

# THE EXPERTS IN DRILLING.

// 2024



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| 184  | 152                         | 631  | 162                         | 778  | 088                         | 971  | 104                         |
| 188  | 067                         | 633  | 194                         | 779  | 244                         | 973  | 103                         |
| 189  | 069                         | 638  | 143                         | 780  | 246                         | 974  | 104                         |
| 202  | 181                         | 640  | 166                         | 781  | 248                         | 978  | 104                         |
| 216  | 207                         | 642  | 166                         | 783  | 250                         | 979  | 104                         |
| 226  | 207                         | 648  | 166                         | 784  | 252                         | 980  | 096                         |
| 228  | 207                         | 654  | 166                         | 785  | 254                         | 981  | 096                         |
| 234  | 216                         | 655  | 140                         | 786  | 256                         | 982  | 096                         |
| 235  | 212                         | 656  | 140                         | 787  | 258                         | 983  | 096                         |
| 236  | 211                         | 663  | 127                         | 788  | 260                         | 985  | 096                         |
| 237  | 216                         | 671  | 197                         | 789  | 262                         | 987  | 095                         |
| 238  | 216                         | 672  | 198                         | 790  | 264                         | 996  | 106                         |
| 239  | 210                         | 675  | 199                         | 805  | 079                         | 2270 | 293                         |
| 252  | 043                         | 680  | 041                         | 807  | 085                         | 2290 | 300                         |
| 253  | 043                         | 701  | 284                         | 815  | 079                         | 2291 | 307                         |
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| 303  | 048                         | 711  | 286                         | 872  | 101                         | 2397 | 294                         |
| 311  | 124                         | 712  | 284                         | 875  | 081                         | 5430 | 284                         |
| 321  | 122                         | 713  | 284                         | 877  | 088                         | 6146 | 231                         |
| 327  | 074                         | 714  | 288                         | 885  | 102                         | 6147 | 231                         |
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| 331  | 123                         | 718  | 074                         | 887  | 088                         | 6157 | 234                         |
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**Spezialbohrer**  
*Special drill bits*  
*Brocas especiales*

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**Gesteinsbohrer, SDS-Bohrer und Meißel**  
*Concrete and Masonry drill bits, SDS hammer drill bits and chisels*  
*Broca para piedra, broca de percusión SDS y cinceles*

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**Metall- und Edelstahlbohrer**  
*Metal drills and stainless steel drills*  
*Broca para metal y broca de acero inoxidable*

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**Holzbohrer**  
*Drills for wood*  
*Brocas para madera*

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**Hartmetall Werkzeuge**  
*Tungsten carbide tools*  
*Herramientas de metal duro*

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**Gewinde-, Senk- und Schälwerkzeuge**  
*Taps, dies, countersinks and conecut*  
*Herramientas para roscar, avellanar y escarpar*

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## **TIMBER TWIST**



**D HSS Maschinen- Holzspiralbohrer**

**E HSS dowel drills**

**ES Brocas para madera HSS**

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### **Beste Zentrierung**

Durch die verbesserte Spitze findet man das Zentrum im Handumdrehen und benötigt wenig Kraftaufwand in der ersten Bohrphase.

### **Best centering**

Thanks to the improved tip, you can find the center in no time at all and require little effort in the first drilling phase.

### **Centrado mejorado**

Gracias a la punta mejorada, resulta más fácil encontrar el centro, y se necesita menos presión en la primera fase de perforación.

### **Kraftschonend - energiesparend**

Aufgrund der neuen Konstruktion muss weniger Anpressdruck aufgewendet werden.

### **Effortless - energy-saving**

Because of the new construction less contact pressure needs to be expended.

### **Ahorro de potencia y energía**

Gracias a su nuevo diseño, la presión necesaria es menor.





# VIELFÄLTIGES KASSETTEN- SORTIMENT

**NEW**

Wir bieten unseren Kunden ein breites Angebot an Set- und Kassettenlösungen, um den unterschiedlichsten Bedürfnissen zu entsprechen.

*We offer a broad selection of sets and cassette options to cover our customers' varying requirements.*

*Asimismo, ofrecemos a nuestros clientes una amplia oferta de juegos y cajas para satisfacer las necesidades más variadas.*





# DER **BOHREXPORTE** FÜR PROFIS

*Wir stehen für Qualität- Innovation – Zuverlässigkeit.*

// Als führender Hersteller von Metall-, Stein- und Holzbohrern und als Europas einziger Komplettanbieter für Bohrwerkzeuge aus eigener Fertigung produzieren wir jährlich mehr als 35 Millionen professionelle und innovative Produkte für unsere Kunden. Unsere österreichischen Produktionsstandorte bedienen Profis weltweit – in über 70 Ländern. Auf Basis von mehr als 60 Jahren Erfahrung als Familienunternehmen und herausragenden Alleinstellungsmerkmalen sind wir überzeugt, das perfekte Werkzeug für jede Herausforderung zu bieten. Mithilfe intelligenter Technik setzen wir alles daran, die hohe Qualität noch weiter auszubauen und somit den Markt von morgen mitzugestalten.





**E THE DRILL EXPERTS FOR PROFESSIONALS**

***We stand for quality – innovation – reliability.***

*As a leading manufacturer of drill bits for metal, masonry and wood and as Europe's only comprehensive provider of drilling tools from proprietary production, we produce more than 35 million professional and innovative products for our customers every year. Our Austrian production sites serve professionals worldwide - in over 70 countries. Based on more than 60 years of experience as a family-owned company and outstanding unique selling propositions, we are convinced to offer the perfect tool for every challenge. With the help of intelligent technology, we are doing everything we can to expand our high quality even further and thus help shape the market of tomorrow.*

**ES EL EXPERTO EN TALADROS PARA PROFESIONALES.**

***Somos una empresa de calidad, innovación y fiabilidad.***

*Como fabricante líder de brocas para metal, piedra y madera, y como único proveedor europeo de herramientas de perforación de producción propia, producimos cada año más de 35 millones de productos profesionales e innovadores para nuestros clientes. Nuestros centros de producción austriacos sirven a profesionales de todo el mundo, en más de 70 países. Gracias a nuestros más de 60 años de experiencia como empresa familiar y a nuestras extraordinarias propuestas de venta, estamos convencidos de que ofrecemos la herramienta perfecta para cada reto. Con la ayuda de la tecnología inteligente, hacemos todo lo posible para seguir ampliando nuestra alta calidad y contribuir así a dar forma al mercado del mañana.*



# UNSERE VIELSEITIGKEIT IST **IHR GEWINN.**

// Mit unserem Sortiment an über 4000 Standard- und Spezialbohrern garantieren wir Ihnen das perfekte Werkzeug für jede Anforderung. Egal wo Sie arbeiten – mit uns bohren Sie schneller, einfacher und wirtschaftlicher. Dabei überzeugen wir durch Qualität, kurze Bohrzeiten und hohe Standzeiten auch unter härtesten Bedingungen.



## ALLESKÖNNER

- E** ALLROUNDER
- ES** EL POLIVALENTE

## HOHLZIEGEL

- E** CAVITY BRICKS
- ES** LADRILLOS HUECOS

## HOLZ

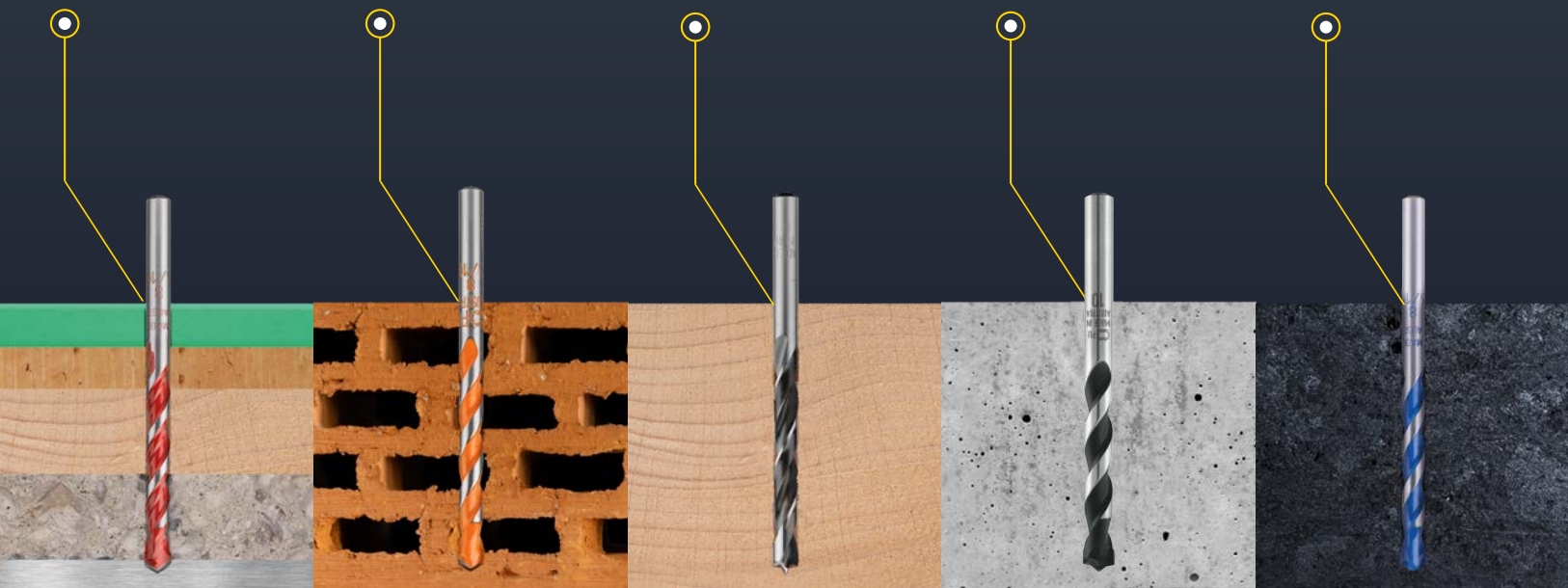
- E** WOOD
- ES** MADERA

## BETON

- E** CONCRETE
- ES** HORMIGÓN

## GRANIT

- E** GRANITE
- ES** GRANITO



**E OUR VERSATILITY IS YOUR  
GAIN**

*With our range of over 4,000 standard and special drills, we offer the perfect tool for every requirement. No matter where you work - with us you drill faster, easier and more economically. At the same time, we convince with quality, short drilling times and long tool life even under the toughest conditions.*

**ES NUESTRA VERSATILIDAD ES SU  
VENTAJA**

*Con nuestra gama de más de 4000 brocas estándar y especiales, le garantizamos la herramienta perfecta para cada necesidad. No importa dónde trabaje: con nosotros perforará más rápido, más fácil y más económicamente. Al mismo tiempo, convencemos con la calidad, los cortos tiempos de perforación y la larga vida útil incluso en las condiciones más duras.*

**METALL**

- E** METAL
- ES** METAL

**EDELSTAHL**

- E** STAINLESS STEEL
- ES** ACERO INOXIDABLE

**GLAS**

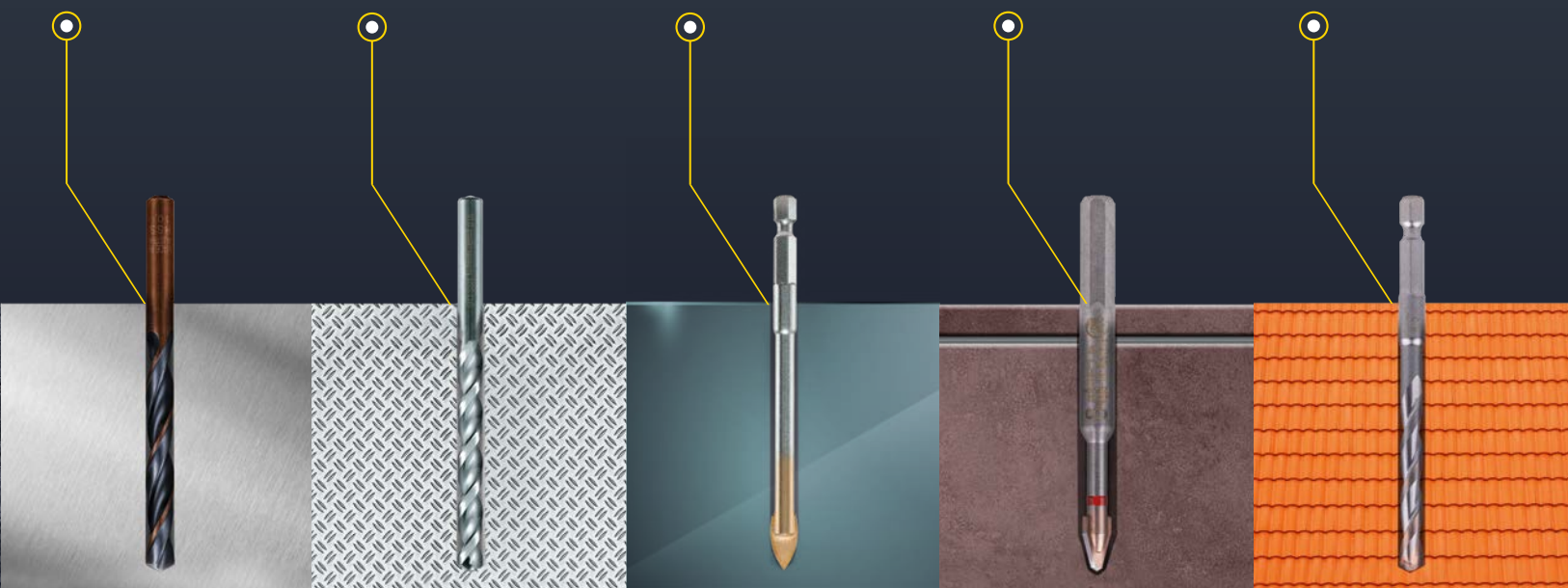
- E** GLASS
- ES** VIDRIO

**FLIESEN**

- E** TILES
- ES** BALDOSAS

**DACHZIEGEL**

- E** ROOF TILES
- ES** TEJAS

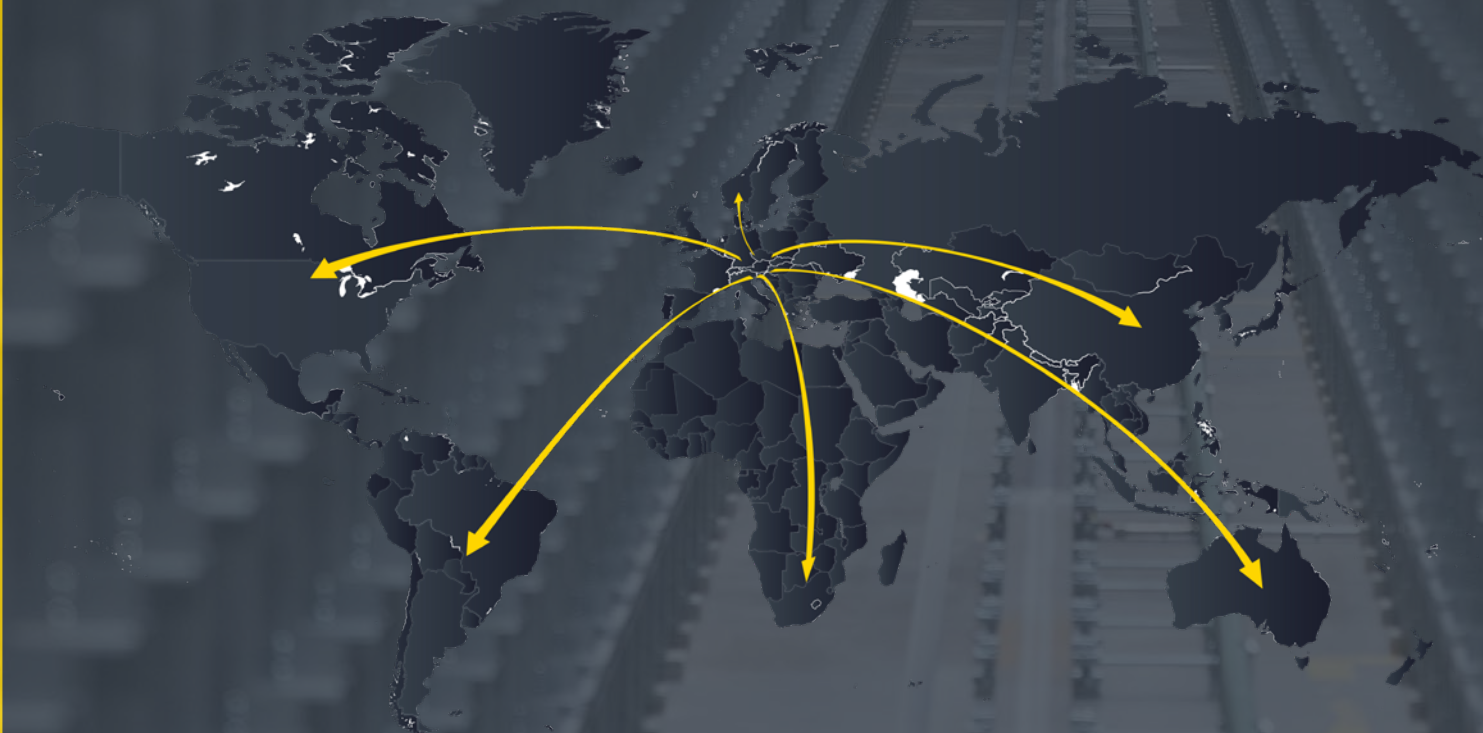




# DARAUF KÖNNEN SIE SICH **VERLASSEN**

*Egal wann, egal wo – wir sind für Sie da und kümmern uns mit vollem Einsatz um Ihr Anliegen.*

// Auf Basis von mehr als 60 Jahren Erfahrung und internationalen Netzwerken in über 70 Ländern liefern wir Ihnen eine Vielzahl an Produkten – täglich und weltweit. Dabei beraten wir Sie selbstverständlich allumfassend in vielen Sprachen. Indem wir flexibel unterschiedlichste IT-Anbindungen an Ihr Warenwirtschaftssystem realisieren, bestellen Sie noch unkomplizierter und einfacher.



**E SERVICE YOU CAN RELY ON.**

*No matter when, no matter where - we are there for you and take care of your concerns with full commitment.*

*Based on more than 60 years of experience and international networks in over 70 countries, we deliver a wide range of products - daily and worldwide. And (needless to say) we advise you comprehensively in many languages. By flexibly implementing a wide variety of IT connections to your merchandise management system, you can order even more easily and conveniently.*

**ES UN SERVICIO EN EL QUE PUEDE CONFIAR.**

*No importa cuándo ni dónde, estamos a su disposición y nos ocupamos de sus preocupaciones con total compromiso.*

*Basándonos en más de 60 años de experiencia y en redes internacionales en más de 70 países, le suministramos una amplia gama de productos, a diario y en todo el mundo. Y (por supuesto) ofrecemos un asesoramiento completo en muchos idiomas. Gracias a la implementación flexible de una gran variedad de conexiones informáticas a su sistema de gestión de mercancías, podrá realizar pedidos de forma aún más fácil y sencilla.*







# WIR DENKEN FÜR SIE **VORAUSS**

// Wir wissen:  
nur mit neuster Technologie und einer  
kontinuierlichen Weiterentwicklung  
können wir Ihnen das beste Werkzeug  
für jede Anforderung bieten. Und so  
arbeitet unsere Forschungs- und  
Entwicklungsabteilung stetig daran,  
noch präzisere, langlebigere und  
bessere Produkte zu gestalten.

## **E WE THINK IN ADVANCE ON YOUR BEHALF.**

*We know that we can only offer you  
the best tool for every requirement with  
the latest technology and continuous  
further development. This is why our  
Research and Development department  
is constantly working on designing even  
more precise, more durable and better  
products.*

## **ES PENSAMOS POR USTED POR ADELAN- TADO.**

*Lo sabemos:  
sólo con la más novedosa tecnología y el  
continuo desarrollo podemos ofrecerle la  
mejor herramienta para cada necesidad.  
Por ello, nuestro departamento de in-  
vestigación y desarrollo trabaja constan-  
temente en el diseño de productos aún  
más precisos, más duraderos y mejores.*

# CLEAN UP CLEAN BETTER.

*Wir entwickeln uns ständig weiter - unser Gewerbepack auch!*

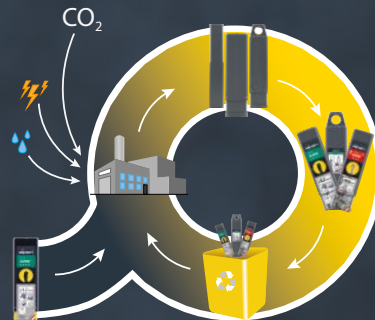
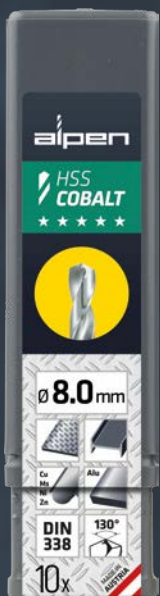
// Der Schutz der Umwelt betrifft uns alle und deshalb möchten wir auch hier einen Schritt weiter gehen. Unsere Gewerbepack-Verpackungen bestehen jetzt aus bereits recyceltem Material und sind ebenso wieder recycelbar.

**E WE ARE CONSTANTLY INVOLVING -  
OUR INDUSTRIALPACK TOO!**

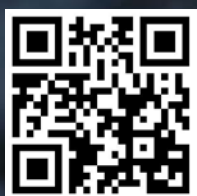
*The protection of the environment affects us all and that's the reason why we go one step further. Our Industrialpack is now made from material that has already been recycled and can also be recycled again.*

**ES ESTAMOS EVOLUCIONANDO CON-  
STANTEMENTE - NUESTRO PAQUETE  
INDUSTRIAL TAMBIÉN!**

*La protección del medio ambiente nos afecta a todos y por ello queremos dar un paso hacia adelante. Ahora nuestros paquetes industriales están fabricados a base de material reciclado y son de nuevo reciclables.*









### Diebstahlschutz

- E Anti-theft protection
- ES Protección antirrobo

### Qualitätssystem

- E Quality system
- ES Sistema de calidad

### Produkt

- E Product
- ES Producto

### Infobox

- E Infobox
- ES Infobox

### Materialhintergrund

- E Material background
- ES Fondo del material



### Markenfläche & Farbleitsystem

- E Label space & colour guide system
- ES Espacio para la marca & sistema de guía por colores

### Sicherheitshinweise

- E Safety notes
- ES Instrucciones de seguridad

### Farbleitsystem & Produktname

- E Colour guide system & product name
- ES Sistema de guía por colores y nombre de los productos

### Selbsterklärende Verpackung

Das Farbleitsystem, unterschiedliche Qualitätsstufen, Informationsgrafiken sowie die eindeutige Zuordnung der Anwendung schaffen Klarheit und Verständnis am POS.

- E Self-Explanatory packaging  
The color coding system, different quality levels, information graphics and an unambiguous assignment of the application provide clarity and understanding at the POS.
- ES Envase intuitivo  
Claridad y comprensión en el punto de venta: El sistema de guía por colores, diferentes niveles de calidad, gráficos informativos y una indicación clara del ámbito de uso.

### Qualitätsstufen für jede Anforderung

- E Quality levels for every demand
- ES Niveles de calidad para todos los requisitos.





# ALLE INFORMATIONEN AUF EINEN BLICK.

*Sie sind neugierig geworden? Unser innovatives Verpackungsdesign informiert Sie schnell und effizient.*

// Unserer POS-Platzierungsoptionen Vereinen ansprechendes Design mit hoher Funktionalität. Somit informieren wir Sie unkompliziert und verständlich über unsere Vielzahl an Produkten. Dabei denken wir immer einen Schritt weiter: unsere Verpackungen sind zudem innovativ und umweltfreundlich gestaltet.

## **E ALL INFORMATION AT A GLANCE.**

*Are you curious? Our innovative packaging design informs you quickly and efficiently.*

*Our POS placement options combine attractive design with high functionality. So we inform you uncomplicated and understandable about our variety of products. We always think one step ahead: our packaging is also innovative and designed to be eco-friendly.*

## **ES TODA LA INFORMACIÓN DE UN VISTAZO.**

*¿Siente curiosidad? Nuestro innovador diseño de envases le informa de forma rápida y eficaz.*

*Nuestras opciones de presentación en el punto de venta combinan un diseño atractivo con una gran funcionalidad. De este modo, le informamos sobre nuestra amplia gama de productos de forma sencilla y comprensible. Y siempre pensamos un paso por delante: nuestros envases también están diseñados para ser innovadores y respetuosos con el medio ambiente.*



Metallkassette  
E Metal cassettes  
ES Caja de metal



SB-Aufhänger  
E Plastic tag  
ES Expositores para autoservicio



Kunststoffbox  
E Plastic box  
ES Embalaje de plástico



Kunststoffkassette  
E Plastic cassettes  
ES Caja de plástico



Kombiset  
E Mix-packs  
ES Juego combinado





# VIELFÄLTIGES **KASSETTEN** SORTIMENT.

// Wir bieten unseren Kunden ein breites Angebot an Set- und Kassettenlösungen, um den unterschiedlichsten Bedürfnissen zu entsprechen.

## **E** **NUMEROUS CASSETTE OPTIONS.**

*We offer a broad selection of sets and cassette options to cover our customers' varying requirements.*

## **ES** **GRAN VARIEDAD DE CAJAS.**

*Asimismo, ofrecemos a nuestros clientes una amplia oferta de juegos y cajas para satisfacer las necesidades más variadas.*



Kunststoffkassetten – schmale Bauform  
Plastic cassettes – narrow size  
Cajas de plástico – versión estrecha

Kunststoffkassetten – breite Bauform  
Plastic cassettes – wide size  
Cajas de plástico – versión ancha





# UNSERE **ERFAHRUNGEN** AM POS

## *Vielfältige POS-Präsentation für jeden Bedarf*

- // Unsere **markterprobten Verkaufssysteme** erhöhen den Flächenumsatz und steigern Ihren Ertrag.
- // Für jeden Platzbedarf **das zielführende Verkaufssystem**: Vom Thekendisplay bis zur kompletten Präsentationswand.
- // Produktschilder in der gewünschten Landessprache, **das verständliche Farbleitsystem** und die **marktgerechten Bestückungsvarianten** bieten eine optimale und übersichtliche Präsentation am POS und somit einen starken Abverkauf.

### **E OUR EXPERIENCE** **AT THE POINT OF SALE**

#### **Wide range of POS presentations for any shop**

*Our market-approved sales systems increase the sales density and raise your revenue.*

*Fits perfect. The appropriate sales systems for every space:*

*From counter displays up to complete presentation walls.*

*Product labels in the local language, the comprehensible colour coding system and the market-driven display assortment provide optimum and clear presentation at the POS and raise your revenue.*

### **ES NUESTRA EXPERIENCIA** **EN EL PUNTO DE VENTA**

#### **Diferentes presentaciones para cada tipo de necesidad**

*Nuestros sistemas de venta probados en el mercado aumentan el volumen de venta de la superficie e incrementan sus beneficios.*

*Tenemos los sistemas de venta apropiados en el mercado para todas las necesidades de espacio: Desde el expositor de mostrador hasta el panel de presentación.*

*Los carteles de los productos en el idioma deseado, un comprensible sistema de guía por colores, juntos con los modelos de montaje competitivos ofrecen una presentación óptima en el punto de venta y, por lo tanto, unas ventas de una forma rápida.*

## D POS KNOW HOW VON ALPEN.

Erhöhung des Flächenumsatzes und Profits.

Durch die Auswahl von Qualitätsstufen und Sorten für verschiedene Materialien haben die Kunden die Möglichkeit sich zu entscheiden. Dadurch entscheidet man sich sehr oft für eine bessere Qualität. ... und deshalb gibt es höhere Margen am Point of Sale

*Due to the assortment of quality levels and types for different materials the customer has the choice to decide! Thereby the customer decides very often for a better quality ... that's why we create higher turnovers and profits for all at the Point of Sale*

*Los clientes tienen la posibilidad de elegir entre varios niveles de calidad y tipos de materiales. De este modo se deciden normalmente por una mejor calidad. ... y esto significa un margen de beneficio mayor para el punto de venta*

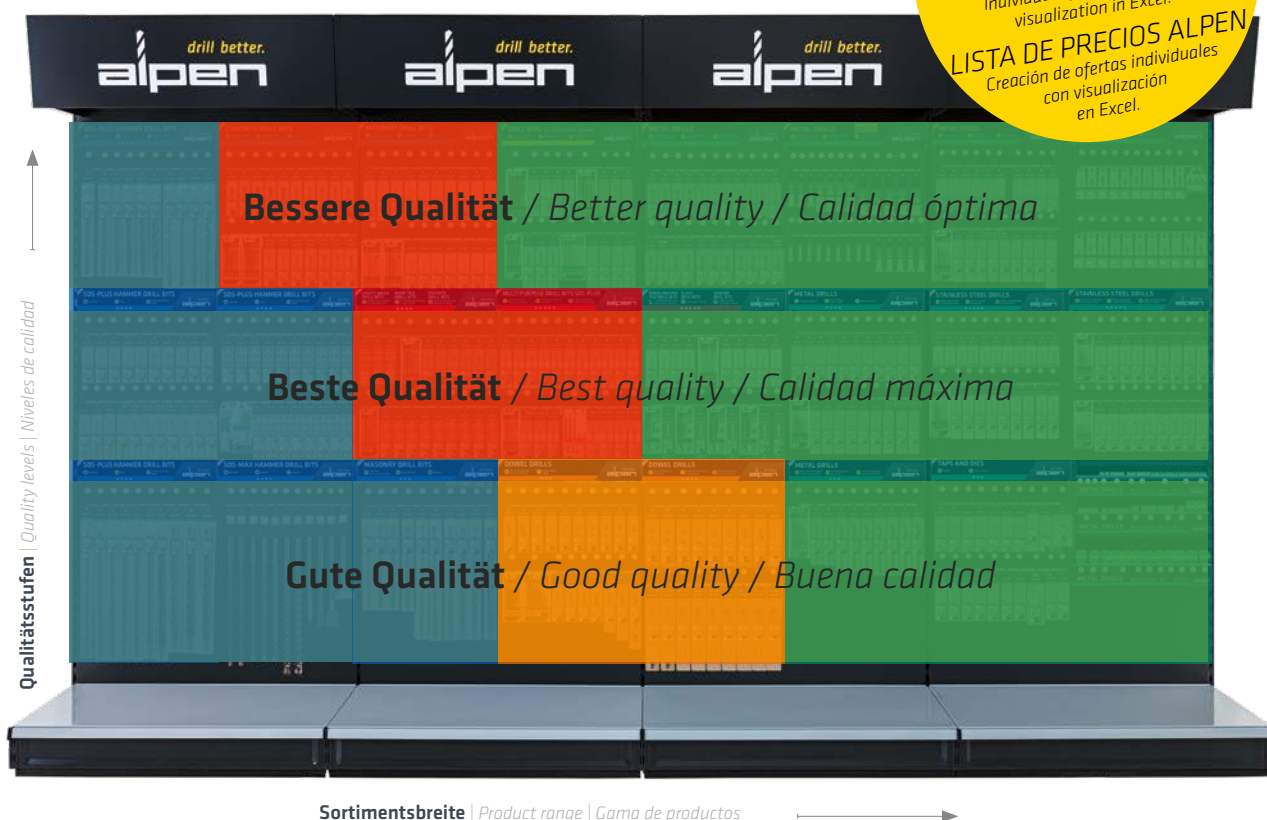
## E POS KNOW HOW OF ALPEN.

Increase of turnover and profit at the same space.

## ES LA EXPERIENCIA EN EL PUNTO DE VENTA DE ALPEN.

Aumento en el volumen de ventas de la superficie y sus beneficios.

// Fortlaufende Platzierung des Farbleitsystems | Continuous placement of the colour system  
Posicionamiento continuo del sistema de guía por colores



## D GARANTIERT STARKER ABVERKAUF.



**Sortenreine Präsentation**  
Unmixed presentation  
Presentación ordenada por tipos de material

## E GUARANTEED STRONG SALES.



**Anwendungsgleiche Präsentation**  
Same application presentation  
Presentación por tipos de uso

## ES GARANTIZA LA VENTA RÁPIDA.



**Spezielle 6-kant Bohrer Präsentation**  
Special hexagonal shank presentation  
Presentación especial de brocas hexagonales



## D DAS PERFEKTE ANGEBOT.

Markterprobtes POS-Know-how für starken Abverkauf. Für jeden Platzbedarf haben wir das passende Display.



**Boden-Display**  
Ground display  
Expositor de pie

## E THE PERFECT OFFER.

Market-approved POS know-how for strong sales. We have the right display for every available space.



**Bohrer-Display**  
Drill display  
Expositor con forma de broca

## ES LA OFERTA PERFECTA.

Conocimientos del punto de venta probados en el mercado para obtener ventas de una forma rápida. Tenemos los expositores adecuados para todas las necesidades de espacio.



**Präsentationswand**  
Presentation wall  
Panel de presentación



**Metall-Magazinschrank**  
Metal cabinet  
Cajón metálico con estantes



**Säulen-Display**  
Pillar display  
Expositor de columna



**Karton-Display**  
Cardboard display  
Expositor de cartón



**Theken-Display**  
Counter-display  
Expositor para mostrador

**D ZEICHENERKLÄRUNG**

**E SIGNS AND SYMBOLS**

**ES SIGNIFICADO DE LOS SIMBOLOS**



**Armierter Beton**  
Reinforced concrete  
Hormigón armado



**Beton**  
Concrete  
Hormigón



**Stein**  
Natural stone  
Piedra



**Vollziegel**  
Solid brick  
Ladrillo macizo



**Hohlziegel**  
Cavity brick  
Ladrillo hueco



**Dachziegel**  
Roof tile  
Teja



**Dachziegel 1x**  
Roof tile 1x  
Teja 1x



**Dachziegel 2x**  
Roof tile 2x  
Teja 2x



**Marmor**  
Marble  
Mármol



**Granit**  
Granite  
Granito



**Verbund**  
Composites  
Combinación



**Fliesen**  
Tiles  
Baldosas



**Fein-Steinzeugfliesen**  
Ceramic tiles  
Baldosas de gres porcelánicos



**Glas**  
Glass  
Vidrio



**Allgemeine Baustähle**  
Structural steels  
Aceros de construcción generales



**Automatenstähle**  
Free cutting steels  
Aceros de corte fácil



**Unlegierte Vergütungsstähle**  
Unalloyed heat treatable steels  
Aceros para bonificar no aleados



**Legierte Vergütungsstähle**  
Alloyed heat treatable steels  
Aceros para bonificar aleados



**Metall**  
Metal  
Metal



**Rostfreie Stähle**  
Stainless steels  
Aceros inoxidables



**Blech**  
Sheet metal  
Chapa



**Grauguss, Temperguss**  
Grey cast iron, malleable cast iron  
Hierro fundido gris, fundición maleable



**Titan- und Titanlegierungen**  
Titanium and titanium alloys  
Titanio y aleaciones de titanio



**Kupfer, Messing**  
Copper, brass  
Cobre, latón



**Aluminium**  
Aluminio  
Aluminio



**Kunststoffe**  
Plastics  
Plásticos



**Diamant Beschichtung**  
Diamond coating  
Recubrimiento de diamante



**Weichholz**  
Soft wood  
Madera blanda



**Mittelweiches Holz**  
Medium soft wood  
Madera media blanda



**Hartholz**  
Hard wood  
Madera dura



**Holz geleimt**  
Glued timbers  
Madera encolada



**Holzbalken**  
Joined timbers  
Viga de madera



**Verleimter Holzbalken**  
Glued joined timbers  
Viga de madera pegada



**Spanplatte**  
Chipboard  
Tabla de madera aglomerada



**Beschichtete Spanplatte**  
Coated chipboard  
Tablero de virutas revestido



**Resopal**  
Laminated Chipboard  
Resopal

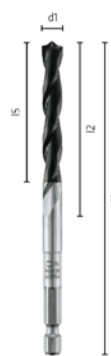


**Gipskarton**  
Gypsum plaster boards  
Cartón yeso

**D TECHNISCHE ZEICHNUNGEN**

**E TECHNICAL DRAWINGS**

**ES DIBUJOS TECNICOS**



- d1** Schneiddurchmesser  
Cutting diameter | Diámetro de corte
- d2** Schaft | Shank | Eje
- d3** Freistellung | Neck | Cuello
- d4** Zapfen-/Spiegeldurchmesser  
Ø pilot / mirror | Diámetro piloto
- d5** Senkdurchmesser  
Ø countersink | Diámetro avellanador
- a** Schlüsselweite | Wrench size | Anchura casquillo
- b** Breite | Width | Anchura
- l1** Gesamtlänge | Total length | Longitud total
- l2** Schneidenlänge | Cutting length | Longitud de corte
- l3** Freistelllänge | Neck length | Longitud cuello
- l4** Bohrlänge | Drilling length | Longitud de taladro
- l5** Dübelbohrlänge / Gewindelänge  
Dowel drilling length / thread length  
Longitud de anclaje / Longitud de rosca

## Zeichenerklärung

### D ZEICHENERKLÄRUNG

### E SIGNS AND SYMBOLS

### ES SIGNIFICADO DE LOS SIMBOLOS

|                                                                                     |                                                                                                             |                                     |                                                                                                      |                                                                                       |                                                                                                |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <b>CV</b>                                                                           | Chrom-Vanadium<br>Chrome-Vanadium<br>Cromo-vanadio                                                          | <b>WN</b>                           | Werksnorm<br>Works standard<br>Norma interna                                                         | <b>A</b>                                                                              | Anschnittformen<br>Cutting form<br>Formas de corte de entrada                                  |
| <b>HSS</b>                                                                          | Hochleistungsschnellarbeitsstahl<br>High Speed Steel<br>El acero de alta velocidad                          | <b>M</b>                            | Metrisches Gewinde<br>Metric threads<br>Rosca metrica                                                | <b>Typ / Type / Tipo</b><br><b>PZ</b>                                                 | Werkzeug Typ<br>Tool type<br>Tipo de herramienta                                               |
| <b>HSS Co5</b>                                                                      | 5% kobaltlegierter HSS-Stahl<br>5% cobalt-alloyed high speed steel<br>Acero HSS aleado con un 5% de cobalto | <b>G</b>                            | Rohrgewinde<br>Pipe threads<br>Rasca para tubos                                                      | <b>3.d</b>                                                                            | Bohrtiefe<br>Drilling depth<br>Hondura de perforar                                             |
| <b>HSS TiN</b>                                                                      | Titan-Nitrid-Beschichtung<br>Titanium-Nitride-coating<br>Recubrimiento titanio nitrato                      | <b>SIKERSAFE</b>                    | Prüfzeichen Mauerbohrer<br>Approval mark masonry drills<br>Certificado brocas de albañilería         | <b>120°</b>                                                                           | Spitzenwinkel<br>Point angle<br>Ángulo de punta                                                |
| <b>HM</b>                                                                           | Hartmetall<br>Carbide<br>Metal duro                                                                         | <b>Flächenanschliff</b>             | Flächenanschliffen<br>Facet ground forms<br>Formas de la faceta                                      | <b>35°</b>                                                                            | Drallsteigung<br>Spiral grade<br>Paso de hélice                                                |
|   | Akkubohrer<br>Cordless drill<br>Taladro con batería                                                         | <b>Stirnverzahnung</b>              | Stirnverzahnung<br>Spur gearing<br>Dentado frontal                                                   | <b>102°-138°</b>                                                                      | Ungleichteilung Senker<br>Unequal spacing - countersink<br>División irregular de avellanadores |
|  | Bohrmaschine<br>Drilling machine<br>Taladro                                                                 | <b>55°</b>                          | Gewindeflankenwinkel<br>Thread flank angle<br>Ángulo de flanco de rosca                              |  | Senkkopf<br>Countersunk head<br>Cabeza avellanada                                              |
|  | Bohrhammer<br>Hammer drill machine<br>Martillo perforador                                                   | <b>Gewindegänge</b>                 | Gewindegänge<br>Thread convolution<br>Pasos de rosca                                                 | <b>90°</b>                                                                            | Senkwinkel<br>Countersink angle<br>Ángulo de avellanar                                         |
|  | Drehbohren<br>Rotary drilling<br>Solo taladrado rotativo                                                    | <b>Gewinde</b>                      | Gewinde<br>Thread<br>Rosca                                                                           | <b>R1</b>                                                                             | Reihen nach DIN 1869<br>Rows according to DIN 1869<br>Serie según DIN 1869                     |
|  | Schlagbohren<br>Percussion drilling<br>Perforación a percusión                                              | <b>≤1,5d1</b>                       | Durchgangsbohrung<br>Tapped through hole<br>Rosca pasante                                            |  | Verpackungseinheit<br>Packing unit<br>Unidad de embalaje                                       |
| <b>ISO 2 6H</b>                                                                     | Toleranz GWB<br>Dimensions according to DIN<br>Tolerancia de machos de roscar                               | <b>Durchgangs- und Grundgewinde</b> | Durchgangs- und Grundgewinde<br>Through hole and blind hole threads<br>Roscas pasante y roscas ciega |                                                                                       |                                                                                                |
| <b>DIN 1897</b>                                                                     | Baumaße nach DIN<br>Tap tolerance<br>Tolerancia de machos de roscar                                         | <b>6g</b>                           | Toleranzfeld<br>Tolerance zone<br>Dominio de tolerancia                                              |                                                                                       |                                                                                                |

### D SCHAFTAUSFÜHRUNGEN

### E SHANK DESIGNS

### ES DISEÑOS DE EJES

|                                                                                     |                                                                    |                                                                                     |                                                                                                              |                                                                                     |                                                             |                                                                                       |                                                           |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------|
|  | 1/4" Sechskantschaft<br>1/4" hexagonal shank<br>Eje hexagonal 1/4" |  | SDS-plus mit Schlag Stopp Funktion<br>SDS-plus with hammer-stop function<br>SDS-plus con parada de percusión |  | SDS-plus Schaft<br>SDS-plus shank<br>Eje SDS-plus           |  | SDS-max Schaft<br>SDS-max shank<br>Eje SDS-max            |
|  | Zylindrischer Schaft<br>Cylindrical shank<br>Eje cilíndrico        |  | Reduzierter Schaft<br>Reduced shank<br>Eje reducido                                                          |  | Morsekegelschaft<br>Morse taper shank<br>Eje con cono Morse |  | Anti-slip Schaft<br>Anti-slip shank<br>Eje antideslizante |
|  | Sechskantschaft<br>Hexagonal shank<br>Eje hexagonal                |  | 3-Flächenshaft<br>3-surface shank<br>Eje de 3 caras                                                          |  | Vierkantschaft<br>Square shank<br>Eje cuadrado              |                                                                                       |                                                           |





# ÜBERSICHT BOHRER MIT 1/4"-SECHSKANTSCHAFT

**E** OVERVIEW  
DRILL BITS WITH  
1/4" HEXAGONAL SHANK

**ES** RESUMEN DE BROCAS  
CON CODO HEXAGONAL  
1/4"

|                                                                                     | Name / Nombre  | Code / Código | Seite / Page / Página |
|-------------------------------------------------------------------------------------|----------------|---------------|-----------------------|
|    | Profi Multicut | 272           | 33                    |
|    | Profi Dach     | 252, 253      | 43                    |
|    | Profi Diamant  | 290           | 53                    |
|  | Profi Glas     | 289           | 54                    |
|  | Profi Beton    | 189           | 69                    |
|  | Pro            | 952           | 155                   |
|  | Timber Twist   | 675           | 199                   |
|  | Profi Holz     | 622           | 198                   |
|  |                | 237, 238      | 211                   |
|  |                | 702           | 285                   |
|  |                | 703           | 286                   |
|  |                | 720           | 302                   |
|  |                | 0070503071100 |                       |





# SPEZIALBOHRER

// MEHRZWECKBOHRER, BOHRER FÜR HOHLZIEGEL, DACHZIEGEL,  
GRANIT, FEINSTEINZEUG, FLIESEN, KERAMIK UND GLAS





## **E SPECIAL DRILL BITS**

- // MULTIPURPOSE DRILL BITS
- // DRILL BITS FOR CAVITY BRICKS
- // ROOF TILES
- // GRANITE
- // PORCELAIN/GRES
- // TILES
- // CERAMIC AND GLASS

## **ES BROCAS ESPECIALES**

- // BROCAS MULTIUSOS
- // BROCAS PARA LADRILLOS HUECOS
- // TEJAS
- // GRANITO
- // GRES PORCELÁNICO
- // BALDOSAS
- // CERÁMICA Y VIDRIO

Übersicht

Overview

Resumen

|                                                                                                                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                             |    |    |    |    |    |    |
| Norm / Estándar                                                                                                                                             | WN                                                                                  | WN                                                                                  | WN                                                                                  | WN                                                                                    | WN                                                                                    | WN                                                                                    |
| Name / Nombre                                                                                                                                               | Profi Multicut                                                                      | Profi Multicut                                                                      | Profi Multicut                                                                      | Profi Multicut                                                                        | Profi Ziegel                                                                          | DUST EXTRACTOR SHARP                                                                  |
| Schaft / Shank / Eje                                                                                                                                        |    |    |    |    |    |    |
| Ø mm                                                                                                                                                        | 3,00 - 12,00                                                                        | 5,00 - 16,00                                                                        | 4,00 - 10,00                                                                        | 5,00 - 20,00                                                                          | 4,00 - 10,00                                                                          | 6,00 - 16,00                                                                          |
| Code / Código                                                                                                                                               | 172                                                                                 | 729-730                                                                             | 272                                                                                 | 509, 519, 529, 539, 579                                                               | 352                                                                                   | 680                                                                                   |
| Seite / Page / Página                                                                                                                                       | 31                                                                                  | 32                                                                                  | 33                                                                                  | 34                                                                                    | 39                                                                                    | 41                                                                                    |
| Geeignet für / Suitable for / Adecuada para                                                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  Beton<br>Concrete<br>Hormigón                                           |  |  |  |  |                                                                                       |                                                                                       |
|  Stein<br>Natural stone<br>Piedra                                        |  |  |  |  |                                                                                       |                                                                                       |
|  Vollziegel<br>Solid brick<br>Ladrillo macizo                            |  |  |  |  |  |  |
|  Hohlziegel<br>Cavity brick<br>Ladrillo hueco                            |  |  |  |  |  |  |
|  Dachziegel 1x<br>Roof tile 1x<br>Teja 1x                                |  |  |  |  |  |                                                                                       |
|  Dachziegel 2x<br>Roof tile 2x<br>Teja 2x                                |  |  |  |  |                                                                                       |                                                                                       |
|  Marmor<br>Marble<br>Mármol                                              |  |  |  |  |  |  |
|  Granit<br>Granite<br>Granito                                            |  |  |  |  |                                                                                       |                                                                                       |
|  Fliesen<br>Tiles<br>Baldosas                                            |  |  |  |  |  |  |
|  Fein-Steinzeugfliesen<br>Ceramic tiles<br>Baldosas de gres porcelánicos |  |  |  |  |                                                                                       |                                                                                       |
|  Holz<br>Natural<br>Madera                                               |  |  |  |  |                                                                                       |                                                                                       |
|  Metall<br>Metal<br>Metal                                                |  |  |  |  |                                                                                       |                                                                                       |
|  Kunststoffe<br>Plastics<br>Plásticos                                    |  |  |  |  |  |                                                                                       |
|  Glas<br>Glass<br>Vidrio                                                 |  |  |  |  |                                                                                       |                                                                                       |

## D Übersicht

## E Overview

## ES Resumen


Spezialbohrer  
special drill bit  
broca especial

|             |              |                 |              |                |              |               |              |
|-------------|--------------|-----------------|--------------|----------------|--------------|---------------|--------------|
|             |              |                 |              |                |              |               |              |
| WN          | DIN ISO 5468 | DIN ISO 5468    | WN           | WN             | DIN 5468     | WN            | WN           |
| Profi Dach  | Profi Granit | Longlife Granit | C PROTECTOR  | Keramo Extreme | Profi Keramo | Profi Diamant | Profi Glas   |
|             |              |                 |              |                |              |               |              |
| 3,50 - 6,00 | 4,00 - 14,00 | 4,00 - 12,00    | 5,00 - 14,00 | 5,00 - 14,00   | 4,00 - 12,00 | 5,00 - 15,00  | 3,00 - 12,00 |
| 252-253     | 257          | 258             | 303          | 300            | 297          | 290           | 289          |
| 43          | 45           | 46              | 48           | 50             | 52           | 53            | 54           |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |
|             |              |                 |              |                |              |               |              |





 **PROFI MULTICUT**



**Der Alleskönner**

Flexible Einsatzmöglichkeiten bei unterschiedlichen Materialien ohne Bohrerwechsel

***The all-rounder***

*Flexible application possibilities for different materials without changing the drill bit*

***El polivalente***

*Diversas posibilidades de uso en materiales diferentes sin necesidad de cambiar de broca*

**Extra scharfe Schneiden**

Diamantgeschliffene, scharfe Schneiden ermöglichen Bohren auch in Metall

***Extra sharp cutting edges***

*Diamond-ground, sharp cutting edges enable drilling even in metal*

***Filos especialmente afilados***

*Los filos afilados pulidos con diamante permiten incluso la perforación de metal*

**Patentiertes 4-fach Stufenprofil**

Schnelle Bohrmehlförderung beim Bohren in Mauerwerk und Beton

***Patented 4-step profile***

*Fast drill dust feed when drilling into masonry and concrete*

***Perfil cuádruple escalonado patentado***

*Rápida eliminación de los detritos durante la perforación en mampostería y hormigón*



 **alpen** *drill better.*

**D Hartmetall-Mehrzweckbohrer  
mit zylindrischem Schaft, kurz**

**Einsatzbereich:**

Hohe Flexibilität und präzise Bohrung - auch bei abwechselndem Bohren in unterschiedlichen Materialien. Zum Drehbohren in Fliesen, Mauerwerk, Metall, Holz und Kunststoff.

**E Tungsten carbide multi purpose  
drill bits with cylindrical shank,  
short series**

**Range of application:**

Extremely versatile and precise drilling - even with changing drills in various materials. For precision rotary drilling in tiles, natural stone, metal, wood and plastics.

**ES Broca multiuso de metal duro,  
con eje cilíndrico, corta  
short series**

**Ámbito de aplicación:**

Elevada flexibilidad y taladrados precisos, incluso si se cambian las brocas en materiales diversos. Para el taladrado rotativo en baldosas, mampostería, metal, madera y plástico.



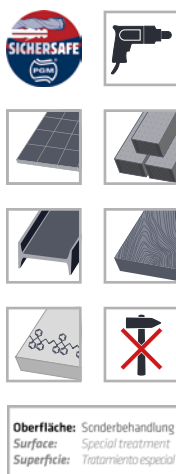
Universeller Spezialbohrer  
Universal special drill bits  
Taladradora especial universal



Für Metall, Mauerwerk und Fliesen  
For metal, masonry and tiles  
Para metal, albañilería y baldosas



Diamantgeschliffene, scharfe Schneiden  
Diamond ground, sharp cutting edges  
Filos muy afilados pulidos con diamante



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 172<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|-------|----------------------|---------------|----|
| 3,00     | 1/8        | 60       | 30       |       | 0017200300100        | 1             | 10 |
| 4,00     | 5/32       | 75       | 39       |       | 0017200400100        | 1             | 10 |
| 5,00     | 3/16       | 85       | 39       |       | 0017200500100        | 1             | 10 |
| 5,50     |            | 85       | 39       |       | 0017200550100        | 1             | 10 |
| 6,00     | 15/64      | 100      | 54       |       | 0017200600100        | 1             | 10 |
| 6,50     | 1/4        | 100      | 54       |       | 0017200650100        | 1             | 10 |
| 7,00     | 9/32       | 100      | 54       |       | 0017200700100        | 1             | 10 |
| 8,00     | 5/16       | 120      | 80       |       | 0017200800100        | 1             | 10 |
| 10,00    | 3/8        | 120      | 80       |       | 0017201000100        | 1             | 10 |
| 12,00    | 15/32      | 150      | 90       | 10,00 | 0017201200100        | 1             | 10 |



Spezialbohrer  
special drill bit  
broca especial

## D Hartmetall-Mehrzweckbohrer mit zylindrischem Schaft, lang

### Einsatzbereich:

Zum Drehbohren in Fliesen, Mauerwerk, Metall, Holz und Kunststoff. Durch extra-lange Ausführung mehr Möglichkeiten bei der Fenstermontage: Bohren von Kunststoff, Metall und Mauerwerk in einem Arbeitsgang.



Universeller Spezialbohrer  
Universal special drill bits  
Taladradora especial universal



Für Metall, Mauerwerk und Fliesen  
For metal, masonry and tiles  
Para metal, albañilería y baldosas



Diamantgeschliffene, scharfe Schneiden  
Diamond ground, sharp cutting edges  
Filos muy afilados pulidos con diamante

## E Tungsten carbide multi purpose drill bits with cylindrical shank, long series

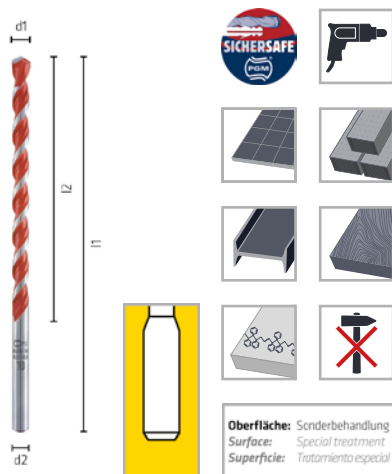
### Range of application:

For precision rotary drilling in tiles, natural stone, metal, wood and plastics. Due to its extra long version more options when installing windows: drill through plastics, metal and masonry in one work step.

## ES Broca especial de metal duro con eje cilíndrico, larga

### Ámbito de aplicación:

Para el taladrado rotativo en baldosas, mampostería, metal, madera y plástico. Gracias al diseño extralargo, hay más posibilidades para el montaje de ventanas: taladrado de plástico, metal y mampostería en una misma operación.



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 729<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|-------|----------------------|---------------|----|
| 5,00     | 3/16       | 150      | 85       |       | 0072900500100        | 1             | 10 |
| 5,50     |            | 150      | 85       |       | 0072900550100        | 1             | 10 |
| 6,00     | 15/64      | 200      | 135      |       | 0072900600100        | 1             | 10 |
| 6,50     | 1/4        | 200      | 135      |       | 0072900650100        | 1             | 10 |
| 7,00     | 9/32       | 200      | 135      |       | 0072900700100        | 1             | 10 |
| 8,00     | 5/16       | 200      | 135      |       | 0072900800100        | 1             | 10 |
| 10,00    | 3/8        | 200      | 135      |       | 0072901000100        | 1             | 10 |
| 12,00    | 15/32      | 220      | 150      | 10,00 | 0072901200100        | 1             | 10 |
| 14,00    | 9/16       | 220      | 150      | 10,00 | 0072901400100        | 1             | 10 |

Länge / Length / Longitud: 400/300 mm

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 730<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|-------|----------------------|---------------|----|
| 5,00     | 3/16       | 400      | 300      |       | 0073000500100        | 1             | 10 |
| 5,50     |            | 400      | 300      |       | 0073000550100        | 1             | 10 |
| 6,00     | 15/64      | 400      | 300      |       | 0073000600100        | 1             | 10 |
| 6,50     | 1/4        | 400      | 300      |       | 0073000650100        | 1             | 10 |
| 8,00     | 5/16       | 400      | 300      |       | 0073000800100        | 1             | 10 |
| 10,00    | 3/8        | 400      | 300      |       | 0073001000100        | 1             | 10 |
| 12,00    | 15/32      | 400      | 300      | 10,00 | 0073001200100        | 1             | 10 |
| 14,00    | 9/16       | 400      | 300      | 10,00 | 0073001400100        | 1             | 10 |
| 16,00    | 5/8        | 400      | 300      | 10,00 | 0073001600100        | 1             | 10 |



## D Hartmetall-Mehrzweckbohrer mit 1/4"-Sechskantschaft

### Einsatzbereich:

Zum Drehbohren in Fliesen, Mauerwerk, Metall, Holz und Kunststoff. Passend für jeden Standard-Akkuschrauber durch genormtes Schaftprofil.

## E Tungsten carbide multi purpose drill bits with 1/4" hexagonal shank

### Range of application:

For precision rotary drilling in tiles, natural stone, metal, wood and plastics. Ideal for all standard cordless drills thanks to its standardized shank profile.

## ES Broca multiuso de metal duro con eje hexagonal 1/4"

### Ámbito de aplicación:

Para el taladrado de baldosas, mampostería, metal, madera y plástico. Adecuadas para todos los destornilladores con baterías convencionales gracias al perfil de eje normativo.



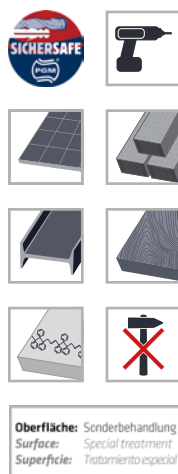
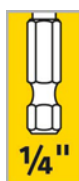
Universeller Spezialbohrer  
Universal special drill bits  
Taladradora especial universal



Für Metall, Mauerwerk und Fliesen  
For metal, masonry and tiles  
Para metal, albañilería y baldosas



Diamantgeschliffene, scharfe Schneiden  
Diamond ground, sharp cutting edges  
Filos muy afilados pulidos con diamante



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2<br>mm | Code 272<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|----------|----------------------|---------------|----|
| 4,00     | 5/32       | 100      | 39       | 1/4"     | 0027200400100        | 1             | 10 |
| 5,00     | 3/16       | 100      | 39       | 1/4"     | 0027200500100        | 1             | 10 |
| 5,50     |            | 100      | 39       | 1/4"     | 0027200550100        | 1             | 10 |
| 6,00     | 15/64      | 100      | 54       | 1/4"     | 0027200600100        | 1             | 10 |
| 7,00     | 9/32       | 100      | 54       | 1/4"     | 0027200700100        | 1             | 10 |
| 8,00     | 5/16       | 120      | 80       | 1/4"     | 0027200800100        | 1             | 10 |
| 10,00    | 3/8        | 120      | 80       | 1/4"     | 0027201000100        | 1             | 10 |



Spezialbohrer  
special drill bit  
broca especial

## ① Hartmetall-Mehrzweckbohrer mit SDS-plus Schaft

### Einsatzbereich:

Zum Drehbohren in Fliesen, Mauerwerk, Metall, Holz und Kunststoff. Spezielle Schaftausführung mit automatischer Schlag-Stopp Funktion für SDS-plus Bohrhämmer, dadurch deutliche Verlängerung der Standzeit des Bohrers.



Automatische Schlag-Stopp Funktion  
Automatic hammer-stop function  
Función de parada automática



Für Metall, Mauerwerk und Fliesen  
For metal, masonry and tiles  
Para metal, albañilería y baldosas



Diamantgeschliffene, scharfe Schneiden  
Diamond ground, sharp cutting edges  
Filos muy afilados pulidos con diamante



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

Länge / Length / Longitud: 110/50 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 509<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------|----------------------|---------------|----|
| 5,00     | 110      | 50       | SDS-plus | 0050900500100        | 1             | 10 |
| 6,00     | 110      | 50       | SDS-plus | 0050900600100        | 1             | 10 |
| 8,00     | 110      | 50       | SDS-plus | 0050900800100        | 1             | 10 |

Länge / Length / Longitud: 160/100 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 519<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------|----------------------|---------------|----|
| 5,00     | 160      | 100      | SDS-plus | 0051900500100        | 1             | 10 |
| 6,00     | 160      | 100      | SDS-plus | 0051900600100        | 1             | 10 |
| 7,00     | 160      | 100      | SDS-plus | 0051900700100        | 1             | 10 |
| 8,00     | 160      | 100      | SDS-plus | 0051900800100        | 1             | 10 |
| 10,00    | 160      | 100      | SDS-plus | 0051901000100        | 1             | 10 |
| 12,00    | 160      | 100      | SDS-plus | 0051901200100        | 1             | 10 |
| 14,00    | 160      | 100      | SDS-plus | 0051901400100        | 1             | 10 |

Einzelverpackung  
Single pack  
Embalaje individual

**Länge / Length / Longitud: 210/150 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 529<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|----------------------|---------------|-----------------------------------------------------------------------------------|
| 6,00     | 210      | 150      | SDS-plus | 0052900600100        | 1             | 10                                                                                |
| 8,00     | 210      | 150      | SDS-plus | 0052900800100        | 1             | 10                                                                                |
| 10,00    | 210      | 150      | SDS-plus | 0052901000100        | 1             | 10                                                                                |
| 12,00    | 210      | 150      | SDS-plus | 0052901200100        | 1             | 10                                                                                |
| 14,00    | 210      | 150      | SDS-plus | 0052901400100        | 1             | 10                                                                                |

**Länge / Length / Longitud: 260/200 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 539<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|----------------------|---------------|-----------------------------------------------------------------------------------|
| 6,00     | 260      | 200      | SDS-plus | 0053900600100        | 1             | 10                                                                                |
| 6,50     | 260      | 200      | SDS-plus | 0053900650100        | 1             | 10                                                                                |
| 8,00     | 260      | 200      | SDS-plus | 0053900800100        | 1             | 10                                                                                |
| 10,00    | 260      | 200      | SDS-plus | 0053901000100        | 1             | 10                                                                                |
| 12,00    | 260      | 200      | SDS-plus | 0053901200100        | 1             | 10                                                                                |
| 14,00    | 260      | 200      | SDS-plus | 0053901400100        | 1             | 10                                                                                |
| 16,00    | 260      | 200      | SDS-plus | 0053901600100        | 1             | 10                                                                                |

**Länge / Length / Longitud: 450/400 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 579<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|----------------------|---------------|-------------------------------------------------------------------------------------|
| 6,50     | 450      | 400      | SDS-plus | 0057900650100        | 1             | 10                                                                                  |
| 8,00     | 450      | 400      | SDS-plus | 0057900800100        | 1             | 10                                                                                  |
| 10,00    | 450      | 400      | SDS-plus | 0057901000100        | 1             | 10                                                                                  |
| 12,00    | 450      | 400      | SDS-plus | 0057901200100        | 1             | 10                                                                                  |
| 14,00    | 450      | 400      | SDS-plus | 0057901400100        | 1             | 10                                                                                  |
| 16,00    | 450      | 400      | SDS-plus | 0057901600100        | 1             | 10                                                                                  |
| 18,00    | 450      | 400      | SDS-plus | 0057901800100        | 1             | 10                                                                                  |
| 20,00    | 450      | 400      | SDS-plus | 0057902000100        | 1             | 10                                                                                  |



Spezialbohrer  
special drill bit  
broca especial

**Automatische  
Schlag-Stopp-Funktion**  
Automatic hammer-stop  
function  
Función automática de  
parada de percusión





**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

| <b>Profi Multicut PM 3</b><br>       |                                           |                                           | <b>Profi Multicut PM 5</b><br>       |                                           |                                           | <b>Profi Multicut BOX 4</b><br>                      |         |                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------------------------------|
| 3-tlg. / 3-pcs. / 3-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100703100                                                                                        |                                           |                                           | 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100705100                                                                                        |                                           |                                           | 4-tlg. / 4-pcs. / 4-unid.<br>Kunststoffbox / Plastic box / Caja de plástico<br>Art.-Nr. 0000100808100                                                                                                                      |         |                                           |
| Ø<br>mm                                                                                                                                                                                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |                                           | Ø<br>mm                                                                                                                                                                                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |                                           | Ø<br>mm                                                                                                                                                                                                                    | l<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| Profi Multicut                                                                                                                                                                                         |                                           |                                           | Profi Multicut                                                                                                                                                                                         |                                           |                                           | Profi Multicut                                                                                                                                                                                                             |         |                                           |
| Ø 5,00 / 6,00 / 8,00                                                                                                                                                                                   |                                           |                                           | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                                    |                                           |                                           | Ø 6,00 / 8,00 / 10,00 / 12,00                                                                                                                                                                                              |         |                                           |
| 1                                                                                                                                                                                                      |                                           |                                           | 1                                                                                                                                                                                                      |                                           |                                           | 1                                                                                                                                                                                                                          |         |                                           |
| <b>Profi Multicut ATM 3</b><br>    |                                           |                                           | <b>Profi Multicut ATM 5</b><br>    |                                           |                                           | <b>Profi Multicut ATM 6</b><br>                    |         |                                           |
| 3-tlg. / 3-pcs. / 3-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100803100                                                                                        |                                           |                                           | 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100805100                                                                                        |                                           |                                           | 6-tlg. / 6-pcs. / 6-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100802100                                                                                                            |         |                                           |
| Ø<br>mm                                                                                                                                                                                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |                                           | Ø<br>mm                                                                                                                                                                                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |                                           | Ø<br>mm                                                                                                                                                                                                                    |         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| Profi Multicut                                                                                                                                                                                         |                                           |                                           | Profi Multicut                                                                                                                                                                                         |                                           |                                           | Profi Multicut                                                                                                                                                                                                             |         |                                           |
| Ø 5,00 / 6,00 / 8,00                                                                                                                                                                                   |                                           |                                           | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                                    |                                           |                                           | Ø 4,00 / 5,00 / 6,00 / 7,00 / 8,00 / 10,00                                                                                                                                                                                 |         |                                           |
| 1                                                                                                                                                                                                      |                                           |                                           | 1                                                                                                                                                                                                      |                                           |                                           | 1                                                                                                                                                                                                                          |         |                                           |
| <b>Profi Multicut SPM 5</b><br>  |                                           |                                           | <b>Profi Multicut BOX 4</b><br>  |                                           |                                           | <b>Combi Construction Set SDS-plus MB 7</b><br>  |         |                                           |
| 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100905100                                                                                        |                                           |                                           | 4-tlg. / 4-pcs. / 4-unid.<br>Kunststoffbox / Plastic box / Caja de plástico<br>Art.-Nr. 0057900004100                                                                                                  |                                           |                                           | 7-tlg. / 7-pcs. / 7-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100007100                                                                                                            |         |                                           |
| Ø<br>mm                                                                                                                                                                                                | l<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                | l<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                                    | l<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| Profi Multicut                                                                                                                                                                                         |                                           |                                           | Profi Multicut                                                                                                                                                                                         |                                           |                                           | F4 Forte                                                                                                                                                                                                                   |         |                                           |
| Ø 5,00 / 6,00                                                                                                                                                                                          |                                           |                                           | Ø 8,00 / 10,00 / 12,00 / 16,00                                                                                                                                                                         |                                           |                                           | Ø 5,00                                                                                                                                                                                                                     |         |                                           |
| 110                                                                                                                                                                                                    |                                           |                                           | 450                                                                                                                                                                                                    |                                           |                                           | 110                                                                                                                                                                                                                        |         |                                           |
| 1                                                                                                                                                                                                      |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | 1                                                                                                                                                                                                                          |         |                                           |
| Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                  |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                                      |         |                                           |
| 160                                                                                                                                                                                                    |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | 160                                                                                                                                                                                                                        |         |                                           |
| 1                                                                                                                                                                                                      |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | Profi Multicut                                                                                                                                                                                                             |         |                                           |
|                                                                                                                                                                                                        |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | Ø 5,00                                                                                                                                                                                                                     |         |                                           |
|                                                                                                                                                                                                        |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | 110                                                                                                                                                                                                                        |         |                                           |
|                                                                                                                                                                                                        |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | 1                                                                                                                                                                                                                          |         |                                           |
|                                                                                                                                                                                                        |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | Ø 6,00 / 8,00                                                                                                                                                                                                              |         |                                           |
|                                                                                                                                                                                                        |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | 160                                                                                                                                                                                                                        |         |                                           |
|                                                                                                                                                                                                        |                                           |                                           |                                                                                                                                                                                                        |                                           |                                           | 1                                                                                                                                                                                                                          |         |                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos


Spezialbohrer  
special drill bit  
broca especial

KIT SET 13-1



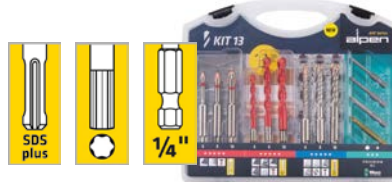
13-tlg. / 13-pcs. / 13-unid.

Set

Art.-Nr. 0000303213100

| Ø<br>mm                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------------|-------------------------------------------|-----------------------------------------------------|-------------------------------------------|
| C PROTECTOR                                         |                                           | C PROTECTOR                                         |                                           |
| Ø 5,00 / 6,00 / 8,00                                | 1                                         | Ø 6,00 / 8,00 / 10,00                               | 1                                         |
| F4 Forte                                            |                                           | FORCE X                                             |                                           |
| Ø 5,00 / 6,00 / 8,00                                | 1                                         | Ø 6,00 / 8,00 / 10,00                               | 1                                         |
| Profi Multicut                                      |                                           | Profi Multicut                                      |                                           |
| Ø 5,00 / 6,00 / 8,00                                | 1                                         | Ø 6,00 / 8,00 / 10,00                               | 1                                         |
| Wera                                                |                                           | Wera                                                |                                           |
| 4 Bits sortiert / 4 Bits sorted / 4 brocas surtidas |                                           | 4 Bits sortiert / 4 Bits sorted / 4 brocas surtidas |                                           |

KIT SET 13



13-tlg. / 13-pcs. / 13-unid.

Set

Art.-Nr. 0000303513100

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**Keine Ausbrüche**

Einzigartige Schneidengeometrie verhindert ein Ausbrechen der Hohlräume

**No breakoffs**

*Unique cutting geometry prevents cavities from breaking off*

**Sin requibrado**

*La geometría de corte exclusiva impide la rotura de los huecos*

**Perfekter Dübelhalt**

Durch geometrisch exakte Löcher wird ein perfekter Dübelhalt garantiert

**Perfect dowel hold**

*Geometrically exact holes guarantee perfect hold of dowel*

**Sujeción perfecta del taco**

*Sujeción perfecta del taco garantizada gracias a los orificios con geometría exacta*

**Optimale Bohrleistung für Hohlziegel**

Bruchsicheres Drehbohren für exakte Löcher

**Optimal drilling performance for cavity bricks**

*Shatter-proof rotary drilling for precise holes*

**Capacidad de perforación óptima para ladrillos huecos**

*Taladrado rotativo resistente a las roturas para agujeros exactos*





## D Hartmetall-Hohlziegelbohrer mit zylindrischem Schaft

### Einsatzbereich:

Spezialbohrer zum bruchsicheren Drehbohren von Hohlziegeln. Durch einzigartige Schneidengeometrie wird ein Ausbrechen der Hohlräume verhindert und somit ein sicherer Dübelhalt gewährleistet.

## E Tungsten carbide cavity brick drill bits with cylindrical shank

### Range of application:

Special drill bits for shatter-proof rotary drilling of cavity bricks. The unique cutting geometry prevents the cavities from breaking and thereby ensures a secure dowel hold.

## ES Broca de metal duro para ladrillos huecos con eje cilíndrico

### Ámbito de aplicación:

Broca especial para el taladrado rotativo resistente a las roturas de ladrillos huecos. Gracias a la geometría de corte exclusiva se impide la rotura de los huecos y, por lo tanto, se garantiza una sujeción segura de la espiga.



Bruchsicheres Bohren / Für perfekten Dübelhalt  
Shatter-proof drilling / secure dowel hold  
Taladro a prueba de rotura / Para una sujeción de espigas perfecta



Optimale Bohrleistung durch Spezialanschliff  
Optimum drilling performance thanks to a special point shape  
Óptima potencia de taladrado gracias a su punta afilada especial



Sicher  
Secure  
Segura



Spezialbohrer  
special drill bit  
broca especial



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 352<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|----------------------|---------------|----|
| 4,00     | 5/32       | 75       | 39       | 0035200400100        | 1             | 10 |
| 5,00     | 3/16       | 85       | 39       | 0035200500100        | 1             | 10 |
| 6,00     | 15/64      | 100      | 54       | 0035200600100        | 1             | 10 |
| 8,00     | 5/16       | 120      | 80       | 0035200800100        | 1             | 10 |
| 10,00    | 3/8        | 120      | 80       | 0035201000100        | 1             | 10 |

### Profi Ziegel PZ 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000200705100

| Ø<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------|-------------------------------------------|
|---------|-------------------------------------------|

Profi Ziegel

|                                     |   |
|-------------------------------------|---|
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1 |
|-------------------------------------|---|

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



## **DUST EXTRACTOR SHARP**



### **Der neue 2 in 1 Bohrer**

Bohren und Staubsaugen in einem Schritt

### **The new 2-in-1 drill bit**

Drilling and dust extraction in a single step

### **Nueva broca 2 en 1**

Perforación y aspiración en un paso

### **Saubere, staubfreie Bohrlöcher**

Erspart lästige Reinigung und ermöglicht das sichere Einsetzen chemischer Dübel

### **Clean, dust-free drill holes**

Saves annoying cleaning and enables safe insertion of chemical dowels

### **Agujeros limpios y sin polvo**

Evita el fastidio de la limpieza y permite el uso seguro de tacos químicos

### **Schützt den Anwender**

Gesundheitliche Belastungen werden vermieden

### **Protects the user**

Health risks are avoided

### **Protección del usuario**

Se evita poner en riesgo la salud



## D Hartmetall-Saugbohrer für Ziegel mit SDS-plus Schaft

### Einsatzbereich:

Spezialbohrer zum bruchsicheren Drehbohren von Voll- und Hohlziegeln sowie Fliesen. Durch einzigartige Schneidengeometrie wird ein Ausbrechen der Hohlräume verhindert und somit ein sicherer Dübelhalt gewährleistet.

## E Tungsten carbide extraction drill bits for bricks with SDS-plus shank

### Range of application:

Special drill bits for shatter-proof rotary drilling of solid and cavity bricks as well as tiles. The unique cutting geometry prevents the cavities from breaking and thereby ensures a secure dowel hold.

## ES Broca de aspiración de metal duro para ladrillos con eje SDS-plus

### Ámbito de aplicación:

Broca especial para el taladrado rotativo resistente a roturas de ladrillos macizos, ladrillos huecos y baldosas. Gracias a la geometría de corte exclusiva se impide la rotura de los huecos y, por lo tanto, se garantiza una sujeción segura de la espiga.



Bruchsicheres Bohren / Für perfekten Dübelhalt  
Shatter-proof drilling / secure dowel hold  
Taladro a prueba de rotura / Para una sujeción de espigas perfecta



Optimale Bohrleistung durch Spezialanschliff  
Optimum drilling performance thanks to a special point shape  
Óptima potencia de taladrado gracias a su punta afilada especial



Sicher  
Secure  
Segura



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



SB-Aufhänger  
Plastic tag  
Gancho para autoservicio

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 680<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------|----------------------|---------------|---|
| 6,00     | 220      | 100      | SDS-plus | 0068000600100        | 1             | 1 |
| 8,00     | 270      | 150      | SDS-plus | 0068000800100        | 1             | 1 |
| 10,00    | 270      | 150      | SDS-plus | 0068001000100        | 1             | 1 |
| 12,00    | 320      | 200      | SDS-plus | 0068001200100        | 1             | 1 |
| 14,00    | 370      | 250      | SDS-plus | 0068001400100        | 1             | 1 |
| 16,00    | 370      | 250      | SDS-plus | 0068001600100        | 1             | 1 |

**Automatische Schlag-Stopp-Funktion**  
Automatic hammer-stop function  
Función automática de parada de percusión





**Für harte Materialien**

Selbst für die härtesten Dachziegel geeignet

**For hard materials**

Suitable even for the hardest roof tiles

**Para materiales duros**

Apta incluso para las tejas más duras

**Passt. Sitzt. Hält.**

Durch genormtes Schaftprofil passend für jeden Standard-Akkuschrauber

**Fits. Sits. Holds.**

Due to standardized shank profile suitable for any standard cordless drill

**Apta. Encaja. Resiste.**

Gracias a su perfil de eje conforme a la norma, es apta para todos los destornilladores a batería estándar

**Exakte Ergebnisse**

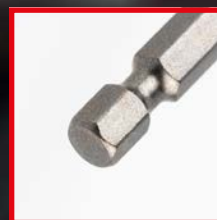
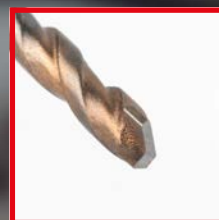
Präzisionsgeschliffene Spiralnuten sorgen für exakte Bohrungen

**Precise results**

Precision-ground spiral flutes ensure accurate holes

**Resultados exactos**

Las ranuras en espiral afiladas con precisión garantizan perforaciones exactas



## D Hartmetall-Dachziegelbohrer mit 1/4"-Sechskantschaft

### Einsatzbereich:

Spezialbohrer zum Drehbohren in Dachziegel, Dachstein, Eternit, Schiefer, Keramik, Fliesen, Marmor und Granit. Passend für jeden Standard-Akkuschrauber durch genormtes Schaftprofil.



Für härteste Dachziegel / Lange Lebensdauer  
For the hardest roof tiles / Long tool life  
Para las tejas más duras / Larga vida útil

## E Tungsten carbide roof tile drill bits with 1/4" hexagonal shank

### Range of application:

Special drill bits for rotary drilling in roof tiles, concrete tiles, cement asbestos, slate, ceramics, tiles, marble and granite. Suitable for all standard cordless drills with standardised shank profile.



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Hart  
Hard  
Dura

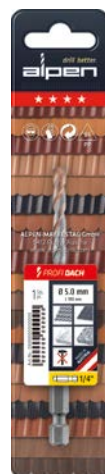
## ES Broca de metal duro para tejas con eje hexagonal 1/4"

### Ámbito de aplicación:

Broca especial para el taladrado rotativo de tejas, tejas de material no cerámico, eternita, pizarra, cerámica, baldosas, mármol y granito. Adecuada para todos los destornilladores con baterías convencionales gracias al perfil de eje normativo.



Spezialbohrer  
special drill bit  
broca especial



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2<br>mm | Code 252<br>Art.-Nr. | Inh.<br>Cont. |    | Code 253<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 3,50     |            | 100      | 39       | 1/4"     | 0025200350100        | 1             | 10 | 0025300350100        | 10            |
| 4,00     | 5/32       | 100      | 39       | 1/4"     | 0025200400100        | 1             | 10 | 0025300400100        | 10            |
| 5,00     | 3/16       | 100      | 39       | 1/4"     | 0025200500100        | 1             | 10 | 0025300500100        | 10            |
| 6,00     | 15/64      | 100      | 54       | 1/4"     | 0025200600100        | 1             | 10 | 0025300600100        | 10            |



**PROFI GRANIT**



**Schnell und präzise**

Optimierte Schneidengeometrie sorgt für schnelles und präzises Arbeiten

**Fast and precise**

*Optimized cutting geometry ensures fast and precise work*

**Rápido y preciso**

*La geometría optimizada de los filos permite trabajar de forma rápida y precisa*

**Optimale Bohrmehlförderung**  
durch spezielle Spiralnutgeometrie

**Optimal drilling dust transport**  
with special spiral flute geometry

**Eliminación óptima de los detritos**  
gracias a la geometría especial de la ranura en espiral

**Für harte Materialien**  
Selbst der härteste Granit und Marmor lässt sich dank der Hartmetall-Platte exakt bohren

**For hard materials**  
*Even the hardest granite and marble can be drilled accurately thanks to the carbide plate*

**Para materiales duros**  
*Permite incluso la perforación del granito y del mármol más resistente gracias a su placa de metal duro*



**alpen** *drill better.*



## D Hartmetall-Granitbohrer, DIN ISO 5468

### Einsatzbereich:

Spezialbohrer zum Dreh- und Schlagbohren von Granit und Marmor. Durch spezielle Bohrer-geometrie und Hartmetall-Platte sehr gut geeignet zum Bohren von allen Granitsorten - auch in den härtesten.



Präzise  
Precise  
Preciso



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Stabil  
Stable  
Estable

## E Tungsten carbide granite drill bits DIN ISO 5468

### Range of application:

Special drill bits for rotary and percussion drilling of granite and marble. Extremely suitable for drilling all granite types with special drill bit geometry and carbide plate - even the hardest of granite.

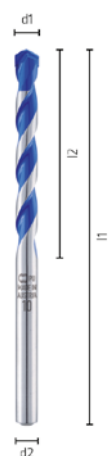
## ES Broca de metal duro para grani- to, DIN ISO 5468

### Ámbito de aplicación:

Broca especial para el taladrado rotativo y a percusión de granito y mármol. Gracias a la geometría especial de la broca y la placa de metal duro es muy adecuada para taladrar cualquier tipo de granito, incluso los más duros.



Spezialbohrer  
special drill bit  
broca especial



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 257<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|-------|----------------------|---------------|----|
| 4,00     | 5/32       | 75       | 39       |       | 0025700400100        | 1             | 10 |
| 5,00     | 3/16       | 85       | 39       |       | 0025700500100        | 1             | 10 |
| 6,00     | 15/64      | 100      | 54       |       | 0025700600100        | 1             | 10 |
| 8,00     | 5/16       | 120      | 80       |       | 0025700800100        | 1             | 10 |
| 10,00    | 3/8        | 120      | 80       |       | 0025701000100        | 1             | 10 |
| 12,00    | 15/32      | 150      | 90       | 10,00 | 0025701200100        | 1             | 10 |
| 14,00    | 9/16       | 150      | 90       | 10,00 | 0025701400100        | 1             | 10 |

### Profi Granit PG 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0025700005100

| Ø  | Stk. <sup>(1)</sup> |
|----|---------------------|
| mm | pc. <sup>(1)</sup>  |

Profi Granit

|                                     |   |
|-------------------------------------|---|
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1 |
|-------------------------------------|---|

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D Hartmetall-Granitbohrer, DIN ISO 5468

### Einsatzbereich:

Spezialbohrer zum Schlagbohren von Granit und Marmor. Durch spezielle Bohrer-Geometrie und Hartmetall-Platte sehr gut geeignet zum Bohren von Granit.

## E Tungsten carbide granite drill bits DIN ISO 5468

### Range of application:

Special drill bits for percussion drilling of granite and marble. Extremely suitable for drilling granite with special drill bit geometry and carbide plate.

## ES Broca de metal duro para grani- to, DIN ISO 5468

### Ámbito de aplicación:

Broca especial para el taladrado a percusión de granito y mármol. Gracias a la geometría especial de la broca y la placa de metal duro es muy adecuada para taladrar el granito.



Präzise  
Precise  
Preciso



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Stabil  
Stable  
Estable



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish



Gewerbepack mit Aufhänger  
Industrial packing with tag  
Paquete industrial con gancho

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 258<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|-------|----------------------|---------------|
| 4,00     | 5/32       | 75       | 39       |       | 0025800400100        | 10            |
| 5,00     | 3/16       | 85       | 39       |       | 0025800500100        | 10            |
| 6,00     | 15/64      | 100      | 54       |       | 0025800600100        | 10            |
| 8,00     | 5/16       | 120      | 80       |       | 0025800800100        | 10            |
| 10,00    | 3/8        | 120      | 80       |       | 0025801000100        | 10            |
| 12,00    | 15/32      | 150      | 90       | 10,00 | 0025801200100        | 5             |



#### **Der Problemlöser**

Präzise Ergebnisse selbst für die härtesten Feinsteinzeugfliesen

#### ***The problem solver***

*Precise results even for the hardest porcelain stoneware tiles*

#### ***La solución a los problemas***

*Resultados precisos incluso en los azulejos de gres más duros*

#### **Stabiles, bruchssicheres Bohren**

Garantiert jede Bohrung ohne Riss

#### ***Stable, shatter-proof drilling***

*Guarantees every hole without a crack*

#### ***Perforación estable resistente a las roturas***

*Garantiza perforaciones sin grietas*

#### **Einfach und exakt**

Der neue Anti-slip Schaft verhindert das Durchdrehen und sichert somit eine leichte, exakte Bohrung

#### ***Simple and precise***

*The new anti-slip shank prevents spinning and ensures easy, accurate drilling*

#### ***Fácil y preciso***

*El nuevo eje antideslizante evita la rotación y asegura una perforación fácil y precisa*





## D Feinsteinzeug-Fliesenbohrer "C PROTECTOR"

### Einsatzbereich:

Für extrem harte Steinzeugfliesen bis Mohs-/ Ritz-Härte 9 sowie Glas und Porzellan. Keine Kühlung erforderlich. Nicht geeignet zum Schlagbohren.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Ideal zum Trockenbohren  
Ideal for dry drilling  
Ideal para perforaciones en seco



Anti-slip Schaft  
Anti-slip shank  
Mango anti-slip

## E Porcelain / gres tile drill bit "C PROTECTOR"

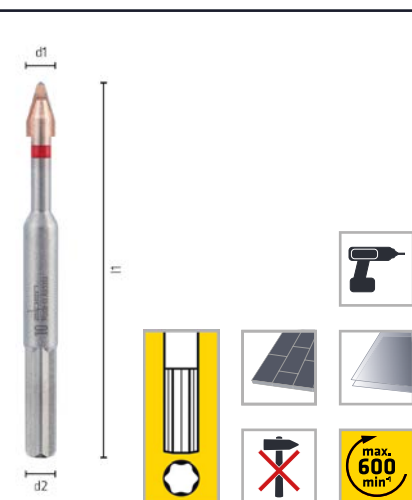
### Range of application:

For extremely hard porcelain tiles up to Mohs / Ritz hardness 9 and glass. No cooling required. Not suitable for percussion drilling.

## E Broca para baldosas de gres porcelánico "C PROTECTOR"

### Ámbito de aplicación:

Para baldosas de gres extremadamente duros con una dureza 9 de Mohs / Ritz y vidrio y porcelana. No es necesaria la refrigeración. No adecuado para el taladrado a percusión.



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | d1<br>inch | l1<br>mm | d2<br>mm |
|----------|------------|----------|----------|
| 5,00     | 3/16       | 103      | 10,00    |
| 6,00     | 15/64      | 105      | 10,00    |
| 8,00     | 5/16       | 106      | 10,00    |
| 10,00    | 3/8        | 107      |          |
| 12,00    | 15/32      | 110      | 10,00    |

| Code 303<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------------------|---------------|----|
| 0030300500100        | 1             | 10 |
| 0030300600100        | 1             | 10 |
| 0030300800100        | 1             | 10 |
| 0030301000100        | 1             | 10 |
| 0030301200100        | 1             | 10 |

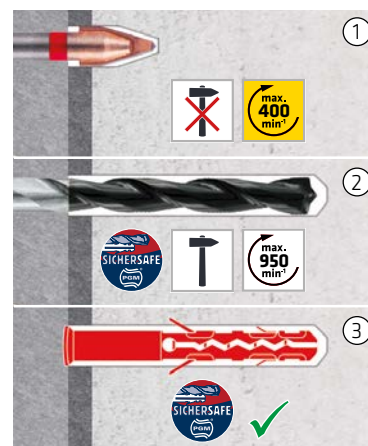
| Code 20303<br>Art.-Nr. | Inh.<br>Cont. |
|------------------------|---------------|
| 2030300600100          | 3             |
| 2030300800100          | 3             |

### C PROTECTOR ATM 2



2-tlg. / 2-pcs. / 2-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000303002100

| Ø<br>mm        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------|-------------------------------------------|
| C PROTECTOR    |                                           |
| Ø 14,00 / 8,00 | 1                                         |



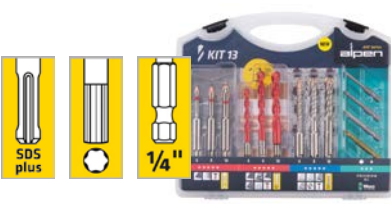
Vorböhrer mit Ø 8,00 mm / To pre-drill with Ø 8,00 mm / Pretaladrado con Ø 8,00 mm

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| <b>C PROTECTOR BOX 3</b><br>   |                                           | <b>C PROTECTOR ATM 2</b><br>   |                                           | <b>C PROTECTOR ATM 2</b><br> |                                           |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 3-tlg. / 3-pcs. / 3-unid.<br>Kunststoffbox / Plastic box / Caja de plástico<br>Art.-Nr. 0000303003100           |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303052100 |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303062100 |                                           |
| Ø<br>mm                                                                                                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| C PROTECTOR                                                                                                     |                                           | C PROTECTOR                                                                                                     |                                           | C PROTECTOR                                                                                                     |                                           |
| Ø 6,00 / 8,00 / 10,00                                                                                           | 1                                         | Ø 5,00                                                                                                          | 1                                         | Ø 6,00                                                                                                          | 1                                         |
|                                                                                                                 |                                           | Profi Beton                                                                                                     |                                           | Profi Beton                                                                                                     |                                           |
|                                                                                                                 |                                           | Ø 5,00                                                                                                          | 1                                         | Ø 6,00                                                                                                          | 1                                         |
| <b>C PROTECTOR ATM 2</b><br>  |                                           | <b>C PROTECTOR ATM 2</b><br>  |                                           | <b>KIT SET 13-1</b><br>     |                                           |
| 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303082100 |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303102100 |                                           | 13-tlg. / 13-pcs. / 13-unid.<br>Set<br>Art.-Nr. 0000303213100                                                   |                                           |
| Ø<br>mm                                                                                                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| C PROTECTOR                                                                                                     |                                           | C PROTECTOR                                                                                                     |                                           | C PROTECTOR                                                                                                     |                                           |
| Ø 8,00                                                                                                          | 1                                         | Ø 10,00                                                                                                         | 1                                         | Ø 5,00 / 6,00 / 8,00                                                                                            | 1                                         |
| Profi Beton                                                                                                     |                                           | Profi Beton                                                                                                     |                                           | F4 Forte                                                                                                        |                                           |
| Ø 8,00                                                                                                          | 1                                         | Ø 10,00                                                                                                         | 1                                         | Ø 5,00 / 6,00 / 8,00                                                                                            | 1                                         |
|                                                                                                                 |                                           |                                                                                                                 |                                           | Profi Multicut                                                                                                  |                                           |
|                                                                                                                 |                                           |                                                                                                                 |                                           | Ø 5,00 / 6,00 / 8,00                                                                                            | 1                                         |
|                                                                                                                 |                                           |                                                                                                                 |                                           | Wera                                                                                                            |                                           |
|                                                                                                                 |                                           |                                                                                                                 |                                           | 4 Bits sortiert / 4 Bits sorted / 4 brocas surtidas                                                             |                                           |
| <b>KIT SET 13</b><br>        |                                           | <b>Ø<br/>mm</b><br><b>Stk.<sup>(1)</sup><br/>pc.<sup>(1)</sup></b>                                              |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | C PROTECTOR                                                                                                     |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | Ø 6,00 / 8,00 / 10,00                                                                                           |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | FORCE X                                                                                                         |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | Ø 6,00 / 8,00 / 10,00                                                                                           |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | Profi Multicut                                                                                                  |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | Ø 6,00 / 8,00 / 10,00                                                                                           |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | Wera                                                                                                            |                                           |                                                                                                                 |                                           |
|                                                                                                                 |                                           | 4 Bits sortiert / 4 Bits sorted / 4 brocas surtidas                                                             |                                           |                                                                                                                 |                                           |
| 13-tlg. / 13-pcs. / 13-unid.<br>Set<br>Art.-Nr. 0000303513100                                                   |                                           |                                                                                                                 |                                           |                                                                                                                 |                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## ① Feinsteinzeug-Fliesenbohrer

## ② Porcelain / gres tile drill bit

## ③ Broca para baldosas de gres porcelánico

### Einsatzbereich:

Für extrem harte Steinzeugfliesen bis Mohs-/Ritz-Härte 9 sowie Glas und Porzellan. Keine Kühlung erforderlich. Spindeldrehzahl max. 200 U/min beachten. Nicht geeignet zum Schlagbohren.

### Range of application:

For extremely hard porcelain/gres tiles up to Mohs/Ritz hardness 9 and glass. No cooling required. Please note max. spindle speed 200 rpm. Not suitable for percussion drilling.

### Ámbito de aplicación:

Para baldosas de gres extremadamente duras con una dureza 9 de Mohs/Ritz y vidrio y porcelana. No es necesaria la refrigeración. No superar la velocidad del husillo máxima de 200 r.p.m. No adecuada para el taladrado a percusión.



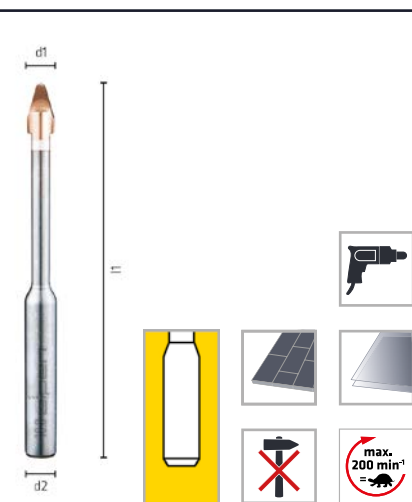
Für härteste Steinzeugfliesen bis Mohs-/Ritz-Härte 9  
For hardest porcelain/gres tiles up to Mohs/Ritz hardness 9  
Para las baldosas de gres más duras hasta una dureza de 9 en la escala Mohs



Ideal zum Trockenbohren  
Ideal for dry drilling  
Ideal para perforaciones en seco



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | d1<br>inch | l1<br>mm | d2<br>mm |
|----------|------------|----------|----------|
| 5,00     | 3/16       | 105      | 10,00    |
| 6,00     | 15/64      | 115      | 10,00    |
| 8,00     | 5/16       | 120      | 10,00    |
| 10,00    | 3/8        | 120      | 10,00    |
| 12,00    | 15/32      | 120      | 10,00    |

| Code 300<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------------------|---------------|----|
| 0030000500100        | 1             | 10 |
| 0030000600100        | 1             | 10 |
| 0030000800100        | 1             | 10 |
| 0030001000100        | 1             | 10 |
| 0030001200100        | 1             | 10 |

| Code 20300<br>Art.-Nr. | Inh.<br>Cont. |
|------------------------|---------------|
| 2030000600100          | 3             |
| 2030000800100          | 3             |

### Keramo Extreme 2



2-tlg. / 2-pcs. / 2-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000300002100

| Ø<br>mm        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------|-------------------------------------------|
| Keramo Extreme |                                           |
| Ø 14,00 / 8,00 | 1                                         |

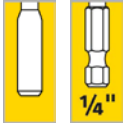
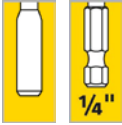
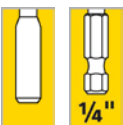
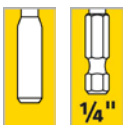
Vorbohren mit Ø 8,00 mm / To pre-drill with Ø 8,00 mm  
/ Pretaladrado con Ø 8,00 mm  
<sup>(1)</sup> Stück je Abmessung / Pieces each dimension  
/ Piezas por diámetro



## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| <b>Keramo Extreme BOX 3</b><br><br>    |                                           | <b>Keramo Extreme ATM 2</b><br><br>    |                                           | <b>Keramo Extreme ATM 2</b><br><br> |                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 3-tlg. / 3-pcs. / 3-unid.<br>Kunststoffbox / Plastic box / Caja de plástico<br>Art.-Nr. 0000300003100                                                                                                    |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000300052100                                                                                          |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000300062100                                                                                           |                                           |
| Ø<br>mm                                                                                                                                                                                                  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| Keramo Extreme                                                                                                                                                                                           |                                           | Keramo Extreme                                                                                                                                                                                           |                                           | Keramo Extreme                                                                                                                                                                                            |                                           |
| Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                    | 1                                         | Ø 5,00                                                                                                                                                                                                   | 1                                         | Ø 6,00                                                                                                                                                                                                    | 1                                         |
|                                                                                                                                                                                                          |                                           | Profi Beton                                                                                                                                                                                              |                                           | Profi Beton                                                                                                                                                                                               |                                           |
|                                                                                                                                                                                                          |                                           | Ø 5,00                                                                                                                                                                                                   | 1                                         | Ø 6,00                                                                                                                                                                                                    | 1                                         |
| <b>Keramo Extreme ATM 2</b><br><br> |                                           | <b>Keramo Extreme ATM 2</b><br><br> |                                           |                                                                                                                                                                                                           |                                           |
| 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000300082100                                                                                          |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000300102100                                                                                          |                                           |                                                                                                                                                                                                           |                                           |
| Ø<br>mm                                                                                                                                                                                                  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |                                                                                                                                                                                                           |                                           |
| Keramo Extreme                                                                                                                                                                                           |                                           | Keramo Extreme                                                                                                                                                                                           |                                           |                                                                                                                                                                                                           |                                           |
| Ø 8,00                                                                                                                                                                                                   | 1                                         | Ø 10,00                                                                                                                                                                                                  | 1                                         |                                                                                                                                                                                                           |                                           |
| Profi Beton                                                                                                                                                                                              |                                           | Profi Beton                                                                                                                                                                                              |                                           |                                                                                                                                                                                                           |                                           |
| Ø 8,00                                                                                                                                                                                                   | 1                                         | Ø 10,00                                                                                                                                                                                                  | 1                                         |                                                                                                                                                                                                           |                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

Spezialbohrer  
special drill bit  
broca especial

## D Hartmetall-Keramikbohrer, DIN ISO 5468

### Einsatzbereich:

Hochleistungsbohrer zum Drehbohren von Fliesen, Keramik und Marmor. Nicht geeignet zum Schlagbohren.

## E Tungsten carbide rotary ceramic drill bits, DIN ISO 5468

### Range of application:

High efficiency drill for drilling tiles, ceramics and marble. Rotary only.

## ES Broca de metal duro para cerámica, DIN ISO 5468

### Ámbito de aplicación:

Broca de alto rendimiento para el taladrado rotativo de baldosas, cerámica y mármol. No adecuada para el taladrado a percusión.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



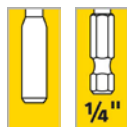
Stabil  
Stable  
Estable



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 297<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|-------|----------------------|---------------|----|
| 4,00     | 5/32       | 75       | 39       |       | 0029700400100        | 1             | 10 |
| 5,00     | 3/16       | 85       | 39       |       | 0029700500100        | 1             | 10 |
| 6,00     | 15/64      | 100      | 54       |       | 0029700600100        | 1             | 10 |
| 6,50     | 1/4        | 100      | 54       | 6,00  | 0029700650100        | 1             | 10 |
| 8,00     | 5/16       | 120      | 80       |       | 0029700800100        | 1             | 10 |
| 10,00    | 3/8        | 120      | 80       |       | 0029701000100        | 1             | 10 |
| 12,00    | 15/32      | 150      | 90       | 10,00 | 0029701200100        | 1             | 10 |

### Profi Keramo KSBF 8



8-tlg. / 8-pcs. / 8-unid.  
Metallkassette  
Art.-Nr. 0022700208100

| Ø<br>mm        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------|-------------------------------------------|
| Profi Glas     |                                           |
| Ø 5,00 / 6,00  | 1                                         |
| Profi Keramo   |                                           |
| Ø 5,00 / 10,00 | 1                                         |
| Ø 6,00 / 8,00  | 2                                         |

### Profi Keramo PK 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0022700205100

| Ø<br>mm                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------|-------------------------------------------|
| Profi Keramo                        |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D Diamant-Fliesenbohrer inkl. Bohrschablone

### Einsatzbereich:

Für extrem harte Steinzeugfliesen, extrem harte Dachziegel, Marmor, Granit, Glas sowie Porzellan. Speziell geeignet für Akku-Bohrmaschinen und Universalhalter durch genormtes Schaftprofil. Nicht geeignet zum Schlagbohren. Unbedingt mit Wasser kühlen!



Diamantbeschichtet für härteste Materialien  
Diamond coated for the hardest materials  
Con recubrimiento de diamant para los materiales más duros



Hart  
Hard  
Dura

## E Diamond tile drill bits incl. drilling template

### Range of application:

For extremely hard ceramic tiles, extremely hard roofing tiles, marble, granite, glass and porcelain. Suitable for any standard cordless drill thanks to its standardized shank profile. Not suitable for percussion drilling. Water cooling highly required.

## ES Broca de diamante para baldosas, incl. plantilla para taladrar

### Ámbito de aplicación:

Para baldosas de gres extremadamente duras, tejas extremadamente duras, mármol, granito, vidrio y porcelana. No adecuada para el taladrado a percusión. Especialmente adecuada para taladradoras con batería y soportes universales gracias a su perfil de eje normativo. Es indispensable enfriar con agua.



Blisterverpackung  
Blister packaging  
Embalaje en blíster

| d1<br>mm | d1<br>inch | l1<br>mm | d2<br>mm | Code 290<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|------------|----------|----------|----------------------|---------------|---|
| 5,00     | 3/16       | 60       | 1/4"     | 0029000500100        | 1             | 1 |
| 6,00     | 15/64      | 60       | 1/4"     | 0029000600100        | 1             | 1 |
| 8,00     | 5/16       | 60       | 1/4"     | 0029000800100        | 1             | 1 |
| 10,00    | 3/8        | 60       | 1/4"     | 0029001000100        | 1             | 1 |
| 12,00    | 15/32      | 60       | 1/4"     | 0029001200100        | 1             | 1 |
| 15,00    | 19/32      | 60       | 1/4"     | 0029001500100        | 1             | 1 |

Schaft nach DIN 3126, Form E6.3, ISO 1173 / Shank DIN 3126, Form E6.3, ISO 1173 /  
Eje según DIN 3126, forma E6.3, ISO 1173



Inkl. Bohrschablone  
Incl. drilling template  
Incl. plantilla para taladrar





## D Hartmetall-Glasbohrer

## E Tungsten carbide glass drill bits E Broca de metal duro para vidrio

### Einsatzbereich:

Zum Bohren von Glas, Flaschen, Porzellan, Fliesen usw. Nicht geeignet zum Schlagbohren.

### Range of application:

For drilling glass, bottles, porcelain, ceramics etc. Rotary only.

### Ámbito de aplicación:

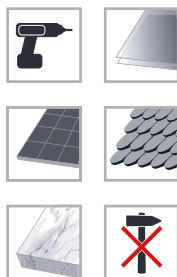
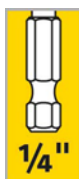
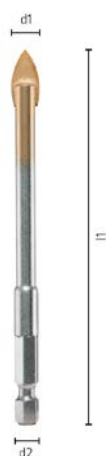
Para el taladrado de vidrio, botellas, porcelana, baldosas, etc. No adecuada para el taladrado a percusión.



Präzise  
Precise  
Preciso



Stabil  
Stable  
Estable



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish



Einzelverpackung  
Single pack  
Embalaje individual

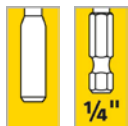
| d1<br>mm | d1<br>inch | l1<br>mm | d2<br>mm | Code 289<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|----------------------|---------------|----|
| 3,00     | 1/8        | 100      | 1/4"     | 0028900300100        | 1             | 10 |
| 4,00     | 5/32       | 100      | 1/4"     | 0028900400100        | 1             | 10 |
| 5,00     | 3/16       | 105      | 1/4"     | 0028900500100        | 1             | 10 |
| 6,00     | 15/64      | 105      | 1/4"     | 0028900600100        | 1             | 10 |
| 8,00     | 5/16       | 110      | 1/4"     | 0028900800100        | 1             | 10 |
| 10,00    | 3/8        | 130      | 1/4"     | 0028901000100        | 1             | 10 |
| 12,00    | 15/32      | 113      | 10,00    | 0028901200100        | 1             | 10 |

D Kassetten, Sets

E Cassettes, sets

ES Cajas, juegos

Profi Keramo KSBF 8



8-tlg. / 8-pcs. / 8-unid.  
Metallkassette  
Art.-Nr. 0022700208100

| Ø<br>mm        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------|-------------------------------------------|
| Profi Glas     |                                           |
| Ø 5,00 / 6,00  | 1                                         |
| Profi Keramo   |                                           |
| Ø 5,00 / 10,00 | 1                                         |
| Ø 6,00 / 8,00  | 2                                         |

Profi Glas ATM 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0028900003100

| Ø<br>mm              | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------------|-------------------------------------------|
| Profi Glas           |                                           |
| Ø 5,00 / 6,00 / 8,00 | 1                                         |



Spezialbohrer  
special drill bit  
broca especial

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D** Drehzahlen

**E** Spindle speeds

**ES** Velocidades

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

**Profi Multicut**



Code 172, 272, 729, 730, 509, 519, 529, 539, 579

| Ø<br>mm |                       |      |      | Alu  |      |      |
|---------|-----------------------|------|------|------|------|------|
|         |                       |      |      |      |      |      |
|         | U/min.   rpm   r.p.m. |      |      |      |      |      |
| 3       | 930                   | 4000 | 1590 | 2100 | 2600 | 1300 |
| 4       | 750                   | 3000 | 1200 | 1600 | 2000 | 1000 |
| 5       | 600                   | 2400 | 1000 | 1300 | 1600 | 800  |
| 5,5     | 545                   | 2185 | 900  | 1180 | 1450 | 730  |
| 6       | 500                   | 2000 | 800  | 1100 | 1300 | 700  |
| 6,5     | 465                   | 1850 | 770  | 1000 | 1230 | 620  |
| 7       | 450                   | 1750 | 700  | 900  | 1150 | 600  |
| 8       | 350                   | 1500 | 600  | 800  | 1000 | 500  |
| 10      | 300                   | 1200 | 500  | 650  | 800  | 400  |
| 12      | 250                   | 1000 | 400  | 550  | 650  | 350  |
| 14      | 200                   | 900  | 350  | 450  | 550  | 300  |
| 16      | 175                   | 750  | 300  | 400  | 500  | 250  |
| 18      | 165                   | 670  | 280  | 360  | 450  | 220  |
| 20      | 150                   | 600  | 240  | 320  | 400  | 200  |

**Profi Ziegel / DUST EXTRACTOR SHARP**



Code 352, 680

| Ø<br>mm |                       |      |
|---------|-----------------------|------|
|         |                       |      |
|         | U/min.   rpm   r.p.m. |      |
| 4       | 3000                  | 3000 |
| 5       | 2400                  | 2400 |
| 6       | 2000                  | 2000 |
| 8       | 1500                  | 1500 |
| 10      | 1200                  | 1200 |
| 12      | 1000                  | 1000 |
| 14      | 900                   | 900  |
| 16      | 800                   | 800  |





Spezialbohrer  
special drill bit  
broca especial

## Profi Dach



## Code 252, 253

| Ø<br>mm |                       |     |     |      |     |
|---------|-----------------------|-----|-----|------|-----|
|         | U/min.   rpm   r.p.m. |     |     |      |     |
| 3,5     | 1150                  | 700 | 850 | 1150 | 800 |
| 4       | 1000                  | 600 | 750 | 1000 | 700 |
| 5       | 900                   | 500 | 600 | 900  | 550 |
| 6       | 750                   | 400 | 500 | 750  | 450 |

## Profi Granit



## Code 257

| Ø<br>mm |                       |      |
|---------|-----------------------|------|
|         | U/min.   rpm   r.p.m. |      |
| 4       | 2000                  | 2400 |
| 5       | 1800                  | 2000 |
| 6       | 1400                  | 1700 |
| 8       | 1000                  | 1250 |
| 10      | 800                   | 1000 |
| 12      | 650                   | 800  |
| 14      | 600                   | 700  |

Beim Drehbohren in dünne Granitplatten  
Reduzierung der Drehzahlen um 70%.

Please reduce spindle speeds by 70%  
if drilling into thin granite tiles.

Cuando taladre en placas de granito finas,  
reduzca la velocidad en un 70%.

➊ Drehzahlen

➋ Spindle speeds

➌ Velocidades

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

Longlife Granit



Code 258

| Ø<br>mm | U/min.   rpm   r.p.m.                                                               |                                                                                     |
|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|         |  |  |
| 4       | 1850                                                                                | 2250                                                                                |
| 5       | 1650                                                                                | 1800                                                                                |
| 6       | 1300                                                                                | 1500                                                                                |
| 8       | 930                                                                                 | 1150                                                                                |
| 10      | 740                                                                                 | 900                                                                                 |
| 12      | 600                                                                                 | 750                                                                                 |

Keramo extreme



Code 300

| Ø<br>mm | U/min.   rpm   r.p.m.                                                               |                                                                                     |
|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|         |  |  |
| 5       | 500                                                                                 | 500                                                                                 |
| 6       | 400                                                                                 | 400                                                                                 |
| 8       | 300                                                                                 | 300                                                                                 |
| 10      | 300                                                                                 | 300                                                                                 |
| 12      | 300                                                                                 | 300                                                                                 |
| 14      | 200                                                                                 | 200                                                                                 |

C PROTECTOR



Code 303

| Ø<br>mm | U/min.   rpm   r.p.m.                                                                 |                                                                                       |
|---------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|         |  |  |
| 5       | 800                                                                                   | 800                                                                                   |
| 6       | 600                                                                                   | 600                                                                                   |
| 8       | 600                                                                                   | 600                                                                                   |
| 10      | 400                                                                                   | 400                                                                                   |
| 12      | 400                                                                                   | 400                                                                                   |
| 14      | 200                                                                                   | 200                                                                                   |



Spezialbohrer  
special drill bit  
broca especial

## Profi Keramo



## Code 297

Ø  
mm



U/min. | rpm | r.p.m.

|     |     |      |      |
|-----|-----|------|------|
| 4   | 750 | 1600 | 1000 |
| 5   | 600 | 1300 | 800  |
| 6   | 500 | 1100 | 700  |
| 6,5 | 450 | 1000 | 650  |
| 8   | 350 | 800  | 500  |
| 10  | 300 | 650  | 400  |
| 12  | 250 | 550  | 350  |

## Profi Diamant



## Code 290

Ø  
mm



U/min. | rpm | r.p.m.

|    |      |     |     |      |
|----|------|-----|-----|------|
| 5  | 1000 | 950 | 950 | 1500 |
| 6  | 900  | 800 | 800 | 1300 |
| 8  | 700  | 600 | 600 | 1000 |
| 10 | 550  | 500 | 500 | 800  |
| 12 | 450  | 400 | 400 | 650  |
| 15 | 400  | 350 | 350 | 550  |

## Profi Glas



## Code 289

Ø  
mm



U/min. | rpm | r.p.m.

|    |     |      |
|----|-----|------|
| 3  | 400 | 1000 |
| 4  | 300 | 750  |
| 5  | 250 | 600  |
| 6  | 200 | 500  |
| 8  | 150 | 350  |
| 10 | 100 | 300  |
| 12 | 75  | 250  |



# GESTEINSBOHRER, SDS-BOHRER UND MEISSEL

// SCHLAGBOHRER, HAMMERBOHRER, BOHRKRONEN UND MEISSEL





**E CONCRETE AND MASONRY DRILL  
BITS, SDS HAMMER DRILL BITS  
AND CHISELS**

// PERCUSSION DRILL BITS  
// HAMMER DRILL BITS  
// CORE BITS AND CHISELS

**ES BROCA PARA PIEDRA,  
BROCA DE PERCUSIÓN  
SDS Y CINCELES**

// BROCA DE PERCUSION  
// CORONAS DE PERFORAR Y CINCELES

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|                                                                                                                                                      |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                      |    |    |    |    |    |    |
| Norm / Estándar                                                                                                                                      | DIN ISO 5468                                                                        | WN                                                                                  | DIN ISO 5468                                                                        | WN                                                                                    | WN                                                                                    | WN                                                                                    |
| Name / Nombre                                                                                                                                        | Profi Beton                                                                         | Profi Beton                                                                         | Long Life                                                                           | FORCE X                                                                               | F4 Forte                                                                              | DUST EXTRACTOR SMASH                                                                  |
| Schaft / Shank / Eje                                                                                                                                 |  |  |  |  |  |  |
| Ø mm                                                                                                                                                 | 3,00 - 20,00                                                                        | 4,00 - 10,00                                                                        | 3,00 - 22,00                                                                        | 5,00 - 32,00                                                                          | 4,00 - 26,00                                                                          | 6,00 - 16,00                                                                          |
| Code / Código                                                                                                                                        | 188, 727, 737                                                                       | 189                                                                                 | 117, 118, 327, 367, 517, 617, 718                                                   | 762-765, 805, 815, 825, 835, 845, 875, 905, 915                                       | 768-771, 773, 778, 807, 817, 827, 837, 847, 877, 887, 913, 914                        | 580                                                                                   |
| Seite / Page / Página                                                                                                                                | 67                                                                                  | 69                                                                                  | 73                                                                                  | 79                                                                                    | 85                                                                                    | 93                                                                                    |
| Geeignet für / Suitable for / Adecuada para                                                                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Beton</b><br>Concrete<br>Hormigón                             |  |  |  |  |  |  |
|  <b>Armierter Beton</b><br>Reinforced concrete<br>Hormigón armado |                                                                                     |                                                                                     |                                                                                     |  |  |                                                                                       |
|  <b>Stein</b><br>Natural stone<br>Piedra                          |  |  |  |  |  |  |
|  <b>Ziegel</b><br>Brick<br>Ladrillo                               |  |  |  |  |  |  |
|  <b>Granit</b><br>Granite<br>Granito                              |  |  |  |  |  |  |
|  <b>Marmor</b><br>Marble<br>Mármol                                |  |  |  |  |  |  |

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|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
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|    |    |    |    |    |    |    |    |
| WN                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| SDS-plus Bohrkronen                                                                 | DEMOLISHER Plus                                                                     | DEMOLISHER Plus                                                                     | DEMOLISHER Plus                                                                     | SDS-plus Meißel                                                                     | SDS-plus Meißel                                                                     | SDS-plus Meißel                                                                       | SDS-plus Meißel                                                                       |
|  |  |  |  |  |  |  |  |
| 25,00 - 80,00                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| 897-899                                                                             | 987                                                                                 | 987                                                                                 | 987                                                                                 | 982                                                                                 | 983                                                                                 | 985                                                                                   | 981                                                                                   |
| 94                                                                                  | 95                                                                                  | 95                                                                                  | 95                                                                                  | 96                                                                                  | 96                                                                                  | 96                                                                                    | 96                                                                                    |
|  |  |  |  |  |  |  |  |
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Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y cirreles

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|                                                                                                                                                      |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
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|                                                                                                                                                      |    |    |    |    |    |    |
| Norm / Estándar                                                                                                                                      |                                                                                     |                                                                                     | WN                                                                                  | WN                                                                                    | WN                                                                                    |                                                                                       |
| Name / Nombre                                                                                                                                        | SDS-plus Meißel                                                                     | SDS-plus Meißel                                                                     | SDS-max                                                                             | SDS-max Bohrkronen                                                                    | SDS-max Fräskronen                                                                    | DEMOLISHER Max                                                                        |
| Schaft / Shank / Eje                                                                                                                                 |  |  |  |  |  |  |
| Ø mm                                                                                                                                                 |                                                                                     |                                                                                     | 12,00 - 50,00                                                                       | 12,00 - 125,00                                                                        | 45,00 - 80,00                                                                         |                                                                                       |
| Code / Código                                                                                                                                        | 983                                                                                 | 980                                                                                 | 889-895                                                                             | 871-872                                                                               | 885-886                                                                               | 973                                                                                   |
| Seite / Page / Página                                                                                                                                | 96                                                                                  | 96                                                                                  | 98                                                                                  | 101                                                                                   | 102                                                                                   | 103                                                                                   |
| Geeignet für / Suitable for / Adecuada para                                                                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Beton</b><br>Concrete<br>Hormigón                             |  |  |  |  |  |  |
|  <b>Armierter Beton</b><br>Reinforced concrete<br>Hormigón armado |                                                                                     |                                                                                     |  |                                                                                       |                                                                                       |                                                                                       |
|  <b>Stein</b><br>Natural stone<br>Piedra                          |  |  |  |  |  |  |
|  <b>Ziegel</b><br>Brick<br>Ladrillo                               |  |  |  |  |  |  |
|  <b>Granit</b><br>Granite<br>Granito                              |  |  |  |  |  |  |
|  <b>Marmor</b><br>Marble<br>Mármol                                |  |  |  |  |  |  |



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|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |    |    |    |    |    |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | WN                                                                                    |                                                                                       |                                                                                       |
| DEMOLISHER Max                                                                      | DEMOLISHER Max                                                                      | SDS-max Meißel                                                                      | SDS-max Meißel                                                                      | SDS-max Meißel                                                                      | SDS-max Meißel                                                                      | SDS-max Meißel                                                                        | SDS-max Meißel                                                                        | Aufnahmeadapter                                                                       |
|  |  |  |  |  |  |  |  |  |
| 973                                                                                 | 973                                                                                 | 978                                                                                 | 979                                                                                 | 971                                                                                 | 974                                                                                 | 970                                                                                   | 974                                                                                   | 996                                                                                   |
| 103                                                                                 | 103                                                                                 | 104                                                                                 | 104                                                                                 | 104                                                                                 | 104                                                                                 | 104                                                                                   | 104                                                                                   | 106                                                                                   |
|  |  |  |  |  |  |  |  |                                                                                       |
|  |  |  |  |  |  |  |                                                                                       |                                                                                       |
|  |  |  |  |  |  |  |                                                                                       |                                                                                       |
|  |  |  |  |  |  |  |                                                                                       |                                                                                       |
|  |  |  |  |  |  |  |                                                                                       |                                                                                       |



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y cirreles



Ideal / Ideal / Ideal



Geeignet / Suitable / Adecuada

 **PROFI BETON**



**Exakte Ergebnisse**

Herausragende Zentriereigenschaft  
ermöglicht punktgenaue Bohrungen

**Precise results**

Outstanding centering properties  
enable precise drilling

**Resultados exactos**

Las excelentes propiedades de centrado  
permiten perforaciones precisas

**Fester, sicherer Halt**

Durch vergüteten Schaft und einen  
hochfesten Bohrkörper wird ein  
stabiles Bohren ermöglicht

**Firm and stable hold**

Tempered shank and a very strong  
drilling core enables stable drilling

**Sujeción firme y segura**

El eje tratado y mejorado y el  
portabrocas de alta resistencia  
permiten una perforación estable

**Präzise Nuten**

Für eine optimale Bohrgutabtragung

**Precise flutes**

For optimal removal of drilling material

**Ranuras precisas**

Para una extracción óptima del  
material de perforación



 **drill better.**  
**alpen**

## D Hartmetall-Betonbohrer, DIN ISO 5468

### Einsatzbereich:

Hochleistungsbohrer Profi Beton zum Einsatz in Schlagbohrmaschinen und Bohrhämmern mit Bohrfutteraufnahme. Geeignet zum Schlagbohren in Beton, Mauerwerk und Naturstein, zum Drehbohren in Marmor.



Leistungsstark  
Efficient  
Alto rendimiento



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Stabil  
Stable  
Estable

## E Tungsten carbide concrete drill bits, DIN ISO 5468

### Range of application:

High efficiency Profi Beton drill for percussion and heavy-duty hammer drilling of natural stone, concrete, brick and for rotary drilling of marble.

## ES Broca de metal duro para hormigón, DIN ISO 5468

### Ámbito de aplicación:

Broca de alto rendimiento Profi Beton para su uso en taladradoras a percusión y martillos perforadores con toma para portabrocas. Adecuada para el taladrado a percusión en hormigón, mampostería y piedra natural y para el taladrado rotativo en mármol.



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y ciruelas



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 188<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|-------|----------------------|---------------|----|
| 3,00     | 1/8        | 60       | 30       |       | 0018800300100        | 1             | 10 |
| 4,00     | 5/32       | 75       | 39       |       | 0018800400100        | 1             | 10 |
| 5,00     | 3/16       | 85       | 39       |       | 0018800500100        | 1             | 10 |
| 6,00     | 15/64      | 100      | 54       |       | 0018800600100        | 1             | 10 |
| 6,50     | 1/4        | 100      | 54       |       | 0018800650100        | 1             | 10 |
| 7,00     | 9/32       | 100      | 54       |       | 0018800700100        | 1             | 10 |
| 8,00     | 5/16       | 120      | 80       |       | 0018800800100        | 1             | 10 |
| 9,00     | 11/32      | 120      | 80       |       | 0018800900100        | 1             | 10 |
| 10,00    | 3/8        | 120      | 80       |       | 0018801000100        | 1             | 10 |
| 12,00    | 15/32      | 150      | 90       | 10,00 | 0018801200100        | 1             | 10 |
| 14,00    | 9/16       | 150      | 90       | 10,00 | 0018801400100        | 1             | 10 |
| 16,00    | 5/8        | 150      | 90       | 10,00 | 0018801600100        | 1             | 10 |
| 18,00    | 23/32      | 160      | 100      | 10,00 | 0018801800100        | 1             | 10 |
| 20,00    | 3/4        | 160      | 100      | 13,00 | 0018802000100        | 1             | 10 |

Einzelverpackung  
Single pack  
Embalaje individual

**Länge / Length / Longitud: 150/90 mm**

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 727<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|------------|----------|----------|----------------------|---------------|-----------------------------------------------------------------------------------|
| 5,00     | 3/16       | 150      | 90       | 0072700500100        | 1             | 10                                                                                |
| 5,50     |            | 150      | 90       | 0072700550100        | 1             | 10                                                                                |
| 6,00     | 15/64      | 150      | 90       | 0072700600100        | 1             | 10                                                                                |
| 6,50     | 1/4        | 150      | 90       | 0072700650100        | 1             | 10                                                                                |
| 7,00     | 9/32       | 150      | 90       | 0072700700100        | 1             | 10                                                                                |
| 8,00     | 5/16       | 150      | 90       | 0072700800100        | 1             | 10                                                                                |
| 10,00    | 3/8        | 150      | 90       | 0072701000100        | 1             | 10                                                                                |

**Länge / Length / Longitud: 200/140 mm**

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 737<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|------------|----------|----------|-------|----------------------|---------------|-----------------------------------------------------------------------------------|
| 6,00     | 15/64      | 200      | 140      |       | 0073700600100        | 1             | 8                                                                                 |
| 6,50     | 1/4        | 200      | 140      |       | 0073700650100        | 1             | 8                                                                                 |
| 8,00     | 5/16       | 200      | 140      |       | 0073700800100        | 1             | 8                                                                                 |
| 10,00    | 3/8        | 200      | 140      |       | 0073701000100        | 1             | 8                                                                                 |
| 12,00    | 15/32      | 200      | 140      | 10,00 | 0073701200100        | 1             | 8                                                                                 |



## D Hartmetall-Betonbohrer mit 1/4"-Sechskantschaft

### Einsatzbereich:

Hochleistungsbohrer speziell für Standard-Akkubohrmaschinen und Universalhalter (Bithalter) durch genormtes Schaftprofil. Zum Schlagbohren in Beton, Mauerwerk und Naturstein, zum Drehbohren in Marmor.



Leistungsstark  
Efficient  
Alto rendimiento



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Stabil  
Stable  
Estable

## E Tungsten carbide concrete drill bits with 1/4" hexagonal shank

### Range of application:

High performance drill especially for standard-cordless drills and universal holders (bit holder) through standard shank profile. For percussion drilling in concrete, brickwork and natural stone, rotary drilling in marble.

## ES Broca de metal duro para hormigón con eje hexagonal 1/4"

### Ámbito de aplicación:

Broca de alto rendimiento especial para taladradoras con batería estándar y soportes universales (soporte de broca) gracias a su perfil de eje normativo. Para el taladrado a percusión en hormigón, mampostería y piedra natural y el taladrado rotativo en mármol.



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | l5<br>mm | d2   | Code 189<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|------------|----------|----------|----------|------|----------------------|---------------|----|
| 4,00     | 5/32       | 100      | 39       | 25       | 1/4" | 0018900400100        | 1             | 10 |
| 5,00     | 3/16       | 100      | 39       | 35       | 1/4" | 0018900500100        | 1             | 10 |
| 6,00     | 15/64      | 100      | 54       | 40       | 1/4" | 0018900600100        | 1             | 10 |
| 8,00     | 5/16       | 120      | 80       | 55       | 1/4" | 0018900800100        | 1             | 10 |
| 10,00    | 3/8        | 120      | 80       | 63       | 1/4" | 0018901000100        | 1             | 10 |

Schaft nach DIN 3126, Form E6.3, ISO 1173 / Shank DIN 3126, Form E6.3, ISO 1173 / Eje según DIN 3126, forma E6.3, ISO 1173

### Dübelbohrlänge

Drilling length for anchor  
Longitud de perforación de la espiga

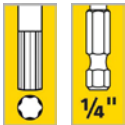
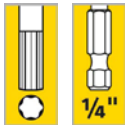
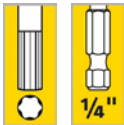
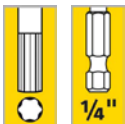
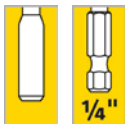
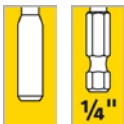


Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y cirreles

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

| <b>Profi Beton PT5B 5</b><br><br>     |                                           | <b>Profi Beton PKS8 8</b><br><br>        |                                           | <b>Profi Beton APTM 3</b><br><br>        |                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0022700222100                                                                                         |                                           | 8-tlg. / 8-pcs. / 8-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0022700201100                                                                                            |                                           | 3-tlg. / 3-pcs. / 3-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000101803100                                                                                                |                                           |
| Ø<br>mm                                                                                                                                                                                                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                    | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| Profi Beton                                                                                                                                                                                             |                                           | Profi Beton                                                                                                                                                                                                |                                           | Profi Beton                                                                                                                                                                                                    |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                                     | 1                                         | Ø 3,00 / 4,00 / 5,00 / 10,00                                                                                                                                                                               | 1                                         | Ø 5,00 / 6,00 / 8,00                                                                                                                                                                                           | 1                                         |
|                                                                                                                                                                                                         |                                           | Ø 6,00 / 8,00                                                                                                                                                                                              | 2                                         |                                                                                                                                                                                                                |                                           |
| <b>C PROTECTOR ATM 2</b><br><br>    |                                           | <b>C PROTECTOR ATM 2</b><br><br>       |                                           | <b>C PROTECTOR ATM 2</b><br><br>       |                                           |
| 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303052100                                                                                         |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303062100                                                                                            |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303082100                                                                                                |                                           |
| Ø<br>mm                                                                                                                                                                                                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                    | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| C PROTECTOR                                                                                                                                                                                             |                                           | C PROTECTOR                                                                                                                                                                                                |                                           | C PROTECTOR                                                                                                                                                                                                    |                                           |
| Ø 5,00                                                                                                                                                                                                  | 1                                         | Ø 6,00                                                                                                                                                                                                     | 1                                         | Ø 8,00                                                                                                                                                                                                         | 1                                         |
| Profi Beton                                                                                                                                                                                             |                                           | Profi Beton                                                                                                                                                                                                |                                           | Profi Beton                                                                                                                                                                                                    |                                           |
| Ø 5,00                                                                                                                                                                                                  | 1                                         | Ø 6,00                                                                                                                                                                                                     | 1                                         | Ø 8,00                                                                                                                                                                                                         | 1                                         |
| <b>C PROTECTOR ATM 2</b><br><br>  |                                           | <b>Keramo Extreme ATM 2</b><br><br>  |                                           | <b>Keramo Extreme ATM 2</b><br><br>  |                                           |
| 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000303102100                                                                                         |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000300052100                                                                                            |                                           | 2-tlg. / 2-pcs. / 2-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000300062100                                                                                                |                                           |
| Ø<br>mm                                                                                                                                                                                                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                    | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| C PROTECTOR                                                                                                                                                                                             |                                           | Keramo Extreme                                                                                                                                                                                             |                                           | Keramo Extreme                                                                                                                                                                                                 |                                           |
| Ø 10,00                                                                                                                                                                                                 | 1                                         | Ø 5,00                                                                                                                                                                                                     | 1                                         | Ø 6,00                                                                                                                                                                                                         | 1                                         |
| Profi Beton                                                                                                                                                                                             |                                           | Profi Beton                                                                                                                                                                                                |                                           | Profi Beton                                                                                                                                                                                                    |                                           |
| Ø 10,00                                                                                                                                                                                                 | 1                                         | Ø 5,00                                                                                                                                                                                                     | 1                                         | Ø 6,00                                                                                                                                                                                                         | 1                                         |

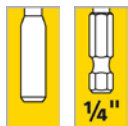
<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D** Kassetten, Sets

**E** *Cassettes, sets*

**ES** *Cajas, juegos*

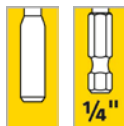
Keramo Extreme ATM 2



2-tlg. / 2-pcs. / 2-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000300082100

| Ø<br>mm        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------|-------------------------------------------|----------------|-------------------------------------------|
| Keramo Extreme |                                           | Keramo Extreme |                                           |
| Ø 8,00         | 1                                         | Ø 10,00        | 1                                         |
| Profi Beton    |                                           | Profi Beton    |                                           |
| Ø 8,00         | 1                                         | Ø 10,00        | 1                                         |

Keramo Extreme ATM 2



2-tlg. / 2-pcs. / 2-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000300102100



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y ciruelas

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**Vielseitige Einsatzmöglichkeiten**

Kann als Universalbohrer flexibel eingesetzt werden

***Diverse application possibilities***

*Can be used flexibly as a universal drill*

***Múltiples posibilidades de uso***

*Se puede usar como broca universal versátil*

**Gefrästes Profil**

Wie bei den SDS-Bohrern

***Profile milled***

*As with SDS bits*

***Perfil fresado***

*Como las brocas SDS*

**Stabiler Grundkörper**

Bohrung von harten Materialien wird durch Grundkörper aus Werkzeugstahl sichergestellt

***Robust core***

*Drilling of hard materials is ensured by a core made of tool steel*

***Cuerpo base estable***

*Perforación de materiales duros asegurada gracias al cuerpo base de acero para herramientas*





## D Hartmetall-Steinbohrer, DIN ISO 5468

### Einsatzbereich:

Universeller Mauerbohrer Typ Long Life in  
gefräster Ausführung zum Schlag- und Dreh-  
bohren in Mauerwerk und Naturstein.

## E Tungsten carbide masonry drill bits, DIN ISO 5468

### Range of application:

Masonry drill bit type Long Life, milled flutes,  
for percussion and rotary drilling in concrete,  
brick and natural stone.

## ES Broca de metal duro para pie- dra, DIN ISO 5468

### Ámbito de aplicación:

Broca universal para mampostería, tipo Long  
Life en modelo fresado para el taladrado a  
percusión y rotativo en mampostería y piedra  
natural.



Universeller Schlagbohrer  
Universal percussion drill bits  
Taladradora universal



Lange Lebensdauer  
Long tool life  
Larga vida útil



Hart  
Hard  
Dura



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y ciruelas



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack mit Aufhänger  
Industrial packing with tag  
Paquete industrial con gancho

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 117<br>Art.-Nr. | Inh.<br>Cont. |    | Code 118<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|-------|----------------------|---------------|----|----------------------|---------------|
| 3,00     | 1/8        | 60       | 30       |       | 0011700300100        | 1             | 10 | 0011800300100        | 10            |
| 4,00     | 5/32       | 75       | 39       |       | 0011700400100        | 1             | 10 | 0011800400100        | 10            |
| 5,00     | 3/16       | 85       | 39       |       | 0011700500100        | 1             | 10 | 0011800500100        | 10            |
| 5,50     |            | 85       | 39       |       | 0011700550100        | 1             | 10 |                      |               |
| 6,00     | 15/64      | 100      | 54       |       | 0011700600100        | 1             | 10 | 0011800600100        | 10            |
| 6,50     | 1/4        | 100      | 54       |       | 0011700650100        | 1             | 10 | 0011800650100        | 10            |
| 7,00     | 9/32       | 100      | 54       |       | 0011700700100        | 1             | 10 |                      |               |
| 8,00     | 5/16       | 120      | 80       |       | 0011700800100        | 1             | 10 | 0011800800100        | 10            |
| 9,00     | 11/32      | 120      | 80       |       | 0011700900100        | 1             | 10 |                      |               |
| 10,00    | 3/8        | 120      | 80       |       | 0011701000100        | 1             | 10 | 0011801000100        | 10            |
| 11,00    | 7/16       | 150      | 90       | 10,00 | 0011701100100        | 1             | 10 |                      |               |
| 12,00    | 15/32      | 150      | 90       | 10,00 | 0011701200100        | 1             | 10 | 0011801200100        | 10            |
| 13,00    | 1/2        | 150      | 90       | 10,00 | 0011701300100        | 1             | 10 |                      |               |
| 14,00    | 9/16       | 150      | 90       | 10,00 | 0011701400100        | 1             | 10 |                      |               |
| 15,00    | 19/32      | 150      | 90       | 10,00 | 0011701500100        | 1             | 10 |                      |               |
| 16,00    | 5/8        | 150      | 90       | 10,00 | 0011701600100        | 1             | 10 |                      |               |
| 18,00    | 23/32      | 160      | 100      | 10,00 | 0011701800100        | 1             | 10 |                      |               |
| 20,00    | 3/4        | 160      | 100      | 13,00 | 0011702000100        | 1             | 10 |                      |               |

|                                       |            |          |          |       | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                     | Gewerbepack mit Aufhänger<br>Industrial packing with tag<br>Paquete industrial con gancho |               |
|---------------------------------------|------------|----------|----------|-------|--------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------|
| Länge / Length / Longitud: 150/90 mm  |            |          |          |       |                                                        |               |                                                                                     |                                                                                           |               |
| d1<br>mm                              | d1<br>inch | l1<br>mm | l2<br>mm |       | Code 718<br>Art.-Nr.                                   | Inh.<br>Cont. |    | Art.-Nr.                                                                                  | Inh.<br>Cont. |
| 4,00                                  | 5/32       | 150      | 90       |       | 0071800400100                                          | 1             | 10                                                                                  |                                                                                           |               |
| 5,00                                  | 3/16       | 150      | 90       |       | 0071800500100                                          | 1             | 10                                                                                  |                                                                                           |               |
| 5,50                                  |            | 150      | 90       |       | 0071800550100                                          | 1             | 10                                                                                  |                                                                                           |               |
| 6,00                                  | 15/64      | 150      | 90       |       | 0071800600100                                          | 1             | 10                                                                                  |                                                                                           |               |
| 6,50                                  | 1/4        | 150      | 90       |       | 0071800650100                                          | 1             | 10                                                                                  |                                                                                           |               |
| 7,00                                  | 9/32       | 150      | 90       |       | 0071800700100                                          | 1             | 10                                                                                  |                                                                                           |               |
| 8,00                                  | 5/16       | 150      | 90       |       | 0071800800100                                          | 1             | 10                                                                                  |                                                                                           |               |
| 10,00                                 | 3/8        | 150      | 90       |       | 0071801000100                                          | 1             | 10                                                                                  |                                                                                           |               |
| Länge / Length / Longitud: 200/140 mm |            |          |          |       |                                                        |               |                                                                                     |                                                                                           |               |
| d1<br>mm                              | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 367<br>Art.-Nr.                                   | Inh.<br>Cont. |    | Art.-Nr.                                                                                  | Inh.<br>Cont. |
| 6,00                                  | 15/64      | 200      | 140      |       | 0036700600100                                          | 1             | 8                                                                                   |                                                                                           |               |
| 8,00                                  | 5/16       | 200      | 140      |       | 0036700800100                                          | 1             | 8                                                                                   |                                                                                           |               |
| 10,00                                 | 3/8        | 200      | 140      |       | 0036701000100                                          | 1             | 8                                                                                   |                                                                                           |               |
| 12,00                                 | 15/32      | 200      | 140      | 10,00 | 0036701200100                                          | 1             | 8                                                                                   |                                                                                           |               |
| 14,00                                 | 9/16       | 200      | 140      | 10,00 | 0036701400100                                          | 1             | 8                                                                                   |                                                                                           |               |
| 16,00                                 | 5/8        | 200      | 140      | 10,00 | 0036701600100                                          | 1             | 8                                                                                   |                                                                                           |               |
| Länge / Length / Longitud: 300/220 mm |            |          |          |       |                                                        |               |                                                                                     |                                                                                           |               |
| d1<br>mm                              | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 327<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Art.-Nr.                                                                                  | Inh.<br>Cont. |
| 6,00                                  | 15/64      | 300      | 220      |       | 0032700600100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 8,00                                  | 5/16       | 300      | 220      |       | 0032700800100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 10,00                                 | 3/8        | 300      | 220      |       | 0032701000100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 12,00                                 | 15/32      | 300      | 220      | 10,00 | 0032701200100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 14,00                                 | 9/16       | 300      | 220      | 10,00 | 0032701400100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 16,00                                 | 5/8        | 300      | 220      | 10,00 | 0032701600100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 18,00                                 | 23/32      | 300      | 220      | 10,00 | 0032701800100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 20,00                                 | 3/4        | 300      | 220      | 13,00 | 0032702000100                                          | 1             | 5                                                                                   |                                                                                           |               |
| Länge / Length / Longitud: 400/300 mm |            |          |          |       |                                                        |               |                                                                                     |                                                                                           |               |
| d1<br>mm                              | d1<br>inch | l1<br>mm | l2<br>mm | d2    | Code 517<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Art.-Nr.                                                                                  | Inh.<br>Cont. |
| 6,00                                  | 15/64      | 400      | 300      |       | 0051700600100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 6,50                                  | 1/4        | 400      | 300      |       | 0051700650100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 8,00                                  | 5/16       | 400      | 300      |       | 0051700800100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 10,00                                 | 3/8        | 400      | 300      |       | 0051701000100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 12,00                                 | 15/32      | 400      | 300      | 10,00 | 0051701200100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 13,00                                 | 1/2        | 400      | 300      | 10,00 | 0051701300100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 14,00                                 | 9/16       | 400      | 300      | 10,00 | 0051701400100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 16,00                                 | 5/8        | 400      | 300      | 10,00 | 0051701600100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 18,00                                 | 23/32      | 400      | 300      | 10,00 | 0051701800100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 20,00                                 | 3/4        | 400      | 300      | 13,00 | 0051702000100                                          | 1             | 5                                                                                   |                                                                                           |               |
| 22,00                                 |            | 400      | 300      | 13,00 | 0051702200100                                          | 1             | 5                                                                                   |                                                                                           |               |

| Länge / Length / Longitud: 600/500 mm |       |     |     |       | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack mit Aufhänger<br>Industrial packing with tag<br>Paquete industrial con gancho |               |
|---------------------------------------|-------|-----|-----|-------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------|
| d1                                    | d1    | l1  | l2  | d2    | Code 617<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Art.-Nr.                                                                                  | Inh.<br>Cont. |
| mm                                    | inch  | mm  | mm  |       |                                                        |               |                                                                                   |                                                                                           |               |
| 8,00                                  | 5/16  | 600 | 500 |       | 0061700800100                                          | 1             | 5                                                                                 |                                                                                           |               |
| 10,00                                 | 3/8   | 600 | 500 |       | 0061701000100                                          | 1             | 5                                                                                 |                                                                                           |               |
| 12,00                                 | 15/32 | 600 | 500 | 10,00 | 0061701200100                                          | 1             | 5                                                                                 |                                                                                           |               |
| 14,00                                 | 9/16  | 600 | 500 | 10,00 | 0061701400100                                          | 1             | 5                                                                                 |                                                                                           |               |
| 16,00                                 | 5/8   | 600 | 500 | 10,00 | 0061701600100                                          | 1             | 5                                                                                 |                                                                                           |               |
| 18,00                                 | 23/32 | 600 | 500 | 10,00 | 0061701800100                                          | 1             | 5                                                                                 |                                                                                           |               |
| 20,00                                 | 3/4   | 600 | 500 | 13,00 | 0061702000100                                          | 1             | 5                                                                                 |                                                                                           |               |



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y circoles

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

Long Life TSS 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000700103100

Long Life TSS 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000700105100

Long Life TSS 8



8-tlg. / 8-pcs. / 8-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000700108100

| Ø<br>mm              | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------------|-------------------------------------------|-------------------------------------|-------------------------------------------|--------------|-------------------------------------------|
| Long Life            |                                           | Long Life                           |                                           | Long Life    |                                           |
| Ø 5,00 / 6,00 / 8,00 | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1                                         | Ø 3,00-10,00 | 1                                         |

KIT SET 22



22-tlg. / 22-pcs. / 22-unid.  
Set  
Art.-Nr. 0000800222100

KIT SET 30



30-tlg. / 30-pcs. / 30-unid.  
Set  
Art.-Nr. 0000800230100

Combiset TM 9



9-tlg. / 9-pcs. / 9-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000802102100

| Ø<br>mm                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm              | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------------|-------------------------------------------|-----------------------------------------------------|-------------------------------------------|----------------------|-------------------------------------------|
| Long Life                                           |                                           | Holz                                                |                                           | Holz                 |                                           |
| Ø 5,00 / 6,00 / 8,00 / 10,00                        | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                 | 1                                         | Ø 5,00 / 6,00 / 8,00 | 1                                         |
| Sprint Master                                       |                                           | HSS Super                                           |                                           | Long Life            |                                           |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 / 10,00   | 1                                         | Ø 2,50 / 3,20                                       | 1                                         | Ø 5,00 / 6,00 / 8,00 | 1                                         |
| Wera                                                |                                           | Long Life                                           |                                           | Sprint Master        |                                           |
| 9 Bits sortiert / 9 Bits sorted / 9 brocas surtidas |                                           | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                 | 1                                         | Ø 5,00 / 6,00 / 8,00 | 1                                         |
| Bitshalter / Bitholder / Portabrocas                |                                           | Sprint Master                                       |                                           |                      |                                           |
| Körner / Centerpunch / Punzón                       |                                           | Ø 3,00 / 4,00 / 5,00 / 6,00 / 8,00 / 10,00          | 1                                         |                      |                                           |
|                                                     |                                           | Wera                                                |                                           |                      |                                           |
|                                                     |                                           | 9 Bits sortiert / 9 Bits sorted / 9 brocas surtidas |                                           |                      |                                           |
|                                                     |                                           | Bitshalter / Bitholder / Portabrocas                |                                           |                      |                                           |
|                                                     |                                           | Körner / Centerpunch / Punzón                       |                                           |                      |                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

Combiset TM 9/1



9-tlg. / 9-pcs. / 9-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000802122100

| Ø<br>mm                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| Long Life                          |                                           | Holz                                      |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00        | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00       | 1                                         |
| Sprint Master                      |                                           | Long Life                                 |                                           |
| Ø 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00       | 1                                         |
|                                    |                                           | Sprint Master                             |                                           |
|                                    |                                           | Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         |

Combiset Master SET 16



16-tlg. / 16-pcs. / 16-unid.  
Set  
Art.-Nr. 0000811003100



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y circoles

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**Kein Verhaken**

4 Vollhartmetallschneiden verhindert das Einhaken bei Armierungstreffern

**No hooking**

4 tungsten carbide cutting edges prevent hooking when hitting reinforcement

**No se engancha**

Los cuatro filos de metal duro y macizo evitan el enganche al impactar contra la armadura

**Schnell und problemlos**

Das progressive Spiralendesign liefert schnelle und exakte Ergebnisse

**Fast and trouble-free**

The progressive spiral design delivers fast and accurate results

**Rápido y sin problemas**

Su diseño en espiral proporciona resultados rápidos y precisos

**Exakte Bohrtiefe**

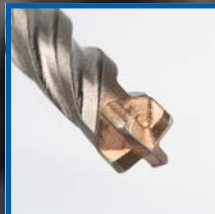
Durch den Einsatz von Dübellängenindikatoren

**Exact drilling depth**

Through the use of dowel length indicators

**Profundidad de perforación precisa**

Gracias al uso de un indicador de longitud de anclaje



## D SDS-plus Hammerbohrer "FORCE X", 4 Schneiden

### Einsatzbereich:

SDS-plus Hochleistungsbohrer mit 4 Vollhartmetall-Schneiden und neuem progressiven Spiralendesign mit Dübellängenindikator. Problemloses Durchbohren von Eisenarmierungen, vibrationsarmer Lauf und schnelle Bohrmehlförderung.



Für armierten Beton  
For reinforced concrete  
Para hormigón armado



4 Vollhartmetallschneiden  
4 tungsten carbide cutting edges  
4 filos de metal duro y macizo



Dübellängenindikator  
Dowel length indicator  
Indicador de longitud del anclaje



### Range of application:

SDS-plus high performance drill bit with 4 tungsten carbide cutting edges and new progressive spiral design with dowel length indicator. Problem-free drilling in reinforced concrete, vibrationless running and fast removal of drilling dust.

## E5 Brocas de percusión SDS-plus "FORCE X", 4 filos

### Ámbito de aplicación:

Broca SDS-plus de alto rendimiento con 4 filos de metal duro integral y una ranura diseñada de forma progresiva con indicador de longitud del anclaje. Perforación de armaduras de hierro sin problemas, taladro sin vibraciones y eliminación rápida del polvo.



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y ciruelas

Einzelverpackung  
Single pack  
Embalaje individual

Gewerbepack  
Industrial packing  
Paquete industrial

### Länge / Length / Longitud: 110/50 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Z | Code 805<br>Art.-Nr. | Inh.<br>Cont. |  | Code 762<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------|---|----------------------|---------------|-------------------------------------------------------------------------------------|----------------------|---------------|
| 5,00     | 110      | 50       | SDS-plus | 4 | 0080500500100        | 1             | 10                                                                                  | 0076200500100        | 10            |
| 5,50     | 110      | 50       | SDS-plus | 4 | 0080500550100        | 1             | 10                                                                                  |                      |               |
| 6,00     | 110      | 50       | SDS-plus | 4 | 0080500600100        | 1             | 10                                                                                  | 0076200600100        | 10            |
| 7,00     | 110      | 50       | SDS-plus | 4 | 0080500700100        | 1             | 10                                                                                  |                      |               |
| 8,00     | 110      | 50       | SDS-plus | 4 | 0080500800100        | 1             | 10                                                                                  | 0076200800100        | 10            |
| 10,00    | 110      | 50       | SDS-plus | 4 | 0080501000100        | 1             | 10                                                                                  |                      |               |

### Länge / Length / Longitud: 160/100 mm

| d1<br>mm | l1<br>mm | l2<br>mm | l5<br>mm | d2       | Z | Code 815<br>Art.-Nr. | Inh.<br>Cont. |  | Code 763<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------|----------|---|----------------------|---------------|-------------------------------------------------------------------------------------|----------------------|---------------|
| 5,00     | 160      | 100      | 35       | SDS-plus | 4 | 0081500500100        | 1             | 10                                                                                  |                      |               |
| 5,50     | 160      | 100      | 35       | SDS-plus | 4 | 0081500550100        | 1             | 10                                                                                  |                      |               |
| 6,00     | 160      | 100      | 40       | SDS-plus | 4 | 0081500600100        | 1             | 10                                                                                  | 0076300600100        | 10            |
| 6,50     | 160      | 100      | 40       | SDS-plus | 4 | 0081500650100        | 1             | 10                                                                                  |                      |               |
| 7,00     | 160      | 100      | 40       | SDS-plus | 4 | 0081500700100        | 1             | 10                                                                                  |                      |               |
| 8,00     | 160      | 100      | 55       | SDS-plus | 4 | 0081500800100        | 1             | 10                                                                                  | 0076300800100        | 10            |
| 9,00     | 160      | 100      | 55       | SDS-plus | 4 | 0081500900100        | 1             | 10                                                                                  |                      |               |
| 10,00    | 160      | 100      | 70       | SDS-plus | 4 | 0081501000100        | 1             | 10                                                                                  | 0076301000100        | 10            |
| 12,00    | 160      | 100      |          | SDS-plus | 4 | 0081501200100        | 1             | 10                                                                                  | 0076301200100        | 5             |
| 14,00    | 160      | 100      |          | SDS-plus | 4 | 0081501400100        | 1             | 10                                                                                  |                      |               |
| 15,00    | 160      | 100      |          | SDS-plus | 4 | 0081501500100        | 1             | 10                                                                                  |                      |               |
| 16,00    | 160      | 100      |          | SDS-plus | 4 | 0081501600100        | 1             | 10                                                                                  |                      |               |

|                                       |          |          |          |          |   | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                     | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|---------------------------------------|----------|----------|----------|----------|---|--------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|---------------------------------------------------------|---------------|
| Länge / Length / Longitud: 210/150 mm |          |          |          |          |   |                                                        |               |                                                                                     |                                                         |               |
| d1<br>mm                              | l1<br>mm | l2<br>mm | l5<br>mm | d2       | Z | Code 825<br>Art.-Nr.                                   | Inh.<br>Cont. |    | Code 764<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 5,00                                  | 210      | 150      | 35       | SDS-plus | 4 | 0082500500100                                          | 1             | 8                                                                                   |                                                         |               |
| 6,00                                  | 210      | 150      | 40       | SDS-plus | 4 | 0082500600100                                          | 1             | 8                                                                                   | 0076400600100                                           | 10            |
| 6,50                                  | 210      | 150      | 40       | SDS-plus | 4 | 0082500650100                                          | 1             | 8                                                                                   |                                                         |               |
| 8,00                                  | 210      | 150      | 55       | SDS-plus | 4 | 0082500800100                                          | 1             | 8                                                                                   | 0076400800100                                           | 10            |
| 9,00                                  | 210      | 150      | 55       | SDS-plus | 4 | 0082500900100                                          | 1             | 8                                                                                   |                                                         |               |
| 10,00                                 | 210      | 150      | 70       | SDS-plus | 4 | 0082501000100                                          | 1             | 8                                                                                   | 0076401000100                                           | 10            |
| 12,00                                 | 210      | 150      | 80       | SDS-plus | 4 | 0082501200100                                          | 1             | 8                                                                                   | 0076401200100                                           | 5             |
| 14,00                                 | 210      | 150      | 90       | SDS-plus | 4 | 0082501400100                                          | 1             | 8                                                                                   |                                                         |               |
| 16,00                                 | 210      | 150      | 100      | SDS-plus | 4 | 0082501600100                                          | 1             | 8                                                                                   |                                                         |               |
|                                       |          |          |          |          |   |                                                        |               |                                                                                     |                                                         |               |
| d1<br>mm                              | l1<br>mm | l2<br>mm | l5<br>mm | d2       | Z | Code 835<br>Art.-Nr.                                   | Inh.<br>Cont. |    | Code 765<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 6,00                                  | 260      | 200      | 40       | SDS-plus | 4 | 0083500600100                                          | 1             | 8                                                                                   | 0076500600100                                           | 10            |
| 6,50                                  | 260      | 200      | 40       | SDS-plus | 4 | 0083500650100                                          | 1             | 8                                                                                   |                                                         |               |
| 8,00                                  | 260      | 200      | 55       | SDS-plus | 4 | 0083500800100                                          | 1             | 8                                                                                   | 0076500800100                                           | 10            |
| 9,00                                  | 260      | 200      | 55       | SDS-plus | 4 | 0083500900100                                          | 1             | 8                                                                                   |                                                         |               |
| 10,00                                 | 260      | 200      | 70       | SDS-plus | 4 | 0083501000100                                          | 1             | 8                                                                                   | 0076501000100                                           | 10            |
| 12,00                                 | 260      | 200      | 80       | SDS-plus | 4 | 0083501200100                                          | 1             | 8                                                                                   | 0076501200100                                           | 5             |
| 14,00                                 | 260      | 200      | 90       | SDS-plus | 4 | 0083501400100                                          | 1             | 8                                                                                   | 0076501400100                                           | 5             |
| 15,00                                 | 260      | 200      | 90       | SDS-plus | 4 | 0083501500100                                          | 1             | 8                                                                                   |                                                         |               |
| 16,00                                 | 260      | 200      | 100      | SDS-plus | 4 | 0083501600100                                          | 1             | 8                                                                                   |                                                         |               |
| 18,00                                 | 250      | 200      |          | SDS-plus | 4 | 0083501800100                                          | 1             | 8                                                                                   |                                                         |               |
| 20,00                                 | 250      | 200      |          | SDS-plus | 4 | 0083502000100                                          | 1             | 8                                                                                   |                                                         |               |
| 22,00                                 | 250      | 200      |          | SDS-plus | 4 | 0083502200100                                          | 1             | 8                                                                                   |                                                         |               |
| 24,00                                 | 250      | 200      |          | SDS-plus | 4 | 0083502400100                                          | 1             | 8                                                                                   |                                                         |               |
| 25,00                                 | 250      | 200      |          | SDS-plus | 4 | 0083502500100                                          | 1             | 8                                                                                   |                                                         |               |
| Länge / Length / Longitud: 310/250 mm |          |          |          |          |   |                                                        |               |                                                                                     |                                                         |               |
| d1<br>mm                              | l1<br>mm | l2<br>mm | l5<br>mm | d2       | Z | Code 845<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Art.-Nr.                                                | Inh.<br>Cont. |
| 6,00                                  | 310      | 250      | 40       | SDS-plus | 4 | 0084500600100                                          | 1             | 8                                                                                   |                                                         |               |
| 6,50                                  | 310      | 250      | 40       | SDS-plus | 4 | 0084500650100                                          | 1             | 8                                                                                   |                                                         |               |
| 8,00                                  | 310      | 250      | 55       | SDS-plus | 4 | 0084500800100                                          | 1             | 8                                                                                   |                                                         |               |
| 10,00                                 | 310      | 250      | 70       | SDS-plus | 4 | 0084501000100                                          | 1             | 8                                                                                   |                                                         |               |
| 12,00                                 | 310      | 250      | 80       | SDS-plus | 4 | 0084501200100                                          | 1             | 8                                                                                   |                                                         |               |
| 14,00                                 | 310      | 250      | 90       | SDS-plus | 4 | 0084501400100                                          | 1             | 8                                                                                   |                                                         |               |
| 16,00                                 | 310      | 250      | 100      | SDS-plus | 4 | 0084501600100                                          | 1             | 8                                                                                   |                                                         |               |

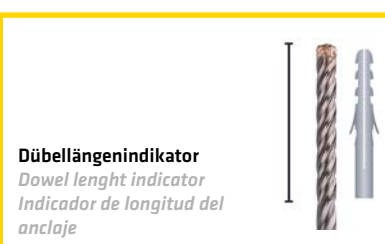


|                                              |          |          |          |          |   | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|----------------------------------------------|----------|----------|----------|----------|---|----------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|
| <b>Länge / Length / Longitud: 450/400 mm</b> |          |          |          |          |   |                                                                      |               |                                                                                   |                                                                       |               |
| d1<br>mm                                     | l1<br>mm | l2<br>mm | l5<br>mm | d2       | Z | Code 875<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Art.-Nr.                                                              | Inh.<br>Cont. |
| 8,00                                         | 450      | 400      | 55       | SDS-plus | 4 | 0087500800100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 10,00                                        | 450      | 400      | 70       | SDS-plus | 4 | 0087501000100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 12,00                                        | 450      | 400      | 80       | SDS-plus | 4 | 0087501200100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 14,00                                        | 450      | 400      | 90       | SDS-plus | 4 | 0087501400100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 16,00                                        | 450      | 400      | 100      | SDS-plus | 4 | 0087501600100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 18,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087501800100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 20,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087502000100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 22,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087502200100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 24,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087502400100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 25,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087502500100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 28,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087502800100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 30,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087503000100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 32,00                                        | 450      | 400      |          | SDS-plus | 4 | 0087503200100                                                        | 1             | 5                                                                                 |                                                                       |               |
| <b>Länge / Length / Longitud: 600/550 mm</b> |          |          |          |          |   |                                                                      |               |                                                                                   |                                                                       |               |
| d1<br>mm                                     | l1<br>mm | l2<br>mm | l5<br>mm | d2       | Z | Code 905<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Art.-Nr.                                                              | Inh.<br>Cont. |
| 10,00                                        | 600      | 550      | 70       | SDS-plus | 4 | 0090501000100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 12,00                                        | 600      | 550      | 80       | SDS-plus | 4 | 0090501200100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 14,00                                        | 600      | 550      | 90       | SDS-plus | 4 | 0090501400100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 16,00                                        | 600      | 550      | 100      | SDS-plus | 4 | 0090501600100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 18,00                                        | 600      | 550      |          | SDS-plus | 4 | 0090501800100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 20,00                                        | 600      | 550      |          | SDS-plus | 4 | 0090502000100                                                        | 1             | 5                                                                                 |                                                                       |               |
| 22,00                                        | 600      | 550      |          | SDS-plus | 4 | 0090502200100                                                        | 1             | 5                                                                                 |                                                                       |               |



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y ciruelas

- > Ø 16 Ausführung ohne Dübellängenindikator und 3-tlg. Hartmetallplatte
- > Ø 16 versions without dowel length indicator and 3-piece carbide tip
- > Ø 16 Versión sin indicador de longitud de anclaje y placa de metal duro de tres piezas



Dübellängenindikator  
Dowel length indicator  
Indicador de longitud del anclaje

## ① SDS-plus Hammerbohrer "FORCE X", 4 Schneiden

### Einsatzbereich:

SDS-plus Hochleistungsbohrer mit 4 Vollhartmetall-Schneiden und neuem progressiven Spiralendesign mit Dübellängenindikator. Problemloses Durchbohren von Eisenarmierungen, vibrationsarmer Lauf und schnelle Bohrmehlförderung.



Für armierten Beton  
For reinforced concrete  
Para hormigón armado



4 Vollhartmetallschneiden  
4 tungsten carbide cutting edges  
4 filos de metal duro y macizo



Dübellängenindikator  
Dowel length indicator  
Indicador de longitud del anclaje

## ② SDS-plus hammer drill bits "FORCE X", 4 cutting edges

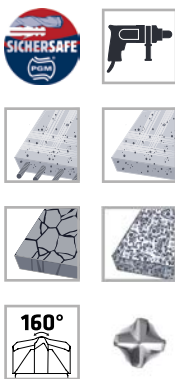
### Range of application:

SDS-plus high performance drill bit with 4 tungsten carbide cutting edges and new progressive spiral design with dowel length indicator. Problem-free drilling in reinforced concrete, vibrationless running and fast removal of drilling dust.

## ③ Brocas de percusión SDS-plus "FORCE X", 4 filos

### Ámbito de aplicación:

Broca SDS-plus de alto rendimiento con 4 filos de metal duro integral y una ranura diseñada de forma progresiva con indicador de longitud del anclaje. Perforación de armaduras de hierro sin problemas, taladro sin vibraciones y eliminación rápida del polvo.



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish



SB-Aufhänger  
Plastic tag  
Gancho para autoservicio

Länge / Length / Longitud: 1000/950 mm

| d1<br>mm | l1<br>mm | l2<br>mm | l5<br>mm | d2       | Z | Code 915<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------|----------|---|----------------------|---------------|---|
| 10,00    | 1000     | 950      | 70       | SDS-plus | 4 | 0091501000100        | 1             | 1 |
| 12,00    | 1000     | 950      | 80       | SDS-plus | 4 | 0091501200100        | 1             | 1 |
| 14,00    | 1000     | 950      | 90       | SDS-plus | 4 | 0091501400100        | 1             | 1 |
| 16,00    | 1000     | 950      | 100      | SDS-plus | 4 | 0091501600100        | 1             | 1 |

Dübellängenindikator  
Dowel length indicator  
Indicador de longitud del anclaje

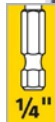


D Kassetten, Sets

E Cassettes, sets

ES Cajas, juegos

|                                                                                                                                                                                                                                                                                                                           |                      |                                                       |                                                                                                                                                                                                                                                                                                                                    |                      |                                                       |                                                                                                                                                                                                                                                                                                                               |                      |                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|
| <div>FORCE X BOX 3</div> <div></div> <div>3-tlg. / 3-pcs. / 3-unid.<br/>Kunststoffbox / Plastic box / Caja de plástico<br/>Art.-Nr. 0081506810100</div> |                      |                                                       | <div>FORCE X MB 5</div> <div></div> <div>5-tlg. / 5-pcs. / 5-unid.<br/>Kunststoffkassette / Plastic cassette / Caja de plástico<br/>Art.-Nr. 0080500005100</div> |                      |                                                       | <div>FORCE X KM 7</div> <div></div> <div>7-tlg. / 7-pcs. / 7-unid.<br/>Metallkassette / Metal cassette / Caja de metal<br/>Art.-Nr. 0080500007100</div> |                      |                                                       |
| <div>Ø<br/>mm</div>                                                                                                                                                                                                                                                                                                       | <div>l1<br/>mm</div> | <div>Stk. <sup>(1)</sup><br/>pc. <sup>(1)</sup></div> | <div>Ø<br/>mm</div>                                                                                                                                                                                                                                                                                                                | <div>l1<br/>mm</div> | <div>Stk. <sup>(1)</sup><br/>pc. <sup>(1)</sup></div> | <div>Ø<br/>mm</div>                                                                                                                                                                                                                                                                                                           | <div>l1<br/>mm</div> | <div>Stk. <sup>(1)</sup><br/>pc. <sup>(1)</sup></div> |
| FORCE X                                                                                                                                                                                                                                                                                                                   |                      |                                                       | FORCE X                                                                                                                                                                                                                                                                                                                            |                      |                                                       | FORCE X                                                                                                                                                                                                                                                                                                                       |                      |                                                       |
| Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                                                                                                                                     | 160                  | 1                                                     | Ø 5,00 / 6,00                                                                                                                                                                                                                                                                                                                      | 110                  | 1                                                     | Ø 5,00 / 6,00 / 8,00                                                                                                                                                                                                                                                                                                          | 110                  | 1                                                     |
|                                                                                                                                                                                                                                                                                                                           |                      |                                                       | Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                                                                                                                                              | 160                  | 1                                                     | Ø 6,00 / 8,00 / 10,00 / 12,00                                                                                                                                                                                                                                                                                                 | 160                  | 1                                                     |

|                                                                                                                                                                                                                                                                                                                             |                      |                                                       |                                                                                                                                                                                                                                                                                                                                      |                      |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|
| <div>FORCE X BOX 7</div> <div></div> <div>7-tlg. / 7-pcs. / 7-unid.<br/>Kunststoffbox / Plastic box / Caja de plástico<br/>Art.-Nr. 0081500007100</div> |                      |                                                       | <div>FORCE X KP 7</div> <div></div> <div>7-tlg. / 7-pcs. / 7-unid.<br/>Kunststoffkassette / Plastic cassette / Caja de plástico<br/>Art.-Nr. 0080501007100</div> |                      |                                                       | <div>KIT SET 13</div> <div></div> <div>13-tlg. / 13-pcs. / 13-unid.<br/>Set<br/>Art.-Nr. 0000303513100</div> |                      |                                                       |
| <div>Ø<br/>mm</div>                                                                                                                                                                                                                                                                                                         | <div>l1<br/>mm</div> | <div>Stk. <sup>(1)</sup><br/>pc. <sup>(1)</sup></div> | <div>Ø<br/>mm</div>                                                                                                                                                                                                                                                                                                                  | <div>l1<br/>mm</div> | <div>Stk. <sup>(1)</sup><br/>pc. <sup>(1)</sup></div> | <div>Ø<br/>mm</div>                                                                                                                                                                                                                                                                                                                                                                                                                                          | <div>l1<br/>mm</div> | <div>Stk. <sup>(1)</sup><br/>pc. <sup>(1)</sup></div> |
| FORCE X                                                                                                                                                                                                                                                                                                                     |                      |                                                       | FORCE X                                                                                                                                                                                                                                                                                                                              |                      |                                                       | C PROTECTOR                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                                                       |
| Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                                                                                                                                       | 160                  | 1                                                     | Ø 5,00 / 6,00 / 8,00                                                                                                                                                                                                                                                                                                                 | 110                  | 1                                                     | Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      | 1                                                     |
| Ø 6,00 / 8,00 / 10,00 / 12,00                                                                                                                                                                                                                                                                                               | 260                  | 1                                                     | Ø 6,00 / 8,00 / 10,00 / 12,00                                                                                                                                                                                                                                                                                                        | 160                  | 1                                                     | FORCE X                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                                                       |
|                                                                                                                                                                                                                                                                                                                             |                      |                                                       |                                                                                                                                                                                                                                                                                                                                      |                      |                                                       | Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      | 1                                                     |
|                                                                                                                                                                                                                                                                                                                             |                      |                                                       |                                                                                                                                                                                                                                                                                                                                      |                      |                                                       | Profi Multicut                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                                                       |
|                                                                                                                                                                                                                                                                                                                             |                      |                                                       |                                                                                                                                                                                                                                                                                                                                      |                      |                                                       | Ø 6,00 / 8,00 / 10,00                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      | 1                                                     |
|                                                                                                                                                                                                                                                                                                                             |                      |                                                       |                                                                                                                                                                                                                                                                                                                                      |                      |                                                       | Wera                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                                                       |
|                                                                                                                                                                                                                                                                                                                             |                      |                                                       |                                                                                                                                                                                                                                                                                                                                      |                      |                                                       | 4 Bits sortiert / 4 Bits sorted / 4 brocas surtidas                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                                                       |

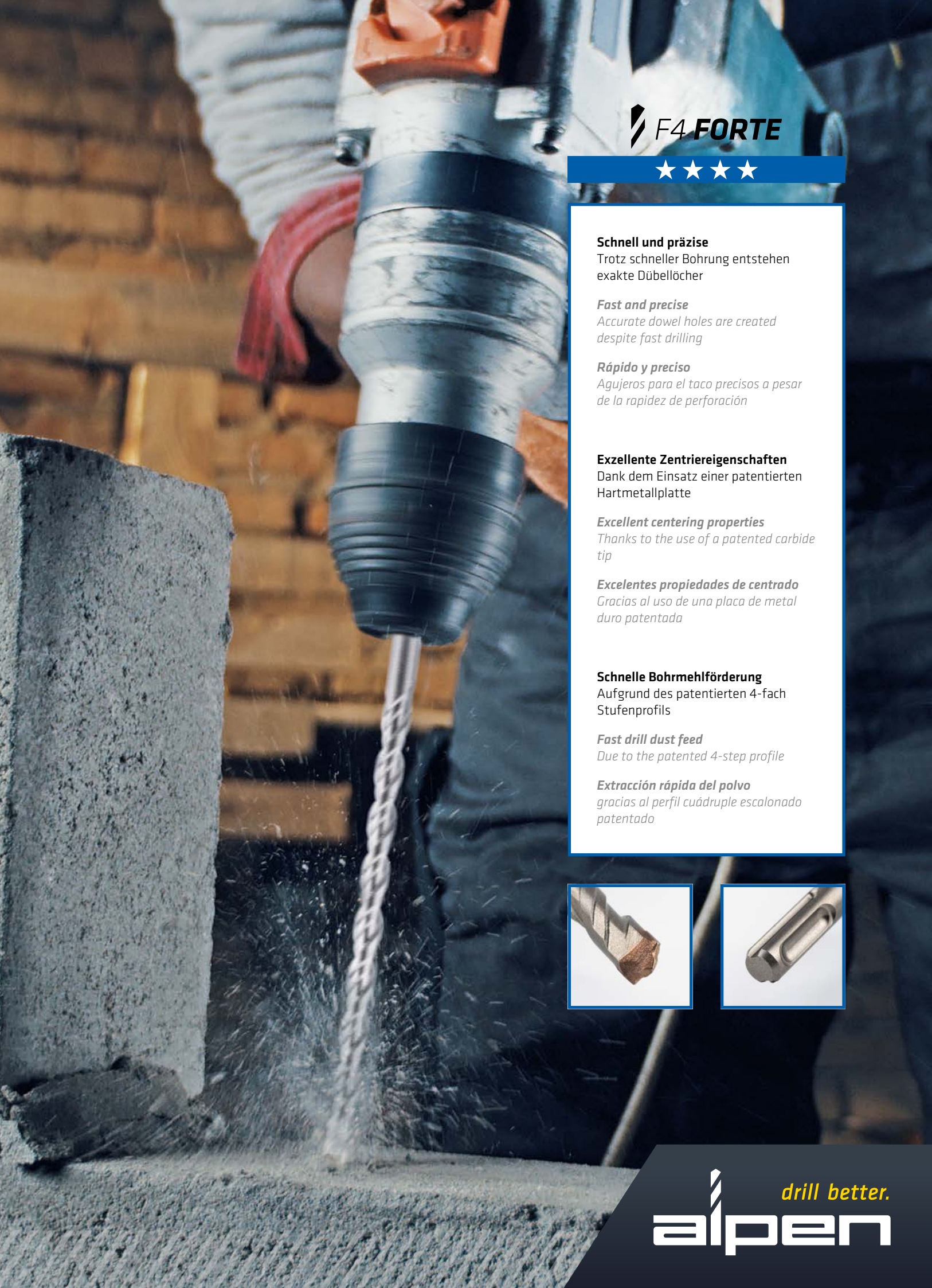
|                                                                                                                                                                                                                                                                                                     |  |  |                                            |                      |                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------|----------------------|-------------------------------------------------------|
| <div>SDS-plus FORCE X KIT SET 16</div> <div></div> <div>16-tlg. / 16-pcs. / 16-unid.<br/>Set<br/>Art.-Nr. 0000500216100</div> |  |  | <div>Inhalt<br/>Contents / Contenido</div> | <div>l1<br/>mm</div> | <div>Stk. <sup>(1)</sup><br/>pc. <sup>(1)</sup></div> |
|                                                                                                                                                                                                                                                                                                     |  |  | Bohrer / Drill bits / Broca:               |                      |                                                       |
|                                                                                                                                                                                                                                                                                                     |  |  | Ø 5,00 / 6,00                              | 110                  | 1                                                     |
|                                                                                                                                                                                                                                                                                                     |  |  | Ø 6,00 / 8,00 / 10,00 / 12,00              | 160                  | 1                                                     |
|                                                                                                                                                                                                                                                                                                     |  |  | Ø 6,00 / 8,00 / 10,00                      | 210                  | 1                                                     |
|                                                                                                                                                                                                                                                                                                     |  |  | Ø 8,00 / 10,00 / 12,00 / 14,00             | 260                  | 1                                                     |
|                                                                                                                                                                                                                                                                                                     |  |  | Meißel / Chisel / Cíncel:                  |                      |                                                       |
|                                                                                                                                                                                                                                                                                                     |  |  | Spitz / point / punta                      |                      | 1                                                     |
|                                                                                                                                                                                                                                                                                                     |  |  | Flach / flat / plana                       |                      | 1                                                     |
|                                                                                                                                                                                                                                                                                                     |  |  | Breit / wide / ancha                       |                      | 1                                                     |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y cínceles





**F4 FORTE**



**Schnell und präzise**

Trotz schneller Bohrung entstehen  
exakte Dübellöcher

**Fast and precise**

Accurate dowel holes are created  
despite fast drilling

**Rápido y preciso**

Agujeros para el taco precisos a pesar  
de la rapidez de perforación

**Exzellente Zentriereigenschaften**

Dank dem Einsatz einer patentierten  
Hartmetallplatte

**Excellent centering properties**

Thanks to the use of a patented carbide  
tip

**Excelentes propiedades de centrado**

Gracias al uso de una placa de metal  
duro patentada

**Schnelle Bohrmehlförderung**

Aufgrund des patentierten 4-fach  
Stufenprofils

**Fast drill dust feed**

Due to the patented 4-step profile

**Extracción rápida del polvo**

gracias al perfil cuádruple escalonado  
patentado



**alpen** *drill better.*



**D** SDS-plus Hammerbohrer „F4“, 2 Schneiden **E** SDS-plus hammer drill bits “F4”, 2 cutting edges **ES** Brocas de percusión SDS-plus “F4”, 2 filos

**Einsatzbereich:**

Der SDS-plus Hammerbohrer F4 mit patentiertem 4-fach-Stufenprofil und patentierter Hartmetallplatte. Geringer Verschleiß, sehr hohe Standzeit. Hochleistungsbohrer zum Hammerbohren in Beton, Naturstein und Mauerwerk.

**Range of application:**

The SDS-plus hammer drill bit F4 with its patented 4X stepped profile and patented tip. Low wear, very long service life. High efficiency drill bit for heavy-duty drilling in concrete, natural stone and brickwork.

**Ámbito de aplicación:**

La broca de percusión SDS-plus F4 con perfil cuádruple escalonado patentado y plancha de metal duro patentada. Menor desgaste, largo tiempo de uso. Broca de alto rendimiento para taladrado a percusión en hormigón, piedra natural y mampostería.



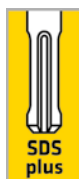
Leistungsstark  
Efficient  
Alto rendimiento



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Präzise  
Precise  
Preciso



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

Länge / Length / Longitud: 110/50 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Z | Code 807<br>Art.-Nr. | Inh.<br>Cont. |    | Code 768<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------|---|----------------------|---------------|----|----------------------|---------------|
| 4,00     | 110      | 50       | SDS-plus | 2 | 0080700400100        | 1             | 10 | 0076800400100        | 10            |
| 5,00     | 110      | 50       | SDS-plus | 2 | 0080700500100        | 1             | 10 | 0076800500100        | 10            |
| 5,50     | 110      | 50       | SDS-plus | 2 | 0080700550100        | 1             | 10 | 0076800550100        | 10            |
| 6,00     | 110      | 50       | SDS-plus | 2 | 0080700600100        | 1             | 10 | 0076800600100        | 10            |
| 6,50     | 110      | 50       | SDS-plus | 2 | 0080700650100        | 1             | 10 | 0076800650100        | 10            |
| 7,00     | 110      | 50       | SDS-plus | 2 | 0080700700100        | 1             | 10 | 0076800700100        | 10            |
| 8,00     | 110      | 50       | SDS-plus | 2 | 0080700800100        | 1             | 10 | 0076800800100        | 10            |
| 10,00    | 110      | 50       | SDS-plus | 2 | 0080701000100        | 1             | 10 | 0076801000100        | 10            |

Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y círculos

|                                       |          |          |          |   | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                    | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|---------------------------------------|----------|----------|----------|---|--------------------------------------------------------|---------------|------------------------------------------------------------------------------------|---------------------------------------------------------|---------------|
| Länge / Length / Longitud: 160/100 mm |          |          |          |   |                                                        |               |                                                                                    |                                                         |               |
| d1<br>mm                              | l1<br>mm | l2<br>mm | d2       | Z | Code 817<br>Art.-Nr.                                   | Inh.<br>Cont. |   | Code 769<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 4,00                                  | 160      | 100      | SDS-plus | 2 | 0081700400100                                          | 1             | 10                                                                                 | 0076900400100                                           | 10            |
| 5,00                                  | 160      | 100      | SDS-plus | 2 | 0081700500100                                          | 1             | 10                                                                                 | 0076900500100                                           | 10            |
| 5,50                                  | 160      | 100      | SDS-plus | 2 | 0081700550100                                          | 1             | 10                                                                                 | 0076900550100                                           | 10            |
| 6,00                                  | 160      | 100      | SDS-plus | 2 | 0081700600100                                          | 1             | 10                                                                                 | 0076900600100                                           | 10            |
| 6,50                                  | 160      | 100      | SDS-plus | 2 | 0081700650100                                          | 1             | 10                                                                                 | 0076900650100                                           | 10            |
| 7,00                                  | 160      | 100      | SDS-plus | 2 | 0081700700100                                          | 1             | 10                                                                                 | 0076900700100                                           | 10            |
| 8,00                                  | 160      | 100      | SDS-plus | 2 | 0081700800100                                          | 1             | 10                                                                                 | 0076900800100                                           | 10            |
| 9,00                                  | 160      | 100      | SDS-plus | 2 | 0081700900100                                          | 1             | 10                                                                                 | 0076900900100                                           | 10            |
| 9,50                                  | 160      | 100      | SDS-plus | 2 | 0081700950100                                          | 1             | 10                                                                                 |                                                         |               |
| 10,00                                 | 160      | 100      | SDS-plus | 2 | 0081701000100                                          | 1             | 10                                                                                 | 0076901000100                                           | 10            |
| 11,00                                 | 160      | 100      | SDS-plus | 2 | 0081701100100                                          | 1             | 10                                                                                 |                                                         |               |
| 12,00                                 | 160      | 100      | SDS-plus | 2 | 0081701200100                                          | 1             | 10                                                                                 | 0076901200100                                           | 5             |
| 13,00                                 | 160      | 100      | SDS-plus | 2 | 0081701300100                                          | 1             | 10                                                                                 |                                                         |               |
| 14,00                                 | 160      | 100      | SDS-plus | 2 | 0081701400100                                          | 1             | 10                                                                                 | 0076901400100                                           | 5             |
| 15,00                                 | 160      | 100      | SDS-plus | 2 | 0081701500100                                          | 1             | 10                                                                                 | 0076901500100                                           | 5             |
| 16,00                                 | 160      | 100      | SDS-plus | 2 | 0081701600100                                          | 1             | 10                                                                                 | 0076901600100                                           | 5             |
| Länge / Length / Longitud: 210/150 mm |          |          |          |   |                                                        |               |                                                                                    |                                                         |               |
| d1<br>mm                              | l1<br>mm | l2<br>mm | d2       | Z | Code 827<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 770<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 5,00                                  | 210      | 150      | SDS-plus | 2 | 0082700500100                                          | 1             | 8                                                                                  | 0077000500100                                           | 10            |
| 5,50                                  | 210      | 150      | SDS-plus | 2 | 0082700550100                                          | 1             | 8                                                                                  | 0077000550100                                           | 10            |
| 6,00                                  | 210      | 150      | SDS-plus | 2 | 0082700600100                                          | 1             | 8                                                                                  | 0077000600100                                           | 10            |
| 6,50                                  | 210      | 150      | SDS-plus | 2 | 0082700650100                                          | 1             | 8                                                                                  | 0077000650100                                           | 10            |
| 7,00                                  | 210      | 150      | SDS-plus | 2 | 0082700700100                                          | 1             | 8                                                                                  | 0077000700100                                           | 10            |
| 8,00                                  | 210      | 150      | SDS-plus | 2 | 0082700800100                                          | 1             | 8                                                                                  | 0077000800100                                           | 10            |
| 9,00                                  | 210      | 150      | SDS-plus | 2 | 0082700900100                                          | 1             | 8                                                                                  | 0077000900100                                           | 10            |
| 10,00                                 | 210      | 150      | SDS-plus | 2 | 0082701000100                                          | 1             | 8                                                                                  | 0077001000100                                           | 10            |
| 12,00                                 | 210      | 150      | SDS-plus | 2 | 0082701200100                                          | 1             | 8                                                                                  | 0077001200100                                           | 5             |
| 14,00                                 | 210      | 150      | SDS-plus | 2 | 0082701400100                                          | 1             | 8                                                                                  | 0077001400100                                           | 5             |
| 15,00                                 | 210      | 150      | SDS-plus | 2 | 0082701500100                                          | 1             | 8                                                                                  | 0077001500100                                           | 5             |
| 16,00                                 | 210      | 150      | SDS-plus | 2 | 0082701600100                                          | 1             | 8                                                                                  | 0077001600100                                           | 5             |
| 17,00                                 | 210      | 150      | SDS-plus | 2 | 0082701700100                                          | 1             | 8                                                                                  |                                                         |               |
| 18,00                                 | 210      | 150      | SDS-plus | 2 | 0082701800100                                          | 1             | 8                                                                                  |                                                         |               |
| 19,00                                 | 210      | 150      | SDS-plus | 2 | 0082701900100                                          | 1             | 8                                                                                  |                                                         |               |
| 20,00                                 | 210      | 150      | SDS-plus | 2 | 0082702000100                                          | 1             | 8                                                                                  |                                                         |               |

|                                                      |          |          |          |   | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                     | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|------------------------------------------------------|----------|----------|----------|---|----------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|
| Länge / <i>Length</i> / <i>Longitud</i> : 260/200 mm |          |          |          |   |                                                                      |               |                                                                                     |                                                                       |               |
| d1<br>mm                                             | l1<br>mm | l2<br>mm | d2       | Z | Code 837<br>Art.-Nr.                                                 | Inh.<br>Cont. |    | Code 771<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 5,00                                                 | 260      | 200      | SDS-plus | 2 | 0083700500100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 5,50                                                 | 260      | 200      | SDS-plus | 2 | 0083700550100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 6,00                                                 | 260      | 200      | SDS-plus | 2 | 0083700600100                                                        | 1             | 8                                                                                   | 0077100600100                                                         | 10            |
| 6,50                                                 | 260      | 200      | SDS-plus | 2 | 0083700650100                                                        | 1             | 8                                                                                   | 0077100650100                                                         | 10            |
| 7,00                                                 | 260      | 200      | SDS-plus | 2 | 0083700700100                                                        | 1             | 8                                                                                   | 0077100700100                                                         | 10            |
| 8,00                                                 | 260      | 200      | SDS-plus | 2 | 0083700800100                                                        | 1             | 8                                                                                   | 0077100800100                                                         | 10            |
| 10,00                                                | 260      | 200      | SDS-plus | 2 | 0083701000100                                                        | 1             | 8                                                                                   | 0077101000100                                                         | 10            |
| 11,00                                                | 260      | 200      | SDS-plus | 2 | 0083701100100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 12,00                                                | 260      | 200      | SDS-plus | 2 | 0083701200100                                                        | 1             | 8                                                                                   | 0077101200100                                                         | 5             |
| 13,00                                                | 260      | 200      | SDS-plus | 2 | 0083701300100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 14,00                                                | 260      | 200      | SDS-plus | 2 | 0083701400100                                                        | 1             | 8                                                                                   | 0077101400100                                                         | 5             |
| 15,00                                                | 260      | 200      | SDS-plus | 2 | 0083701500100                                                        | 1             | 8                                                                                   | 0077101500100                                                         | 5             |
| 16,00                                                | 260      | 200      | SDS-plus | 2 | 0083701600100                                                        | 1             | 8                                                                                   | 0077101600100                                                         | 5             |
| 18,00                                                | 260      | 200      | SDS-plus | 2 | 0083701800100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 20,00                                                | 260      | 200      | SDS-plus | 2 | 0083702000100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 22,00                                                | 260      | 200      | SDS-plus | 2 | 0083702200100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 24,00                                                | 260      | 200      | SDS-plus | 2 | 0083702400100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 25,00                                                | 260      | 200      | SDS-plus | 2 | 0083702500100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 26,00                                                | 260      | 200      | SDS-plus | 2 | 0083702600100                                                        | 1             | 8                                                                                   |                                                                       |               |
| Länge / <i>Length</i> / <i>Longitud</i> : 310/250 mm |          |          |          |   |                                                                      |               |                                                                                     |                                                                       |               |
| d1<br>mm                                             | l1<br>mm | l2<br>mm | d2       | Z | Code 847<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Code 773<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 5,00                                                 | 310      | 250      | SDS-plus | 2 | 0084700500100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 5,50                                                 | 310      | 250      | SDS-plus | 2 | 0084700550100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 6,00                                                 | 310      | 250      | SDS-plus | 2 | 0084700600100                                                        | 1             | 8                                                                                   | 0077300600100                                                         | 10            |
| 6,50                                                 | 310      | 250      | SDS-plus | 2 | 0084700650100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 7,00                                                 | 310      | 250      | SDS-plus | 2 | 0084700700100                                                        | 1             | 8                                                                                   | 0077300700100                                                         | 10            |
| 8,00                                                 | 310      | 250      | SDS-plus | 2 | 0084700800100                                                        | 1             | 8                                                                                   | 0077300800100                                                         | 10            |
| 10,00                                                | 310      | 250      | SDS-plus | 2 | 0084701000100                                                        | 1             | 8                                                                                   | 0077301000100                                                         | 10            |
| 12,00                                                | 310      | 250      | SDS-plus | 2 | 0084701200100                                                        | 1             | 8                                                                                   | 0077301200100                                                         | 5             |
| 13,00                                                | 310      | 250      | SDS-plus | 2 | 0084701300100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 14,00                                                | 310      | 250      | SDS-plus | 2 | 0084701400100                                                        | 1             | 8                                                                                   | 0077301400100                                                         | 5             |
| 16,00                                                | 310      | 250      | SDS-plus | 2 | 0084701600100                                                        | 1             | 8                                                                                   | 0077301600100                                                         | 5             |
| 18,00                                                | 310      | 250      | SDS-plus | 2 | 0084701800100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 19,00                                                | 310      | 250      | SDS-plus | 2 | 0084701900100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 20,00                                                | 310      | 250      | SDS-plus | 2 | 0084702000100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 22,00                                                | 310      | 250      | SDS-plus | 2 | 0084702200100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 24,00                                                | 310      | 250      | SDS-plus | 2 | 0084702400100                                                        | 1             | 8                                                                                   |                                                                       |               |
| 25,00                                                | 310      | 250      | SDS-plus | 2 | 0084702500100                                                        | 1             | 8                                                                                   |                                                                       |               |



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y circoles

|                                       |          |          |          |   | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                     | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|---------------------------------------|----------|----------|----------|---|----------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|
| d1<br>mm                              | l1<br>mm | l2<br>mm | d2       | Z | Code 877<br>Art.-Nr.                                                 | Inh.<br>Cont. |    | Code 778<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 5,00                                  | 450      | 400      | SDS-plus | 2 | 0087700500100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 5,50                                  | 450      | 400      | SDS-plus | 2 | 0087700550100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 6,00                                  | 450      | 400      | SDS-plus | 2 | 0087700600100                                                        | 1             | 5                                                                                   | 0077800600100                                                         | 10            |
| 6,50                                  | 450      | 400      | SDS-plus | 2 | 0087700650100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 8,00                                  | 450      | 400      | SDS-plus | 2 | 0087700800100                                                        | 1             | 5                                                                                   | 0077800800100                                                         | 10            |
| 10,00                                 | 450      | 400      | SDS-plus | 2 | 0087701000100                                                        | 1             | 5                                                                                   | 0077801000100                                                         | 10            |
| 12,00                                 | 450      | 400      | SDS-plus | 2 | 0087701200100                                                        | 1             | 5                                                                                   | 0077801200100                                                         | 5             |
| 13,00                                 | 450      | 400      | SDS-plus | 2 | 0087701300100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 14,00                                 | 450      | 400      | SDS-plus | 2 | 0087701400100                                                        | 1             | 5                                                                                   | 0077801400100                                                         | 5             |
| 15,00                                 | 450      | 400      | SDS-plus | 2 | 0087701500100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 16,00                                 | 450      | 400      | SDS-plus | 2 | 0087701600100                                                        | 1             | 5                                                                                   | 0077801600100                                                         | 5             |
| 18,00                                 | 450      | 300      | SDS-plus | 2 | 0087701800100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 20,00                                 | 450      | 400      | SDS-plus | 2 | 0087702000100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 22,00                                 | 450      | 400      | SDS-plus | 2 | 0087702200100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 24,00                                 | 450      | 400      | SDS-plus | 2 | 0087702400100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 25,00                                 | 450      | 400      | SDS-plus | 2 | 0087702500100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 26,00                                 | 450      | 400      | SDS-plus | 2 | 0087702600100                                                        | 1             | 5                                                                                   |                                                                       |               |
| Länge / Length / Longitud: 600/550 mm |          |          |          |   |                                                                      |               |                                                                                     |                                                                       |               |
| d1<br>mm                              | l1<br>mm | l2<br>mm | d2       | Z | Code 887<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Art.-Nr.                                                              | Inh.<br>Cont. |
| 10,00                                 | 600      | 550      | SDS-plus | 2 | 0088701000100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 12,00                                 | 600      | 550      | SDS-plus | 2 | 0088701200100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 14,00                                 | 600      | 550      | SDS-plus | 2 | 0088701400100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 16,00                                 | 600      | 550      | SDS-plus | 2 | 0088701600100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 18,00                                 | 600      | 550      | SDS-plus | 2 | 0088701800100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 20,00                                 | 600      | 550      | SDS-plus | 2 | 0088702000100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 24,00                                 | 600      | 550      | SDS-plus | 2 | 0088702400100                                                        | 1             | 5                                                                                   |                                                                       |               |
| 25,00                                 | 600      | 550      | SDS-plus | 2 | 0088702500100                                                        | 1             | 5                                                                                   |                                                                       |               |



**D SDS-plus Hammerbohrer „F4“, 2 Schneiden**
**E SDS-plus hammer drill bits “F4”, 2 cutting edges**
**ES Brocas de percusión SDS-plus “F4”, 2 filos**
**Einsatzbereich:**

Der SDS-plus Hammerbohrer F4 mit patentiertem 4-fach-Stufenprofil und patentierter Hartmetallplatte. Geringer Verschleiß, sehr hohe Standzeit. Hochleistungsbohrer zum Hammerbohren in Beton, Naturstein und Mauerwerk.

**Range of application:**

The SDS-plus hammer drill bit F4 with its patented 4X stepped profile and patented tip. Low wear, very long service life. High efficiency drill bit for heavy-duty drilling in concrete, natural stone and brickwork.

**Ámbito de aplicación:**

La broca de percusión SDS-plus F4 con perfil cuádruple escalonado patentado y plancha de metal duro patentada. Menor desgaste, largo tiempo de uso. Broca de alto rendimiento para taladrado a percusión en hormigón, piedra natural y mampostería.



Leistungsstark  
Efficient  
Alto rendimiento



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Präzise  
Precise  
Preciso



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish



SB-Aufhänger  
Plastic tag  
Gancho para autoservicio

**Länge / Length / Longitud: 800/740 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Z | Code 913<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|---|----------------------|---------------|-------------------------------------------------------------------------------------|
| 12,00    | 800      | 740      | SDS-plus | 2 | 0091301200100        | 1             | 1                                                                                   |
| 16,00    | 800      | 740      | SDS-plus | 2 | 0091301600100        | 1             | 1                                                                                   |
| 20,00    | 800      | 740      | SDS-plus | 2 | 0091302000100        | 1             | 1                                                                                   |

**Länge / Length / Longitud: 1000/950 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Z | Code 914<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|---|----------------------|---------------|-------------------------------------------------------------------------------------|
| 10,00    | 1000     | 950      | SDS-plus | 2 | 0091401000100        | 1             | 1                                                                                   |
| 12,00    | 1000     | 950      | SDS-plus | 2 | 0091401200100        | 1             | 1                                                                                   |
| 14,00    | 1000     | 950      | SDS-plus | 2 | 0091401400100        | 1             | 1                                                                                   |
| 16,00    | 1000     | 950      | SDS-plus | 2 | 0091401600100        | 1             | 1                                                                                   |
| 18,00    | 1000     | 950      | SDS-plus | 2 | 0091401800100        | 1             | 1                                                                                   |
| 20,00    | 1000     | 950      | SDS-plus | 2 | 0091402000100        | 1             | 1                                                                                   |
| 25,00    | 1000     | 950      | SDS-plus | 2 | 0091402500100        | 1             | 1                                                                                   |

Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y círculos

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

F4 Forte BOX 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0081700568100

| Ø<br>mm              | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|----------------------|----------|--------------------------------|
| F4 Forte             |          |                                |
| Ø 5,00 / 6,00 / 8,00 | 160      | 1                              |

F4 Forte BOX 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0081700571100

| Ø<br>mm               | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-----------------------|----------|--------------------------------|
| F4 Forte              |          |                                |
| Ø 6,00 / 7,00 / 10,00 | 160      | 1                              |

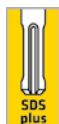
F4 Forte MB 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0080705680100

| Ø<br>mm               | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-----------------------|----------|--------------------------------|
| F4 Forte              |          |                                |
| Ø 5,00 / 6,00         | 110      | 1                              |
| Ø 6,00 / 8,00 / 10,00 | 160      | 1                              |

F4 Forte MB 7



7-tlg. / 7-pcs. / 7-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0080700007100

| Ø<br>mm                             | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-------------------------------------|----------|--------------------------------|
| F4 Forte                            |          |                                |
| Ø 5,00 / 6,00                       | 110      | 1                              |
| Ø 6,00 / 7,00 / 8,00 / 9,00 / 10,00 | 160      | 1                              |

F4 Forte SET 8



8-tlg. / 8-pcs. / 8-unid.  
Set  
Art.-Nr. 0080704100100

| Ø<br>mm                       | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-------------------------------|----------|--------------------------------|
| F4 Forte                      |          |                                |
| Ø 5,00 / 6,00 / 8,00          | 110      | 1                              |
| Ø 6,00 / 8,00 / 10,00 / 12,00 | 160      | 1                              |
| Ø 8,00                        | 210      | 1                              |

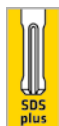
F4 Forte KM 7



7-tlg. / 7-pcs. / 7-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000500007100

| Ø<br>mm                       | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-------------------------------|----------|--------------------------------|
| F4 Forte                      |          |                                |
| Ø 5,00 / 6,00 / 8,00          | 110      | 1                              |
| Ø 6,00 / 8,00 / 10,00 / 12,00 | 160      | 1                              |

F4 Forte BOX 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 1077809005100

| Ø<br>mm                                 | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-----------------------------------------|----------|--------------------------------|
| F4 Forte                                |          |                                |
| Ø 10,00 / 12,00 / 14,00 / 16,00 / 20,00 | 450      | 1                              |

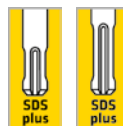
F4 Forte BOX 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 1088709005100

| Ø<br>mm                                 | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-----------------------------------------|----------|--------------------------------|
| F4 Forte                                |          |                                |
| Ø 10,00 / 12,00 / 14,00 / 16,00 / 20,00 | 600      | 1                              |

Combi Construction Set SDS-plus MB 7



7-tlg. / 7-pcs. / 7-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000100007100

| Ø<br>mm               | l1<br>mm | Stk. <sup>(1)</sup><br>pc. (1) |
|-----------------------|----------|--------------------------------|
| F4 Forte              |          |                                |
| Ø 5,00                | 110      | 1                              |
| Ø 6,00 / 8,00 / 10,00 | 160      | 1                              |
| Profi Multicut        |          |                                |
| Ø 5,00                | 110      | 1                              |
| Ø 6,00 / 8,00         | 160      | 1                              |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

## KIT SET 13-1



13-tlg. / 13-pcs. / 13-unid.  
Set  
Art.-Nr. 0000303213100

## SDS-plus F4 Forte Mix BOX 8



8-tlg. / 8-pcs. / 8-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0000500008100

## SDS-plus F4 Forte KIT SET 16



16-tlg. / 16-pcs. / 16-unid.  
Set  
Art.-Nr. 0000500016100

| Ø<br>mm                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------------|-------------------------------------------|--------------------------------|----------|-------------------------------------------|--------------------------------|----------|-------------------------------------------|
| C PROTECTOR                                         |                                           | Bohrer / Drill bits / Broca:   |          |                                           | Bohrer / Drill bits / Broca:   |          |                                           |
| Ø 5,00 / 6,00 / 8,00                                | 1                                         | Ø 6,00 / 8,00 / 10,00 / 12,00  | 160      | 1                                         | Ø 5,00 / 6,00                  | 110      | 1                                         |
| F4 Forte                                            |                                           | Ø 8,00 / 10,00                 | 210      | 1                                         | Ø 6,00 / 8,00 / 10,00 / 12,00  | 160      | 1                                         |
| Ø 5,00 / 6,00 / 8,00                                | 1                                         | Meißel / Chisel / Cincel:      |          |                                           | Ø 6,00 / 8,00 / 10,00          | 210      | 1                                         |
| Profi Multicut                                      |                                           | Spitz / point / punta          |          | 1                                         | Ø 8,00 / 10,00 / 12,00 / 14,00 | 260      | 1                                         |
| Ø 5,00 / 6,00 / 8,00                                | 1                                         | Flach / flat / plana           |          | 1                                         | Meißel / Chisel / Cincel:      |          |                                           |
| Wera                                                |                                           |                                |          |                                           | Spitz / point / punta          |          | 1                                         |
| 4 Bits sortiert / 4 Bits sorted / 4 brocas surtidas |                                           |                                |          |                                           | Flach / flat / plana           |          | 1                                         |
|                                                     |                                           |                                |          |                                           | Breit / wide / ancha           |          | 1                                         |

## SDS-plus Mix Set F4 Forte KM 6



6-tlg. / 6-pcs. / 6-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0081700006100

| Ø<br>mm                      | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|------------------------------|----------|-------------------------------------------|
| F4 Forte                     |          |                                           |
| Ø 5,00 / 6,00 / 8,00 / 10,00 | 160      | 1                                         |
| Meißel / Chisel / Cincel:    |          |                                           |
| Spitz / point / punta        | 140      | 1                                         |
| Flach / flat / plana         | 20 x 140 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y circoles



## **DUST EXTRACTOR SMASH**



### **Der neue 2 in 1 Bohrer**

Bohren und Staubsaugen in einem Schritt

### **The new 2-in-1 drill bit**

Drilling and dust extraction in a single step

### **Nueva broca 2 en 1**

Perforación y aspiración en un paso

### **Saubere, staubfreie Bohrlöcher**

Erspart lästige Reinigung und ermöglicht das sichere Einsetzen chemischer Dübel

### **Clean, dust-free drill holes**

Saves annoying cleaning and enables safe insertion of chemical dowels

### **Agujeros limpios y sin polvo**

Evita el fastidio de la limpieza y permite el uso seguro de tacos químicos

### **Schützt den Anwender**

Gesundheitliche Belastungen werden vermieden

### **Protects the user**

Health risks are avoided

### **Protección del usuario**

Se evita poner en riesgo la salud





## D SDS-plus Saugbohrer „DUST EXTRACTOR SMASH“ 2 Schneiden

### Einsatzbereich:

Der SDS-plus Hammerbohrer zum Saugbohren mit geringem Verschleiß und sehr hoher Standzeit. Hochleistungsbohrer zum Hammerbohren in Beton, Naturstein und Mauerwerk.



Leistungsstark  
Efficient  
Alto rendimiento



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Präzise  
Precise  
Preciso

## E SDS-plus extraction drill bits „DUST EXTRACTOR SMASH“ 2 cutting edges

### Range of application:

The SDS-plus hammer drill bit for extraction drilling with low wear and very long service life. High efficiency drill bit for heavy-duty drilling in concrete, natural stone and brick-work.

## ES Broca de aspiración SDS-plus „DUST EXTRACTOR SMASH“ 2 filos

### Ámbito de aplicación:

La broca SDS-plus para perforar a percusión aspirando el polvo con desgaste mínimo y larga duración. Broca de alto rendimiento para taladrado a percusión en hormigón, piedra natural y mampostería.



SB-Aufhänger  
Plastic tag  
Gancho para autoservicio

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 580<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------|----------------------|---------------|---|
| 6,00     | 220      | 100      | SDS-plus | 0058000600100        | 1             | 1 |
| 8,00     | 270      | 150      | SDS-plus | 0058000800100        | 1             | 1 |
| 10,00    | 270      | 150      | SDS-plus | 0058001000100        | 1             | 1 |
| 12,00    | 320      | 200      | SDS-plus | 0058001200100        | 1             | 1 |
| 14,00    | 370      | 250      | SDS-plus | 0058001400100        | 1             | 1 |
| 16,00    | 370      | 250      | SDS-plus | 0058001600100        | 1             | 1 |

Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y circoles

## ① Hammerfeste SDS-plus Bohrkronen

### Einsatzbereich:

Hammerfeste Schlagbohrkrone mit hochfestem Kronengrundkörper und Hartmetallschneiden in Hammerbohrerqualität. Für Beton und Mauerwerk.



Hart  
Hard  
Dura



Leistungsstark  
Efficient  
Alto rendimiento



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish

## ② Hammer-active SDS-plus core bit

### Range of application:

Hammer-active core bit with high strength base body and carbide tips in SDS hammer drilling quality, for concrete and masonry.

## ③ Corona de perforar resistente a la percusión SDS-plus

### Ámbito de aplicación:

Corona de perforar a percusión resistente al martillo con cuerpo base de la corona de alta resistencia y filos de metal duro con la calidad de una broca de percusión. Para hormigón y mampostería.



Drehpack mit Aufhänger

Twistpack with tag

Paquete giratorio con gancho para autoservicio

Länge / Length / Longitud: 85/65 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 897<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------|----------------------|---------------|
| 25,00    | 85       | 65       | SDS-plus | 0089702500100        | 1             |
| 30,00    | 85       | 65       | SDS-plus | 0089703000100        | 1             |
| 35,00    | 85       | 65       | SDS-plus | 0089703500100        | 1             |
| 40,00    | 85       | 65       | SDS-plus | 0089704000100        | 1             |
| 50,00    | 85       | 65       | SDS-plus | 0089705000100        | 1             |
| 66,00    | 85       | 65       | SDS-plus | 0089706600100        | 1             |
| 68,00    | 85       | 65       | SDS-plus | 0089706800100        | 1             |
| 80,00    | 85       | 65       | SDS-plus | 0089708000100        | 1             |

### Aufnahmeschaft einzeln

Single arbor / Espiga de soporte individual (1 unid.)

| l1<br>mm | d2<br>mm | Code 898<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------------------|---------------|
| 95       | 1/4"     | 0089800095100        | 1             |
| 110      | SDS-plus | 0089800110100        | 1             |
| 220      | SDS-plus | 0089800200100        | 1             |

### Zentrierbohrer einzeln

Single pilot drill / Broca de centrar individual (1 unid.)

| d1<br>mm | l1<br>mm | l2<br>mm | Code 899<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 8,00     | 120      | 70       | 0089900800100        | 1             |

## D SDS-plus Meißel "DEMOLISHER Plus"

### Einsatzbereich:

Spezialhärtung mit extrem harter Spitze,  
dadurch extrem leistungsfähig. Maximale  
Stabilität und verschleißfestes Einsteckende.

## E SDS-plus chisels "DEMOLISHER Plus"

### Range of application:

Special hardening with extremely hard tip,  
therefore extremely efficient. Maximum sta-  
bility and wear-resistant insertion end.

## ES Cíncel SDS-plus "DEMOLISHER Plus"

### Ámbito de aplicación:

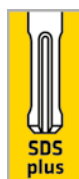
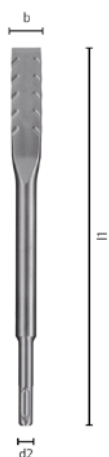
Endurecimiento especial con punta extrema-  
damente dura para un rendimiento excelente.  
Estabilidad máxima y encastre resistente al  
desgaste.



Leistungsstark  
Efficient  
Alto rendimiento



Stabil  
Stable  
Estable



Oberflächen: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish

SB-Aufhänger  
Plastic tag  
Gancho para autoservicio



|                                                                                                                  | l1<br>mm | b<br>mm | d2       | Code 987<br>Art.-Nr. | Inh.<br>Cont. |   |
|------------------------------------------------------------------------------------------------------------------|----------|---------|----------|----------------------|---------------|---|
|  <b>Spitz</b> / point / punta | 250      |         | SDS-plus | 0098700251100        | 1             | 1 |
|  <b>Flach</b> / flat / plana  | 250      | 20-25   | SDS-plus | 0098700252100        | 1             | 1 |
|  <b>Breit</b> / wide / ancha  | 250      | 40-50   | SDS-plus | 0098700253100        | 1             | 1 |

## ① SDS-plus Meißel Länge 250 mm

### Einsatzbereich:

Für allgemeine Meißel- und Abbrucharbeiten von Mauerwerk, Beton und Gestein. Für alle Bohrhämmer mit SDS-plus Aufnahme.

## ② SDS-plus chisels length 250 mm

### Range of application:

For general chiselling and demolition work in masonry, concrete and stone. For all hammer drills with SDS-plus adapters.

## ③ Cíncel SDS-plus Longitud 250 mm

### Ámbito de aplicación:

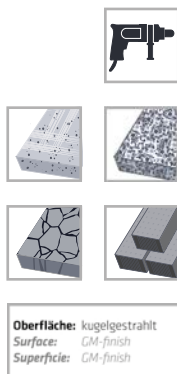
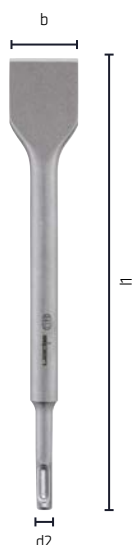
Para trabajos generales con cinceles y de demolición de mampostería, hormigón y piedra. Para todos los martillos perforadores con toma SDS-plus.



Leistungstark  
Efficient  
Alto rendimiento



Hart  
Hard  
Duro



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish

### SB-Aufhänger

Plastic tag

Gancho para autoservicio



|                                               | l1<br>mm | b<br>mm | d2       | Code 980<br>Art.-Nr. | Inh.<br>Cont. |     |
|-----------------------------------------------|----------|---------|----------|----------------------|---------------|-----|
| Spitz / point / punta                         | 250      |         | SDS-plus | 0098000250100        | 1             | 1   |
| Spitz / point / punta                         | 250      |         | SDS-plus | 0098001250100        | 1             | 10* |
|                                               | l1<br>mm | b<br>mm | d2       | Code 981<br>Art.-Nr. | Inh.<br>Cont. |     |
| Flach / flat / plana                          | 250      | 20      | SDS-plus | 0098100250100        | 1             | 1   |
| Flach / flat / plana                          | 250      | 20      | SDS-plus | 0098101250100        | 1             | 10* |
|                                               | l1<br>mm | b<br>mm | d2       | Code 982<br>Art.-Nr. | Inh.<br>Cont. |     |
| Breit / wide / ancha                          | 250      | 40      | SDS-plus | 0098200425100        | 1             | 1   |
| Breit / wide / ancha                          | 250      | 40      | SDS-plus | 0098201425100        | 1             | 10* |
|                                               | l1<br>mm | b<br>mm | d2       | Code 983<br>Art.-Nr. | Inh.<br>Cont. |     |
| Hohl / gouge / hueco                          | 250      | 22      | SDS-plus | 0098300225100        | 1             | 1   |
| Breit gekröpft / wide cranked / acodada ancha | 250      | 50      | SDS-plus | 0098300505100        | 1             | 1   |
|                                               | l1<br>mm | b<br>mm | d2       | Code 985<br>Art.-Nr. | Inh.<br>Cont. |     |
| Extra breit / extra wide / ancha especial     | 165      | 75      | SDS-plus | 0098500165100        | 1             | 1   |

\*) Ohne SB-Aufhänger  
without plastic tag  
sin gancho para autoservicio

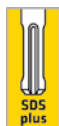


## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

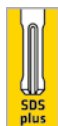
SDS-plus Meißel-Set BOX 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0098000003100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Meißel / Chisel / Cíncel:      |          |                                           |
| Spitz / point / punta          | 250      | 1                                         |
| Flach / flat / plana           | 250      | 1                                         |
| Breit / wide / ancha           | 250      | 1                                         |

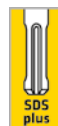
SDS-plus F4 Forte Mix BOX 8



8-tlg. / 8-pcs. / 8-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0000500008100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Bohrer / Drill bits / Broca:   |          |                                           |
| Ø 6,00 / 8,00 / 10,00 / 12,00  | 160      | 1                                         |
| Ø 8,00 / 10,00                 | 210      | 1                                         |
| Meißel / Chisel / Cíncel:      |          |                                           |
| Spitz / point / punta          |          | 1                                         |
| Flach / flat / plana           |          | 1                                         |

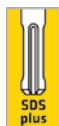
SDS-plus F4 Forte KIT SET 16



16-tlg. / 16-pcs. / 16-unid.  
Set  
Art.-Nr. 0000500016100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Bohrer / Drill bits / Broca:   |          |                                           |
| Ø 5,00 / 6,00                  | 110      | 1                                         |
| Ø 6,00 / 8,00 / 10,00 / 12,00  | 160      | 1                                         |
| Ø 6,00 / 8,00 / 10,00          | 210      | 1                                         |
| Ø 8,00 / 10,00 / 12,00 / 14,00 | 260      | 1                                         |
| Meißel / Chisel / Cíncel:      |          |                                           |
| Spitz / point / punta          |          | 1                                         |
| Flach / flat / plana           |          | 1                                         |
| Breit / wide / ancha           |          | 1                                         |

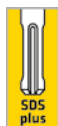
SDS-plus FORCE X KIT SET 16



16-tlg. / 16-pcs. / 16-unid.  
Set  
Art.-Nr. 0000500216100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Bohrer / Drill bits / Broca:   |          |                                           |
| Ø 5,00 / 6,00                  | 110      | 1                                         |
| Ø 6,00 / 8,00 / 10,00 / 12,00  | 160      | 1                                         |
| Ø 6,00 / 8,00 / 10,00          | 210      | 1                                         |
| Ø 8,00 / 10,00 / 12,00 / 14,00 | 260      | 1                                         |
| Meißel / Chisel / Cíncel:      |          |                                           |
| Spitz / point / punta          |          | 1                                         |
| Flach / flat / plana           |          | 1                                         |
| Breit / wide / ancha           |          | 1                                         |

SDS-plus Mix Set F4 Forte KM 6



6-tlg. / 6-pcs. / 6-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0081700006100

| Ø<br>mm                      | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|------------------------------|----------|-------------------------------------------|
| F4 Forte                     |          |                                           |
| Ø 5,00 / 6,00 / 8,00 / 10,00 | 160      | 1                                         |
| Meißel / Chisel / Cíncel:    |          |                                           |
| Spitz / point / punta        | 140      | 1                                         |
| Flach / flat / plana         | 20 x 140 | 1                                         |

SDS-plus Kurzmeißel-Set



3-tlg. / 3-pcs. / 3-unid.  
Röhrchen / Tube / Tubo  
Art.-Nr. 0098000013100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Spitz / point / punta          | 140      | 1                                         |
| Flach / flat / plana           | 20 x 140 | 1                                         |
| Breit / wide / ancha           | 30 x 140 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



## ① SDS-max Hammerbohrer

## ② SDS-max hammer drill bits

## ③ Broca de percusión SDS-max

### Einsatzbereich:

Für alle Bohrhämmer mit SDS-max Aufnahme. Zum Hammerbohren in Beton, Naturstein und Mauerwerk.

### Range of application:

High efficiency drill bit for heavy-duty SDS-max hammer drilling of concrete, natural stone, masonry.

### Ámbito de aplicación:

Para todos los martillos perforadores con toma SDS-max. Para el taladrado a percusión en hormigón, piedra natural y mampostería.



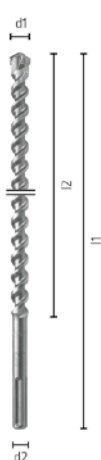
Leistungsstark  
Efficient  
Alto rendimiento



Hart  
Hard  
Duro



Präzise  
Precise  
Preciso



SB-Aufhänger  
Plastic tag  
Gancho para autoservicio

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 889<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|---------|---|----------------------|---------------|---|
| 12,00    | 340      | 200      | SDS-max | 2 | 0088901200100        | 1             | 1 |
| 13,00    | 340      | 200      | SDS-max | 2 | 0088901300100        | 1             | 1 |
| 14,00    | 340      | 200      | SDS-max | 2 | 0088901400100        | 1             | 1 |
| 15,00    | 340      | 200      | SDS-max | 2 | 0088901500100        | 1             | 1 |
| 16,00    | 340      | 200      | SDS-max | 3 | 0088901600100        | 1             | 1 |
| 18,00    | 340      | 200      | SDS-max | 4 | 0088901800100        | 1             | 1 |
| 20,00    | 320      | 200      | SDS-max | 4 | 0088902000100        | 1             | 1 |
| 22,00    | 320      | 200      | SDS-max | 4 | 0088902200100        | 1             | 1 |
| 24,00    | 320      | 200      | SDS-max | 4 | 0088902400100        | 1             | 1 |
| 25,00    | 320      | 200      | SDS-max | 4 | 0088902500100        | 1             | 1 |
| 26,00    | 320      | 200      | SDS-max | 4 | 0088902600100        | 1             | 1 |

Länge / Length / Longitud: 320/200 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 890<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|---------|---|----------------------|---------------|---|
| 28,00    | 320      | 200      | SDS-max | 4 | 0089002800100        | 1             | 1 |
| 30,00    | 320      | 200      | SDS-max | 4 | 0089003000100        | 1             | 1 |
| 32,00    | 320      | 200      | SDS-max | 4 | 0089003200100        | 1             | 1 |
| 35,00    | 320      | 200      | SDS-max | 4 | 0089003500100        | 1             | 1 |
| 38,00    | 320      | 200      | SDS-max | 4 | 0089003800100        | 1             | 1 |
| 40,00    | 320      | 200      | SDS-max | 4 | 0089004000100        | 1             | 1 |

SB-Aufhänger  
*Plastic tag*  
*Gancho para autoservicio*

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 891<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|---------|---|----------------------|---------------|-----------------------------------------------------------------------------------|
| 12,00    | 540      | 400      | SDS-max | 2 | 0089101200100        | 1             | 1                                                                                 |
| 13,00    | 540      | 400      | SDS-max | 2 | 0089101300100        | 1             | 1                                                                                 |
| 14,00    | 540      | 400      | SDS-max | 2 | 0089101400100        | 1             | 1                                                                                 |
| 15,00    | 540      | 400      | SDS-max | 2 | 0089101500100        | 1             | 1                                                                                 |
| 16,00    | 540      | 400      | SDS-max | 3 | 0089101600100        | 1             | 1                                                                                 |
| 18,00    | 540      | 400      | SDS-max | 4 | 0089101800100        | 1             | 1                                                                                 |
| 19,00    | 520      | 400      | SDS-max | 4 | 0089101900100        | 1             | 1                                                                                 |
| 20,00    | 520      | 400      | SDS-max | 4 | 0089102000100        | 1             | 1                                                                                 |
| 22,00    | 520      | 400      | SDS-max | 4 | 0089102200100        | 1             | 1                                                                                 |
| 24,00    | 520      | 400      | SDS-max | 4 | 0089102400100        | 1             | 1                                                                                 |
| 25,00    | 520      | 400      | SDS-max | 4 | 0089102500100        | 1             | 1                                                                                 |
| 26,00    | 520      | 400      | SDS-max | 4 | 0089102600100        | 1             | 1                                                                                 |

Länge / Length / Longitud: 520/400 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 892<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|---------|---|----------------------|---------------|-----------------------------------------------------------------------------------|
| 28,00    | 520      | 400      | SDS-max | 4 | 0089202800100        | 1             | 1                                                                                 |
| 30,00    | 520      | 400      | SDS-max | 4 | 0089203000100        | 1             | 1                                                                                 |
| 32,00    | 520      | 400      | SDS-max | 4 | 0089203200100        | 1             | 1                                                                                 |
| 35,00    | 520      | 400      | SDS-max | 4 | 0089203500100        | 1             | 1                                                                                 |
| 38,00    | 520      | 400      | SDS-max | 4 | 0089203800100        | 1             | 1                                                                                 |
| 40,00    | 520      | 400      | SDS-max | 4 | 0089204000100        | 1             | 1                                                                                 |
| 45,00    | 520      | 400      | SDS-max | 4 | 0089204500100        | 1             | 1                                                                                 |
| 50,00    | 520      | 400      | SDS-max | 4 | 0089205000100        | 1             | 1                                                                                 |

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 893<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|---------|---|----------------------|---------------|-------------------------------------------------------------------------------------|
| 12,00    | 740      | 600      | SDS-max | 2 | 0089301200100        | 1             | 1                                                                                   |
| 28,00    | 720      | 600      | SDS-max | 4 | 0089302800100        | 1             | 1                                                                                   |
| 35,00    | 720      | 600      | SDS-max | 4 | 0089303500100        | 1             | 1                                                                                   |

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 894<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|---------|---|----------------------|---------------|-------------------------------------------------------------------------------------|
| 16,00    | 940      | 800      | SDS-max | 3 | 0089401600100        | 1             | 1                                                                                   |
| 18,00    | 920      | 800      | SDS-max | 4 | 0089401800100        | 1             | 1                                                                                   |
| 20,00    | 920      | 800      | SDS-max | 4 | 0089402000100        | 1             | 1                                                                                   |
| 22,00    | 920      | 800      | SDS-max | 4 | 0089402200100        | 1             | 1                                                                                   |
| 25,00    | 920      | 800      | SDS-max | 4 | 0089402500100        | 1             | 1                                                                                   |
| 32,00    | 920      | 800      | SDS-max | 4 | 0089403200100        | 1             | 1                                                                                   |
| 40,00    | 920      | 800      | SDS-max | 4 | 0089404000100        | 1             | 1                                                                                   |

Länge / Length / Longitud: 1320/1200 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 895<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|---------|---|----------------------|---------------|-------------------------------------------------------------------------------------|
| 22,00    | 1320     | 1200     | SDS-max | 4 | 0089502200100        | 1             | 1                                                                                   |
| 25,00    | 1320     | 1200     | SDS-max | 4 | 0089502500100        | 1             | 1                                                                                   |
| 32,00    | 1320     | 1200     | SDS-max | 4 | 0089503200100        | 1             | 1                                                                                   |
| 40,00    | 1320     | 1200     | SDS-max | 4 | 0089504000100        | 1             | 1                                                                                   |



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y ciruelas

Set

Set

Juego

SDS-max Mix BOX 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0089100005100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Meißel / Chisel / Cíncel:      |          |                                           |
| Spitz / point / punta          |          | 1                                         |
| Flach / flat / plana           |          | 1                                         |
| Bohrer / Drill bits / Broca:   |          |                                           |
| Ø 25,00                        | 520      | 1                                         |
| Ø 30,00 / 35,00                | 520      | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



## D SDS-max Bohrkronen

## E SDS-max core bit

## ES Corona de perforar SDS-max

### Einsatzbereich:

Die Hartmetall-Zähne ermöglichen hohe Standzeiten. Durch die wechselnde Zahnfolge können Bohren und Meißeln in einem Arbeitsgang durchgeführt werden. Zum Bearbeiten von Beton, Naturstein, Mauerwerk, Marmor und Klinker.



Stabil  
Stable  
Estable



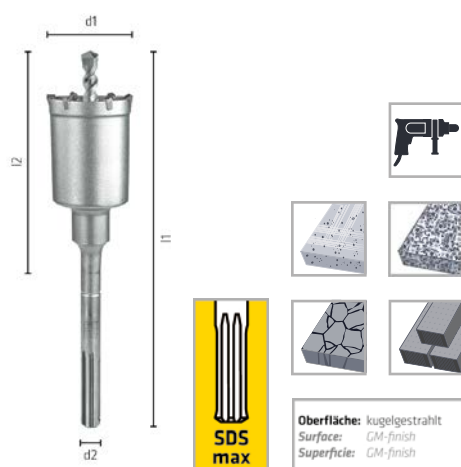
Hart  
Hard  
Dura

### Range of application:

High durabilities are achieved due to the tungsten carbide teeth. Because of the changing tooth order, drilling and chiseling can be done in one operation. For heavy duty SDS-max hammer drilling of concrete, natural stone, masonry and marble.

### Ámbito de aplicación:

Los dientes de metal duro hacen posible un largo tiempo de uso. Gracias a la secuencia de dientes cambiante se pueden realizar agujeros y cincelados en una misma operación. Para procesar hormigón, piedra natural, mampostería, mármol y ladrillos.



Drehpack  
Twistpack  
Paquete giratorio

### Länge / Length / Longitud: 290/170 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z | Code 871<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|---------|---|----------------------|---------------|---|
| 50,00    | 290      | 170      | SDS-max | 6 | 0087105000100        | 1             | 1 |
| 68,00    | 290      | 170      | SDS-max | 6 | 0087106800100        | 1             | 1 |
| 80,00    | 290      | 170      | SDS-max | 8 | 0087108000100        | 1             | 1 |

### Länge / Length / Longitud: 550/430 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2      | Z  | Code 872<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|---------|----|----------------------|---------------|---|
| 50,00    | 550      | 430      | SDS-max | 6  | 0087205000100        | 1             | 1 |
| 68,00    | 550      | 430      | SDS-max | 6  | 0087206800100        | 1             | 1 |
| 80,00    | 550      | 430      | SDS-max | 8  | 0087208000100        | 1             | 1 |
| 100,00   | 550      | 430      | SDS-max | 10 | 0087209999100        | 1             | 1 |
| 125,00   | 550      | 430      | SDS-max | 12 | 0087212500100        | 1             | 1 |

### Zentrierbohrer für Bohrkronen / Centre drill for drilling crown / Broca de centrar para corona de perforar

Plastiktasche  
Plastic wallet / Embalaje de plástico

| d1<br>mm | l1<br>mm | Z | Code 871<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|---|----------------------|---------------|---|
| 12,00    | 128      | 2 | 0087101200100        | 1             | 1 |

Die Bohrtiefe setzt sich aus mehreren Schritten zusammen: jeweils nach Erreichen der Nutzlänge Kern ausbrechen.

The drilling depth is done in several steps: after reaching the working length break up the core.

La profundidad de perforación se compone de varios pasos: cada vez que se alcanza la longitud útil romper el núcleo.

Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y ciruelas

## SDS-max Fräskrone

## ES SDS-max milling crown

## ES Corona de fresar SDS-max

### Einsatzbereich:

Sicherer Ansatz auch in Ecken durch langen Zentrierbohrer. Exakte Bohrlochgeometrie auch bei tiefen Bohrlöchern. Durch asynchrone Bohrkopfstruktur schnelle Bohrmehlförderung. Zum Bearbeiten von Beton, Mauerwerk, Marmor und Klinker.



Präzise  
Precise  
Preciso



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápida

### Range of application:

Safe fixing even in corners thanks to long centre drill. Precise geometry of the drilling hole even at deep holes. Due to the asynchronous structure of the drilling head the drilling dust will be moved faster. For heavy-duty cutting in concrete, masonry and marble.

### Ámbito de aplicación:

Seguridad de uso incluso en las esquinas gracias a su larga broca de centrar. Geometría exacta de los agujeros incluso en agujeros de perforación profundos. Su estructura de cabezal asíncrono permite la rápida eliminación de los detritos. Para procesar hormigón, mampostería, mármol y ladrillos.



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish



Einzelverpackung  
Single packing  
Embalaje individual

Länge / Length / Longitud: 550/450 mm

| d1<br>mm | l1<br>mm | l2<br>mm | Code 885<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------------------|---------------|---|
| 45,00    | 550      | 450      | 0088514500100        | 1             | 1 |
| 55,00    | 550      | 450      | 0088515500100        | 1             | 1 |
| 65,00    | 550      | 450      | 0088516500100        | 1             | 1 |
| 80,00    | 550      | 450      | 0088518000100        | 1             | 1 |

Länge / Length / Longitud: 990/850 mm

| d1<br>mm | l1<br>mm | l2<br>mm | Code 886<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------------------|---------------|---|
| 45,00    | 990      | 850      | 0088614500100        | 1             | 1 |
| 55,00    | 990      | 850      | 0088615500100        | 1             | 1 |
| 65,00    | 990      | 850      | 0088616500100        | 1             | 1 |
| 80,00    | 990      | 850      | 0088618000100        | 1             | 1 |

Gewindefett / Thread grease / Grasa para roscas

Dose / Can / Caja

| Inhalt<br>Contents / Contenido | Code 888<br>Art.-Nr. | Inh.<br>Cont. |   |
|--------------------------------|----------------------|---------------|---|
| 200 g                          | 0088800002100        | 1             | 1 |

**D** SDS-max Meißel  
„DEMOLISHER Max“

**Einsatzbereich:**

Spezialhärtung mit extrem harter Spitze,  
dadurch extrem leistungsfähig. Maximale  
Stabilität und verschleißfestes Einsteckende.

**E** SDS-max chisels  
„DEMOLISHER Max“

**Range of application:**

Special hardening with extremely hard tip,  
therefor extremely efficient. Maximum stability  
and wear-resistant insertion end.

**ES** Cíncel SDS-max  
„DEMOLISHER Max“

**Ámbito de aplicación:**

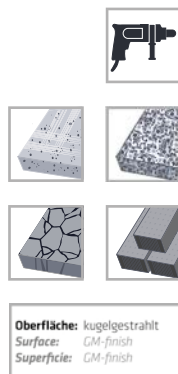
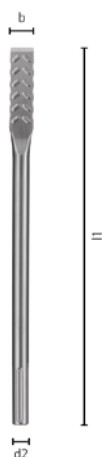
Endurecimiento especial con una punta  
extremadamente dura para un rendimiento  
excelente. Estabilidad máxima y encastre  
resistente al desgaste.



Leistungsstark  
Efficient  
Alto rendimiento



Stabil  
Stable  
Estable



Oberflächen: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish

SB-Aufhänger  
Plastic tag  
Gancho para autoservicio



|                       | l1<br>mm | b<br>mm | d2      | Code 973<br>Art.-Nr. | Inh.<br>Cont. |   |
|-----------------------|----------|---------|---------|----------------------|---------------|---|
| Breit / wide / ancha  | 380      | 50      | SDS-max | 0097300253100        | 1             | 1 |
| Spitz / point / punta | 400      |         | SDS-max | 0097300251100        | 1             | 1 |
| Flach / flat / plana  | 400      | 25      | SDS-max | 0097300252100        | 1             | 1 |

Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y círculos

## D SDS-max Meißel

## E SDS-max chisels

## ES Cíncel SDS-max

### Einsatzbereich:

Für allgemeine Meißel- und Abbrucharbeiten von Mauerwerk, Beton und Gestein. Für alle Bohrhämmer mit SDS-max Aufnahme.

### Range of application:

For general chiselling and demolition work in masonry, concrete and stone. For all hammer drills with SDS-max adapters.

### Ámbito de aplicación:

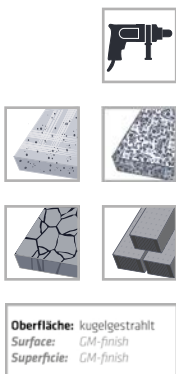
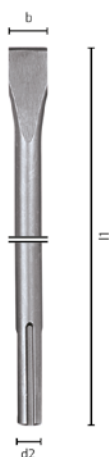
Para trabajos generales con cínceles y de demolición de mampostería, hormigón y piedra. Para todos los martillos perforadores con toma SDS-max.



Leistungstark  
Efficient  
Alto rendimiento



Hart  
Hard  
Dura



Oberfläche: kugelgestrahlt  
Surface: GM-finish  
Superficie: GM-finish

### SB-Aufhänger

Plastic tag

Gancho para autoservicio



|                                                                                     | l1<br>mm | b<br>mm | d2      | Code 970<br>Art.-Nr. | Inh.<br>Cont. |   |
|-------------------------------------------------------------------------------------|----------|---------|---------|----------------------|---------------|---|
|  |          |         |         |                      |               |   |
| Spitz / point / punta                                                               | 280      |         | SDS-max | 0097000280100        | 1             | 1 |
| Spitz / point / punta                                                               | 400      |         | SDS-max | 0097000400100        | 1             | 1 |
| Spitz / point / punta                                                               | 600      |         | SDS-max | 0097000600100        | 1             | 1 |
|  |          |         |         |                      |               |   |
| Flach / flat / plana                                                                | 280      | 25      | SDS-max | 0097100280100        | 1             | 1 |
| Flach / flat / plana                                                                | 400      | 25      | SDS-max | 0097100400100        | 1             | 1 |
| Flach / flat / plana                                                                | 600      | 25      | SDS-max | 0097100600100        | 1             | 1 |
|  |          |         |         |                      |               |   |
| Breit / wide / ancha                                                                | 300      | 80      | SDS-max | 0097800830100        | 1             | 1 |
| Breit / wide / ancha                                                                | 350      | 115     | SDS-max | 0097801135100        | 1             | 1 |
| Breit / wide / ancha                                                                | 400      | 50      | SDS-max | 0097800540100        | 1             | 1 |
|  |          |         |         |                      |               |   |
| Breit gekröpft / wide cranked /<br>acodada ancha                                    | 300      | 80      | SDS-max | 0097900830100        | 1             | 1 |
| Breit gekröpft / wide cranked /<br>acodada ancha                                    | 400      | 50      | SDS-max | 0097900530100        | 1             | 1 |
|  |          |         |         |                      |               |   |
| Stockermeißel / Bushing chisel /<br>Cíncel dentado                                  | 240      | 50      | SDS-max | 0097405024100        | 1             | 1 |
| Hohl / gouge / hueco                                                                | 300      | 26      | SDS-max | 0097402630100        | 1             | 1 |



**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

SDS-max Meißel BOX 2



2-tlg. / 2-pcs. / 2-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0097004002100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Meißel / Chisel / Cíncel:      |          |                                           |
| Spitz / point / punta          | 400      | 1                                         |
| Flach / flat / plana           | 400      | 1                                         |

SDS-max Mix BOX 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0089100005100

| Inhalt<br>Contents / Contenido | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------|----------|-------------------------------------------|
| Meißel / Chisel / Cíncel:      |          |                                           |
| Spitz / point / punta          |          | 1                                         |
| Flach / flat / plana           |          | 1                                         |
| Bohrer / Drill bits / Broca:   |          |                                           |
| Ø 25,00                        | 520      | 1                                         |
| Ø 30,00 / 35,00                | 520      | 1                                         |



Gesteinsbohrer, SDS-Bohrer und Meißel  
Concrete and Masonry drill bits, SDS hammer drill bits and chisels  
Broca para piedra, broca de percusión SDS y cínceles

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D Aufnahmadapter**

**E Shank adaptor**

**ES Adaptador de tomas**

**Einsatzbereich:**

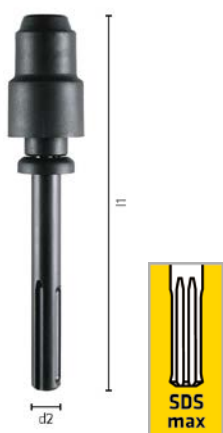
SDS-plus Kupplung mit SDS-max Aufnahme.  
Für alle Bohrhämmer mit SDS-max Aufnahme.

**Range of application:**

Converts SDS-max to SDS-plus. For all hammer drills with SDS-max shank.

**Ámbito de aplicación:**

Acoplamiento SDS-plus con toma SDS-max.  
Para todos los martillos perforadores con toma SDS-max.



SB-Aufhänger  
Plastic tag  
Gancho para autoservicio

Länge / Length / Longitud: 223 mm

| l1<br>mm | d2      | Code 996<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------------------|---------------|
| 223      | SDS-max | 0099600021100        | 1             |

## D Drehzahlen SDS-plus / SDS-max

Bitte beachten Sie die Drehzahl-empfehlungen des jeweiligen Bohrhammer-Maschinenherstellers.

## E Spindle speeds SDS-plus / SDS-max

Please note the spindle speed of the respective hammer drilling machine recommended by the manufacturer.

## ES Velocidades SDS-plus / SDS-max

Tenga en cuenta las recomendaciones de velocidad del fabricante respectivo de máquinas de martillos perforadores.

## D Drehzahlen

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

## E Spindle speeds

The recommended cutting data refer to standard applications.

## ES Velocidades

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

### Profi Beton



#### Code 188, 189, 727, 737

| Ø<br>mm |                       |      |      |      |
|---------|-----------------------|------|------|------|
|         | U/min.   rpm   r.p.m. |      |      |      |
| 3       | 3000                  | 3000 | 2100 | 1300 |
| 4       | 2400                  | 3000 | 1600 | 1000 |
| 5       | 1900                  | 2500 | 1300 | 800  |
| 5,5     | 1750                  | 2300 | 1200 | 750  |
| 6       | 1600                  | 2100 | 1100 | 700  |
| 6,5     | 1500                  | 1950 | 1000 | 650  |
| 7       | 1400                  | 1800 | 900  | 600  |
| 8       | 1200                  | 1600 | 800  | 500  |
| 9       | 1100                  | 1400 | 700  | 450  |
| 10      | 950                   | 1300 | 650  | 400  |
| 12      | 800                   | 1050 | 550  | 350  |
| 14      | 700                   | 900  | 450  | 300  |
| 16      | 600                   | 800  | 400  | 250  |
| 18      | 550                   | 700  | 350  | 200  |
| 20      | 500                   | 650  | 300  | 200  |

### Long Life



#### Code 117, 118, 327, 367, 517, 617, 718

| Ø<br>mm |                       |      |      |      |
|---------|-----------------------|------|------|------|
|         | U/min.   rpm   r.p.m. |      |      |      |
| 3       | 3000                  | 3000 | 2600 | 1300 |
| 4       | 3000                  | 2400 | 2000 | 1000 |
| 5       | 2500                  | 1900 | 1600 | 800  |
| 5,5     | 2300                  | 1750 | 1450 | 750  |
| 6       | 2100                  | 1600 | 1300 | 700  |
| 6,5     | 1950                  | 1500 | 1200 | 650  |
| 7       | 1800                  | 1400 | 1100 | 600  |
| 8       | 1600                  | 1200 | 1000 | 500  |
| 9       | 1400                  | 1100 | 900  | 450  |
| 10      | 1250                  | 950  | 800  | 400  |
| 11      | 1150                  | 850  | 700  | 350  |
| 12      | 1050                  | 800  | 650  | 350  |
| 13      | 950                   | 750  | 600  | 300  |
| 14      | 900                   | 700  | 600  | 300  |
| 15      | 850                   | 650  | 550  | 250  |
| 16      | 800                   | 600  | 500  | 250  |
| 18      | 700                   | 550  | 450  | 200  |
| 20      | 650                   | 500  | 400  | 200  |
| 22      | 600                   | 450  | 350  | 150  |
| 24      | 550                   | 400  | 350  | 150  |
| 25      | 500                   | 400  | 300  | 150  |



# METALL- UND EDELSTAHLBOHRER





Ⓔ *METAL DRILLS AND  
STAINLESS STEEL DRILLS*

Ⓔ *BROCA PARA METAL Y BROCA  
DE ACERO INOXIDABLE*

Übersicht

Overview

Resumen

|                                                                                                                                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                   |    |    |    |    |    |    |
| Norm / Estándar                                                                                                                                                                                   | DIN 1897                                                                            |                                                                                     | DIN 1897                                                                            | WN                                                                                    | WN                                                                                    | WN                                                                                    |
| Name / Nombre                                                                                                                                                                                     | HSS PZ-Cobalt                                                                       | HSS PZ-Cobalt                                                                       | HSS PZ-COBALT GRIP                                                                  | HSS Super                                                                             | HSS Super                                                                             | HSS Super                                                                             |
| Typ / Type / Tipo                                                                                                                                                                                 | PZ                                                                                  | PZ                                                                                  | PZ                                                                                  |                                                                                       |                                                                                       |                                                                                       |
| Bohrtiefe / Depth of drilling / Profundidad de perforación                                                                                                                                        | 3xD                                                                                 | 3xD                                                                                 | 3xD                                                                                 | 3xD                                                                                   | 3xD                                                                                   | 3xD                                                                                   |
| Schneidstoff / Cutting material / Material de corte                                                                                                                                               | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS                                                                                   | HSS                                                                                   | HSS                                                                                   |
| Beschichtung / Coating / Recubrimiento                                                                                                                                                            |                                                                                     | TiN                                                                                 |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Spitzenwinkel / Lip angle / Ángulo de la punta                                                                                                                                                    | 130°                                                                                | 130°                                                                                | 130°                                                                                | 118°                                                                                  | 118°                                                                                  | 118°                                                                                  |
| Sonderanschliff / Special point shape / Punta afilada especial                                                                                                                                    | C (≥ Ø 2,0 mm)                                                                      | C (≥ Ø 2,0 mm)                                                                      | C (≥ Ø 2,0 mm)                                                                      |                                                                                       | C                                                                                     | C                                                                                     |
| Schaft / Shank / Eje                                                                                                                                                                              |  |  |  |                                                                                       |                                                                                       |  |
| Ø mm                                                                                                                                                                                              | 1,00 - 13,00                                                                        | 1,00 - 13,00                                                                        | 1,00 - 20,00                                                                        | 3,10 - 5,20                                                                           | 3,10 - 6,10                                                                           | 3,00 - 5,30                                                                           |
| Code / Código                                                                                                                                                                                     | 901, 921                                                                            | 907                                                                                 | 904, 906                                                                            | 321                                                                                   | 331, 371                                                                              | 311                                                                                   |
| Seite / Page / Página                                                                                                                                                                             | 114                                                                                 | 114                                                                                 | 119                                                                                 | 122                                                                                   | 123                                                                                   | 124                                                                                   |
| Geeignet für / Suitable for / Adecuada para                                                                                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Allgemeine Baustähle</b><br>Structural steels<br>Aceros de construcción generales                          |  |  |  |  |  |  |
|  <b>Automatenstähle</b><br>Free cutting steels<br>Aceros de corte fácil                                        |  |  |  |  |  |  |
|  <b>Unlegierte Vergütungsstähle</b><br>Unalloyed heat treatable steels<br>Aceros para bonifi car no aleados    |  |  |  |  |  |  |
|  <b>Legierte Vergütungsstähle</b><br>Alloyed heat treatable steels<br>Aceros para bonifi car aleados           |  |  |  |                                                                                       |                                                                                       |                                                                                       |
|  <b>Rostfreie Stähle</b><br>Stainless steels<br>Aceros inoxidables                                             |  |  |  |                                                                                       |                                                                                       |                                                                                       |
|  <b>Grauguss, Temperguss</b><br>Grey cast iron, malleable cast iron<br>Hierro fundido gris, fundición maleable |  |  |  |                                                                                       |                                                                                       |                                                                                       |
|  <b>Titan- und Titanlegierungen</b><br>Titanium and titanium alloys<br>Titanio y aleaciones de titanio         |  |  |  |                                                                                       |                                                                                       |                                                                                       |
|  <b>Kupfer, Messing</b><br>Copper, brass<br>Cobre, latón                                                       |  |  |  |  |  |  |
|  <b>Aluminium</b><br>Aluminio<br>Aluminio                                                                      |  |  |  |  |  |  |
|  <b>Kunststoffe</b><br>Plastics<br>Plásticos                                                                   |  |  |  |  |  |  |

## D Übersicht

## E Overview

## ES Resumen

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |    |     |    |    |
| WN                                                                                  | WN                                                                                  | DIN 338                                                                             | DIN 338                                                                             | DIN 338                                                                             |                                                                                      | DIN 338                                                                               | WN                                                                                    |
| HSS Super                                                                           | HSS Sprint                                                                          | HSS Co5                                                                             | HSS Forte Cobalt                                                                    | HSS Cobalt                                                                          | HSS Cobalt                                                                           | HSS COBALT GRIP                                                                       | HSS COBALT STABLE                                                                     |
|                                                                                     | RN                                                                                  | R-AS                                                                                | FORTE                                                                               | RN                                                                                  | RN                                                                                   | RN                                                                                    | H                                                                                     |
| 3xD                                                                                 | 3xD                                                                                 | 5xD                                                                                 | 5xD                                                                                 | 5xD                                                                                 | 5xD                                                                                  | 5xD                                                                                   | 3xD                                                                                   |
| HSS                                                                                 | HSS                                                                                 | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS-Co5                                                                              | HSS-Co5                                                                               | HSS-Co5                                                                               |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | TiN                                                                                  |                                                                                       |                                                                                       |
| 118°                                                                                | 118°                                                                                | 130°                                                                                | 130°                                                                                | 130°                                                                                | 130°                                                                                 | 130°                                                                                  | 135°                                                                                  |
|                                                                                     |                                                                                     | C                                                                                   | AC (≥ Ø 2,0 mm)                                                                     | C (≥ Ø 2,0 mm)                                                                      | C (≥ Ø 2,0 mm)                                                                       | C (≥ Ø 2,0 mm)                                                                        | C                                                                                     |
|  |  |  |  |  |  |  |  |
| 2,50 - 6,35                                                                         | 14,28 - 25,40                                                                       | 2,00 - 13,00                                                                        | 1,00 - 13,00                                                                        | 1,00 - 16,00                                                                        | 1,00 - 16,00                                                                         | 1,00 - 20,00                                                                          | 2,00 - 13,00                                                                          |
| 301                                                                                 | 734                                                                                 | 663                                                                                 | 183, 611                                                                            | 613, 623                                                                            | 607                                                                                  | 655-656                                                                               | 638                                                                                   |
| 125                                                                                 | 126                                                                                 | 127                                                                                 | 131                                                                                 | 135                                                                                 | 135                                                                                  | 140                                                                                   | 143                                                                                   |
|  |  |                                                                                     |  |  |  |  |                                                                                       |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|                                                                                     |                                                                                     |  |  |  |  |  |  |
|                                                                                     |                                                                                     |  |  |  |  |  |  |
|                                                                                     |  |                                                                                     |  |  |  |  |                                                                                       |
|                                                                                     |                                                                                     |  |                                                                                     |                                                                                     |                                                                                      |                                                                                       |  |
|  |  |                                                                                     |  |  |  |  |                                                                                       |
|  |  |                                                                                     |  |  |  |  |                                                                                       |
|  |  |                                                                                     |  |  |  |  |                                                                                       |



Metal- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

Übersicht

Overview

Resumen

|                                                                                                                                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                   |    |    |    |    |    |    |
| Norm / Estándar                                                                                                                                                                                   | DIN 338                                                                             | DIN 338                                                                             | DIN 338                                                                             | DIN 338                                                                               | DIN 338                                                                               | DIN 338                                                                               |
| Name / Nombre                                                                                                                                                                                     | HSS DIN 338                                                                         | PRO                                                                                 | PRO                                                                                 | HSS Super                                                                             | Sprint Master                                                                         | Sprint Master                                                                         |
| Typ / Type / Tipo                                                                                                                                                                                 | RN                                                                                  | RN                                                                                  | RN                                                                                  | RN                                                                                    | RN                                                                                    | RN                                                                                    |
| Bohrtiefe / Depth of drilling / Profundidad de perforación                                                                                                                                        | 5xD                                                                                 | 5xD                                                                                 | 5xD                                                                                 | 5xD                                                                                   | 5xD                                                                                   | 5xD                                                                                   |
| Schneidstoff / Cutting material / Material de corte                                                                                                                                               | HSS                                                                                 | HSS                                                                                 | HSS                                                                                 | HSS                                                                                   | HSS                                                                                   | HSS                                                                                   |
| Beschichtung / Coating / Recubrimiento                                                                                                                                                            |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Spitzenwinkel / Lip angle / Ángulo de la punta                                                                                                                                                    | 118°                                                                                | 135°                                                                                | 135°                                                                                | 118°                                                                                  | 118°                                                                                  | 118°                                                                                  |
| Sonderanschliff / Special point shape / Punta afilada especial                                                                                                                                    | AC (≥ Ø 4,0 mm)                                                                     | C (≥ Ø 3,0 mm)                                                                      | C (≥ Ø 3,0 mm)                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Schaft / Shank / Eje                                                                                                                                                                              |  |  |  |  |  |  |
| Ø mm                                                                                                                                                                                              | 0,20 - 20,00                                                                        | 1,00 - 13,00                                                                        | 2,00 - 8,00                                                                         | 1,00 - 13,00                                                                          | 0,40 - 20,00                                                                          | 10,50 - 20,00                                                                         |
| Code / Código                                                                                                                                                                                     | 601                                                                                 | 184, 954                                                                            | 952                                                                                 | 181, 951                                                                              | 618, 626, 631                                                                         | 640, 642, 648, 654                                                                    |
| Seite / Page / Página                                                                                                                                                                             | 145                                                                                 | 152                                                                                 | 155                                                                                 | 157                                                                                   | 162                                                                                   | 166                                                                                   |
| Geeignet für / Suitable for / Adecuada para                                                                                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Allgemeine Baustähle</b><br>Structural steels<br>Aceros de construcción generales                          |  |  |  |  |  |  |
|  <b>Automatenstähle</b><br>Free cutting steels<br>Aceros de corte fácil                                        |  |  |  |  |  |  |
|  <b>Unlegierte Vergütungsstähle</b><br>Unalloyed heat treatable steels<br>Aceros para bonifi car no aleados    |  |  |  |  |  |  |
|  <b>Legierte Vergütungsstähle</b><br>Alloyed heat treatable steels<br>Aceros para bonifi car aleados           |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Rostfreie Stähle</b><br>Stainless steels<br>Aceros inoxidables                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Grauguss, Temperguss</b><br>Grey cast iron, malleable cast iron<br>Hierro fundido gris, fundición maleable |  |  |  |  |  |  |
|  <b>Titan- und Titanlegierungen</b><br>Titanium and titanium alloys<br>Titanio y aleaciones de titanio         |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Kupfer, Messing</b><br>Copper, brass<br>Cobre, latón                                                       |  |  |  |  |  |  |
|  <b>Aluminium</b><br>Aluminio<br>Aluminio                                                                      |  |  |  |  |  |  |
|  <b>Kunststoffe</b><br>Plastics<br>Plásticos                                                                   |  |  |  |  |  |  |

## D Übersicht

## E Overview

## ES Resumen

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |    |    |    |    |    |
| DIN 340                                                                             | DIN 340                                                                             | DIN 1869-1                                                                          | DIN 1869-2                                                                          | DIN 1869-3                                                                          | WN                                                                                  | WN                                                                                    | WN                                                                                    | DIN 345                                                                               |
| HSS DIN 340 RN                                                                      | HSS Super                                                                           | HSS DIN 1869 R1                                                                     | HSS DIN 1869 R2                                                                     | HSS DIN 1869 R3                                                                     | HSS Super Fassadenbohrer                                                            | HSS Cobalt Schweißpunktbohrer                                                         | HSS Cobalt Schweißpunktbohrer                                                         | HSS DIN 345 RN                                                                        |
| RN                                                                                  | RN                                                                                  | RN                                                                                  | RN                                                                                  | RN                                                                                  | RN                                                                                  |                                                                                       |                                                                                       | RN                                                                                    |
| 10xD                                                                                | 10xD                                                                                | >10xD                                                                               | >10xD                                                                               | >10xD                                                                               |                                                                                     |                                                                                       |                                                                                       | 5xD                                                                                   |
| HSS                                                                                 | HSS                                                                                 | HSS                                                                                 | HSS                                                                                 | HSS                                                                                 | HSS                                                                                 | HSS-EC                                                                                | HSS-EC                                                                                | HSS                                                                                   |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       | <b>TiN</b>                                                                            |                                                                                       |
| 118°                                                                                | 118°                                                                                | 118°                                                                                | 118°                                                                                | 118°                                                                                | 120°                                                                                | 180°                                                                                  | 180°                                                                                  | 118°                                                                                  |
| AC (≥ Ø 4,0 mm)                                                                     |                                                                                     | AC                                                                                  | AC                                                                                  | AC                                                                                  | AC                                                                                  | E                                                                                     | E                                                                                     | A / AC                                                                                |
|  |  |  |  |  |  |  |  |  |
| 0,50 - 16,00                                                                        | 1,00 - 10,00                                                                        | 2,00 - 13,00                                                                        | 3,00 - 13,00                                                                        | 2,50 - 13,00                                                                        | 4,00 - 7,40                                                                         | 6,00 - 8,00                                                                           | 6,00 - 8,00                                                                           | 5,00 - 70,00                                                                          |
| 501                                                                                 | 528, 551                                                                            | 100-101                                                                             | 111                                                                                 | 121                                                                                 | 123-127                                                                             | 130, 330                                                                              | 336                                                                                   | 202                                                                                   |
| 170                                                                                 | 173                                                                                 | 174                                                                                 | 176                                                                                 | 177                                                                                 | 178                                                                                 | 180                                                                                   | 180                                                                                   | 181                                                                                   |
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|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |                                                                                       |
|  |  |  |  |  |  |                                                                                       |                                                                                       |  |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |  |
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**Metal- und Edelstahlbohrer**  
 Metal drills and stainless steel drills  
 broca para metal y broca de acero inoxidable



# **D HSS Cobalt Spiralbohrer, extra kurz, DIN 1897 PZ**

## **Einsatzbereich:**

5% kobaltlegierter Spiralbohrer mit verstärktem Kerndurchmesser. Besonders geeignet für zähe und harte Werkstoffe wie rost- und säurebeständige Chrom-Nickelstähle. Durch die kurze Bauweise sehr gut für Handbohrmaschinen geeignet.



Bruchsicher, kurze stabile Ausführung  
Break-resistant, short stable design  
A prueba de roturas, modelo corto y estable



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Industriequalität  
Industrial quality  
Calidad industrial

# **E HSS Cobalt stub drills, extra short, DIN 1897 PZ**

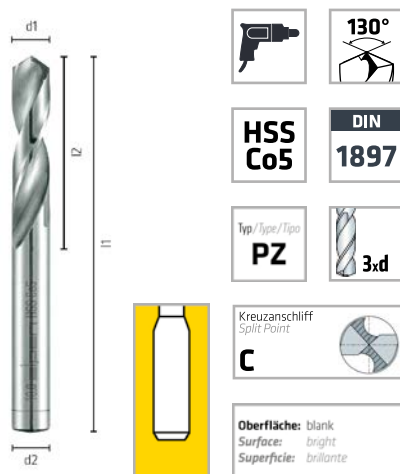
## **Range of application:**

5% cobalt-alloyed high-efficiency drills with re-inforced web. Specially suitable for drilling stainless steel, acid-resisting steel, spring steel. Best for hand held operations.

# **ES Broca espiral HSS Cobalt, extra corta, DIN 1897 PZ**

## **Ámbito de aplicación:**

Broca espiral con 5 % de aleación de cobalto y diámetro central reforzado. Especialmente adecuadas para materiales tenaces y duros, como aceros al cromo-níquel que resisten los ácidos y la corrosión. Muy adecuadas para taladradoras manuales gracias al diseño corto.



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial



**TiN**  
Hohe Performance,  
lange Standzeit  
High performance,  
long durability  
Rendimiento elevado,  
duración prolongada

Einzelverpackung  
Single packing  
Embalaje individual

|          |          |          | blank / bright / brillante |               |    | blank / bright / brillante |               |  | TiN                  |               |  |
|----------|----------|----------|----------------------------|---------------|----|----------------------------|---------------|--|----------------------|---------------|--|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 921<br>Art.-Nr.       | Inh.<br>Cont. |    | Code 901<br>Art.-Nr.       | Inh.<br>Cont. |  | Code 907<br>Art.-Nr. | Inh.<br>Cont. |  |
| 1,00     | 26       | 6        |                            |               |    | 0090100100100              | 10            |  | 0090700100100        | 1             |  |
| 1,10     | 28       | 7        |                            |               |    | 0090100110100              | 10            |  | 0090700110100        | 1             |  |
| 1,20     | 30       | 8        |                            |               |    | 0090100120100              | 10            |  | 0090700120100        | 1             |  |
| 1,30     | 30       | 8        |                            |               |    | 0090100130100              | 10            |  | 0090700130100        | 1             |  |
| 1,40     | 32       | 9        |                            |               |    | 0090100140100              | 10            |  | 0090700140100        | 1             |  |
| 1,50     | 32       | 9        |                            |               |    | 0090100150100              | 10            |  | 0090700150100        | 1             |  |
| 1,60     | 34       | 10       |                            |               |    | 0090100160100              | 10            |  | 0090700160100        | 1             |  |
| 1,70     | 34       | 10       |                            |               |    | 0090100170100              | 10            |  | 0090700170100        | 1             |  |
| 1,80     | 36       | 11       |                            |               |    | 0090100180100              | 10            |  | 0090700180100        | 1             |  |
| 1,90     | 36       | 11       |                            |               |    | 0090100190100              | 10            |  | 0090700190100        | 1             |  |
| 2,00     | 38       | 12       | 0092100200100              | 1             | 10 | 0090100200100              | 10            |  | 0090700200100        | 1             |  |
| 2,10     | 38       | 12       |                            |               |    | 0090100210100              | 10            |  | 0090700210100        | 1             |  |
| 2,20     | 40       | 13       |                            |               |    | 0090100220100              | 10            |  | 0090700220100        | 1             |  |
| 2,30     | 40       | 13       |                            |               |    | 0090100230100              | 10            |  | 0090700230100        | 1             |  |
| 2,40     | 43       | 14       |                            |               |    | 0090100240100              | 10            |  | 0090700240100        | 1             |  |
| 2,50     | 43       | 14       | 0092100250100              | 1             | 10 | 0090100250100              | 10            |  | 0090700250100        | 1             |  |
| 2,60     | 43       | 14       |                            |               |    | 0090100260100              | 10            |  | 0090700260100        | 1             |  |
| 2,70     | 46       | 16       |                            |               |    | 0090100270100              | 10            |  | 0090700270100        | 1             |  |
| 2,80     | 46       | 16       |                            |               |    | 0090100280100              | 10            |  | 0090700280100        | 1             |  |
| 2,90     | 46       | 16       |                            |               |    | 0090100290100              | 10            |  | 0090700290100        | 1             |  |
| 3,00     | 46       | 16       | 0092100300100              | 1             | 10 | 0090100300100              | 10            |  | 0090700300100        | 1             |  |
| 3,10     | 49       | 18       |                            |               |    | 0090100310100              | 10            |  | 0090700310100        | 1             |  |

|          |          |          | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |  | Einzelverpackung<br><i>Single packing</i><br><i>Embalaje individual</i> |               |  |
|----------|----------|----------|----------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|--|-------------------------------------------------------------------------|---------------|--|
|          |          |          | blank / bright / brillante                                           |               |                                                                                   | blank / bright / brillante                                            |               |  | TiN                                                                     |               |  |
| d1<br>mm | l1<br>mm | l2<br>mm | Code 921<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Code 901<br>Art.-Nr.                                                  | Inh.<br>Cont. |  | Code 907<br>Art.-Nr.                                                    | Inh.<br>Cont. |  |
| 3,20     | 49       | 18       | 0092100320100                                                        | 1             | 10                                                                                | 0090100320100                                                         | 10            |  | 0090700320100                                                           | 1             |  |
| 3,30     | 49       | 18       | 0092100330100                                                        | 1             | 10                                                                                | 0090100330100                                                         | 10            |  | 0090700330100                                                           | 1             |  |
| 3,40     | 52       | 20       |                                                                      |               |                                                                                   | 0090100340100                                                         | 10            |  | 0090700340100                                                           | 1             |  |
| 3,50     | 52       | 20       | 0092100350100                                                        | 1             | 10                                                                                | 0090100350100                                                         | 10            |  | 0090700350100                                                           | 1             |  |
| 3,60     | 52       | 20       |                                                                      |               |                                                                                   | 0090100360100                                                         | 10            |  | 0090700360100                                                           | 1             |  |
| 3,70     | 52       | 20       |                                                                      |               |                                                                                   | 0090100370100                                                         | 10            |  | 0090700370100                                                           | 1             |  |
| 3,80     | 55       | 22       |                                                                      |               |                                                                                   | 0090100380100                                                         | 10            |  | 0090700380100                                                           | 1             |  |
| 3,90     | 55       | 22       |                                                                      |               |                                                                                   | 0090100390100                                                         | 10            |  | 0090700390100                                                           | 1             |  |
| 4,00     | 55       | 22       | 0092100400100                                                        | 1             | 10                                                                                | 0090100400100                                                         | 10            |  | 0090700400100                                                           | 1             |  |
| 4,10     | 55       | 22       |                                                                      |               |                                                                                   | 0090100410100                                                         | 10            |  | 0090700410100                                                           | 1             |  |
| 4,20     | 55       | 22       | 0092100420100                                                        | 1             | 10                                                                                | 0090100420100                                                         | 10            |  | 0090700420100                                                           | 1             |  |
| 4,30     | 58       | 24       |                                                                      |               |                                                                                   | 0090100430100                                                         | 10            |  | 0090700430100                                                           | 1             |  |
| 4,40     | 58       | 24       |                                                                      |               |                                                                                   | 0090100440100                                                         | 10            |  | 0090700440100                                                           | 1             |  |
| 4,50     | 58       | 24       | 0092100450100                                                        | 1             | 10                                                                                | 0090100450100                                                         | 10            |  | 0090700450100                                                           | 1             |  |
| 4,60     | 58       | 24       |                                                                      |               |                                                                                   | 0090100460100                                                         | 10            |  | 0090700460100                                                           | 1             |  |
| 4,70     | 58       | 24       |                                                                      |               |                                                                                   | 0090100470100                                                         | 10            |  | 0090700470100                                                           | 1             |  |
| 4,80     | 62       | 26       |                                                                      |               |                                                                                   | 0090100480100                                                         | 10            |  | 0090700480100                                                           | 1             |  |
| 4,90     | 62       | 26       |                                                                      |               |                                                                                   | 0090100490100                                                         | 10            |  | 0090700490100                                                           | 1             |  |
| 5,00     | 62       | 26       | 0092100500100                                                        | 1             | 10                                                                                | 0090100500100                                                         | 10            |  | 0090700500100                                                           | 1             |  |
| 5,10     | 62       | 26       |                                                                      |               |                                                                                   | 0090100510100                                                         | 10            |  | 0090700510100                                                           | 1             |  |
| 5,20     | 62       | 26       |                                                                      |               |                                                                                   | 0090100520100                                                         | 10            |  | 0090700520100                                                           | 1             |  |
| 5,30     | 62       | 26       |                                                                      |               |                                                                                   | 0090100530100                                                         | 10            |  | 0090700530100                                                           | 1             |  |
| 5,40     | 66       | 28       |                                                                      |               |                                                                                   | 0090100540100                                                         | 10            |  | 0090700540100                                                           | 1             |  |
| 5,50     | 66       | 28       | 0092100550100                                                        | 1             | 10                                                                                | 0090100550100                                                         | 10            |  | 0090700550100                                                           | 1             |  |
| 5,60     | 66       | 28       |                                                                      |               |                                                                                   | 0090100560100                                                         | 10            |  | 0090700560100                                                           | 1             |  |
| 5,70     | 66       | 28       |                                                                      |               |                                                                                   | 0090100570100                                                         | 10            |  | 0090700570100                                                           | 1             |  |
| 5,80     | 66       | 28       |                                                                      |               |                                                                                   | 0090100580100                                                         | 10            |  | 0090700580100                                                           | 1             |  |
| 5,90     | 66       | 28       |                                                                      |               |                                                                                   | 0090100590100                                                         | 10            |  | 0090700590100                                                           | 1             |  |
| 6,00     | 66       | 28       | 0092100600100                                                        | 1             | 10                                                                                | 0090100600100                                                         | 10            |  | 0090700600100                                                           | 1             |  |
| 6,10     | 70       | 31       |                                                                      |               |                                                                                   | 0090100610100                                                         | 10            |  | 0090700610100                                                           | 1             |  |
| 6,20     | 70       | 31       |                                                                      |               |                                                                                   | 0090100620100                                                         | 10            |  | 0090700620100                                                           | 1             |  |
| 6,30     | 70       | 31       |                                                                      |               |                                                                                   | 0090100630100                                                         | 10            |  | 0090700630100                                                           | 1             |  |
| 6,40     | 70       | 31       |                                                                      |               |                                                                                   | 0090100640100                                                         | 10            |  | 0090700640100                                                           | 1             |  |
| 6,50     | 70       | 31       | 0092100650100                                                        | 1             | 10                                                                                | 0090100650100                                                         | 10            |  | 0090700650100                                                           | 1             |  |
| 6,60     | 70       | 31       |                                                                      |               |                                                                                   | 0090100660100                                                         | 10            |  | 0090700660100                                                           | 1             |  |
| 6,70     | 70       | 31       |                                                                      |               |                                                                                   | 0090100670100                                                         | 10            |  | 0090700670100                                                           | 1             |  |
| 6,80     | 74       | 34       | 0092100680100                                                        | 1             | 10                                                                                | 0090100680100                                                         | 10            |  | 0090700680100                                                           | 1             |  |
| 6,90     | 74       | 34       |                                                                      |               |                                                                                   | 0090100690100                                                         | 10            |  | 0090700690100                                                           | 1             |  |
| 7,00     | 74       | 34       | 0092100700100                                                        | 1             | 10                                                                                | 0090100700100                                                         | 10            |  | 0090700700100                                                           | 1             |  |
| 7,10     | 74       | 34       |                                                                      |               |                                                                                   | 0090100710100                                                         | 10            |  | 0090700710100                                                           | 1             |  |
| 7,20     | 74       | 34       |                                                                      |               |                                                                                   | 0090100720100                                                         | 10            |  | 0090700720100                                                           | 1             |  |
| 7,30     | 74       | 34       |                                                                      |               |                                                                                   | 0090100730100                                                         | 10            |  | 0090700730100                                                           | 1             |  |
| 7,40     | 74       | 34       |                                                                      |               |                                                                                   | 0090100740100                                                         | 10            |  | 0090700740100                                                           | 1             |  |
| 7,50     | 74       | 34       | 0092100750100                                                        | 1             | 10                                                                                | 0090100750100                                                         | 10            |  | 0090700750100                                                           | 1             |  |
| 7,60     | 79       | 37       |                                                                      |               |                                                                                   | 0090100760100                                                         | 10            |  | 0090700760100                                                           | 1             |  |
| 7,70     | 79       | 37       |                                                                      |               |                                                                                   | 0090100770100                                                         | 10            |  | 0090700770100                                                           | 1             |  |
| 7,80     | 79       | 37       |                                                                      |               |                                                                                   | 0090100780100                                                         | 10            |  | 0090700780100                                                           | 1             |  |
| 7,90     | 79       | 37       |                                                                      |               |                                                                                   | 0090100790100                                                         | 10            |  | 0090700790100                                                           | 1             |  |
| 8,00     | 79       | 37       | 0092100800100                                                        | 1             | 10                                                                                | 0090100800100                                                         | 10            |  | 0090700800100                                                           | 1             |  |
| 8,10     | 79       | 37       |                                                                      |               |                                                                                   | 0090100810100                                                         | 10            |  | 0090700810100                                                           | 1             |  |
| 8,20     | 79       | 37       |                                                                      |               |                                                                                   | 0090100820100                                                         | 10            |  | 0090700820100                                                           | 1             |  |
| 8,30     | 79       | 37       |                                                                      |               |                                                                                   | 0090100830100                                                         | 10            |  | 0090700830100                                                           | 1             |  |
| 8,40     | 79       | 37       |                                                                      |               |                                                                                   | 0090100840100                                                         | 10            |  | 0090700840100                                                           | 1             |  |
| 8,50     | 79       | 37       | 0092100850100                                                        | 1             | 10                                                                                | 0090100850100                                                         | 10            |  | 0090700850100                                                           | 1             |  |
| 8,60     | 84       | 40       |                                                                      |               |                                                                                   | 0090100860100                                                         | 10            |  | 0090700860100                                                           | 1             |  |
| 8,70     | 84       | 40       |                                                                      |               |                                                                                   | 0090100870100                                                         | 10            |  | 0090700870100                                                           | 1             |  |



**Metall- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |  | Einzelverpackung<br><i>Single packing</i><br><i>Embalaje individual</i> |               |  |
|----------|----------|----------|----------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|--|-------------------------------------------------------------------------|---------------|--|
|          |          |          | blank / bright / brillante                                           |               |                                                                                   | blank / bright / brillante                                            |               |  | TiN                                                                     |               |  |
| d1<br>mm | l1<br>mm | l2<br>mm | Code 921<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Code 901<br>Art.-Nr.                                                  | Inh.<br>Cont. |  | Code 907<br>Art.-Nr.                                                    | Inh.<br>Cont. |  |
| 8,80     | 84       | 40       |                                                                      |               |                                                                                   | 0090100880100                                                         | 10            |  | 0090700880100                                                           | 1             |  |
| 8,90     | 84       | 40       |                                                                      |               |                                                                                   | 0090100890100                                                         | 10            |  | 0090700890100                                                           | 1             |  |
| 9,00     | 84       | 40       | 0092100900100                                                        | 1             | 10                                                                                | 0090100900100                                                         | 10            |  | 0090700900100                                                           | 1             |  |
| 9,10     | 84       | 40       |                                                                      |               |                                                                                   | 0090100910100                                                         | 10            |  | 0090700910100                                                           | 1             |  |
| 9,20     | 84       | 40       |                                                                      |               |                                                                                   | 0090100920100                                                         | 10            |  | 0090700920100                                                           | 1             |  |
| 9,30     | 84       | 40       |                                                                      |               |                                                                                   | 0090100930100                                                         | 10            |  | 0090700930100                                                           | 1             |  |
| 9,40     | 84       | 40       |                                                                      |               |                                                                                   | 0090100940100                                                         | 10            |  | 0090700940100                                                           | 1             |  |
| 9,50     | 84       | 40       | 0092100950100                                                        | 1             | 10                                                                                | 0090100950100                                                         | 10            |  | 0090700950100                                                           | 1             |  |
| 9,60     | 89       | 43       |                                                                      |               |                                                                                   | 0090100960100                                                         | 10            |  | 0090700960100                                                           | 1             |  |
| 9,70     | 89       | 43       |                                                                      |               |                                                                                   | 0090100970100                                                         | 10            |  | 0090700970100                                                           | 1             |  |
| 9,80     | 89       | 43       |                                                                      |               |                                                                                   | 0090100980100                                                         | 10            |  | 0090700980100                                                           | 1             |  |
| 9,90     | 89       | 43       |                                                                      |               |                                                                                   | 0090100990100                                                         | 10            |  | 0090700990100                                                           | 1             |  |
| 10,00    | 89       | 43       | 0092101000100                                                        | 1             | 10                                                                                | 0090101000100                                                         | 10            |  | 0090701000100                                                           | 1             |  |
| 10,20    | 89       | 43       | 0092101020100                                                        | 1             | 10                                                                                | 0090101020100                                                         | 1             |  | 0090701020100                                                           | 1             |  |
| 10,50    | 89       | 43       |                                                                      |               |                                                                                   | 0090101050100                                                         | 1             |  | 0090701050100                                                           | 1             |  |
| 11,00    | 95       | 47       |                                                                      |               |                                                                                   | 0090101100100                                                         | 1             |  | 0090701100100                                                           | 1             |  |
| 11,50    | 95       | 47       |                                                                      |               |                                                                                   | 0090101150100                                                         | 1             |  | 0090701150100                                                           | 1             |  |
| 12,00    | 102      | 51       |                                                                      |               |                                                                                   | 0090101200100                                                         | 1             |  | 0090701200100                                                           | 1             |  |
| 12,50    | 102      | 51       |                                                                      |               |                                                                                   | 0090101250100                                                         | 1             |  | 0090701250100                                                           | 1             |  |
| 13,00    | 102      | 51       |                                                                      |               |                                                                                   | 0090101300100                                                         | 1             |  | 0090701300100                                                           | 1             |  |

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

HSS PZ-Cobalt TM 6



6-tlg. / 6-pcs. / 6-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000100906100

| Ø<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------|-------------------------------------------|
| HSS PZ-Cobalt                             |                                           |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         |

HSS PZ-Cobalt KM 10



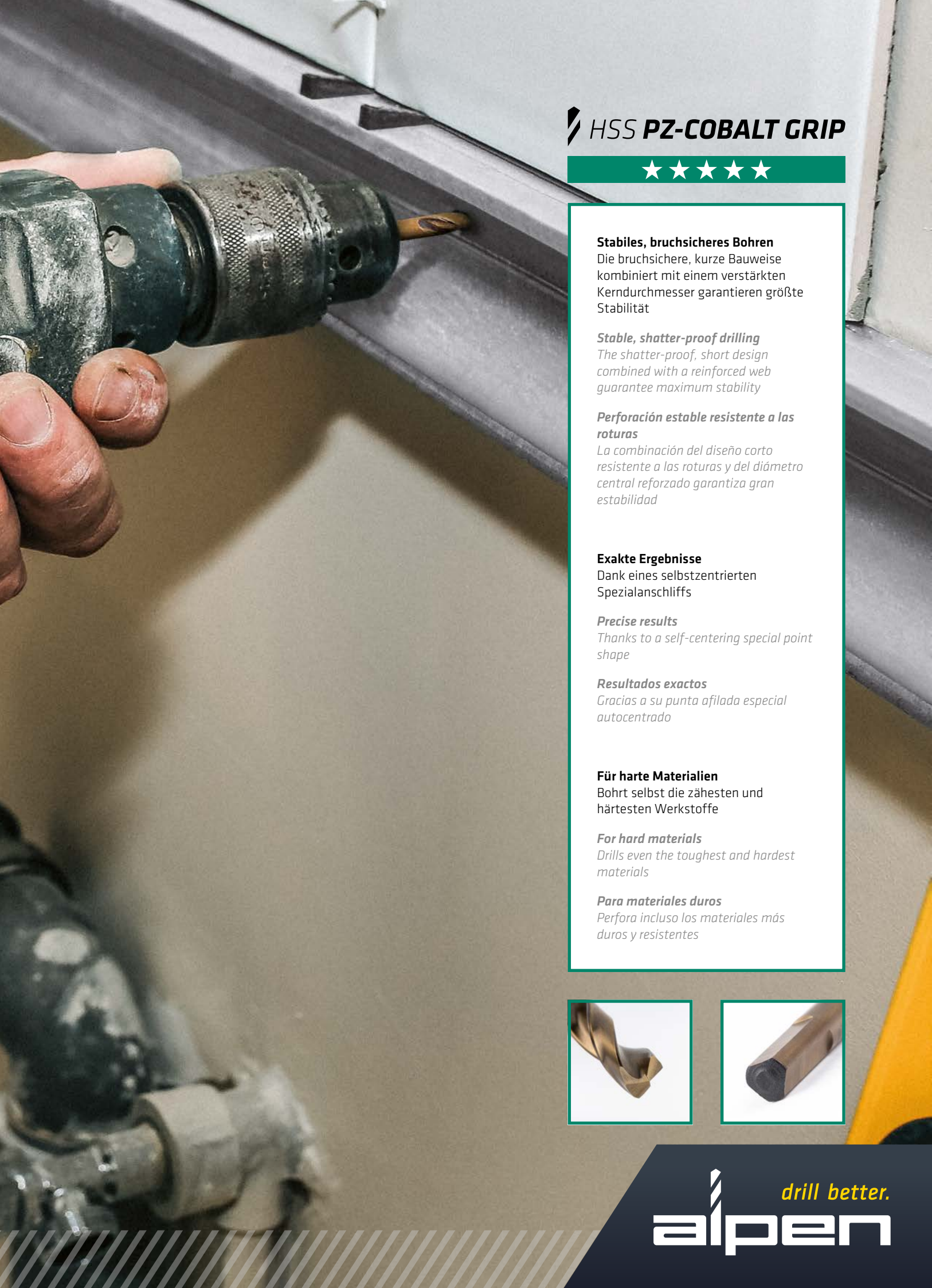
10-tlg. / 10-pcs. / 10-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100910100

| Ø<br>mm                                                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|------------------------------------------------------------------------|-------------------------------------------|
| HSS PZ-Cobalt                                                          |                                           |
| Ø 3,00 / 3,20 / 3,50 / 4,00 / 4,20 / 4,50 / 5,00 / 6,00 / 8,00 / 10,00 | 1                                         |



**Metall- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



 **HSS PZ-COBALT GRIP**



**Stabiles, bruchsicheres Bohren**

Die bruchssichere, kurze Bauweise kombiniert mit einem verstärkten Kerndurchmesser garantieren größte Stabilität

**Stable, shatter-proof drilling**

*The shatter-proof, short design combined with a reinforced web guarantee maximum stability*

**Perforación estable resistente a las roturas**

*La combinación del diseño corto resistente a las roturas y del diámetro central reforzado garantiza gran estabilidad*

**Exakte Ergebnisse**

Dank eines selbstzentrierten Spezialanschliffs

**Precise results**

*Thanks to a self-centering special point shape*

**Resultados exactos**

*Gracias a su punta afilada especial autocentrado*

**Für harte Materialien**

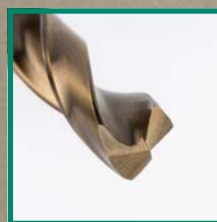
Bohrt selbst die zähesten und härtesten Werkstoffe

**For hard materials**

*Drills even the toughest and hardest materials*

**Para materiales duros**

*Perfora incluso los materiales más duros y resistentes*



 **alpen** *drill better.*



## D HSS Cobalt Spiralbohrer, 3-Flächenschaft, extra kurz, DIN 1897 PZ

### Einsatzbereich:

5% kobaltlegierter Spiralbohrer mit verstärktem Kerndurchmesser. Besonders geeignet für zähe und harte Werkstoffe wie rost- und säurebeständige Chrom-Nickelstähle. Durch die kurze Bauweise sehr gut für Handbohrmaschinen geeignet. Der 3-Flächenschaft verhindert das Durchdrehen im Bohrfutter und sorgt für eine optimale Drehmomentübertragung.



Bruchsicher, kurze stabile Ausführung  
Break-resistant, short stable design  
A prueba de roturas, modelo corto y estable



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



3-Flächenschaft  
3-surface shank  
3 caras

## E HSS Cobalt stub drills, 3-surface shank, DIN 1897 PZ

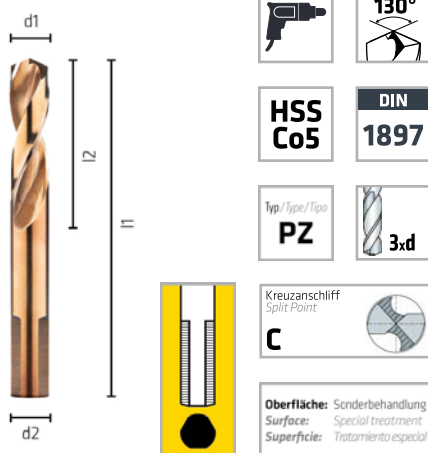
### Range of application:

5% cobalt-alloyed high-efficiency drills with re-inforced web. Specially suitable for drilling stainless steel, acid-resisting steel, spring-steel. Best for hand held operations. The 3-surface shank prevents slipping in the chuck and ensures optimum torque transmission.

## ES Broca espiral HSS Cobalt, eje de 3 cantos, extra corta, DIN 1897 PZ

### Ámbito de aplicación:

Broca espiral con 5 % de aleación de cobalto y diámetro central reforzado. Especialmente adecuada para materiales tenaces y duros, como aceros al cromo-níquel que resisten los ácidos y la corrosión. Muy adecuada para taladradoras manuales gracias al diseño corto. El nuevo vástago antideslizante evita la rotación en el portabrocas y asegura una transmisión de torsión óptima.



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 904<br>Art.-Nr. | Inh.<br>Cont. |    | Code 906<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 1,00     | 26       | 6        |          | 0090400100100        | 1             | 10 | 0090600100100        | 10            |
| 1,50     | 32       | 9        |          | 0090400150100        | 1             | 10 | 0090600150100        | 10            |
| 1,60     | 34       | 10       |          |                      |               |    | 0090600160100        | 10            |
| 2,00     | 38       | 12       |          | 0090400200100        | 1             | 10 | 0090600200100        | 10            |
| 2,50     | 43       | 14       |          | 0090400250100        | 1             | 10 | 0090600250100        | 10            |
| 3,00     | 46       | 16       |          | 0090400300100        | 1             | 10 | 0090600300100        | 10            |
| 3,20     | 49       | 18       |          | 0090400320100        | 1             | 10 | 0090600320100        | 10            |
| 3,30     | 49       | 18       |          | 0090400330100        | 1             | 10 | 0090600330100        | 10            |
| 3,50     | 52       | 20       |          | 0090400350100        | 1             | 10 | 0090600350100        | 10            |
| 4,00     | 55       | 22       |          | 0090400400100        | 1             | 10 | 0090600400100        | 10            |
| 4,10     | 55       | 22       |          |                      |               |    | 0090600410100        | 10            |
| 4,20     | 55       | 22       |          | 0090400420100        | 1             | 10 | 0090600420100        | 10            |
| 4,50     | 58       | 24       |          | 0090400450100        | 1             | 10 | 0090600450100        | 10            |
| 5,00     | 62       | 26       |          | 0090400500100        | 1             | 10 | 0090600500100        | 10            |
| 5,10     | 62       | 26       |          |                      |               |    | 0090600510100        | 10            |
| 5,20     | 62       | 26       |          |                      |               |    | 0090600520100        | 10            |
| 5,50     | 66       | 28       |          | 0090400550100        | 1             | 10 | 0090600550100        | 10            |
| 6,00     | 66       | 28       |          | 0090400600100        | 1             | 10 | 0090600600100        | 10            |
| 6,50     | 70       | 31       |          | 0090400650100        | 1             | 10 | 0090600650100        | 10            |
| 6,80     | 74       | 34       |          | 0090400680100        | 1             | 10 | 0090600680100        | 10            |
| 7,00     | 74       | 34       |          | 0090400700100        | 1             | 10 | 0090600700100        | 10            |
| 7,50     | 74       | 34       |          | 0090400750100        | 1             | 10 | 0090600750100        | 10            |



Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          |          | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|----------|----------|----------|----------|----------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 904<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Code 906<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 8,00     | 79       | 37       |          | 0090400800100                                                        | 1             | 10                                                                                | 0090600800100                                                         | 10            |
| 8,50     | 79       | 37       |          | 0090400850100                                                        | 1             | 10                                                                                | 0090600850100                                                         | 10            |
| 9,00     | 84       | 40       |          | 0090400900100                                                        | 1             | 10                                                                                | 0090600900100                                                         | 10            |
| 9,50     | 84       | 40       |          | 0090400950100                                                        | 1             | 10                                                                                | 0090600950100                                                         | 10            |
| 10,00    | 89       | 43       |          | 0090401000100                                                        | 1             | 10                                                                                | 0090601000100                                                         | 10            |
| 10,20    | 89       | 43       |          | 0090401020100                                                        | 1             | 10                                                                                | 0090601020100                                                         | 1             |
| 10,50    | 89       | 43       |          |                                                                      |               |                                                                                   | 0090601050100                                                         | 1             |
| 11,00    | 95       | 47       |          |                                                                      |               |                                                                                   | 0090601100100                                                         | 1             |
| 11,50    | 95       | 47       |          |                                                                      |               |                                                                                   | 0090601150100                                                         | 1             |
| 12,00    | 102      | 51       |          |                                                                      |               |                                                                                   | 0090601200100                                                         | 1             |
| 12,50    | 102      | 51       |          |                                                                      |               |                                                                                   | 0090601250100                                                         | 1             |
| 13,00    | 102      | 51       |          |                                                                      |               |                                                                                   | 0090601300100                                                         | 1             |
| 13,50    | 107      | 54       | 9,50     |                                                                      |               |                                                                                   | 0090601350100                                                         | 1             |
| 14,00    | 107      | 54       | 9,50     |                                                                      |               |                                                                                   | 0090601400100                                                         | 1             |
| 14,50    | 111      | 56       | 9,50     |                                                                      |               |                                                                                   | 0090601450100                                                         | 1             |
| 15,00    | 111      | 56       | 9,50     |                                                                      |               |                                                                                   | 0090601500100                                                         | 1             |
| 15,50    | 115      | 58       | 9,50     |                                                                      |               |                                                                                   | 0090601550100                                                         | 1             |
| 16,00    | 115      | 58       | 9,50     |                                                                      |               |                                                                                   | 0090601600100                                                         | 1             |
| 17,00    | 119      | 60       | 12,50    |                                                                      |               |                                                                                   | 0090601700100                                                         | 1             |
| 18,00    | 123      | 62       | 12,50    |                                                                      |               |                                                                                   | 0090601800100                                                         | 1             |
| 19,00    | 127      | 64       | 12,50    |                                                                      |               |                                                                                   | 0090601900100                                                         | 1             |
| 20,00    | 131      | 66       | 12,50    |                                                                      |               |                                                                                   | 0090602000100                                                         | 1             |

Kreuzanschliff  $\geq \varnothing 2,0$  mm / Split Point  $\geq \varnothing 2,0$  mm / Punta afilada en cruz  $\geq \varnothing 2,0$  mm  
Zylindrischer Schaft  $\leq \varnothing 3,5$  mm / Cylindrical shank  $\leq \varnothing 3,5$  mm / Eje cilíndrico  $\leq \varnothing 3,5$  mm

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| HSS PZ-COBALT GRIP TM 6                                                                                         |                                           | HSS PZ-COBALT GRIP KM 10                                                                                  |                                           | HSS PZ-COBALT GRIP KP 24                                                                                                                                                   |                                           |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|                                |                                           |                          |                                           |                                                                                         |                                           |
| 6-tlg. / 6-pcs. / 6-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0090600006100 |                                           | 10-tlg. / 10-pcs. / 10-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0090600010100 |                                           | 24-tlg. / 24-pcs. / 24-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0090600024100                                                         |                                           |
| Ø<br>mm                                                                                                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                    | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| HSS PZ-COBALT GRIP                                                                                              |                                           | HSS PZ-COBALT GRIP                                                                                        |                                           | HSS PZ-COBALT GRIP                                                                                                                                                         |                                           |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00                                                                       |                                           | Ø 3,00 / 3,20 / 3,50 / 4,00 / 4,20 / 4,50 / 5,00 / 6,00 / 8,00 / 10,00                                    |                                           | Ø 1,00 / 1,50 / 2,00 / 2,50 / 3,00 / 3,30 / 3,50 / 4,00 / 4,20 / 4,50 / 5,00 / 5,50 / 6,00 / 6,50 / 6,80 / 7,00 / 7,50 / 8,00 / 8,50 / 9,00 / 9,50 / 10,00 / 10,20 / 10,50 |                                           |
|                                                                                                                 | 1                                         |                                                                                                           | 1                                         |                                                                                                                                                                            | 1                                         |



Metall- und Edelstahlbohrer  
 Metal drills and stainless steel drills  
 broca para metal y broca de acero inoxidable

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D HSS Blindnietbohrer, doppelseitig

### Einsatzbereich:

Spiralbohrer zum Bohren von dünnen Materialien, z. B. Spenglereien, Karosseriewerkstätten usw., für Handbohrmaschinen. Nicht für normale Bohrtiefen einsetzen.

## E HSS stub drills for rivets, double-ended

### Range of application:

Drill with extremely sturdy construction, particularly suitable for drilling thin materials. Used in portable-handtools, mainly in body panel shops, car repair shops etc.

## ES Broca de remache ciego HSS de dos caras

### Ámbito de aplicación:

Broca espiral para perforar materiales finos, p. ej., hojalaterías, talleres de carrocería, etc., para taladradoras manuales. No debe utilizarse para profundidades de perforación convencionales.



Präzise  
Precise  
Preciso



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Bruchstabil  
Break-resistant  
Resistente a la rotura



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 321<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 3,10     | 49       | 14       | 0032100310100        | 10            |
| 3,20     | 49       | 14       | 0032100320100        | 10            |
| 3,25     | 49       | 14       | 0032100325100        | 10            |
| 3,30     | 49       | 14       | 0032100330100        | 10            |
| 3,50     | 52       | 17       | 0032100350100        | 10            |
| 4,00     | 55       | 17       | 0032100400100        | 10            |
| 4,10     | 55       | 17       | 0032100410100        | 10            |
| 4,20     | 55       | 17       | 0032100420100        | 10            |
| 4,90     | 62       | 20       | 0032100490100        | 10            |
| 5,10     | 62       | 20       | 0032100510100        | 10            |
| 5,20     | 62       | 20       | 0032100520100        | 10            |

## D HSS Blindnietbohrer, doppelseitig

### Einsatzbereich:

Spiralbohrer zum Bohren von dünnen Materialien, z. B. Spenglereien, Karosseriewerkstätten usw., für Handbohrmaschinen. Nicht für normale Bohrtiefen einsetzen.



Präzise  
Precise  
Preciso



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Bruchstabil  
Break-resistant  
Resistente a la rotura

## E HSS stub drills for rivets, double-ended

### Range of application:

Drill with extremely sturdy construction, particularly suitable for drilling thin materials. Used in portable-handtools, mainly in body panel shops, car repair shops etc.

## ES Broca de remache ciego HSS de dos caras

### Ámbito de aplicación:

Broca espiral para perforar materiales finos, p. ej., hojalaterías, talleres de carrocería, etc., para taladradoras manuales. No debe utilizarse para profundidades de perforación convencionales.



HSS



Cu  
Ms  
Ni  
Zn



Kreuzanschliff  
Split Point  
C  
Oberfläche: blank  
Surface: bright  
Superficie: brillante



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 371<br>Art.-Nr. | Inh.<br>Cont. |    | Code 331<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 3,10     | 49       | 14       | 0037100310100        | 2             | 10 | 0033100310100        | 10            |
| 3,20     | 49       | 14       | 0037100320100        | 2             | 10 | 0033100320100        | 10            |
| 3,25     | 49       | 14       | 0037100325100        | 2             | 10 | 0033100325100        | 10            |
| 3,30     | 49       | 14       | 0037100330100        | 2             | 10 | 0033100330100        | 10            |
| 4,10     | 55       | 17       | 0037100410100        | 2             | 10 | 0033100410100        | 10            |
| 4,20     | 55       | 17       | 0037100420100        | 2             | 10 | 0033100420100        | 10            |
| 4,90     | 62       | 20       | 0037100490100        | 2             | 10 | 0033100490100        | 10            |
| 5,10     | 62       | 20       | 0037100510100        | 2             | 10 | 0033100510100        | 10            |
| 6,10     | 70       | 23       | 0037100610100        | 2             | 10 |                      |               |

Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable



## D HSS Blindnietbohrer mit Kreuzanschliff

### Einsatzbereich:

Spiralbohrer zum Bohren von dünnen Materialien, z. B. Spenglereien, Karosseriewerkstätten usw., für Handbohrmaschinen. Nicht für normale Bohrtiefen einsetzen.

## E HSS stub drills for rivets with split point

### Range of application:

Drill with extremely sturdy construction, particularly suitable for drilling thin materials. Used in portable-handtools, mainly in body panel shops, car repair shops etc.

## ES Broca de remache ciego HSS con punta afilada en cruz

### Ámbito de aplicación:

Broca espiral para perforar materiales finos, p. ej., hojalaterías, talleres de carrocería, etc., para taladradoras manuales. No debe utilizarse para profundidades de perforación convencionales.



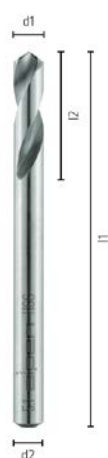
Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Präzise  
Precise  
Preciso



Bruchstabil  
Break-resistant  
Resistente a la rotura



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 311<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 3,00     | 46       | 14       | 0031100300100        | 10            |
| 3,10     | 49       | 14       | 0031100310100        | 10            |
| 3,20     | 49       | 14       | 0031100320100        | 10            |
| 3,25     | 49       | 14       | 0031100325100        | 10            |
| 3,30     | 49       | 14       | 0031100330100        | 10            |
| 3,50     | 52       | 17       | 0031100350100        | 10            |
| 4,00     | 55       | 17       | 0031100400100        | 10            |
| 4,10     | 55       | 17       | 0031100410100        | 10            |
| 4,20     | 55       | 17       | 0031100420100        | 10            |
| 4,90     | 62       | 20       | 0031100490100        | 10            |
| 5,10     | 62       | 20       | 0031100510100        | 10            |
| 5,20     | 62       | 20       | 0031100520100        | 10            |
| 5,30     | 62       | 20       | 0031100530100        | 10            |

**D HSS Blindnietbohrer**

**E HSS stub drills for rivets**

**ES Broca de remache ciego HSS**

**Einsatzbereich:**

Spiralbohrer zum Bohren von dünnen Materialien, z. B. Spenglereien, Karosseriewerkstätten usw., für Handbohrmaschinen. Nicht für normale Bohrtiefen einsetzen.

**Range of application:**

Drill with extremely sturdy construction, particularly suitable for drilling thin materials. Used in portable-handtools, mainly in body panel shops, car repair shops etc.

**Ámbito de aplicación:**

Broca espiral para perforar materiales finos, p.ej., hojalaterías, talleres de carrocería, etc., para taladradoras manuales. No debe utilizarse para profundidades de perforación convencionales.



Präzise  
Precise  
Preciso



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Bruchstabil  
Break-resistant  
Resistente a la rotura



Oberfläche: dampfangelassen  
Surface: steam tempered  
Superficie: templado al vapor



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 301<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|----------------------|---------------|
| 2,50     |            | 43       | 95       | 0030100250100        | 10            |
| 3,10     |            | 49       | 14       | 0030100310100        | 10            |
| 3,18     | 1/8        | 49       | 14       | 0030100318100        | 10            |
| 3,20     |            | 49       | 14       | 0030100320100        | 10            |
| 3,25     |            | 49       | 14       | 0030100325100        | 10            |
| 3,30     |            | 49       | 14       | 0030100330100        | 10            |
| 3,57     | 9/64       | 52       | 17       | 0030100357100        | 10            |
| 3,97     | 5/32       | 55       | 17       | 0030100397100        | 10            |
| 4,10     |            | 55       | 17       | 0030100410100        | 10            |
| 4,20     |            | 55       | 17       | 0030100420100        | 10            |
| 4,37     | 11/64      | 58       | 20       | 0030100437100        | 10            |
| 4,76     | 3/16       | 62       | 20       | 0030100476100        | 10            |
| 4,90     |            | 62       | 20       | 0030100490100        | 10            |
| 5,00     |            | 62       | 20       | 0030100500100        | 10            |
| 5,10     |            | 62       | 20       | 0030100510100        | 10            |
| 5,16     | 13/64      | 62       | 20       | 0030100516100        | 10            |
| 5,20     |            | 62       | 20       | 0030100520100        | 10            |
| 5,56     | 7/32       | 66       | 23       | 0030100556100        | 10            |
| 6,35     | 1/4        | 70       | 23       | 0030100635100        | 10            |



Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D HSS Spiralbohrer, extra kurz,  
mit reduziertem Schaft  
Ø 12,7 mm (1/2")**

**Einsatzbereich:**

Universeller Spiralbohrer, hohe Elastizität. Sehr gut geeignet für den Einsatz in Handbohrmaschinen, zum Bearbeiten von legiertem und unlegiertem Stahl.

**E HSS twist drill, extra short,  
with reduced shank  
Ø 12,7 mm (1/2")**

**Range of application:**

HSS twist drill: toughness and precision combined with excellent cutting efficiency for drilling alloyed carbon and plain steel. Ideal for hand held operations.

**E Broca espiral HSS, extra corta,  
con eje reducido  
Ø 12,7 mm (1/2")**

**Ámbito de aplicación:**

Broca espiral universal, alta elasticidad. Muy adecuada para su uso en taladradoras manuales. Para el procesamiento de acero aleado y no aleado.



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Elastisch  
Resilient  
Elástico



Bruchstabil  
Break-resistant  
Resistente a la rotura



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | d2<br>mm | Code 734<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|----------|----------------------|---------------|
| 14,28    | 9/16       | 157      | 84       | 12,70    | 0073401428100        | 1             |
| 15,87    | 5/8        | 157      | 84       | 12,70    | 0073401587100        | 1             |
| 17,46    | 11/16      | 158      | 85       | 12,70    | 0073401746100        | 1             |
| 19,05    | 3/4        | 158      | 85       | 12,70    | 0073401905100        | 1             |
| 20,64    | 13/16      | 159      | 86       | 12,70    | 0073402064100        | 1             |
| 21,00    |            | 159      | 86       | 12,70    | 0073402100100        | 1             |
| 22,00    |            | 159      | 86       | 12,70    | 0073402200100        | 1             |
| 22,22    | 7/8        | 159      | 86       | 12,70    | 0073402222100        | 1             |
| 23,00    |            | 159      | 86       | 12,70    | 0073402300100        | 1             |
| 23,81    | 15/16      | 160      | 87       | 12,70    | 0073402381100        | 1             |
| 24,00    |            | 160      | 87       | 12,70    | 0073402400100        | 1             |
| 25,00    |            | 160      | 87       | 12,70    | 0073402500100        | 1             |
| 25,40    | 1          | 160      | 87       | 12,70    | 0073402540100        | 1             |

**D HSS Cobalt Spiralbohrer, kurz,  
DIN 338 R-AS**

**Einsatzbereich:**

5% kobaltlegierter Spezialbohrer in sehr stabiler Bauweise für sehr schwer zerspanbare Werkstoffe wie rost- und säurebeständige austenitische Stähle sowie hitzebeständige Stähle.

**E HSS Cobalt jobber drills,  
DIN 338 R-AS**

**Range of application:**

5% cobalt-alloyed drills in a solid sturdy construction, specially suitable for stainless austenitic steels as well as heat resistant steels.

**ES Broca espiral HSS Cobalt, corta,  
DIN 338 R-AS**

**Ámbito de aplicación:**

Broca especial con 5% de aleación de cobalto, especialmente estable, materiales muy difícilmente mecanizables con virutaje, aceros austeníticos resistentes a los ácidos y la corrosión, así como aceros resistentes al calor.



Rostfreie Stähle  
Stainless steels  
Aceros inoxidables



Bruchstabil  
Break-resistant  
Resistente a la rotura



Industriequalität  
Industrial quality  
Calidad industrial



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 663<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 2,00     | 49       | 24       | 0066300200100        | 10            |
| 2,10     | 49       | 24       | 0066300210100        | 10            |
| 2,20     | 53       | 27       | 0066300220100        | 10            |
| 2,30     | 53       | 27       | 0066300230100        | 10            |
| 2,40     | 57       | 30       | 0066300240100        | 10            |
| 2,50     | 57       | 30       | 0066300250100        | 10            |
| 2,60     | 57       | 30       | 0066300260100        | 10            |
| 2,70     | 61       | 33       | 0066300270100        | 10            |
| 2,80     | 61       | 33       | 0066300280100        | 10            |
| 2,90     | 61       | 33       | 0066300290100        | 10            |
| 3,00     | 61       | 33       | 0066300300100        | 10            |
| 3,10     | 65       | 36       | 0066300310100        | 10            |
| 3,20     | 65       | 36       | 0066300320100        | 10            |
| 3,30     | 65       | 36       | 0066300330100        | 10            |
| 3,40     | 70       | 39       | 0066300340100        | 10            |
| 3,50     | 70       | 39       | 0066300350100        | 10            |
| 3,60     | 70       | 39       | 0066300360100        | 10            |
| 3,70     | 70       | 39       | 0066300370100        | 10            |
| 3,80     | 75       | 43       | 0066300380100        | 10            |
| 3,90     | 75       | 43       | 0066300390100        | 10            |
| 4,00     | 75       | 43       | 0066300400100        | 10            |
| 4,10     | 75       | 43       | 0066300410100        | 10            |



Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|----------|----------|---------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 663<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 4,20     | 75       | 43       | 0066300420100                                           | 10            |
| 4,30     | 80       | 47       | 0066300430100                                           | 10            |
| 4,40     | 80       | 47       | 0066300440100                                           | 10            |
| 4,50     | 80       | 47       | 0066300450100                                           | 10            |
| 4,60     | 80       | 47       | 0066300460100                                           | 10            |
| 4,70     | 80       | 47       | 0066300470100                                           | 10            |
| 4,80     | 86       | 52       | 0066300480100                                           | 10            |
| 4,90     | 86       | 52       | 0066300490100                                           | 10            |
| 5,00     | 86       | 52       | 0066300500100                                           | 10            |
| 5,10     | 86       | 52       | 0066300510100                                           | 10            |
| 5,20     | 86       | 52       | 0066300520100                                           | 10            |
| 5,30     | 86       | 52       | 0066300530100                                           | 10            |
| 5,40     | 93       | 57       | 0066300540100                                           | 10            |
| 5,50     | 93       | 57       | 0066300550100                                           | 10            |
| 5,60     | 93       | 57       | 0066300560100                                           | 10            |
| 5,70     | 93       | 57       | 0066300570100                                           | 10            |
| 5,80     | 93       | 57       | 0066300580100                                           | 10            |
| 5,90     | 93       | 57       | 0066300590100                                           | 10            |
| 6,00     | 93       | 57       | 0066300600100                                           | 10            |
| 6,10     | 101      | 63       | 0066300610100                                           | 10            |
| 6,20     | 101      | 63       | 0066300620100                                           | 10            |
| 6,30     | 101      | 63       | 0066300630100                                           | 10            |
| 6,40     | 101      | 63       | 0066300640100                                           | 10            |
| 6,50     | 101      | 63       | 0066300650100                                           | 10            |
| 6,60     | 101      | 63       | 0066300660100                                           | 10            |
| 6,70     | 101      | 63       | 0066300670100                                           | 10            |
| 6,80     | 109      | 69       | 0066300680100                                           | 10            |
| 6,90     | 109      | 69       | 0066300690100                                           | 10            |
| 7,00     | 109      | 69       | 0066300700100                                           | 10            |
| 7,10     | 109      | 69       | 0066300710100                                           | 10            |
| 7,20     | 109      | 69       | 0066300720100                                           | 10            |
| 7,30     | 109      | 69       | 0066300730100                                           | 10            |
| 7,40     | 109      | 69       | 0066300740100                                           | 10            |
| 7,50     | 109      | 69       | 0066300750100                                           | 10            |
| 7,60     | 117      | 75       | 0066300760100                                           | 10            |
| 7,70     | 117      | 75       | 0066300770100                                           | 10            |
| 7,80     | 117      | 75       | 0066300780100                                           | 10            |
| 7,90     | 117      | 75       | 0066300790100                                           | 10            |
| 8,00     | 117      | 75       | 0066300800100                                           | 10            |
| 8,10     | 117      | 75       | 0066300810100                                           | 10            |
| 8,20     | 117      | 75       | 0066300820100                                           | 10            |
| 8,30     | 117      | 75       | 0066300830100                                           | 10            |
| 8,40     | 117      | 75       | 0066300840100                                           | 10            |
| 8,50     | 117      | 75       | 0066300850100                                           | 10            |
| 8,60     | 125      | 81       | 0066300860100                                           | 10            |
| 8,70     | 125      | 81       | 0066300870100                                           | 10            |
| 8,80     | 125      | 81       | 0066300880100                                           | 10            |
| 8,90     | 125      | 81       | 0066300890100                                           | 10            |
| 9,00     | 125      | 81       | 0066300900100                                           | 10            |
| 9,10     | 125      | 81       | 0066300910100                                           | 10            |
| 9,20     | 125      | 81       | 0066300920100                                           | 10            |
| 9,30     | 125      | 81       | 0066300930100                                           | 10            |
| 9,40     | 125      | 81       | 0066300940100                                           | 10            |
| 9,50     | 125      | 81       | 0066300950100                                           | 10            |
| 9,60     | 133      | 87       | 0066300960100                                           | 10            |
| 9,70     | 133      | 87       | 0066300970100                                           | 10            |



Gewerbepack  
*Industrial packing*  
*Paquete industrial*

| d1<br>mm | l1<br>mm | l2<br>mm | Code 663<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 9,80     | 133      | 87       | 0066300980100        | 10            |
| 9,90     | 133      | 87       | 0066300990100        | 10            |
| 10,00    | 133      | 87       | 0066301000100        | 10            |
| 10,20    | 133      | 87       | 0066301020100        | 5             |
| 10,50    | 133      | 87       | 0066301050100        | 5             |
| 11,00    | 142      | 94       | 0066301100100        | 5             |
| 11,50    | 142      | 94       | 0066301150100        | 5             |
| 12,00    | 151      | 101      | 0066301200100        | 5             |
| 12,50    | 151      | 101      | 0066301250100        | 5             |
| 13,00    | 151      | 101      | 0066301300100        | 5             |



**Metall- und Edelstahlbohrer**  
*Metal drills and stainless steel drills*  
*broca para metal y broca de acero inoxidable*



**HSS FORTE COBALT**



**Noch härter**

Hohe Belastbarkeit durch Nitro-oxidierte Fase

**Even harder**

High resilience due to nitro-oxidized chamfer

**Todavía más resistente**

Alta resistencia gracias a la etapa nitro-oxidada

**Exakte Ergebnisse**

Dank eines selbstzentrierten Spezialanschliffs

**Precise results**

Thanks to a self-centering special point shape

**Resultados exactos**

Gracias a su punta afilada especial autocentrado

**Exakte, tiefe Löcher**

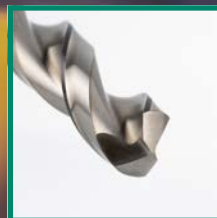
Die großen Spanräume garantieren präzise, tiefe Löcher bei hartem Stahl

**Precise, deep holes**

The large chip spaces guarantee precise, deep holes in hard steel

**Agujeros precisos y profundos**

El espacio ancho para virutas garantiza orificios precisos y profundos incluso en acero duro



**alpen** *drill better.*

## D HSS Cobalt Spiralbohrer, kurz, DIN 338 Forte

### Einsatzbereich:

5% kobaltlegierter Spiralbohrer mit sehr hoher thermischer Belastbarkeit. Durch spezielle Nutausbildung bei schlechter Spanabfuhr bzw. für größere Bohrtiefen geeignet. Für Werkstoffe mit einer Festigkeit bis 1.300 N/mm<sup>2</sup>.



Tieflochbohrer für hochfeste Stähle  
Deep hole twist drills for high tensile steels  
Broca de perforación profunda para aceros de alta resistencia

## E HSS Cobalt jobber drills, DIN 338 Forte

### Range of application:

5% cobalt-alloyed jobber drills with an extremely sturdy construction (re-inforced web) for drilling under difficult conditions e. g. poor chipremoval and deep holes, for use in steel and cast-iron with tensile strength up to 1.300 N/mm<sup>2</sup>.



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido

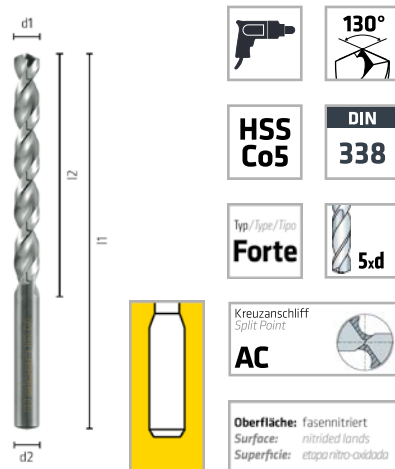
## ES Broca espiral HSS Cobalt, corta, DIN 338 Forte

### Ámbito de aplicación:

Broca espiral HSS con 5% de aleación de cobalto y muy alta clasificación térmica. Adecuada para una separación de virutas deficiente o para grandes profundidades de perforación gracias a la conformación especial de la ranura. Para materiales con una resistencia de hasta 1300 N/mm<sup>2</sup>.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 183<br>Art.-Nr. | Inh.<br>Cont. |    | Code 611<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 1,00     | 34       | 12       | 0018300100100        | 1             | 10 | 0061100100100        | 10            |
| 1,10     | 36       | 14       |                      |               |    | 0061100110100        | 10            |
| 1,20     | 38       | 16       |                      |               |    | 0061100120100        | 10            |
| 1,30     | 38       | 16       |                      |               |    | 0061100130100        | 10            |
| 1,40     | 40       | 18       |                      |               |    | 0061100140100        | 10            |
| 1,50     | 40       | 18       | 0018300150100        | 1             | 10 | 0061100150100        | 10            |
| 1,60     | 43       | 20       |                      |               |    | 0061100160100        | 10            |
| 1,70     | 43       | 20       |                      |               |    | 0061100170100        | 10            |
| 1,80     | 46       | 22       |                      |               |    | 0061100180100        | 10            |
| 1,90     | 49       | 24       |                      |               |    | 0061100190100        | 10            |
| 2,00     | 49       | 24       | 0018300200100        | 1             | 10 | 0061100200100        | 10            |
| 2,10     | 49       | 24       |                      |               |    | 0061100210100        | 10            |
| 2,20     | 53       | 27       |                      |               |    | 0061100220100        | 10            |
| 2,30     | 53       | 27       |                      |               |    | 0061100230100        | 10            |
| 2,40     | 57       | 30       |                      |               |    | 0061100240100        | 10            |
| 2,50     | 57       | 30       | 0018300250100        | 1             | 10 | 0061100250100        | 10            |
| 2,60     | 57       | 30       |                      |               |    | 0061100260100        | 10            |
| 2,70     | 61       | 33       |                      |               |    | 0061100270100        | 10            |
| 2,80     | 61       | 33       |                      |               |    | 0061100280100        | 10            |
| 2,90     | 61       | 33       |                      |               |    | 0061100290100        | 10            |
| 3,00     | 61       | 33       | 0018300300100        | 1             | 10 | 0061100300100        | 10            |
| 3,10     | 65       | 36       |                      |               |    | 0061100310100        | 10            |



Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|----------|----------|----------|----------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 183<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Code 611<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 3,20     | 65       | 36       | 0018300320100                                                        | 1             | 10                                                                                | 0061100320100                                                         | 10            |
| 3,30     | 65       | 36       | 0018300330100                                                        | 1             | 10                                                                                | 0061100330100                                                         | 10            |
| 3,40     | 70       | 39       |                                                                      |               |                                                                                   | 0061100340100                                                         | 10            |
| 3,50     | 70       | 39       | 0018300350100                                                        | 1             | 10                                                                                | 0061100350100                                                         | 10            |
| 3,60     | 70       | 39       |                                                                      |               |                                                                                   | 0061100360100                                                         | 10            |
| 3,70     | 70       | 39       |                                                                      |               |                                                                                   | 0061100370100                                                         | 10            |
| 3,80     | 75       | 43       |                                                                      |               |                                                                                   | 0061100380100                                                         | 10            |
| 3,90     | 75       | 43       |                                                                      |               |                                                                                   | 0061100390100                                                         | 10            |
| 4,00     | 75       | 43       | 0018300400100                                                        | 1             | 10                                                                                | 0061100400100                                                         | 10            |
| 4,10     | 75       | 43       |                                                                      |               |                                                                                   | 0061100410100                                                         | 10            |
| 4,20     | 75       | 43       | 0018300420100                                                        | 1             | 10                                                                                | 0061100420100                                                         | 10            |
| 4,30     | 80       | 47       |                                                                      |               |                                                                                   | 0061100430100                                                         | 10            |
| 4,40     | 80       | 47       |                                                                      |               |                                                                                   | 0061100440100                                                         | 10            |
| 4,50     | 80       | 47       | 0018300450100                                                        | 1             | 10                                                                                | 0061100450100                                                         | 10            |
| 4,60     | 80       | 47       |                                                                      |               |                                                                                   | 0061100460100                                                         | 10            |
| 4,70     | 80       | 47       |                                                                      |               |                                                                                   | 0061100470100                                                         | 10            |
| 4,80     | 86       | 52       |                                                                      |               |                                                                                   | 0061100480100                                                         | 10            |
| 4,90     | 86       | 52       |                                                                      |               |                                                                                   | 0061100490100                                                         | 10            |
| 5,00     | 86       | 52       | 0018300500100                                                        | 1             | 10                                                                                | 0061100500100                                                         | 10            |
| 5,10     | 86       | 52       |                                                                      |               |                                                                                   | 0061100510100                                                         | 10            |
| 5,20     | 86       | 52       |                                                                      |               |                                                                                   | 0061100520100                                                         | 10            |
| 5,30     | 86       | 52       |                                                                      |               |                                                                                   | 0061100530100                                                         | 10            |
| 5,40     | 93       | 57       |                                                                      |               |                                                                                   | 0061100540100                                                         | 10            |
| 5,50     | 93       | 57       | 0018300550100                                                        | 1             | 10                                                                                | 0061100550100                                                         | 10            |
| 5,60     | 93       | 57       |                                                                      |               |                                                                                   | 0061100560100                                                         | 10            |
| 5,70     | 93       | 57       |                                                                      |               |                                                                                   | 0061100570100                                                         | 10            |
| 5,80     | 93       | 57       |                                                                      |               |                                                                                   | 0061100580100                                                         | 10            |
| 5,90     | 93       | 57       |                                                                      |               |                                                                                   | 0061100590100                                                         | 10            |
| 6,00     | 93       | 57       | 0018300600100                                                        | 1             | 10                                                                                | 0061100600100                                                         | 10            |
| 6,10     | 101      | 63       |                                                                      |               |                                                                                   | 0061100610100                                                         | 10            |
| 6,20     | 101      | 63       |                                                                      |               |                                                                                   | 0061100620100                                                         | 10            |
| 6,30     | 101      | 63       |                                                                      |               |                                                                                   | 0061100630100                                                         | 10            |
| 6,40     | 101      | 63       |                                                                      |               |                                                                                   | 0061100640100                                                         | 10            |
| 6,50     | 101      | 63       | 0018300650100                                                        | 1             | 10                                                                                | 0061100650100                                                         | 10            |
| 6,60     | 101      | 63       |                                                                      |               |                                                                                   | 0061100660100                                                         | 10            |
| 6,70     | 101      | 63       |                                                                      |               |                                                                                   | 0061100670100                                                         | 10            |
| 6,80     | 109      | 69       | 0018300680100                                                        | 1             | 10                                                                                | 0061100680100                                                         | 10            |
| 6,90     | 109      | 69       |                                                                      |               |                                                                                   | 0061100690100                                                         | 10            |
| 7,00     | 109      | 69       | 0018300700100                                                        | 1             | 10                                                                                | 0061100700100                                                         | 10            |
| 7,10     | 109      | 69       |                                                                      |               |                                                                                   | 0061100710100                                                         | 10            |
| 7,20     | 109      | 69       |                                                                      |               |                                                                                   | 0061100720100                                                         | 10            |
| 7,30     | 109      | 69       |                                                                      |               |                                                                                   | 0061100730100                                                         | 10            |
| 7,40     | 109      | 69       |                                                                      |               |                                                                                   | 0061100740100                                                         | 10            |
| 7,50     | 109      | 69       | 0018300750100                                                        | 1             | 10                                                                                | 0061100750100                                                         | 10            |
| 7,60     | 117      | 75       |                                                                      |               |                                                                                   | 0061100760100                                                         | 10            |
| 7,70     | 117      | 75       |                                                                      |               |                                                                                   | 0061100770100                                                         | 10            |
| 7,80     | 117      | 75       |                                                                      |               |                                                                                   | 0061100780100                                                         | 10            |
| 7,90     | 117      | 75       |                                                                      |               |                                                                                   | 0061100790100                                                         | 10            |
| 8,00     | 117      | 75       | 0018300800100                                                        | 1             | 10                                                                                | 0061100800100                                                         | 10            |
| 8,10     | 117      | 75       |                                                                      |               |                                                                                   | 0061100810100                                                         | 10            |
| 8,20     | 117      | 75       |                                                                      |               |                                                                                   | 0061100820100                                                         | 10            |
| 8,30     | 117      | 75       |                                                                      |               |                                                                                   | 0061100830100                                                         | 10            |
| 8,40     | 117      | 75       |                                                                      |               |                                                                                   | 0061100840100                                                         | 10            |
| 8,50     | 117      | 75       |                                                                      |               |                                                                                   | 0061100850100                                                         | 10            |
| 8,60     | 125      | 81       |                                                                      |               |                                                                                   | 0061100860100                                                         | 10            |
| 8,70     | 125      | 81       |                                                                      |               |                                                                                   | 0061100870100                                                         | 10            |

|          |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 183<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 611<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 8,80     | 125      | 81       |                                                        |               |                                                                                   | 0061100880100                                           | 10            |
| 8,90     | 125      | 81       |                                                        |               |                                                                                   | 0061100890100                                           | 10            |
| 9,00     | 125      | 81       | 0018300900100                                          | 1             | 10                                                                                | 0061100900100                                           | 10            |
| 9,10     | 125      | 81       |                                                        |               |                                                                                   | 0061100910100                                           | 10            |
| 9,20     | 126      | 81       |                                                        |               |                                                                                   | 0061100920100                                           | 10            |
| 9,30     | 125      | 81       |                                                        |               |                                                                                   | 0061100930100                                           | 10            |
| 9,40     | 125      | 81       |                                                        |               |                                                                                   | 0061100940100                                           | 10            |
| 9,50     | 125      | 81       |                                                        |               |                                                                                   | 0061100950100                                           | 10            |
| 9,60     | 133      | 87       |                                                        |               |                                                                                   | 0061100960100                                           | 10            |
| 9,70     | 133      | 87       |                                                        |               |                                                                                   | 0061100970100                                           | 10            |
| 9,80     | 133      | 87       |                                                        |               |                                                                                   | 0061100980100                                           | 10            |
| 9,90     | 133      | 87       |                                                        |               |                                                                                   | 0061100990100                                           | 10            |
| 10,00    | 133      | 87       | 0018301000100                                          | 1             | 10                                                                                | 0061101000100                                           | 10            |
| 10,20    | 133      | 87       |                                                        |               |                                                                                   | 0061101020100                                           | 5             |
| 10,50    | 133      | 87       |                                                        |               |                                                                                   | 0061101050100                                           | 5             |
| 11,00    | 142      | 94       | 0018301100100                                          | 1             | 10                                                                                | 0061101100100                                           | 5             |
| 11,50    | 142      | 94       |                                                        |               |                                                                                   | 0061101150100                                           | 5             |
| 12,00    | 151      | 101      | 0018301200100                                          | 1             | 10                                                                                | 0061101200100                                           | 5             |
| 12,50    | 151      | 101      |                                                        |               |                                                                                   | 0061101250100                                           | 5             |
| 13,00    | 151      | 101      | 0018301300100                                          | 1             | 10                                                                                | 0061101300100                                           | 5             |



**Metall- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

Kreuzanschliff  $\geq \varnothing 2,0$  mm / Split Point  $\geq \varnothing 2,0$  mm / Punta afilada en cruz  $\geq \varnothing 2,0$  mm

Oberfläche: fasennitriert  $\geq \varnothing 3,0$  mm / Surface: nitrided lands  $\geq \varnothing 3,0$  mm / Superficie: etapa nitro-oxidada  $\geq \varnothing 3,0$  mm



**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

HSS Forte Cobalt TM 6



6-tlg. / 6-pcs. / 6-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000100616100

HSS Forte Cobalt KM 19



19-tlg. / 19-pcs. / 19-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100619100

HSS Forte Cobalt KM 25



25-tlg. / 25-pcs. / 25-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100625100

| Ø<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm          |  Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm          |  Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------|-------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------|
| HSS Forte Cobalt                          |                                           | HSS Forte Cobalt |                                                                                                                             | HSS Forte Cobalt |                                                                                                                               |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         | Ø 1,00-10,00     | 0,5                                                                                                                         | Ø 1,00-13,00     | 0,5                                                                                                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D HSS Cobalt Spiralbohrer, kurz,  
DIN 338 RN**

**Einsatzbereich:**

5% kobaltlegierter Spiralbohrer mit sehr hoher thermischer Belastbarkeit zum Bohren von Werkstoffen mit höherem Legierungsgehalt und Festigkeit über 800 N/mm<sup>2</sup>.

**E HSS Cobalt jobber drills,  
DIN 338 RN**

**Range of application:**

5% cobalt-alloyed jobber drills with high heat-resistance for drilling steels with tensile strength over 800 N/mm<sup>2</sup>, specially suitable for high alloyed steels, bearing-steels, hot/cold-rolled steel. Ideal for stainless steel.

**ES Broca espiral HSS Cobalt, corta,  
DIN 338 RN**

**Ámbito de aplicación:**

Broca espiral HSS con 5% de aleación de cobalto y muy alta clasificación térmica. Especialmente adecuadas para aceros un porcentaje elevado de aleación con R > 800 N/mm<sup>2</sup>.



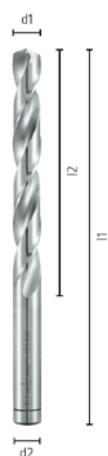
Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Bruchstabil  
Break-resistant  
Resistente a la rotura



Industriequalität  
Industrial quality  
Calidad industrial



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial



**TiN**

Hohe Performance,  
lange Standzeit  
High performance,  
long durability  
Rendimiento elevado,  
duración prolongada

Einzelverpackung  
Single packing  
Embalaje individual

|          |            |          |          | blank / bright / brillante |               |    | blank / bright / brillante |               |  | TiN                  |               |
|----------|------------|----------|----------|----------------------------|---------------|----|----------------------------|---------------|--|----------------------|---------------|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 623<br>Art.-Nr.       | Inh.<br>Cont. |    | Code 613<br>Art.-Nr.       | Inh.<br>Cont. |  | Code 607<br>Art.-Nr. | Inh.<br>Cont. |
| 1,00     |            | 34       | 12       | 0062300100100              | 1             | 10 | 0061300100100              | 10            |  | 0060700100100        | 1             |
| 1,10     |            | 36       | 14       |                            |               |    | 0061300110100              | 10            |  | 0060700110100        | 1             |
| 1,19     | 3/64       | 38       | 16       |                            |               |    | 0061300119100              | 10            |  | 0060700119100        | 1             |
| 1,20     |            | 38       | 16       |                            |               |    | 0061300120100              | 10            |  | 0060700120100        | 1             |
| 1,30     |            | 38       | 16       |                            |               |    | 0061300130100              | 10            |  | 0060700130100        | 1             |
| 1,40     |            | 40       | 18       |                            |               |    | 0061300140100              | 10            |  | 0060700140100        | 1             |
| 1,50     |            | 40       | 18       | 0062300150100              | 1             | 10 | 0061300150100              | 10            |  | 0060700150100        | 1             |
| 1,59     | 1/16       | 43       | 20       |                            |               |    | 0061300159100              | 10            |  | 0060700159100        | 1             |
| 1,60     |            | 43       | 20       |                            |               |    | 0061300160100              | 10            |  | 0060700160100        | 1             |
| 1,70     |            | 43       | 20       |                            |               |    | 0061300170100              | 10            |  | 0060700170100        | 1             |
| 1,80     |            | 46       | 22       |                            |               |    | 0061300180100              | 10            |  | 0060700180100        | 1             |
| 1,90     |            | 46       | 22       |                            |               |    | 0061300190100              | 10            |  | 0060700190100        | 1             |
| 1,98     | 5/64       | 49       | 24       |                            |               |    | 0061300198100              | 10            |  | 0060700198100        | 1             |
| 2,00     |            | 49       | 24       | 0062300200100              | 1             | 10 | 0061300200100              | 10            |  | 0060700200100        | 1             |
| 2,10     |            | 49       | 24       |                            |               |    | 0061300210100              | 10            |  | 0060700210100        | 1             |
| 2,20     |            | 53       | 27       |                            |               |    | 0061300220100              | 10            |  | 0060700220100        | 1             |
| 2,30     |            | 53       | 27       |                            |               |    | 0061300230100              | 10            |  | 0060700230100        | 1             |
| 2,38     | 3/32       | 57       | 30       |                            |               |    | 0061300238100              | 10            |  | 0060700238100        | 1             |
| 2,40     |            | 57       | 30       |                            |               |    | 0061300240100              | 10            |  | 0060700240100        | 1             |
| 2,50     |            | 57       | 30       | 0062300250100              | 1             | 10 | 0061300250100              | 10            |  | 0060700250100        | 1             |
| 2,60     |            | 57       | 30       |                            |               |    | 0061300260100              | 10            |  | 0060700260100        | 1             |
| 2,70     |            | 61       | 33       |                            |               |    | 0061300270100              | 10            |  | 0060700270100        | 1             |

Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|      |       |     |    | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |       |    | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |       |  | Einzelverpackung<br><i>Single packing</i><br><i>Embalaje individual</i> |       |  |
|------|-------|-----|----|----------------------------------------------------------------------|-------|----|-----------------------------------------------------------------------|-------|--|-------------------------------------------------------------------------|-------|--|
|      |       |     |    | blank / bright / brillante                                           |       |    | blank / bright / brillante                                            |       |  | TiN                                                                     |       |  |
| d1   | d1    | l1  | l2 | Code 623                                                             | Inh.  |    | Code 613                                                              | Inh.  |  | Code 607                                                                | Inh.  |  |
| mm   | inch  | mm  | mm | Art.-Nr.                                                             | Cont. |    | Art.-Nr.                                                              | Cont. |  | Art.-Nr.                                                                | Cont. |  |
| 2,78 | 7/64  | 61  | 33 |                                                                      |       |    | 0061300278100                                                         | 10    |  | 0060700278100                                                           | 1     |  |
| 2,80 |       | 61  | 33 |                                                                      |       |    | 0061300280100                                                         | 10    |  | 0060700280100                                                           | 1     |  |
| 2,90 |       | 61  | 33 |                                                                      |       |    | 0061300290100                                                         | 10    |  | 0060700290100                                                           | 1     |  |
| 3,00 |       | 61  | 33 | 0062300300100                                                        | 1     | 10 | 0061300300100                                                         | 10    |  | 0060700300100                                                           | 1     |  |
| 3,10 |       | 65  | 36 |                                                                      |       |    | 0061300310100                                                         | 10    |  | 0060700310100                                                           | 1     |  |
| 3,17 | 1/8   | 65  | 36 |                                                                      |       |    | 0061300317100                                                         | 10    |  | 0060700317100                                                           | 1     |  |
| 3,20 |       | 65  | 36 | 0062300320100                                                        | 1     | 10 | 0061300320100                                                         | 10    |  | 0060700320100                                                           | 1     |  |
| 3,30 |       | 65  | 36 | 0062300330100                                                        | 1     | 10 | 0061300330100                                                         | 10    |  | 0060700330100                                                           | 1     |  |
| 3,40 |       | 70  | 39 |                                                                      |       |    | 0061300340100                                                         | 10    |  | 0060700340100                                                           | 1     |  |
| 3,50 |       | 70  | 39 | 0062300350100                                                        | 1     | 10 | 0061300350100                                                         | 10    |  | 0060700350100                                                           | 1     |  |
| 3,57 | 9/64  | 70  | 39 |                                                                      |       |    | 0061300357100                                                         | 10    |  | 0060700357100                                                           | 1     |  |
| 3,60 |       | 70  | 39 |                                                                      |       |    | 0061300360100                                                         | 10    |  | 0060700360100                                                           | 1     |  |
| 3,70 |       | 70  | 39 |                                                                      |       |    | 0061300370100                                                         | 10    |  | 0060700370100                                                           | 1     |  |
| 3,80 |       | 75  | 43 |                                                                      |       |    | 0061300380100                                                         | 10    |  | 0060700380100                                                           | 1     |  |
| 3,90 |       | 75  | 43 |                                                                      |       |    | 0061300390100                                                         | 10    |  | 0060700390100                                                           | 1     |  |
| 3,97 | 5/32  | 75  | 43 |                                                                      |       |    | 0061300397100                                                         | 10    |  | 0060700397100                                                           | 1     |  |
| 4,00 |       | 75  | 43 | 0062300400100                                                        | 1     | 10 | 0061300400100                                                         | 10    |  | 0060700400100                                                           | 1     |  |
| 4,10 |       | 75  | 43 |                                                                      |       |    | 0061300410100                                                         | 10    |  | 0060700410100                                                           | 1     |  |
| 4,20 |       | 75  | 43 | 0062300420100                                                        | 1     | 10 | 0061300420100                                                         | 10    |  | 0060700420100                                                           | 1     |  |
| 4,30 |       | 80  | 47 |                                                                      |       |    | 0061300430100                                                         | 10    |  | 0060700430100                                                           | 1     |  |
| 4,37 | 11/64 | 80  | 47 |                                                                      |       |    | 0061300437100                                                         | 10    |  | 0060700437100                                                           | 1     |  |
| 4,40 |       | 80  | 47 |                                                                      |       |    | 0061300440100                                                         | 10    |  | 0060700440100                                                           | 1     |  |
| 4,50 |       | 80  | 47 | 0062300450100                                                        | 1     | 10 | 0061300450100                                                         | 10    |  | 0060700450100                                                           | 1     |  |
| 4,60 |       | 80  | 47 |                                                                      |       |    | 0061300460100                                                         | 10    |  | 0060700460100                                                           | 1     |  |
| 4,70 |       | 80  | 47 |                                                                      |       |    | 0061300470100                                                         | 10    |  | 0060700470100                                                           | 1     |  |
| 4,76 | 3/16  | 86  | 52 |                                                                      |       |    | 0061300476100                                                         | 10    |  | 0060700476100                                                           | 1     |  |
| 4,80 |       | 86  | 52 |                                                                      |       |    | 0061300480100                                                         | 10    |  | 0060700480100                                                           | 1     |  |
| 4,90 |       | 86  | 52 |                                                                      |       |    | 0061300490100                                                         | 10    |  | 0060700490100                                                           | 1     |  |
| 5,00 |       | 86  | 52 | 0062300500100                                                        | 1     | 10 | 0061300500100                                                         | 10    |  | 0060700500100                                                           | 1     |  |
| 5,10 |       | 86  | 52 |                                                                      |       |    | 0061300510100                                                         | 10    |  | 0060700510100                                                           | 1     |  |
| 5,16 | 13/64 | 86  | 52 |                                                                      |       |    | 0061300516100                                                         | 10    |  | 0060700516100                                                           | 1     |  |
| 5,20 |       | 86  | 52 |                                                                      |       |    | 0061300520100                                                         | 10    |  | 0060700520100                                                           | 1     |  |
| 5,30 |       | 86  | 52 |                                                                      |       |    | 0061300530100                                                         | 10    |  | 0060700530100                                                           | 1     |  |
| 5,40 |       | 93  | 57 |                                                                      |       |    | 0061300540100                                                         | 10    |  | 0060700540100                                                           | 1     |  |
| 5,50 |       | 93  | 57 | 0062300550100                                                        | 1     | 10 | 0061300550100                                                         | 10    |  | 0060700550100                                                           | 1     |  |
| 5,56 | 7/32  | 93  | 57 |                                                                      |       |    | 0061300556100                                                         | 10    |  | 0060700556100                                                           | 1     |  |
| 5,60 |       | 93  | 57 |                                                                      |       |    | 0061300560100                                                         | 10    |  | 0060700560100                                                           | 1     |  |
| 5,70 |       | 93  | 57 |                                                                      |       |    | 0061300570100                                                         | 10    |  | 0060700570100                                                           | 1     |  |
| 5,80 |       | 93  | 57 |                                                                      |       |    | 0061300580100                                                         | 10    |  | 0060700580100                                                           | 1     |  |
| 5,90 |       | 93  | 57 |                                                                      |       |    | 0061300590100                                                         | 10    |  | 0060700590100                                                           | 1     |  |
| 5,95 | 15/64 | 93  | 57 |                                                                      |       |    |                                                                       |       |  | 0060700595100                                                           | 1     |  |
| 6,00 |       | 93  | 57 | 0062300600100                                                        | 1     | 10 | 0061300600100                                                         | 10    |  | 0060700600100                                                           | 1     |  |
| 6,10 |       | 101 | 63 |                                                                      |       |    | 0061300610100                                                         | 10    |  | 0060700610100                                                           | 1     |  |
| 6,20 |       | 101 | 63 |                                                                      |       |    | 0061300620100                                                         | 10    |  | 0060700620100                                                           | 1     |  |
| 6,30 |       | 101 | 63 |                                                                      |       |    | 0061300630100                                                         | 10    |  | 0060700630100                                                           | 1     |  |
| 6,35 | 1/4   | 101 | 63 |                                                                      |       |    | 0061300635100                                                         | 10    |  | 0060700635100                                                           | 1     |  |
| 6,40 |       | 101 | 63 |                                                                      |       |    | 0061300640100                                                         | 10    |  | 0060700640100                                                           | 1     |  |
| 6,50 |       | 101 | 63 | 0062300650100                                                        | 1     | 10 | 0061300650100                                                         | 10    |  | 0060700650100                                                           | 1     |  |
| 6,60 |       | 101 | 63 |                                                                      |       |    | 0061300660100                                                         | 10    |  | 0060700660100                                                           | 1     |  |
| 6,70 |       | 101 | 63 |                                                                      |       |    | 0061300670100                                                         | 10    |  | 0060700670100                                                           | 1     |  |
| 6,75 | 17/64 | 109 | 69 |                                                                      |       |    | 0061300675100                                                         | 10    |  | 0060700675100                                                           | 1     |  |
| 6,80 |       | 109 | 69 | 0062300680100                                                        | 1     | 10 | 0061300680100                                                         | 10    |  | 0060700680100                                                           | 1     |  |
| 6,90 |       | 109 | 69 |                                                                      |       |    | 0061300690100                                                         | 10    |  | 0060700690100                                                           | 1     |  |
| 7,00 |       | 109 | 69 | 0062300700100                                                        | 1     | 10 | 0061300700100                                                         | 10    |  | 0060700700100                                                           | 1     |  |
| 7,10 |       | 109 | 69 |                                                                      |       |    | 0061300710100                                                         | 10    |  | 0060700710100                                                           | 1     |  |
| 7,14 | 9/32  | 109 | 69 |                                                                      |       |    | 0061300714100                                                         | 10    |  | 0060700714100                                                           | 1     |  |

|       |       |     |     | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |       |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |       |  | Einzelverpackung<br><i>Single packing</i><br><i>Embalaje individual</i> |       |  |
|-------|-------|-----|-----|----------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------|--|-------------------------------------------------------------------------|-------|--|
|       |       |     |     | blank / bright / brillante                                           |       |                                                                                   | blank / bright / brillante                                            |       |  | TiN                                                                     |       |  |
| d1    | d1    | l1  | l2  | Code 623                                                             | Inh.  |                                                                                   | Code 613                                                              | Inh.  |  | Code 607                                                                | Inh.  |  |
| mm    | inch  | mm  | mm  | Art.-Nr.                                                             | Cont. |  | Art.-Nr.                                                              | Cont. |  | Art.-Nr.                                                                | Cont. |  |
| 7,20  |       | 109 | 69  |                                                                      |       |                                                                                   | 0061300720100                                                         | 10    |  | 0060700720100                                                           | 1     |  |
| 7,30  |       | 109 | 69  |                                                                      |       |                                                                                   | 0061300730100                                                         | 10    |  | 0060700730100                                                           | 1     |  |
| 7,40  |       | 109 | 69  |                                                                      |       |                                                                                   | 0061300740100                                                         | 10    |  | 0060700740100                                                           | 1     |  |
| 7,50  |       | 109 | 69  | 0062300750100                                                        | 1     | 10                                                                                | 0061300750100                                                         | 10    |  | 0060700750100                                                           | 1     |  |
| 7,54  | 19/64 | 117 | 75  |                                                                      |       |                                                                                   | 0061300754100                                                         | 10    |  | 0060700754100                                                           | 1     |  |
| 7,60  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300760100                                                         | 10    |  | 0060700760100                                                           | 1     |  |
| 7,70  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300770100                                                         | 10    |  | 0060700770100                                                           | 1     |  |
| 7,80  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300780100                                                         | 10    |  | 0060700780100                                                           | 1     |  |
| 7,90  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300790100                                                         | 10    |  | 0060700790100                                                           | 1     |  |
| 7,94  | 5/16  | 117 | 75  |                                                                      |       |                                                                                   | 0061300794100                                                         | 10    |  | 0060700794100                                                           | 1     |  |
| 8,00  |       | 117 | 75  | 0062300800100                                                        | 1     | 10                                                                                | 0061300800100                                                         | 10    |  | 0060700800100                                                           | 1     |  |
| 8,10  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300810100                                                         | 10    |  | 0060700810100                                                           | 1     |  |
| 8,20  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300820100                                                         | 10    |  | 0060700820100                                                           | 1     |  |
| 8,30  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300830100                                                         | 10    |  | 0060700830100                                                           | 1     |  |
| 8,33  | 21/64 | 117 | 75  |                                                                      |       |                                                                                   |                                                                       |       |  | 0060700833100                                                           | 1     |  |
| 8,40  |       | 117 | 75  |                                                                      |       |                                                                                   | 0061300840100                                                         | 10    |  | 0060700840100                                                           | 1     |  |
| 8,50  |       | 117 | 75  | 0062300850100                                                        | 1     | 10                                                                                | 0061300850100                                                         | 10    |  | 0060700850100                                                           | 1     |  |
| 8,60  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300860100                                                         | 10    |  | 0060700860100                                                           | 1     |  |
| 8,70  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300870100                                                         | 10    |  | 0060700870100                                                           | 1     |  |
| 8,73  | 11/32 | 125 | 81  |                                                                      |       |                                                                                   | 0061300873100                                                         | 10    |  | 0060700873100                                                           | 1     |  |
| 8,80  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300880100                                                         | 10    |  | 0060700880100                                                           | 1     |  |
| 8,90  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300890100                                                         | 10    |  | 0060700890100                                                           | 1     |  |
| 9,00  |       | 125 | 81  | 0062300900100                                                        | 1     | 10                                                                                | 0061300900100                                                         | 10    |  | 0060700900100                                                           | 1     |  |
| 9,10  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300910100                                                         | 10    |  | 0060700910100                                                           | 1     |  |
| 9,13  | 23/64 | 125 | 81  |                                                                      |       |                                                                                   |                                                                       |       |  | 0060700913100                                                           | 1     |  |
| 9,20  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300920100                                                         | 10    |  | 0060700920100                                                           | 1     |  |
| 9,30  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300930100                                                         | 10    |  | 0060700930100                                                           | 1     |  |
| 9,40  |       | 125 | 81  |                                                                      |       |                                                                                   | 0061300940100                                                         | 10    |  | 0060700940100                                                           | 1     |  |
| 9,50  |       | 125 | 81  | 0062300950100                                                        | 1     | 10                                                                                | 0061300950100                                                         | 10    |  | 0060700950100                                                           | 1     |  |
| 9,52  | 3/8   | 133 | 87  |                                                                      |       |                                                                                   | 0061300952100                                                         | 10    |  | 0060700952100                                                           | 1     |  |
| 9,60  |       | 133 | 87  |                                                                      |       |                                                                                   | 0061300960100                                                         | 10    |  | 0060700960100                                                           | 1     |  |
| 9,70  |       | 133 | 87  |                                                                      |       |                                                                                   | 0061300970100                                                         | 10    |  | 0060700970100                                                           | 1     |  |
| 9,80  |       | 133 | 87  |                                                                      |       |                                                                                   | 0061300980100                                                         | 10    |  | 0060700980100                                                           | 1     |  |
| 9,90  |       | 133 | 87  |                                                                      |       |                                                                                   | 0061300990100                                                         | 10    |  | 0060700990100                                                           | 1     |  |
| 9,92  | 25/64 | 133 | 87  |                                                                      |       |                                                                                   |                                                                       |       |  | 0060700992100                                                           | 1     |  |
| 10,00 |       | 133 | 87  | 0062301000100                                                        | 1     | 10                                                                                | 0061301000100                                                         | 10    |  | 0060701000100                                                           | 1     |  |
| 10,20 |       | 133 | 87  | 0062301020100                                                        | 1     | 10                                                                                | 0061301020100                                                         | 5     |  | 0060701020100                                                           | 1     |  |
| 10,32 | 13/32 | 133 | 87  |                                                                      |       |                                                                                   |                                                                       |       |  | 0060701032100                                                           | 1     |  |
| 10,50 |       | 133 | 87  |                                                                      |       |                                                                                   | 0061301050100                                                         | 5     |  | 0060701050100                                                           | 1     |  |
| 11,00 |       | 142 | 94  | 0062301100100                                                        | 1     | 10                                                                                | 0061301100100                                                         | 5     |  | 0060701100100                                                           | 1     |  |
| 11,11 | 7/16  | 142 | 94  |                                                                      |       |                                                                                   | 0061301111100                                                         | 5     |  | 0060701111100                                                           | 1     |  |
| 11,50 |       | 142 | 94  |                                                                      |       |                                                                                   | 0061301150100                                                         | 5     |  | 0060701150100                                                           | 1     |  |
| 11,51 | 29/64 | 142 | 94  |                                                                      |       |                                                                                   |                                                                       |       |  | 0060701151100                                                           | 1     |  |
| 11,91 | 15/32 | 151 | 101 |                                                                      |       |                                                                                   |                                                                       |       |  | 0060701191100                                                           | 1     |  |
| 12,00 |       | 151 | 101 | 0062301200100                                                        | 1     | 10                                                                                | 0061301200100                                                         | 5     |  | 0060701200100                                                           | 1     |  |
| 12,30 | 31/64 | 151 | 101 |                                                                      |       |                                                                                   |                                                                       |       |  | 0060701230100                                                           | 1     |  |
| 12,50 |       | 151 | 101 |                                                                      |       |                                                                                   | 0061301250100                                                         | 5     |  | 0060701250100                                                           | 1     |  |
| 12,70 | 1/2   | 151 | 101 |                                                                      |       |                                                                                   | 0061301270100                                                         | 5     |  | 0060701270100                                                           | 1     |  |
| 13,00 |       | 151 | 101 | 0062301300100                                                        | 1     | 10                                                                                | 0061301300100                                                         | 5     |  | 0060701300100                                                           | 1     |  |
| 13,50 |       | 160 | 108 |                                                                      |       |                                                                                   | 0061301350100                                                         | 1     |  | 0060701350100                                                           | 1     |  |
| 14,00 |       | 160 | 108 |                                                                      |       |                                                                                   | 0061301400100                                                         | 1     |  | 0060701400100                                                           | 1     |  |
| 14,50 |       | 169 | 114 |                                                                      |       |                                                                                   | 0061301450100                                                         | 1     |  | 0060701450100                                                           | 1     |  |
| 15,00 |       | 169 | 114 |                                                                      |       |                                                                                   | 0061301500100                                                         | 1     |  | 0060701500100                                                           | 1     |  |
| 16,00 |       | 178 | 120 |                                                                      |       |                                                                                   | 0061301600100                                                         | 1     |  | 0060701600100                                                           | 1     |  |



**Metall- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

HSS Cobalt TM 6



6-tlg. / 6-pcs. / 6-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000100606100

| Ø<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------|-------------------------------------------|
| HSS Cobalt                                |                                           |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         |

HSS Cobalt KM 19



19-tlg. / 19-pcs. / 19-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100219100

| Ø<br>mm      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-------------------------------------------|
| HSS Cobalt   |                                           |
| Ø 1,00-10,00 | 0,5                                       |

HSS Cobalt KP 19



19-tlg. / 19-pcs. / 19-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 000010219100

| Ø<br>mm      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-------------------------------------------|
| HSS Cobalt   |                                           |
| Ø 1,00-10,00 | 0,5                                       |

HSS Cobalt KM 25



25-tlg. / 25-pcs. / 25-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100225100

| Ø<br>mm      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-------------------------------------------|
| HSS Cobalt   |                                           |
| Ø 1,00-13,00 | 0,5                                       |

HSS Cobalt KP 25



25-tlg. / 25-pcs. / 25-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000102225100

| Ø<br>mm      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-------------------------------------------|
| HSS Cobalt   |                                           |
| Ø 1,00-13,00 | 0,5                                       |

HSS Cobalt KM 32



32-tlg. / 32-pcs. / 32-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000101232100

| Ø<br>mm                                          | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------------------------|-------------------------------------------|
| HSS Cobalt                                       |                                           |
| Ø 1,00-10,50                                     | 0,5                                       |
| 1,9/2,1/2,6/2,9/3,2/3,3/3,8/4,2/5,1/6,8/7,9/10,2 | 1                                         |

HSS Cobalt KM 50



50-tlg. / 50-pcs. / 50-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000101250100

| Ø<br>mm     | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------|-------------------------------------------|
| HSS Cobalt  |                                           |
| Ø 1,00-5,90 | 0,1                                       |

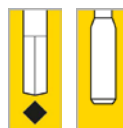
HSS Cobalt KM 41



41-tlg. / 41-pcs. / 41-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000101241100

| Ø<br>mm      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-------------------------------------------|
| HSS Cobalt   |                                           |
| Ø 6,00-10,00 | 0,1                                       |

HSS-E DIN Maschinengewindebohrersatz KM 14



14-tlg. / 14-pcs. / 14-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0070800014100

| Ø<br>mm                                           | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------------------------------------------------|-------------------------------------------|
| HSS Cobalt                                        |                                           |
| Ø 2,50 / 3,30 / 4,20 / 5,00 / 6,80 / 8,50 / 10,20 | 1                                         |
| Ø M3 - M12                                        | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro





**HSS COBALT GRIP**



**Selbstzentrierend**  
durch Spezialanschliff

**Self-centering**  
*thanks to special point shape*

**Autocentrado**  
*gracias a la punta especialmente  
afilada*

**Bis 600° C**  
Bohren auch bei höchsten  
Temperaturbelastungen

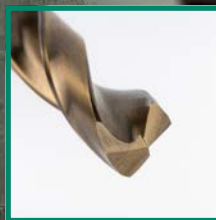
**Up to 600° C**  
*Drilling even with the highest thermal  
stress*

**Taladrado hasta 600° C**  
*Incluso bajo temperaturas extremas*

**Schnell**  
Durch speziellen Bohrerschleiß schneller  
Bohrfortschritt und bis zu 50%  
weniger Vorschubdruck erforderlich

**Fast**  
*Due to special drill grinding fast drilling  
progress and up to 50% less feed  
pressure required*

**Rápida**  
*Gracias a la punta especialmente  
afilada avance rápido y presión de  
avance necesaria inferior al 50 %*



**alpen** *drill better.*

**D HSS Cobalt Spiralbohrer,  
3-Flächenschaft, kurz,  
DIN 338 RN**

**Einsatzbereich:**

5% kobaltlegierter Spiralbohrer mit sehr hoher thermischer Belastbarkeit zum Bohren von Werkstoffen mit höherem Legierungsgehalt und Festigkeit über 800 N/mm<sup>2</sup>. Der 3-Flächenschaft verhindert das Durchdrehen im Bohrfutter und sorgt für eine optimale Drehmomentübertragung.



Industriequalität  
Industrial quality  
Calidad industrial



Bohren mit stark verminderten Anpressdruck  
Drilling with greatly reduced feed pressure  
Perforar con una presión de avance muy disminuida



3-Flächenschaft  
3-surface shank  
3 caras

**E HSS Cobalt jobber drills,  
3-surface shank,  
DIN 338 RN**

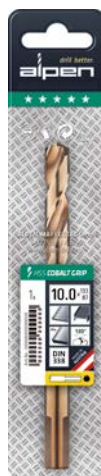
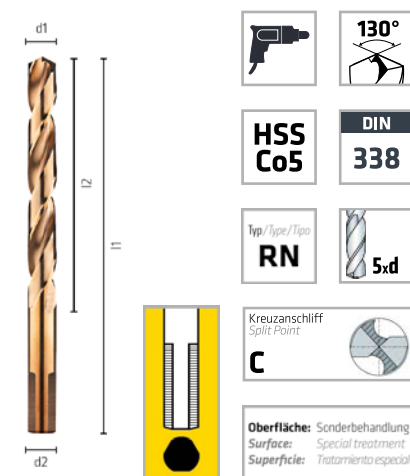
**Range of application:**

5% cobalt-alloyed jobber drills with high heat-resistance for drilling steels with tensile strength over 800 N/mm<sup>2</sup>, specially suitable for high alloyed steels, bearing-steels, hot/ cold-rolled steel. Ideal for stainless steel. The 3-surface shank prevents slipping in the chuck and ensures optimum torque transmission.

**E Broca espiral HSS Cobalt,  
eje de 3 cantos, corta,  
DIN 338 RN**

**Ámbito de aplicación:**

Broca espiral HSS con 5% de aleación de cobalto y muy alta clasificación térmica. Especialmente adecuada para aceros con un porcentaje elevado de aleación de R > 800 N/mm<sup>2</sup>. El nuevo vástago antideslizante evita la rotación en el portabrocas y asegura una transmisión de torsión óptima.



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 655<br>Art.-Nr. | Inh.<br>Cont. |    | Code 656<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 1,00     | 34       | 12       |          | 0065500100100        | 1             | 10 | 0065600100100        | 10            |
| 1,50     | 40       | 18       |          | 0065500150100        | 1             | 10 | 0065600150100        | 10            |
| 1,60     | 43       | 20       |          |                      |               |    | 0065600160100        | 10            |
| 2,00     | 49       | 24       |          | 0065500200100        | 1             | 10 | 0065600200100        | 10            |
| 2,50     | 57       | 30       |          | 0065500250100        | 1             | 10 | 0065600250100        | 10            |
| 3,00     | 61       | 33       |          | 0065500300100        | 1             | 10 | 0065600300100        | 10            |
| 3,20     | 65       | 36       |          | 0065500320100        | 1             | 10 | 0065600320100        | 10            |
| 3,30     | 65       | 36       |          | 0065500330100        | 1             | 10 | 0065600330100        | 10            |
| 3,50     | 70       | 39       |          | 0065500350100        | 1             | 10 | 0065600350100        | 10            |
| 4,00     | 75       | 43       |          | 0065500400100        | 1             | 10 | 0065600400100        | 10            |
| 4,20     | 75       | 43       |          | 0065500420100        | 1             | 10 | 0065600420100        | 10            |
| 4,50     | 80       | 47       |          | 0065500450100        | 1             | 10 | 0065600450100        | 10            |
| 5,00     | 86       | 52       |          | 0065500500100        | 1             | 10 | 0065600500100        | 10            |
| 5,20     | 86       | 52       |          |                      |               |    | 0065600520100        | 10            |
| 5,50     | 93       | 57       |          | 0065500550100        | 1             | 10 | 0065600550100        | 10            |
| 6,00     | 93       | 57       |          | 0065500600100        | 1             | 10 | 0065600600100        | 10            |
| 6,50     | 101      | 63       |          | 0065500650100        | 1             | 10 | 0065600650100        | 10            |
| 6,80     | 109      | 69       |          | 0065500680100        | 1             | 10 | 0065600680100        | 10            |
| 7,00     | 109      | 69       |          | 0065500700100        | 1             | 10 | 0065600700100        | 10            |
| 7,50     | 109      | 69       |          | 0065500750100        | 1             | 10 | 0065600750100        | 10            |
| 8,00     | 117      | 75       |          | 0065500800100        | 1             | 10 | 0065600800100        | 10            |
| 8,50     | 117      | 75       |          | 0065500850100        | 1             | 10 | 0065600850100        | 10            |

|          |          |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|----------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 655<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 656<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 9,00     | 125      | 81       |          | 0065500900100                                          | 1             | 10                                                                                | 0065600900100                                           | 10            |
| 9,50     | 125      | 81       |          | 0065500950100                                          | 1             | 10                                                                                | 0065600950100                                           | 10            |
| 10,00    | 133      | 87       |          | 0065501000100                                          | 1             | 10                                                                                | 0065601000100                                           | 10            |
| 10,20    | 133      | 87       |          | 0065501020100                                          | 1             | 10                                                                                | 0065601020100                                           | 5             |
| 10,50    | 133      | 87       |          |                                                        |               |                                                                                   | 0065601050100                                           | 5             |
| 11,00    | 142      | 94       |          | 0065501100100                                          | 1             | 10                                                                                | 0065601100100                                           | 5             |
| 11,50    | 142      | 94       |          |                                                        |               |                                                                                   | 0065601150100                                           | 5             |
| 12,00    | 151      | 101      |          | 0065501200100                                          | 1             | 10                                                                                | 0065601200100                                           | 5             |
| 12,50    | 151      | 101      |          |                                                        |               |                                                                                   | 0065601250100                                           | 5             |
| 13,00    | 151      | 101      |          | 0065501300100                                          | 1             | 10                                                                                | 0065601300100                                           | 5             |
| 13,50    | 160      | 108      | 9,50     |                                                        |               |                                                                                   | 0065601350100                                           | 1             |
| 14,00    | 160      | 108      | 9,50     |                                                        |               |                                                                                   | 0065601400100                                           | 1             |
| 14,50    | 169      | 114      | 9,50     |                                                        |               |                                                                                   | 0065601450100                                           | 1             |
| 15,00    | 169      | 114      | 9,50     |                                                        |               |                                                                                   | 0065601500100                                           | 1             |
| 15,50    | 178      | 120      | 9,50     |                                                        |               |                                                                                   | 0065601550100                                           | 1             |
| 16,00    | 178      | 120      | 9,50     |                                                        |               |                                                                                   | 0065601600100                                           | 1             |
| 17,00    | 184      | 125      | 12,50    |                                                        |               |                                                                                   | 0065601700100                                           | 1             |
| 18,00    | 191      | 130      | 12,50    |                                                        |               |                                                                                   | 0065601800100                                           | 1             |
| 19,00    | 198      | 135      | 12,50    |                                                        |               |                                                                                   | 0065601900100                                           | 1             |
| 20,00    | 205      | 140      | 12,50    |                                                        |               |                                                                                   | 0065602000100                                           | 1             |



**Metall- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

**D Kassetten, Sets**

**E Cassettes, sets**

**ES Cajas, juegos**

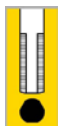
**HSS COBALT GRIP TM 6**



6-tlg. / 6-pcs. / 6-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0065600006100

| Ø<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------|-------------------------------------------|
| HSS COBALT GRIP                           |                                           |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         |

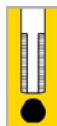
**HSS COBALT GRIP KM 19**



19-tlg. / 19-pcs. / 19-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0065600019100

| Ø<br>mm         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------|-------------------------------------------|
| HSS COBALT GRIP |                                           |
| Ø 1,00-10,00    | 0,5                                       |

**HSS COBALT GRIP KM 25**



25-tlg. / 25-pcs. / 25-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0065600025100

| Ø<br>mm         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------|-------------------------------------------|
| HSS COBALT GRIP |                                           |
| Ø 1,00-13,00    | 0,5                                       |

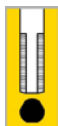
**HSS COBALT GRIP KP 19**



19-tlg. / 19-pcs. / 19-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0065600119100

| Ø<br>mm         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------|-------------------------------------------|
| HSS COBALT GRIP |                                           |
| Ø 1,00-10,00    | 0,5                                       |

**HSS COBALT GRIP KP 24**



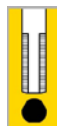
**NEW**



24-tlg. / 24-pcs. / 24-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0065600224100

| Ø<br>mm         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------|-------------------------------------------|
| HSS COBALT GRIP |                                           |
| Ø 1,00-10,50    | 0,5                                       |

**HSS COBALT GRIP KP 25**



25-tlg. / 25-pcs. / 25-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0065600125100

| Ø<br>mm         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------|-------------------------------------------|
| HSS COBALT GRIP |                                           |
| Ø 1,00-13,00    | 0,5                                       |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D HSS Cobalt Spiralbohrer für INOX-Bleche und Hardox®

### Einsatzbereich:

Besonders geeignet für zähe und harte Werkstoffe wie rost- und säurebeständige Chrom-Nickelstähle, sowie sämtliche verschleißbeanspruchte Bauteile, überwiegend im Baugewerbe, wie z.B. HARDOX® 400 sowie XAR® 320 und XAR® 400 und ähnliche Werkstoffe.



Industriequalität  
Industrial quality  
Calidad industrial



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión

## E HSS Cobalt jobber drills for INOX sheet metals and Hardox®

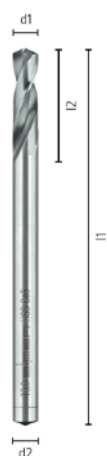
### Range of application:

Specially suitable for drilling stainless steel, acid-resisting steel, spring-steel as well as extremely hard materials such as manganese steel, high-tensile fine grained machinery steel (e.g. HARDOX® 400, XAR® 320, XAR® 400) and similar materials.

## ES Broca espiral HSS Cobalt para chapas INOX & Hardox®

### Ámbito de aplicación:

Especialmente adecuadas para materiales tenaces y duros, como aceros al cromo-níquel que resisten los ácidos y la corrosión, así como elementos de mucho desgaste, principalmente en el campo de la construcción, como p. ej. HARDOX® 400 como XAR® 320 e XAR® 400 y otros materiales similares.



HSS  
Co5



WN

Typ/Type/Tipo  
H



3x d

Kreuzanschliff  
Split Point  
C



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 638<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 2,00     | 49       | 12       | 0063800200100        | 10            |
| 2,50     | 57       | 14       | 0063800250100        | 10            |
| 3,00     | 61       | 16       | 0063800300100        | 10            |
| 3,20     | 65       | 18       | 0063800320100        | 10            |
| 3,30     | 65       | 19       | 0063800330100        | 10            |
| 3,50     | 70       | 20       | 0063800350100        | 10            |
| 4,00     | 75       | 22       | 0063800400100        | 10            |
| 4,20     | 75       | 22       | 0063800420100        | 10            |
| 4,50     | 80       | 24       | 0063800450100        | 10            |
| 5,00     | 86       | 26       | 0063800500100        | 10            |
| 5,50     | 93       | 28       | 0063800550100        | 10            |
| 6,00     | 93       | 28       | 0063800600100        | 10            |
| 6,50     | 101      | 31       | 0063800650100        | 10            |
| 6,80     | 101      | 31       | 0063800680100        | 10            |
| 7,00     | 109      | 34       | 0063800700100        | 10            |
| 7,50     | 109      | 34       | 0063800750100        | 5             |
| 8,00     | 117      | 37       | 0063800800100        | 5             |
| 8,50     | 117      | 37       | 0063800850100        | 5             |
| 9,00     | 125      | 40       | 0063800900100        | 5             |
| 9,50     | 125      | 40       | 0063800950100        | 5             |
| 10,00    | 133      | 43       | 0063801000100        | 5             |
| 10,20    | 133      | 43       | 0063801020100        | 5             |



Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable



|          |          |          | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|----------|----------|----------|-----------------------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 638<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 10,50    | 133      | 43       | 0063801050100                                                         | 5             |
| 11,00    | 142      | 47       | 0063801100100                                                         | 5             |
| 11,50    | 142      | 47       | 0063801150100                                                         | 5             |
| 12,00    | 151      | 51       | 0063801200100                                                         | 5             |
| 12,50    | 151      | 51       | 0063801250100                                                         | 5             |
| 13,00    | 151      | 51       | 0063801300100                                                         | 5             |

**D HSS Spiralbohrer  
mit Kreuzanschliff AC, kurz,  
DIN 338 RN**

**Einsatzbereich:**

Spiralbohrer präzisionsgeschliffen, Industriequalität zum Bohren von legierten und unlegierten Stählen, Grauguss, Temperguss, Kupferlegierungen, Neusilber, Graphit, Sinterisen.

**E HSS jobber drills  
with split point AC,  
DIN 338 RN**

**Range of application:**

Industrial quality twist drill for drilling steel and steel castings, alloyed carbon and plain steel, grey iron castings, copper-alloys, nickel-silver, graphite and similar materials.

**ES Broca espiral HSS  
con punta afilada en cruz AC,  
corta, DIN 338 RN**

**Ámbito de aplicación:**

Broca espiral afilada con precisión, calidad industrial para el taladrado de aceros aleados y no aleados, hierro fundido gris, fundición maleable, aleaciones de cobre, alpaca, grafito, hierro sinterizado.



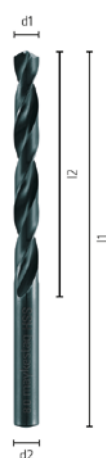
Industriequalität  
Industrial quality  
Calidad industrial



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Präzise  
Precise  
Preciso



HSS

DIN  
338

Typ/Type/Tipo  
RN



Kreuzanschliff  
Split Point  
AC



Oberfläche: dampfangelassen  
Surface: steam tempered  
Superficie: templado al vapor



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 601<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 0,20     | 19       | 25       | 0060100020100        | 10            |
| 0,30     | 19       | 3        | 0060100030100        | 10            |
| 0,35     | 20       | 5        | 0060100035100        | 10            |
| 0,40     | 20       | 5        | 0060100040100        | 10            |
| 0,50     | 22       | 6        | 0060100050100        | 10            |
| 0,55     | 24       | 7        | 0060100055100        | 10            |
| 0,60     | 24       | 7        | 0060100060100        | 10            |
| 0,65     | 26       | 8        | 0060100065100        | 10            |
| 0,70     | 29       | 9        | 0060100070100        | 10            |
| 0,75     | 28       | 9        | 0060100075100        | 10            |
| 0,80     | 30       | 10       | 0060100080100        | 10            |
| 0,85     | 30       | 10       | 0060100085100        | 10            |
| 0,90     | 32       | 11       | 0060100090100        | 10            |
| 0,95     | 32       | 11       | 0060100095100        | 10            |
| 1,00     | 34       | 12       | 0060100100100        | 10            |
| 1,05     | 34       | 12       | 0060100105100        | 10            |
| 1,10     | 36       | 14       | 0060100110100        | 10            |
| 1,15     | 36       | 14       | 0060100115100        | 10            |
| 1,20     | 38       | 16       | 0060100120100        | 10            |
| 1,25     | 38       | 16       | 0060100125100        | 10            |
| 1,30     | 38       | 16       | 0060100130100        | 10            |
| 1,35     | 40       | 18       | 0060100135100        | 10            |



Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|----------|----------|---------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 601<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 1,40     | 40       | 18       | 0060100140100                                           | 10            |
| 1,45     | 40       | 18       | 0060100145100                                           | 10            |
| 1,50     | 40       | 18       | 0060100150100                                           | 10            |
| 1,55     | 43       | 20       | 0060100155100                                           | 10            |
| 1,60     | 43       | 20       | 0060100160100                                           | 10            |
| 1,65     | 43       | 20       | 0060100165100                                           | 10            |
| 1,70     | 43       | 20       | 0060100170100                                           | 10            |
| 1,75     | 46       | 22       | 0060100175100                                           | 10            |
| 1,80     | 46       | 22       | 0060100180100                                           | 10            |
| 1,85     | 46       | 22       | 0060100185100                                           | 10            |
| 1,90     | 46       | 22       | 0060100190100                                           | 10            |
| 1,95     | 49       | 24       | 0060100195100                                           | 10            |
| 2,00     | 49       | 24       | 0060100200100                                           | 10            |
| 2,05     | 49       | 24       | 0060100205100                                           | 10            |
| 2,10     | 49       | 24       | 0060100210100                                           | 10            |
| 2,15     | 53       | 27       | 0060100215100                                           | 10            |
| 2,20     | 53       | 27       | 0060100220100                                           | 10            |
| 2,25     | 53       | 27       | 0060100225100                                           | 10            |
| 2,30     | 53       | 27       | 0060100230100                                           | 10            |
| 2,35     | 53       | 27       | 0060100235100                                           | 10            |
| 2,40     | 57       | 30       | 0060100240100                                           | 10            |
| 2,45     | 57       | 30       | 0060100245100                                           | 10            |
| 2,50     | 57       | 30       | 0060100250100                                           | 10            |
| 2,55     | 57       | 30       | 0060100255100                                           | 10            |
| 2,60     | 57       | 30       | 0060100260100                                           | 10            |
| 2,65     | 57       | 30       | 0060100265100                                           | 10            |
| 2,70     | 61       | 33       | 0060100270100                                           | 10            |
| 2,75     | 61       | 33       | 0060100275100                                           | 10            |
| 2,80     | 61       | 33       | 0060100280100                                           | 10            |
| 2,85     | 61       | 33       | 0060100285100                                           | 10            |
| 2,90     | 61       | 33       | 0060100290100                                           | 10            |
| 2,95     | 61       | 33       | 0060100295100                                           | 10            |
| 3,00     | 61       | 33       | 0060100300100                                           | 10            |
| 3,10     | 65       | 36       | 0060100310100                                           | 10            |
| 3,20     | 65       | 36       | 0060100320100                                           | 10            |
| 3,25     | 65       | 36       | 0060100325100                                           | 10            |
| 3,30     | 65       | 36       | 0060100330100                                           | 10            |
| 3,40     | 70       | 39       | 0060100340100                                           | 10            |
| 3,50     | 70       | 39       | 0060100350100                                           | 10            |
| 3,60     | 70       | 39       | 0060100360100                                           | 10            |
| 3,70     | 70       | 39       | 0060100370100                                           | 10            |
| 3,75     | 70       | 39       | 0060100375100                                           | 10            |
| 3,80     | 75       | 43       | 0060100380100                                           | 10            |
| 3,90     | 75       | 43       | 0060100390100                                           | 10            |
| 4,00     | 75       | 43       | 0060100400100                                           | 10            |
| 4,10     | 75       | 43       | 0060100410100                                           | 10            |
| 4,20     | 75       | 43       | 0060100420100                                           | 10            |
| 4,25     | 75       | 43       | 0060100425100                                           | 10            |
| 4,30     | 80       | 47       | 0060100430100                                           | 10            |
| 4,40     | 80       | 47       | 0060100440100                                           | 10            |
| 4,50     | 80       | 47       | 0060100450100                                           | 10            |
| 4,60     | 80       | 47       | 0060100460100                                           | 10            |
| 4,70     | 80       | 47       | 0060100470100                                           | 10            |
| 4,75     | 80       | 47       | 0060100475100                                           | 10            |
| 4,80     | 86       | 52       | 0060100480100                                           | 10            |
| 4,90     | 86       | 52       | 0060100490100                                           | 10            |

Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 601<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 5,00     | 86       | 52       | 0060100500100        | 10            |
| 5,10     | 86       | 52       | 0060100510100        | 10            |
| 5,20     | 86       | 52       | 0060100520100        | 10            |
| 5,25     | 86       | 52       | 0060100525100        | 10            |
| 5,30     | 86       | 52       | 0060100530100        | 10            |
| 5,40     | 93       | 57       | 0060100540100        | 10            |
| 5,50     | 93       | 57       | 0060100550100        | 10            |
| 5,60     | 93       | 57       | 0060100560100        | 10            |
| 5,70     | 93       | 57       | 0060100570100        | 10            |
| 5,75     | 93       | 57       | 0060100575100        | 10            |
| 5,80     | 93       | 57       | 0060100580100        | 10            |
| 5,90     | 93       | 57       | 0060100590100        | 10            |
| 6,00     | 93       | 57       | 0060100600100        | 10            |
| 6,10     | 101      | 63       | 0060100610100        | 10            |
| 6,20     | 101      | 63       | 0060100620100        | 10            |
| 6,25     | 101      | 63       | 0060100625100        | 10            |
| 6,30     | 101      | 63       | 0060100630100        | 10            |
| 6,40     | 101      | 63       | 0060100640100        | 10            |
| 6,50     | 101      | 63       | 0060100650100        | 10            |
| 6,60     | 101      | 63       | 0060100660100        | 10            |
| 6,70     | 101      | 63       | 0060100670100        | 10            |
| 6,75     | 109      | 69       | 0060100675100        | 10            |
| 6,80     | 109      | 69       | 0060100680100        | 10            |
| 6,90     | 109      | 69       | 0060100690100        | 10            |
| 7,00     | 109      | 69       | 0060100700100        | 10            |
| 7,10     | 109      | 69       | 0060100710100        | 10            |
| 7,20     | 109      | 69       | 0060100720100        | 10            |
| 7,25     | 109      | 69       | 0060100725100        | 10            |
| 7,30     | 109      | 69       | 0060100730100        | 10            |
| 7,40     | 109      | 69       | 0060100740100        | 10            |
| 7,50     | 109      | 69       | 0060100750100        | 10            |
| 7,60     | 117      | 75       | 0060100760100        | 10            |
| 7,70     | 117      | 75       | 0060100770100        | 10            |
| 7,75     | 117      | 75       | 0060100775100        | 10            |
| 7,80     | 117      | 75       | 0060100780100        | 10            |
| 7,90     | 117      | 75       | 0060100790100        | 10            |
| 8,00     | 117      | 75       | 0060100800100        | 10            |
| 8,10     | 117      | 75       | 0060100810100        | 10            |
| 8,20     | 117      | 75       | 0060100820100        | 10            |
| 8,25     | 117      | 75       | 0060100825100        | 10            |
| 8,30     | 117      | 75       | 0060100830100        | 10            |
| 8,40     | 117      | 75       | 0060100840100        | 10            |
| 8,50     | 117      | 75       | 0060100850100        | 10            |
| 8,60     | 125      | 81       | 0060100860100        | 10            |
| 8,70     | 125      | 81       | 0060100870100        | 10            |
| 8,75     | 125      | 81       | 0060100875100        | 10            |
| 8,80     | 125      | 81       | 0060100880100        | 10            |
| 8,90     | 125      | 81       | 0060100890100        | 10            |
| 9,00     | 125      | 81       | 0060100900100        | 10            |
| 9,10     | 125      | 81       | 0060100910100        | 10            |
| 9,20     | 125      | 81       | 0060100920100        | 10            |
| 9,25     | 125      | 81       | 0060100925100        | 10            |
| 9,30     | 125      | 81       | 0060100930100        | 10            |
| 9,40     | 125      | 81       | 0060100940100        | 10            |
| 9,50     | 125      | 81       | 0060100950100        | 10            |
| 9,60     | 133      | 87       | 0060100960100        | 10            |



Metal- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|----------|----------|---------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 601<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 9,70     | 133      | 87       | 0060100970100                                           | 10            |
| 9,75     | 133      | 87       | 0060100975100                                           | 10            |
| 9,80     | 133      | 87       | 0060100980100                                           | 10            |
| 9,90     | 133      | 87       | 0060100990100                                           | 10            |
| 10,00    | 133      | 87       | 0060101000100                                           | 10            |
| 10,10    | 133      | 87       | 0060101010100                                           | 5             |
| 10,20    | 133      | 87       | 0060101020100                                           | 5             |
| 10,25    | 133      | 87       | 0060101025100                                           | 5             |
| 10,30    | 133      | 87       | 0060101030100                                           | 5             |
| 10,40    | 133      | 87       | 0060101040100                                           | 5             |
| 10,50    | 133      | 87       | 0060101050100                                           | 5             |
| 10,60    | 133      | 87       | 0060101060100                                           | 5             |
| 10,70    | 142      | 94       | 0060101070100                                           | 5             |
| 10,75    | 142      | 94       | 0060101075100                                           | 5             |
| 10,80    | 142      | 94       | 0060101080100                                           | 5             |
| 10,90    | 142      | 94       | 0060101090100                                           | 5             |
| 11,00    | 142      | 94       | 0060101100100                                           | 5             |
| 11,10    | 142      | 94       | 0060101110100                                           | 5             |
| 11,20    | 142      | 94       | 0060101120100                                           | 5             |
| 11,25    | 142      | 94       | 0060101125100                                           | 5             |
| 11,30    | 142      | 94       | 0060101130100                                           | 5             |
| 11,40    | 142      | 94       | 0060101140100                                           | 5             |
| 11,50    | 142      | 94       | 0060101150100                                           | 5             |
| 11,60    | 142      | 94       | 0060101160100                                           | 5             |
| 11,70    | 142      | 94       | 0060101170100                                           | 5             |
| 11,75    | 142      | 94       | 0060101175100                                           | 5             |
| 11,80    | 142      | 94       | 0060101180100                                           | 5             |
| 11,90    | 151      | 101      | 0060101190100                                           | 5             |
| 12,00    | 151      | 101      | 0060101200100                                           | 5             |
| 12,10    | 151      | 101      | 0060101210100                                           | 5             |
| 12,20    | 151      | 101      | 0060101220100                                           | 5             |
| 12,25    | 151      | 101      | 0060101225100                                           | 5             |
| 12,30    | 151      | 101      | 0060101230100                                           | 5             |
| 12,40    | 151      | 101      | 0060101240100                                           | 5             |
| 12,50    | 151      | 101      | 0060101250100                                           | 5             |
| 12,60    | 151      | 101      | 0060101260100                                           | 5             |
| 12,70    | 151      | 101      | 0060101270100                                           | 5             |
| 12,75    | 151      | 101      | 0060101275100                                           | 5             |
| 12,80    | 151      | 101      | 0060101280100                                           | 5             |
| 12,90    | 151      | 101      | 0060101290100                                           | 5             |
| 13,00    | 151      | 101      | 0060101300100                                           | 5             |
| 13,25    | 160      | 108      | 0060101325100                                           | 1             |
| 13,50    | 160      | 108      | 0060101350100                                           | 1             |
| 13,75    | 160      | 108      | 0060101375100                                           | 1             |
| 14,00    | 160      | 108      | 0060101400100                                           | 1             |
| 14,25    | 169      | 114      | 0060101425100                                           | 1             |
| 14,50    | 169      | 114      | 0060101450100                                           | 1             |
| 14,75    | 169      | 114      | 0060101475100                                           | 1             |
| 15,00    | 169      | 114      | 0060101500100                                           | 1             |
| 15,25    | 178      | 120      | 0060101525100                                           | 1             |
| 15,50    | 178      | 120      | 0060101550100                                           | 1             |
| 15,75    | 178      | 120      | 0060101575100                                           | 1             |
| 16,00    | 178      | 120      | 0060101600100                                           | 1             |
| 16,50    | 184      | 125      | 0060101650100                                           | 1             |
| 17,00    | 184      | 125      | 0060101700100                                           | 1             |
| 17,50    | 191      | 130      | 0060101750100                                           | 1             |



|          |          |          | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|----------|----------|----------|-----------------------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 601<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 18,00    | 191      | 130      | 0060101800100                                                         | 1             |
| 18,50    | 198      | 135      | 0060101850100                                                         | 1             |
| 19,00    | 198      | 135      | 0060101900100                                                         | 1             |
| 19,50    | 205      | 140      | 0060101950100                                                         | 1             |
| 20,00    | 205      | 140      | 0060102000100                                                         | 1             |



**Metall- und Edelstahlbohrer**  
*Metal drills and stainless steel drills*  
*broca para metal y broca de acero inoxidable*

**Für unser umfangreiches Sortiment an HSS- und VHM-Werkzeugen fordern Sie bitte den MAYKESTAG-Katalog an!**

*For our extensive range of HSS and solid carbide cutting tools please request the MAYKESTAG catalogue!*

*Si desea consultar la gama completa de herramientas HSS y VHM, solicite nuestro catálogo de MAYKESTAG.*

Kreuzanschliff  $\geq \varnothing 4,0$  mm / Split Point  $\geq \varnothing 4,0$  mm / Punta afilada en cruz  $\geq \varnothing 4,0$  mm

Oberfläche: dampfangelassen  $\geq \varnothing 1,0$  mm / Surface: steam tempered  $\geq \varnothing 1,0$  mm / Superficie: templada al vapor  $\geq \varnothing 1,0$  mm

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

HSS DIN 338 KM 19



19-tlg. / 19-pcs. / 19-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000101311100

| Ø<br>mm      |     | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-----|-------------------------------------------|
| HSS DIN 338  |     |                                           |
| Ø 1,00-10,00 | 0,5 | 1                                         |

HSS DIN 338 KM 25



25-tlg. / 25-pcs. / 25-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000101321100

| Ø<br>mm      |     | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-----|-------------------------------------------|
| HSS DIN 338  |     |                                           |
| Ø 1,00-13,00 | 0,5 | 1                                         |

HSS DIN 338 KM 50



50-tlg. / 50-pcs. / 50-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100351100

| Ø<br>mm     |     | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------|-----|-------------------------------------------|
| HSS DIN 338 |     |                                           |
| Ø 1,00-5,90 | 0,1 | 1                                         |

HSS DIN 338 KM 41



41-tlg. / 41-pcs. / 41-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100361100

| Ø<br>mm      |     | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-----|-------------------------------------------|
| HSS DIN 338  |     |                                           |
| Ø 6,00-10,00 | 0,1 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**Spezialanschliff**

Kein Ankörnen erforderlich, weniger  
Vorschubdruck notwendig

***Special split point***

*No center punching required, less feed  
pressure needed*

***Punta afilada especial***

*No es preciso el graneteado, necesita  
menor presión de avance*

**Präzisionsgeschliffen*****Precision ground******Afilada con precisión*****Stahlqualität**

Hochwertigste HSS-Stahlqualität

***Steel grade***

*Highest-quality HSS steel grade*

***Calidad del acero***

*Acero HSS de la más alta calidad*



## D HSS Spiralbohrer, kurz, DIN 338 RN

### Einsatzbereich:

Präzisionsgeschliffener Spiralbohrer mit speziellem Kreuzanschliff, engen Toleranzen und hoher Rundlaufgenauigkeit. Zum Bearbeiten von legiertem und unlegiertem Stahl.

## E HSS jobber drills, DIN 338 RN

### Range of application:

HSS twist drill ground from solid, special split point. Bright finish: toughness and precision combined with excellent cutting efficiency for drilling alloyed carbon and plain steel.

## ES Broca espiral HSS, corta, DIN 338 RN

### Ámbito de aplicación:

Broca espiral afilada con precisión, con punta afilada en cruz especial, tolerancias estrechas y alta precisión de concentricidad. Para el procesamiento de acero aleado y no aleado.



Optimale Bohrleistung durch Spezialanschliff  
Optimum drilling performance thanks to a special point shape  
Óptima potencia de taladrado gracias a su punta afilada especial



Präzisionsgeschliffen  
Precision ground  
Afilada con precisión



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 184<br>Art.-Nr. | Inh.<br>Cont. |    | Code 954<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 1,00     |            | 34       | 12       | 0018400100100        | 1             | 10 | 0095400100100        | 10            |
| 1,10     |            | 36       | 14       |                      |               |    | 0095400110100        | 10            |
| 1,19     | 3/64       | 38       | 16       |                      |               |    | 0095400119100        | 10            |
| 1,20     |            | 38       | 16       |                      |               |    | 0095400120100        | 10            |
| 1,30     |            | 38       | 16       |                      |               |    | 0095400130100        | 10            |
| 1,40     |            | 40       | 18       |                      |               |    | 0095400140100        | 10            |
| 1,50     |            | 40       | 18       | 0018400150100        | 1             | 10 | 0095400150100        | 10            |
| 1,59     | 1/16       | 43       | 20       |                      |               |    | 0095400159100        | 10            |
| 1,60     |            | 43       | 20       |                      |               |    | 0095400160100        | 10            |
| 1,70     |            | 43       | 20       |                      |               |    | 0095400170100        | 10            |
| 1,80     |            | 46       | 22       |                      |               |    | 0095400180100        | 10            |
| 1,90     |            | 49       | 24       |                      |               |    | 0095400190100        | 10            |
| 1,98     | 5/64       | 49       | 24       |                      |               |    | 0095400198100        | 10            |
| 2,00     |            | 49       | 24       | 0018400200100        | 1             | 10 | 0095400200100        | 10            |
| 2,10     |            | 49       | 24       |                      |               |    | 0095400210100        | 10            |
| 2,20     |            | 53       | 27       |                      |               |    | 0095400220100        | 10            |
| 2,30     |            | 53       | 27       |                      |               |    | 0095400230100        | 10            |
| 2,38     | 3/32       | 57       | 30       |                      |               |    | 0095400238100        | 10            |
| 2,40     |            | 57       | 30       |                      |               |    | 0095400240100        | 10            |
| 2,50     |            | 57       | 30       | 0018400250100        | 1             | 10 | 0095400250100        | 10            |
| 2,60     |            | 57       | 30       |                      |               |    | 0095400260100        | 10            |
| 2,70     |            | 61       | 33       |                      |               |    | 0095400270100        | 10            |

|          |            |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|------------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|---------------|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 184<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 954<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 2,78     | 7/64       | 61       | 33       |                                                        |               |                                                                                   | 0095400278100                                           | 10            |
| 2,80     |            | 61       | 33       |                                                        |               |                                                                                   | 0095400280100                                           | 10            |
| 2,90     |            | 61       | 33       |                                                        |               |                                                                                   | 0095400290100                                           | 10            |
| 3,00     |            | 61       | 33       | 0018400300100                                          | 1             | 10                                                                                | 0095400300100                                           | 10            |
| 3,10     |            | 65       | 36       |                                                        |               |                                                                                   | 0095400310100                                           | 10            |
| 3,18     | 1/8        | 65       | 36       |                                                        |               |                                                                                   | 0095400318100                                           | 10            |
| 3,20     |            | 65       | 36       | 0018400320100                                          | 1             | 10                                                                                | 0095400320100                                           | 10            |
| 3,30     |            | 65       | 36       | 0018400330100                                          | 1             | 10                                                                                | 0095400330100                                           | 10            |
| 3,40     |            | 70       | 39       |                                                        |               |                                                                                   | 0095400340100                                           | 10            |
| 3,50     |            | 70       | 39       | 0018400350100                                          | 1             | 10                                                                                | 0095400350100                                           | 10            |
| 3,57     | 9/64       | 70       | 39       |                                                        |               |                                                                                   | 0095400357100                                           | 10            |
| 3,60     |            | 70       | 39       |                                                        |               |                                                                                   | 0095400360100                                           | 10            |
| 3,70     |            | 70       | 39       |                                                        |               |                                                                                   | 0095400370100                                           | 10            |
| 3,80     |            | 75       | 43       |                                                        |               |                                                                                   | 0095400380100                                           | 10            |
| 3,90     |            | 75       | 43       |                                                        |               |                                                                                   | 0095400390100                                           | 10            |
| 3,97     | 5/32       | 75       | 43       |                                                        |               |                                                                                   | 0095400397100                                           | 10            |
| 4,00     |            | 75       | 43       | 0018400400100                                          | 1             | 10                                                                                | 0095400400100                                           | 10            |
| 4,10     |            | 75       | 43       |                                                        |               |                                                                                   | 0095400410100                                           | 10            |
| 4,20     |            | 75       | 43       | 0018400420100                                          | 1             | 10                                                                                | 0095400420100                                           | 10            |
| 4,30     |            | 80       | 47       |                                                        |               |                                                                                   | 0095400430100                                           | 10            |
| 4,37     | 11/64      | 80       | 47       |                                                        |               |                                                                                   | 0095400437100                                           | 10            |
| 4,40     |            | 80       | 47       |                                                        |               |                                                                                   | 0095400440100                                           | 10            |
| 4,50     |            | 80       | 47       | 0018400450100                                          | 1             | 10                                                                                | 0095400450100                                           | 10            |
| 4,60     |            | 80       | 47       |                                                        |               |                                                                                   | 0095400460100                                           | 10            |
| 4,70     |            | 80       | 47       |                                                        |               |                                                                                   | 0095400470100                                           | 10            |
| 4,76     | 3/16       | 86       | 52       |                                                        |               |                                                                                   | 0095400476100                                           | 10            |
| 4,80     |            | 86       | 52       | 0018400480100                                          | 1             | 10                                                                                | 0095400480100                                           | 10            |
| 4,90     |            | 86       | 52       |                                                        |               |                                                                                   | 0095400490100                                           | 10            |
| 5,00     |            | 86       | 52       | 0018400500100                                          | 1             | 10                                                                                | 0095400500100                                           | 10            |
| 5,10     |            | 86       | 52       |                                                        |               |                                                                                   | 0095400510100                                           | 10            |
| 5,16     | 13/64      | 86       | 52       |                                                        |               |                                                                                   | 0095400516100                                           | 10            |
| 5,20     |            | 86       | 52       |                                                        |               |                                                                                   | 0095400520100                                           | 10            |
| 5,30     |            | 86       | 52       |                                                        |               |                                                                                   | 0095400530100                                           | 10            |
| 5,40     |            | 93       | 57       |                                                        |               |                                                                                   | 0095400540100                                           | 10            |
| 5,50     |            | 93       | 57       | 0018400550100                                          | 1             | 10                                                                                | 0095400550100                                           | 10            |
| 5,56     | 7/32       | 93       | 57       |                                                        |               |                                                                                   | 0095400556100                                           | 10            |
| 5,60     |            | 93       | 57       |                                                        |               |                                                                                   | 0095400560100                                           | 10            |
| 5,70     |            | 93       | 57       |                                                        |               |                                                                                   | 0095400570100                                           | 10            |
| 5,80     |            | 93       | 57       |                                                        |               |                                                                                   | 0095400580100                                           | 10            |
| 5,90     |            | 93       | 57       |                                                        |               |                                                                                   | 0095400590100                                           | 10            |
| 5,95     | 15/64      | 93       | 57       |                                                        |               |                                                                                   | 0095400595100                                           | 10            |
| 6,00     |            | 93       | 57       | 0018400600100                                          | 1             | 10                                                                                | 0095400600100                                           | 10            |
| 6,10     |            | 101      | 63       |                                                        |               |                                                                                   | 0095400610100                                           | 10            |
| 6,20     |            | 101      | 63       |                                                        |               |                                                                                   | 0095400620100                                           | 10            |
| 6,30     |            | 101      | 63       |                                                        |               |                                                                                   | 0095400630100                                           | 10            |
| 6,35     | 1/4        | 101      | 63       |                                                        |               |                                                                                   | 0095400635100                                           | 10            |
| 6,40     |            | 101      | 63       |                                                        |               |                                                                                   | 0095400640100                                           | 10            |
| 6,50     |            | 101      | 63       | 0018400650100                                          | 1             | 10                                                                                | 0095400650100                                           | 10            |
| 6,60     |            | 101      | 63       |                                                        |               |                                                                                   | 0095400660100                                           | 10            |
| 6,70     |            | 101      | 63       |                                                        |               |                                                                                   | 0095400670100                                           | 10            |
| 6,75     | 17/64      | 109      | 69       |                                                        |               |                                                                                   | 0095400675100                                           | 10            |
| 6,80     |            | 109      | 69       | 0018400680100                                          | 1             | 10                                                                                | 0095400680100                                           | 10            |
| 6,90     |            | 109      | 69       |                                                        |               |                                                                                   | 0095400690100                                           | 10            |
| 7,00     |            | 109      | 69       | 0018400700100                                          | 1             | 10                                                                                | 0095400700100                                           | 10            |
| 7,10     |            | 109      | 69       |                                                        |               |                                                                                   | 0095400710100                                           | 10            |
| 7,14     | 9/32       | 109      | 69       |                                                        |               |                                                                                   | 0095400714100                                           | 10            |



Metal- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable



|          |            |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|------------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|---------------|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 184<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 954<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 7,20     |            | 109      | 69       |                                                        |               |                                                                                   | 0095400720100                                           | 10            |
| 7,30     |            | 109      | 69       |                                                        |               |                                                                                   | 0095400730100                                           | 10            |
| 7,40     |            | 109      | 69       |                                                        |               |                                                                                   | 0095400740100                                           | 10            |
| 7,50     |            | 109      | 69       | 0018400750100                                          | 1             | 10                                                                                | 0095400750100                                           | 10            |
| 7,54     | 19/64      | 117      | 75       |                                                        |               |                                                                                   | 0095400754100                                           | 10            |
| 7,60     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400760100                                           | 10            |
| 7,70     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400770100                                           | 10            |
| 7,80     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400780100                                           | 10            |
| 7,90     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400790100                                           | 10            |
| 7,94     | 5/16       | 117      | 75       |                                                        |               |                                                                                   | 0095400794100                                           | 10            |
| 8,00     |            | 117      | 75       | 0018400800100                                          | 1             | 10                                                                                | 0095400800100                                           | 10            |
| 8,10     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400810100                                           | 10            |
| 8,20     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400820100                                           | 10            |
| 8,30     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400830100                                           | 10            |
| 8,33     | 21/64      | 117      | 75       |                                                        |               |                                                                                   | 0095400833100                                           | 10            |
| 8,40     |            | 117      | 75       |                                                        |               |                                                                                   | 0095400840100                                           | 10            |
| 8,50     |            | 117      | 75       | 0018400850100                                          | 1             | 10                                                                                | 0095400850100                                           | 10            |
| 8,60     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400860100                                           | 10            |
| 8,70     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400870100                                           | 10            |
| 8,73     | 11/32      | 125      | 81       |                                                        |               |                                                                                   | 0095400873100                                           | 10            |
| 8,80     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400880100                                           | 10            |
| 8,90     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400890100                                           | 10            |
| 9,00     |            | 125      | 81       | 0018400900100                                          | 1             | 10                                                                                | 0095400900100                                           | 10            |
| 9,10     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400910100                                           | 10            |
| 9,13     | 23/64      | 125      | 81       |                                                        |               |                                                                                   | 0095400913100                                           | 10            |
| 9,20     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400920100                                           | 10            |
| 9,30     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400930100                                           | 10            |
| 9,40     |            | 125      | 81       |                                                        |               |                                                                                   | 0095400940100                                           | 10            |
| 9,50     |            | 125      | 81       | 0018400950100                                          | 1             | 10                                                                                | 0095400950100                                           | 10            |
| 9,53     | 3/8        | 133      | 87       |                                                        |               |                                                                                   | 0095400953100                                           | 10            |
| 9,60     |            | 133      | 87       |                                                        |               |                                                                                   | 0095400960100                                           | 10            |
| 9,70     |            | 133      | 87       |                                                        |               |                                                                                   | 0095400970100                                           | 10            |
| 9,80     |            | 133      | 87       |                                                        |               |                                                                                   | 0095400980100                                           | 10            |
| 9,90     |            | 133      | 87       |                                                        |               |                                                                                   | 0095400990100                                           | 10            |
| 9,92     | 25/64      | 133      | 87       |                                                        |               |                                                                                   | 0095400992100                                           | 10            |
| 10,00    |            | 133      | 87       | 0018401000100                                          | 1             | 10                                                                                | 0095401000100                                           | 10            |
| 10,20    |            | 133      | 87       | 0018401020100                                          | 1             | 10                                                                                | 0095401020100                                           | 5             |
| 10,32    | 13/32      | 133      | 87       |                                                        |               |                                                                                   | 0095401032100                                           | 5             |
| 10,50    |            | 133      | 87       | 0018401050100                                          | 1             | 10                                                                                | 0095401050100                                           | 5             |
| 10,72    | 27/64      | 142      | 94       |                                                        |               |                                                                                   | 0095401072100                                           | 5             |
| 11,00    |            | 142      | 94       | 0018401100100                                          | 1             | 10                                                                                | 0095401100100                                           | 5             |
| 11,11    | 7/16       | 142      | 94       |                                                        |               |                                                                                   | 0095401111100                                           | 5             |
| 11,50    |            | 142      | 94       | 0018401150100                                          | 1             | 10                                                                                | 0095401150100                                           | 5             |
| 11,51    | 29/64      | 142      | 94       |                                                        |               |                                                                                   | 0095401151100                                           | 5             |
| 11,91    | 15/32      | 151      | 101      |                                                        |               |                                                                                   | 0095401191100                                           | 5             |
| 12,00    |            | 151      | 101      | 0018401200100                                          | 1             | 10                                                                                | 0095401200100                                           | 5             |
| 12,30    | 31/64      | 151      | 101      |                                                        |               |                                                                                   | 0095401230100                                           | 5             |
| 12,50    |            | 151      | 101      | 0018401250100                                          | 1             | 10                                                                                | 0095401250100                                           | 5             |
| 12,70    | 1/2        | 151      | 101      |                                                        |               |                                                                                   | 0095401270100                                           | 5             |
| 13,00    |            | 151      | 101      | 0018401300100                                          | 1             | 10                                                                                | 0095401300100                                           | 5             |

Kreuzanschliff  $\geq \varnothing 3,0 \text{ mm}$  / Split Point  $\geq \varnothing 3,0 \text{ mm}$  / Punta afilada en cruz  $\geq \varnothing 3,0 \text{ mm}$

**D HSS Spiralbohrer,  
ähnlich DIN 338 RN  
mit 1/4"-Sechskantschaft**

**Einsatzbereich:**

Wie Code 184/954, zusätzlich passend für jeden Standard-Akkuschrauber und Universal-Halter (Bithalter) durch genormtes Schaftprofil. Spannung auch in konventionellen Bohrfutter - kein Durchrutschen durch Sechskantschaft.



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápida



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Präzise  
Precise  
Preciso

**E HSS jobber drills,  
sim. to DIN 338 RN  
with 1/4" hexagonal shank**

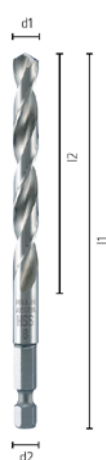
**Range of application:**

Same as Code 184/954, additionally suitable for any standard cordless drill thanks to its standardized shank profile. Suitable for all universal holders (bit holders). Can also be clamped in conventional drill chucks - no slipping owing to the hexagonal shank.

**ES Brocas espirales HSS  
semejantes a DIN 338 RN  
con eje hexagonal 1/4"**

**Ámbito de aplicación:**

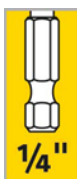
Igual que el código 184/954, apta además para todos los destornilladores a batería estándar y soportes universales (soporte de broca) gracias a su perfil de eje normativo. Tensión incluso en portabrocas convencionales, no se desliza gracias al eje hexagonal.



HSS



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | Code 952<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------------------|---------------|----|
| 2,00     | 62       | 24       | 0095200200100        | 1             | 10 |
| 3,00     | 74       | 33       | 0095200300100        | 1             | 10 |
| 4,00     | 88       | 43       | 0095200400100        | 1             | 10 |
| 5,00     | 100      | 52       | 0095200500100        | 1             | 10 |
| 6,00     | 107      | 57       | 0095200600100        | 1             | 10 |
| 8,00     | 117      | 75       | 0095200800100        | 1             | 10 |

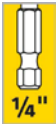


Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

| <b>PRO TM 6</b><br><br>      |                                           |   | <b>PRO ATM 4</b><br><br>     |                                           |   | <b>PRO APM 3</b><br><br>   |                                           |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|
| 6-tlg. / 6-pcs. / 6-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000111806100                                                                                |                                           |   | 4-tlg. / 4-pcs. / 4-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000110804100                                                                                |                                           |   | 3-tlg. / 3-pcs. / 3-unid.<br>Einzelverpackung / Single pack / Embalaje individual<br>Art.-Nr. 0095200234100                                                                                      |                                           |   |
| Ø<br>mm                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                                                                                                          | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   |
| PRO                                                                                                                                                                                            |                                           |   | PRO                                                                                                                                                                                            |                                           |   | PRO                                                                                                                                                                                              |                                           |   |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00                                                                                                                                                      | 1                                         |   | Ø 2,00 / 3,00 / 4,00 / 5,00                                                                                                                                                                    | 1                                         |   | Ø 2,00 / 3,00 / 4,00                                                                                                                                                                             | 1                                         |   |
| <b>PRO ATM 6</b><br><br>   |                                           |   | <b>PRO KM 19</b><br><br>   |                                           |   | <b>PRO KM 25</b><br><br> |                                           |   |
| 6-tlg. / 6-pcs. / 6-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000100806100                                                                                |                                           |   | 19-tlg. / 19-pcs. / 19-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0000110311100                                                                                      |                                           |   | 25-tlg. / 25-pcs. / 25-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0000110321100                                                                                        |                                           |   |
| Ø<br>mm                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                                                                                                          | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   |
| PRO                                                                                                                                                                                            |                                           |   | PRO                                                                                                                                                                                            |                                           |   | PRO                                                                                                                                                                                              |                                           |   |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00                                                                                                                                                      | 1                                         |   | Ø 1,00-10,00                                                                                                                                                                                   | 0,5                                       |   | Ø 1,00-13,00                                                                                                                                                                                     | 0,5                                       | 1 |
| <b>PRO KP 19</b><br><br> |                                           |   | <b>PRO KP 25</b><br><br> |                                           |   |                                                                                                                                                                                                  |                                           |   |
| 19-tlg. / 19-pcs. / 19-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000110319100                                                                             |                                           |   | 25-tlg. / 25-pcs. / 25-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000110325100                                                                             |                                           |   |                                                                                                                                                                                                  |                                           |   |
| Ø<br>mm                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                                                                                                        | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   |                                                                                                                                                                                                  |                                           |   |
| PRO                                                                                                                                                                                            |                                           |   | PRO                                                                                                                                                                                            |                                           |   |                                                                                                                                                                                                  |                                           |   |
| Ø 1,00-10,00                                                                                                                                                                                   | 0,5                                       | 1 | Ø 1,00-13,00                                                                                                                                                                                   | 0,5                                       | 1 |                                                                                                                                                                                                  |                                           |   |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D HSS Spiralbohrer, kurz,  
DIN 338 RN**

**Einsatzbereich:**

Spiralbohrer präzisionsgeschliffen, mit engen Toleranzen und hoher Rundlaufgenauigkeit. Zum Bearbeiten von legiertem und unlegiertem Stahl.

**E HSS jobber drills,  
DIN 338 RN**

**Range of application:**

HSS twist drill ground from solid, bright finish: toughness and precision combined with excellent cutting efficiency for drilling alloyed carbon and plain steel.

**ES Broca espiral HSS, corta,  
DIN 338 RN**

**Ámbito de aplicación:**

Broca espiral afilada con precisión, con tolerancias estrechas y alta precisión de concentricidad. Para el procesamiento de acero aleado y no aleado.



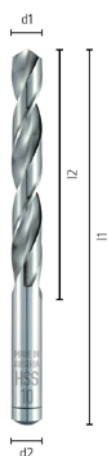
Präzisionsgeschliffen  
Precision ground  
Afilada con precisión



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Bruchstabil  
Break-resistant  
Resistente a la rotura



118°



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 181<br>Art.-Nr. | Inh.<br>Cont. |    | Code 951<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 1,00     |            | 34       | 12       | 0018100100100        | 3             | 10 | 0095100100100        | 10            |
| 1,10     |            | 36       | 14       |                      |               |    | 0095100110100        | 10            |
| 1,19     | 3/64       | 38       | 16       |                      |               |    | 0095100119100        | 10            |
| 1,20     |            | 38       | 16       |                      |               |    | 0095100120100        | 10            |
| 1,30     |            | 38       | 16       |                      |               |    | 0095100130100        | 10            |
| 1,40     |            | 40       | 18       |                      |               |    | 0095100140100        | 10            |
| 1,50     |            | 40       | 18       | 0018100150100        | 3             | 10 | 0095100150100        | 10            |
| 1,59     | 1/16       | 43       | 20       |                      |               |    | 0095100159100        | 10            |
| 1,60     |            | 43       | 20       |                      |               |    | 0095100160100        | 10            |
| 1,70     |            | 43       | 20       |                      |               |    | 0095100170100        | 10            |
| 1,80     |            | 46       | 22       |                      |               |    | 0095100180100        | 10            |
| 1,90     |            | 49       | 24       |                      |               |    | 0095100190100        | 10            |
| 1,98     | 5/64       | 49       | 24       |                      |               |    | 0095100198100        | 10            |
| 2,00     |            | 49       | 24       | 0018100200100        | 3             | 10 | 0095100200100        | 10            |
| 2,10     |            | 49       | 24       |                      |               |    | 0095100210100        | 10            |
| 2,20     |            | 53       | 27       |                      |               |    | 0095100220100        | 10            |
| 2,30     |            | 53       | 27       |                      |               |    | 0095100230100        | 10            |
| 2,38     | 3/32       | 57       | 30       |                      |               |    | 0095100238100        | 10            |
| 2,40     |            | 57       | 30       |                      |               |    | 0095100240100        | 10            |
| 2,50     |            | 57       | 30       | 0018100250100        | 3             | 10 | 0095100250100        | 10            |
| 2,60     |            | 57       | 30       |                      |               |    | 0095100260100        | 10            |
| 2,70     |            | 61       | 33       |                      |               |    | 0095100270100        | 10            |

|          |            |          |          | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|----------|------------|----------|----------|----------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 181<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Code 951<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 2,78     | 7/64       | 61       | 33       |                                                                      |               |                                                                                   | 0095100278100                                                         | 10            |
| 2,80     |            | 61       | 33       |                                                                      |               |                                                                                   | 0095100280100                                                         | 10            |
| 2,90     |            | 61       | 33       |                                                                      |               |                                                                                   | 0095100290100                                                         | 10            |
| 3,00     |            | 61       | 33       | 0018100300100                                                        | 3             | 10                                                                                | 0095100300100                                                         | 10            |
| 3,10     |            | 65       | 36       |                                                                      |               |                                                                                   | 0095100310100                                                         | 10            |
| 3,18     | 1/8        | 65       | 36       |                                                                      |               |                                                                                   | 0095100318100                                                         | 10            |
| 3,20     |            | 65       | 36       | 0018100320100                                                        | 3             | 10                                                                                | 0095100320100                                                         | 10            |
| 3,30     |            | 65       | 36       | 0018100330100                                                        | 3             | 10                                                                                | 0095100330100                                                         | 10            |
| 3,40     |            | 70       | 39       |                                                                      |               |                                                                                   | 0095100340100                                                         | 10            |
| 3,50     |            | 70       | 39       | 0018100350100                                                        | 2             | 10                                                                                | 0095100350100                                                         | 10            |
| 3,57     | 9/64       | 70       | 39       |                                                                      |               |                                                                                   | 0095100357100                                                         | 10            |
| 3,60     |            | 70       | 39       |                                                                      |               |                                                                                   | 0095100360100                                                         | 10            |
| 3,70     |            | 70       | 39       |                                                                      |               |                                                                                   | 0095100370100                                                         | 10            |
| 3,80     |            | 75       | 43       |                                                                      |               |                                                                                   | 0095100380100                                                         | 10            |
| 3,90     |            | 75       | 43       |                                                                      |               |                                                                                   | 0095100390100                                                         | 10            |
| 3,97     | 5/32       | 75       | 43       |                                                                      |               |                                                                                   | 0095100397100                                                         | 10            |
| 4,00     |            | 75       | 43       | 0018100400100                                                        | 2             | 10                                                                                | 0095100400100                                                         | 10            |
| 4,10     |            | 75       | 43       |                                                                      |               |                                                                                   | 0095100410100                                                         | 10            |
| 4,20     |            | 75       | 43       | 0018100420100                                                        | 2             | 10                                                                                | 0095100420100                                                         | 10            |
| 4,30     |            | 80       | 47       |                                                                      |               |                                                                                   | 0095100430100                                                         | 10            |
| 4,37     | 11/64      | 80       | 47       |                                                                      |               |                                                                                   | 0095100437100                                                         | 10            |
| 4,40     |            | 80       | 47       |                                                                      |               |                                                                                   | 0095100440100                                                         | 10            |
| 4,50     |            | 80       | 47       | 0018100450100                                                        | 2             | 10                                                                                | 0095100450100                                                         | 10            |
| 4,60     |            | 80       | 47       |                                                                      |               |                                                                                   | 0095100460100                                                         | 10            |
| 4,70     |            | 80       | 47       |                                                                      |               |                                                                                   | 0095100470100                                                         | 10            |
| 4,76     | 3/16       | 86       | 52       |                                                                      |               |                                                                                   | 0095100476100                                                         | 10            |
| 4,80     |            | 86       | 52       | 0018100480100                                                        | 2             | 10                                                                                | 0095100480100                                                         | 10            |
| 4,90     |            | 86       | 52       |                                                                      |               |                                                                                   | 0095100490100                                                         | 10            |
| 5,00     |            | 86       | 52       | 0018100500100                                                        | 2             | 10                                                                                | 0095100500100                                                         | 10            |
| 5,10     |            | 86       | 52       |                                                                      |               |                                                                                   | 0095100510100                                                         | 10            |
| 5,16     | 13/64      | 86       | 52       |                                                                      |               |                                                                                   | 0095100516100                                                         | 10            |
| 5,20     |            | 86       | 52       |                                                                      |               |                                                                                   | 0095100520100                                                         | 10            |
| 5,30     |            | 86       | 52       |                                                                      |               |                                                                                   | 0095100530100                                                         | 10            |
| 5,40     |            | 93       | 57       |                                                                      |               |                                                                                   | 0095100540100                                                         | 10            |
| 5,50     |            | 93       | 57       | 0018100550100                                                        | 2             | 10                                                                                | 0095100550100                                                         | 10            |
| 5,56     | 7/32       | 93       | 57       |                                                                      |               |                                                                                   | 0095100556100                                                         | 10            |
| 5,60     |            | 93       | 57       |                                                                      |               |                                                                                   | 0095100560100                                                         | 10            |
| 5,70     |            | 93       | 57       |                                                                      |               |                                                                                   | 0095100570100                                                         | 10            |
| 5,80     |            | 93       | 57       |                                                                      |               |                                                                                   | 0095100580100                                                         | 10            |
| 5,90     |            | 93       | 57       |                                                                      |               |                                                                                   | 0095100590100                                                         | 10            |
| 5,95     | 15/64      | 93       | 57       |                                                                      |               |                                                                                   | 0095100595100                                                         | 10            |
| 6,00     |            | 93       | 57       | 0018100600100                                                        | 2             | 10                                                                                | 0095100600100                                                         | 10            |
| 6,10     |            | 101      | 63       |                                                                      |               |                                                                                   | 0095100610100                                                         | 10            |
| 6,20     |            | 101      | 63       |                                                                      |               |                                                                                   | 0095100620100                                                         | 10            |
| 6,30     |            | 101      | 63       |                                                                      |               |                                                                                   | 0095100630100                                                         | 10            |
| 6,35     | 1/4        | 101      | 63       |                                                                      |               |                                                                                   | 0095100635100                                                         | 10            |
| 6,40     |            | 101      | 63       |                                                                      |               |                                                                                   | 0095100640100                                                         | 10            |
| 6,50     |            | 101      | 63       | 0018100650100                                                        | 1             | 10                                                                                | 0095100650100                                                         | 10            |
| 6,60     |            | 101      | 63       |                                                                      |               |                                                                                   | 0095100660100                                                         | 10            |
| 6,70     |            | 101      | 63       |                                                                      |               |                                                                                   | 0095100670100                                                         | 10            |
| 6,75     | 17/64      | 109      | 69       |                                                                      |               |                                                                                   | 0095100675100                                                         | 10            |
| 6,80     |            | 109      | 69       | 0018100680100                                                        | 1             | 10                                                                                | 0095100680100                                                         | 10            |
| 6,90     |            | 109      | 69       |                                                                      |               |                                                                                   | 0095100690100                                                         | 10            |
| 7,00     |            | 109      | 69       | 0018100700100                                                        | 1             | 10                                                                                | 0095100700100                                                         | 10            |
| 7,10     |            | 109      | 69       |                                                                      |               |                                                                                   | 0095100710100                                                         | 10            |
| 7,14     | 9/32       | 109      | 69       |                                                                      |               |                                                                                   | 0095100714100                                                         | 10            |



|          |            |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |
|----------|------------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|---------------|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 181<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 951<br>Art.-Nr.                                    | Inh.<br>Cont. |
| 7,20     |            | 109      | 69       |                                                        |               |                                                                                   | 0095100720100                                           | 10            |
| 7,30     |            | 109      | 69       |                                                        |               |                                                                                   | 0095100730100                                           | 10            |
| 7,40     |            | 109      | 69       |                                                        |               |                                                                                   | 0095100740100                                           | 10            |
| 7,50     |            | 109      | 69       | 0018100750100                                          | 1             | 10                                                                                | 0095100750100                                           | 10            |
| 7,54     | 19/64      | 117      | 75       |                                                        |               |                                                                                   | 0095100754100                                           | 10            |
| 7,60     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100760100                                           | 10            |
| 7,70     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100770100                                           | 10            |
| 7,80     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100780100                                           | 10            |
| 7,90     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100790100                                           | 10            |
| 7,94     | 5/16       | 117      | 75       |                                                        |               |                                                                                   | 0095100794100                                           | 10            |
| 8,00     |            | 117      | 75       | 0018100800100                                          | 1             | 10                                                                                | 0095100800100                                           | 10            |
| 8,10     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100810100                                           | 10            |
| 8,20     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100820100                                           | 10            |
| 8,30     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100830100                                           | 10            |
| 8,33     | 21/64      | 117      | 75       |                                                        |               |                                                                                   | 0095100833100                                           | 10            |
| 8,40     |            | 117      | 75       |                                                        |               |                                                                                   | 0095100840100                                           | 10            |
| 8,50     |            | 117      | 75       | 0018100850100                                          | 1             | 10                                                                                | 0095100850100                                           | 10            |
| 8,60     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100860100                                           | 10            |
| 8,70     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100870100                                           | 10            |
| 8,73     | 11/32      | 125      | 81       |                                                        |               |                                                                                   | 0095100873100                                           | 10            |
| 8,80     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100880100                                           | 10            |
| 8,90     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100890100                                           | 10            |
| 9,00     |            | 125      | 81       | 0018100900100                                          | 1             | 10                                                                                | 0095100900100                                           | 10            |
| 9,10     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100910100                                           | 10            |
| 9,13     | 23/64      | 125      | 81       |                                                        |               |                                                                                   | 0095100913100                                           | 10            |
| 9,20     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100920100                                           | 10            |
| 9,30     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100930100                                           | 10            |
| 9,40     |            | 125      | 81       |                                                        |               |                                                                                   | 0095100940100                                           | 10            |
| 9,50     |            | 125      | 81       | 0018100950100                                          | 1             | 10                                                                                | 0095100950100                                           | 10            |
| 9,53     | 3/8        | 133      | 87       |                                                        |               |                                                                                   | 0095100953100                                           | 10            |
| 9,60     |            | 133      | 87       |                                                        |               |                                                                                   | 0095100960100                                           | 10            |
| 9,70     |            | 133      | 87       |                                                        |               |                                                                                   | 0095100970100                                           | 10            |
| 9,80     |            | 133      | 87       |                                                        |               |                                                                                   | 0095100980100                                           | 10            |
| 9,90     |            | 133      | 87       |                                                        |               |                                                                                   | 0095100990100                                           | 10            |
| 9,92     | 25/64      | 133      | 87       |                                                        |               |                                                                                   | 0095100992100                                           | 10            |
| 10,00    |            | 133      | 87       | 0018101000100                                          | 1             | 10                                                                                | 0095101000100                                           | 10            |
| 10,20    |            | 133      | 87       | 0018101020100                                          | 1             | 10                                                                                | 0095101020100                                           | 5             |
| 10,32    | 13/32      | 133      | 87       |                                                        |               |                                                                                   | 0095101032100                                           | 5             |
| 10,50    |            | 133      | 87       | 0018101050100                                          | 1             | 10                                                                                | 0095101050100                                           | 5             |
| 10,72    | 27/64      | 142      | 94       |                                                        |               |                                                                                   | 0095101072100                                           | 5             |
| 11,00    |            | 142      | 94       | 0018101100100                                          | 1             | 10                                                                                | 0095101100100                                           | 5             |
| 11,11    | 7/16       | 142      | 94       |                                                        |               |                                                                                   | 0095101111100                                           | 5             |
| 11,50    |            | 142      | 94       | 0018101150100                                          | 1             | 10                                                                                | 0095101150100                                           | 5             |
| 11,51    | 29/64      | 142      | 94       |                                                        |               |                                                                                   | 0095101151100                                           | 5             |
| 11,91    | 15/32      | 151      | 101      |                                                        |               |                                                                                   | 0095101191100                                           | 5             |
| 12,00    |            | 151      | 101      | 0018101200100                                          | 1             | 10                                                                                | 0095101200100                                           | 5             |
| 12,30    | 31/64      | 151      | 101      |                                                        |               |                                                                                   | 0095101230100                                           | 5             |
| 12,50    |            | 151      | 101      | 0018101250100                                          | 1             | 10                                                                                | 0095101250100                                           | 5             |
| 12,70    | 1/2        | 151      | 101      |                                                        |               |                                                                                   | 0095101270100                                           | 5             |
| 13,00    |            | 151      | 101      | 0018101300100                                          | 1             | 10                                                                                | 0095101300100                                           | 5             |



Metal- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

**D Kassetten, Sets**

**E Cassettes, sets**

**ES Cajas, juegos**

HSS Super TM 6



6-tlg. / 6-pcs. / 6-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000110806100

HSS Super KM 19



19-tlg. / 19-pcs. / 19-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100311100

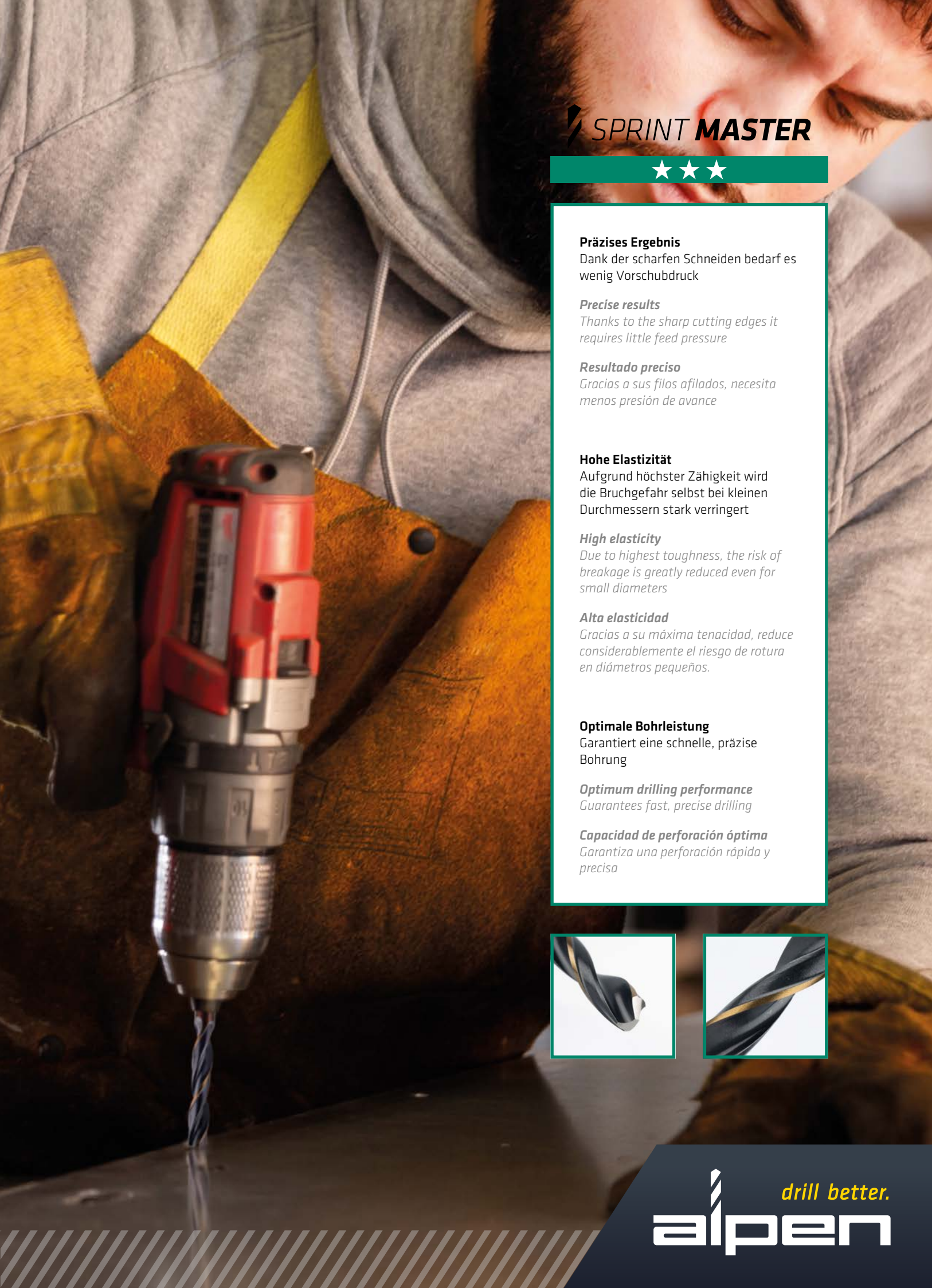
HSS Super KM 25



25-tlg. / 25-pcs. / 25-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000100321100

| Ø<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm      |  Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm      |  Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------|-------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------|
| HSS Super                                 |                                           | HSS Super    |                                                                                                                             | HSS Super    |                                                                                                                               |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         | Ø 1,00-10,00 | 0,5                                                                                                                         | Ø 1,00-13,00 | 0,5                                                                                                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



 **SPRINT MASTER**



**Präzises Ergebnis**

Dank der scharfen Schneiden bedarf es wenig Vorschubdruck

**Precise results**

*Thanks to the sharp cutting edges it requires little feed pressure*

**Resultado preciso**

*Gracias a sus filos afilados, necesita menos presión de avance*

**Hohe Elastizität**

Aufgrund höchster Zähigkeit wird die Bruchgefahr selbst bei kleinen Durchmessern stark verringert

**High elasticity**

*Due to highest toughness, the risk of breakage is greatly reduced even for small diameters*

**Alta elasticidad**

*Gracias a su máxima tenacidad, reduce considerablemente el riesgo de rotura en diámetros pequeños.*

**Optimale Bohrleistung**

Garantiert eine schnelle, präzise Bohrung

**Optimum drilling performance**

*Guarantees fast, precise drilling*

**Capacidad de perforación óptima**

*Garantiza una perforación rápida y precisa*



 **alpen** *drill better.*

## D HSS Spiralbohrer, kurz, DIN 338 RN

### Einsatzbereich:

Universeller Spiralbohrer, hohe Elastizität. Sehr gut geeignet für den Einsatz in Handbohrmaschinen, zum Bearbeiten von legiertem und unlegiertem Stahl.

## E HSS jobber drills, short DIN 338 RN

### Range of application:

HSS twist drill: toughness and precision combined with excellent cutting efficiency for drilling alloyed carbon and plain steel. Ideal for hand held operations.

## ES Broca espiral HSS, corta, DIN 338 RN

### Ámbito de aplicación:

Broca espiral universal con gran elasticidad. Muy adecuada para uso en taladros manuales, para el procesamiento de acero aleado y no aleado.



Elastisch  
Resilient  
Elástica



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Lange Lebensdauer  
Long tool life  
Larga vida útil



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial



Gewerbepack mit Aufhänger  
Industrial packing with tag  
Paquete industrial con gancho

| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 618<br>Art.-Nr. | Inh.<br>Cont. | Code 626<br>Art.-Nr. | Inh.<br>Cont. | Code 631<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------------|----------|----------|----------------------|---------------|----------------------|---------------|----------------------|---------------|
| 0,40     | 1/64       | 20       | 5        |                      |               | 0062600040100        | 10            |                      |               |
| 0,79     | 1/32       | 30       | 10       |                      |               | 0062600079100        | 10            |                      |               |
| 1,00     |            | 34       | 12       | 0061800100100        | 3 10          | 0062600100100        | 10            | 0063100100100        | 10            |
| 1,10     |            | 36       | 14       |                      |               | 0062600110100        | 10            |                      |               |
| 1,19     | 3/64       | 38       | 16       |                      |               | 0062600119100        | 10            |                      |               |
| 1,20     |            | 38       | 16       |                      |               | 0062600120100        | 10            |                      |               |
| 1,25     |            | 38       | 16       |                      |               | 0062600125100        | 10            |                      |               |
| 1,30     |            | 38       | 16       |                      |               | 0062600130100        | 10            |                      |               |
| 1,40     |            | 40       | 18       |                      |               | 0062600140100        | 10            |                      |               |
| 1,50     |            | 40       | 18       | 0061800150100        | 3 10          | 0062600150100        | 10            | 0063100150100        | 10            |
| 1,59     | 1/16       | 43       | 20       |                      |               | 0062600159100        | 10            |                      |               |
| 1,60     |            | 43       | 20       |                      |               | 0062600160100        | 10            |                      |               |
| 1,70     |            | 43       | 20       |                      |               | 0062600170100        | 10            |                      |               |
| 1,75     |            | 46       | 22       |                      |               | 0062600175100        | 10            |                      |               |
| 1,80     |            | 46       | 22       |                      |               | 0062600180100        | 10            |                      |               |
| 1,90     |            | 49       | 24       |                      |               | 0062600190100        | 10            |                      |               |
| 1,98     | 5/64       | 49       | 24       |                      |               | 0062600198100        | 10            |                      |               |
| 2,00     |            | 49       | 24       | 0061800200100        | 3 10          | 0062600200100        | 10            | 0063100200100        | 10            |
| 2,10     |            | 49       | 24       |                      |               | 0062600210100        | 10            |                      |               |
| 2,20     |            | 53       | 27       |                      |               | 0062600220100        | 10            |                      |               |
| 2,25     |            | 53       | 27       |                      |               | 0062600225100        | 10            |                      |               |

|          |            |          |          | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |               |                                                                                   | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |  | Gewerbepack mit Aufhänger<br><i>Industrial packing with tag</i><br><i>Paquete industrial con gancho</i> |               |  |
|----------|------------|----------|----------|----------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|--|---------------------------------------------------------------------------------------------------------|---------------|--|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 618<br>Art.-Nr.                                                 | Inh.<br>Cont. |  | Code 626<br>Art.-Nr.                                                  | Inh.<br>Cont. |  | Code 631<br>Art.-Nr.                                                                                    | Inh.<br>Cont. |  |
| 2,30     |            | 53       | 27       |                                                                      |               |                                                                                   | 0062600230100                                                         | 10            |  |                                                                                                         |               |  |
| 2,38     | 3/32       | 57       | 30       |                                                                      |               |                                                                                   | 0062600238100                                                         | 10            |  |                                                                                                         |               |  |
| 2,40     |            | 57       | 30       |                                                                      |               |                                                                                   | 0062600240100                                                         | 10            |  |                                                                                                         |               |  |
| 2,50     |            | 57       | 30       | 0061800250100                                                        | 3             | 10                                                                                | 0062600250100                                                         | 10            |  | 0063100250100                                                                                           | 10            |  |
| 2,60     |            | 57       | 30       |                                                                      |               |                                                                                   | 0062600260100                                                         | 10            |  |                                                                                                         |               |  |
| 2,70     |            | 61       | 33       |                                                                      |               |                                                                                   | 0062600270100                                                         | 10            |  |                                                                                                         |               |  |
| 2,75     |            | 61       | 33       |                                                                      |               |                                                                                   | 0062600275100                                                         | 10            |  |                                                                                                         |               |  |
| 2,78     | 7/64       | 61       | 33       |                                                                      |               |                                                                                   | 0062600278100                                                         | 10            |  |                                                                                                         |               |  |
| 2,80     |            | 61       | 33       |                                                                      |               |                                                                                   | 0062600280100                                                         | 10            |  |                                                                                                         |               |  |
| 2,90     |            | 61       | 33       |                                                                      |               |                                                                                   | 0062600290100                                                         | 10            |  |                                                                                                         |               |  |
| 3,00     |            | 61       | 33       | 0061800300100                                                        | 3             | 10                                                                                | 0062600300100                                                         | 10            |  | 0063100300100                                                                                           | 10            |  |
| 3,10     |            | 65       | 36       |                                                                      |               |                                                                                   | 0062600310100                                                         | 10            |  | 0063100310100                                                                                           | 10            |  |
| 3,18     | 1/8        | 65       | 36       |                                                                      |               |                                                                                   | 0062600318100                                                         | 10            |  |                                                                                                         |               |  |
| 3,20     |            | 65       | 36       | 0061800320100                                                        | 3             | 10                                                                                | 0062600320100                                                         | 10            |  | 0063100320100                                                                                           | 10            |  |
| 3,25     |            | 65       | 36       |                                                                      |               |                                                                                   | 0062600325100                                                         | 10            |  |                                                                                                         |               |  |
| 3,30     |            | 65       | 36       | 0061800330100                                                        | 3             | 10                                                                                | 0062600330100                                                         | 10            |  | 0063100330100                                                                                           | 10            |  |
| 3,40     |            | 70       | 39       |                                                                      |               |                                                                                   | 0062600340100                                                         | 10            |  |                                                                                                         |               |  |
| 3,50     |            | 70       | 39       | 0061800350100                                                        | 2             | 10                                                                                | 0062600350100                                                         | 10            |  | 0063100350100                                                                                           | 10            |  |
| 3,57     | 9/64       | 70       | 39       |                                                                      |               |                                                                                   | 0062600357100                                                         | 10            |  |                                                                                                         |               |  |
| 3,60     |            | 70       | 39       |                                                                      |               |                                                                                   | 0062600360100                                                         | 10            |  |                                                                                                         |               |  |
| 3,70     |            | 70       | 39       |                                                                      |               |                                                                                   | 0062600370100                                                         | 10            |  |                                                                                                         |               |  |
| 3,75     |            | 70       | 39       |                                                                      |               |                                                                                   | 0062600375100                                                         | 10            |  |                                                                                                         |               |  |
| 3,80     |            | 75       | 43       |                                                                      |               |                                                                                   | 0062600380100                                                         | 10            |  |                                                                                                         |               |  |
| 3,90     |            | 75       | 43       |                                                                      |               |                                                                                   | 0062600390100                                                         | 10            |  |                                                                                                         |               |  |
| 3,97     | 5/32       | 75       | 43       |                                                                      |               |                                                                                   | 0062600397100                                                         | 10            |  |                                                                                                         |               |  |
| 4,00     |            | 75       | 43       | 0061800400100                                                        | 2             | 10                                                                                | 0062600400100                                                         | 10            |  | 0063100400100                                                                                           | 10            |  |
| 4,10     |            | 75       | 43       |                                                                      |               |                                                                                   | 0062600410100                                                         | 10            |  | 0063100410100                                                                                           | 10            |  |
| 4,20     |            | 75       | 43       | 0061800420100                                                        | 2             | 10                                                                                | 0062600420100                                                         | 10            |  | 0063100420100                                                                                           | 10            |  |
| 4,25     |            | 75       | 43       |                                                                      |               |                                                                                   | 0062600425100                                                         | 10            |  |                                                                                                         |               |  |
| 4,30     |            | 80       | 47       |                                                                      |               |                                                                                   | 0062600430100                                                         | 10            |  |                                                                                                         |               |  |
| 4,37     | 11/64      | 80       | 47       |                                                                      |               |                                                                                   | 0062600437100                                                         | 10            |  |                                                                                                         |               |  |
| 4,40     |            | 80       | 47       |                                                                      |               |                                                                                   | 0062600440100                                                         | 10            |  |                                                                                                         |               |  |
| 4,50     |            | 80       | 47       | 0061800450100                                                        | 2             | 10                                                                                | 0062600450100                                                         | 10            |  | 0063100450100                                                                                           | 10            |  |
| 4,60     |            | 80       | 47       |                                                                      |               |                                                                                   | 0062600460100                                                         | 10            |  |                                                                                                         |               |  |
| 4,70     |            | 80       | 47       |                                                                      |               |                                                                                   | 0062600470100                                                         | 10            |  |                                                                                                         |               |  |
| 4,75     |            | 80       | 47       |                                                                      |               |                                                                                   | 0062600475100                                                         | 10            |  |                                                                                                         |               |  |
| 4,76     | 3/16       | 80       | 47       |                                                                      |               |                                                                                   | 0062600476100                                                         | 10            |  |                                                                                                         |               |  |
| 4,80     |            | 86       | 52       | 0061800480100                                                        | 2             | 10                                                                                | 0062600480100                                                         | 10            |  | 0063100480100                                                                                           | 10            |  |
| 4,90     |            | 86       | 52       |                                                                      |               |                                                                                   | 0062600490100                                                         | 10            |  |                                                                                                         |               |  |
| 5,00     |            | 86       | 52       | 0061800500100                                                        | 2             | 10                                                                                | 0062600500100                                                         | 10            |  | 0063100500100                                                                                           | 10            |  |
| 5,10     |            | 86       | 52       |                                                                      |               |                                                                                   | 0062600510100                                                         | 10            |  |                                                                                                         |               |  |
| 5,16     | 13/64      | 86       | 52       |                                                                      |               |                                                                                   | 0062600516100                                                         | 10            |  |                                                                                                         |               |  |
| 5,20     |            | 86       | 52       |                                                                      |               |                                                                                   | 0062600520100                                                         | 10            |  |                                                                                                         |               |  |
| 5,25     |            | 86       | 52       |                                                                      |               |                                                                                   | 0062600525100                                                         | 10            |  |                                                                                                         |               |  |
| 5,30     |            | 86       | 52       |                                                                      |               |                                                                                   | 0062600530100                                                         | 10            |  |                                                                                                         |               |  |
| 5,40     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600540100                                                         | 10            |  |                                                                                                         |               |  |
| 5,50     |            | 93       | 57       | 0061800550100                                                        | 2             | 10                                                                                | 0062600550100                                                         | 10            |  | 0063100550100                                                                                           | 10            |  |
| 5,56     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600556100                                                         | 10            |  |                                                                                                         |               |  |
| 5,60     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600560100                                                         | 10            |  |                                                                                                         |               |  |
| 5,70     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600570100                                                         | 10            |  |                                                                                                         |               |  |
| 5,75     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600575100                                                         | 10            |  |                                                                                                         |               |  |
| 5,80     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600580100                                                         | 10            |  |                                                                                                         |               |  |
| 5,90     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600590100                                                         | 10            |  |                                                                                                         |               |  |
| 5,95     |            | 93       | 57       |                                                                      |               |                                                                                   | 0062600595100                                                         | 10            |  |                                                                                                         |               |  |
| 6,00     |            | 93       | 57       | 0061800600100                                                        | 2             | 10                                                                                | 0062600600100                                                         | 10            |  | 0063100600100                                                                                           | 10            |  |





|          |            |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |  | Gewerbepack mit Aufhänger<br>Industrial packing with tag<br>Paquete industrial con gancho |               |  |
|----------|------------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|---------------|--|-------------------------------------------------------------------------------------------|---------------|--|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 618<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 626<br>Art.-Nr.                                    | Inh.<br>Cont. |  | Code 631<br>Art.-Nr.                                                                      | Inh.<br>Cont. |  |
| 6,10     |            | 101      | 63       |                                                        |               |                                                                                   | 0062600610100                                           | 10            |  |                                                                                           |               |  |
| 6,20     |            | 101      | 63       |                                                        |               |                                                                                   | 0062600620100                                           | 10            |  |                                                                                           |               |  |
| 6,25     |            | 101      | 63       |                                                        |               |                                                                                   | 0062600625100                                           | 10            |  |                                                                                           |               |  |
| 6,30     |            | 101      | 63       |                                                        |               |                                                                                   | 0062600630100                                           | 10            |  |                                                                                           |               |  |
| 6,35     | 1/4        | 101      | 63       |                                                        |               |                                                                                   | 0062600635100                                           | 10            |  |                                                                                           |               |  |
| 6,40     |            | 101      | 63       |                                                        |               |                                                                                   | 0062600640100                                           | 10            |  |                                                                                           |               |  |
| 6,50     |            | 101      | 63       | 0061800650100                                          | 1             | 10                                                                                | 0062600650100                                           | 10            |  | 0063100650100                                                                             | 10            |  |
| 6,60     |            | 101      | 63       |                                                        |               |                                                                                   | 0062600660100                                           | 10            |  |                                                                                           |               |  |
| 6,70     |            | 101      | 63       |                                                        |               |                                                                                   | 0062600670100                                           | 10            |  |                                                                                           |               |  |
| 6,75     |            | 109      | 69       |                                                        |               |                                                                                   | 0062600675100                                           | 10            |  |                                                                                           |               |  |
| 6,80     |            | 109      | 69       | 0061800680100                                          | 1             | 10                                                                                | 0062600680100                                           | 10            |  | 0063100680100                                                                             | 10            |  |
| 6,90     |            | 109      | 69       |                                                        |               |                                                                                   | 0062600690100                                           | 10            |  |                                                                                           |               |  |
| 7,00     |            | 109      | 69       | 0061800700100                                          | 1             | 10                                                                                | 0062600700100                                           | 10            |  | 0063100700100                                                                             | 10            |  |
| 7,10     |            | 109      | 69       |                                                        |               |                                                                                   | 0062600710100                                           | 10            |  |                                                                                           |               |  |
| 7,14     | 9/32       | 109      | 69       |                                                        |               |                                                                                   | 0062600714100                                           | 10            |  |                                                                                           |               |  |
| 7,20     |            | 109      | 69       |                                                        |               |                                                                                   | 0062600720100                                           | 10            |  |                                                                                           |               |  |
| 7,25     |            | 109      | 69       |                                                        |               |                                                                                   | 0062600725100                                           | 10            |  |                                                                                           |               |  |
| 7,30     |            | 109      | 69       |                                                        |               |                                                                                   | 0062600730100                                           | 10            |  |                                                                                           |               |  |
| 7,40     |            | 109      | 69       |                                                        |               |                                                                                   | 0062600740100                                           | 10            |  |                                                                                           |               |  |
| 7,50     |            | 109      | 69       | 0061800750100                                          | 1             | 10                                                                                | 0062600750100                                           | 10            |  | 0063100750100                                                                             | 10            |  |
| 7,54     | 19/64      | 117      | 75       |                                                        |               |                                                                                   | 0062600754100                                           | 10            |  |                                                                                           |               |  |
| 7,60     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600760100                                           | 10            |  |                                                                                           |               |  |
| 7,70     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600770100                                           | 10            |  |                                                                                           |               |  |
| 7,75     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600775100                                           | 10            |  |                                                                                           |               |  |
| 7,80     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600780100                                           | 10            |  |                                                                                           |               |  |
| 7,90     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600790100                                           | 10            |  |                                                                                           |               |  |
| 7,94     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600794100                                           | 10            |  |                                                                                           |               |  |
| 8,00     |            | 117      | 75       | 0061800800100                                          | 1             | 10                                                                                | 0062600800100                                           | 10            |  | 0063100800100                                                                             | 10            |  |
| 8,10     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600810100                                           | 10            |  |                                                                                           |               |  |
| 8,20     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600820100                                           | 10            |  |                                                                                           |               |  |
| 8,25     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600825100                                           | 10            |  |                                                                                           |               |  |
| 8,30     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600830100                                           | 10            |  |                                                                                           |               |  |
| 8,33     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600833100                                           | 10            |  |                                                                                           |               |  |
| 8,40     |            | 117      | 75       |                                                        |               |                                                                                   | 0062600840100                                           | 10            |  |                                                                                           |               |  |
| 8,50     |            | 117      | 75       | 0061800850100                                          | 1             | 10                                                                                | 0062600850100                                           | 10            |  | 0063100850100                                                                             | 10            |  |
| 8,60     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600860100                                           | 10            |  |                                                                                           |               |  |
| 8,70     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600870100                                           | 10            |  |                                                                                           |               |  |
| 8,73     | 11/32      | 125      | 81       |                                                        |               |                                                                                   | 0062600873100                                           | 10            |  |                                                                                           |               |  |
| 8,75     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600875100                                           | 10            |  |                                                                                           |               |  |
| 8,80     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600880100                                           | 10            |  |                                                                                           |               |  |
| 8,90     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600890100                                           | 10            |  |                                                                                           |               |  |
| 9,00     |            | 125      | 81       | 0061800900100                                          | 1             | 10                                                                                | 0062600900100                                           | 10            |  | 0063100900100                                                                             | 10            |  |
| 9,10     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600910100                                           | 10            |  |                                                                                           |               |  |
| 9,13     | 23/64      | 125      | 81       |                                                        |               |                                                                                   | 0062600913100                                           | 10            |  |                                                                                           |               |  |
| 9,20     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600920100                                           | 10            |  |                                                                                           |               |  |
| 9,25     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600925100                                           | 10            |  |                                                                                           |               |  |
| 9,30     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600930100                                           | 10            |  |                                                                                           |               |  |
| 9,40     |            | 125      | 81       |                                                        |               |                                                                                   | 0062600940100                                           | 10            |  |                                                                                           |               |  |
| 9,50     |            | 125      | 81       | 0061800950100                                          | 1             | 10                                                                                | 0062600950100                                           | 10            |  | 0063100950100                                                                             | 10            |  |
| 9,53     | 3/8        | 133      | 87       |                                                        |               |                                                                                   | 0062600953100                                           | 10            |  |                                                                                           |               |  |
| 9,60     |            | 133      | 87       |                                                        |               |                                                                                   | 0062600960100                                           | 10            |  |                                                                                           |               |  |
| 9,70     |            | 133      | 87       |                                                        |               |                                                                                   | 0062600970100                                           | 10            |  |                                                                                           |               |  |
| 9,75     |            | 133      | 87       |                                                        |               |                                                                                   | 0062600975100                                           | 10            |  |                                                                                           |               |  |
| 9,80     |            | 133      | 87       |                                                        |               |                                                                                   | 0062600980100                                           | 10            |  |                                                                                           |               |  |
| 9,90     |            | 133      | 87       |                                                        |               |                                                                                   | 0062600990100                                           | 10            |  |                                                                                           |               |  |

|          |            |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Gewerbepack<br>Industrial packing<br>Paquete industrial |               |  | Gewerbepack mit Aufhänger<br>Industrial packing with tag<br>Paquete industrial con gancho |               |  |
|----------|------------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|---------------|--|-------------------------------------------------------------------------------------------|---------------|--|
| d1<br>mm | d1<br>inch | l1<br>mm | l2<br>mm | Code 618<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 626<br>Art.-Nr.                                    | Inh.<br>Cont. |  | Code 631<br>Art.-Nr.                                                                      | Inh.<br>Cont. |  |
| 9,92     | 25/64      | 133      | 87       |                                                        |               |                                                                                   | 0062600992100                                           | 10            |  |                                                                                           |               |  |
| 10,00    |            | 133      | 87       | 0061801000100                                          | 1             | 10                                                                                | 0062601000100                                           | 10            |  | 0063101000100                                                                             | 10            |  |
| 10,20    |            | 133      | 87       | 0061801020100                                          | 1             | 10                                                                                | 0062601020100                                           | 5             |  |                                                                                           |               |  |
| 10,25    |            | 133      | 87       |                                                        |               |                                                                                   | 0062601025100                                           | 5             |  |                                                                                           |               |  |
| 10,32    | 13/32      | 133      | 87       |                                                        |               |                                                                                   | 0062601032100                                           | 5             |  |                                                                                           |               |  |
| 10,50    |            | 133      | 87       | 0061801050100                                          | 1             | 10                                                                                | 0062601050100                                           | 5             |  |                                                                                           |               |  |
| 10,72    | 27/64      | 142      | 94       |                                                        |               |                                                                                   | 0062601072100                                           | 5             |  |                                                                                           |               |  |
| 10,75    |            | 142      | 94       |                                                        |               |                                                                                   | 0062601075100                                           | 5             |  |                                                                                           |               |  |
| 10,80    |            | 142      | 94       |                                                        |               |                                                                                   | 0062601080100                                           | 5             |  |                                                                                           |               |  |
| 11,00    |            | 142      | 94       | 0061801100100                                          | 1             | 10                                                                                | 0062601100100                                           | 5             |  |                                                                                           |               |  |
| 11,11    | 7/16       | 142      | 94       |                                                        |               |                                                                                   | 0062601111100                                           | 5             |  |                                                                                           |               |  |
| 11,20    |            | 142      | 94       |                                                        |               |                                                                                   | 0062601120100                                           | 5             |  |                                                                                           |               |  |
| 11,25    |            | 142      | 94       |                                                        |               |                                                                                   | 0062601125100                                           | 5             |  |                                                                                           |               |  |
| 11,50    |            | 142      | 94       | 0061801150100                                          | 1             | 10                                                                                | 0062601150100                                           | 5             |  |                                                                                           |               |  |
| 11,51    | 29/64      | 142      | 94       |                                                        |               |                                                                                   | 0062601151100                                           | 5             |  |                                                                                           |               |  |
| 11,75    |            | 142      | 94       |                                                        |               |                                                                                   | 0062601175100                                           | 5             |  |                                                                                           |               |  |
| 11,80    |            | 142      | 94       |                                                        |               |                                                                                   | 0062601180100                                           | 5             |  |                                                                                           |               |  |
| 11,91    | 15/32      | 151      | 101      |                                                        |               |                                                                                   | 0062601191100                                           | 5             |  |                                                                                           |               |  |
| 12,00    |            | 151      | 101      | 0061801200100                                          | 1             | 10                                                                                | 0062601200100                                           | 5             |  |                                                                                           |               |  |
| 12,20    |            | 151      | 101      |                                                        |               |                                                                                   | 0062601220100                                           | 5             |  |                                                                                           |               |  |
| 12,25    |            | 151      | 101      |                                                        |               |                                                                                   | 0062601225100                                           | 5             |  |                                                                                           |               |  |
| 12,30    | 31/64      | 151      | 101      |                                                        |               |                                                                                   | 0062601230100                                           | 5             |  |                                                                                           |               |  |
| 12,50    |            | 151      | 101      | 0061801250100                                          | 1             | 10                                                                                | 0062601250100                                           | 5             |  |                                                                                           |               |  |
| 12,70    | 1/2        | 151      | 101      |                                                        |               |                                                                                   | 0062601270100                                           | 5             |  |                                                                                           |               |  |
| 12,80    |            | 151      | 101      |                                                        |               |                                                                                   | 0062601280100                                           | 5             |  |                                                                                           |               |  |
| 13,00    |            | 151      | 101      | 0061801300100                                          | 1             | 10                                                                                | 0062601300100                                           | 5             |  |                                                                                           |               |  |
| 13,49    | 17/32      | 160      | 108      |                                                        |               |                                                                                   | 0062601349100                                           | 5             |  |                                                                                           |               |  |
| 13,50    |            | 160      | 108      |                                                        |               |                                                                                   | 0062601350100                                           | 5             |  |                                                                                           |               |  |
| 14,00    |            | 160      | 108      |                                                        |               |                                                                                   | 0062601400100                                           | 5             |  |                                                                                           |               |  |
| 14,28    | 9/16       | 169      | 114      |                                                        |               |                                                                                   | 0062601428100                                           | 5             |  |                                                                                           |               |  |
| 14,50    |            | 169      | 114      |                                                        |               |                                                                                   | 0062601450100                                           | 5             |  |                                                                                           |               |  |
| 15,00    |            | 169      | 114      |                                                        |               |                                                                                   | 0062601500100                                           | 5             |  |                                                                                           |               |  |
| 15,50    |            | 178      | 120      |                                                        |               |                                                                                   | 0062601550100                                           | 3             |  |                                                                                           |               |  |
| 15,87    | 5/8        | 178      | 120      |                                                        |               |                                                                                   | 0062601587100                                           | 3             |  |                                                                                           |               |  |
| 16,00    |            | 178      | 120      |                                                        |               |                                                                                   | 0062601600100                                           | 3             |  |                                                                                           |               |  |
| 16,50    |            | 184      | 125      |                                                        |               |                                                                                   | 0062601650100                                           | 3             |  |                                                                                           |               |  |
| 17,00    |            | 184      | 125      |                                                        |               |                                                                                   | 0062601700100                                           | 3             |  |                                                                                           |               |  |
| 17,46    | 11/16      | 184      | 125      |                                                        |               |                                                                                   | 0062601746100                                           | 3             |  |                                                                                           |               |  |
| 17,50    |            | 191      | 130      |                                                        |               |                                                                                   | 0062601750100                                           | 3             |  |                                                                                           |               |  |
| 18,00    |            | 191      | 130      |                                                        |               |                                                                                   | 0062601800100                                           | 3             |  |                                                                                           |               |  |
| 18,50    |            | 198      | 135      |                                                        |               |                                                                                   | 0062601850100                                           | 3             |  |                                                                                           |               |  |
| 19,00    |            | 198      | 135      |                                                        |               |                                                                                   | 0062601900100                                           | 3             |  |                                                                                           |               |  |
| 19,05    | 3/4        | 198      | 135      |                                                        |               |                                                                                   | 0062601905100                                           | 3             |  |                                                                                           |               |  |
| 19,50    |            | 205      | 140      |                                                        |               |                                                                                   | 0062601950100                                           | 3             |  |                                                                                           |               |  |
| 20,00    |            | 205      | 140      |                                                        |               |                                                                                   | 0062602000100                                           | 3             |  |                                                                                           |               |  |



**D HSS Spiralbohrer,  
mit reduziertem Schaft,  
kurz, DIN 338 RN**

**Einsatzbereich:**

Universeller Spiralbohrer, hohe Elastizität. Sehr gut geeignet für den Einsatz in Handbohrmaschinen, zum Bearbeiten von legiertem und unlegiertem Stahl.

**E HSS jobber drills,  
with reduced shank,  
short, DIN 338 RN**

**Range of application:**

HSS twist drill: toughness and precision combined with excellent cutting efficiency for drilling alloyed carbon and plain steel. Ideal for hand held operations.

**ES Broca espiral HSS,  
con eje reducido,  
corta, DIN 338 RN**

**Ámbito de aplicación:**

Broca espiral universal con gran elasticidad. Muy adecuada para uso en taladros manuales, para el procesamiento de acero aleado y no aleado.



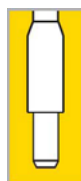
Elastisch  
Resilient  
Elástica



Schneller Bohrfortschritt  
Fast drilling progress  
Avance de perforación rápido



Lange Lebensdauer  
Long tool life  
Larga vida útil



118°

DIN  
338

Cu  
Ms  
Ni  
Zn

Alu

Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



HSS



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 640, 648<br>Art.-Nr. | Inh.<br>Cont. |    | Code 642, 654<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------|---------------------------|---------------|----|---------------------------|---------------|
| 10,50    | 133      | 87       | 9,50     | 0064001050100             | 1             | 10 | 0064201050100             | 5             |
| 11,00    | 142      | 94       | 9,50     | 0064001100100             | 1             | 10 | 0064201100100             | 5             |
| 11,50    | 142      | 94       | 9,50     | 0064001150100             | 1             | 10 | 0064201150100             | 5             |
| 12,00    | 151      | 101      | 9,50     | 0064001200100             | 1             | 10 | 0064201200100             | 5             |
| 12,50    | 151      | 101      | 9,50     | 0064001250100             | 1             | 10 | 0064201250100             | 5             |
| 13,00    | 151      | 101      | 9,50     | 0064001300100             | 1             | 10 | 0064201300100             | 5             |
| 13,50    | 160      | 108      | 9,50     | 0064001350100             | 1             | 8  | 0064201350100             | 5             |
| 14,00    | 160      | 108      | 9,50     | 0064001400100             | 1             | 8  | 0064201400100             | 5             |
| 14,50    | 169      | 114      | 9,50     | 0064001450100             | 1             | 8  | 0064201450100             | 5             |
| 15,00    | 169      | 114      | 9,50     | 0064001500100             | 1             | 8  | 0064201500100             | 5             |
| 15,50    | 178      | 120      | 9,50     | 0064001550100             | 1             | 8  | 0064201550100             | 3             |
| 16,00    | 178      | 120      | 9,50     | 0064001600100             | 1             | 8  | 0064201600100             | 3             |
| 16,50    | 184      | 125      | 12,50    | 0064801650100             | 1             | 8  | 0065401650100             | 3             |
| 17,00    | 184      | 125      | 12,50    | 0064801700100             | 1             | 8  | 0065401700100             | 3             |
| 17,50    | 191      | 130      | 12,50    | 0064801750100             | 1             | 8  | 0065401750100             | 3             |
| 18,00    | 191      | 130      | 12,50    | 0064801800100             | 1             | 8  | 0065401800100             | 3             |
| 18,50    | 198      | 135      | 12,50    | 0064801850100             | 1             | 8  | 0065401850100             | 3             |
| 19,00    | 198      | 135      | 12,50    | 0064801900100             | 1             | 8  | 0065401900100             | 3             |
| 19,50    | 205      | 140      | 12,50    | 0064801950100             | 1             | 8  | 0065401950100             | 3             |
| 20,00    | 205      | 140      | 12,50    | 0064802000100             | 1             | 8  | 0065402000100             | 3             |

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| <b>Sprint Master TM 6</b><br>     |                                           |   | <b>Sprint Master TM 10</b><br>    |                                           |   | <b>Sprint Master TM 13/2</b><br> |                                           |   |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|
| 6-tlg. / 6-pcs. / 6-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000811122100    |                                           |   | 10-tlg. / 10-pcs. / 10-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000811092100 |                                           |   | 13-tlg. / 13-pcs. / 13-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000811101100  |                                           |   |
| Ø<br>mm                                                                                                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   |
| Sprint Master                                                                                                      |                                           |   | Sprint Master                                                                                                      |                                           |   | Sprint Master                                                                                                       |                                           |   |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00                                                                          | 1                                         |   | Ø 1,00-10,00                                                                                                       | 1,0                                       | 1 | Ø 1,50-6,50                                                                                                         | 0,5                                       | 1 |
|                                                                                                                    |                                           |   |                                                                                                                    |                                           |   | Sprint Master                                                                                                       |                                           |   |
|                                                                                                                    |                                           |   |                                                                                                                    |                                           |   | Ø 3,20 / 4,80                                                                                                       |                                           |   |
| <b>Sprint Master TM 13</b><br>   |                                           |   | <b>Sprint Master KM 19</b><br>   |                                           |   | <b>Sprint Master KP 19</b><br>  |                                           |   |
| 13-tlg. / 13-pcs. / 13-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000811102100 |                                           |   | 19-tlg. / 19-pcs. / 19-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0000810311100          |                                           |   | 19-tlg. / 19-pcs. / 19-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000812311100  |                                           |   |
| Ø<br>mm                                                                                                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   |
| Sprint Master                                                                                                      |                                           |   | Sprint Master                                                                                                      |                                           |   | Sprint Master                                                                                                       |                                           |   |
| Ø 2,00-8,00                                                                                                        | 0,5                                       | 1 | Ø 1,00-10,00                                                                                                       | 0,5                                       | 1 | Ø 1,00-10,00                                                                                                        | 0,5                                       | 1 |
| <b>Sprint Master KM 21</b><br>  |                                           |   | <b>Sprint Master KM 25</b><br>  |                                           |   | <b>Sprint Master KP 25</b><br> |                                           |   |
| 21-tlg. / 21-pcs. / 21-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0000810400100          |                                           |   | 25-tlg. / 25-pcs. / 25-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0000810321100          |                                           |   | 25-tlg. / 25-pcs. / 25-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000812321100  |                                           |   |
| Ø<br>mm                                                                                                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   | Ø<br>mm                                                                                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |   |
| Sprint Master                                                                                                      |                                           |   | Sprint Master                                                                                                      |                                           |   | Sprint Master                                                                                                       |                                           |   |
| Ø 1,00-8,50                                                                                                        | 0,5                                       | 1 | Ø 1,00-13,00                                                                                                       | 0,5                                       | 1 | Ø 1,00-13,00                                                                                                        | 0,5                                       | 1 |
| Ø 9,00-13,00                                                                                                       | 1,0                                       |   |                                                                                                                    |                                           |   |                                                                                                                     |                                           |   |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

Sprint Master KM 32



32-tlg. / 32-pcs. / 32-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000810371100

| Ø<br>mm                                                                                    |  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------|
| Sprint Master                                                                              |                                                                                   |                                           |
| Ø 1,00-10,50                                                                               | 0,5                                                                               | 1                                         |
| Ø 1,90 / 2,10 / 2,60 / 2,90 / 3,20<br>/ 3,30 / 3,80 / 4,20 / 5,10 / 6,80<br>/ 7,90 / 10,20 |                                                                                   | 1                                         |

Sprint Master KM 50



50-tlg. / 50-pcs. / 50-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000810351100

| Ø<br>mm       |  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------------|-----------------------------------------------------------------------------------|-------------------------------------------|
| Sprint Master |                                                                                   |                                           |
| Ø 1,00-5,90   | 0,1                                                                               | 1                                         |

Sprint Master KM 41



41-tlg. / 41-pcs. / 41-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000810361100

| Ø<br>mm       |  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------|
| Sprint Master |                                                                                     |                                           |
| Ø 6,00-10,00  | 0,1                                                                                 | 1                                         |

Sprint Master KM 170



170-tlg. / 170-pcs. / 170-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0000810170100

| Ø<br>mm       |  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------|
| Sprint Master |                                                                                     |                                           |
| Ø 1,00-8,00   | 0,5                                                                                 | 10                                        |
| Ø 8,50-10,00  | 0,5                                                                                 | 5                                         |

Sprint Master RDM 19



19-tlg. / 19-pcs. / 19-unid.  
Runddose  
Art.-Nr. 0000810522100

| Ø<br>mm       |  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------|
| Sprint Master |                                                                                     |                                           |
| Ø 1,00-10,00  | 0,5                                                                                 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| <b>Combiset TM 9</b><br>   |                                           | <b>Combiset TM 9/1</b><br>  |                                           | <b>Combiset Master SET 16</b><br>  |                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 9-tlg. / 9-pcs. / 9-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000802102100                                                                              |                                           | 9-tlg. / 9-pcs. / 9-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0000802122100                                                                               |                                           | 16-tlg. / 16-pcs. / 16-unid.<br>Set<br>Art.-Nr. 0000811003100                                                                                                                                            |                                           |
| Ø<br>mm                                                                                                                                                                                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                       | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                  | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| Holz                                                                                                                                                                                         |                                           | Long Life                                                                                                                                                                                     |                                           | Holz                                                                                                                                                                                                     |                                           |
| Ø 5,00 / 6,00 / 8,00                                                                                                                                                                         | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00                                                                                                                                                                   | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                                      | 1                                         |
| Long Life                                                                                                                                                                                    |                                           | Sprint Master                                                                                                                                                                                 |                                           | Long Life                                                                                                                                                                                                |                                           |
| Ø 5,00 / 6,00 / 8,00                                                                                                                                                                         | 1                                         | Ø 3,00 / 4,00 / 5,00 / 6,00 / 8,00                                                                                                                                                            | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                                      | 1                                         |
| Sprint Master                                                                                                                                                                                |                                           |                                                                                                                                                                                               |                                           | Sprint Master                                                                                                                                                                                            |                                           |
| Ø 5,00 / 6,00 / 8,00                                                                                                                                                                         | 1                                         |                                                                                                                                                                                               |                                           | Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00                                                                                                                                                                | 1                                         |
| <b>KIT SET 22</b><br>  |                                           | <b>KIT SET 30</b><br>   |                                           |                                                                                                                                                                                                          |                                           |
| 22-tlg. / 22-pcs. / 22-unid.<br>Set<br>Art.-Nr. 0000800222100                                                                                                                                |                                           | 30-tlg. / 30-pcs. / 30-unid.<br>Set<br>Art.-Nr. 0000800230100                                                                                                                                 |                                           |                                                                                                                                                                                                          |                                           |
| Ø<br>mm                                                                                                                                                                                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                       | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |                                                                                                                                                                                                          |                                           |
| Long Life                                                                                                                                                                                    |                                           | Holz                                                                                                                                                                                          |                                           |                                                                                                                                                                                                          |                                           |
| Ø 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                                 | 1                                         | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                           | 1                                         |                                                                                                                                                                                                          |                                           |
| Sprint Master                                                                                                                                                                                |                                           | HSS Super                                                                                                                                                                                     |                                           |                                                                                                                                                                                                          |                                           |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                            | 1                                         | Ø 2,50 / 3,20                                                                                                                                                                                 | 1                                         |                                                                                                                                                                                                          |                                           |
| Wera                                                                                                                                                                                         |                                           | Long Life                                                                                                                                                                                     |                                           |                                                                                                                                                                                                          |                                           |
| 9 Bits sortiert / 9 Bits sorted / 9 brocas surtidas                                                                                                                                          |                                           | Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                           | 1                                         |                                                                                                                                                                                                          |                                           |
| Bitshalter / Bitholder / Portabrocas                                                                                                                                                         |                                           | Sprint Master                                                                                                                                                                                 |                                           |                                                                                                                                                                                                          |                                           |
| Körner / Centerpunch / Punzón                                                                                                                                                                |                                           | Ø 3,00 / 4,00 / 5,00 / 6,00 / 8,00 / 10,00                                                                                                                                                    | 1                                         |                                                                                                                                                                                                          |                                           |
|                                                                                                                                                                                              |                                           | Wera                                                                                                                                                                                          |                                           |                                                                                                                                                                                                          |                                           |
|                                                                                                                                                                                              |                                           | 9 Bits sortiert / 9 Bits sorted / 9 brocas surtidas                                                                                                                                           |                                           |                                                                                                                                                                                                          |                                           |
|                                                                                                                                                                                              |                                           | Bitshalter / Bitholder / Portabrocas                                                                                                                                                          |                                           |                                                                                                                                                                                                          |                                           |
|                                                                                                                                                                                              |                                           | Körner / Centerpunch / Punzón                                                                                                                                                                 |                                           |                                                                                                                                                                                                          |                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D HSS Spiralbohrer, lang, mit Kreuzanschliff AC, DIN 340 RN**

**E HSS long series drills with split point AC, DIN 340 RN**

**E Broca espiral HSS, larga, con punta afilada en cruz AC, DIN 340 RN**

**Einsatzbereich:**

Spiralbohrer präzisionsgeschliffen, Industriequalität zum Bohren von legierten und unlegierten Stählen, Grauguss, Temperguss, Kupferlegierungen, Neusilber, Graphit, Sinterisen.

**Range of application:**

Premium quality twist drill for drilling steel and steel castings, alloyed carbon and plain steel, grey iron castings, copper-alloys, nickel-silver, graphite and similar materials.

**Ámbito de aplicación:**

Broca espiral afilada con precisión, calidad industrial para el taladrado de aceros aleados y no aleados, hierro fundido gris, fundición maleable, aleaciones de cobre, alpaca, grafito, hierro sinterizado.



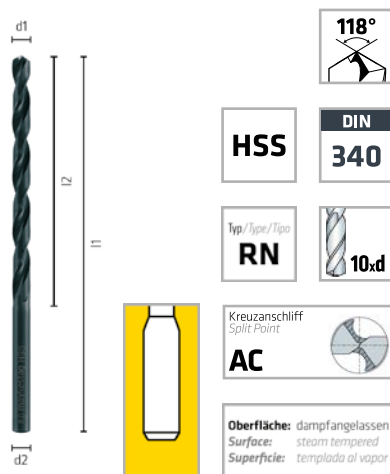
Industriequalität  
Industrial quality  
Calidad industrial



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Präzise  
Precise  
Preciso



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 501<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 0,50     | 32       | 12       | 0050100050100        | 10            |
| 0,60     | 35       | 15       | 0050100060100        | 10            |
| 0,70     | 42       | 21       | 0050100070100        | 10            |
| 0,80     | 46       | 25       | 0050100080100        | 10            |
| 1,00     | 56       | 33       | 0050100100100        | 10            |
| 1,10     | 60       | 37       | 0050100110100        | 10            |
| 1,20     | 65       | 41       | 0050100120100        | 10            |
| 1,30     | 65       | 41       | 0050100130100        | 10            |
| 1,40     | 70       | 45       | 0050100140100        | 10            |
| 1,50     | 70       | 45       | 0050100150100        | 10            |
| 1,60     | 76       | 50       | 0050100160100        | 10            |
| 1,70     | 76       | 50       | 0050100170100        | 10            |
| 1,80     | 80       | 53       | 0050100180100        | 10            |
| 1,90     | 80       | 53       | 0050100190100        | 10            |
| 2,00     | 85       | 56       | 0050100200100        | 10            |
| 2,10     | 85       | 56       | 0050100210100        | 10            |
| 2,20     | 90       | 59       | 0050100220100        | 10            |
| 2,30     | 90       | 59       | 0050100230100        | 10            |
| 2,40     | 95       | 62       | 0050100240100        | 10            |
| 2,50     | 95       | 62       | 0050100250100        | 10            |
| 2,60     | 95       | 62       | 0050100260100        | 10            |
| 2,70     | 100      | 66       | 0050100270100        | 10            |

Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 501<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 2,80     | 100      | 66       | 0050100280100        | 10            |
| 2,90     | 100      | 66       | 0050100290100        | 10            |
| 3,00     | 100      | 66       | 0050100300100        | 10            |
| 3,10     | 106      | 69       | 0050100310100        | 10            |
| 3,20     | 106      | 69       | 0050100320100        | 10            |
| 3,30     | 106      | 69       | 0050100330100        | 10            |
| 3,40     | 112      | 73       | 0050100340100        | 10            |
| 3,50     | 112      | 73       | 0050100350100        | 10            |
| 3,60     | 112      | 73       | 0050100360100        | 10            |
| 3,70     | 112      | 73       | 0050100370100        | 10            |
| 3,80     | 119      | 78       | 0050100380100        | 10            |
| 3,90     | 119      | 78       | 0050100390100        | 10            |
| 4,00     | 119      | 78       | 0050100400100        | 10            |
| 4,10     | 119      | 78       | 0050100410100        | 10            |
| 4,20     | 119      | 78       | 0050100420100        | 10            |
| 4,30     | 126      | 82       | 0050100430100        | 10            |
| 4,40     | 126      | 82       | 0050100440100        | 10            |
| 4,50     | 126      | 82       | 0050100450100        | 10            |
| 4,60     | 126      | 82       | 0050100460100        | 10            |
| 4,70     | 126      | 82       | 0050100470100        | 10            |
| 4,80     | 132      | 87       | 0050100480100        | 10            |
| 4,90     | 132      | 87       | 0050100490100        | 10            |
| 5,00     | 132      | 87       | 0050100500100        | 10            |
| 5,10     | 132      | 87       | 0050100510100        | 10            |
| 5,20     | 132      | 87       | 0050100520100        | 10            |
| 5,30     | 132      | 87       | 0050100530100        | 10            |
| 5,40     | 139      | 91       | 0050100540100        | 10            |
| 5,50     | 139      | 91       | 0050100550100        | 10            |
| 5,60     | 139      | 91       | 0050100560100        | 10            |
| 5,70     | 139      | 91       | 0050100570100        | 10            |
| 5,80     | 139      | 91       | 0050100580100        | 10            |
| 5,90     | 139      | 91       | 0050100590100        | 10            |
| 6,00     | 139      | 91       | 0050100600100        | 10            |
| 6,10     | 148      | 97       | 0050100610100        | 10            |
| 6,20     | 148      | 97       | 0050100620100        | 10            |
| 6,30     | 148      | 97       | 0050100630100        | 10            |
| 6,40     | 148      | 97       | 0050100640100        | 10            |
| 6,50     | 148      | 97       | 0050100650100        | 10            |
| 6,60     | 148      | 97       | 0050100660100        | 10            |
| 6,70     | 148      | 97       | 0050100670100        | 10            |
| 6,80     | 156      | 102      | 0050100680100        | 10            |
| 6,90     | 156      | 102      | 0050100690100        | 10            |
| 7,00     | 156      | 102      | 0050100700100        | 10            |
| 7,10     | 156      | 102      | 0050100710100        | 10            |
| 7,20     | 156      | 102      | 0050100720100        | 10            |
| 7,30     | 156      | 102      | 0050100730100        | 10            |
| 7,40     | 156      | 102      | 0050100740100        | 10            |
| 7,50     | 156      | 102      | 0050100750100        | 10            |
| 7,60     | 165      | 109      | 0050100760100        | 10            |
| 7,70     | 165      | 109      | 0050100770100        | 10            |
| 7,80     | 165      | 109      | 0050100780100        | 10            |
| 7,90     | 165      | 109      | 0050100790100        | 10            |
| 8,00     | 165      | 109      | 0050100800100        | 10            |
| 8,20     | 165      | 109      | 0050100820100        | 10            |
| 8,50     | 165      | 109      | 0050100850100        | 10            |
| 8,80     | 175      | 115      | 0050100880100        | 10            |



Metal- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|----------|----------|----------|-----------------------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 501<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 9,00     | 175      | 115      | 0050100900100                                                         | 10            |
| 9,50     | 175      | 115      | 0050100950100                                                         | 10            |
| 9,80     | 184      | 121      | 0050100980100                                                         | 10            |
| 10,00    | 184      | 121      | 0050101000100                                                         | 10            |
| 10,20    | 184      | 121      | 0050101020100                                                         | 1             |
| 10,50    | 184      | 121      | 0050101050100                                                         | 1             |
| 11,00    | 195      | 128      | 0050101100100                                                         | 1             |
| 11,50    | 195      | 128      | 0050101150100                                                         | 1             |
| 12,00    | 205      | 134      | 0050101200100                                                         | 1             |
| 12,50    | 205      | 134      | 0050101250100                                                         | 1             |
| 13,00    | 205      | 134      | 0050101300100                                                         | 1             |
| 13,50    | 214      | 140      | 0050101350100                                                         | 1             |
| 14,00    | 214      | 140      | 0050101400100                                                         | 1             |
| 14,50    | 220      | 144      | 0050101450100                                                         | 1             |
| 15,00    | 220      | 144      | 0050101500100                                                         | 1             |
| 15,50    | 227      | 149      | 0050101550100                                                         | 1             |
| 16,00    | 227      | 149      | 0050101600100                                                         | 1             |

Ø 0,50mm / Ø 0,60mm / Ø 0,70mm = WN / Split Point ≥ Ø 4,0 mm / Punta afilada en cruz ≥ Ø 4,0 mm  
Kreuzanschliff ≥ Ø 4,0 mm / Split Point ≥ Ø 4,0 mm / Punta afilada en cruz ≥ Ø 4,0 mm

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**D HSS Spiralbohrer, lang,  
DIN 340 RN**
**Einsatzbereich:**

Spiralbohrer präzisionsgeschliffen, mit engen Toleranzen und hoher Rundlaufgenauigkeit. Zum Bearbeiten von legiertem und unlegiertem Stahl.

**E HSS long series drills,  
DIN 340 RN**
**Range of application:**

HSS twist drill ground from solid, bright finish: toughness and precision combined with excellent cutting efficiency for drilling alloyed carbon and plain steel.

**ES Broca espiral HSS, larga,  
DIN 340 RN**
**Ámbito de aplicación:**

Broca espiral afilada con precisión, con tolerancias estrechas y alta precisión de concentricidad. Para el procesamiento de acero aleado y no aleado.



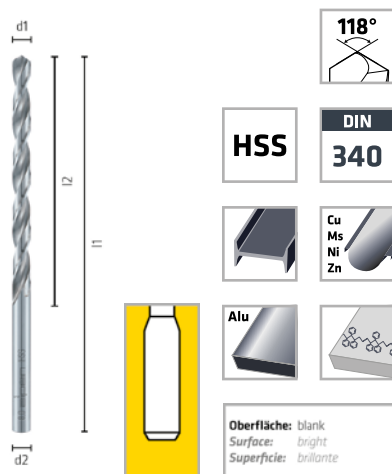
Präzisionsgeschliffen  
Precision ground  
Afilada con precisión



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Bruchstabil  
Break-resistant  
Resistente a la rotura



Einzelverpackung  
Single pack  
Embalaje individual



Gewerbepack  
Industrial packing  
Paquete industrial

| d1<br>mm | l1<br>mm | l2<br>mm | Code 528<br>Art.-Nr. | Inh.<br>Cont. |    | Code 551<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 1,00     | 56       | 33       |                      |               |    | 0055100100100        | 10            |
| 1,50     | 70       | 45       |                      |               |    | 0055100150100        | 10            |
| 2,00     | 85       | 56       |                      |               |    | 0055100200100        | 10            |
| 2,50     | 95       | 62       |                      |               |    | 0055100250100        | 10            |
| 3,00     | 100      | 66       | 0052800300100        | 1             | 10 | 0055100300100        | 10            |
| 3,20     | 106      | 69       |                      |               |    | 0055100320100        | 10            |
| 3,50     | 112      | 73       | 0052800350100        | 1             | 10 | 0055100350100        | 10            |
| 4,00     | 119      | 78       | 0052800400100        | 1             | 10 | 0055100400100        | 10            |
| 4,20     | 119      | 78       |                      |               |    | 0055100420100        | 10            |
| 4,50     | 126      | 82       | 0052800450100        | 1             | 10 | 0055100450100        | 10            |
| 5,00     | 132      | 87       | 0052800500100        | 1             | 10 | 0055100500100        | 10            |
| 5,50     | 139      | 91       | 0052800550100        | 1             | 10 | 0055100550100        | 10            |
| 6,00     | 139      | 91       | 0052800600100        | 1             | 10 | 0055100600100        | 10            |
| 6,50     | 148      | 97       |                      |               |    | 0055100650100        | 10            |
| 7,00     | 156      | 102      | 0052800700100        | 1             | 10 | 0055100700100        | 10            |
| 8,00     | 165      | 109      | 0052800800100        | 1             | 10 | 0055100800100        | 10            |
| 9,00     | 175      | 115      |                      |               |    | 0055100900100        | 10            |
| 10,00    | 184      | 121      | 0052801000100        | 1             | 10 | 0055101000100        | 10            |

**Metall- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable



**D HSS Spiralbohrer, überlang,  
DIN 1869 R1 RN**

**Einsatzbereich:**

Hochleistungsbohrer zum Bohren von sehr tiefen Löchern, wobei Schnittgeschwindigkeit, Vorschub, Kühlung sowie häufige Span-entleerung zu beachten sind.

**E HSS extra long series drills,  
DIN 1869 R1 RN**

**Range of application:**

High efficiency drills for extremely deep holes where working conditions such as cutting speed, feed, coolant and frequent chip removal have to be observed.

**E Broca espiral HSS, extra larga,  
DIN 1869 R1 RN**

**Ámbito de aplicación:**

Broca de alto rendimiento para el taladrado de agujeros muy profundos, en los que hay que tener en cuenta la velocidad de corte, el avance, la refrigeración y la eliminación frecuente de virutas.



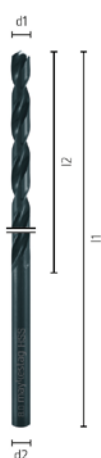
Industriequalität  
Industrial quality  
Calidad industrial



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Präzise  
Precise  
Preciso



Einzelverpackung  
Single pack  
Embalaje individual

Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | Code 100<br>Art.-Nr. | Inh.<br>Cont. |    | Code 101<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|----|----------------------|---------------|
| 2,00     | 125      | 85       |                      |               |    | 0010100200100        | 1             |
| 2,50     | 140      | 95       |                      |               |    | 0010100250100        | 1             |
| 3,00     | 150      | 100      | 0010000300100        | 1             | 10 | 0010100300100        | 1             |
| 3,50     | 165      | 115      | 0010000350100        | 1             | 10 | 0010100350100        | 1             |
| 4,00     | 175      | 120      | 0010000400100        | 1             | 10 | 0010100400100        | 1             |
| 4,20     | 175      | 120      |                      |               |    | 0010100420100        | 1             |
| 4,50     | 185      | 125      |                      |               |    | 0010100450100        | 1             |
| 4,80     | 195      | 135      |                      |               |    | 0010100480100        | 1             |
| 4,90     | 195      | 135      |                      |               |    | 0010100490100        | 1             |
| 5,00     | 195      | 135      | 0010000500100        | 1             | 10 | 0010100500100        | 1             |
| 5,50     | 205      | 140      |                      |               |    | 0010100550100        | 1             |
| 5,80     | 205      | 140      |                      |               |    | 0010100580100        | 1             |
| 6,00     | 205      | 140      | 0010000600100        | 1             | 10 | 0010100600100        | 1             |
| 6,20     | 215      | 150      |                      |               |    | 0010100620100        | 1             |
| 6,50     | 215      | 150      |                      |               |    | 0010100650100        | 1             |
| 6,80     | 225      | 155      |                      |               |    | 0010100680100        | 1             |
| 7,00     | 225      | 155      |                      |               |    | 0010100700100        | 1             |
| 7,50     | 225      | 155      |                      |               |    | 0010100750100        | 1             |
| 8,00     | 240      | 165      | 0010000800100        | 1             | 10 | 0010100800100        | 1             |
| 8,50     | 240      | 165      |                      |               |    | 0010100850100        | 1             |
| 9,00     | 250      | 175      |                      |               |    | 0010100900100        | 1             |
| 9,50     | 250      | 175      |                      |               |    | 0010100950100        | 1             |

|          |          |          | Einzelverpackung<br>Single pack<br>Embalaje individual |               |                                                                                   | Einzelverpackung<br>Single pack<br>Embalaje individual |               |
|----------|----------|----------|--------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|--------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | Code 100<br>Art.-Nr.                                   | Inh.<br>Cont. |  | Code 101<br>Art.-Nr.                                   | Inh.<br>Cont. |
| 10,00    | 265      | 185      | 0010001000100                                          | 1             | 10                                                                                | 0010101000100                                          | 1             |
| 10,50    | 265      | 185      |                                                        |               |                                                                                   | 0010101050100                                          | 1             |
| 11,00    | 280      | 195      |                                                        |               |                                                                                   | 0010101100100                                          | 1             |
| 11,50    | 280      | 195      |                                                        |               |                                                                                   | 0010101150100                                          | 1             |
| 12,00    | 295      | 205      |                                                        |               |                                                                                   | 0010101200100                                          | 1             |
| 12,50    | 295      | 205      |                                                        |               |                                                                                   | 0010101250100                                          | 1             |
| 13,00    | 295      | 205      |                                                        |               |                                                                                   | 0010101300100                                          | 1             |



**Metall- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

**D HSS Spiralbohrer, überlang,  
DIN 1869 R2 RN**

**Einsatzbereich:**

Hochleistungsbohrer zum Bohren von sehr tiefen Löchern, wobei Schnittgeschwindigkeit, Vorschub, Kühlung sowie häufige Spanentleerung zu beachten sind.

**E HSS extra long series drills,  
DIN 1869 R2 RN**

**Range of application:**

High efficiency drills for extremely deep holes where working conditions such as cutting speed, feed, coolant and frequent chip removal have to be observed.

**E Broca espiral HSS, extra larga,  
DIN 1869 R2 RN**

**Ámbito de aplicación:**

Broca de alto rendimiento para el taladrado de agujeros muy profundos, en los que hay que tener en cuenta la velocidad de corte, el avance, la refrigeración y la eliminación frecuente de virutas.



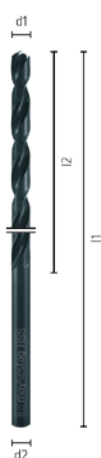
Industriequalität  
Industrial quality  
Calidad industrial



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Präzise  
Precise  
Preciso



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | Code 111<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 3,00     | 190      | 130      | 0011100300100        | 1             |
| 3,50     | 210      | 145      | 0011100350100        | 1             |
| 4,00     | 220      | 150      | 0011100400100        | 1             |
| 4,20     | 220      | 150      | 0011100420100        | 1             |
| 4,50     | 235      | 160      | 0011100450100        | 1             |
| 5,00     | 245      | 170      | 0011100500100        | 1             |
| 5,50     | 260      | 180      | 0011100550100        | 1             |
| 6,00     | 260      | 180      | 0011100600100        | 1             |
| 6,50     | 275      | 190      | 0011100650100        | 1             |
| 7,00     | 290      | 200      | 0011100700100        | 1             |
| 7,50     | 290      | 200      | 0011100750100        | 1             |
| 8,00     | 305      | 210      | 0011100800100        | 1             |
| 8,50     | 305      | 210      | 0011100850100        | 1             |
| 9,00     | 320      | 220      | 0011100900100        | 1             |
| 9,50     | 320      | 220      | 0011100950100        | 1             |
| 10,00    | 340      | 235      | 0011101000100        | 1             |
| 10,20    | 340      | 235      | 0011101020100        | 1             |
| 10,50    | 340      | 235      | 0011101050100        | 1             |
| 11,00    | 365      | 250      | 0011101100100        | 1             |
| 11,50    | 365      | 250      | 0011101150100        | 1             |
| 12,00    | 375      | 260      | 0011101200100        | 1             |
| 12,50    | 375      | 260      | 0011101250100        | 1             |
| 13,00    | 375      | 260      | 0011101300100        | 1             |

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**D HSS Spiralbohrer, überlang,  
DIN 1869 R3 RN**

**Einsatzbereich:**

Hochleistungsbohrer zum Bohren von sehr tiefen Löchern, wobei Schnittgeschwindigkeit, Vorschub, Kühlung sowie häufige Spanentleerung zu beachten sind.

**E HSS extra long series drills,  
DIN 1869 R3 RN**

**Range of application:**

High efficiency drills for extremely deep holes where working conditions such as cutting speed, feed, coolant and frequent chip removal have to be observed.

**ES Broca espiral HSS, extra larga,  
DIN 1869 R3 RN**

**Ámbito de aplicación:**

Broca de alto rendimiento para el taladrado de agujeros muy profundos, en los que hay que tener en cuenta la velocidad de corte, el avance, la refrigeración y la eliminación frecuente de virutas.



Industriequalität  
Industrial quality  
Calidad industrial



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Präzise  
Precise  
Preciso



**HSS**



**Typ / Type / Tipo  
RN**



**10.d**



**AC**

Oberfläche: dampfangelassen  
Surface: steam tempered  
Superficie: templado al vapor



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | Code 121<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 2,50     | 225      | 150      | 0012100250100        | 1             |
| 3,50     | 265      | 180      | 0012100350100        | 1             |
| 4,00     | 280      | 190      | 0012100400100        | 1             |
| 4,20     | 280      | 190      | 0012100420100        | 1             |
| 4,50     | 295      | 200      | 0012100450100        | 1             |
| 5,00     | 315      | 210      | 0012100500100        | 1             |
| 5,50     | 330      | 225      | 0012100550100        | 1             |
| 6,00     | 330      | 225      | 0012100600100        | 1             |
| 6,20     | 350      | 235      | 0012100620100        | 1             |
| 6,50     | 350      | 235      | 0012100650100        | 1             |
| 6,80     | 370      | 235      | 0012100680100        | 1             |
| 7,00     | 370      | 250      | 0012100700100        | 1             |
| 7,50     | 370      | 250      | 0012100750100        | 1             |
| 8,00     | 390      | 265      | 0012100800100        | 1             |
| 8,50     | 390      | 265      | 0012100850100        | 1             |
| 9,00     | 410      | 280      | 0012100900100        | 1             |
| 9,50     | 410      | 280      | 0012100950100        | 1             |
| 10,00    | 430      | 295      | 0012101000100        | 1             |
| 10,50    | 430      | 295      | 0012101050100        | 1             |
| 11,00    | 430      | 310      | 0012101100100        | 1             |
| 11,50    | 455      | 310      | 0012101150100        | 1             |
| 12,00    | 480      | 330      | 0012101200100        | 1             |
| 12,50    | 480      | 330      | 0012101250100        | 1             |
| 13,00    | 480      | 330      | 0012101300100        | 1             |

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Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

## D HSS Fassadenbohrer

## E HSS facade drills

## ES Brocas HSS para fachadas

### Einsatzbereich:

Spezialbohrer zum Bohren von allen üblichen Metallwerkstoffen sowie Hohlprofile aus Stahl, Kunststoff und Aluminium. Die kurze Spiralnute verhindert das Aufreißen der Bohrung bei Hohlprofilen. Speziell geeignet für Fassadenbau, Montage von Solar Photovoltaik Anlagen etc.

### Range of application:

Special drill for drilling of all common metal materials and hollow profiles made of steel, plastics and aluminium. The short spiral flute prevents the reaming of the hole in hollow profiles. Especially suitable for facade construction, installation of solar photovoltaics systems, etc.

### Ámbito de aplicación:

Broca especial para perforar todos los materiales metálicos habituales, así como perfiles huecos de acero, plástico y aluminio. La ranura en espiral corta impide que el orificio se escarie en perfiles huecos. Especialmente adecuada para la construcción de fachadas, el montaje de instalaciones de paneles solares fotovoltaicos, etc.



Präzise  
Precise  
Preciso



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Bruchstabil  
Break-resistant  
Resistente a la rotura



Oberfläche: dampfangelassen  
Surface: steam tempered  
Superficie: templada al vapor



Gewerbepack  
Industrial packing  
Paquete industrial

### Länge / Length / Longitud: 150/30 mm

| d1<br>mm | l1<br>mm | l2<br>mm | Code 123<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 4,00     | 150      | 30       | 0012300400100        | 5             |
| 4,50     | 150      | 30       | 0012300450100        | 5             |
| 5,00     | 150      | 30       | 0012300500100        | 5             |
| 5,30     | 150      | 30       | 0012300530100        | 5             |
| 5,50     | 150      | 30       | 0012300550100        | 5             |
| 5,70     | 150      | 30       | 0012300570100        | 5             |
| 5,80     | 150      | 30       | 0012300580100        | 5             |

### Länge / Length / Longitud: 180/30 mm

| d1<br>mm | l1<br>mm | l2<br>mm | Code 124<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 5,30     | 180      | 30       | 0012400530100        | 5             |
| 5,70     | 180      | 30       | 0012400570100        | 5             |
| 5,80     | 180      | 30       | 0012400580100        | 5             |
| 5,90     | 180      | 30       | 0012400590100        | 5             |



|                                      |          |          | Gewerbepack<br><i>Industrial packing</i><br><i>Paquete industrial</i> |               |
|--------------------------------------|----------|----------|-----------------------------------------------------------------------|---------------|
| Länge / Length / Longitud: 200/30 mm |          |          |                                                                       |               |
| d1<br>mm                             | l1<br>mm | l2<br>mm | Code 125<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 4,50                                 | 200      | 30       | 0012500450100                                                         | 5             |
| 5,00                                 | 200      | 30       | 0012500500100                                                         | 5             |
| 5,30                                 | 200      | 30       | 0012500530100                                                         | 5             |
| 5,50                                 | 200      | 30       | 0012500550100                                                         | 5             |
| 5,70                                 | 200      | 30       | 0012500570100                                                         | 5             |
| 5,80                                 | 200      | 30       | 0012500580100                                                         | 5             |
| 5,90                                 | 200      | 30       | 0012500590100                                                         | 5             |
| 6,20                                 | 200      | 30       | 0012500620100                                                         | 5             |
| 6,80                                 | 200      | 30       | 0012500680100                                                         | 5             |
| 7,00                                 | 200      | 30       | 0012500700100                                                         | 5             |
|                                      |          |          |                                                                       |               |
| Länge / Length / Longitud: 225/30 mm |          |          |                                                                       |               |
| d1<br>mm                             | l1<br>mm | l2<br>mm | Code 126<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 6,80                                 | 225      | 30       | 0012600680100                                                         | 5             |
| 7,00                                 | 225      | 30       | 0012600700100                                                         | 5             |
| 7,20                                 | 225      | 30       | 0012600720100                                                         | 5             |
| 7,40                                 | 225      | 30       | 0012600740100                                                         | 5             |
|                                      |          |          |                                                                       |               |
| Länge / Length / Longitud: 300/30 mm |          |          |                                                                       |               |
| d1<br>mm                             | l1<br>mm | l2<br>mm | Code 127<br>Art.-Nr.                                                  | Inh.<br>Cont. |
| 5,00                                 | 300      | 30       | 0012700500100                                                         | 5             |
| 5,50                                 | 300      | 30       | 0012700550100                                                         | 5             |
| 5,70                                 | 300      | 30       | 0012700570100                                                         | 5             |
| 5,80                                 | 300      | 30       | 0012700580100                                                         | 5             |
| 6,80                                 | 300      | 30       | 0012700680100                                                         | 5             |
| 7,00                                 | 300      | 30       | 0012700700100                                                         | 5             |



**Metal- und Edelstahlbohrer**  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

## D HSS Cobalt Schweisspunktbohrer

### Einsatzbereich:

Spezialbohrer für Karoseriespengler. Zum einfachen Aufbohren von Schweißpunkten.

## E HSS Cobalt spotweld drills

### Range of application:

This high performance Spot Weld Drill possesses the ability to remove a spot weld without destroying the deeper sheet metal.

## ES Broca para puntos de soldadura HSS Cobalt

### Ámbito de aplicación:

Broca especial para hojalateros. Para el taladrado sencillo de puntos de soldado.



Präzise  
Precise  
Preciso



Bruchstabil  
Break-resistant  
Resistente a la rotura



Industriequalität  
Industrial quality  
Calidad industrial



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Einzelverpackung  
Single pack  
Embalaje individual



Einzelverpackung  
Single packing  
Embalaje individual



### TiN

Hohe Performance,  
lange Standzeit  
High performance,  
long durability  
Rendimiento elevado,  
duración prolongada

Einzelverpackung  
Single packing  
Embalaje individual

Länge / Length / Longitud: 80/38 mm

|      |    |    | blank / bright / brillante |       |    | blank / bright / brillante |       |    | TiN           |       |
|------|----|----|----------------------------|-------|----|----------------------------|-------|----|---------------|-------|
| d1   | l1 | l2 | Code 130                   | Inh.  |    | Code 330                   | Inh.  |    | Code 336      | Inh.  |
| mm   | mm | mm | Art.-Nr.                   | Cont. |    | Art.-Nr.                   | Cont. |    | Art.-Nr.      | Cont. |
| 6,00 | 80 | 38 | 0013000600100              | 1     | 10 | 0033000600100              | 1     | 10 | 0033600600100 | 1     |
| 8,00 | 80 | 38 | 0013000800100              | 1     | 10 | 0033000800100              | 1     | 10 | 0033600800100 | 1     |

**D HSS Spiralbohrer mit  
Morsekegel, DIN 345 RN**

**Einsatzbereich:**

Hochleistungsbohrer zum Bohren von legierten und unlegierten Stählen und Stahlguss, Grauguss, Temperguss, Kupferlegierungen, Neusilber, Graphit, Sinterisen.

**E HSS morse taper shank drills,  
DIN 345 RN**

**Range of application:**

Premium quality twist drills for drilling steel and steel castings, alloy and plain carbon, grey iron castings, copper-alloys, nickel-silver, graphite and similar materials.

**ES Broca espiral HSS con cono  
Morse, DIN 345 RN**

**Ámbito de aplicación:**

Broca espiral afilada con precisión, calidad industrial para el taladrado de aceros aleados y no aleados, hierro fundido gris, fundición maleable, aleaciones de cobre, alpaca, grafito, hierro sinterizado.



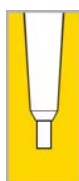
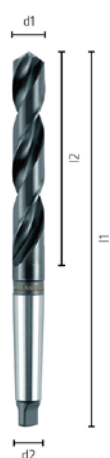
Industriequalität  
Industrial quality  
Calidad industrial



Bruchstabil  
Break-resistant  
Resistente a la rotura



Präzise  
Precise  
Preciso



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm |   | Code 202<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|---|----------------------|---------------|
| 5,00     | 133      | 52       | 1 | 0020200500100        | 1             |
| 5,50     | 138      | 57       | 1 | 0020200550100        | 1             |
| 6,00     | 138      | 57       | 1 | 0020200600100        | 1             |
| 6,50     | 144      | 63       | 1 | 0020200650100        | 1             |
| 7,00     | 150      | 69       | 1 | 0020200700100        | 1             |
| 7,50     | 150      | 69       | 1 | 0020200750100        | 1             |
| 8,00     | 156      | 75       | 1 | 0020200800100        | 1             |
| 8,50     | 156      | 75       | 1 | 0020200850100        | 1             |
| 9,00     | 162      | 81       | 1 | 0020200900100        | 1             |
| 9,50     | 162      | 81       | 1 | 0020200950100        | 1             |
| 9,80     | 168      | 87       | 1 | 0020200980100        | 1             |
| 10,00    | 168      | 87       | 1 | 0020201000100        | 1             |
| 10,20    | 168      | 87       | 1 | 0020201020100        | 1             |
| 10,25    | 168      | 87       | 1 | 0020201025100        | 1             |
| 10,50    | 168      | 87       | 1 | 0020201050100        | 1             |
| 10,75    | 175      | 94       | 1 | 0020201075100        | 1             |
| 11,00    | 175      | 94       | 1 | 0020201100100        | 1             |
| 11,25    | 175      | 94       | 1 | 0020201125100        | 1             |
| 11,50    | 175      | 94       | 1 | 0020201150100        | 1             |
| 11,75    | 175      | 94       | 1 | 0020201175100        | 1             |
| 12,00    | 182      | 101      | 1 | 0020201200100        | 1             |
| 12,25    | 182      | 101      | 1 | 0020201225100        | 1             |



Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

|          |          |          |                                                                                   | Einzelverpackung<br>Single pack<br>Embalaje individual |               |
|----------|----------|----------|-----------------------------------------------------------------------------------|--------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm |  | Code 202<br>Art.-Nr.                                   | Inh.<br>Cont. |
| 12,50    | 182      | 101      | 1                                                                                 | 0020201250100                                          | 1             |
| 12,75    | 182      | 101      | 1                                                                                 | 0020201275100                                          | 1             |
| 13,00    | 182      | 101      | 1                                                                                 | 0020201300100                                          | 1             |
| 13,25    | 189      | 108      | 1                                                                                 | 0020201325100                                          | 1             |
| 13,50    | 189      | 108      | 1                                                                                 | 0020201350100                                          | 1             |
| 13,75    | 189      | 108      | 1                                                                                 | 0020201375100                                          | 1             |
| 14,00    | 189      | 108      | 1                                                                                 | 0020201400100                                          | 1             |
| 14,25    | 212      | 114      | 2                                                                                 | 0020201425100                                          | 1             |
| 14,50    | 212      | 114      | 2                                                                                 | 0020201450100                                          | 1             |
| 14,75    | 212      | 114      | 2                                                                                 | 0020201475100                                          | 1             |
| 15,00    | 212      | 114      | 2                                                                                 | 0020201500100                                          | 1             |
| 15,25    | 218      | 120      | 2                                                                                 | 0020201525100                                          | 1             |
| 15,50    | 218      | 120      | 2                                                                                 | 0020201550100                                          | 1             |
| 15,75    | 218      | 120      | 2                                                                                 | 0020201575100                                          | 1             |
| 16,00    | 218      | 120      | 2                                                                                 | 0020201600100                                          | 1             |
| 16,25    | 223      | 125      | 2                                                                                 | 0020201625100                                          | 1             |
| 16,50    | 223      | 125      | 2                                                                                 | 0020201650100                                          | 1             |
| 16,75    | 223      | 125      | 2                                                                                 | 0020201675100                                          | 1             |
| 17,00    | 223      | 125      | 2                                                                                 | 0020201700100                                          | 1             |
| 17,25    | 228      | 130      | 2                                                                                 | 0020201725100                                          | 1             |
| 17,50    | 228      | 130      | 2                                                                                 | 0020201750100                                          | 1             |
| 17,75    | 228      | 130      | 2                                                                                 | 0020201775100                                          | 1             |
| 18,00    | 228      | 130      | 2                                                                                 | 0020201800100                                          | 1             |
| 18,25    | 233      | 135      | 2                                                                                 | 0020201825100                                          | 1             |
| 18,50    | 233      | 135      | 2                                                                                 | 0020201850100                                          | 1             |
| 18,75    | 233      | 135      | 2                                                                                 | 0020201875100                                          | 1             |
| 19,00    | 233      | 135      | 2                                                                                 | 0020201900100                                          | 1             |
| 19,25    | 238      | 140      | 2                                                                                 | 0020201925100                                          | 1             |
| 19,50    | 238      | 140      | 2                                                                                 | 0020201950100                                          | 1             |
| 19,75    | 238      | 140      | 2                                                                                 | 0020201975100                                          | 1             |
| 20,00    | 238      | 140      | 2                                                                                 | 0020202000100                                          | 1             |
| 20,25    | 243      | 145      | 2                                                                                 | 0020202025100                                          | 1             |
| 20,50    | 243      | 145      | 2                                                                                 | 0020202050100                                          | 1             |
| 20,75    | 243      | 145      | 2                                                                                 | 0020202075100                                          | 1             |
| 21,00    | 243      | 145      | 2                                                                                 | 0020202100100                                          | 1             |
| 21,25    | 248      | 150      | 2                                                                                 | 0020202125100                                          | 1             |
| 21,50    | 248      | 150      | 2                                                                                 | 0020202150100                                          | 1             |
| 21,75    | 248      | 150      | 2                                                                                 | 0020202175100                                          | 1             |
| 22,00    | 248      | 150      | 2                                                                                 | 0020202200100                                          | 1             |
| 22,25    | 248      | 150      | 2                                                                                 | 0020202225100                                          | 1             |
| 22,50    | 253      | 155      | 2                                                                                 | 0020202250100                                          | 1             |
| 22,75    | 253      | 155      | 2                                                                                 | 0020202275100                                          | 1             |
| 23,00    | 253      | 155      | 2                                                                                 | 0020202300100                                          | 1             |
| 23,50    | 276      | 155      | 3                                                                                 | 0020202350100                                          | 1             |
| 23,75    | 281      | 160      | 3                                                                                 | 0020202375100                                          | 1             |
| 24,00    | 281      | 160      | 3                                                                                 | 0020202400100                                          | 1             |
| 24,50    | 281      | 160      | 3                                                                                 | 0020202450100                                          | 1             |
| 24,75    | 281      | 160      | 3                                                                                 | 0020202475100                                          | 1             |
| 25,00    | 281      | 160      | 3                                                                                 | 0020202500100                                          | 1             |
| 25,25    | 286      | 165      | 3                                                                                 | 0020202525100                                          | 1             |
| 25,50    | 286      | 165      | 3                                                                                 | 0020202550100                                          | 1             |
| 25,75    | 286      | 165      | 3                                                                                 | 0020202575100                                          | 1             |
| 26,00    | 286      | 165      | 3                                                                                 | 0020202600100                                          | 1             |
| 26,50    | 286      | 165      | 3                                                                                 | 0020202650100                                          | 1             |
| 27,00    | 291      | 170      | 3                                                                                 | 0020202700100                                          | 1             |
| 27,50    | 291      | 170      | 3                                                                                 | 0020202750100                                          | 1             |

|          |          |          |                                                                                   | Einzelverpackung<br>Single pack<br>Embalaje individual |               |
|----------|----------|----------|-----------------------------------------------------------------------------------|--------------------------------------------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm |  | Code 202<br>Art.-Nr.                                   | Inh.<br>Cont. |
| 27,75    | 291      | 170      | 3                                                                                 | 0020202775100                                          | 1             |
| 28,00    | 291      | 170      | 3                                                                                 | 0020202800100                                          | 1             |
| 28,25    | 296      | 175      | 3                                                                                 | 0020202825100                                          | 1             |
| 28,50    | 296      | 175      | 3                                                                                 | 0020202850100                                          | 1             |
| 28,75    | 296      | 175      | 3                                                                                 | 0020202875100                                          | 1             |
| 29,00    | 296      | 175      | 3                                                                                 | 0020202900100                                          | 1             |
| 29,50    | 296      | 175      | 3                                                                                 | 0020202950100                                          | 1             |
| 29,75    | 296      | 175      | 3                                                                                 | 0020202975100                                          | 1             |
| 30,00    | 296      | 175      | 3                                                                                 | 0020203000100                                          | 1             |
| 30,25    | 301      | 180      | 3                                                                                 | 0020203025100                                          | 1             |
| 30,50    | 301      | 180      | 3                                                                                 | 0020203050100                                          | 1             |
| 31,00    | 301      | 180      | 3                                                                                 | 0020203100100                                          | 1             |
| 31,50    | 301      | 180      | 3                                                                                 | 0020203150100                                          | 1             |
| 31,75    | 301      | 185      | 3                                                                                 | 0020203175100                                          | 1             |
| 32,00    | 334      | 185      | 4                                                                                 | 0020203200100                                          | 1             |
| 32,50    | 334      | 185      | 4                                                                                 | 0020203250100                                          | 1             |
| 33,00    | 334      | 185      | 4                                                                                 | 0020203300100                                          | 1             |
| 33,50    | 334      | 185      | 4                                                                                 | 0020203350100                                          | 1             |
| 34,00    | 339      | 190      | 4                                                                                 | 0020203400100                                          | 1             |
| 34,50    | 339      | 190      | 4                                                                                 | 0020203450100                                          | 1             |
| 35,00    | 339      | 190      | 4                                                                                 | 0020203500100                                          | 1             |
| 35,50    | 339      | 190      | 4                                                                                 | 0020203550100                                          | 1             |
| 36,00    | 344      | 195      | 4                                                                                 | 0020203600100                                          | 1             |
| 36,50    | 344      | 195      | 4                                                                                 | 0020203650100                                          | 1             |
| 37,00    | 344      | 195      | 4                                                                                 | 0020203700100                                          | 1             |
| 37,50    | 344      | 195      | 4                                                                                 | 0020203750100                                          | 1             |
| 38,00    | 349      | 200      | 4                                                                                 | 0020203800100                                          | 1             |
| 38,50    | 349      | 200      | 4                                                                                 | 0020203850100                                          | 1             |
| 39,00    | 349      | 200      | 4                                                                                 | 0020203900100                                          | 1             |
| 39,50    | 349      | 200      | 4                                                                                 | 0020203950100                                          | 1             |
| 40,00    | 349      | 200      | 4                                                                                 | 0020204000100                                          | 1             |
| 40,50    | 354      | 205      | 4                                                                                 | 0020204050100                                          | 1             |
| 41,00    | 354      | 205      | 4                                                                                 | 0020204100100                                          | 1             |
| 41,50    | 354      | 205      | 4                                                                                 | 0020204150100                                          | 1             |
| 42,00    | 354      | 205      | 4                                                                                 | 0020204200100                                          | 1             |
| 42,50    | 354      | 205      | 4                                                                                 | 0020204250100                                          | 1             |
| 43,00    | 359      | 210      | 4                                                                                 | 0020204300100                                          | 1             |
| 44,00    | 359      | 210      | 4                                                                                 | 0020204400100                                          | 1             |
| 45,00    | 359      | 210      | 4                                                                                 | 0020204500100                                          | 1             |
| 46,00    | 364      | 215      | 4                                                                                 | 0020204600100                                          | 1             |
| 47,00    | 364      | 215      | 4                                                                                 | 0020204700100                                          | 1             |
| 48,00    | 369      | 220      | 4                                                                                 | 0020204800100                                          | 1             |
| 49,00    | 369      | 220      | 4                                                                                 | 0020204900100                                          | 1             |
| 50,00    | 369      | 220      | 4                                                                                 | 0020205000100                                          | 1             |
| 51,00    | 412      | 225      | 5                                                                                 | 0020205100100                                          | 1             |
| 52,00    | 412      | 225      | 5                                                                                 | 0020205200100                                          | 1             |
| 53,00    | 412      | 225      | 5                                                                                 | 0020205300100                                          | 1             |
| 54,00    | 417      | 230      | 5                                                                                 | 0020205400100                                          | 1             |
| 55,00    | 417      | 230      | 5                                                                                 | 0020205500100                                          | 1             |
| 56,00    | 417      | 230      | 5                                                                                 | 0020205600100                                          | 1             |
| 57,00    | 422      | 235      | 5                                                                                 | 0020205700100                                          | 1             |
| 58,00    | 422      | 235      | 5                                                                                 | 0020205800100                                          | 1             |
| 59,00    | 422      | 235      | 5                                                                                 | 0020205900100                                          | 1             |
| 60,00    | 422      | 235      | 5                                                                                 | 0020206000100                                          | 1             |
| 65,00    | 432      | 245      | 5                                                                                 | 0020206500100                                          | 1             |
| 70,00    | 437      | 250      | 5                                                                                 | 0020207000100                                          | 1             |

**Für unser umfangreiches Sortiment an HSS- und VHM-Werkzeugen fordern Sie bitte den MAYKESTAG-Katalog an!**  
For our extensive range of HSS and solid carbide cutting tools please request the MAYKESTAG catalogue!  
Si desea consultar la gama completa de herramientas HSS y VHM, solicite nuestro catálogo de MAYKESTAG.





**D Drehzahlen und Vorschübe**

**E Spindle speeds and feeds**

**ES Velocidades y avances**

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

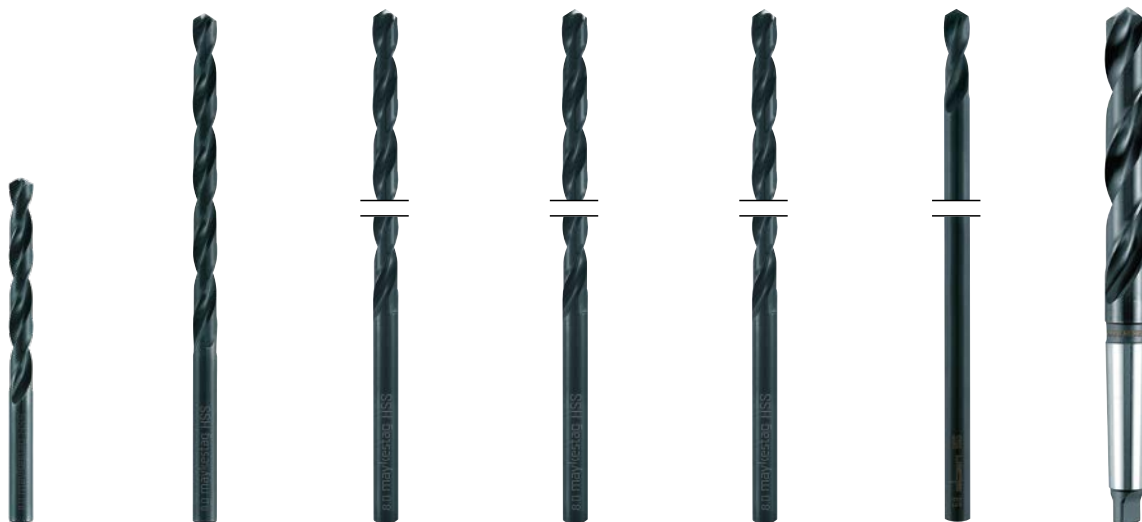
Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

n: Drehzahl U/min  
f: Vorschub mm/U

n: Spindle speed rpm  
f: Feed mm/rev

n: Velocidad r.p.m.  
f: Avance mm/giro

**MAYKESTAG**



**Code 100, 101, 111, 121, 123-127, 202, 501, 601**

| Ø<br>mm                             |  |  |  |  |  |  |  |      |       |      |       |      |       |
|-------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|-------|------|-------|------|-------|
|                                     | n                                                                                   | f                                                                                   | n                                                                                   | f                                                                                   | n                                                                                     | f                                                                                     | n                                                                                     | f    | n     | f    | n     | f    |       |
| 1,0                                 | 9549                                                                                | 0,03                                                                                | 7958                                                                                | 0,02                                                                                | 7003                                                                                  | 0,01                                                                                  | 6366                                                                                  | 0,02 | 14324 | 0,02 | 14324 | 0,02 |       |
| 1,5                                 | 6366                                                                                | 0,04                                                                                | 5305                                                                                | 0,02                                                                                | 4669                                                                                  | 0,01                                                                                  | 4244                                                                                  | 0,03 | 9549  | 0,04 | 9549  | 0,04 |       |
| 2,0                                 | 4775                                                                                | 0,05                                                                                | 3979                                                                                | 0,03                                                                                | 3501                                                                                  | 0,02                                                                                  | 3183                                                                                  | 0,04 | 7162  | 0,05 | 7162  | 0,05 |       |
| 2,5                                 | 3820                                                                                | 0,06                                                                                | 3183                                                                                | 0,04                                                                                | 2801                                                                                  | 0,03                                                                                  | 2546                                                                                  | 0,05 | 5730  | 0,06 | 5730  | 0,06 |       |
| 3,0                                 | 3183                                                                                | 0,07                                                                                | 2653                                                                                | 0,04                                                                                | 2334                                                                                  | 0,03                                                                                  | 2122                                                                                  | 0,06 | 4775  | 0,08 | 4775  | 0,08 |       |
| 3,2                                 | 2984                                                                                | 0,08                                                                                | 2487                                                                                | 0,05                                                                                | 2188                                                                                  | 0,04                                                                                  | 1989                                                                                  | 0,06 | 4476  | 0,08 | 4476  | 0,08 |       |
| 3,5                                 | 2728                                                                                | 0,09                                                                                | 2274                                                                                | 0,05                                                                                | 2001                                                                                  | 0,04                                                                                  | 1819                                                                                  | 0,07 | 4093  | 0,09 | 4093  | 0,09 |       |
| 4,0                                 | 2387                                                                                | 0,10                                                                                | 1989                                                                                | 0,06                                                                                | 1751                                                                                  | 0,05                                                                                  | 1592                                                                                  | 0,08 | 3581  | 0,11 | 3581  | 0,11 |       |
| 4,5                                 | 2122                                                                                | 0,11                                                                                | 1768                                                                                | 0,06                                                                                | 1556                                                                                  | 0,05                                                                                  | 1415                                                                                  | 0,09 | 3183  | 0,12 | 3183  | 0,12 |       |
| 4,8                                 | 1989                                                                                | 0,12                                                                                | 1658                                                                                | 0,07                                                                                | 1459                                                                                  | 0,06                                                                                  | 1326                                                                                  | 0,10 | 2984  | 0,13 | 2984  | 0,13 |       |
| 5,0                                 | 1910                                                                                | 0,12                                                                                | 1592                                                                                | 0,07                                                                                | 1401                                                                                  | 0,06                                                                                  | 1273                                                                                  | 0,10 | 2865  | 0,14 | 2865  | 0,14 |       |
| 5,5                                 | 1736                                                                                | 0,13                                                                                | 1447                                                                                | 0,08                                                                                | 1273                                                                                  | 0,07                                                                                  | 1157                                                                                  | 0,11 | 2604  | 0,15 | 2604  | 0,15 |       |
| 6,0                                 | 1592                                                                                | 0,15                                                                                | 1326                                                                                | 0,08                                                                                | 1167                                                                                  | 0,07                                                                                  | 1061                                                                                  | 0,12 | 2387  | 0,15 | 2387  | 0,15 |       |
| 6,5                                 | 1469                                                                                | 0,16                                                                                | 1224                                                                                | 0,09                                                                                | 1077                                                                                  | 0,08                                                                                  | 979                                                                                   | 0,13 | 2204  | 0,16 | 2204  | 0,16 |       |
| 7,0                                 | 1364                                                                                | 0,17                                                                                | 1137                                                                                | 0,09                                                                                | 1000                                                                                  | 0,08                                                                                  | 909                                                                                   | 0,14 | 2046  | 0,17 | 2046  | 0,17 |       |
| 7,5                                 | 1273                                                                                | 0,19                                                                                | 1061                                                                                | 0,10                                                                                | 934                                                                                   | 0,09                                                                                  | 849                                                                                   | 0,15 | 1910  | 0,17 | 1910  | 0,17 |       |
| 8,0                                 | 1194                                                                                | 0,20                                                                                | 995                                                                                 | 0,10                                                                                | 875                                                                                   | 0,09                                                                                  | 796                                                                                   | 0,16 | 1790  | 0,18 | 1790  | 0,18 |       |
| 9,0                                 | 1061                                                                                | 0,21                                                                                | 884                                                                                 | 0,11                                                                                | 778                                                                                   | 0,10                                                                                  | 707                                                                                   | 0,17 | 1592  | 0,19 | 1592  | 0,19 |       |
| 10,0                                | 955                                                                                 | 0,23                                                                                | 796                                                                                 | 0,13                                                                                | 700                                                                                   | 0,11                                                                                  | 637                                                                                   | 0,18 | 1432  | 0,20 | 1432  | 0,20 |       |
| 12,0                                | 796                                                                                 | 0,25                                                                                | 663                                                                                 | 0,16                                                                                | 584                                                                                   | 0,14                                                                                  | 531                                                                                   | 0,20 | 1194  | 0,22 | 1194  | 0,22 |       |
| 14,0                                | 682                                                                                 | 0,28                                                                                | 568                                                                                 | 0,18                                                                                | 500                                                                                   | 0,16                                                                                  | 455                                                                                   | 0,23 | 1023  | 0,26 | 1023  | 0,26 |       |
| 16,0                                | 597                                                                                 | 0,30                                                                                | 497                                                                                 | 0,20                                                                                | 438                                                                                   | 0,18                                                                                  | 398                                                                                   | 0,25 | 895   | 0,30 | 895   | 0,30 |       |
| 18,0                                | 531                                                                                 | 0,32                                                                                | 442                                                                                 | 0,21                                                                                | 389                                                                                   | 0,19                                                                                  | 354                                                                                   | 0,27 | 796   | 0,32 | 796   | 0,32 |       |
| 20,0                                | 477                                                                                 | 0,35                                                                                | 398                                                                                 | 0,22                                                                                | 350                                                                                   | 0,20                                                                                  | 318                                                                                   | 0,28 | 716   | 0,35 | 716   | 0,35 |       |
| Kühlung<br>Coolant<br>Refrigeración | E                                                                                   |                                                                                     | E                                                                                   |                                                                                     | E                                                                                     |                                                                                       | T/D/E                                                                                 |      | E/O   |      | E     |      | E/W/A |

E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido, W: Wasser | Water | agua, A: Luft | Air | Aire

## D Drehzahlen und Vorschübe

## E Spindle speeds and feeds

## ES Velocidades y avances

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

n: Drehzahl  
f: Vorschub

n: Spindle speed  
f: Feed

rpm  
mm/rev

n: Velocidad  
f: Avance

r.p.m.  
mm/giro

### HSS Cobalt



Code 130, 183, 330, 336, 607, 611, 613, 623, 638, 655, 656, 663, 901, 904, 906, 907, 921

| Ø<br>mm                             |  |      |  |      |  |      |  |      |  |      |  |      |  |      |  |      |  |      |       |      |
|-------------------------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|------|-------|------|
|                                     | n                                                                                   | f    | n                                                                                   | f    | n                                                                                   | f    | n                                                                                   | f    | n                                                                                   | f    | n                                                                                   | f    | n                                                                                    | f    | n                                                                                     | f    | n                                                                                     | f    |       |      |
| 1.0                                 | 9549                                                                                | 0,03 | 7958                                                                                | 0,02 | 7003                                                                                | 0,01 | 3183                                                                                | 0,01 | 3820                                                                                | 0,01 | 6366                                                                                | 0,02 | 1751                                                                                 | 0,01 | 14324                                                                                 | 0,02 | 14324                                                                                 | 0,02 | 4775  | 0,04 |
| 1.5                                 | 6366                                                                                | 0,04 | 5305                                                                                | 0,02 | 4669                                                                                | 0,01 | 2122                                                                                | 0,02 | 2546                                                                                | 0,02 | 4244                                                                                | 0,03 | 1167                                                                                 | 0,02 | 9549                                                                                  | 0,04 | 9549                                                                                  | 0,04 | 3183  | 0,04 |
| 2.0                                 | 4775                                                                                | 0,05 | 3979                                                                                | 0,03 | 3501                                                                                | 0,02 | 1592                                                                                | 0,02 | 1910                                                                                | 0,02 | 3183                                                                                | 0,04 | 875                                                                                  | 0,02 | 7162                                                                                  | 0,05 | 7162                                                                                  | 0,05 | 2387  | 0,05 |
| 2.5                                 | 3820                                                                                | 0,06 | 3183                                                                                | 0,04 | 2801                                                                                | 0,03 | 1273                                                                                | 0,03 | 1528                                                                                | 0,03 | 2546                                                                                | 0,05 | 700                                                                                  | 0,03 | 5730                                                                                  | 0,06 | 5730                                                                                  | 0,06 | 1910  | 0,06 |
| 3.0                                 | 3183                                                                                | 0,07 | 2653                                                                                | 0,04 | 2334                                                                                | 0,03 | 1061                                                                                | 0,03 | 1273                                                                                | 0,03 | 2122                                                                                | 0,06 | 584                                                                                  | 0,03 | 4775                                                                                  | 0,08 | 4775                                                                                  | 0,08 | 1592  | 0,06 |
| 3.2                                 | 2984                                                                                | 0,08 | 2487                                                                                | 0,05 | 2188                                                                                | 0,04 | 995                                                                                 | 0,03 | 1194                                                                                | 0,03 | 1989                                                                                | 0,06 | 547                                                                                  | 0,03 | 4476                                                                                  | 0,08 | 4476                                                                                  | 0,08 | 1492  | 0,06 |
| 3.5                                 | 2728                                                                                | 0,09 | 2274                                                                                | 0,05 | 2001                                                                                | 0,04 | 909                                                                                 | 0,04 | 1091                                                                                | 0,04 | 1819                                                                                | 0,07 | 500                                                                                  | 0,04 | 4093                                                                                  | 0,09 | 4093                                                                                  | 0,09 | 1364  | 0,07 |
| 4.0                                 | 2387                                                                                | 0,10 | 1989                                                                                | 0,06 | 1751                                                                                | 0,05 | 796                                                                                 | 0,04 | 955                                                                                 | 0,04 | 1592                                                                                | 0,08 | 438                                                                                  | 0,04 | 3581                                                                                  | 0,11 | 3581                                                                                  | 0,11 | 1194  | 0,07 |
| 4.5                                 | 2122                                                                                | 0,11 | 1768                                                                                | 0,06 | 1556                                                                                | 0,05 | 707                                                                                 | 0,05 | 849                                                                                 | 0,05 | 1415                                                                                | 0,09 | 389                                                                                  | 0,05 | 3183                                                                                  | 0,12 | 3183                                                                                  | 0,12 | 1061  | 0,08 |
| 4.8                                 | 1989                                                                                | 0,12 | 1658                                                                                | 0,07 | 1459                                                                                | 0,06 | 663                                                                                 | 0,05 | 796                                                                                 | 0,05 | 1326                                                                                | 0,10 | 365                                                                                  | 0,05 | 2984                                                                                  | 0,13 | 2984                                                                                  | 0,13 | 995   | 0,08 |
| 5.0                                 | 1910                                                                                | 0,12 | 1592                                                                                | 0,07 | 1401                                                                                | 0,06 | 637                                                                                 | 0,05 | 764                                                                                 | 0,05 | 1273                                                                                | 0,10 | 350                                                                                  | 0,05 | 2865                                                                                  | 0,14 | 2865                                                                                  | 0,14 | 955   | 0,08 |
| 5.5                                 | 1736                                                                                | 0,13 | 1447                                                                                | 0,08 | 1273                                                                                | 0,07 | 579                                                                                 | 0,06 | 694                                                                                 | 0,06 | 1157                                                                                | 0,11 | 318                                                                                  | 0,06 | 2604                                                                                  | 0,15 | 2604                                                                                  | 0,15 | 868   | 0,09 |
| 6.0                                 | 1592                                                                                | 0,15 | 1326                                                                                | 0,08 | 1167                                                                                | 0,07 | 531                                                                                 | 0,06 | 637                                                                                 | 0,06 | 1061                                                                                | 0,12 | 292                                                                                  | 0,06 | 2387                                                                                  | 0,15 | 2387                                                                                  | 0,15 | 796   | 0,10 |
| 6.5                                 | 1469                                                                                | 0,16 | 1224                                                                                | 0,09 | 1077                                                                                | 0,08 | 490                                                                                 | 0,07 | 588                                                                                 | 0,07 | 979                                                                                 | 0,13 | 269                                                                                  | 0,07 | 2204                                                                                  | 0,16 | 2204                                                                                  | 0,16 | 735   | 0,11 |
| 7.0                                 | 1364                                                                                | 0,17 | 1137                                                                                | 0,09 | 1000                                                                                | 0,08 | 455                                                                                 | 0,07 | 546                                                                                 | 0,07 | 909                                                                                 | 0,14 | 250                                                                                  | 0,07 | 2046                                                                                  | 0,17 | 2046                                                                                  | 0,17 | 682   | 0,12 |
| 7.5                                 | 1273                                                                                | 0,19 | 1061                                                                                | 0,10 | 934                                                                                 | 0,09 | 424                                                                                 | 0,08 | 509                                                                                 | 0,08 | 849                                                                                 | 0,15 | 233                                                                                  | 0,08 | 1910                                                                                  | 0,17 | 1910                                                                                  | 0,17 | 637   | 0,13 |
| 8.0                                 | 1194                                                                                | 0,20 | 995                                                                                 | 0,10 | 875                                                                                 | 0,09 | 398                                                                                 | 0,08 | 477                                                                                 | 0,08 | 796                                                                                 | 0,16 | 219                                                                                  | 0,08 | 1790                                                                                  | 0,18 | 1790                                                                                  | 0,18 | 597   | 0,14 |
| 9.0                                 | 1061                                                                                | 0,21 | 884                                                                                 | 0,11 | 778                                                                                 | 0,10 | 354                                                                                 | 0,09 | 424                                                                                 | 0,09 | 707                                                                                 | 0,17 | 195                                                                                  | 0,09 | 1592                                                                                  | 0,19 | 1592                                                                                  | 0,19 | 531   | 0,16 |
| 10.0                                | 955                                                                                 | 0,23 | 796                                                                                 | 0,13 | 700                                                                                 | 0,11 | 318                                                                                 | 0,10 | 382                                                                                 | 0,10 | 637                                                                                 | 0,18 | 175                                                                                  | 0,10 | 1432                                                                                  | 0,20 | 1432                                                                                  | 0,20 | 477   | 0,17 |
| 12.0                                | 796                                                                                 | 0,25 | 663                                                                                 | 0,16 | 584                                                                                 | 0,14 | 265                                                                                 | 0,12 | 318                                                                                 | 0,12 | 531                                                                                 | 0,20 | 146                                                                                  | 0,12 | 1194                                                                                  | 0,22 | 1194                                                                                  | 0,22 | 398   | 0,20 |
| 14.0                                | 682                                                                                 | 0,28 | 568                                                                                 | 0,18 | 500                                                                                 | 0,16 | 227                                                                                 | 0,13 | 273                                                                                 | 0,13 | 455                                                                                 | 0,23 | 125                                                                                  | 0,13 | 1023                                                                                  | 0,26 | 1023                                                                                  | 0,26 | 341   | 0,23 |
| 16.0                                | 597                                                                                 | 0,30 | 497                                                                                 | 0,20 | 438                                                                                 | 0,18 | 199                                                                                 | 0,14 | 239                                                                                 | 0,14 | 398                                                                                 | 0,25 | 109                                                                                  | 0,14 | 895                                                                                   | 0,30 | 895                                                                                   | 0,30 | 298   | 0,25 |
| 18.0                                | 531                                                                                 | 0,32 | 442                                                                                 | 0,21 | 389                                                                                 | 0,19 | 177                                                                                 | 0,15 | 212                                                                                 | 0,15 | 354                                                                                 | 0,27 | 97                                                                                   | 0,15 | 796                                                                                   | 0,32 | 796                                                                                   | 0,32 | 265   | 0,26 |
| 20.0                                | 477                                                                                 | 0,35 | 398                                                                                 | 0,22 | 350                                                                                 | 0,20 | 159                                                                                 | 0,16 | 191                                                                                 | 0,16 | 318                                                                                 | 0,28 | 88                                                                                   | 0,16 | 716                                                                                   | 0,35 | 716                                                                                   | 0,35 | 239   | 0,27 |
| Kühlung<br>Coolant<br>Refrigeración | E                                                                                   |      | E                                                                                   |      | E                                                                                   |      | E/O                                                                                 |      | E                                                                                   |      | T/D/E                                                                               |      | O                                                                                    |      | E/O                                                                                   |      | E                                                                                     |      | E/W/A |      |
|                                     |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                      |      |                                                                                       |      |                                                                                       |      |       |      |
|                                     |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                      |      |                                                                                       |      |                                                                                       |      |       |      |
|                                     |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                     |      |                                                                                      |      |                                                                                       |      |                                                                                       |      |       |      |

E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido, W: Wasser | Water | agua, A: Luft | Air | Aire

Metal- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

**D Drehzahlen und Vorschübe**

**E Spindle speeds and feeds**

**ES Velocidades y avances**

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

n: Drehzahl  
f: Vorschub

U/min  
mm/U

n: Spindle speed  
f: Feed

rpm  
mm/rev

n: Velocidad  
f: Avance

r.p.m.  
mm/giro

**PRO / HSS Super**



**Code 181, 301, 311, 321, 331, 371, 528, 551, 951, 952, 954**

| Ø<br>mm                             |  |      |  |      |  |      |  |      |  |      |  |      |  |      |
|-------------------------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|------|
|                                     | n                                                                                   | f    | n                                                                                   | f    | n                                                                                   | f    | n                                                                                   | f    | n                                                                                     | f    | n                                                                                     | f    | n                                                                                     | f    |
| 1,0                                 | 7003                                                                                | 0,03 | 6048                                                                                | 0,02 | 5411                                                                                | 0,01 | 4775                                                                                | 0,02 | 10823                                                                                 | 0,02 | 10823                                                                                 | 0,02 | 4775                                                                                  | 0,04 |
| 1,5                                 | 4669                                                                                | 0,04 | 4032                                                                                | 0,02 | 3608                                                                                | 0,01 | 3183                                                                                | 0,03 | 7215                                                                                  | 0,04 | 7215                                                                                  | 0,04 | 3183                                                                                  | 0,04 |
| 2,0                                 | 3501                                                                                | 0,05 | 3024                                                                                | 0,03 | 2706                                                                                | 0,02 | 2387                                                                                | 0,04 | 5411                                                                                  | 0,05 | 5411                                                                                  | 0,05 | 2387                                                                                  | 0,05 |
| 2,5                                 | 2801                                                                                | 0,06 | 2419                                                                                | 0,04 | 2165                                                                                | 0,03 | 1910                                                                                | 0,05 | 4329                                                                                  | 0,06 | 4329                                                                                  | 0,06 | 1910                                                                                  | 0,06 |
| 3,0                                 | 2334                                                                                | 0,07 | 2016                                                                                | 0,04 | 1804                                                                                | 0,03 | 1592                                                                                | 0,06 | 3608                                                                                  | 0,08 | 3608                                                                                  | 0,08 | 1592                                                                                  | 0,06 |
| 3,2                                 | 2188                                                                                | 0,08 | 1890                                                                                | 0,05 | 1691                                                                                | 0,04 | 1492                                                                                | 0,06 | 3382                                                                                  | 0,08 | 3382                                                                                  | 0,08 | 1492                                                                                  | 0,06 |
| 3,5                                 | 2001                                                                                | 0,09 | 1728                                                                                | 0,05 | 1546                                                                                | 0,04 | 1364                                                                                | 0,07 | 3092                                                                                  | 0,09 | 3092                                                                                  | 0,09 | 1364                                                                                  | 0,07 |
| 4,0                                 | 1751                                                                                | 0,10 | 1512                                                                                | 0,06 | 1353                                                                                | 0,05 | 1194                                                                                | 0,08 | 2706                                                                                  | 0,11 | 2706                                                                                  | 0,11 | 1194                                                                                  | 0,07 |
| 4,5                                 | 1556                                                                                | 0,11 | 1344                                                                                | 0,06 | 1203                                                                                | 0,05 | 1061                                                                                | 0,09 | 2405                                                                                  | 0,12 | 2405                                                                                  | 0,12 | 1061                                                                                  | 0,08 |
| 4,8                                 | 1459                                                                                | 0,12 | 1260                                                                                | 0,07 | 1127                                                                                | 0,06 | 995                                                                                 | 0,10 | 2255                                                                                  | 0,13 | 2255                                                                                  | 0,13 | 995                                                                                   | 0,08 |
| 5,0                                 | 1401                                                                                | 0,12 | 1210                                                                                | 0,07 | 1082                                                                                | 0,06 | 955                                                                                 | 0,10 | 2165                                                                                  | 0,14 | 2165                                                                                  | 0,14 | 955                                                                                   | 0,08 |
| 5,5                                 | 1273                                                                                | 0,13 | 1100                                                                                | 0,08 | 984                                                                                 | 0,07 | 868                                                                                 | 0,11 | 1968                                                                                  | 0,15 | 1968                                                                                  | 0,15 | 868                                                                                   | 0,09 |
| 6,0                                 | 1167                                                                                | 0,15 | 1008                                                                                | 0,08 | 902                                                                                 | 0,07 | 796                                                                                 | 0,12 | 1804                                                                                  | 0,15 | 1804                                                                                  | 0,15 | 796                                                                                   | 0,10 |
| 6,5                                 | 1077                                                                                | 0,16 | 930                                                                                 | 0,09 | 833                                                                                 | 0,08 | 735                                                                                 | 0,13 | 1665                                                                                  | 0,16 | 1665                                                                                  | 0,16 | 735                                                                                   | 0,11 |
| 7,0                                 | 1000                                                                                | 0,17 | 864                                                                                 | 0,09 | 773                                                                                 | 0,08 | 682                                                                                 | 0,14 | 1546                                                                                  | 0,17 | 1546                                                                                  | 0,17 | 682                                                                                   | 0,12 |
| 7,5                                 | 934                                                                                 | 0,19 | 806                                                                                 | 0,10 | 722                                                                                 | 0,09 | 637                                                                                 | 0,15 | 1443                                                                                  | 0,17 | 1443                                                                                  | 0,17 | 637                                                                                   | 0,13 |
| 8,0                                 | 875                                                                                 | 0,20 | 756                                                                                 | 0,10 | 676                                                                                 | 0,09 | 597                                                                                 | 0,16 | 1353                                                                                  | 0,18 | 1353                                                                                  | 0,18 | 597                                                                                   | 0,14 |
| 9,0                                 | 778                                                                                 | 0,21 | 672                                                                                 | 0,11 | 601                                                                                 | 0,10 | 531                                                                                 | 0,17 | 1203                                                                                  | 0,19 | 1203                                                                                  | 0,19 | 531                                                                                   | 0,16 |
| 10,0                                | 700                                                                                 | 0,23 | 605                                                                                 | 0,13 | 541                                                                                 | 0,11 | 477                                                                                 | 0,18 | 1082                                                                                  | 0,20 | 1082                                                                                  | 0,20 | 477                                                                                   | 0,17 |
| 12,0                                | 584                                                                                 | 0,25 | 504                                                                                 | 0,16 | 451                                                                                 | 0,14 | 398                                                                                 | 0,20 | 902                                                                                   | 0,22 | 902                                                                                   | 0,22 | 398                                                                                   | 0,20 |
| 14,0                                | 500                                                                                 | 0,28 | 432                                                                                 | 0,18 | 387                                                                                 | 0,16 | 341                                                                                 | 0,23 | 773                                                                                   | 0,26 | 773                                                                                   | 0,26 | 341                                                                                   | 0,23 |
| 16,0                                | 438                                                                                 | 0,30 | 378                                                                                 | 0,20 | 338                                                                                 | 0,18 | 298                                                                                 | 0,25 | 676                                                                                   | 0,30 | 676                                                                                   | 0,30 | 298                                                                                   | 0,25 |
| 18,0                                | 389                                                                                 | 0,32 | 336                                                                                 | 0,21 | 301                                                                                 | 0,19 | 265                                                                                 | 0,27 | 601                                                                                   | 0,32 | 601                                                                                   | 0,32 | 265                                                                                   | 0,26 |
| 20,0                                | 350                                                                                 | 0,35 | 302                                                                                 | 0,22 | 271                                                                                 | 0,20 | 239                                                                                 | 0,28 | 541                                                                                   | 0,35 | 541                                                                                   | 0,35 | 239                                                                                   | 0,27 |
| Kühlung<br>Coolant<br>Refrigeración | E                                                                                   |      | E                                                                                   |      | E                                                                                   |      | T/D/E                                                                               |      | E/O                                                                                   |      | E                                                                                     |      | E/W/A                                                                                 |      |

E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido, W: Wasser | Water | agua, A: Luft | Air | Aire

## D Drehzahlen und Vorschübe

## E Spindle speeds and feeds

## ES Velocidades y avances

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

n: Drehzahl U/min  
f: Vorschub mm/U

n: Spindle speed rpm  
f: Feed mm/rev

n: Velocidad r.p.m.  
f: Avance mm/giro

### HSS Sprint / Sprint Master



### Code 618, 626, 631, 640, 642, 648, 654, 734

| Ø<br>mm                             |  |  |  |  |  |  |  |      |       |      |       |      |       |
|-------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|-------|------|-------|------|-------|
|                                     | n                                                                                   | f                                                                                   | n                                                                                   | f                                                                                   | n                                                                                    | f                                                                                     | n                                                                                     | f    | n     | f    | n     | f    |       |
| 1,0                                 | 7003                                                                                | 0,03                                                                                | 6048                                                                                | 0,02                                                                                | 5411                                                                                 | 0,01                                                                                  | 4775                                                                                  | 0,02 | 10823 | 0,02 | 10823 | 0,02 |       |
| 1,5                                 | 4669                                                                                | 0,04                                                                                | 4032                                                                                | 0,02                                                                                | 3608                                                                                 | 0,01                                                                                  | 3183                                                                                  | 0,03 | 7215  | 0,04 | 7215  | 0,04 |       |
| 2,0                                 | 3501                                                                                | 0,05                                                                                | 3024                                                                                | 0,03                                                                                | 2706                                                                                 | 0,02                                                                                  | 2387                                                                                  | 0,04 | 5411  | 0,05 | 5411  | 0,05 |       |
| 2,5                                 | 2801                                                                                | 0,06                                                                                | 2419                                                                                | 0,04                                                                                | 2165                                                                                 | 0,03                                                                                  | 1910                                                                                  | 0,05 | 4329  | 0,06 | 4329  | 0,06 |       |
| 3,0                                 | 2334                                                                                | 0,07                                                                                | 2016                                                                                | 0,04                                                                                | 1804                                                                                 | 0,03                                                                                  | 1592                                                                                  | 0,06 | 3608  | 0,08 | 3608  | 0,08 |       |
| 3,2                                 | 2188                                                                                | 0,08                                                                                | 1890                                                                                | 0,05                                                                                | 1691                                                                                 | 0,04                                                                                  | 1492                                                                                  | 0,06 | 3382  | 0,08 | 3382  | 0,08 |       |
| 3,5                                 | 2001                                                                                | 0,09                                                                                | 1728                                                                                | 0,05                                                                                | 1546                                                                                 | 0,04                                                                                  | 1364                                                                                  | 0,07 | 3092  | 0,09 | 3092  | 0,09 |       |
| 4,0                                 | 1751                                                                                | 0,10                                                                                | 1512                                                                                | 0,06                                                                                | 1353                                                                                 | 0,05                                                                                  | 1194                                                                                  | 0,08 | 2706  | 0,11 | 2706  | 0,11 |       |
| 4,5                                 | 1556                                                                                | 0,11                                                                                | 1344                                                                                | 0,06                                                                                | 1203                                                                                 | 0,05                                                                                  | 1061                                                                                  | 0,09 | 2405  | 0,12 | 2405  | 0,12 |       |
| 4,8                                 | 1459                                                                                | 0,12                                                                                | 1260                                                                                | 0,07                                                                                | 1127                                                                                 | 0,06                                                                                  | 995                                                                                   | 0,10 | 2255  | 0,13 | 2255  | 0,13 |       |
| 5,0                                 | 1401                                                                                | 0,12                                                                                | 1210                                                                                | 0,07                                                                                | 1082                                                                                 | 0,06                                                                                  | 955                                                                                   | 0,10 | 2165  | 0,14 | 2165  | 0,14 |       |
| 5,5                                 | 1273                                                                                | 0,13                                                                                | 1100                                                                                | 0,08                                                                                | 984                                                                                  | 0,07                                                                                  | 868                                                                                   | 0,11 | 1968  | 0,15 | 1968  | 0,15 |       |
| 6,0                                 | 1167                                                                                | 0,15                                                                                | 1008                                                                                | 0,08                                                                                | 902                                                                                  | 0,07                                                                                  | 796                                                                                   | 0,12 | 1804  | 0,15 | 1804  | 0,15 |       |
| 6,5                                 | 1077                                                                                | 0,16                                                                                | 930                                                                                 | 0,09                                                                                | 833                                                                                  | 0,08                                                                                  | 735                                                                                   | 0,13 | 1665  | 0,16 | 1665  | 0,16 |       |
| 7,0                                 | 1000                                                                                | 0,17                                                                                | 864                                                                                 | 0,09                                                                                | 773                                                                                  | 0,08                                                                                  | 682                                                                                   | 0,14 | 1546  | 0,17 | 1546  | 0,17 |       |
| 7,5                                 | 934                                                                                 | 0,19                                                                                | 806                                                                                 | 0,10                                                                                | 722                                                                                  | 0,09                                                                                  | 637                                                                                   | 0,15 | 1443  | 0,17 | 1443  | 0,17 |       |
| 8,0                                 | 875                                                                                 | 0,20                                                                                | 756                                                                                 | 0,10                                                                                | 676                                                                                  | 0,09                                                                                  | 597                                                                                   | 0,16 | 1353  | 0,18 | 1353  | 0,18 |       |
| 9,0                                 | 778                                                                                 | 0,21                                                                                | 672                                                                                 | 0,11                                                                                | 601                                                                                  | 0,10                                                                                  | 531                                                                                   | 0,17 | 1203  | 0,19 | 1203  | 0,19 |       |
| 10,0                                | 700                                                                                 | 0,23                                                                                | 605                                                                                 | 0,13                                                                                | 541                                                                                  | 0,11                                                                                  | 477                                                                                   | 0,18 | 1082  | 0,20 | 1082  | 0,20 |       |
| 12,0                                | 584                                                                                 | 0,25                                                                                | 504                                                                                 | 0,16                                                                                | 451                                                                                  | 0,14                                                                                  | 398                                                                                   | 0,20 | 902   | 0,22 | 902   | 0,22 |       |
| 14,0                                | 500                                                                                 | 0,28                                                                                | 432                                                                                 | 0,18                                                                                | 387                                                                                  | 0,16                                                                                  | 341                                                                                   | 0,23 | 773   | 0,26 | 773   | 0,26 |       |
| 16,0                                | 438                                                                                 | 0,30                                                                                | 378                                                                                 | 0,20                                                                                | 338                                                                                  | 0,18                                                                                  | 298                                                                                   | 0,25 | 676   | 0,30 | 676   | 0,30 |       |
| 18,0                                | 389                                                                                 | 0,32                                                                                | 336                                                                                 | 0,21                                                                                | 301                                                                                  | 0,19                                                                                  | 265                                                                                   | 0,27 | 601   | 0,32 | 601   | 0,32 |       |
| 20,0                                | 350                                                                                 | 0,35                                                                                | 302                                                                                 | 0,22                                                                                | 271                                                                                  | 0,20                                                                                  | 239                                                                                   | 0,28 | 541   | 0,35 | 541   | 0,35 |       |
| Kühlung<br>Coolant<br>Refrigeración | E                                                                                   |                                                                                     | E                                                                                   |                                                                                     | E                                                                                    |                                                                                       | T/D/E                                                                                 |      | E/O   |      | E     |      | E/W/A |

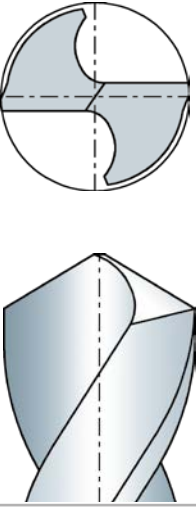
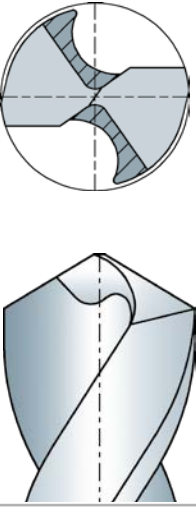
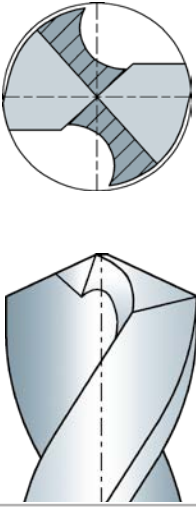
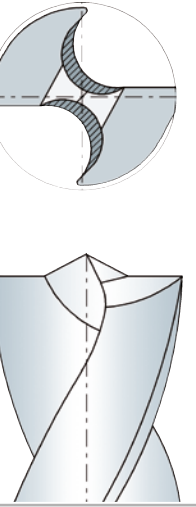
E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido, W: Wasser | Water | agua, A: Luft | Air | Aire

Metall- und Edelstahlbohrer  
Metal drills and stainless steel drills  
broca para metal y broca de acero inoxidable

① Spitzenanschliffe

② Point shapes

③ Puntas afiladas

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                              |
| <p><b>Kegelmantelanschiff, 118°</b><br/>Universeller Anschiff für viele Bohrarbeiten in Stahl- und Eisenwerkstoffen, Nichteisenmetallen, Kunststoffen und sonstigen Werkstoffen.</p> <p><b>Relieved cone, 118°</b><br/><i>Universal point-shape for a lot of drilling applications in steel and iron, non ferritic-materials, plastics and other materials.</i></p> <p><b>Punta afilada con superficie cónica, 118°</b><br/><i>Punta afilada universal para diversos trabajos de perforación en materiales de acero y hierro, metales no férricos, plásticos y otros materiales.</i></p> | <p><b>Kreuzanschiff AC, 118° bzw. 130°</b><br/>Spezialanschiff für alle gängigen HSS Industriebohrer. Sehr gute Zentrierung und verbesserte Leistung durch die reduzierte Querschneide.</p> <p><b>Split Point AC, 118° or 130°</b><br/><i>Special point-shape for all common industrial drill bits. Very good centering and improved performance by the reduced cross-cutting.</i></p> <p><b>Punta afilada en cruz AC, 118° o 130°</b><br/><i>Punta afilada especial para todas las brocas industriales más frecuentes. Centrado excepcional y rendimiento mejorado gracias a la reducción del corte transversal.</i></p> | <p><b>Kreuzanschiff C, 130°/135°</b><br/>Spezialanschiff für HSS Co5 Industriebohrer für die Zerspänung von besonders zähen und harten Werkstoffen sowie nichtrostenden und Sonderwerkstoffen. Optimale Zentrierung und reduzierte Vorschubkraft durch maximale Querschneidenreduktion.</p> <p><b>Split Point C, 130°/135°</b><br/><i>Special point-shape for HSS Co5 industrial drill bits for the machining of particularly tough and hard materials as well as stainless steel and special materials. Optimal centering and reduced feed force by maximum cross-cutting reduction.</i></p> <p><b>Punta afilada en cruz C, 130°/135°</b><br/><i>Punta afilada especial para brocas industriales HSS Co5 para el virutaje de materiales especialmente blandos y duros, así como materiales inoxidables y especiales. Centrado óptimo y reducción de la fuerza de avance gracias a la reducción del corte transversal.</i></p> | <p><b>Zentrierspitze, Anschiff E, 180°</b><br/>Spezialanschiff für Schweißpunktbohrer.</p> <p><b>Centering Point-Shape E, 180°</b><br/><i>Special point-shape for spot weld drills.</i></p> <p><b>Punta de centrado, punta afilada, tipo E, 180°</b><br/><i>Punta afilada especial para brocas para puntos de soldadura.</i></p> |





**Metal- und Edelstahlbohrer**  
*Metal drills and stainless steel drills*  
*broca para metal y broca de acero inoxidable*



HOLZBOHRER



🇪 DRILLS FOR  
WOOD

🇪S BROCAS PARA  
MADERA

Übersicht

Overview

Resumen

|                                                                                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                  |    |    |    |    |    |    |
| Norm / Estándar                                                                                                                                  | WN                                                                                  | WN                                                                                  |                                                                                     | WN                                                                                    | WN                                                                                    |                                                                                       |
| Name / Nombre                                                                                                                                    | HSS Cobalt                                                                          | TIMBER TWIST                                                                        | TIMBER TWIST                                                                        | Profi Holz                                                                            | Profi Holz                                                                            | Holz                                                                                  |
| Schneidstoff / Cutting material / Material de corte                                                                                              | HSS-Co5                                                                             | HSS                                                                                 | HSS                                                                                 | HSS                                                                                   | HSS                                                                                   | CV                                                                                    |
| Sonderanschliff / Special point shape / Punta afi lada especial                                                                                  | B                                                                                   | D                                                                                   | D                                                                                   | C                                                                                     | B                                                                                     | B                                                                                     |
| Schaft / Shank / Eje                                                                                                                             |    |    |    |    |    |    |
| Ø mm                                                                                                                                             | 3,00 - 20,00                                                                        | 1 - 20                                                                              | 3 - 10                                                                              | 3,00 - 12,00                                                                          | 3,00 - 10,00                                                                          | 1,00 - 20,00                                                                          |
| Code / Código                                                                                                                                    | 633                                                                                 | 671                                                                                 | 675                                                                                 | 620                                                                                   | 622                                                                                   | 616                                                                                   |
| Seite / Page / Página                                                                                                                            | 194                                                                                 | 197                                                                                 | 199                                                                                 | 202                                                                                   | 203                                                                                   | 205                                                                                   |
| Geeignet für / Suitable for / Adecuada para                                                                                                      |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  <b>Weichholz</b><br>Soft wood<br>Madera blanda               |  |  |  |  |  |  |
|  <b>Hartholz</b><br>Hard wood<br>Madera dura                  |  |  |  |  |  |  |
|  <b>Holz geleimt</b><br>Flooring timbers<br>Madera encolada   |  |  |  |  |  |  |
|  <b>Spanplatte</b><br>Chipboard<br>Tabla de madera aglomerada |  |  |  |  |  |  |
|  <b>Resopal</b><br>Laminated Chipboard<br>Resopal             |  |  |  |  |  |  |
|  <b>Kunststoffe</b><br>Plastics<br>Plástico                   |  |  |  |  |  |                                                                                       |

## D Übersicht

## E Overview

## ES Resumen

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |    |    |    |
| WN                                                                                  | WN                                                                                  | WN                                                                                  | WN                                                                                  | WN                                                                                  | WN                                                                                    |                                                                                       |
| Form Lewis                                                                          | SHARP SHARK                                                                         | Forstnerbohrer                                                                      | BESCHLAGBOHRER                                                                      | Holzbohrer                                                                          | Holzbohrer                                                                            | Flachfräsbohrer                                                                       |
| CV                                                                                  | CV                                                                                  | CV                                                                                  | Hartmetall                                                                          | CV                                                                                  | CV                                                                                    | CV                                                                                    |
|    |    |    |    |    |    |    |
| 4,00 - 32,00                                                                        | 15,00 - 50,00                                                                       | 10,00 - 50,00                                                                       | 30,00 - 35,00                                                                       | 8,00 - 30,00                                                                        | 10,00 - 22,00                                                                         | 6,00 - 40,00                                                                          |
| 216, 226, 228                                                                       | 239                                                                                 | 236                                                                                 | 235                                                                                 | 55, 65, 75                                                                          | 56, 66                                                                                | 234, 237-238                                                                          |
| 207                                                                                 | 210                                                                                 | 211                                                                                 | 212                                                                                 | 213                                                                                 | 215                                                                                   | 216                                                                                   |
|  |  |  |  |  |  |  |
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|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |





## D HSS Cobalt Maschinen-Holzspiralbohrer

### Einsatzbereich:

5% kobaltlegierter Spiralbohrer mit sehr hoher thermischer Belastbarkeit. Hitzebeständig bis 650° C. Zum Bohren von Weich- und Harthölzern, Spanplatten, Hartfaserplatten, zum Dübelbohren.



Hitzebeständig  
Heat resistant  
Termoestable



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión

## E HSS Cobalt dowel drills

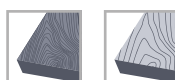
### Range of application:

5% cobalt-alloyed jobber drills with high heat resistant up to 650° C. For drilling in soft and hard wood, in chipboards, fibreboards, for drilling dowel holes.

## ES Broca espiral HSS Cobalt para madera

### Ámbito de aplicación:

Broca espiral HSS con 5% de aleación de cobalto y muy alta clasificación térmica. Termoestable hasta 650 °C. Adecuada para perforar maderas blandas y duras, tablas de madera aglomerada, tableros duros tratados, para perforar agujeros para espigas.



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 633<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------|----------------------|---------------|----|
| 3,00     | 61       | 33       |          | 0063300300100        | 1             | 10 |
| 4,00     | 75       | 43       |          | 0063300400100        | 1             | 10 |
| 5,00     | 86       | 52       |          | 0063300500100        | 1             | 10 |
| 6,00     | 93       | 57       |          | 0063300600100        | 1             | 10 |
| 7,00     | 109      | 69       |          | 0063300700100        | 1             | 10 |
| 8,00     | 117      | 75       |          | 0063300800100        | 1             | 10 |
| 9,00     | 125      | 81       |          | 0063300900100        | 1             | 10 |
| 10,00    | 133      | 87       |          | 0063301000100        | 1             | 10 |
| 11,00    | 142      | 94       | 9,50     | 0063301100100        | 1             | 10 |
| 12,00    | 151      | 101      | 9,50     | 0063301200100        | 1             | 10 |
| 14,00    | 160      | 108      | 9,50     | 0063301400100        | 1             | 10 |
| 16,00    | 178      | 120      | 9,50     | 0063301600100        | 1             | 10 |
| 18,00    | 178      | 120      | 9,50     | 0063301800100        | 1             | 10 |
| 20,00    | 178      | 120      | 9,50     | 0063302000100        | 1             | 10 |

Form C Ø 5 mm, Form B < Ø 5 & ≥ 14 mm / Forma C Ø 5 mm, Forma B < Ø 5 & ≥ 14 mm

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

HSS Cobalt PCTM 5



5-tlg. / 5-pcs. / 5-unid.

Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0063300005100

| Ø<br>mm                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------|-------------------------------------------|------------------------------|-------------------------------------------|
| HSS Cobalt                          |                                           | HSS Cobalt                   |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1                                         | Ø 3,00 / 4,00 / 5,00 / 10,00 | 1                                         |
|                                     |                                           | Ø 6,00 / 8,00                | 2                                         |

HSS Cobalt PCTM 8



8-tlg. / 8-pcs. / 8-unid.

Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0063300008100
 Holzbohrer  
wood drills  
brocas para madera
<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



 **TIMBER TWIST**



**Haarscharf**

Die optimierten Vorschneider sorgen für ein genaues und ausrissfreies Bohrloch.

***Precise to a hair's breadth***

*The optimized pre-cutters ensure an accurate and tear-free drill hole.*

**Ultraprecisa**

*Los precortadores optimizados garantizan una perforación precisa y sin grietas.*

**Stabil**

Mehr Stabilität durch den Kernanstieg.

***Stable***

*More stability through the adjusted increasing core.*

***Estable***

*Mayor estabilidad gracias al aumento del centro.*

**Kraftschonend - energiesparend**

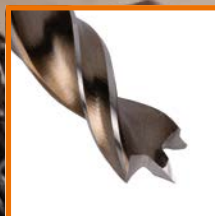
Aufgrund der neuen Konstruktion muss weniger Anpressdruck aufgewendet werden.

***Effortless - energy-saving***

*Because of the new construction less contact pressure needs to be expended.*

**Ahorro de potencia y energía**

*Gracias a su nuevo diseño, la presión necesaria es menor.*



 **alpen** *drill better.*

## D HSS Maschinen-Holzspiralbohrer

## E HSS dowel drills

## ES Brocas para madera HSS

### Einsatzbereich:

Für ausrissfreies, präzises Bohren in sämtlichen Holzarten, sowie Holzverbundwerkstoffen und besonders harten, beschichteten Spanplatten. Für genaue Arbeiten im Holzbereich. (Tischler, Restauration, Instrumentenbau, Zimmerer, Modellbau, Montage,...)

### Range of application:

For tear-free, precise drilling in all types of wood, as well as wood composites and especially hard, coated chipboard. For accurate work in the carpentry sector. (carpentry, restoration, instrument making, model making, assembly,...)

### Ámbito de aplicación:

Para una perforación precisa y sin grietas en cualquier tipo de madera, así como en compuestos de madera y superficies especiales, tablas y aglomerados. Para trabajos en superficies de madera. (Carpintería, restauración, construcción de instrumentos, Carpintería de obra, modelismo, montaje, etc.)



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Bohren mit stark verminderten Anpressdruck  
Drilling with greatly reduced feed pressure  
Perforar con una presión de avance muy disminuida



Verlängerte Akkulaufzeit  
Extended battery life  
Duración de la batería prolongada



NEW

Einzelverpackung  
Single pack  
Embalaje individual

Länge / Length / Longitud: 34 / 12 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 671<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------|----------------------|---------------|----|
| 1,00     | 34       | 12       | 1        | 0067100100100        | 2             | 10 |
| 1,50     | 40       | 18       | 1,5      | 0067100150100        | 2             | 10 |
| 2,00     | 49       | 24       | 2        | 0067100200100        | 2             | 10 |
| 2,50     | 57       | 30       | 2,5      | 0067100250100        | 2             | 10 |
| 3,00     | 61       | 33       | 3        | 0067100300100        | 1             | 10 |
| 3,50     | 70       | 39       | 3,5      | 0067100350100        | 1             | 10 |
| 4,00     | 75       | 43       | 4        | 0067100400100        | 1             | 10 |
| 4,50     | 80       | 47       | 4,5      | 0067100450100        | 1             | 10 |
| 5,00     | 86       | 52       | 5        | 0067100500100        | 1             | 10 |
| 5,50     | 93       | 57       | 5,5      | 0067100550100        | 1             | 10 |
| 6,00     | 93       | 57       | 6        | 0067100600100        | 1             | 10 |
| 6,50     | 101      | 63       | 6,5      | 0067100650100        | 1             | 10 |
| 7,00     | 109      | 69       | 7        | 0067100700100        | 1             | 10 |
| 7,50     | 109      | 69       | 7,5      | 0067100750100        | 1             | 10 |
| 8,00     | 117      | 75       | 8        | 0067100800100        | 1             | 10 |
| 8,50     | 117      | 75       | 8,5      | 0067100850100        | 1             | 10 |
| 9,00     | 125      | 81       | 9        | 0067100900100        | 1             | 10 |
| 9,50     | 125      | 81       | 9,5      | 0067100950100        | 1             | 10 |

1,0-2,5mm Kegelmantelschliff | ≥ 3,0mm Form B | ≥ 4,0mm Form D

1,0-2,5mm Relieved cone | ≥ 3,0mm Form B | ≥ 4,0mm Form D

1,0-2,5mm Punta afilada con superficie cónica | ≥ 3,0mm Form B | ≥ 4,0mm Form D

Holzbohrer  
wood drills  
brocas para madera

Einzelverpackung  
Single pack  
Embalaje individual

**Länge / Length / Longitud: 34 / 12 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 671<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|----------------------|---------------|------------------------------------------------------------------------------------|
| 10,00    | 133      | 87       | 10       | 0067101000100        | 1             | 10                                                                                 |
| 10,50    | 133      | 87       | 9,5      | 0067101050100        | 1             | 10                                                                                 |
| 11,00    | 142      | 94       | 9,5      | 0067101100100        | 1             | 10                                                                                 |
| 11,50    | 142      | 94       | 9,5      | 0067101150100        | 1             | 10                                                                                 |
| 12,00    | 151      | 101      | 9,5      | 0067101200100        | 1             | 10                                                                                 |
| 12,50    | 151      | 101      | 9,5      | 0067101250100        | 1             | 10                                                                                 |
| 13,00    | 151      | 101      | 9,5      | 0067101300100        | 1             | 10                                                                                 |
| 14,00    | 160      | 108      | 9,5      | 0067101400100        | 1             | 10                                                                                 |
| 15,00    | 169      | 114      | 9,5      | 0067101500100        | 1             | 10                                                                                 |
| 16,00    | 178      | 120      | 9,5      | 0067101600100        | 1             | 10                                                                                 |
| 18,00    | 178      | 120      | 9,5      | 0067101800100        | 1             | 10                                                                                 |
| 20,00    | 178      | 120      | 9,5      | 0067102000100        | 1             | 10                                                                                 |

**Länge / Length / Longitud: 250 / 200 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 672<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|----------------------|---------------|------------------------------------------------------------------------------------|
| 3,00     | 250      | 200      | 3        | 0067200300100        | 1             | 8                                                                                  |
| 4,00     | 250      | 200      | 4        | 0067200400100        | 1             | 8                                                                                  |
| 5,00     | 250      | 200      | 5        | 0067200500100        | 1             | 8                                                                                  |
| 6,00     | 250      | 200      | 6        | 0067200600100        | 1             | 8                                                                                  |
| 8,00     | 250      | 200      | 8        | 0067200800100        | 1             | 8                                                                                  |
| 10,00    | 250      | 200      | 10       | 0067201000100        | 1             | 8                                                                                  |

1,0-2,5mm Kegelmantelschliff |  $\geq 3,0\text{mm}$  Form B |  $\geq 4,0\text{mm}$  Form D

1,0-2,5mm Relieved cone |  $\geq 3,0\text{mm}$  Form B |  $\geq 4,0\text{mm}$  Form D

1,0-2,5mm Punta afilada con superficie cónica |  $\geq 3,0\text{mm}$  Form B |  $\geq 4,0\text{mm}$  Form D



## D HSS Maschinen- Holzspiralbohrer mit 1/4"-Sechskantschaft

### Einsatzbereich:

Wie Code 671, zusätzlich passend für jeden Standard-Akkuschrauber und Universal-Halter (Bithalter) durch genormtes Schaftprofil. Spannung auch in konventionellen Bohrfutter - kein Durchrutschen durch Sechskantschaft.

## E HSS dowel drills with 1/4"-hexagonal shank

### Range of application:

Same as code 671, additionally suitable for any standard cordless drill thanks to its standardized shank profile. Suitable for all universal holders (bit holders). Can also be clamped in conventional drill chucks - no slipping owing to the hexagonal shank.

## ES Brocas para madera HSS con eje hexagonal 1/4"

### Ámbito de aplicación:

Igual que el código 671, apta además para todos los destornilladores a batería estándar y soportes universales (soporte de broca) gracias a su perfil de eje normativo.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Bohren mit stark verminderten Anpressdruck  
Drilling with greatly reduced feed pressure  
Perforar con una presión de avance muy disminuida



Verlängerte Akkulaufzeit  
Extended battery life  
Duración de la batería prolongada



**NEW**

Einzelverpackung  
Single pack  
Embalaje individual

Länge / Length / Longitud: 74 / 33 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 675<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------|----------------------|---------------|----|
| 3,00     | 74       | 33       | 1/4"     | 0067500300100        | 1             | 10 |
| 4,00     | 88       | 43       | 1/4"     | 0067500400100        | 1             | 10 |
| 5,00     | 100      | 52       | 1/4"     | 0067500500100        | 1             | 10 |
| 6,00     | 107      | 57       | 1/4"     | 0067500600100        | 1             | 10 |
| 8,00     | 117      | 75       | 1/4"     | 0067500800100        | 1             | 10 |
| 10,00    | 133      | 87       | 1/4"     | 0067501000100        | 1             | 10 |

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

Timber Twist PTM 5



**NEW**



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0067100005100

| Inhalt<br>Contents / Contenido                      | Stk. |
|-----------------------------------------------------|------|
| Timber Twist<br>Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1    |

Timber Twist PTM 8



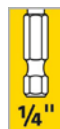
**NEW**



8-tlg. / 8-pcs. / 8-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0067100008100

| Inhalt<br>Contents / Contenido                                | Stk.   |
|---------------------------------------------------------------|--------|
| Timber Twist<br>Ø 3,00 / 4,00 / 5,00 / 10,00<br>Ø 6,00 / 8,00 | 1<br>2 |

Timber Twist ATM 4



**NEW**



4-tlg. / 4-pcs. / 4-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0067500004100

| Inhalt<br>Contents / Contenido              | Stk. |
|---------------------------------------------|------|
| Timber Twist<br>Ø 3,00 / 4,00 / 5,00 / 6,00 | 1    |

Timber Twist KP 19



**NEW**



19-tlg. / 19-pcs. / 19-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0067100019100

| Inhalt<br>Contents / Contenido | Stk.  |
|--------------------------------|-------|
| Timber Twist<br>Ø 1,00 - 10,00 | 0,5 1 |

Timber Twist KP 25



**NEW**



25-tlg. / 25-pcs. / 25-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0067100025100

| Inhalt<br>Contents / Contenido | Stk.  |
|--------------------------------|-------|
| Timber Twist<br>Ø 1,00 - 13,00 | 0,5 1 |

Timber Twist Set L=250MM

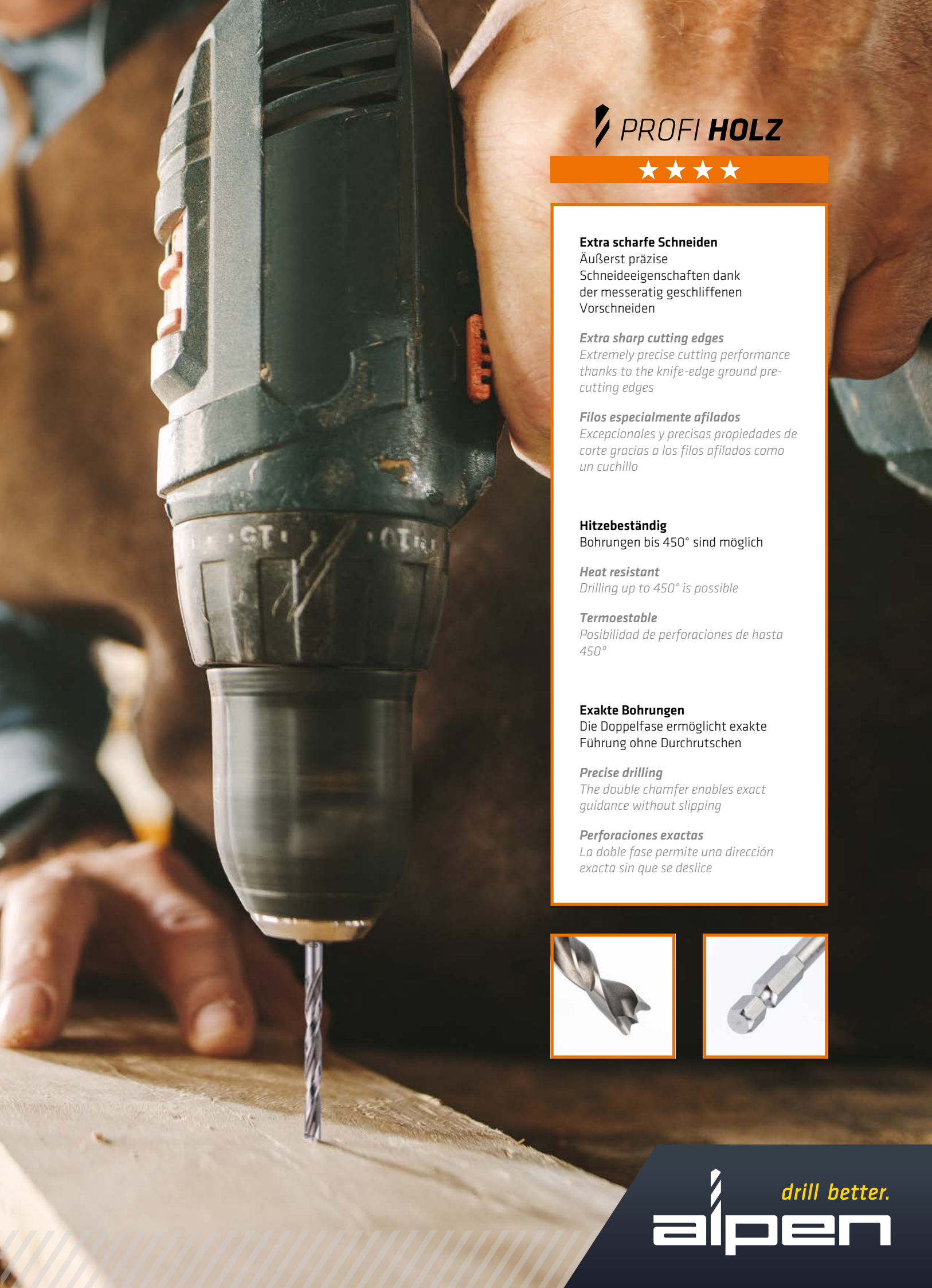


**NEW**



6-tlg. / 6-pcs. / 6-unid.  
Holzkassette / Wood cassette / Caja de madera  
Art.-Nr. 0067200006100

| Inhalt<br>Contents / Contenido                             | Stk. |
|------------------------------------------------------------|------|
| Timber Twist<br>Ø 3,00 / 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1    |



 **PROFI HOLZ**



**Extra scharfe Schneiden**

Äußerst präzise  
Schneideeigenschaften dank  
der messerartig geschliffenen  
Vorschneiden

**Extra sharp cutting edges**

Extremely precise cutting performance  
thanks to the knife-edge ground pre-  
cutting edges

**Filos especialmente afilados**

Excepcionales y precisas propiedades de  
corte gracias a los filos afilados como  
un cuchillo

**Hitzebeständig**

Bohrungen bis 450° sind möglich

**Heat resistant**

Drilling up to 450° is possible

**Termoestable**

Posibilidad de perforaciones de hasta  
450°

**Exakte Bohrungen**

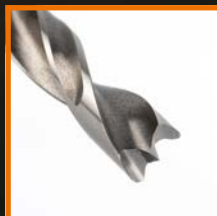
Die Doppelfase ermöglicht exakte  
Führung ohne Durchrutschen

**Precise drilling**

The double chamfer enables exact  
guidance without slipping

**Perforaciones exactas**

La doble fase permite una dirección  
exacta sin que se deslice



 **alpen** *drill better.*

## D HSS Maschinen- Holzspiralbohrer

## E HSS dowel drills

## ES Brocas para madera HSS

### Einsatzbereich:

Hitzebeständig bis 450° C. Zum Bohren von Weich- und Harthölzern, Spanplatten, Hartfaserplatten, zum Dübellochbohren.

### Range of application:

Heat resistant up to 450° C. For drilling in soft and hard wood, in chipboards, fibreboards, for drilling dowel holes.

### Ámbito de aplicación:

Termoestable hasta 450 °C. Adecuada para perforar maderas blandas y duras, tablas de madera aglomerada, tableros duros tratados, para perforar agujeros para espigas.



Hitzebeständig  
Heat resistant  
Termoestable



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 620<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------|----------------------|---------------|----|
| 3,00     | 61       | 33       |          | 0062000300100        | 1             | 10 |
| 4,00     | 75       | 43       |          | 0062000400100        | 1             | 10 |
| 5,00     | 86       | 52       |          | 0062000500100        | 1             | 10 |
| 6,00     | 93       | 57       |          | 0062000600100        | 1             | 10 |
| 8,00     | 117      | 75       |          | 0062000800100        | 1             | 10 |
| 10,00    | 133      | 87       |          | 0062001000100        | 1             | 10 |
| 12,00    | 151      | 101      | 9,50     | 0062001200100        | 1             | 10 |

## D HSS Maschinen- Holzspiralbohrer mit 1/4"-Sechskantschaft

### Einsatzbereich:

Wie Code 620, zusätzlich passend für jeden Standard-Akkuschrauber und Universal-Halter (Bithalter) durch genormtes Schaftprofil. Spannung auch in konventionellen Bohrfuttern - kein Durchrutschen durch Sechskant-schaft.



Hitzebeständig  
Heat resistant  
Termoestable



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión

## E HSS dowel drills with 1/4"-hexagonal shank

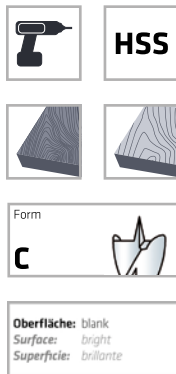
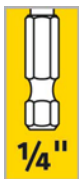
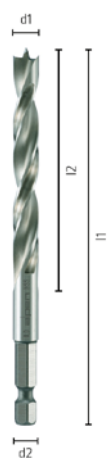
### Range of application:

Same as code 620, additionally suitable for any standard cordless drill thanks to its standardized shank profile. Suitable for all universal holders (bit holders). Can also be clamped in conventional drill chucks - no slipping owing to the hexagonal shank.

## ES Brocas para madera HSS con eje hexagonal 1/4"

### Ámbito de aplicación:

Igual que el código 620, apta además para todos los destornilladores a batería estándar y soportes universales (soporte de broca) gracias a su perfil de eje normativo.



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | d2   | Code 622<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|------|----------------------|---------------|----|
| 3,00     | 74       | 33       | 1/4" | 0062200300100        | 1             | 10 |
| 4,00     | 88       | 43       | 1/4" | 0062200400100        | 1             | 10 |
| 5,00     | 100      | 52       | 1/4" | 0062200500100        | 1             | 10 |
| 6,00     | 107      | 57       | 1/4" | 0062200600100        | 1             | 10 |
| 8,00     | 117      | 75       | 1/4" | 0062200800100        | 1             | 10 |
| 10,00    | 133      | 87       | 1/4" | 0062201000100        | 1             | 10 |

Schaft nach DIN 3126, Form E6.3, ISO 1173 / Shank DIN 3126, Form E6.3, ISO 1173 / Eje según DIN 3126, forma E6.3, ISO 1173  
Form C Ø 5 mm, Form B < Ø 5 mm / Forma C Ø 5 mm, Forma B < Ø 5 mm

Holzbohrer  
wood drills  
brocas para madera



**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

Profi Holz PTM 5



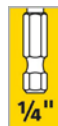
5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000600114100

Profi Holz PTM 8



8-tlg. / 8-pcs. / 8-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000600093100

Profi Holz ATM 4



4-tlg. / 4-pcs. / 4-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000603002100

| Ø<br>mm                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                     | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------|-------------------------------------------|------------------------------|-------------------------------------------|-----------------------------|-------------------------------------------|
| Profi Holz                          |                                           | Profi Holz                   |                                           | Profi Holz                  |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1                                         | Ø 3,00 / 4,00 / 5,00 / 10,00 | 1                                         | Ø 3,00 / 4,00 / 5,00 / 6,00 | 1                                         |
|                                     |                                           | Ø 6,00 / 8,00                | 2                                         |                             |                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

🇩🇪 CV Maschinen-Holzspiralbohrer 🇪🇸 CV machine dowel drills

🇪🇸 Brocas espirales para madera CV

**Einsatzbereich:**

Hitzebeständig bis 250° C. Zum Bohren von Weich- und Harthölzern, Spanplatten, Hartfaserplatten, zum Dübellochbohren.

**Range of application:**

Heat resistant up to 250° C. For drilling in soft and hard wood, in chipboards, fibreboards, for drilling dowel holes.

**Ámbito de aplicación:**

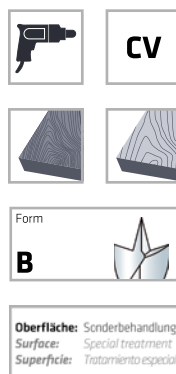
Termoestable hasta 250 °C. Adecuada para perforar maderas blandas y duras, tablas de madera aglomerada, tableros duros tratados, para perforar agujeros para espigas.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Scharfe Schneiden  
Sharp cutting edges  
Filas bien afilados



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 616<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|----------|----------|----------------------|---------------|----|
| *1,00    | 34       | 12       |          | 0061600100100        | 2             | 10 |
| *2,00    | 49       | 24       |          | 0061600200100        | 2             | 10 |
| 3,00     | 61       | 33       |          | 0061600300100        | 1             | 10 |
| 4,00     | 75       | 43       |          | 0061600400100        | 1             | 10 |
| 5,00     | 86       | 52       |          | 0061600500100        | 1             | 10 |
| 6,00     | 93       | 57       |          | 0061600600100        | 1             | 10 |
| 7,00     | 109      | 69       |          | 0061600700100        | 1             | 10 |
| 8,00     | 117      | 75       |          | 0061600800100        | 1             | 10 |
| 9,00     | 125      | 81       |          | 0061600900100        | 1             | 10 |
| 10,00    | 133      | 87       |          | 0061601000100        | 1             | 10 |
| 11,00    | 142      | 84       | 9,50     | 0061601100100        | 1             | 10 |
| 12,00    | 151      | 101      | 9,50     | 0061601200100        | 1             | 10 |
| 13,00    | 151      | 101      | 9,50     | 0061601300100        | 1             | 10 |
| 14,00    | 160      | 108      | 9,50     | 0061601400100        | 1             | 8  |
| 15,00    | 169      | 114      | 9,50     | 0061601500100        | 1             | 8  |
| 16,00    | 178      | 120      | 9,50     | 0061601600100        | 1             | 8  |
| 18,00    | 178      | 120      | 9,50     | 0061601800100        | 1             | 8  |
| 20,00    | 178      | 120      | 9,50     | 0061602000100        | 1             | 8  |

\* Spitzenwinkel 118° / tip waving 118° / agitar la punta 118°

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

Holz TM 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000600112100

| Ø<br>mm                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------|-------------------------------------------|
| Holz                                |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00 | 1                                         |

Holz TM 8



8-tlg. / 8-pcs. / 8-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000600092100

| Ø<br>mm      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------|-------------------------------------------|
| Holz         |                                           |
| Ø 3,00-10,00 | 1                                         |

KIT SET 30



30-tlg. / 30-pcs. / 30-unid.  
Set  
Art.-Nr. 0000800230100

| Ø<br>mm                                             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------------|-------------------------------------------|
| Holz                                                |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                 | 1                                         |
| HSS Super                                           |                                           |
| Ø 2,50 / 3,20                                       | 1                                         |
| Long Life                                           |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00                 | 1                                         |
| Sprint Master                                       |                                           |
| Ø 3,00 / 4,00 / 5,00 / 6,00 / 8,00 / 10,00          | 1                                         |
| Wera                                                |                                           |
| 4 Bits sortiert / 4 Bits sorted / 4 brocas surtidas |                                           |

Combiset TM 9



9-tlg. / 9-pcs. / 9-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0000802102100

| Ø<br>mm              | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------------|-------------------------------------------|
| Holz                 |                                           |
| Ø 5,00 / 6,00 / 8,00 | 1                                         |
| Long Life            |                                           |
| Ø 5,00 / 6,00 / 8,00 | 1                                         |
| Sprint Master        |                                           |
| Ø 5,00 / 6,00 / 8,00 | 1                                         |

Combiset Master SET 16



16-tlg. / 16-pcs. / 16-unid.  
Set  
Art.-Nr. 0000811003100

| Ø<br>mm                                   | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------|-------------------------------------------|
| Holz                                      |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00       | 1                                         |
| Long Life                                 |                                           |
| Ø 4,00 / 5,00 / 6,00 / 8,00 / 10,00       | 1                                         |
| Sprint Master                             |                                           |
| Ø 2,00 / 3,00 / 4,00 / 5,00 / 6,00 / 8,00 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D CV Schlangenbohrer „Form Lewis“

### Einsatzbereich:

Zum Bohren von Kanthölzern und dicken Pfosten.

## E CV auger bit “Form Lewis”

### Range of application:

For drilling in square timbers and wood-jambs.

## ES Broca salomónica CV “Forma Lewis”

### Ámbito de aplicación:

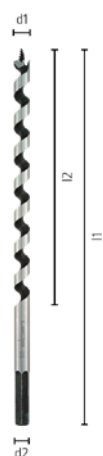
Para perforar maderas escuadradas y vigas gruesas.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Scharfe Schneiden  
Sharp cutting edges  
Filas bien afilados



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 216<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------|----------------------|---------------|---|
| 4,00     | 180      | 100      |          | 0021600400100        | 1             | 1 |
| 5,00     | 235      | 160      |          | 0021600500100        | 1             | 1 |
| 6,00     | 235      | 160      |          | 0021600600100        | 1             | 1 |
| 8,00     | 235      | 160      | 7,00     | 0021600800100        | 1             | 1 |
| 10,00    | 235      | 160      | 9,00     | 0021601000100        | 1             | 1 |
| 12,00    | 235      | 160      | 11,00    | 0021601200100        | 1             | 1 |
| 14,00    | 235      | 160      | 13,00    | 0021601400100        | 1             | 1 |
| 15,00    | 235      | 160      | 13,00    | 0021601500100        | 1             | 1 |
| 16,00    | 235      | 160      | 13,00    | 0021601600100        | 1             | 1 |
| 18,00    | 235      | 160      | 13,00    | 0021601800100        | 1             | 1 |
| 20,00    | 235      | 160      | 13,00    | 0021602000100        | 1             | 1 |
| 22,00    | 235      | 160      | 13,00    | 0021602200100        | 1             | 1 |
| 24,00    | 235      | 160      | 13,00    | 0021602400100        | 1             | 1 |
| 25,00    | 235      | 160      | 13,00    | 0021602500100        | 1             | 1 |
| 26,00    | 235      | 160      | 13,00    | 0021602600100        | 1             | 1 |
| 28,00    | 235      | 160      | 13,00    | 0021602800100        | 1             | 1 |
| 30,00    | 235      | 160      | 13,00    | 0021603000100        | 1             | 1 |
| 32,00    | 235      | 160      | 13,00    | 0021603200100        | 1             | 1 |

Länge / Length / Longitud: 460/380 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 226<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|----------------------|---------------|-----------------------------------------------------------------------------------|
| 8,00     | 460      | 380      | 7,00     | 0022600800100        | 1             | 1                                                                                 |
| 10,00    | 460      | 380      | 9,00     | 0022601000100        | 1             | 1                                                                                 |
| 12,00    | 460      | 380      | 11,00    | 0022601200100        | 1             | 1                                                                                 |
| 14,00    | 460      | 380      | 12,00    | 0022601400100        | 1             | 1                                                                                 |
| 16,00    | 460      | 380      | 12,00    | 0022601600100        | 1             | 1                                                                                 |
| 18,00    | 460      | 380      | 12,00    | 0022601800100        | 1             | 1                                                                                 |
| 20,00    | 460      | 380      | 12,00    | 0022602000100        | 1             | 1                                                                                 |
| 22,00    | 460      | 380      | 12,00    | 0022602200100        | 1             | 1                                                                                 |
| 24,00    | 460      | 380      | 12,00    | 0022602400100        | 1             | 1                                                                                 |
| 25,00    | 460      | 380      | 12,00    | 0022602500100        | 1             | 1                                                                                 |
| 26,00    | 460      | 380      | 12,00    | 0022602600100        | 1             | 1                                                                                 |
| 28,00    | 460      | 380      | 12,00    | 0022602800100        | 1             | 1                                                                                 |
| 30,00    | 460      | 380      | 12,00    | 0022603000100        | 1             | 1                                                                                 |
| 32,00    | 460      | 380      | 12,00    | 0022603200100        | 1             | 1                                                                                 |

Länge / Length / Longitud: 600/530 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 228<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|----------------------|---------------|-----------------------------------------------------------------------------------|
| 10,00    | 600      | 530      | 9,00     | 0022801000100        | 1             | 1                                                                                 |
| 12,00    | 600      | 530      | 11,00    | 0022801200100        | 1             | 1                                                                                 |
| 14,00    | 600      | 530      | 12,00    | 0022801400100        | 1             | 1                                                                                 |
| 16,00    | 600      | 530      | 12,00    | 0022801600100        | 1             | 1                                                                                 |
| 18,00    | 600      | 530      | 12,00    | 0022801800100        | 1             | 1                                                                                 |
| 20,00    | 600      | 530      | 12,00    | 0022802000100        | 1             | 1                                                                                 |
| 22,00    | 600      | 530      | 12,00    | 0022802200100        | 1             | 1                                                                                 |
| 24,00    | 600      | 530      | 12,00    | 0022802400100        | 1             | 1                                                                                 |
| 26,00    | 600      | 530      | 12,00    | 0022802600100        | 1             | 1                                                                                 |
| 28,00    | 600      | 530      | 12,00    | 0022802800100        | 1             | 1                                                                                 |
| 30,00    | 600      | 530      | 12,00    | 0022803000100        | 1             | 1                                                                                 |
| 32,00    | 600      | 530      | 12,00    | 0022803200100        | 1             | 1                                                                                 |

Sechskantschaft ≥ Ø 8,0 mm / Hexagonal shank ≥ Ø 8,0 mm / Eje hexagonal ≥ Ø 8,0 mm



## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

Form Lewis Holzkassette 6



6-tlg. / 6-pcs. / 6-unid.  
Holzkassette / Wood cassette / Caja de madera  
Art.-Nr. 0021600006100

| Ø<br>mm                                       | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------|----------|-------------------------------------------|
| Form Lewis                                    |          |                                           |
| Ø 6,00 / 8,00 / 10,00 / 12,00 / 14,00 / 16,00 | 235      | 1                                         |

Form Lewis Holzkassette 6



6-tlg. / 6-pcs. / 6-unid.  
Holzkassette / Wood cassette / Caja de madera  
Art.-Nr. 0022600006100

| Ø<br>mm                                         | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------------|----------|-------------------------------------------|
| Form Lewis                                      |          |                                           |
| Ø 12,00 / 14,00 / 16,00 / 18,00 / 20,00 / 22,00 | 460      | 1                                         |

Form Lewis Holzkassette 6



6-tlg. / 6-pcs. / 6-unid.  
Holzkassette / Wood cassette / Caja de madera  
Art.-Nr. 0022800006100

| Ø<br>mm                                         | l1<br>mm | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------------|----------|-------------------------------------------|
| Form Lewis                                      |          |                                           |
| Ø 12,00 / 14,00 / 16,00 / 18,00 / 20,00 / 22,00 | 600      | 1                                         |



Holzbohrer  
wood drills  
brocas para madera

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## ① Maschinen-Forstnerbohrer mit 3-Flächenschaft „SHARP SHARK“

### Einsatzbereich:

Extrem scharfe Schneiden geben dem Werkzeug präzise Schneideigenschaften sowie eine extrem hohe Standzeit. Zum Bohren von Weich- und Harthölzern, Spanplatten und Hartfaserplatten.



Präzise  
Precise  
Preciso



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados

## ② Machine forstner bit with 3-surface shank “SHARP SHARK”

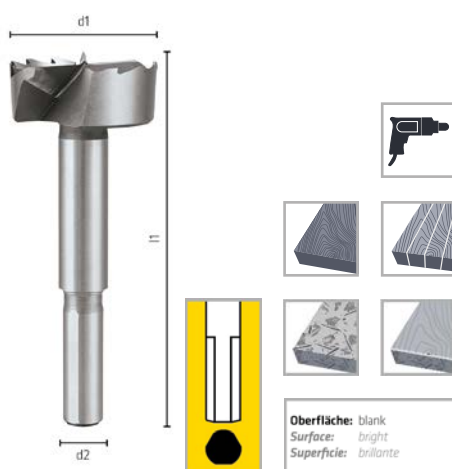
### Range of application:

For drilling hard and soft woods, chip and fibreboards. Extreme sharp edges provide optimum performance and prolonged life.

## ③ Broca fresadora para madera para máquinas con eje de 3 caras “SHARP SHARK”

### Ámbito de aplicación:

Filos extremadamente cortantes en el borde confieren a esta herramienta características de corte muy precisas, así como un tiempo de uso extremadamente prolongado. Para perforar maderas blandas y duras, tablas de madera aglomerada y tableros duros tratados.



Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio

Länge / Length / Longitud: 90 mm

| d1<br>mm | l1<br>mm | d2<br>mm | Code 239<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------------------|---------------|---|
| 15,00    | 90       | 8,00     | 0023901500100        | 1             | 1 |
| 16,00    | 90       | 8,00     | 0023901600100        | 1             | 1 |
| 18,00    | 90       | 8,00     | 0023901800100        | 1             | 1 |
| 20,00    | 90       | 8,00     | 0023902000100        | 1             | 1 |
| 22,00    | 90       | 8,00     | 0023902200100        | 1             | 1 |
| 24,00    | 90       | 8,00     | 0023902400100        | 1             | 1 |
| 25,00    | 90       | 8,00     | 0023902500100        | 1             | 1 |
| 26,00    | 90       | 8,00     | 0023902600100        | 1             | 1 |
| 28,00    | 90       | 10,00    | 0023902800100        | 1             | 1 |
| 30,00    | 90       | 10,00    | 0023903000100        | 1             | 1 |
| 32,00    | 90       | 10,00    | 0023903200100        | 1             | 1 |
| 35,00    | 90       | 10,00    | 0023903500100        | 1             | 1 |
| 40,00    | 90       | 10,00    | 0023904000100        | 1             | 1 |
| 45,00    | 90       | 10,00    | 0023904500100        | 1             | 1 |
| 50,00    | 90       | 10,00    | 0023905000100        | 1             | 1 |

SHARP SHARK Holzkassette 5



5-tlg. / 5-pcs. / 5-unid.  
Holzkassette / Wood cassette / Caja de madera  
Art.-Nr. 0023900005100

| Ø<br>mm                                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------|-------------------------------------------|
| SHARP SHARK                             |                                           |
| Ø 15,00 / 20,00 / 25,00 / 30,00 / 35,00 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D Maschinen-Forstnerbohrer**
**E Machine forstner bit**
**ES Broca fresadora para madera para máquinas**
**Einsatzbereich:**

Zum Bohren von Weich- und Harthölzern, Spanplatten und Hartfaserplatten.

**Range of application:**

For drilling in soft and hard wood, in chipboards and fibreboards.

**Ámbito de aplicación:**

Para perforar maderas blandas y duras, tablas de madera aglomerada y tableros duros tratados.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Scharfe Schneiden  
Sharp cutting edges  
Filas bien afilados



Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio

Länge / Length / Longitud: 90 mm

| d1<br>mm | l1<br>mm | d2<br>mm | Code 236<br>Art.-Nr. | Inh.<br>Cont. |   |
|----------|----------|----------|----------------------|---------------|---|
| 10,00    | 90       | 8,00     | 0023601000100        | 1             | 1 |
| 12,00    | 90       | 8,00     | 0023601200100        | 1             | 1 |
| 14,00    | 90       | 8,00     | 0023601400100        | 1             | 1 |
| 15,00    | 90       | 8,00     | 0023601500100        | 1             | 1 |
| 16,00    | 90       | 8,00     | 0023601600100        | 1             | 1 |
| 18,00    | 90       | 8,00     | 0023601800100        | 1             | 1 |
| 20,00    | 90       | 8,00     | 0023602000100        | 1             | 1 |
| 22,00    | 90       | 10,00    | 0023602200100        | 1             | 1 |
| 24,00    | 90       | 10,00    | 0023602400100        | 1             | 1 |
| 25,00    | 90       | 10,00    | 0023602500100        | 1             | 1 |
| 26,00    | 90       | 10,00    | 0023602600100        | 1             | 1 |
| 28,00    | 90       | 10,00    | 0023602800100        | 1             | 1 |
| 30,00    | 90       | 10,00    | 0023603000100        | 1             | 1 |
| 32,00    | 90       | 10,00    | 0023603200100        | 1             | 1 |
| 35,00    | 90       | 10,00    | 0023603500100        | 1             | 1 |
| 40,00    | 90       | 10,00    | 0023604000100        | 1             | 1 |
| 45,00    | 90       | 10,00    | 0023604500100        | 1             | 1 |
| 50,00    | 90       | 10,00    | 0023605000100        | 1             | 1 |



## D Hartmetallbestückter Beschlagbohrer für Einbohrbänder

### Einsatzbereich:

Zum Bohren von Harthölzer, Spanplatten und Hartfaserplatten. Einsatz nur mit Bohrständer.

## E TCT drill bits for cantilever hinges

### Range of application:

For drilling in hard wood, in chipboards and fibreboards. Use with drill stand only.

## ES Broca para herrajes revestida de carburo metálico para brocas individuales

### Ámbito de aplicación:

Para perforar maderas duras, tablas de madera aglomerada y tableros duros tratados. Solo emplear con un soporte para taladradora.



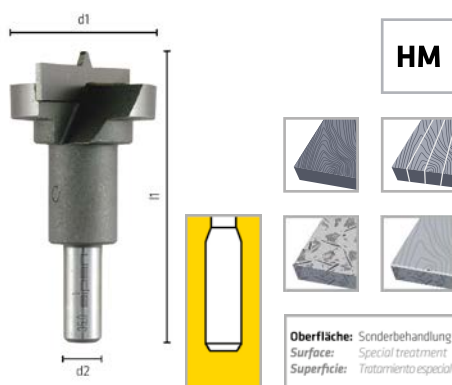
Verschleissfest  
Wear-resistant  
Resistente al desgaste



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Drehpack mit Aufhänger

Twistpack with tag

Paquete giratorio con gancho para autoservicio

Länge / Length / Longitud: 57 mm

| d1<br>mm | l1<br>mm | d2<br>mm | Code 235<br>Art.-Nr. | Inh.<br>Cont. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|---------------|
| 30,00    | 57       | 8,00     | 0023503000100        | 1             | 1             |
| 35,00    | 57       | 10,00    | 0023503500100        | 1             | 1             |

**D Maschinen-Schalungsbohrer**
**E Machine cavity wood drills**
**ES Broca para encofrados a máquina**
**Einsatzbereich:**

Zum Bohren in Schalungen im Baubereich sowie von Brettern, Balken, Dielen und Platten aus Weich- und Hartholz u. ä.

**Range of application:**

For drilling through cavities in the building industry, also for drilling blanks, beams, joists and panels made of soft and hard wood.

**Ámbito de aplicación:**

Para perforar en encofrados en el sector de la construcción, así como para tablonos, vigas, tablas de suelo y losas de madera y blanda y dura, etc.



Bruchstabil  
Break-resistant  
Resistente a la rotura



Scharfe Schneiden  
Sharp cutting edges  
Filas bien afilados



CV



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

Länge / Length / Longitud: 400/120 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 55<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|---------------------|---------------|-------------------------------------------------------------------------------------|
| 8,00     | 400      | 120      | 6,00     | 0005500800100       | 1             | 1                                                                                   |
| 10,00    | 400      | 120      | 8,00     | 0005501000100       | 1             | 1                                                                                   |
| 12,00    | 400      | 120      | 8,00     | 0005501200100       | 1             | 1                                                                                   |
| 14,00    | 400      | 120      | 8,00     | 0005501400100       | 1             | 1                                                                                   |
| 16,00    | 400      | 120      | 10,00    | 0005501600100       | 1             | 1                                                                                   |
| 18,00    | 400      | 120      | 10,00    | 0005501800100       | 1             | 1                                                                                   |
| 20,00    | 400      | 120      | 10,00    | 0005502000100       | 1             | 1                                                                                   |
| 22,00    | 400      | 120      | 10,00    | 0005502200100       | 1             | 1                                                                                   |
| 24,00    | 400      | 120      | 11,00    | 0005502400100       | 1             | 1                                                                                   |
| 26,00    | 400      | 120      | 11,00    | 0005502600100       | 1             | 1                                                                                   |



Holzbohrer  
wood drills  
brocas para madera

Einzelverpackung  
Single pack  
Embalaje individual

Länge / Length / Longitud: 600/120 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 65<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|---------------------|---------------|-----------------------------------------------------------------------------------|
| 8,00     | 600      | 120      | 6,00     | 0006500800100       | 1             | 1                                                                                 |
| 10,00    | 600      | 120      | 8,00     | 0006501000100       | 1             | 1                                                                                 |
| 12,00    | 600      | 120      | 8,00     | 0006501200100       | 1             | 1                                                                                 |
| 14,00    | 600      | 120      | 8,00     | 0006501400100       | 1             | 1                                                                                 |
| 16,00    | 600      | 120      | 10,00    | 0006501600100       | 1             | 1                                                                                 |
| 18,00    | 600      | 120      | 10,00    | 0006501800100       | 1             | 1                                                                                 |
| 20,00    | 600      | 120      | 10,00    | 0006502000100       | 1             | 1                                                                                 |
| 22,00    | 600      | 120      | 10,00    | 0006502200100       | 1             | 1                                                                                 |
| 24,00    | 600      | 120      | 11,00    | 0006502400100       | 1             | 1                                                                                 |
| 26,00    | 600      | 120      | 11,00    | 0006502600100       | 1             | 1                                                                                 |
| 30,00    | 600      | 120      | 11,00    | 0006503000100       | 1             | 1                                                                                 |

Länge / Length / Longitud: 800/120 mm

| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 75<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|---------------------|---------------|-----------------------------------------------------------------------------------|
| 10,00    | 800      | 120      | 8,00     | 0007501000100       | 1             | 1                                                                                 |
| 12,00    | 800      | 120      | 8,00     | 0007501200100       | 1             | 1                                                                                 |
| 14,00    | 800      | 120      | 8,00     | 0007501400100       | 1             | 1                                                                                 |
| 16,00    | 800      | 120      | 10,00    | 0007501600100       | 1             | 1                                                                                 |
| 18,00    | 800      | 120      | 10,00    | 0007501800100       | 1             | 1                                                                                 |
| 20,00    | 800      | 120      | 10,00    | 0007502000100       | 1             | 1                                                                                 |



**D Maschinen-Schalungsbohrer  
mit SDS-plus Aufnahme**
**E Machine cavity wood drills  
with SDS-plus shank**
**ES Broca para encofrados para  
máquinas con toma SDS-plus**
**Einsatzbereich:**

Zum Bohren in Schalungen im Baubereich sowie von Brettern, Balken, Dielen und Platten aus Weich- und Hartholz u. ä.

**Range of application:**

For drilling through cavities in the building industry, also for drilling blanks, beams, joists and panels made of soft and hard wood.

**Ámbito de aplicación:**

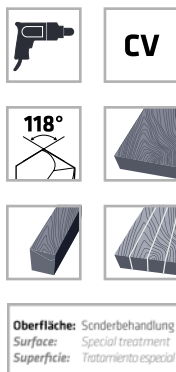
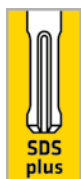
Para perforar en encofrados en el sector de la construcción, así como para tableros, vigas, tablas de suelo y losas de madera y blanda y dura, etc.



Bruchstabil  
Break-resistant  
Resistente a la rotura



Scharfe Schneiden  
Sharp cutting edges  
Filas bien afilados



Oberfläche: Sonderbehandlung  
Surface: Special treatment  
Superficie: Tratamiento especial



Einzelverpackung  
Single pack  
Embalaje individual

**Länge / Length / Longitud: 400/120 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 56<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|---------------------|---------------|-------------------------------------------------------------------------------------|
| 10,00    | 400      | 120      | SDS-plus | 0005601000100       | 1             | 1                                                                                   |
| 12,00    | 400      | 120      | SDS-plus | 0005601200100       | 1             | 1                                                                                   |
| 14,00    | 400      | 120      | SDS-plus | 0005601400100       | 1             | 1                                                                                   |
| 16,00    | 400      | 120      | SDS-plus | 0005601600100       | 1             | 1                                                                                   |
| 18,00    | 400      | 120      | SDS-plus | 0005601800100       | 1             | 1                                                                                   |
| 20,00    | 400      | 120      | SDS-plus | 0005602000100       | 1             | 1                                                                                   |
| 22,00    | 400      | 120      | SDS-plus | 0005602200100       | 1             | 1                                                                                   |

**Länge / Length / Longitud: 600/120 mm**

| d1<br>mm | l1<br>mm | l2<br>mm | d2       | Code 66<br>Art.-Nr. | Inh.<br>Cont. |  |
|----------|----------|----------|----------|---------------------|---------------|-------------------------------------------------------------------------------------|
| 10,00    | 600      | 120      | SDS-plus | 0006601000100       | 1             | 1                                                                                   |
| 12,00    | 600      | 120      | SDS-plus | 0006601200100       | 1             | 1                                                                                   |
| 14,00    | 600      | 120      | SDS-plus | 0006601400100       | 1             | 1                                                                                   |
| 16,00    | 600      | 120      | SDS-plus | 0006601600100       | 1             | 1                                                                                   |
| 18,00    | 600      | 120      | SDS-plus | 0006601800100       | 1             | 1                                                                                   |
| 20,00    | 600      | 120      | SDS-plus | 0006602000100       | 1             | 1                                                                                   |
| 22,00    | 600      | 120      | SDS-plus | 0006602200100       | 1             | 1                                                                                   |



Holzbohrer  
wood drills  
brocas para madera

**D Flachfräsbohrer**

**E Flat wood bit**

**ES Broca fresadora plana**

**Einsatzbereich:**

Schneller und exakter Schnitt, punktgenaues Anbohren. Zum Bohren in Weich- und Hartholz, Spanplatten und Balken.

**Range of application:**

Fast and precise cut, spot precision drilling. For drilling in soft and hard wood, chipboards and beams.

**Ámbito de aplicación:**

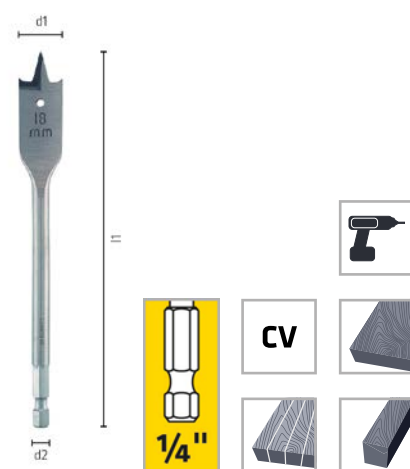
Corte rápido y exacto, perforación precisa. Para perforar maderas blandas y duras, tablas de madera aglomerada y vigas.



Punktgenaues Anbohren  
Highly accurate centering  
Perforación de gran precisión



Scharfe Schneiden  
Sharp cutting edges  
Filos bien afilados



Einzelverpackung  
Single pack  
Embalaje individual

Länge / Length / Longitud: 152 mm

| d1<br>mm | l1<br>mm | d2   | Code 237<br>Art.-Nr. | Inh.<br>Cont. |    |
|----------|----------|------|----------------------|---------------|----|
| 6,00     | 152      | 1/4" | 0023700600100        | 1             | 10 |
| 8,00     | 152      | 1/4" | 0023700800100        | 1             | 10 |
| 10,00    | 152      | 1/4" | 0023701000100        | 1             | 10 |
| 12,00    | 152      | 1/4" | 0023701200100        | 1             | 10 |
| 13,00    | 152      | 1/4" | 0023701300100        | 1             | 10 |
| 14,00    | 152      | 1/4" | 0023701400100        | 1             | 10 |
| 16,00    | 152      | 1/4" | 0023701600100        | 1             | 10 |
| 17,00    | 152      | 1/4" | 0023701700100        | 1             | 10 |
| 18,00    | 152      | 1/4" | 0023701800100        | 1             | 10 |
| 19,00    | 152      | 1/4" | 0023701900100        | 1             | 10 |
| 20,00    | 152      | 1/4" | 0023702000100        | 1             | 10 |
| 22,00    | 152      | 1/4" | 0023702200100        | 1             | 10 |
| 24,00    | 152      | 1/4" | 0023702400100        | 1             | 10 |
| 25,00    | 152      | 1/4" | 0023702500100        | 1             | 10 |
| 26,00    | 152      | 1/4" | 0023702600100        | 1             | 10 |
| 28,00    | 152      | 1/4" | 0023702800100        | 1             | 10 |
| 30,00    | 152      | 1/4" | 0023703000100        | 1             | 10 |
| 32,00    | 152      | 1/4" | 0023703200100        | 1             | 10 |
| 35,00    | 152      | 1/4" | 0023703500100        | 1             | 10 |
| 38,00    | 152      | 1/4" | 0023703800100        | 1             | 10 |
| 40,00    | 152      | 1/4" | 0023704000100        | 1             | 10 |

|                                                                                                                                            |          |      | Einzelverpackung<br><i>Single pack</i><br><i>Embalaje individual</i> |                             |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------|------|----------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------|
| <b>Länge / Length / Longitud: 400 mm</b>                                                                                                   |          |      |                                                                      |                             |                                                                                     |
| d1<br>mm                                                                                                                                   | l1<br>mm | d2   | Code 238<br>Art.-Nr.                                                 | Inh.<br>Cont.               |    |
| 6,00                                                                                                                                       | 400      | 1/4" | 0023800600100                                                        | 1                           | 10                                                                                  |
| 8,00                                                                                                                                       | 400      | 1/4" | 0023800800100                                                        | 1                           | 10                                                                                  |
| 10,00                                                                                                                                      | 400      | 1/4" | 0023801000100                                                        | 1                           | 10                                                                                  |
| 12,00                                                                                                                                      | 400      | 1/4" | 0023801200100                                                        | 1                           | 10                                                                                  |
| 13,00                                                                                                                                      | 400      | 1/4" | 0023801300100                                                        | 1                           | 10                                                                                  |
| 14,00                                                                                                                                      | 400      | 1/4" | 0023801400100                                                        | 1                           | 10                                                                                  |
| 16,00                                                                                                                                      | 400      | 1/4" | 0023801600100                                                        | 1                           | 10                                                                                  |
| 17,00                                                                                                                                      | 400      | 1/4" | 0023801700100                                                        | 1                           | 10                                                                                  |
| 18,00                                                                                                                                      | 400      | 1/4" | 0023801800100                                                        | 1                           | 10                                                                                  |
| 20,00                                                                                                                                      | 400      | 1/4" | 0023802000100                                                        | 1                           | 10                                                                                  |
| 22,00                                                                                                                                      | 400      | 1/4" | 0023802200100                                                        | 1                           | 10                                                                                  |
| 24,00                                                                                                                                      | 400      | 1/4" | 0023802400100                                                        | 1                           | 10                                                                                  |
| 25,00                                                                                                                                      | 400      | 1/4" | 0023802500100                                                        | 1                           | 10                                                                                  |
| 26,00                                                                                                                                      | 400      | 1/4" | 0023802600100                                                        | 1                           | 10                                                                                  |
| 28,00                                                                                                                                      | 400      | 1/4" | 0023802800100                                                        | 1                           | 10                                                                                  |
| 30,00                                                                                                                                      | 400      | 1/4" | 0023803000100                                                        | 1                           | 10                                                                                  |
| 32,00                                                                                                                                      | 400      | 1/4" | 0023803200100                                                        | 1                           | 10                                                                                  |
| 35,00                                                                                                                                      | 400      | 1/4" | 0023803500100                                                        | 1                           | 10                                                                                  |
| 38,00                                                                                                                                      | 400      | 1/4" | 0023803800100                                                        | 1                           | 10                                                                                  |
| 40,00                                                                                                                                      | 400      | 1/4" | 0023804000100                                                        | 1                           | 10                                                                                  |
|                                                                                                                                            |          |      |                                                                      |                             |                                                                                     |
| <b>Einzelverpackung</b><br><i>Single pack / Embalaje individual</i>                                                                        |          |      | <b>Code 234</b><br><b>Art.-Nr.</b>                                   | <b>Inh.</b><br><b>Cont.</b> |  |
| Zentrumsbohrer verstellbar bis ø 45 mm<br><i>Center bit adjustable up to ø 45 mm</i><br><i>Broca de centrar ajustable hasta ø 45 mm</i>    |          |      | 0023404000100                                                        | 1                           | 10                                                                                  |
|                                                                                                                                            |          |      |                                                                      |                             |                                                                                     |
| <b>Zubehör</b><br><i>Accessory / Accesorios</i>                                                                                            |          |      | <b>Code 237</b><br><b>Art.-Nr.</b>                                   | <b>Inh.</b><br><b>Cont.</b> |  |
| Verlängerung Flachfräsbohrer 300 mm<br><i>Extension flat drill file rasp 300 mm</i><br><i>Prolongación de broca fresadora plana 300 mm</i> |          |      | 0023709999100                                                        | 1                           | 10                                                                                  |



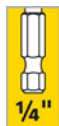
Holzbohrer  
wood drills  
brocas para madera

**D** Kassetten, Sets

**E** Cassettes, sets

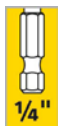
**ES** Cajas, juegos

Flachfräsbohrer BOX 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0023700015100

Flachfräsbohrer PLT 3



3-tlg. / 3-pcs. / 3-unid.  
Einzelverpackung / Single pack / Embalaje individual  
Art.-Nr. 0023700003100

| Ø<br>mm                                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------|-------------------------------------------|-------------------------|-------------------------------------------|
| Flachfräsbohrer                         |                                           | Flachfräsbohrer         |                                           |
| Ø 16,00 / 18,00 / 20,00 / 22,00 / 24,00 | 1                                         | Ø 16,00 / 18,00 / 20,00 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D Drehzahlen

## E Spindle speeds

## ES Velocidades

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

## HSS Cobalt Holz



## Code 633

| Ø<br>mm |  |  |  |  |  |
|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 3       | 3800                                                                                | 2850                                                                                | 2500                                                                                | 2100                                                                                | 2300                                                                                |
| 4       | 2900                                                                                | 2150                                                                                | 1850                                                                                | 1600                                                                                | 1750                                                                                |
| 5       | 2350                                                                                | 1700                                                                                | 1500                                                                                | 1300                                                                                | 1400                                                                                |
| 6       | 1950                                                                                | 1450                                                                                | 1250                                                                                | 1100                                                                                | 1170                                                                                |
| 7       | 1650                                                                                | 1250                                                                                | 1100                                                                                | 900                                                                                 | 1000                                                                                |
| 8       | 1450                                                                                | 1050                                                                                | 950                                                                                 | 800                                                                                 | 880                                                                                 |
| 9       | 1300                                                                                | 950                                                                                 | 850                                                                                 | 700                                                                                 | 780                                                                                 |
| 10      | 1160                                                                                | 850                                                                                 | 750                                                                                 | 650                                                                                 | 700                                                                                 |
| 11      | 1050                                                                                | 780                                                                                 | 680                                                                                 | 580                                                                                 | 650                                                                                 |
| 12      | 970                                                                                 | 700                                                                                 | 620                                                                                 | 530                                                                                 | 580                                                                                 |
| 14      | 830                                                                                 | 600                                                                                 | 530                                                                                 | 450                                                                                 | 500                                                                                 |
| 16      | 730                                                                                 | 550                                                                                 | 470                                                                                 | 400                                                                                 | 440                                                                                 |
| 18      | 650                                                                                 | 480                                                                                 | 420                                                                                 | 350                                                                                 | 400                                                                                 |
| 20      | 580                                                                                 | 430                                                                                 | 370                                                                                 | 320                                                                                 | 350                                                                                 |

## Profi Holz



## Code 620, 622

| Ø<br>mm |  |  |  |  |  |
|---------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                               |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| 3       | 3000                                                                                | 2700                                                                                  | 2300                                                                                  | 1900                                                                                  | 2300                                                                                  |
| 4       | 2800                                                                                | 2000                                                                                  | 1800                                                                                  | 1400                                                                                  | 1750                                                                                  |
| 5       | 2200                                                                                | 1600                                                                                  | 1400                                                                                  | 1150                                                                                  | 1400                                                                                  |
| 6       | 1900                                                                                | 1300                                                                                  | 1150                                                                                  | 950                                                                                   | 1170                                                                                  |
| 8       | 1400                                                                                | 1000                                                                                  | 900                                                                                   | 700                                                                                   | 880                                                                                   |
| 10      | 1100                                                                                | 800                                                                                   | 700                                                                                   | 550                                                                                   | 700                                                                                   |
| 12      | 900                                                                                 | 650                                                                                   | 600                                                                                   | 500                                                                                   | 580                                                                                   |

Holzbohrer  
wood drills  
brocas para madera

Holz



Code 616

| Ø<br>mm |  |  |  |  |
|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                               |                                                                                     |                                                                                     |                                                                                     |
| 1       | 2700                                                                                | 2300                                                                                | 1900                                                                                | 1600                                                                                |
| 2       | 2700                                                                                | 2300                                                                                | 1900                                                                                | 1600                                                                                |
| 3       | 2700                                                                                | 2300                                                                                | 1900                                                                                | 1600                                                                                |
| 4       | 2000                                                                                | 1800                                                                                | 1400                                                                                | 1200                                                                                |
| 5       | 1600                                                                                | 1400                                                                                | 1100                                                                                | 1000                                                                                |
| 6       | 1300                                                                                | 1200                                                                                | 1000                                                                                | 800                                                                                 |
| 7       | 1200                                                                                | 1000                                                                                | 800                                                                                 | 700                                                                                 |
| 8       | 1000                                                                                | 900                                                                                 | 700                                                                                 | 600                                                                                 |
| 9       | 900                                                                                 | 800                                                                                 | 600                                                                                 | 550                                                                                 |
| 10      | 800                                                                                 | 700                                                                                 | 600                                                                                 | 500                                                                                 |
| 11      | 700                                                                                 | 650                                                                                 | 550                                                                                 | 450                                                                                 |
| 12      | 650                                                                                 | 600                                                                                 | 500                                                                                 | 400                                                                                 |
| 13      | 600                                                                                 | 550                                                                                 | 450                                                                                 | 350                                                                                 |
| 14      | 550                                                                                 | 500                                                                                 | 400                                                                                 | 350                                                                                 |
| 15      | 550                                                                                 | 450                                                                                 | 400                                                                                 | 300                                                                                 |
| 16      | 500                                                                                 | 450                                                                                 | 350                                                                                 | 300                                                                                 |
| 18      | 450                                                                                 | 400                                                                                 | 300                                                                                 | 250                                                                                 |
| 20      | 400                                                                                 | 350                                                                                 | 250                                                                                 | 200                                                                                 |

Schlangenbohrer / Auger bit / Broca salomónica "Form Lewis"



Code 216, 226, 228

| Ø<br>mm |  |  |  |  |
|---------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                                |                                                                                       |                                                                                       |                                                                                       |
| 4       | 1000                                                                                 | 800                                                                                   | 800                                                                                   | 800                                                                                   |
| 5       | 1000                                                                                 | 800                                                                                   | 800                                                                                   | 800                                                                                   |
| 6       | 1000                                                                                 | 800                                                                                   | 800                                                                                   | 800                                                                                   |
| 8       | 1000                                                                                 | 750                                                                                   | 750                                                                                   | 600                                                                                   |
| 10      | 1000                                                                                 | 600                                                                                   | 600                                                                                   | 450                                                                                   |
| 12      | 1000                                                                                 | 500                                                                                   | 500                                                                                   | 400                                                                                   |
| 14      | 900                                                                                  | 450                                                                                   | 450                                                                                   | 350                                                                                   |
| 15      | 850                                                                                  | 400                                                                                   | 400                                                                                   | 300                                                                                   |
| 16      | 800                                                                                  | 400                                                                                   | 400                                                                                   | 300                                                                                   |
| 18      | 700                                                                                  | 350                                                                                   | 350                                                                                   | 250                                                                                   |
| 20      | 650                                                                                  | 300                                                                                   | 300                                                                                   | 250                                                                                   |
| 22      | 600                                                                                  | 300                                                                                   | 300                                                                                   | 200                                                                                   |
| 24      | 550                                                                                  | 250                                                                                   | 250                                                                                   | 200                                                                                   |
| 25      | 500                                                                                  | 250                                                                                   | 250                                                                                   | 200                                                                                   |
| 26      | 500                                                                                  | 250                                                                                   | 250                                                                                   | 200                                                                                   |
| 28      | 450                                                                                  | 200                                                                                   | 200                                                                                   | 150                                                                                   |
| 30      | 400                                                                                  | 200                                                                                   | 200                                                                                   | 150                                                                                   |
| 32      | 400                                                                                  | 200                                                                                   | 200                                                                                   | 150                                                                                   |



## D Drehzahlen

## E Spindle speeds

## ES Velocidades

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

Forstnerbohrer / Forstner Bit /  
Broca fresadora para madera, „Sharp Shark“

Beschlagbohrer / Drill bits for cantilever hinges /  
Broca para herrajes



Code 236, 239

| Ø<br>mm |  |  |  |  |
|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                               |                                                                                     |                                                                                     |                                                                                     |
| 10      | 2400                                                                                | 1800                                                                                | 1400                                                                                | 1100                                                                                |
| 12      | 2400                                                                                | 1500                                                                                | 1200                                                                                | 950                                                                                 |
| 14      | 2150                                                                                | 1300                                                                                | 1050                                                                                | 850                                                                                 |
| 15      | 2050                                                                                | 1200                                                                                | 950                                                                                 | 800                                                                                 |
| 16      | 1950                                                                                | 1150                                                                                | 900                                                                                 | 750                                                                                 |
| 18      | 1800                                                                                | 1050                                                                                | 850                                                                                 | 650                                                                                 |
| 20      | 1650                                                                                | 950                                                                                 | 750                                                                                 | 600                                                                                 |
| 22      | 1550                                                                                | 850                                                                                 | 700                                                                                 | 550                                                                                 |
| 24      | 1450                                                                                | 800                                                                                 | 650                                                                                 | 500                                                                                 |
| 25      | 1400                                                                                | 750                                                                                 | 600                                                                                 | 500                                                                                 |
| 26      | 1350                                                                                | 750                                                                                 | 600                                                                                 | 450                                                                                 |
| 28      | 1300                                                                                | 700                                                                                 | 550                                                                                 | 450                                                                                 |
| 30      | 1250                                                                                | 650                                                                                 | 550                                                                                 | 400                                                                                 |
| 32      | 1200                                                                                | 600                                                                                 | 500                                                                                 | 400                                                                                 |
| 35      | 1100                                                                                | 550                                                                                 | 450                                                                                 | 350                                                                                 |
| 40      | 1000                                                                                | 500                                                                                 | 400                                                                                 | 300                                                                                 |
| 45      | 900                                                                                 | 450                                                                                 | 350                                                                                 | 300                                                                                 |
| 50      | 850                                                                                 | 400                                                                                 | 300                                                                                 | 250                                                                                 |

Code 235

| Ø<br>mm |  |  |  |
|---------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                               |                                                                                       |                                                                                       |
| 30      | 800                                                                                 | 650                                                                                   | 550                                                                                   |
| 35      | 700                                                                                 | 550                                                                                   | 450                                                                                   |



Holzbohrer  
wood drills  
brocas para madera

**Schalungsbohrer / Cavity wood drills / Broca para encofrados**



Code 055, 056, 065, 066, 075

| Ø<br>mm |  |  |  |
|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                               |                                                                                     |                                                                                     |
| 8       | 1400                                                                                | 1000                                                                                | 900                                                                                 |
| 10      | 1100                                                                                | 800                                                                                 | 700                                                                                 |
| 12      | 900                                                                                 | 650                                                                                 | 600                                                                                 |
| 14      | 800                                                                                 | 600                                                                                 | 500                                                                                 |
| 16      | 700                                                                                 | 500                                                                                 | 450                                                                                 |
| 18      | 600                                                                                 | 450                                                                                 | 400                                                                                 |
| 20      | 550                                                                                 | 400                                                                                 | 350                                                                                 |
| 22      | 500                                                                                 | 350                                                                                 | 300                                                                                 |
| 24      | 450                                                                                 | 350                                                                                 | 300                                                                                 |
| 26      | 400                                                                                 | 300                                                                                 | 300                                                                                 |
| 28      | 400                                                                                 | 300                                                                                 | 250                                                                                 |
| 30      | 350                                                                                 | 250                                                                                 | 250                                                                                 |

**Flachfräsbohrer / Flat wood bit / Broca fresadora plana**



Code 237, 238, 234

| Ø<br>mm |  |  |  |  |
|---------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|         | U/min.   rpm   r.p.m.                                                                |                                                                                       |                                                                                       |                                                                                       |
| 6       | 1700                                                                                 | 1000                                                                                  | 800                                                                                   | 650                                                                                   |
| 8       | 1450                                                                                 | 900                                                                                   | 700                                                                                   | 550                                                                                   |
| 10      | 1300                                                                                 | 750                                                                                   | 600                                                                                   | 500                                                                                   |
| 12      | 1150                                                                                 | 700                                                                                   | 550                                                                                   | 450                                                                                   |
| 13      | 1100                                                                                 | 650                                                                                   | 550                                                                                   | 400                                                                                   |
| 14      | 1050                                                                                 | 650                                                                                   | 500                                                                                   | 400                                                                                   |
| 16      | 1000                                                                                 | 600                                                                                   | 450                                                                                   | 400                                                                                   |
| 17      | 950                                                                                  | 550                                                                                   | 450                                                                                   | 350                                                                                   |
| 18      | 900                                                                                  | 550                                                                                   | 450                                                                                   | 350                                                                                   |
| 19      | 900                                                                                  | 550                                                                                   | 450                                                                                   | 350                                                                                   |
| 20      | 850                                                                                  | 500                                                                                   | 400                                                                                   | 350                                                                                   |
| 22      | 800                                                                                  | 500                                                                                   | 400                                                                                   | 300                                                                                   |
| 24      | 800                                                                                  | 500                                                                                   | 400                                                                                   | 300                                                                                   |
| 25      | 750                                                                                  | 450                                                                                   | 350                                                                                   | 300                                                                                   |
| 26      | 700                                                                                  | 450                                                                                   | 350                                                                                   | 300                                                                                   |
| 28      | 700                                                                                  | 400                                                                                   | 350                                                                                   | 300                                                                                   |
| 30      | 700                                                                                  | 400                                                                                   | 350                                                                                   | 250                                                                                   |
| 32      | 650                                                                                  | 400                                                                                   | 300                                                                                   | 250                                                                                   |
| 35      | 650                                                                                  | 400                                                                                   | 300                                                                                   | 250                                                                                   |
| 38      | 600                                                                                  | 350                                                                                   | 300                                                                                   | 250                                                                                   |
| 40      | 600                                                                                  | 350                                                                                   | 300                                                                                   | 200                                                                                   |



Holzbohrer  
wood drills  
brocas para madeira



# HARTMETALL WERKZEUGE

// VOLLHARTMETALL-BOHRER, VOLLHARTMETALL-SENKER,  
HARTMETALL-FRÄSSTIFTE



## **E** *TUNGSTEN CARBIDE TOOLS*

- // SOLID CARBIDE DRILLS
- // SOLID CARBIDE COUNTERSINKS
- // TUNGSTEN CARBIDE ROTARY BURRS

## **ES** *HERRAMIENTAS DE METAL DURO*

- // BROCAS DE METAL DURO Y MACIZO
- // BROCAS AVELLANADORAS DE METAL DURO Y MACIZO
- // PUNTAS DE AVELLANDO DE METAL DURO

Übersicht

Overview

Resumen

|                                                                                                                                                                                                   |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                   |    |    |    |    |
| Norm / Estándar                                                                                                                                                                                   | DIN 6539                                                                            |                                                                                     | DIN 338                                                                               |                                                                                       |
| Name / Nombre                                                                                                                                                                                     | VHM Bohrer                                                                          | VHM Bohrer                                                                          | VHM Bohrer                                                                            | VHM Bohrer                                                                            |
| Typ / Type / Tipo                                                                                                                                                                                 | N                                                                                   | N                                                                                   | N                                                                                     | N                                                                                     |
| Bohrtiefe / Depth of drilling / Profundidad de perforación                                                                                                                                        | 3xD                                                                                 | 3xD                                                                                 | 5xD                                                                                   | 5xD                                                                                   |
| Schneidstoff / Cutting material / Material de corte                                                                                                                                               | VHM                                                                                 | VHM                                                                                 | VHM                                                                                   | VHM                                                                                   |
| Beschichtung / Coating / Recubrimiento                                                                                                                                                            |                                                                                     | ALUNIT®                                                                             |                                                                                       | ALUNIT®                                                                               |
| Spitzenwinkel / Lip angle / Ángulo de la punta                                                                                                                                                    | 118°                                                                                | 118°                                                                                | 118°                                                                                  | 118°                                                                                  |
| Schaft / Shank / Eje                                                                                                                                                                              |  |  |  |  |
| Ø mm                                                                                                                                                                                              | 0,50 - 20,00                                                                        | 0,50 - 14,00                                                                        | 1,00 - 16,00                                                                          | 1,00 - 16,00                                                                          |
| Code / Código                                                                                                                                                                                     | 6146                                                                                | 6147                                                                                | 6156                                                                                  | 6157                                                                                  |
| Seite / Page / Página                                                                                                                                                                             | 231                                                                                 | 231                                                                                 | 234                                                                                   | 234                                                                                   |
| Geeignet für / Suitable for / Adecuada para                                                                                                                                                       |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Allgemeine Baustähle</b><br>Structural steels<br>Aceros de construcción generales                          |  |  |  |  |
|  <b>Automatenstähle</b><br>Free cutting steels<br>Aceros de corte fácil                                        |  |  |  |  |
|  <b>Unlegierte Vergütungsstähle</b><br>Unalloyed heat treatable steels<br>Aceros para bonifi car no aleados    |  |  |  |  |
|  <b>Legierte Vergütungsstähle</b><br>Alloyed heat treatable steels<br>Aceros para bonifi car aleados           |  |  |  |  |
|  <b>Rostfreie Stähle</b><br>Stainless steels<br>Aceros inoxidables                                             |  |  |  |  |
|  <b>Grauguss, Temperguss</b><br>Grey cast iron, malleable cast iron<br>Hierro fundido gris, fundición maleable |  |  |  |  |
|  <b>Titan- und Titanlegierungen</b><br>Titanium and titanium alloys<br>Titanio y aleaciones de titanio         |  |  |  |  |
|  <b>Kupfer, Messing</b><br>Copper, brass<br>Cobre, latón                                                       |  |  |  |  |
|  <b>Aluminium</b><br>Aluminio<br>Aluminio                                                                      |  |  |  |  |
|  <b>Kunststoffe</b><br>Plastics<br>Plásticos                                                                   |  |  |  |  |



## D Übersicht

## E Overview

## ES Resumen

|                                                                                     |                                                                                     |                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |
| DIN 335                                                                             |                                                                                     | DIN 335                                                                             |                                                                                       |
| VHM Senker                                                                          | VHM Senker                                                                          | VHM Senker                                                                          | VHM Senker                                                                            |
|                                                                                     |                                                                                     |                                                                                     |                                                                                       |
| VHM                                                                                 | VHM                                                                                 | VHM                                                                                 | VHM                                                                                   |
|                                                                                     | ALUNIT®                                                                             |                                                                                     | ALUNIT®                                                                               |
| 90°                                                                                 | 90°                                                                                 | 90°                                                                                 | 90°                                                                                   |
|  |  |  |  |
| 5,30 - 31,00                                                                        | 5,30 - 31,00                                                                        | 5,30 - 31,00                                                                        | 5,30 - 31,00                                                                          |
| 6530                                                                                | 6637                                                                                | 6405                                                                                | 6407                                                                                  |
| 238                                                                                 | 238                                                                                 | 239                                                                                 | 239                                                                                   |
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 Hartmetall Werkzeuge  
 Tungsten carbide tools  
 herramientas de metal duro

Übersicht

Overview

Resumen

|                                                                                                                           |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                           |    |    |    |    |    |    |
| Typ / Type / Tipo DIN                                                                                                     | ZYA                                                                                 | ZYA-S                                                                               | WRC                                                                                 | SPG                                                                                   | WKN                                                                                   | SKM                                                                                   |
| Typ / Type / Tipo ISO                                                                                                     | A                                                                                   | A-S                                                                                 | C                                                                                   | G                                                                                     | N                                                                                     | M                                                                                     |
| Schneidstoff / Cutting material / Material de corte                                                                       | Hartmetall                                                                          | Hartmetall                                                                          | Hartmetall                                                                          | Hartmetall                                                                            | Hartmetall                                                                            | Hartmetall                                                                            |
| Stirnverzahnung / Front cut / Dentado frontal                                                                             |                                                                                     | ja / yes / si                                                                       |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| Schaft / Shank / Eje                                                                                                      |    |    |    |    |    |    |
| Ø mm                                                                                                                      | 2,00 - 20,00                                                                        | 2,00 - 20,00                                                                        | 3,00 - 20,00                                                                        | 3,00 - 16,00                                                                          | 3,00 - 12,00                                                                          | 3,00 - 16,00                                                                          |
| Code / Código                                                                                                             | 7770 - 7778                                                                         | 7782 - 7789                                                                         | 7790 - 7799                                                                         | 7800 - 7809                                                                           | 7813 - 7816                                                                           | 7833 - 7837                                                                           |
| Seite / Page / Página                                                                                                     | 240                                                                                 | 242                                                                                 | 244                                                                                 | 246                                                                                   | 248                                                                                   | 250                                                                                   |
| Zahnung / Cut / Dentado                                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|  0 INOX                                |  |                                                                                     |  |  |                                                                                       |                                                                                       |
|  1A Aluminium<br>Aluminium<br>Aluminio |  |  |  |  |                                                                                       |                                                                                       |
|  2                                     |                                                                                     |  |  |                                                                                       |                                                                                       |                                                                                       |
|  3 DIN MY                              |  |  |  |  |  |  |
|  4 Diamant<br>Diamond<br>Diamante      |  |  |  |  |                                                                                       |  |
|  6 DIN MX                              |  |  |  |  |  |  |
|  6 TiN DIN MX                          |  |  |  |  |                                                                                       |  |
|  9 SPECIAL STEEL                       |                                                                                     |  |  |  |                                                                                       |                                                                                       |

**ES Resúmen**

**Hartmetall Werkzeuge**  
*Tungsten carbide tools*  
*herramientas de metal duro*



**MAYKE**TAG *INSIDE*



**Äußerst präzise und genau**

Der Mehrflächenanschliff bewirkt optimalen Spanbruch, hohe Zentriergenauigkeit und geringe Schnittkräfte

***Extremely precise and accurate***

*The multi faced point shapes results in optimum chip flow, high centering accuracy and low cutting forces*

***Especialmente precisa y exacta***

*El afilado para varias superficies logra una rotura de las virutas óptima, una elevada precisión del centrado y una menor fuerza de corte*

**Schnelle Bohrung**

Hohe Schnittgeschwindigkeit und Vorschübe

***Fast drilling***

*High cutting speeds and feeds*

***Perforación rápida***

*Velocidad de corte y avance elevados*

**Geeignet für schwer zerspanbare Materialien**

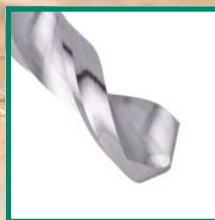
Selbst hochfester Stahl lässt sich exakt bohren

***Suitable for difficult-to-machine materials***

*Even heat resistant steel can be drilled precisely*

***Apto para materiales difícilmente mecanizables***

*Permite la perforación exacta incluso del acero más resistente*



**alpen** *drill better.*

**D Vollhartmetall-Spiralbohrer,  
extra kurz, DIN 6539**
**Einsatzbereich:**

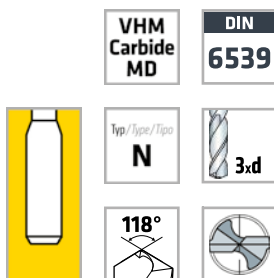
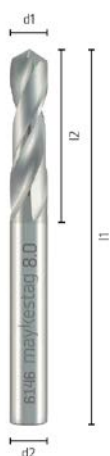
Besonders geeignet zum Bohren von hochfesten Stählen, Cr-Ni-Stählen, Hartguss, Grauguss, Stahlguss, Mn-Hartstahl, Bronze, Aluminium mit hohem Siliziumanteil und anderen schwer zerspanbaren Werkstoffen (beschichtete Ausführung).

**E Solid carbide stub drills,  
short series, DIN 6539**
**Range of application:**

Especially suitable for drilling heat resistant steels, Cr-Ni steels, high carbon steel castings, grey cast iron, cast steels, manganese steels, bronze, aluminium with high percentage silicon and other difficult-to-machine materials (coated design).

**ES Broca espiral de metal  
duro y macizo,  
extra corta, DIN 6539**
**Ámbito de aplicación:**

Especialmente adecuada para el taladrado de aceros de alta resistencia, aceros al cromo-níquel, fundición blanca, hierro fundido gris, fundición de acero, acero duro con manganeso, bronce, aluminio con contenido elevado de silicio y otros materiales difícilmente mecanizables con virutaje (diseño recubierto).



Einzelverpackung  
Single packing  
Embalaje individual



Einzelverpackung  
Single packing  
Embalaje individual

blank / bright / brillante

ALUNIT®

| d1<br>mm | l1<br>mm | l2<br>mm | Code 6146<br>Art.-Nr. | Inh.<br>Cont. | Code 6147<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|-----------------------|---------------|-----------------------|---------------|
| 0,50     | 26       | 6        | 0614600050100         | 1             | 0614700050100         | 1             |
| 0,60     | 26       | 6        | 0614600060100         | 1             | 0614700060100         | 1             |
| 0,70     | 26       | 6        | 0614600070100         | 1             | 0614700070100         | 1             |
| 0,80     | 26       | 6        | 0614600080100         | 1             | 0614700080100         | 1             |
| 0,90     | 26       | 6        | 0614600090100         | 1             | 0614700090100         | 1             |
| 1,00     | 26       | 6        | 0614600100100         | 1             | 0614700100100         | 1             |
| 1,10     | 28       | 7        | 0614600110100         | 1             | 0614700110100         | 1             |
| 1,20     | 30       | 8        | 0614600120100         | 1             | 0614700120100         | 1             |
| 1,30     | 30       | 8        | 0614600130100         | 1             | 0614700130100         | 1             |
| 1,40     | 32       | 9        | 0614600140100         | 1             | 0614700140100         | 1             |
| 1,50     | 32       | 9        | 0614600150100         | 1             | 0614700150100         | 1             |
| 1,60     | 34       | 10       | 0614600160100         | 1             | 0614700160100         | 1             |
| 1,70     | 34       | 10       | 0614600170100         | 1             | 0614700170100         | 1             |
| 1,80     | 36       | 11       | 0614600180100         | 1             | 0614700180100         | 1             |
| 1,90     | 36       | 11       | 0614600190100         | 1             | 0614700190100         | 1             |
| 2,00     | 38       | 12       | 0614600200100         | 1             | 0614700200100         | 1             |
| 2,10     | 38       | 12       | 0614600210100         | 1             | 0614700210100         | 1             |
| 2,20     | 40       | 13       | 0614600220100         | 1             | 0614700220100         | 1             |
| 2,30     | 40       | 13       | 0614600230100         | 1             | 0614700230100         | 1             |
| 2,40     | 43       | 14       | 0614600240100         | 1             | 0614700240100         | 1             |
| 2,50     | 43       | 14       | 0614600250100         | 1             | 0614700250100         | 1             |
| 2,60     | 43       | 14       | 0614600260100         | 1             | 0614700260100         | 1             |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro

|          |          |          | Einzelverpackung<br>Single packing<br>Embalaje individual |               | Einzelverpackung<br>Single packing<br>Embalaje individual |               |
|----------|----------|----------|-----------------------------------------------------------|---------------|-----------------------------------------------------------|---------------|
|          |          |          | blank / bright / brillante                                |               | ALUNIT®                                                   |               |
| d1<br>mm | l1<br>mm | l2<br>mm | Code 6146<br>Art.-Nr.                                     | Inh.<br>Cont. | Code 6147<br>Art.-Nr.                                     | Inh.<br>Cont. |
| 2,70     | 46       | 16       | 0614600270100                                             | 1             | 0614700270100                                             | 1             |
| 2,80     | 46       | 16       | 0614600280100                                             | 1             | 0614700280100                                             | 1             |
| 2,90     | 46       | 16       | 0614600290100                                             | 1             | 0614700290100                                             | 1             |
| 3,00     | 46       | 16       | 0614600300100                                             | 1             | 0614700300100                                             | 1             |
| 3,10     | 49       | 18       | 0614600310100                                             | 1             | 0614700310100                                             | 1             |
| 3,20     | 49       | 18       | 0614600320100                                             | 1             | 0614700320100                                             | 1             |
| 3,30     | 49       | 18       | 0614600330100                                             | 1             | 0614700330100                                             | 1             |
| 3,40     | 52       | 20       | 0614600340100                                             | 1             | 0614700340100                                             | 1             |
| 3,50     | 52       | 20       | 0614600350100                                             | 1             | 0614700350100                                             | 1             |
| 3,60     | 52       | 20       | 0614600360100                                             | 1             | 0614700360100                                             | 1             |
| 3,70     | 52       | 20       | 0614600370100                                             | 1             | 0614700370100                                             | 1             |
| 3,80     | 55       | 22       | 0614600380100                                             | 1             | 0614700380100                                             | 1             |
| 3,90     | 55       | 22       | 0614600390100                                             | 1             | 0614700390100                                             | 1             |
| 4,00     | 55       | 22       | 0614600400100                                             | 1             | 0614700400100                                             | 1             |
| 4,10     | 55       | 22       | 0614600410100                                             | 1             | 0614700410100                                             | 1             |
| 4,20     | 55       | 22       | 0614600420100                                             | 1             | 0614700420100                                             | 1             |
| 4,30     | 58       | 24       | 0614600430100                                             | 1             | 0614700430100                                             | 1             |
| 4,40     | 58       | 24       | 0614600440100                                             | 1             | 0614700440100                                             | 1             |
| 4,50     | 58       | 24       | 0614600450100                                             | 1             | 0614700450100                                             | 1             |
| 4,60     | 58       | 24       | 0614600460100                                             | 1             | 0614700460100                                             | 1             |
| 4,70     | 58       | 24       | 0614600470100                                             | 1             | 0614700470100                                             | 1             |
| 4,80     | 62       | 26       | 0614600480100                                             | 1             | 0614700480100                                             | 1             |
| 4,90     | 62       | 26       | 0614600490100                                             | 1             | 0614700490100                                             | 1             |
| 5,00     | 62       | 26       | 0614600500100                                             | 1             | 0614700500100                                             | 1             |
| 5,10     | 62       | 26       | 0614600510100                                             | 1             | 0614700510100                                             | 1             |
| 5,20     | 62       | 26       | 0614600520100                                             | 1             | 0614700520100                                             | 1             |
| 5,30     | 62       | 26       | 0614600530100                                             | 1             | 0614700530100                                             | 1             |
| 5,40     | 66       | 28       | 0614600540100                                             | 1             | 0614700540100                                             | 1             |
| 5,50     | 66       | 28       | 0614600550100                                             | 1             | 0614700550100                                             | 1             |
| 5,60     | 66       | 28       | 0614600560100                                             | 1             | 0614700560100                                             | 1             |
| 5,70     | 66       | 28       | 0614600570100                                             | 1             | 0614700570100                                             | 1             |
| 5,80     | 66       | 28       | 0614600580100                                             | 1             | 0614700580100                                             | 1             |
| 5,90     | 66       | 28       | 0614600590100                                             | 1             | 0614700590100                                             | 1             |
| 6,00     | 66       | 28       | 0614600600100                                             | 1             | 0614700600100                                             | 1             |
| 6,10     | 70       | 31       | 0614600610100                                             | 1             | 0614700610100                                             | 1             |
| 6,20     | 70       | 31       | 0614600620100                                             | 1             | 0614700620100                                             | 1             |
| 6,30     | 70       | 31       | 0614600630100                                             | 1             | 0614700630100                                             | 1             |
| 6,40     | 70       | 31       | 0614600640100                                             | 1             | 0614700640100                                             | 1             |
| 6,50     | 70       | 31       | 0614600650100                                             | 1             | 0614700650100                                             | 1             |
| 6,60     | 70       | 31       | 0614600660100                                             | 1             | 0614700660100                                             | 1             |
| 6,70     | 70       | 31       | 0614600670100                                             | 1             | 0614700670100                                             | 1             |
| 6,80     | 74       | 34       | 0614600680100                                             | 1             | 0614700680100                                             | 1             |
| 6,90     | 74       | 34       | 0614600690100                                             | 1             | 0614700690100                                             | 1             |
| 7,00     | 74       | 34       | 0614600700100                                             | 1             | 0614700700100                                             | 1             |
| 7,10     | 74       | 34       | 0614600710100                                             | 1             | 0614700710100                                             | 1             |
| 7,20     | 74       | 34       | 0614600720100                                             | 1             | 0614700720100                                             | 1             |
| 7,30     | 74       | 34       | 0614600730100                                             | 1             | 0614700730100                                             | 1             |
| 7,40     | 74       | 34       | 0614600740100                                             | 1             | 0614700740100                                             | 1             |
| 7,50     | 74       | 34       | 0614600750100                                             | 1             | 0614700750100                                             | 1             |
| 7,60     | 79       | 36       | 0614600760100                                             | 1             | 0614700760100                                             | 1             |
| 7,70     | 79       | 36       | 0614600770100                                             | 1             | 0614700770100                                             | 1             |
| 7,80     | 79       | 36       | 0614600780100                                             | 1             | 0614700780100                                             | 1             |
| 7,90     | 79       | 36       | 0614600790100                                             | 1             | 0614700790100                                             | 1             |
| 8,00     | 79       | 37       | 0614600800100                                             | 1             | 0614700800100                                             | 1             |
| 8,10     | 79       | 36       | 0614600810100                                             | 1             | 0614700810100                                             | 1             |
| 8,20     | 79       | 36       | 0614600820100                                             | 1             | 0614700820100                                             | 1             |



|          |          |          | Einzelverpackung<br>Single packing<br>Embalaje individual |               | Einzelverpackung<br>Single packing<br>Embalaje individual |               |
|----------|----------|----------|-----------------------------------------------------------|---------------|-----------------------------------------------------------|---------------|
|          |          |          | blank / bright / brillante                                |               | ALUNIT®                                                   |               |
| d1<br>mm | l1<br>mm | l2<br>mm | Code 6146<br>Art.-Nr.                                     | Inh.<br>Cont. | Code 6147<br>Art.-Nr.                                     | Inh.<br>Cont. |
| 8,30     | 79       | 36       | 0614600830100                                             | 1             | 0614700830100                                             | 1             |
| 8,40     | 79       | 36       | 0614600840100                                             | 1             | 0614700840100                                             | 1             |
| 8,50     | 79       | 37       | 0614600850100                                             | 1             | 0614700850100                                             | 1             |
| 8,60     | 84       | 40       | 0614600860100                                             | 1             | 0614700860100                                             | 1             |
| 8,70     | 84       | 40       | 0614600870100                                             | 1             | 0614700870100                                             | 1             |
| 8,80     | 84       | 40       | 0614600880100                                             | 1             | 0614700880100                                             | 1             |
| 8,90     | 84       | 40       | 0614600890100                                             | 1             | 0614700890100                                             | 1             |
| 9,00     | 84       | 40       | 0614600900100                                             | 1             | 0614700900100                                             | 1             |
| 9,10     | 84       | 40       | 0614600910100                                             | 1             | 0614700910100                                             | 1             |
| 9,20     | 84       | 40       | 0614600920100                                             | 1             | 0614700920100                                             | 1             |
| 9,30     | 84       | 40       | 0614600930100                                             | 1             | 0614700930100                                             | 1             |
| 9,40     | 84       | 40       | 0614600940100                                             | 1             | 0614700940100                                             | 1             |
| 9,50     | 84       | 40       | 0614600950100                                             | 1             | 0614700950100                                             | 1             |
| 9,60     | 89       | 43       | 0614600960100                                             | 1             | 0614700960100                                             | 1             |
| 9,70     | 89       | 43       | 0614600970100                                             | 1             | 0614700970100                                             | 1             |
| 9,80     | 89       | 43       | 0614600980100                                             | 1             | 0614700980100                                             | 1             |
| 9,90     | 89       | 43       | 0614600990100                                             | 1             | 0614700990100                                             | 1             |
| 10,00    | 89       | 43       | 0614601000100                                             | 1             | 0614701000100                                             | 1             |
| 10,20    | 89       | 43       | 0614601020100                                             | 1             | 0614701020100                                             | 1             |
| 10,50    | 89       | 43       | 0614601050100                                             | 1             | 0614701050100                                             | 1             |
| 10,80    | 95       | 47       | 0614601080100                                             | 1             | 0614701080100                                             | 1             |
| 11,00    | 95       | 47       | 0614601100100                                             | 1             | 0614701100100                                             | 1             |
| 11,50    | 95       | 47       | 0614601150100                                             | 1             | 0614701150100                                             | 1             |
| 12,00    | 102      | 51       | 0614601200100                                             | 1             | 0614701200100                                             | 1             |
| 12,50    | 102      | 51       | 0614601250100                                             | 1             | 0614701250100                                             | 1             |
| 13,00    | 102      | 51       | 0614601300100                                             | 1             | 0614701300100                                             | 1             |
| 13,50    | 107      | 54       | 0614601350100                                             | 1             | 0614701350100                                             | 1             |
| 14,00    | 107      | 54       | 0614601400100                                             | 1             | 0614701400100                                             | 1             |
| 14,50    | 111      | 56       | 0614601450100                                             | 1             |                                                           |               |
| 15,00    | 111      | 56       | 0614601500100                                             | 1             |                                                           |               |
| 15,50    | 115      | 58       | 0614601550100                                             | 1             |                                                           |               |
| 16,00    | 115      | 58       | 0614601600100                                             | 1             |                                                           |               |
| 16,50    | 119      | 60       | 0614601650100                                             | 1             |                                                           |               |
| 17,00    | 119      | 60       | 0614601700100                                             | 1             |                                                           |               |
| 17,50    | 123      | 62       | 0614601750100                                             | 1             |                                                           |               |
| 18,00    | 123      | 62       | 0614601800100                                             | 1             |                                                           |               |
| 18,50    | 127      | 64       | 0614601850100                                             | 1             |                                                           |               |
| 19,00    | 127      | 64       | 0614601900100                                             | 1             |                                                           |               |
| 19,50    | 131      | 66       | 0614601950100                                             | 1             |                                                           |               |
| 20,00    | 131      | 66       | 0614602000100                                             | 1             |                                                           |               |


Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro

≤ Ø 2,90 mm 4-Flächenanschliff / ≥ Ø 3,00 mm 6-Flächenanschliff  
 ≤ Ø 2,90 mm 4-faced point shape / ≥ Ø 3,00 mm 6-faced point shape  
 ≤ Ø 2,90 mm 4-Punta afi lada cuádruple / ≥ Ø 3,00 mm 6-Punta afi lada cuádruple

**① Vollhartmetall-Spiralbohrer,  
lang, DIN 338**

**Einsatzbereich:**

Besonders geeignet zum Bohren von hochfesten Stählen, Cr-Ni-Stählen, Hartguss, Grauguss, Stahlguss, Mn-Hartstahl, Bronze, Aluminium mit hohem Siliziumanteil und anderen schwer zerspanbaren Werkstoffen (beschichtete Ausführung).

**② Solid carbide jobber drills,  
long series, DIN 338**

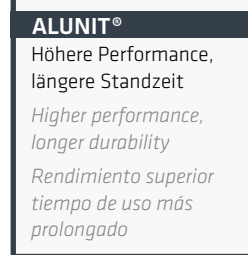
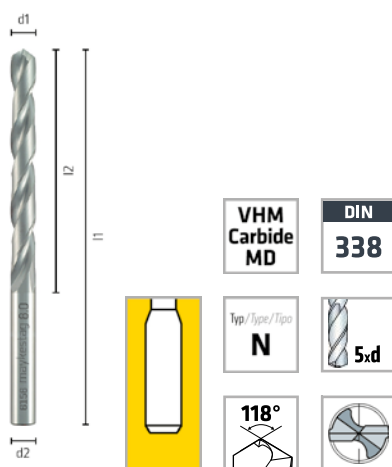
**Range of application:**

Especially suitable for drilling heat resistant steels, Cr-Ni steels, high carbon steel castings, grey cast iron, cast steels, manganese steels, bronze, aluminium with high percentage silicon and other difficult-to-machine materials (coated design).

**③ Broca espiral de metal duro y  
macizo, larga, DIN 338**

**Ámbito de aplicación:**

Especialmente adecuada para el taladrado de aceros de alta resistencia, aceros al cromo-níquel, fundición blanca, hierro fundido gris, fundición de acero, acero duro con manganeso, bronce, aluminio con contenido elevado de silicio y otros materiales difícilmente mecanizables con virutaje (diseño recubierto).



Einzelverpackung  
Single packing  
Embalaje individual

Einzelverpackung  
Single packing  
Embalaje individual

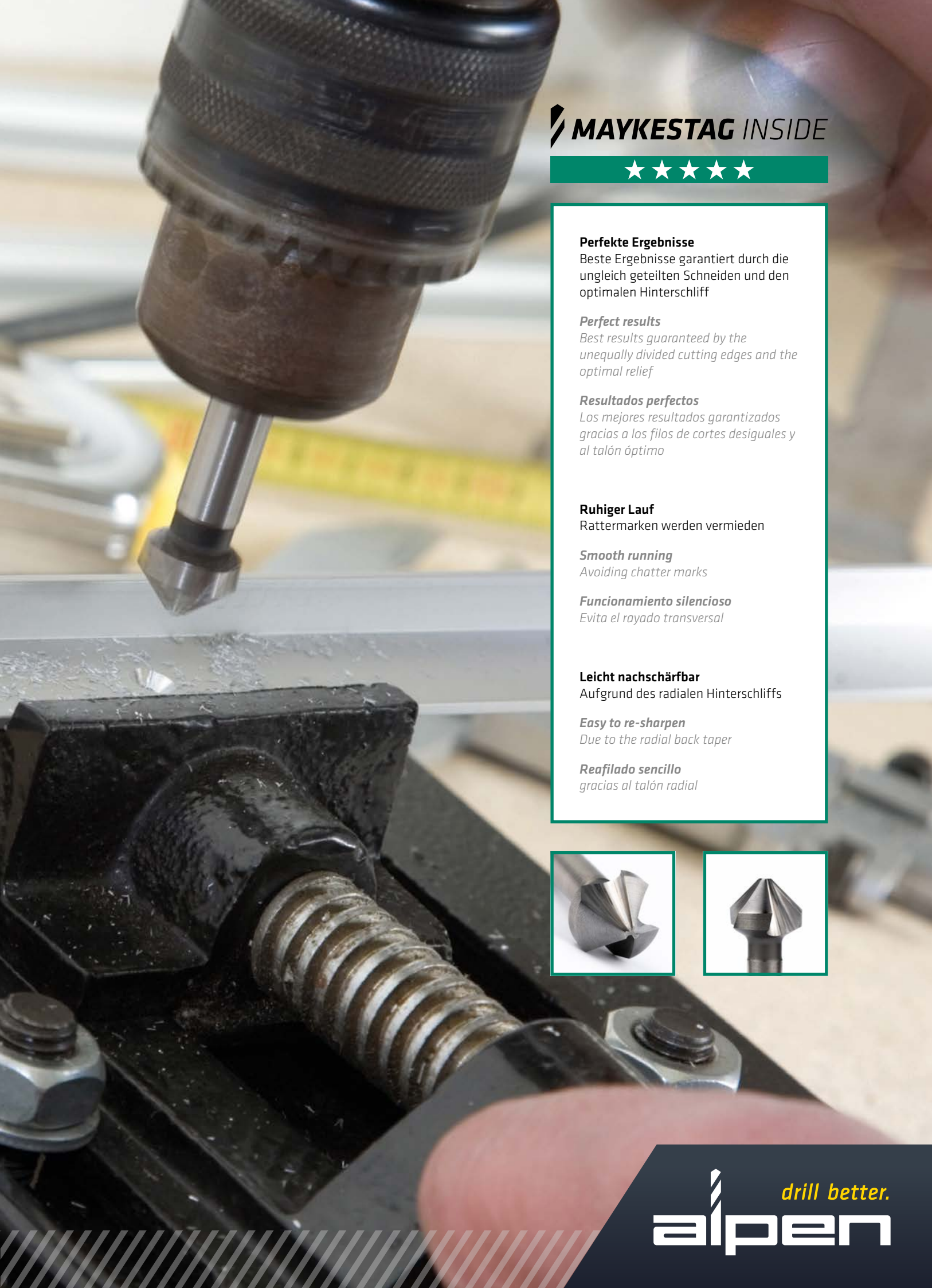
|          |          |          |          | blank / bright / brillante |               | ALUNIT®               |               |
|----------|----------|----------|----------|----------------------------|---------------|-----------------------|---------------|
| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 6156<br>Art.-Nr.      | Inh.<br>Cont. | Code 6157<br>Art.-Nr. | Inh.<br>Cont. |
| 1,00     | 34       | 12       |          | 0615600100100              | 1             | 0615700100100         | 1             |
| 1,10     | 36       | 14       |          | 0615600110100              | 1             | 0615700110100         | 1             |
| 1,20     | 38       | 16       |          | 0615600120100              | 1             | 0615700120100         | 1             |
| 1,30     | 38       | 16       |          | 0615600130100              | 1             | 0615700130100         | 1             |
| 1,40     | 40       | 18       |          | 0615600140100              | 1             | 0615700140100         | 1             |
| 1,50     | 40       | 18       |          | 0615600150100              | 1             | 0615700150100         | 1             |
| 1,60     | 43       | 20       |          | 0615600160100              | 1             | 0615700160100         | 1             |
| 1,70     | 43       | 20       |          | 0615600170100              | 1             | 0615700170100         | 1             |
| 1,80     | 46       | 22       |          | 0615600180100              | 1             | 0615700180100         | 1             |
| 1,90     | 46       | 22       |          | 0615600190100              | 1             | 0615700190100         | 1             |
| 2,00     | 49       | 24       |          | 0615600200100              | 1             | 0615700200100         | 1             |
| 2,10     | 49       | 24       |          | 0615600210100              | 1             | 0615700210100         | 1             |
| 2,20     | 53       | 27       |          | 0615600220100              | 1             | 0615700220100         | 1             |
| 2,30     | 53       | 27       |          | 0615600230100              | 1             | 0615700230100         | 1             |
| 2,40     | 57       | 30       |          | 0615600240100              | 1             | 0615700240100         | 1             |
| 2,50     | 57       | 30       |          | 0615600250100              | 1             | 0615700250100         | 1             |
| 2,60     | 57       | 30       |          | 0615600260100              | 1             | 0615700260100         | 1             |
| 2,70     | 61       | 33       |          | 0615600270100              | 1             | 0615700270100         | 1             |
| 2,80     | 61       | 33       |          | 0615600280100              | 1             | 0615700280100         | 1             |
| 2,90     | 61       | 33       |          | 0615600290100              | 1             | 0615700290100         | 1             |
| 3,00     | 61       | 33       |          | 0615600300100              | 1             | 0615700300100         | 1             |
| 3,10     | 65       | 36       |          | 0615600310100              | 1             | 0615700310100         | 1             |

|          |          |          |          | Einzelverpackung<br>Single packing<br>Embalaje individual |               | Einzelverpackung<br>Single packing<br>Embalaje individual |               |
|----------|----------|----------|----------|-----------------------------------------------------------|---------------|-----------------------------------------------------------|---------------|
|          |          |          |          | blank / bright / brillante                                |               | ALUNIT®                                                   |               |
| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 6156<br>Art.-Nr.                                     | Inh.<br>Cont. | Code 6157<br>Art.-Nr.                                     | Inh.<br>Cont. |
| 3,20     | 65       | 36       |          | 0615600320100                                             | 1             | 0615700320100                                             | 1             |
| 3,30     | 65       | 36       |          | 0615600330100                                             | 1             | 0615700330100                                             | 1             |
| 3,40     | 70       | 39       |          | 0615600340100                                             | 1             | 0615700340100                                             | 1             |
| 3,50     | 70       | 39       |          | 0615600350100                                             | 1             | 0615700350100                                             | 1             |
| 3,60     | 70       | 39       |          | 0615600360100                                             | 1             | 0615700360100                                             | 1             |
| 3,70     | 70       | 39       |          | 0615600370100                                             | 1             | 0615700370100                                             | 1             |
| 3,80     | 75       | 43       |          | 0615600380100                                             | 1             | 0615700380100                                             | 1             |
| 3,90     | 75       | 43       |          | 0615600390100                                             | 1             | 0615700390100                                             | 1             |
| 4,00     | 75       | 43       |          | 0615600400100                                             | 1             | 0615700400100                                             | 1             |
| 4,10     | 75       | 43       |          | 0615600410100                                             | 1             | 0615700410100                                             | 1             |
| 4,20     | 75       | 43       |          | 0615600420100                                             | 1             | 0615700420100                                             | 1             |
| 4,30     | 80       | 47       |          | 0615600430100                                             | 1             | 0615700430100                                             | 1             |
| 4,40     | 80       | 47       |          | 0615600440100                                             | 1             | 0615700440100                                             | 1             |
| 4,50     | 80       | 47       |          | 0615600450100                                             | 1             | 0615700450100                                             | 1             |
| 4,60     | 80       | 47       |          | 0615600460100                                             | 1             | 0615700460100                                             | 1             |
| 4,70     | 80       | 47       |          | 0615600470100                                             | 1             | 0615700470100                                             | 1             |
| 4,80     | 86       | 52       |          | 0615600480100                                             | 1             | 0615700480100                                             | 1             |
| 4,90     | 86       | 52       |          | 0615600490100                                             | 1             | 0615700490100                                             | 1             |
| 5,00     | 86       | 52       |          | 0615600500100                                             | 1             | 0615700500100                                             | 1             |
| 5,10     | 86       | 52       |          | 0615600510100                                             | 1             | 0615700510100                                             | 1             |
| 5,20     | 86       | 52       |          | 0615600520100                                             | 1             | 0615700520100                                             | 1             |
| 5,30     | 86       | 52       |          | 0615600530100                                             | 1             | 0615700530100                                             | 1             |
| 5,40     | 93       | 57       |          | 0615600540100                                             | 1             | 0615700540100                                             | 1             |
| 5,50     | 93       | 57       |          | 0615600550100                                             | 1             | 0615700550100                                             | 1             |
| 5,60     | 93       | 57       |          | 0615600560100                                             | 1             | 0615700560100                                             | 1             |
| 5,70     | 93       | 57       |          | 0615600570100                                             | 1             | 0615700570100                                             | 1             |
| 5,80     | 93       | 57       |          | 0615600580100                                             | 1             | 0615700580100                                             | 1             |
| 5,90     | 93       | 57       |          | 0615600590100                                             | 1             | 0615700590100                                             | 1             |
| 6,00     | 93       | 57       |          | 0615600600100                                             | 1             | 0615700600100                                             | 1             |
| 6,10     | 101      | 63       |          | 0615600610100                                             | 1             | 0615700610100                                             | 1             |
| 6,20     | 101      | 63       |          | 0615600620100                                             | 1             | 0615700620100                                             | 1             |
| 6,30     | 101      | 63       |          | 0615600630100                                             | 1             | 0615700630100                                             | 1             |
| 6,40     | 101      | 63       |          | 0615600640100                                             | 1             | 0615700640100                                             | 1             |
| 6,50     | 101      | 63       |          | 0615600650100                                             | 1             | 0615700650100                                             | 1             |
| 6,60     | 101      | 63       |          | 0615600660100                                             | 1             | 0615700660100                                             | 1             |
| 6,70     | 101      | 63       |          | 0615600670100                                             | 1             | 0615700670100                                             | 1             |
| 6,80     | 109      | 69       |          | 0615600680100                                             | 1             | 0615700680100                                             | 1             |
| 6,90     | 109      | 69       |          | 0615600690100                                             | 1             | 0615700690100                                             | 1             |
| 7,00     | 109      | 69       |          | 0615600700100                                             | 1             | 0615700700100                                             | 1             |
| 7,10     | 109      | 69       |          | 0615600710100                                             | 1             | 0615700710100                                             | 1             |
| 7,20     | 109      | 69       |          | 0615600720100                                             | 1             | 0615700720100                                             | 1             |
| 7,30     | 109      | 69       |          | 0615600730100                                             | 1             | 0615700730100                                             | 1             |
| 7,40     | 109      | 69       |          | 0615600740100                                             | 1             | 0615700740100                                             | 1             |
| 7,50     | 109      | 69       |          | 0615600750100                                             | 1             | 0615700750100                                             | 1             |
| 7,60     | 117      | 75       |          | 0615600760100                                             | 1             | 0615700760100                                             | 1             |
| 7,70     | 117      | 75       |          | 0615600770100                                             | 1             | 0615700770100                                             | 1             |
| 7,80     | 117      | 75       |          | 0615600780100                                             | 1             | 0615700780100                                             | 1             |
| 7,90     | 117      | 75       |          | 0615600790100                                             | 1             | 0615700790100                                             | 1             |
| 8,00     | 117      | 75       |          | 0615600800100                                             | 1             | 0615700800100                                             | 1             |
| 8,10     | 117      | 75       |          | 0615600810100                                             | 1             | 0615700810100                                             | 1             |
| 8,20     | 117      | 75       |          | 0615600820100                                             | 1             | 0615700820100                                             | 1             |
| 8,30     | 117      | 75       |          | 0615600830100                                             | 1             | 0615700830100                                             | 1             |
| 8,40     | 117      | 75       |          | 0615600840100                                             | 1             | 0615700840100                                             | 1             |
| 8,50     | 117      | 75       |          | 0615600850100                                             | 1             | 0615700850100                                             | 1             |
| 8,60     | 125      | 81       |          | 0615600860100                                             | 1             | 0615700860100                                             | 1             |
| 8,70     | 125      | 81       |          | 0615600870100                                             | 1             | 0615700870100                                             | 1             |


Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro

|          |          |          |          | Einzelverpackung<br>Single packing<br>Embalaje individual |               | Einzelverpackung<br>Single packing<br>Embalaje individual |               |
|----------|----------|----------|----------|-----------------------------------------------------------|---------------|-----------------------------------------------------------|---------------|
|          |          |          |          | blank / bright / brillante                                |               | ALUNIT®                                                   |               |
| d1<br>mm | l1<br>mm | l2<br>mm | d2<br>mm | Code 6156<br>Art.-Nr.                                     | Inh.<br>Cont. | Code 6157<br>Art.-Nr.                                     | Inh.<br>Cont. |
| 8,80     | 125      | 81       |          | 0615600880100                                             | 1             | 0615700880100                                             | 1             |
| 8,90     | 125      | 81       |          | 0615600890100                                             | 1             | 0615700890100                                             | 1             |
| 9,00     | 125      | 81       |          | 0615600900100                                             | 1             | 0615700900100                                             | 1             |
| 9,10     | 125      | 81       |          | 0615600910100                                             | 1             | 0615700910100                                             | 1             |
| 9,20     | 125      | 81       |          | 0615600920100                                             | 1             | 0615700920100                                             | 1             |
| 9,30     | 125      | 81       |          | 0615600930100                                             | 1             | 0615700930100                                             | 1             |
| 9,40     | 125      | 81       |          | 0615600940100                                             | 1             | 0615700940100                                             | 1             |
| 9,50     | 125      | 81       |          | 0615600950100                                             | 1             | 0615700950100                                             | 1             |
| 9,60     | 133      | 87       |          | 0615600960100                                             | 1             | 0615700960100                                             | 1             |
| 9,70     | 133      | 87       |          | 0615600970100                                             | 1             | 0615700970100                                             | 1             |
| 9,80     | 133      | 87       |          | 0615600980100                                             | 1             | 0615700980100                                             | 1             |
| 9,90     | 133      | 87       |          | 0615600990100                                             | 1             | 0615700990100                                             | 1             |
| 10,00    | 133      | 87       |          | 0615601000100                                             | 1             | 0615701000100                                             | 1             |
| 10,20    | 133      | 87       |          | 0615601020100                                             | 1             | 0615701020100                                             | 1             |
| 10,50    | 133      | 87       |          | 0615601050100                                             | 1             | 0615701050100                                             | 1             |
| 10,80    | 142      | 94       |          | 0615601080100                                             | 1             | 0615701080100                                             | 1             |
| 11,00    | 142      | 94       |          | 0615601100100                                             | 1             | 0615701100100                                             | 1             |
| 11,50    | 142      | 94       |          | 0615601150100                                             | 1             | 0615701150100                                             | 1             |
| 12,00    | 151      | 101      |          | 0615601200100                                             | 1             | 0615701200100                                             | 1             |
| 12,50    | 151      | 101      |          | 0615601250100                                             | 1             | 0615701250100                                             | 1             |
| 13,00    | 151      | 101      |          | 0615601300100                                             | 1             | 0615701300100                                             | 1             |
| 13,50    | 160      | 108      |          | 0615601350100                                             | 1             | 0615701350100                                             | 1             |
| 14,00    | 160      | 108      |          | 0615601400100                                             | 1             | 0615701400100                                             | 1             |
| 14,50    | 169      | 114      |          | 0615601450100                                             | 1             | 0615701450100                                             | 1             |
| 15,00    | 169      | 114      |          | 0615601500100                                             | 1             | 0615701500100                                             | 1             |
| 15,50    | 178      | 120      |          | 0615601550100                                             | 1             | 0615701550100                                             | 1             |
| 16,00    | 178      | 120      |          | 0615601600100                                             | 1             | 0615701600100                                             | 1             |

≤ Ø 2,90 mm 4-Flächenanschliff / ≥ Ø 3,00 mm 6-Flächenanschliff  
 ≤ Ø 2,90 mm 4-faced point shape / ≥ Ø 3,00 mm 6-faced point shape  
 ≤ Ø 2,90 mm 4-Punta afi lada cuádruple / ≥ Ø 3,00 mm 6-Punta afi lada cuádruple



**MAYKE**TAG *INSIDE*



**Perfekte Ergebnisse**

Beste Ergebnisse garantiert durch die ungleich geteilten Schneiden und den optimalen Hinterschliff

**Perfect results**

Best results guaranteed by the unequally divided cutting edges and the optimal relief

**Resultados perfectos**

Los mejores resultados garantizados gracias a los filos de cortes desiguales y al talón óptimo

**Ruhiger Lauf**

Rattermarken werden vermieden

**Smooth running**

Avoiding chatter marks

**Funcionamiento silencioso**

Evita el rayado transversal

**Leicht nachschärfbar**

Aufgrund des radialen Hinterschliffs

**Easy to re-sharpen**

Due to the radial back taper

**Reafilado sencillo**

gracias al talón radial



**alpen** *drill better.*

**D Vollhartmetall-Kegelsenker**  
**ungleiche Teilung**  
**DIN 335 C, 90°**

**Einsatzbereich:**

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften durch ungleichgeteilte Schneiden. Verringerung der Vorschubkraft und Ratterbildung an der Senkoberfläche durch reduzierte Axial- und Radialkraft.

**E Solid carbide countersinks**  
**different partition**  
**DIN 335 C, 90°**

**Range of application:**

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface by unequally divided cutting edges. Reduction of feed force and chatter marks on the countersinking surface due to reduced axial and radial force.

**ES Avellanador cónico de metal**  
**duro y macizo división irregular**  
**DIN 335 C, 90°**

**Ámbito de aplicación:**

Para todos los metales E y NE y plásticos duros y blandos. Herramienta para desbarbar y avellanar de aplicación universal para agujeros de todo tipo. Excelentes características de corte, por corte desigual dividida. Reducción del avance y de vibración en la superficie avellanada gracias a las fuerzas axiales y radiales reducidas.



Einzelverpackung  
Single packing  
Embalaje individual



**ALUNIT®**  
Höhere Performance,  
längere Standzeit  
Higher performance,  
longer durability  
Rendimiento superior  
tiempo de uso más  
prolongado

Einzelverpackung  
Single packing  
Embalaje individual

|          |          |                        |          |   | blank / bright / brillante |               | ALUNIT®               |               |
|----------|----------|------------------------|----------|---|----------------------------|---------------|-----------------------|---------------|
| d1<br>mm | d4<br>mm | d2 <sub>h9</sub><br>mm | l1<br>mm | Z | Code 6530<br>Art.-Nr.      | Inh.<br>Cont. | Code 6637<br>Art.-Nr. | Inh.<br>Cont. |
| 5,30     | 1,00     | 4,00                   | 40       | 3 | 0653000530100              | 1             | 0663700530100         | 1             |
| 6,30     | 1,50     | 5,00                   | 45       | 3 | 0653000630100              | 1             | 0663700630100         | 1             |
| 8,30     | 2,00     | 6,00                   | 50       | 3 | 0653000830100              | 1             | 0663700830100         | 1             |
| 10,40    | 2,50     | 6,00                   | 50       | 3 | 0653001040100              | 1             | 0663701040100         | 1             |
| 12,40    | 2,80     | 8,00                   | 56       | 3 | 0653001240100              | 1             | 0663701240100         | 1             |
| 14,40    | 2,90     | 8,00                   | 56       | 3 | 0653001440100              | 1             | 0663701440100         | 1             |
| 16,50    | 3,20     | 10,00                  | 60       | 3 | 0653001650100              | 1             | 0663701650100         | 1             |
| 19,50    | 3,50     | 10,00                  | 63       | 3 | 0653001950100              | 1             | 0663701950100         | 1             |
| 20,50    | 3,50     | 10,00                  | 63       | 3 | 0653002050100              | 1             | 0663702050100         | 1             |
| 25,00    | 3,80     | 10,00                  | 67       | 3 | 0653002500100              | 1             | 0663702500100         | 1             |
| 31,00    | 4,20     | 12,00                  | 71       | 3 | 0653003100100              | 1             | 0663703100100         | 1             |

Ø 5,30 VHM / solid carbide / metal duro y macizo

Ø 6,30-31,00 nur VHM-Kopf / only solid carbide cutting part / solo cabezal de metal duro y macizo



**D Vollhartmetall-Kegelsenker**  
**DIN 335 C, 90°**
**Einsatzbereich:**

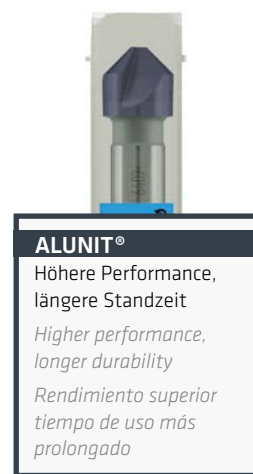
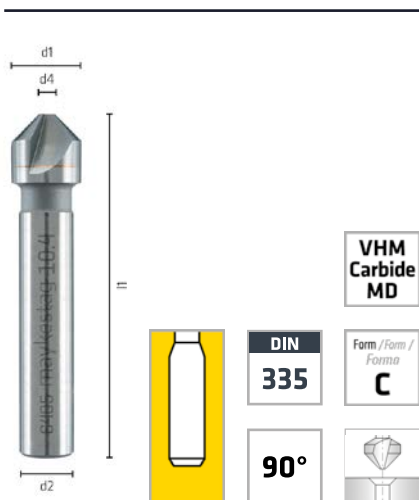
Zum ratterfreien Senken und Entgraten von Stählen, hochfesten Stählen, Grauguss, VA-Werkstoffen sowie siliziumhaltigen Aluminium-Legierungen.

**E Solid carbide countersinks**  
**DIN 335 C, 90°**
**Range of application:**

For countersinking and deburring of steels with medium/high tensile strength, cast iron, stainless steels as well as silicon containing aluminium alloys.

**ES Avellanador cónico de metal**  
**duro y macizo DIN 335 C, 90°**
**Ámbito de aplicación:**

Para el avellanado y el desbarbado sin vibraciones de aceros, aceros de alta resistencia, hierro fundido gris, materiales VA, así como aleaciones de aluminio con contenido de silicio.



Einzelverpackung  
Single packing  
Embalaje individual

Einzelverpackung  
Single packing  
Embalaje individual

|          |          |                        |          |   | blank / bright / brillante |               | ALUNIT®               |               |
|----------|----------|------------------------|----------|---|----------------------------|---------------|-----------------------|---------------|
| d1<br>mm | d4<br>mm | d2 <sub>h9</sub><br>mm | l1<br>mm | Z | Code 6405<br>Art.-Nr.      | Inh.<br>Cont. | Code 6407<br>Art.-Nr. | Inh.<br>Cont. |
| 5,30     | 1,00     | 6,00                   | 45       | 3 | 0640500530100              | 1             | 0640700530100         | 1             |
| 6,30     | 1,50     | 6,00                   | 45       | 3 | 0640500630100              | 1             | 0640700630100         | 1             |
| 8,30     | 2,00     | 6,00                   | 50       | 3 | 0640500830100              | 1             | 0640700830100         | 1             |
| 10,40    | 2,50     | 8,00                   | 50       | 3 | 0640501040100              | 1             | 0640701040100         | 1             |
| 12,40    | 2,80     | 8,00                   | 56       | 3 | 0640501240100              | 1             | 0640701240100         | 1             |
| 14,40    | 3,00     | 8,00                   | 56       | 3 | 0640501440100              | 1             | 0640701440100         | 1             |
| 16,50    | 3,20     | 10,00                  | 60       | 3 | 0640501650100              | 1             | 0640701650100         | 1             |
| 19,50    | 3,50     | 10,00                  | 63       | 3 | 0640501950100              | 1             | 0640701950100         | 1             |
| 20,50    | 3,50     | 10,00                  | 63       | 3 | 0640502050100              | 1             | 0640702050100         | 1             |
| 25,00    | 3,80     | 10,00                  | 67       | 3 | 0640502500100              | 1             | 0640702500100         | 1             |
| 31,00    | 4,20     | 12,00                  | 71       | 3 | 0640503100100              | 1             | 0640703100100         | 1             |

Ø 5,30 VHM / solid carbide / metal duro y macizo

Ø 6,30–31,00 nur VHM-Kopf / only solid carbide cutting part / solo cabezal de metal duro y macizo

Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro

**D Hartmetall-Frässtifte,  
Zylinder,  
ohne Stirnverzahnung**

**E Tungsten carbide rotary burrs,  
cylindrical,  
without front cut**

**ES Puntas de avellanado  
de metal duro, cilíndricas,  
sin dentado frontal**



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



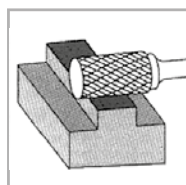
Diamant  
Diamond  
Diamante



DIN MX

Einzelverpackung  
Single packing  
Embalaje individual

\* Einzelverpackung mit SB  
Single packaging with tag  
Embalaje individual con gancho  
para autoservicio



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7770<br>Art.-Nr. | Code 7778<br>Art.-Nr. |  | Code 7773<br>Art.-Nr. |
|----------|----------|----------|----------|-----------------------|-----------------------|--|-----------------------|
| 2,00     | 3,00     | 38       | 10       |                       |                       |  | 0777303102100         |
| 3,00     | 3,00     | 38       | 10       |                       |                       |  | 0777303103100         |
| 3,00     | 3,00     | 50       | 14       |                       |                       |  |                       |
| 3,00     | 3,00     | 65       | 14       |                       |                       |  | 0777303303100         |
| 4,00     | 3,00     | 40       | 10       |                       |                       |  | 0777303104100         |
| 4,00     | 6,00     | 50       | 14       |                       |                       |  |                       |
| 6,00     | 3,00     | 43       | 13       |                       |                       |  | 0777303106100         |
| 6,00     | 6,00     | 50       | 16       | 0777006106100         | 0777806106100         |  | 0777306106100         |
| 8,00     | 6,00     | 65       | 20       | 0777006108100         |                       |  | 0777306108100         |
| 10,00    | 6,00     | 58       | 13       |                       |                       |  |                       |
| 10,00    | 6,00     | 65       | 20       | 0777006110100         | 0777806110100         |  | 0777306110100         |
| 12,00    | 6,00     | 70       | 25       | 0777006112100         | 0777806112100         |  | 0777306112100         |
| 12,00    | 8,00     | 70       | 25       |                       |                       |  |                       |
| 16,00    | 6,00     | 70       | 25       |                       |                       |  | 0777306116100         |
| 20,00    | 6,00     | 70       | 25       |                       |                       |  | 0777306120100         |



DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

**SPECIAL STEEL**

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7774<br>Art.-Nr.                                                               | Code 7776<br>Art.-Nr.                                                               | Code 7777<br>Art.-Nr.                                                                |                                                                                       |
| 2,00     | 3,00     | 38       | 10       |                                                                                     | 0777603102100                                                                       |                                                                                      |                                                                                       |
| 3,00     | 3,00     | 38       | 10       | 0777403103100                                                                       | 0777603103100                                                                       | 0777703103100                                                                        |                                                                                       |
| 3,00     | 3,00     | 50       | 14       |                                                                                     | 0777603203100                                                                       |                                                                                      |                                                                                       |
| 3,00     | 3,00     | 65       | 14       |                                                                                     | 0777603303100                                                                       |                                                                                      |                                                                                       |
| 4,00     | 3,00     | 40       | 10       |                                                                                     | 0777603104100                                                                       |                                                                                      |                                                                                       |
| 4,00     | 6,00     | 50       | 14       | 0777406104100                                                                       | 0777606104100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 3,00     | 43       | 13       | 0777403106100                                                                       | 0777603106100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 50       | 16       | 0777406106100                                                                       | 0777606106100 *                                                                     | 0777706106100                                                                        |                                                                                       |
| 8,00     | 6,00     | 65       | 20       | 0777406108100                                                                       | 0777606108100                                                                       | 0777706108100                                                                        |                                                                                       |
| 10,00    | 6,00     | 58       | 13       |                                                                                     | 0777606310100                                                                       |                                                                                      |                                                                                       |
| 10,00    | 6,00     | 65       | 20       | 0777406110100                                                                       | 0777606110100 *                                                                     | 0777706110100                                                                        |                                                                                       |
| 12,00    | 6,00     | 70       | 25       | 0777406112100                                                                       | 0777606112100 *                                                                     | 0777706112100                                                                        |                                                                                       |
| 12,00    | 8,00     | 70       | 25       |                                                                                     | 0777608112100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 6,00     | 70       | 25       | 0777406116100                                                                       | 0777606116100                                                                       |                                                                                      |                                                                                       |
| 20,00    | 6,00     | 70       | 25       |                                                                                     |                                                                                     |                                                                                      |                                                                                       |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



① Hartmetall-Frässtifte, Zylinder, mit Stirnverzahnung

② Tungsten carbide rotary burrs, cylindrical, with front cut

③ Puntas de avellanado de metal duro, cilindricas, con dentado frontal



INOX



Aluminium  
Aluminium  
Aluminio



2



3

DIN MY



4



6

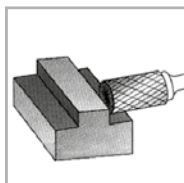
Diamant  
Diamond  
Diamante

DIN MX



DIN  
ZYA-S

ISO  
A-S



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro

Einzelverpackung  
Single packing  
Embalaje individual



\* Einzelverpackung mit SB  
Single packaging with tag  
Embalaje individual con gancho  
para autoservicio



|       |      |    |    |  | 0 | 1A                    | 2                     | 3                     |
|-------|------|----|----|--|---|-----------------------|-----------------------|-----------------------|
| d1    | d2   | l1 | l2 |  |   | Code 7788<br>Art.-Nr. | Code 7782<br>Art.-Nr. | Code 7783<br>Art.-Nr. |
| mm    | mm   | mm | mm |  |   |                       |                       |                       |
| 2,00  | 3,00 | 38 | 10 |  |   |                       |                       | 0778303102100         |
| 2,00  | 3,00 | 50 | 10 |  |   |                       |                       |                       |
| 3,00  | 3,00 | 38 | 14 |  |   |                       |                       | 0778303103100         |
| 3,00  | 3,00 | 50 | 14 |  |   |                       |                       | 0778303203100         |
| 3,00  | 3,00 | 75 | 14 |  |   |                       |                       | 0778303403100         |
| 4,00  | 6,00 | 50 | 14 |  |   |                       |                       | 0778306104100         |
| 6,00  | 3,00 | 43 | 13 |  |   |                       |                       | 0778303106100         |
| 6,00  | 6,00 | 50 | 16 |  |   |                       | 0778206106100         | 0778306106100         |
| 8,00  | 6,00 | 65 | 20 |  |   |                       | 0778206108100         | 0778306108100         |
| 10,00 | 6,00 | 58 | 13 |  |   |                       |                       |                       |
| 10,00 | 6,00 | 65 | 20 |  |   | 0778806110100         | 0778206110100         | 0778306110100         |
| 12,00 | 6,00 | 70 | 25 |  |   | 0778806112100 *       | 0778206112100         | 0778306112100         |
| 16,00 | 6,00 | 70 | 25 |  |   |                       |                       | 0778306116100         |
| 20,00 | 8,00 | 70 | 25 |  |   |                       |                       |                       |



DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

Detailed information about the different cuts see on page 261.

Consulte en la página 261 información más detallada sobre todos los dentados.

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

|       |      |    |    |  |  |  |  |
|-------|------|----|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1    | d2   | l1 | l2 | Code 7784<br>Art.-Nr.                                                               | Code 7786<br>Art.-Nr.                                                               | Code 7787<br>Art.-Nr.                                                                | Code 7789<br>Art.-Nr.                                                                 |
| mm    | mm   | mm | mm |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 2,00  | 3,00 | 38 | 10 |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 2,00  | 3,00 | 50 | 10 | 0778403202100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 3,00  | 3,00 | 38 | 14 | 0778403103100                                                                       | 0778603103100                                                                       | 0778703103100                                                                        |                                                                                       |
| 3,00  | 3,00 | 50 | 14 | 0778403203100                                                                       | 0778603203100                                                                       |                                                                                      |                                                                                       |
| 3,00  | 3,00 | 75 | 14 | 0778403403100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 4,00  | 6,00 | 50 | 14 | 0778406104100                                                                       | 0778606104100                                                                       |                                                                                      |                                                                                       |
| 6,00  | 3,00 | 43 | 13 | 0778403106100                                                                       | 0778603106100                                                                       |                                                                                      |                                                                                       |
| 6,00  | 6,00 | 50 | 16 | 0778406106100                                                                       | 0778606106100 *                                                                     | 0778706106100                                                                        | 0778906106100                                                                         |
| 8,00  | 6,00 | 65 | 20 | 0778406108100                                                                       | 0778606108100                                                                       | 0778706108100                                                                        | 0778906108100                                                                         |
| 10,00 | 6,00 | 58 | 13 |                                                                                     | 0778606210100                                                                       |                                                                                      |                                                                                       |
| 10,00 | 6,00 | 65 | 20 | 0778406110100                                                                       | 0778606110100 *                                                                     | 0778706110100                                                                        | 0778906110100                                                                         |
| 12,00 | 6,00 | 70 | 25 |                                                                                     | 0778606112100 *                                                                     | 0778706112100                                                                        | 0778906112100                                                                         |
| 16,00 | 6,00 | 70 | 25 | 0778406116100                                                                       | 0778606116100                                                                       |                                                                                      |                                                                                       |
| 20,00 | 8,00 | 70 | 25 | 0778408120100                                                                       |                                                                                     |                                                                                      |                                                                                       |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



**D Hartmetall-Frässtifte, Walzenrund**

**E Tungsten carbide rotary burrs, ball nose**

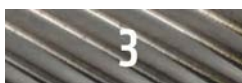
**ES Puntas de avellanado de metal duro esféricilíndricas**



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



Diamant  
Diamond  
Diamante

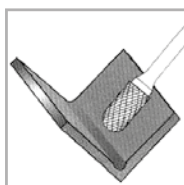


DIN MX



DIN  
WRC

ISO  
C



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro

Einzelverpackung  
Single packing  
Embalaje individual



\* Einzelverpackung mit SB  
Single packaging with tag  
Embalaje individual con gancho  
para autoservicio



| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7790<br>Art.-Nr. | Code 7798<br>Art.-Nr. | Code 7792<br>Art.-Nr. | Code 7793<br>Art.-Nr. |
|----------|----------|----------|----------|-----------------------|-----------------------|-----------------------|-----------------------|
| 3,00     | 3,00     | 38       | 14       |                       |                       |                       | 0779303103100         |
| 3,00     | 3,00     | 50       | 14       |                       |                       |                       | 0779303203100         |
| 4,00     | 3,00     | 40       | 10       |                       |                       |                       | 0779303104100         |
| 4,00     | 6,00     | 50       | 14       |                       |                       |                       | 0779306104100         |
| 5,00     | 3,00     | 42       | 12       |                       |                       |                       |                       |
| 6,00     | 3,00     | 43       | 14       |                       |                       |                       | 0779303106100         |
| 6,00     | 6,00     | 50       | 14       | 0779006106100         |                       | 0779206106100         | 0779306106100         |
| 6,00     | 6,00     | 150      | 16       |                       |                       |                       | 0779306206100         |
| 8,00     | 6,00     | 65       | 20       | 0779006108100         | 0779806108100         | 0779206108100         | 0779306108100         |
| 10,00    | 6,00     | 65       | 20       | 0779006110100         | 0779806110100         | 0779206110100         | 0779306110100         |
| 10,00    | 6,00     | 70       | 25       |                       |                       |                       |                       |
| 10,00    | 6,00     | 150      | 20       |                       |                       |                       |                       |
| 12,00    | 6,00     | 70       | 25       | 0779006112100         | 0779806112100         | 0779206112100         | 0779306112100         |
| 12,00    | 6,00     | 150      | 25       |                       |                       |                       |                       |
| 12,00    | 8,00     | 70       | 25       |                       |                       |                       |                       |
| 16,00    | 6,00     | 70       | 25       |                       |                       |                       | 0779306116100         |
| 20,00    | 6,00     | 70       | 25       |                       |                       |                       |                       |







DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

Detailed information about the different cuts see on page 261.

Consulte en la página 261 información más detallada sobre todos los dentados.

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

|       |      |     |    |  |  |  |  |
|-------|------|-----|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1    | d2   | l1  | l2 | Code 7794<br>Art.-Nr.                                                               | Code 7796<br>Art.-Nr.                                                               | Code 7797<br>Art.-Nr.                                                                | Code 7799<br>Art.-Nr.                                                                 |
| mm    | mm   | mm  | mm |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 3,00  | 3,00 | 38  | 14 | 0779403103100                                                                       | 0779603103100                                                                       | 0779703103100                                                                        |                                                                                       |
| 3,00  | 3,00 | 50  | 14 |                                                                                     | 0779603203100                                                                       |                                                                                      |                                                                                       |
| 4,00  | 3,00 | 40  | 10 | 0779403104100                                                                       | 0779603104100                                                                       |                                                                                      |                                                                                       |
| 4,00  | 6,00 | 50  | 14 |                                                                                     | 0779606104100                                                                       |                                                                                      |                                                                                       |
| 5,00  | 3,00 | 42  | 12 | 0779403105100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 6,00  | 3,00 | 43  | 14 | 0779403106100                                                                       | 0779603106100                                                                       |                                                                                      |                                                                                       |
| 6,00  | 6,00 | 50  | 14 | 0779406106100                                                                       |                                                                                     | 0779706106100                                                                        | 0779906106100                                                                         |
| 6,00  | 6,00 | 150 | 16 | 0779406206100                                                                       | 0779606206100                                                                       |                                                                                      |                                                                                       |
| 8,00  | 6,00 | 65  | 20 | 0779406108100                                                                       | 0779606108100                                                                       | 0779706108100                                                                        | 0779906108100                                                                         |
| 10,00 | 6,00 | 65  | 20 | 0779406110100                                                                       | 0779606110100 *                                                                     | 0779706110100                                                                        | 0779906110100                                                                         |
| 10,00 | 6,00 | 70  | 25 |                                                                                     | 0779606310100                                                                       |                                                                                      |                                                                                       |
| 10,00 | 6,00 | 150 | 20 | 0779406210100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 12,00 | 6,00 | 70  | 25 | 0779406112100                                                                       | 0779606112100 *                                                                     | 0779706112100                                                                        | 0779906112100                                                                         |
| 12,00 | 6,00 | 150 | 25 | 0779406212100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 12,00 | 8,00 | 70  | 25 |                                                                                     | 0779608112100                                                                       |                                                                                      |                                                                                       |
| 16,00 | 6,00 | 70  | 25 | 0779406116100                                                                       | 0779606116100                                                                       |                                                                                      |                                                                                       |
| 20,00 | 6,00 | 70  | 25 | 0779406120100                                                                       |                                                                                     |                                                                                      |                                                                                       |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



**D Hartmetall-Frässtifte, Spitzbogen**

**E Tungsten carbide rotary burrs, arc pointed nose**

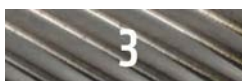
**ES Puntas de avellanado de metal duro, angulares ojivales**



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



Diamant  
Diamond  
Diamante

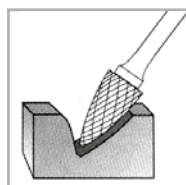


DIN MX



DIN  
SPG

ISO  
G



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



\* Einzelverpackung mit SB  
Single packaging with tag  
Embalaje individual con gancho  
para autoservicio



| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7800<br>Art.-Nr. | Code 7808<br>Art.-Nr. |  | Code 7803<br>Art.-Nr. |
|----------|----------|----------|----------|-----------------------|-----------------------|--|-----------------------|
| 3,00     | 3,00     | 38       | 12       |                       |                       |  | 0780303103100         |
| 4,00     | 3,00     | 40       | 10       |                       |                       |  | 0780303104100         |
| 4,00     | 6,00     | 50       | 14       |                       |                       |  |                       |
| 6,00     | 3,00     | 43       | 13       |                       |                       |  | 0780303106100         |
| 6,00     | 6,00     | 50       | 16       | 0780006106100         |                       |  | 0780306106100         |
| 8,00     | 6,00     | 65       | 20       | 0780006108100         |                       |  | 0780306108100         |
| 10,00    | 6,00     | 65       | 20       | 0780006110100         | 0780806110100         |  | 0780306110100         |
| 12,00    | 6,00     | 70       | 25       | 0780006112100         | 0780806112100         |  | 0780306112100         |
| 12,00    | 6,00     | 75       | 25       |                       |                       |  |                       |
| 12,00    | 8,00     | 70       | 25       |                       |                       |  |                       |
| 16,00    | 6,00     | 75       | 30       |                       |                       |  | 0780306116100         |
| 16,00    | 8,00     | 75       | 30       |                       |                       |  |                       |

NEW



DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

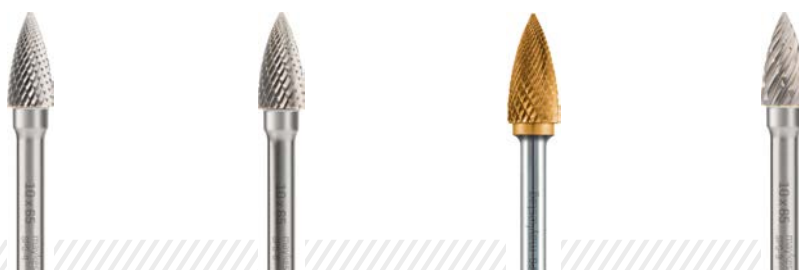
Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7804<br>Art.-Nr.                                                               | Code 7806<br>Art.-Nr.                                                               | Code 7807<br>Art.-Nr.                                                                | Code 7809<br>Art.-Nr.                                                                 |
| 3,00     | 3,00     | 38       | 12       | 0780403103100                                                                       | 0780603103100                                                                       | 0780703103100                                                                        |                                                                                       |
| 4,00     | 3,00     | 40       | 10       |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 4,00     | 6,00     | 50       | 14       |                                                                                     | 0780606104100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 3,00     | 43       | 13       | 0780403106100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 50       | 16       | 0780406106100                                                                       | 0780606106100 *                                                                     | 0780706106100                                                                        | 0780906106100                                                                         |
| 8,00     | 6,00     | 65       | 20       | 0780406108100                                                                       | 0780606108100                                                                       |                                                                                      | 0780906108100                                                                         |
| 10,00    | 6,00     | 65       | 20       | 0780406110100                                                                       | 0780606110100                                                                       | 0780706110100                                                                        | 0780906110100                                                                         |
| 12,00    | 6,00     | 70       | 25       | 0780406112100                                                                       | 0780606112100 *                                                                     | 0780706112100                                                                        | 0780906112100                                                                         |
| 12,00    | 6,00     | 75       | 25       |                                                                                     | 0780606212100                                                                       |                                                                                      |                                                                                       |
| 12,00    | 8,00     | 70       | 25       |                                                                                     | 0780608112100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 6,00     | 75       | 30       | 0780406116100                                                                       | 0780606116100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 8,00     | 75       | 30       |                                                                                     | 0780608116100                                                                       |                                                                                      |                                                                                       |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



① Hartmetall-Frässtifte, Winkel, ohne Stirnverzahnung

② Tungsten carbide rotary burrs, inverted cone, without front cut

③ Puntas de avellanado de metal duro, angulares, sin dentado frontal



INOX



Aluminium  
Aluminium  
Aluminio



2



3

DIN MY



4



6

Diamant  
Diamond  
Diamante

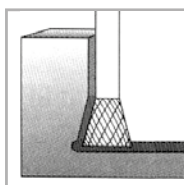
DIN MX

Einzelverpackung  
Single packing  
Embalaje individual



DIN  
WKN

ISO  
N



#### INOX

Herausragende Fräseleistung bei Edelstahl/Niro

Outstanding milling performance in stainless steel

Rendimiento de fresado excelente en acero inoxidable/ acero niro



|          |          |          |          | 0 | 1A | 2 | 3                     |
|----------|----------|----------|----------|---|----|---|-----------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm |   |    |   | Code 7813<br>Art.-Nr. |
| 3,00     | 3,00     | 38       | 3        |   |    |   | 0781303103100         |
| 6,00     | 3,00     | 36       | 6        |   |    |   | 0781303106100         |
| 8,00     | 6,00     | 53       | 8        |   |    |   | 0781306108100         |
| 10,00    | 6,00     | 55       | 10       |   |    |   |                       |
| 12,00    | 6,00     | 57       | 12       |   |    |   | 0781306112100         |





DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | 4 | 6                     | 6 TiN | 9 |
|----------|----------|----------|----------|---|-----------------------|-------|---|
|          |          |          |          |   | Code 7816<br>Art.-Nr. |       |   |
| 3,00     | 3,00     | 38       | 3        |   | 0781603103100         |       |   |
| 6,00     | 3,00     | 36       | 6        |   | 0781603106100         |       |   |
| 8,00     | 6,00     | 53       | 8        |   | 0781606108100         |       |   |
| 10,00    | 6,00     | 55       | 10       |   | 0781606110100         |       |   |
| 12,00    | 6,00     | 57       | 12       |   | 0781606112100         |       |   |

Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



**D Hartmetall-Frässtifte,  
Spitzkegel**

**E Tungsten carbide rotary burrs,  
conical pointed nose**

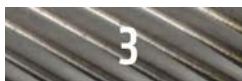
**ES Puntas de avellanado de metal  
duro, cónicas puntiagudas**



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



Diamant  
Diamond  
Diamante



DIN MX

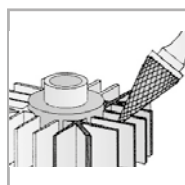
Einzelverpackung  
Single packing  
Embalaje individual

\* Einzelverpackung mit SB  
Single packaging with tag  
Embalaje individual con gancho  
para autoservicio



DIN  
SKM

ISO  
M



**INOX**

Herausragende Fräisleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



|       |      |    |    | 0        | 1A       | 2        | 3             |
|-------|------|----|----|----------|----------|----------|---------------|
| d1    | d2   | l1 | l2 | Code     | Code     | Code     | Code 7833     |
| mm    | mm   | mm | mm | Art.-Nr. | Art.-Nr. | Art.-Nr. | Art.-Nr.      |
| 3,00  | 3,00 | 38 | 12 |          |          |          | 0783303103100 |
| 3,00  | 3,00 | 50 | 12 |          |          |          | 0783303203100 |
| 4,00  | 3,00 | 40 | 10 |          |          |          | 0783303104100 |
| 6,00  | 3,00 | 43 | 13 |          |          |          | 0783303106100 |
| 6,00  | 6,00 | 50 | 16 |          |          |          | 0783306106100 |
| 8,00  | 6,00 | 63 | 18 |          |          |          | 0783306108100 |
| 10,00 | 6,00 | 65 | 20 |          |          |          | 0783306110100 |
| 12,00 | 6,00 | 70 | 25 |          |          |          | 0783306112100 |
| 16,00 | 6,00 | 70 | 25 |          |          |          | 0783306116100 |





DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

*Aggressive geometry –  
high chip removal*

*Geometría agresiva  
– alta remoción de  
material*

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7834<br>Art.-Nr.                                                               | Code 7836<br>Art.-Nr.                                                               | Code 7837<br>Art.-Nr.                                                                | Code<br>Art.-Nr.                                                                      |
| 3,00     | 3,00     | 38       | 12       | 0783403103100                                                                       | 0783603103100                                                                       | 0783703103100                                                                        |                                                                                       |
| 3,00     | 3,00     | 50       | 12       |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 4,00     | 3,00     | 40       | 10       |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 6,00     | 3,00     | 43       | 13       | 0783403106100                                                                       | 0783603106100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 50       | 16       | 0783406106100                                                                       | 0783606106100 *                                                                     | 0783706106100                                                                        |                                                                                       |
| 8,00     | 6,00     | 63       | 18       | 0783406108100                                                                       | 0783606108100                                                                       | 0783706108100                                                                        |                                                                                       |
| 10,00    | 6,00     | 65       | 20       | 0783406110100                                                                       | 0783606110100 *                                                                     | 0783706110100                                                                        |                                                                                       |
| 12,00    | 6,00     | 70       | 25       | 0783406112100                                                                       | 0783606112100 *                                                                     | 0783706112100                                                                        |                                                                                       |
| 16,00    | 6,00     | 70       | 25       | 0783406116100                                                                       | 0783606116100                                                                       |                                                                                      |                                                                                       |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



**D Hartmetall-Frässtifte,  
Konus 90°**

**E Tungsten carbide rotary burrs,  
cone 90°**

**ES Puntas de avellanado de metal  
duro, cono de 90°**



INOX



2



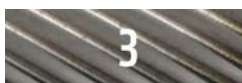
4

**Diamant**  
Diamond  
Diamante



1A

**Aluminium**  
Aluminium  
Aluminio



3

DIN MY



6

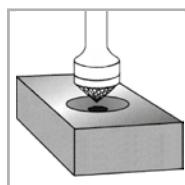
DIN MX

Einzelverpackung  
Single packing  
Embalaje individual



DIN  
**KSK**

ISO  
**K**



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



|          |          |          |          | 0 | 1A | 2 | 3                     |
|----------|----------|----------|----------|---|----|---|-----------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm |   |    |   | Code 7843<br>Art.-Nr. |
| 3,00     | 3,00     | 38       | 2        |   |    |   | 0784303103100         |
| 4,00     | 6,00     | 50       | 3        |   |    |   | 0784306104100         |
| 5,00     | 3,00     | 34       | 4        |   |    |   | 0784303105100         |
| 6,00     | 6,00     | 50       | 5        |   |    |   | 0784306106100         |
| 8,00     | 6,00     | 53       | 8        |   |    |   | 0784306108100         |
| 10,00    | 6,00     | 55       | 10       |   |    |   | 0784306110100         |
| 12,00    | 6,00     | 57       | 12       |   |    |   | 0784306112100         |
| 16,00    | 6,00     | 61       | 16       |   |    |   | 0784306116100         |
| 20,00    | 6,00     | 65       | 20       |   |    |   | 0784306120100         |





DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

**SPECIAL STEEL**

Aggressive Geometrie –  
hoher Materialabtrag

*Aggressive geometry –  
high chip removal*

*Geometría agresiva  
– alta remoción de  
material*

| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | 4 | 6                     | 6 TiN | 9 |
|----------|----------|----------|----------|---|-----------------------|-------|---|
| 3,00     | 3,00     | 38       | 2        |   | Code 7846<br>Art.-Nr. |       |   |
| 4,00     | 6,00     | 50       | 3        |   |                       |       |   |
| 5,00     | 3,00     | 34       | 4        |   |                       |       |   |
| 6,00     | 6,00     | 50       | 5        |   |                       |       |   |
| 8,00     | 6,00     | 53       | 8        |   |                       |       |   |
| 10,00    | 6,00     | 55       | 10       |   | 0784606110100         |       |   |
| 12,00    | 6,00     | 57       | 12       |   | 0784606112100         |       |   |
| 16,00    | 6,00     | 61       | 16       |   |                       |       |   |
| 20,00    | 6,00     | 65       | 20       |   |                       |       |   |

Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro

① Hartmetall-Frässtifte,  
Konus 60°

② Tungsten carbide rotary burrs,  
cone 60°

③ Puntas de avellanado de metal  
duro, cono de 60°



INOX



2



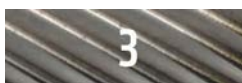
4

Diamant  
Diamond  
Diamante



1A

Aluminium  
Aluminium  
Aluminio



3

DIN MY



6

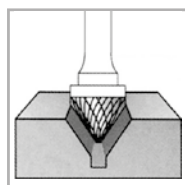
DIN MX

Einzelverpackung  
Single packing  
Embalaje individual



DIN  
KSJ

ISO  
J



**INOX**

Herausragende Fräisleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



|          |          |          |          | 0 | 1A | 2 | 3                     |
|----------|----------|----------|----------|---|----|---|-----------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm |   |    |   | Code 7853<br>Art.-Nr. |
| 3,00     | 3,00     | 38       | 3        |   |    |   | 0785303103100         |
| 4,00     | 6,00     | 50       | 4        |   |    |   | 0785306104100         |
| 6,00     | 6,00     | 50       | 6        |   |    |   | 0785306106100         |
| 10,00    | 6,00     | 55       | 10       |   |    |   | 0785306110100         |
| 12,00    | 6,00     | 57       | 12       |   |    |   | 0785306112100         |
| 16,00    | 6,00     | 61       | 16       |   |    |   | 0785306116100         |





DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

**SPECIAL STEEL**

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | 4 | 6                     | 6 TiN | 9 |
|----------|----------|----------|----------|---|-----------------------|-------|---|
| 3,00     | 3,00     | 38       | 3        |   | Code 7856<br>Art.-Nr. |       |   |
| 4,00     | 6,00     | 50       | 4        |   |                       |       |   |
| 6,00     | 6,00     | 50       | 6        |   | 0785606106100         |       |   |
| 10,00    | 6,00     | 55       | 10       |   |                       |       |   |
| 12,00    | 6,00     | 57       | 12       |   | 0785606112100         |       |   |
| 16,00    | 6,00     | 61       | 16       |   | 0785606116100         |       |   |

① Hartmetall-Frässtifte,  
Tropfen

② Tungsten carbide rotary burrs,  
oval

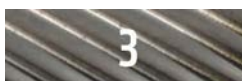
③ Puntas de avellanado de metal  
duro, lágrima



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



Diamant  
Diamond  
Diamante



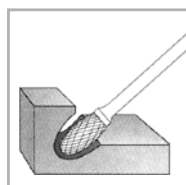
DIN MX

Einzelverpackung  
Single packing  
Embalaje individual



DIN  
TRE

ISO  
E



INOX

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



|          |          |          |          | 0 | 1A | 2 | 3                     |
|----------|----------|----------|----------|---|----|---|-----------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm |   |    |   | Code 7863<br>Art.-Nr. |
| 3,00     | 3,00     | 38       | 6        |   |    |   | 0786303103100         |
| 4,00     | 3,00     | 36       | 6        |   |    |   | 0786303104100         |
| 4,00     | 6,00     | 50       | 6        |   |    |   |                       |
| 6,00     | 3,00     | 40       | 10       |   |    |   | 0786303106100         |
| 6,00     | 6,00     | 50       | 10       |   |    |   | 0786306106100         |
| 8,00     | 6,00     | 58       | 13       |   |    |   | 0786306108100         |
| 10,00    | 6,00     | 61       | 16       |   |    |   | 0786306110100         |
| 12,00    | 6,00     | 65       | 20       |   |    |   | 0786306112100         |
| 16,00    | 6,00     | 70       | 25       |   |    |   | 0786306116100         |







DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

**SPECIAL STEEL**

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7864<br>Art.-Nr.                                                               | Code 7866<br>Art.-Nr.                                                               |                                                                                      |                                                                                       |
| 3,00     | 3,00     | 38       | 6        | 0786403103100                                                                       | 0786603103100                                                                       |                                                                                      |                                                                                       |
| 4,00     | 3,00     | 36       | 6        |                                                                                     | 0786603104100                                                                       |                                                                                      |                                                                                       |
| 4,00     | 6,00     | 50       | 6        |                                                                                     | 0786606104100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 3,00     | 40       | 10       | 0786403106100                                                                       | 0786603106100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 50       | 10       | 0786406106100                                                                       | 0786606106100                                                                       |                                                                                      |                                                                                       |
| 8,00     | 6,00     | 58       | 13       | 0786406108100                                                                       | 0786606108100                                                                       |                                                                                      |                                                                                       |
| 10,00    | 6,00     | 61       | 16       | 0786406110100                                                                       | 0786606110100                                                                       |                                                                                      |                                                                                       |
| 12,00    | 6,00     | 65       | 20       | 0786406112100                                                                       | 0786606112100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 6,00     | 70       | 25       | 0786406116100                                                                       | 0786606116100                                                                       |                                                                                      |                                                                                       |

Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



① Hartmetall-Frässtifte,  
Kugel

② Tungsten carbide rotary burrs,  
spherical

③ Puntas de avellanado de metal  
duro, cónicas



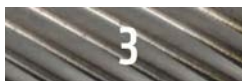
INOX



Aluminium  
Aluminium  
Aluminio



2



3

DIN MY



4

Diamant  
Diamond  
Diamante



6

DIN MX

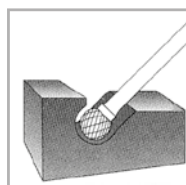
Einzelverpackung  
Single packing  
Embalaje individual

\* Einzelverpackung mit SB  
Single packaging with tag  
Embalaje individual con gancho  
para autoservicio



DIN  
KUD

ISO  
D



INOX

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Q | 1A                    | 2 | 3                     |
|----------|----------|----------|----------|---|-----------------------|---|-----------------------|
|          |          |          |          |   | Code 7878<br>Art.-Nr. |   | Code 7873<br>Art.-Nr. |
| 2,50     | 3,00     | 38       | 2        |   |                       |   | 0787303125100         |
| 3,00     | 3,00     | 33       | 2,5      |   |                       |   | 0787303103100         |
| 3,00     | 3,00     | 38       | 2,5      |   |                       |   |                       |
| 4,00     | 3,00     | 33       | 3        |   |                       |   | 0787303104100         |
| 4,00     | 6,00     | 50       | 3        |   |                       |   | 0787306104100         |
| 5,00     | 3,00     | 34       | 4        |   |                       |   | 0787303105100         |
| 6,00     | 3,00     | 35       | 5        |   |                       |   | 0787303106100         |
| 6,00     | 6,00     | 50       | 5        |   |                       |   | 0787306106100         |
| 8,00     | 6,00     | 52       | 7        |   |                       |   | 0787306108100         |
| 10,00    | 6,00     | 54       | 9        |   | 0787806110100         |   | 0787306110100         |
| 10,00    | 6,00     | 150      | 9        |   |                       |   |                       |
| 12,00    | 6,00     | 55       | 10       |   | 0787806112100         |   | 0787306112100         |
| 12,00    | 6,00     | 150      | 10       |   |                       |   |                       |
| 16,00    | 6,00     | 59       | 14       |   |                       |   | 0787306116100         |
| 16,00    | 8,00     | 59       | 14       |   |                       |   | 0787308116100         |
| 20,00    | 6,00     | 63       | 18       |   |                       |   | 0787306120100         |



DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

Detailed information about the different cuts see on page 261.

Consulte en la página 261 información más detallada sobre todos los dentados.

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7874<br>Art.-Nr.                                                               | Code 7876<br>Art.-Nr.                                                               | Code 7877<br>Art.-Nr.                                                                |                                                                                       |
| 2,50     | 3,00     | 38       | 2        |                                                                                     |                                                                                     | 0787703125100                                                                        |                                                                                       |
| 3,00     | 3,00     | 33       | 2,5      | 0787403103100                                                                       | 0787603103100                                                                       |                                                                                      |                                                                                       |
| 3,00     | 3,00     | 38       | 2,5      |                                                                                     |                                                                                     | 0787703103100                                                                        |                                                                                       |
| 4,00     | 3,00     | 33       | 3        | 0787403104100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 4,00     | 6,00     | 50       | 3        | 0787406104100                                                                       | 0787606104100                                                                       |                                                                                      |                                                                                       |
| 5,00     | 3,00     | 34       | 4        |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 6,00     | 3,00     | 35       | 5        | 0787403106100                                                                       | 0787603106100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 50       | 5        | 0787406106100                                                                       | 0787606106100                                                                       | 0787706106100                                                                        |                                                                                       |
| 8,00     | 6,00     | 52       | 7        | 0787406108100                                                                       | 0787606108100                                                                       | 0787706108100                                                                        |                                                                                       |
| 10,00    | 6,00     | 54       | 9        | 0787406110100                                                                       | 0787606110100 *                                                                     | 0787706110100                                                                        |                                                                                       |
| 10,00    | 6,00     | 150      | 9        |                                                                                     | 0787606210100                                                                       |                                                                                      |                                                                                       |
| 12,00    | 6,00     | 55       | 10       | 0787406112100                                                                       | 0787606112100 *                                                                     |                                                                                      |                                                                                       |
| 12,00    | 6,00     | 150      | 10       |                                                                                     | 0787606212100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 6,00     | 59       | 14       | 0787406116100                                                                       | 0787606116100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 8,00     | 59       | 14       |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 20,00    | 6,00     | 63       | 18       | 0787406120100                                                                       | 0787606120100                                                                       |                                                                                      |                                                                                       |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



**D Hartmetall-Frässtifte, Rundbogen**

**E Tungsten carbide rotary burrs, arc round nose**

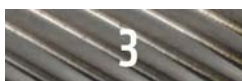
**ES Puntas de avellanado de metal duro, arco circular**



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



Diamant  
Diamond  
Diamante

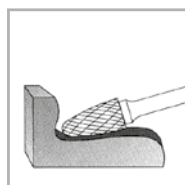


DIN MX



DIN  
RBF

ISO  
F



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro

Einzelverpackung  
Single packing  
Embalaje individual



\* Einzelverpackung mit SB  
Single packaging with tag  
Embalaje individual con gancho  
para autoservicio



| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7880<br>Art.-Nr. | Code 7888<br>Art.-Nr. | Code 7882<br>Art.-Nr. | Code 7883<br>Art.-Nr. |
|----------|----------|----------|----------|-----------------------|-----------------------|-----------------------|-----------------------|
| 3,00     | 3,00     | 38       | 12       |                       |                       |                       | 0788303103100         |
| 4,00     | 3,00     | 40       | 10       |                       |                       |                       | 0788303104100         |
| 6,00     | 3,00     | 43       | 13       |                       |                       |                       | 0788303106100         |
| 6,00     | 6,00     | 50       | 18       | 0788006106100         |                       | 0788206106100         | 0788306106100         |
| 6,00     | 6,00     | 150      | 13       |                       |                       |                       |                       |
| 8,00     | 6,00     | 63       | 18       | 0788006108100         |                       | 0788206108100         | 0788306108100         |
| 10,00    | 6,00     | 65       | 20       | 0788006110100         | 0788806110100         | 0788206110100         | 0788306110100         |
| 10,00    | 6,00     | 150      | 20       |                       |                       |                       |                       |
| 12,00    | 6,00     | 70       | 25       | 0788006112100         | 0788806112100         | 0788206112100         | 0788306112100         |
| 12,00    | 6,00     | 150      | 25       |                       |                       |                       |                       |
| 12,00    | 8,00     | 70       | 25       |                       |                       |                       |                       |
| 16,00    | 6,00     | 75       | 30       |                       | 0788806116100         |                       | 0788306116100         |
| 20,00    | 6,00     | 75       | 30       |                       |                       |                       |                       |





DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

**SPECIAL STEEL**

Aggressive Geometrie –  
hoher Materialabtrag

*Aggressive geometry –  
high chip removal*

*Geometría agresiva  
– alta remoción de  
material*

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7884<br>Art.-Nr.                                                               | Code 7886<br>Art.-Nr.                                                               | Code 7887<br>Art.-Nr.                                                                | Code 7889<br>Art.-Nr.                                                                 |
| 3,00     | 3,00     | 38       | 12       | 0788403103100                                                                       | 0788603103100                                                                       |                                                                                      |                                                                                       |
| 4,00     | 3,00     | 40       | 10       |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
| 6,00     | 3,00     | 43       | 13       | 0788403106100                                                                       | 0788603106100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 50       | 18       | 0788406106100                                                                       | 0788606106100 *                                                                     |                                                                                      | 0788906106100                                                                         |
| 6,00     | 6,00     | 150      | 13       | 0788406206100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 8,00     | 6,00     | 63       | 18       | 0788406108100                                                                       | 0788606108100                                                                       | 0788706108100                                                                        | 0788906108100                                                                         |
| 10,00    | 6,00     | 65       | 20       | 0788406110100                                                                       |                                                                                     | 0788706110100                                                                        | 0788906110100                                                                         |
| 10,00    | 6,00     | 150      | 20       | 0788406210100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 12,00    | 6,00     | 70       | 25       | 0788406112100                                                                       | 0788606112100 *                                                                     | 0788706112100                                                                        | 0788906112100                                                                         |
| 12,00    | 6,00     | 150      | 25       | 0788406212100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 12,00    | 8,00     | 70       | 25       |                                                                                     | 0788608112100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 6,00     | 75       | 30       | 0788406116100                                                                       | 0788606116100                                                                       |                                                                                      |                                                                                       |
| 20,00    | 6,00     | 75       | 30       |                                                                                     | 0788606120100                                                                       |                                                                                      |                                                                                       |

Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



**D Hartmetall-Frässtifte,  
Rundkegel**

**E Tungsten carbide rotary burrs,  
conical round nose**

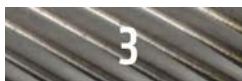
**ES Puntas de avellanado de metal  
duro, cónico circular**



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



Diamant  
Diamond  
Diamante



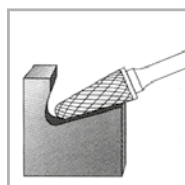
DIN MX

Einzelverpackung  
Single packing  
Embalaje individual



DIN  
KEL

ISO  
L



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



|       |      |    |    | 0                     | 1A                    | 2 | 3                     |
|-------|------|----|----|-----------------------|-----------------------|---|-----------------------|
| d1    | d2   | l1 | l2 | Code 7890<br>Art.-Nr. | Code 7898<br>Art.-Nr. |   | Code 7893<br>Art.-Nr. |
| mm    | mm   | mm | mm |                       |                       |   |                       |
| 3,00  | 3,00 | 38 | 14 |                       |                       |   | 0789303103100         |
| 4,00  | 3,00 | 44 | 14 |                       |                       |   | 0789303104100         |
| 4,00  | 6,00 | 50 | 16 |                       |                       |   |                       |
| 6,00  | 3,00 | 48 | 18 |                       |                       |   | 0789303106100         |
| 6,00  | 6,00 | 50 | 20 |                       |                       |   | 0789306106100         |
| 8,00  | 6,00 | 65 | 20 | 0789006108100         |                       |   | 0789306108100         |
| 10,00 | 6,00 | 65 | 20 | 0789006110100         | 0789806110100         |   | 0789306110100         |
| 12,00 | 6,00 | 70 | 25 | 0789006112100         | 0789806112100         |   | 0789306112100         |
| 12,00 | 6,00 | 75 | 30 |                       |                       |   |                       |
| 16,00 | 6,00 | 75 | 30 |                       | 0789806116100         |   | 0789306116100         |







DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

*Aggressive geometry –  
high chip removal*

*Geometría agresiva  
– alta remoción de  
material*

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7894<br>Art.-Nr.                                                               | Code 7896<br>Art.-Nr.                                                               |                                                                                      | Code 7899<br>Art.-Nr.                                                                 |
| 3,00     | 3,00     | 38       | 14       | 0789403103100                                                                       | 0789603103100                                                                       |                                                                                      |                                                                                       |
| 4,00     | 3,00     | 44       | 14       |                                                                                     | 0789603104100                                                                       |                                                                                      |                                                                                       |
| 4,00     | 6,00     | 50       | 16       |                                                                                     | 0789606104100                                                                       |                                                                                      |                                                                                       |
| 6,00     | 3,00     | 48       | 18       | 0789403106100                                                                       |                                                                                     |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 50       | 20       | 0789406106100                                                                       | 0789606106100                                                                       |                                                                                      |                                                                                       |
| 8,00     | 6,00     | 65       | 20       | 0789406108100                                                                       | 0789606108100                                                                       |                                                                                      |                                                                                       |
| 10,00    | 6,00     | 65       | 20       | 0789406110100                                                                       | 0789606110100                                                                       |                                                                                      | 0789906110100                                                                         |
| 12,00    | 6,00     | 70       | 25       | 0789406112100                                                                       | 0789606112100                                                                       |                                                                                      | 0789906112100                                                                         |
| 12,00    | 6,00     | 75       | 30       |                                                                                     | 0789606312100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 6,00     | 75       | 30       | 0789406116100                                                                       | 0789606116100                                                                       |                                                                                      |                                                                                       |



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro



① Hartmetall-Frässtifte,  
Flamme

② Tungsten carbide rotary burrs,  
flame

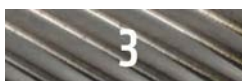
③ Puntas de avellanado de metal  
duro, llama



INOX



Aluminium  
Aluminium  
Aluminio



DIN MY



Diamant  
Diamond  
Diamante



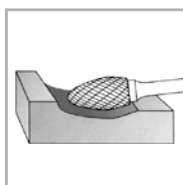
DIN MX

Einzelverpackung  
Single packing  
Embalaje individual



DIN  
B

ISO  
H



**INOX**

Herausragende Fräseleistung  
bei Edelstahl/Niro

Outstanding milling  
performance in stainless  
steel

Rendimiento de fresado  
excelente en acero inoxidable/  
acero niro



| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | 0 | 1A | 2 | 3                     |
|----------|----------|----------|----------|---|----|---|-----------------------|
| 6,00     | 6,00     | 57       | 20       |   |    |   | Code 7903<br>Art.-Nr. |
| 8,00     | 6,00     | 65       | 20       |   |    |   | 0790306108100         |
| 10,00    | 6,00     | 70       | 25       |   |    |   | 0790306110100         |
| 12,00    | 6,00     | 75       | 30       |   |    |   | 0790306112100         |
| 16,00    | 6,00     | 77       | 32       |   |    |   |                       |



DIN MX



SPECIAL STEEL

Nähere Informationen zu den einzelnen Zahnungen siehe Seite 261.

*Detailed information about the different cuts see on page 261.*

*Consulte en la página 261 información más detallada sobre todos los dentados.*

#### SPECIAL STEEL

Aggressive Geometrie –  
hoher Materialabtrag

Aggressive geometry –  
high chip removal

Geometría agresiva  
– alta remoción de  
material

|          |          |          |          |  |  |  |  |
|----------|----------|----------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| d1<br>mm | d2<br>mm | l1<br>mm | l2<br>mm | Code 7904<br>Art.-Nr.                                                               | Code 7906<br>Art.-Nr.                                                               |                                                                                      |                                                                                       |
| 6,00     | 6,00     | 57       | 20       |                                                                                     | 0790606106100                                                                       |                                                                                      |                                                                                       |
| 8,00     | 6,00     | 65       | 20       | 0790406108100                                                                       | 0790606108100                                                                       |                                                                                      |                                                                                       |
| 10,00    | 6,00     | 70       | 25       | 0790406110100                                                                       | 0790606110100                                                                       |                                                                                      |                                                                                       |
| 12,00    | 6,00     | 75       | 30       | 0790406112100                                                                       | 0790606112100                                                                       |                                                                                      |                                                                                       |
| 16,00    | 6,00     | 77       | 32       | 0790406116100                                                                       | 0790606116100                                                                       |                                                                                      |                                                                                       |

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

**Hartmetall-Frässtifteset, Zahnung 6 BOX 3**

Tungsten carbide rotary burrs set, Cut 6 BOX 3

Juego de puntas de avellanado de metal duro, dentado 6 BOX 3



3-tlg. / 3-pcs. / 3-unid.

Kunststoffbox / Plastic box / Caja de plástico

Art.-Nr. 0776000003100

**Hartmetall-Frässtifteset, Zahnung 6 BOX 10**

Tungsten carbide rotary burrs set, Cut 6 BOX 10

Juego de puntas de avellanado de metal duro, dentado 6 BOX 10



10-tlg. / 10-pcs. / 10-unid.

Kunststoffbox / Plastic box / Caja de plástico

Art.-Nr. 0776000005100

**Hartmetall-Set Frässtifte/Senker BOX 5**

Tungsten carbide set rotary burrs/countersinks BOX 5

Juego de puntas de avellanado/avellanadores cónicos de metal duro BOX 5



**NEW**



5-tlg. / 5-pcs. / 5-unid.

Kunststoffbox / Plastic box / Caja de plástico

Art.-Nr. 0776000002100

| Ø<br>mm             | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                         | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------------------|-------------------------------------------|---------------------------------|-------------------------------------------|----------------------------------------|-------------------------------------------|
| HM-Frässtift        |                                           | HM-Frässtift                    |                                           | HM-Frässtift                           |                                           |
| Ø 10 x 65 mm, ZYA-S | 1                                         | Ø 6 x 50 mm / 12 x 70 mm, ZYA-S | 1                                         | Ø 10x65, ZYA-S                         | 1                                         |
| Ø 10 x 65 mm, WRC   | 1                                         | Ø 10 x 54 mm / 12 x 55 mm, KUD  | 1                                         | Ø 10x65, WRC                           | 1                                         |
| Ø 10 x 65 mm, SPG   | 1                                         | Ø 6 x 50 mm / 12 x 70 mm, WRC   | 1                                         | Ø 10x65, SPG                           | 1                                         |
|                     |                                           | Ø 6 x 50 mm / 12 x 70 mm, RBF   | 1                                         | MAYKESTAG                              |                                           |
|                     |                                           | Ø 6 x 50 mm / 10 x 65 mm, SPG   | 1                                         | HSS Cobalt Kegelsenker Ø 10,40 / 12,40 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D Beschreibung  
der Verzahnungen**
**E Description  
of cuts**
**ES Descripción  
de los dentados**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>Zahnung 0 (INOX):</b><br/>Herausragende Fräsleistung bei Edelstahl sowie ferritischen, austenitischen und martenitischen Materialien.</p> <p><b>Cut 0 (INOX):</b><br/><i>Outstanding milling performance in stainless steel as well as ferritic, austenitic and martensitic materials.</i></p> <p><b>Dentado 0 (INOX):</b><br/><i>Rendimiento de fresado excelente de acero inoxidable y de los materiales ferríticos, austeníticos y martensíticos.</i></p> |  <p><b>Zahnung 1A (Aluminium):</b><br/>Für Aluminium und Aluminiumlegierungen sowie Kunststoffe.</p> <p><b>Cut 1A (aluminium):</b><br/><i>Suitable for aluminium and aluminium alloys as well as plastics.</i></p> <p><b>Dentado 1A (aluminio):</b><br/><i>Para aluminio y aleaciones de aluminio, así como plástico.</i></p> |  <p><b>Zahnung 2</b><br/>Für Stähle hoher Festigkeit, Inox, Stahlguss, Schweißnähte und Messing.</p> <p><b>Cut 2:</b><br/><i>Suitable for steels with high tensile strength, inox, cast steels, welding seams and brass</i></p> <p><b>Dentado 2:</b><br/><i>Para aceros de alta resistencia, acero inoxidable, fundición de acero, soldaduras y latón.</i></p> |  <p><b>Zahnung 3 (DIN MY):</b><br/>Für allgemeine Arbeiten wie Entgraten, Fasen, Kantenbrechen mit sauberer Oberfläche. Für Stähle mit hoher Festigkeit, Schweißnähte.</p> <p><b>Cut 3 (DIN MY):</b><br/><i>For general purposes such as deburring, chamfering and smoothing edges with clean surface. Suitable for steels with high tensile strength and welding seams.</i></p> <p><b>Dentado 3 (DIN MY):</b><br/><i>Para trabajos generales como desbarbado, biselado, redondeado de cantos con superficies limpia. Para aceros de alta resistencia, soldaduras</i></p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

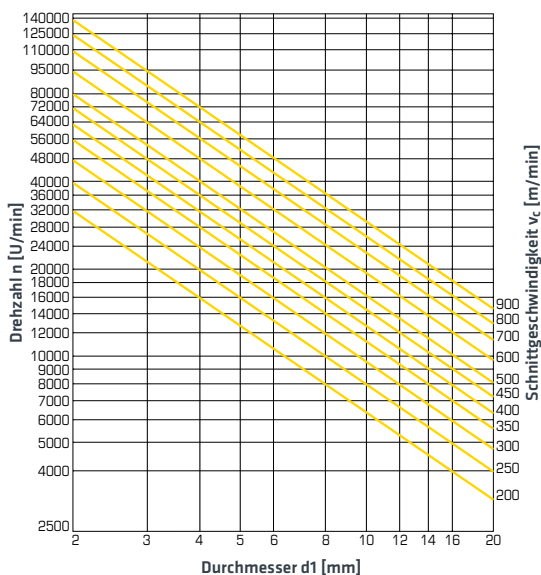
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>Zahnung 4 (Diamant):</b><br/>Hohe Oberflächengüte für gehärtete Stähle, Schweißnähte hoher Festigkeit.</p> <p><b>Cut 4 (diamond):</b><br/><i>Suitable for hardened steels with excellent surface quality and welding seams with high tensile strength.</i></p> <p><b>Dentado 4 (diamante):</b><br/><i>Acabado superficial excelente para aceros templados, soldaduras de alta resistencia.</i></p> |  <p><b>Zahnung 6 (DIN MX):</b><br/>Mit dieser Universalverzahnung werden auch bei härtesten Werkstoffen und Schweißnähten glatte Oberflächen erzielt, ideal für den Werkzeug- und Formenbau.</p> <p><b>Cut 6 (DIN MX):</b><br/><i>With this universal cutting profile even hardest materials and welding seams can be machined with best finishing quality. Ideal for the tool and mould industry</i></p> <p><b>Dentado 6 (DIN MX):</b><br/><i>Con este dentado universal se logran superficies lisas con los materiales más duros y soldaduras, ideal para la fabricación de herramientas y moldes.</i></p> |  <p><b>Zahnung 9 (SPECIAL STEEL):</b><br/>Speziell entwickelte Geometrie für Stahl- und Gusseisenanwendungen. Hervorragende Zerspanungsleistung und hoher Materialabtrag.</p> <p><b>Cut 9 (SPECIAL STEEL):</b><br/><i>Special designed geometry for steel and cast iron applications. Excellent cutting performance and high chip removal.</i></p> <p><b>Dentado 9 (SPECIAL STEEL):</b><br/><i>Geometría especialmente diseñada para aplicaciones de acero y acero de fundición. Rendimiento de arranque de virutas excelente y alta remoción de material.</i></p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



Hartmetall Werkzeuge  
Tungsten carbide tools  
herramientas de metal duro

## ① Anwendung der Zahnungen, Schnittwertempfehlung

| Werkstoffgruppen                      |                                                                                |                                                                                           | Bearbeitung      | Zahnung | Schnittgeschwindigkeit $v_c$ (m/min) |
|---------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------|---------|--------------------------------------|
| <b>Stahl- und Stahlgusswerkstoffe</b> | ungehärtete, nicht vergütete Stähle<br>< 1.200 N/mm <sup>2</sup><br>(< 35 HRC) | Baustähle, Kohlenstoffstähle, Werkzeugstähle, unlegierte Stähle, Einsatzstähle, Stahlguss | Grobe Zerspanung | 2       | 500-700                              |
|                                       |                                                                                |                                                                                           |                  | 6 TiN   | 450-600                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 450-600                              |
|                                       |                                                                                |                                                                                           |                  | 9       | 850-1.100                            |
|                                       | gehärtete, vergütete Stähle<br>> 1.200 N/mm <sup>2</sup> (> 35 HRC)            | Werkzeugstähle, Vergütungsstähle, legierte Stähle, Stahlguss                              | Feine Zerspanung | 3,4     | 500-600                              |
|                                       |                                                                                |                                                                                           |                  | 2       | 250-350                              |
|                                       |                                                                                |                                                                                           |                  | 6 TiN   | 250-350                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 250-350                              |
| <b>Inox</b>                           | rost- und säurebeständige Stähle                                               | austenitisch und ferritisch                                                               | Grobe Zerspanung | 2       | 550-800                              |
|                                       |                                                                                |                                                                                           |                  | 6 TiN   | 300-400                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 250-350                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 250-350                              |
|                                       |                                                                                |                                                                                           | Feine Zerspanung | 3,4     | 350-450                              |
|                                       |                                                                                |                                                                                           |                  | 2       | 250-350                              |
|                                       |                                                                                |                                                                                           |                  | 6 TiN   | 250-350                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 250-350                              |
| <b>NE-Metalle</b>                     | weiche NE-Metalle                                                              | Alu-Legierungen, Messing, Zink, Kupfer                                                    | Grobe Zerspanung | 1A      | 600-900                              |
|                                       |                                                                                |                                                                                           |                  | 2       | 500-700                              |
|                                       |                                                                                |                                                                                           |                  | 6 TiN   | 400-600                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 400-600                              |
|                                       | harte NE-Metalle                                                               | Titan, Titanlegierungen, Bronze, Alu-Legierungen mit hohem Si-Anteil                      | Feine Zerspanung | 2       | 800-900                              |
|                                       |                                                                                |                                                                                           |                  | 2       | 250-350                              |
|                                       |                                                                                |                                                                                           |                  | 6,6 TiN | 250-450                              |
|                                       |                                                                                |                                                                                           |                  | 3,4     | 350-450                              |
|                                       | hochwarmfeste Werkstoffe                                                       | Nickelbasislegierungen, Ni-Co Legierungen                                                 | Grobe Zerspanung | 2       | 300-450                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 300-450                              |
|                                       |                                                                                |                                                                                           |                  | 3,4     | 350-500                              |
|                                       |                                                                                |                                                                                           |                  | 3,4     | 350-500                              |
| <b>Gusseisenwerkstoffe</b>            |                                                                                | Grauguss, Sphäroguss                                                                      | Grobe Zerspanung | 6 TiN   | 600-800                              |
|                                       |                                                                                |                                                                                           |                  | 2       | 500-700                              |
|                                       |                                                                                |                                                                                           |                  | 3       | 450-600                              |
|                                       |                                                                                |                                                                                           |                  | 6       | 450-600                              |
|                                       |                                                                                |                                                                                           |                  | 9       | 850-1.100                            |
|                                       |                                                                                |                                                                                           |                  | 3,4     | 500-600                              |
| <b>Kunststoffe</b>                    |                                                                                | faserverstärkte Kunststoffe, thermoplastische Kunststoffe, Hartgummi                      | Grobe Zerspanung | 1A      | 500-900                              |
|                                       |                                                                                |                                                                                           |                  | 6 TiN   | 500-900                              |
|                                       |                                                                                |                                                                                           | Feine Zerspanung | 2       | 500-900                              |



### Einsatzempfehlungen:

Verwenden Sie nach Möglichkeit die Höchstwerte.

### Ausnahmen:

- Senkarbeiten mit allseitiger Umschlingung des Frässtiftes, Drehzahl < 3000 U/min möglich.
- Stationärer Einsatz, Drehzahl < 3000 U/min möglich.
- Werkstoffe mit schlechter Wärmeleitfähigkeit, Drehzahl senken, um Blaufärbung des Frässtiftes zu vermeiden.

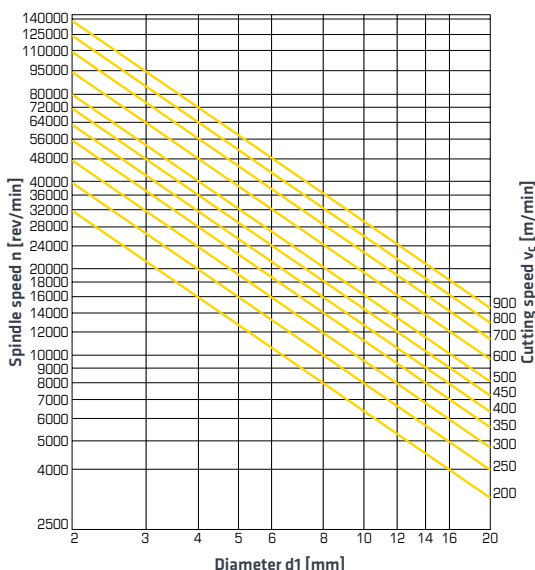
### Sicherheitshinweise:

Augenschutz benutzen! Je härter der Werkstoff, desto feiner die Zahnung wählen. Nur schlagfreie Spannfutter verwenden!



### E Application of different cuts, recommended cutting conditions

| Material groups           |                                                                                    |                                                                                                           | Machining     | Cut     | Cutting speed<br>$v_c$ (m/min) |
|---------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------|---------|--------------------------------|
| Steels and<br>cast steels | non-hardened, non heat<br>treatable steels < 1.200 N/mm <sup>2</sup><br>(< 35 HRC) | Structural steels, carbon steels, tool steels,<br>unalloyed steels, case hardening steels,<br>cast steels | Rough cutting | 2       | 500-700                        |
|                           |                                                                                    |                                                                                                           |               | 6 TiN   | 450-600                        |
|                           |                                                                                    |                                                                                                           |               | 6       | 450-600                        |
|                           |                                                                                    |                                                                                                           |               | 9       | 850-1.100                      |
|                           | hardened, heat treatable steels<br>> 1.200 N/mm <sup>2</sup> (> 35 HRC)            | Tool steels, heat treatable steels,<br>alloyed steels, cast steels                                        | Fine cutting  | 3,4     | 500-600                        |
|                           |                                                                                    |                                                                                                           |               | 2       | 250-350                        |
|                           |                                                                                    |                                                                                                           |               | 6 TiN   | 250-350                        |
|                           |                                                                                    |                                                                                                           |               | 6       | 250-350                        |
| Inox                      | stainless and acid-resistant<br>steels                                             | austenitic and ferritic                                                                                   | Rough cutting | 2       | 550-800                        |
|                           |                                                                                    |                                                                                                           |               | 6 TiN   | 300-400                        |
|                           |                                                                                    |                                                                                                           |               | 6       | 250-350                        |
|                           |                                                                                    |                                                                                                           |               | 6       | 250-350                        |
| Non-ferrous metals        | soft non-ferrous metals                                                            | Alu-alloys, brass, zinc, copper                                                                           | Rough cutting | 3,4     | 350-450                        |
|                           |                                                                                    |                                                                                                           |               | 1A      | 600-900                        |
|                           |                                                                                    |                                                                                                           |               | 2       | 500-700                        |
|                           |                                                                                    |                                                                                                           |               | 6 TiN   | 400-600                        |
|                           | hard non-ferrous metals                                                            | Titanium and Ti-alloys, bronze,<br>Alu-alloys with high Si-content                                        | Fine cutting  | 2       | 800-900                        |
|                           |                                                                                    |                                                                                                           |               | 2       | 250-350                        |
|                           |                                                                                    |                                                                                                           |               | 6,6 TiN | 250-450                        |
|                           |                                                                                    |                                                                                                           |               | 3,4     | 350-450                        |
| Cast iron                 | high-temperature materials                                                         | Ni-alloys, Ni-Co alloys                                                                                   | Rough cutting | 2       | 300-450                        |
|                           |                                                                                    |                                                                                                           |               | 6       | 300-450                        |
|                           |                                                                                    |                                                                                                           |               | 6       | 300-450                        |
|                           |                                                                                    |                                                                                                           |               | 3,4     | 350-500                        |
| Plastics                  | fibre-reinforced plastics, thermoplastics,<br>hard plastics                        | Grey cast iron, spheroidal cast iron                                                                      | Rough cutting | 6 TiN   | 600-800                        |
|                           |                                                                                    |                                                                                                           |               | 2       | 500-700                        |
|                           |                                                                                    |                                                                                                           |               | 3       | 450-600                        |
|                           |                                                                                    |                                                                                                           |               | 6       | 450-600                        |
|                           |                                                                                    |                                                                                                           | Fine cutting  | 9       | 850-1.100                      |
|                           |                                                                                    |                                                                                                           |               | 3,4     | 500-600                        |
|                           |                                                                                    |                                                                                                           |               | 1A      | 500-900                        |
|                           |                                                                                    |                                                                                                           |               | 6 TiN   | 500-900                        |
|                           |                                                                                    |                                                                                                           | Fine cutting  | 2       | 500-900                        |
|                           |                                                                                    |                                                                                                           |               | 2       | 500-900                        |



#### Hints for use:

If possible use the highest values.

#### Exceptions:

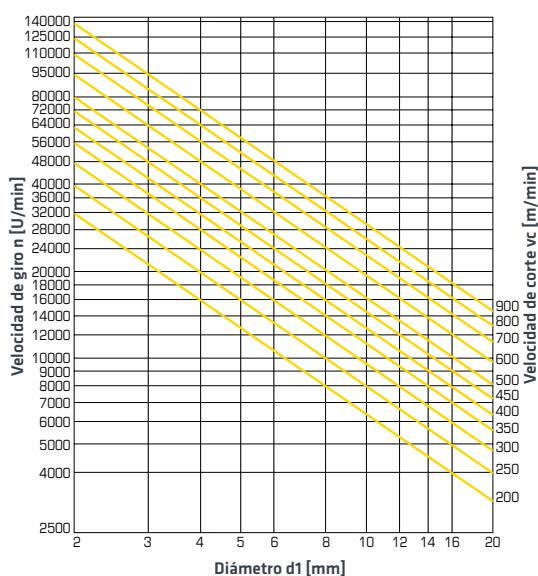
- Counterboring with totally engagement of the rotary burr, recommended spindle speed < 3000 rpm.
- Stationary use, recommended spindle speed < 3000 rpm.
- Materials with bad heat conductivity, reduce spindle speed to avoid superheating of the rotary burr.

#### Safety hints:

Use eye-protection! The harder the material use the more finely tooth. Use only chucks free from chatter!

ES *Aplicación de dentados,  
velocidades recomendadas*

| Materiales                           |                                                                         |                                                                                                                               | Procesamiento | Den-<br>tado | Velocidades<br>$v_c$ (m/min) |
|--------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------------------------|
| <b>Acero, fundición de<br/>acero</b> | Acero no templado, no<br>tratado < 1200 N/mm <sup>2</sup><br>(< 35 HRC) | Acero de construcción, acero carbonizado,<br>acero para herramientas, acero no aleado,<br>acero cementado, fundición de acero | Desbarbado    | 2            | 500-700                      |
|                                      |                                                                         |                                                                                                                               |               | 6 TiN        | 450-600                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 450-600                      |
|                                      |                                                                         |                                                                                                                               |               | 9            | 850-1.100                    |
|                                      | Acero templado, tratado<br>> 1.200 N/mm <sup>2</sup> (> 35 HRC)         | Acero para herramientas, acero tratado,<br>acero aleado, fundición de acero                                                   | Acabado       | 3,4          | 500-600                      |
|                                      |                                                                         |                                                                                                                               |               | 2            | 250-350                      |
|                                      |                                                                         |                                                                                                                               |               | 6 TiN        | 250-350                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 250-350                      |
| <b>Acero inoxidable</b>              | Acero inoxidable y<br>acero resistente a los ácidos                     | Acero austenítico, acero ferrítico                                                                                            | Desbarbado    | 2            | 550-800                      |
|                                      |                                                                         |                                                                                                                               |               | 6 TiN        | 300-400                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 250-350                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 250-350                      |
|                                      |                                                                         |                                                                                                                               | Acabado       | 3,4          | 350-450                      |
|                                      |                                                                         |                                                                                                                               |               | 2            | 250-350                      |
|                                      |                                                                         |                                                                                                                               |               | 6 TiN        | 400-600                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 400-600                      |
| <b>Materiales no<br/>férricos</b>    | Materiales no férricos blandos                                          | Aleaciones de aluminio, latón, cinc y cobre                                                                                   | Desbarbado    | 1A           | 600-900                      |
|                                      |                                                                         |                                                                                                                               |               | 2            | 500-700                      |
|                                      |                                                                         |                                                                                                                               |               | 6 TiN        | 400-600                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 400-600                      |
|                                      | Materiales no férricos duros                                            | Titanio, aleaciones de titanio, bronce,<br>aleaciones de aluminio con contenido elevado<br>de Si                              | Acabado       | 2            | 800-900                      |
|                                      |                                                                         |                                                                                                                               |               | 2            | 250-350                      |
|                                      |                                                                         |                                                                                                                               |               | 6,6 TiN      | 250-450                      |
|                                      |                                                                         |                                                                                                                               |               | 3,4          | 350-450                      |
| <b>Hierro</b>                        |                                                                         | Hierro fundido gris, fundición nodular                                                                                        | Desbarbado    | 2            | 300-450                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 300-450                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 300-450                      |
|                                      |                                                                         |                                                                                                                               |               | 9            | 850-1.100                    |
|                                      |                                                                         |                                                                                                                               | Acabado       | 3,4          | 500-600                      |
|                                      |                                                                         |                                                                                                                               |               | 2            | 500-600                      |
|                                      |                                                                         |                                                                                                                               |               | 3            | 450-600                      |
|                                      |                                                                         |                                                                                                                               |               | 6            | 450-600                      |
| <b>Plástico</b>                      |                                                                         | Plástico reforzados con fibras, termoplásticos,<br>goma dura                                                                  | Desbarbado    | 1A           | 500-900                      |
|                                      |                                                                         |                                                                                                                               |               | 6 TiN        | 500-900                      |
|                                      |                                                                         |                                                                                                                               |               | 2            | 500-900                      |
|                                      |                                                                         |                                                                                                                               |               | 2            | 500-900                      |



**Aplicación:**

Usar, si es posible, los valores más elevados.

**Excepciones:**

- Trabajos de avellanado en todo el perímetro, velocidad posible < 3000.
- Procesamiento fijo, velocidad posible < 3000.
- Materiales con mala conducción térmica, reducir la velocidad para evitar que las puntas de avellanado adquieran un color azul.

**Normas de seguridad:**

Usar gafas de protección. Para materiales muy tenaces, elegir un dentado fino, no emplear mordazas de sujeción.

## D Drehzahlen und Vorschübe

## E Spindle speeds and feeds

## ES Velocidades y avances

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

The recommended cutting data refer to standard applications.

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

n: Drehzahl U/min  
f: Vorschub mm/U

n: Spindle speed rpm  
f: Feed mm/rev

n: Velocidad r.p.m.  
f: Avance mm/giro

### Vollhartmetall-Spiralbohrer / Solid carbide drills / Brocas espirales de metal duro y macizo



|                                     | Code 6147                                                                           |                                                                                     | Code 6146                                                                           |                                                                                     | Code 6157                                                                           |                                                                                     | Code 6156                                                                            |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|-------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Ø<br>mm                             |  |  |  |  |  |  |  |  |  |  |  |  |
|                                     | n                                                                                   | f                                                                                   | n                                                                                   | f                                                                                   | n                                                                                   | f                                                                                   | n                                                                                    | f                                                                                     | n                                                                                     | f                                                                                     | n                                                                                     | f                                                                                     |
| 0,5                                 | 20000                                                                               | 0,02                                                                                | 20000                                                                               | 0,02                                                                                | 20000                                                                               | 0,01                                                                                | 20000                                                                                | 0,01                                                                                  | 19099                                                                                 | 0,01                                                                                  | 20000                                                                                 | 0,01                                                                                  |
| 1,0                                 | 20000                                                                               | 0,03                                                                                | 19099                                                                               | 0,03                                                                                | 19099                                                                               | 0,02                                                                                | 17507                                                                                | 0,02                                                                                  | 9549                                                                                  | 0,02                                                                                  | 20000                                                                                 | 0,03                                                                                  |
| 2,0                                 | 11141                                                                               | 0,04                                                                                | 9549                                                                                | 0,04                                                                                | 9549                                                                                | 0,03                                                                                | 8754                                                                                 | 0,03                                                                                  | 4775                                                                                  | 0,03                                                                                  | 11141                                                                                 | 0,03                                                                                  |
| 3,0                                 | 7427                                                                                | 0,07                                                                                | 6366                                                                                | 0,07                                                                                | 6366                                                                                | 0,06                                                                                | 5836                                                                                 | 0,06                                                                                  | 3183                                                                                  | 0,06                                                                                  | 7427                                                                                  | 0,06                                                                                  |
| 4,0                                 | 5570                                                                                | 0,09                                                                                | 4775                                                                                | 0,09                                                                                | 4775                                                                                | 0,08                                                                                | 4377                                                                                 | 0,08                                                                                  | 2387                                                                                  | 0,08                                                                                  | 5570                                                                                  | 0,08                                                                                  |
| 5,0                                 | 4456                                                                                | 0,11                                                                                | 3820                                                                                | 0,11                                                                                | 3820                                                                                | 0,10                                                                                | 3501                                                                                 | 0,10                                                                                  | 1910                                                                                  | 0,10                                                                                  | 4456                                                                                  | 0,10                                                                                  |
| 6,0                                 | 3714                                                                                | 0,12                                                                                | 3183                                                                                | 0,12                                                                                | 3183                                                                                | 0,11                                                                                | 2918                                                                                 | 0,11                                                                                  | 1592                                                                                  | 0,11                                                                                  | 3714                                                                                  | 0,11                                                                                  |
| 7,0                                 | 3183                                                                                | 0,13                                                                                | 2728                                                                                | 0,13                                                                                | 2728                                                                                | 0,12                                                                                | 2501                                                                                 | 0,12                                                                                  | 1364                                                                                  | 0,12                                                                                  | 3183                                                                                  | 0,12                                                                                  |
| 8,0                                 | 2785                                                                                | 0,15                                                                                | 2387                                                                                | 0,15                                                                                | 2387                                                                                | 0,13                                                                                | 2188                                                                                 | 0,13                                                                                  | 1194                                                                                  | 0,13                                                                                  | 2785                                                                                  | 0,13                                                                                  |
| 9,0                                 | 2476                                                                                | 0,16                                                                                | 2122                                                                                | 0,16                                                                                | 2122                                                                                | 0,14                                                                                | 1945                                                                                 | 0,14                                                                                  | 1061                                                                                  | 0,14                                                                                  | 2476                                                                                  | 0,14                                                                                  |
| 10,0                                | 2228                                                                                | 0,17                                                                                | 1910                                                                                | 0,17                                                                                | 1910                                                                                | 0,15                                                                                | 1751                                                                                 | 0,15                                                                                  | 955                                                                                   | 0,15                                                                                  | 2228                                                                                  | 0,15                                                                                  |
| 11,0                                | 2026                                                                                | 0,18                                                                                | 1736                                                                                | 0,18                                                                                | 1736                                                                                | 0,16                                                                                | 1592                                                                                 | 0,16                                                                                  | 868                                                                                   | 0,16                                                                                  | 2026                                                                                  | 0,16                                                                                  |
| 12,0                                | 1857                                                                                | 0,20                                                                                | 1592                                                                                | 0,20                                                                                | 1592                                                                                | 0,17                                                                                | 1459                                                                                 | 0,17                                                                                  | 796                                                                                   | 0,17                                                                                  | 1857                                                                                  | 0,17                                                                                  |
| 13,0                                | 1714                                                                                | 0,21                                                                                | 1469                                                                                | 0,21                                                                                | 1469                                                                                | 0,19                                                                                | 1347                                                                                 | 0,19                                                                                  | 735                                                                                   | 0,19                                                                                  | 1714                                                                                  | 0,19                                                                                  |
| 14,0                                | 1592                                                                                | 0,23                                                                                | 1364                                                                                | 0,23                                                                                | 1364                                                                                | 0,20                                                                                | 1251                                                                                 | 0,20                                                                                  | 682                                                                                   | 0,20                                                                                  | 1592                                                                                  | 0,20                                                                                  |
| 15,0                                | 1485                                                                                | 0,24                                                                                | 1273                                                                                | 0,24                                                                                | 1273                                                                                | 0,21                                                                                | 1167                                                                                 | 0,21                                                                                  | 637                                                                                   | 0,21                                                                                  | 1485                                                                                  | 0,21                                                                                  |
| 16,0                                | 1393                                                                                | 0,25                                                                                | 1194                                                                                | 0,25                                                                                | 1194                                                                                | 0,22                                                                                | 1094                                                                                 | 0,22                                                                                  | 597                                                                                   | 0,22                                                                                  | 1393                                                                                  | 0,22                                                                                  |
| 17,0                                | 1311                                                                                | 0,26                                                                                | 1123                                                                                | 0,26                                                                                | 1123                                                                                | 0,23                                                                                | 1030                                                                                 | 0,23                                                                                  | 562                                                                                   | 0,23                                                                                  | 1311                                                                                  | 0,23                                                                                  |
| 18,0                                | 1238                                                                                | 0,26                                                                                | 1061                                                                                | 0,26                                                                                | 1061                                                                                | 0,23                                                                                | 973                                                                                  | 0,23                                                                                  | 531                                                                                   | 0,23                                                                                  | 1238                                                                                  | 0,23                                                                                  |
| 19,0                                | 1173                                                                                | 0,27                                                                                | 1005                                                                                | 0,27                                                                                | 1005                                                                                | 0,24                                                                                | 921                                                                                  | 0,24                                                                                  | 503                                                                                   | 0,24                                                                                  | 1173                                                                                  | 0,24                                                                                  |
| 20,0                                | 1114                                                                                | 0,28                                                                                | 955                                                                                 | 0,28                                                                                | 955                                                                                 | 0,25                                                                                | 875                                                                                  | 0,25                                                                                  | 477                                                                                   | 0,25                                                                                  | 1114                                                                                  | 0,25                                                                                  |
| Kühlung<br>Coolant<br>Refrigeración | E                                                                                   |                                                                                     | E                                                                                   |                                                                                     | E                                                                                   |                                                                                     | E                                                                                    |                                                                                       | T/E                                                                                   |                                                                                       | E                                                                                     |                                                                                       |

E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido, W: Wasser | Water | agua, A: Luft | Air | aire

Vollhartmetall-Kegelsenker, DIN 335 C, 90° / Solid carbide countersinks, DIN 335 C, 90° / Avellanador cónico de metal duro y macizo, DIN 335 C, 90°



| Code 6637    Code 6530    Code 6407    Code 6405 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |      |      |
|--------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|------|
| Ø<br>mm                                          |  |  |  |  |  |  |  |  |  |  |      |      |
|                                                  | n                                                                                   | f                                                                                   | n                                                                                   | f                                                                                   | n                                                                                   | f                                                                                   | n                                                                                     | f                                                                                     | n                                                                                     | f                                                                                     | n    | f    |
| 5,3                                              | 3604                                                                                | 0,07                                                                                | 3003                                                                                | 0,05                                                                                | 2703                                                                                | 0,05                                                                                | 1081                                                                                  | 0,04                                                                                  | 961                                                                                   | 0,05                                                                                  | 1501 | 0,07 |
| 5,8                                              | 3293                                                                                | 0,08                                                                                | 2744                                                                                | 0,06                                                                                | 2470                                                                                | 0,06                                                                                | 988                                                                                   | 0,04                                                                                  | 878                                                                                   | 0,05                                                                                  | 1372 | 0,07 |
| 6,3                                              | 3032                                                                                | 0,08                                                                                | 2526                                                                                | 0,06                                                                                | 2274                                                                                | 0,06                                                                                | 909                                                                                   | 0,04                                                                                  | 808                                                                                   | 0,05                                                                                  | 1263 | 0,07 |
| 7,3                                              | 2616                                                                                | 0,09                                                                                | 2180                                                                                | 0,07                                                                                | 1962                                                                                | 0,07                                                                                | 785                                                                                   | 0,04                                                                                  | 698                                                                                   | 0,05                                                                                  | 1090 | 0,07 |
| 8,3                                              | 2301                                                                                | 0,09                                                                                | 1918                                                                                | 0,07                                                                                | 1726                                                                                | 0,07                                                                                | 690                                                                                   | 0,05                                                                                  | 614                                                                                   | 0,06                                                                                  | 959  | 0,08 |
| 9,4                                              | 2032                                                                                | 0,10                                                                                | 1693                                                                                | 0,08                                                                                | 1524                                                                                | 0,08                                                                                | 610                                                                                   | 0,05                                                                                  | 542                                                                                   | 0,06                                                                                  | 847  | 0,08 |
| 10,4                                             | 1836                                                                                | 0,10                                                                                | 1530                                                                                | 0,08                                                                                | 1377                                                                                | 0,08                                                                                | 551                                                                                   | 0,05                                                                                  | 490                                                                                   | 0,06                                                                                  | 765  | 0,08 |
| 12,4                                             | 1540                                                                                | 0,11                                                                                | 1284                                                                                | 0,09                                                                                | 1155                                                                                | 0,09                                                                                | 462                                                                                   | 0,06                                                                                  | 411                                                                                   | 0,06                                                                                  | 642  | 0,10 |
| 13,4                                             | 1425                                                                                | 0,11                                                                                | 1188                                                                                | 0,09                                                                                | 1069                                                                                | 0,09                                                                                | 428                                                                                   | 0,07                                                                                  | 380                                                                                   | 0,07                                                                                  | 594  | 0,10 |
| 14,4                                             | 1326                                                                                | 0,12                                                                                | 1105                                                                                | 0,10                                                                                | 995                                                                                 | 0,10                                                                                | 398                                                                                   | 0,07                                                                                  | 354                                                                                   | 0,07                                                                                  | 553  | 0,11 |
| 16,5                                             | 1157                                                                                | 0,12                                                                                | 965                                                                                 | 0,10                                                                                | 868                                                                                 | 0,10                                                                                | 347                                                                                   | 0,08                                                                                  | 309                                                                                   | 0,07                                                                                  | 482  | 0,12 |
| 19,5                                             | 979                                                                                 | 0,14                                                                                | 816                                                                                 | 0,12                                                                                | 735                                                                                 | 0,12                                                                                | 294                                                                                   | 0,09                                                                                  | 261                                                                                   | 0,08                                                                                  | 408  | 0,15 |
| 20,5                                             | 932                                                                                 | 0,14                                                                                | 776                                                                                 | 0,12                                                                                | 699                                                                                 | 0,12                                                                                | 279                                                                                   | 0,09                                                                                  | 248                                                                                   | 0,08                                                                                  | 388  | 0,16 |
| 25,0                                             | 764                                                                                 | 0,18                                                                                | 637                                                                                 | 0,14                                                                                | 573                                                                                 | 0,14                                                                                | 229                                                                                   | 0,10                                                                                  | 204                                                                                   | 0,09                                                                                  | 318  | 0,20 |
| 31,0                                             | 616                                                                                 | 0,20                                                                                | 513                                                                                 | 0,16                                                                                | 462                                                                                 | 0,16                                                                                | 185                                                                                   | 0,11                                                                                  | 164                                                                                   | 0,10                                                                                  | 257  | 0,22 |
| Kühlung<br>Coolant<br>Refrigeración              | E                                                                                   |                                                                                     | E                                                                                   |                                                                                     | E                                                                                   |                                                                                     | E                                                                                     |                                                                                       | E                                                                                     |                                                                                       | E    | T    |

E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido, W: Wasser | Water | agua, A: Luft | Air | aire



**Hartmetall Werkzeuge**  
Tungsten carbide tools  
herramientas de metal duro



# GEWINDEWERKZEUGE

// GEWINDEBOHRER UND SCHNEIDEISEN, SENKWERKZEUGE,  
SCHÄLWERKZEUGE





## **E TAPS AND DIES**

- // TAPS AND DIES
- // COUNTERSINKS
- // CONECUT

## **ES HERRAMIENTAS PARA ROSCAR**

- // MACHOS Y TERRAJAS
- // HERRAMIENTAS PARA AVELLANAR
- // HERRAMIENTAS PARA ESCARPAR

Übersicht

Overview

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|                                                                                                                                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                   |    |    |    |    |  |  |    |    |
| Norm / Estándar                                                                                                                                                                                   | DIN 352                                                                             | DIN 352                                                                             | DIN 5157                                                                            | DIN 352                                                                             | DIN 1814                                                                            |                                                                                     |                                                                                       |                                                                                       |
| Gewindeart / Type of thread / Tipo de rosca                                                                                                                                                       | M                                                                                   | M                                                                                   | G                                                                                   | M                                                                                   | M + G                                                                               | M                                                                                   | M                                                                                     | M                                                                                     |
| Typ / Type / Tipo                                                                                                                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Schneidstoff / Cutting material / Material de corte                                                                                                                                               | HSS-Co5                                                                             | HSS                                                                                 | HSS                                                                                 | HSS                                                                                 |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Toleranz / Tolerance / Tolerancia                                                                                                                                                                 | ISO 2 6H                                                                            | ISO 2 6H                                                                            |                                                                                     | ISO 2 6H                                                                            |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Anschnitt / Chamfer / Sección                                                                                                                                                                     | C                                                                                   | C                                                                                   | C                                                                                   | A                                                                                   |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Drallwinkel / Spiral angle / Inclinação de hélice                                                                                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Beschichtung / Coating / Recubrimiento                                                                                                                                                            |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Schaft / Shank / Eje                                                                                                                                                                              |  |  |  |  |                                                                                     |                                                                                     |  |  |
| Ø mm                                                                                                                                                                                              | M 3 - M 10                                                                          | M 2 - M 12                                                                          | G1/8" - G1/2"                                                                       | M 2 - M 12                                                                          | Nr. 1 ½ + 3                                                                         | 3,00 - 12,00                                                                        | 3,00 - 18,00                                                                          | M 5 - M 20                                                                            |
| Code / Código                                                                                                                                                                                     | 717                                                                                 | 707                                                                                 | 706                                                                                 | 708                                                                                 | 712, 5430                                                                           | 713                                                                                 | 902                                                                                   | 701                                                                                   |
| Seite / Page / Página                                                                                                                                                                             | 280                                                                                 | 281                                                                                 | 282                                                                                 | 283                                                                                 | 284                                                                                 | 284                                                                                 | 284                                                                                   | 284                                                                                   |
| Geeignet für / Suitable for / Adecuada para                                                                                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Allgemeine Baustähle</b><br>Structural steels<br>Aceros de construcción generales                          |  |  |  |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Automatenstähle</b><br>Free cutting steels<br>Aceros de corte fácil                                        |  |  |  |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Unlegierte Vergütungsstähle</b><br>Unalloyed heat treatable steels<br>Aceros para bonifi car no aleados    |  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Legierte Vergütungsstähle</b><br>Alloyed heat treatable steels<br>Aceros para bonifi car aleados           |  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Rostfreie Stähle</b><br>Stainless steels<br>Aceros inoxidables                                             |  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Grauguss, Temperguss</b><br>Grey cast iron, malleable cast iron<br>Hierro fundido gris, fundición maleable |  |  |  |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Kupfer, Messing</b><br>Copper, brass<br>Cobre, latón                                                       |  |  |  |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Aluminium</b><br>Aluminio<br>Aluminio                                                                      |  |  |  |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  <b>Kunststoffe</b><br>Plastics<br>Plásticos                                                                   |  |  |  |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |

## D Übersicht

## E Overview

## ES Resumen

|                                                                                     |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |  |    |    |    |    |    |   |    |    |    |
| WN                                                                                  | DIN EN 22568                                                                      | DIN 371 / DIN 376                                                                   |                                                                                     |                                                                                     |                                                                                     | WN                                                                                  | WN                                                                                   | DIN 334                                                                               | DIN 335                                                                               | DIN 335                                                                               |
| M                                                                                   | M + G                                                                             | M                                                                                   | M                                                                                   | M                                                                                   | M                                                                                   | M                                                                                   | M                                                                                    | 60°                                                                                   | 90°                                                                                   | 90°                                                                                   |
| HSS                                                                                 |                                                                                   | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS                                                                                 | HSS                                                                                 | HSS                                                                                 | HSS                                                                                  | HSS-Co5                                                                               | HSS-Co5                                                                               | HSS-Co5                                                                               |
| 6g                                                                                  |                                                                                   | ISO 2 6H                                                                            | ISO 2 6H                                                                            | ISO 2 6H                                                                            | ISO 2 6H                                                                            | ISO 2 6H                                                                            | ISO 2 6H                                                                             |                                                                                       |                                                                                       |                                                                                       |
|                                                                                     |                                                                                   | B                                                                                   | C                                                                                   | B                                                                                   | C                                                                                   | A                                                                                   | A                                                                                    |                                                                                       |                                                                                       |                                                                                       |
|                                                                                     |                                                                                   |                                                                                     | 35°                                                                                 |                                                                                     | 35°                                                                                 |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|                                                                                     |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       | ALUNIT®                                                                               |
| M 2 - M 12                                                                          | Nr. 4                                                                             | M 3 - M 12                                                                          | M 3 - M 12                                                                          | M 3 - M 12                                                                          | M 3 - M 12                                                                          | M 3 - M 10                                                                          | M 3 - M 10                                                                           | 6,30 - 25,00                                                                          | 6,30 - 31,00                                                                          | 6,30 - 31,00                                                                          |
| 710                                                                                 | 711                                                                               | 704                                                                                 | 714                                                                                 | 709                                                                                 | 719                                                                                 | 702                                                                                 | 703                                                                                  | 2270                                                                                  | 2390                                                                                  | 2397                                                                                  |
| 285                                                                                 | 286                                                                               | 287                                                                                 | 288                                                                                 | 289                                                                                 | 290                                                                                 | 291                                                                                 | 292                                                                                  | 293                                                                                   | 294                                                                                   | 294                                                                                   |
|  |                                                                                   |  |  |  |  |  |  |  |  |  |
|  |                                                                                   |  |  |  |  |  |  |  |  |  |
|                                                                                     |                                                                                   |  |  |  |  |                                                                                     |                                                                                      |  |  |  |
|                                                                                     |                                                                                   |  |  |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |  |  |
|  |                                                                                   |  |  |  |  |  |  |  |  |  |
|  |                                                                                   |  |  |  |  |  |  |  |  |  |
|  |                                                                                   |  |  |  |  |  |  |  |  |  |
|  |                                                                                   |  |  |  |  |  |  |  |  |  |

Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conecut  
herramientas para roscar, avellanar y escarpar

Übersicht

Overview

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|                                                                                                                                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                   |    |    |    |    |                                                                                       |                                                                                       |    |                                                                                       |
|                                                                                                                                                                                                   |    |    |    |    |    |    |    |    |
| Norm / Estándar                                                                                                                                                                                   | DIN 335                                                                             |                                                                                     | DIN 335                                                                             |                                                                                     | DIN 335                                                                               |                                                                                       | DIN 335                                                                               |                                                                                       |
| Typ / Type / Tipo                                                                                                                                                                                 | 90°                                                                                 | 90°                                                                                 | 90°                                                                                 | 90°                                                                                 | 90°                                                                                   | 90°                                                                                   | 90°                                                                                   | 90°                                                                                   |
| Schneidstoff / Cutting material / Material de corte                                                                                                                                               | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS-Co5                                                                               | HSS-Co5                                                                               | HSS                                                                                   | HSS                                                                                   |
| Beschichtung / Coating / Recubrimiento                                                                                                                                                            |                                                                                     | ALUNIT®                                                                             |                                                                                     | ALUNIT®                                                                             |                                                                                       | ALUNIT®                                                                               |                                                                                       |                                                                                       |
| Schaft / Shank / Eje                                                                                                                                                                              |    |    |    |    |    |    |    |    |
| Ø mm                                                                                                                                                                                              | 6,30 - 31,00                                                                        | 6,30 - 31,00                                                                        | 6,30 - 31,00                                                                        | 6,30 - 31,00                                                                        | 4,30 - 31,00                                                                          | 5,00 - 31,00                                                                          | 6,30 - 31,00                                                                          | 6,30 - 25,00                                                                          |
| Code / Código                                                                                                                                                                                     | 2380                                                                                | 2387                                                                                | 2340                                                                                | 2347                                                                                | 2290                                                                                  | 2297                                                                                  | 2320                                                                                  | 2292                                                                                  |
| Seite / Page / Página                                                                                                                                                                             | 296                                                                                 | 296                                                                                 | 298                                                                                 | 298                                                                                 | 300                                                                                   | 300                                                                                   | 303                                                                                   | 305                                                                                   |
| Geeignet für / Suitable for / Adecuada para                                                                                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|  <b>Allgemeine Baustähle</b><br>Structural steels<br>Aceros de construcción generales                          |  |  |  |  |  |  |  |  |
|  <b>Automatenstähle</b><br>Free cutting steels<br>Aceros de corte fácil                                        |  |  |  |  |  |  |  |  |
|  <b>Unlegierte Vergütungsstähle</b><br>Unalloyed heat treatable steels<br>Aceros para bonifi car no aleados    |  |  |  |  |  |  |  |  |
|  <b>Legierte Vergütungsstähle</b><br>Alloyed heat treatable steels<br>Aceros para bonifi car aleados           |  |  |  |  |  |  |                                                                                       |                                                                                       |
|  <b>Rostfreie Stähle</b><br>Stainless steels<br>Aceros inoxidables                                             |  |  |  |  |  |  |                                                                                       |                                                                                       |
|  <b>Grauguss, Temperguss</b><br>Grey cast iron, malleable cast iron<br>Hierro fundido gris, fundición maleable |  |  |  |  |  |  |  |  |
|  <b>Kupfer, Messing</b><br>Copper, brass<br>Cobre, latón                                                       |  |  |  |  |  |  |  |  |
|  <b>Aluminium</b><br>Aluminio<br>Aluminio                                                                      |  |  |  |  |  |  |  |  |
|  <b>Kunststoffe</b><br>Plastics<br>Plásticos                                                                   |  |  |  |  |  |  |  |  |

## D Übersicht

## E Overview

## ES Resumen

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |    |    |    |    |    |
| 90°                                                                                 | 90°                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
| HSS-Co5                                                                             | HSS                                                                                 | HSS                                                                                 | HSS-Co5                                                                             | HSS-Co5                                                                             | HSS                                                                                 | HSS-Co5                                                                               | HSS-Co5                                                                               | HSS                                                                                   |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     | TiN                                                                                 |                                                                                     |                                                                                       | TiN                                                                                   | TiN                                                                                   |
|    |    |    |    |    |    |    |    |    |
| 10,00 - 35,00                                                                       | 6,30 - 20,50                                                                        | 4,00 - 37,00                                                                        | 4,00 - 37,00                                                                        | 6,00 - 37,00                                                                        | 3,00 - 61,00                                                                        | 3,5 - 30,00                                                                           | 3,5 - 30,00                                                                           | 6,00 - 8,00                                                                           |
| 2291                                                                                | 720                                                                                 | 722                                                                                 | 726                                                                                 | 728                                                                                 | 721                                                                                 | 723                                                                                   | 725                                                                                   | 721                                                                                   |
| 307                                                                                 | 308                                                                                 | 309                                                                                 | 309                                                                                 | 309                                                                                 | 311                                                                                 | 311                                                                                   | 311                                                                                   | 313                                                                                   |
|  |  |  |  |  |  |  |  |  |
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|  |  |                                                                                     |  |  |                                                                                     |  |  |                                                                                       |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |                                                                                     |                                                                                       |  |                                                                                       |
|  |                                                                                     |  |  |  |  |  |  |                                                                                       |
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Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conecut  
herramientas para roscar, avellanar y escarpar

**D HSS Cobalt Handgewindebohrer-Satz, gerade genutet, für metrisches ISO-Gewinde DIN 13**

**Einsatzbereich:**

Für Durchgangs- und Grundgewinde, besonders geeignet für rost- und säurebeständige Stähle sowie legierte und unlegierte Stähle bis ca. 1.000 N/mm<sup>2</sup>, Stahlguss, Temperguss, Messing, Aluminium und Kupfer.



Industriequalität  
Industrial quality  
Calidad industrial



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste

**E HSS Cobalt hand taps set, straight fluted, for metric ISO-threads DIN 13**

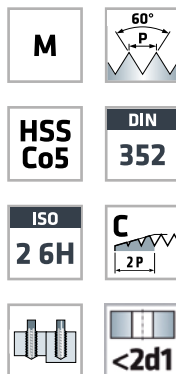
**Range of application:**

For through hole and blind hole threads, especially suitable for stainless and acid-resistant steels as well as alloyed and unalloyed steels up to appr. 1.000 N/mm<sup>2</sup>, cast steels, malleable cast iron, brass, aluminium and copper.

**ES Juego de machos para roscar manualmente HSS Cobalt, con ranura recta, para rosca ISO métrica DIN 13**

**Ámbito de aplicación:**

Para roscas pasantes y roscas ciegas, especialmente adecuada para aceros aleados y no aleados hasta aprox. 1000 N/mm<sup>2</sup>, así como fundición de acero, fundición maleable, latón, aluminio y cobre.



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |          | Code 717<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|----------|----------------------|---------------|
| M 3      | 0,5     | 40       | 12       | 2,7                    | Ø 2,5 mm | 0071700300100        | 3             |
| M 4      | 0,7     | 45       | 14       | 3,4                    | Ø 3,3 mm | 0071700400100        | 3             |
| M 5      | 0,8     | 50       | 16       | 4,9                    | Ø 4,2 mm | 0071700500100        | 3             |
| M 6      | 1       | 50       | 18       | 4,9                    | Ø 5 mm   | 0071700600100        | 3             |
| M 8      | 1,25    | 56       | 18       | 4,9                    | Ø 6,8 mm | 0071700800100        | 3             |
| M 10     | 1,5     | 70       | 23       | 5,5                    | Ø 8,5 mm | 0071701000100        | 3             |

**\* Satz bestehend aus je 1 Stk. Vor-, Mittel- und Fertigschneider**

\* Set consisting 1 pc. each pilot, middle and finishing cutter

\* Juego compuesto por 1 unid. de precortador, macho intermedio y macho acabador





**D HSS Handgewindebohrer-Satz, gerade genutet, für metrisches ISO-Gewinde DIN 13**

**Einsatzbereich:**

Für Durchgangs- und Grundgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>, Stahlguss, Temperguss, Messing, Aluminium und Kupfer.



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste

**E HSS hand taps set, straight fluted, for metric ISO-threads DIN 13**

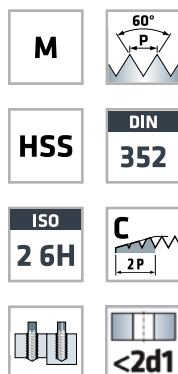
**Range of application:**

For through hole and blind hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>, cast steels, malleable cast iron, brass, aluminium and copper.

**ES Juego de machos para roscar manualmente HSS, con ranura recta, para rosca ISO métrica DIN 13**

**Ámbito de aplicación:**

Para roscas pasantes y roscas ciegas, adecuada para aceros aleados y no aleados hasta aprox. 850 N/mm<sup>2</sup>, así como fundición de acero, fundición maleable, latón, aluminio y cobre.



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |  | Code 707<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|-------------------------------------------------------------------------------------|----------------------|---------------|
| M 2      | 0,4     | 36       | 8        | 2,1                    | Ø 1,6 mm                                                                            | 0070700200100        | 3             |
| M 3      | 0,5     | 40       | 11       | 2,7                    | Ø 2,5 mm                                                                            | 0070700300100        | 3             |
| M 4      | 0,7     | 45       | 13       | 3,4                    | Ø 3,3 mm                                                                            | 0070700400100        | 3             |
| M 5      | 0,8     | 50       | 16       | 4,9                    | Ø 4,2 mm                                                                            | 0070700500100        | 3             |
| M 6      | 1       | 50       | 19       | 4,9                    | Ø 5 mm                                                                              | 0070700600100        | 3             |
| M 8      | 1,25    | 56       | 22       | 4,9                    | Ø 6,8 mm                                                                            | 0070700800100        | 3             |
| M 10     | 1,5     | 70       | 24       | 5,5                    | Ø 8,5 mm                                                                            | 0070701000100        | 3             |
| M 12     | 1,75    | 75       | 29       | 7                      | Ø 10,2 mm                                                                           | 0070701200100        | 3             |

**\* Satz bestehend aus je 1 Stk. Vor-, Mittel- und Fertigschneider**

\* Set consisting 1 pc. each pilot, middle and finishing cutter

\* Juego compuesto por 1 unid. de precortador, macho intermedio y macho acabador



Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

**D HSS Handgewindebohrer-Satz, gerade genutet, für Whitworth-Rohrgewinde DIN ISO 228**

**Einsatzbereich:**

Für Durchgangs- und Grundgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>, Stahlguss, Temperguss, Messing, Aluminium und Kupfer.

**E HSS hand taps set, straight fluted, for Whitworth pipe threads DIN ISO 228**

**Range of application:**

For through hole and blind hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>, cast steels, malleable cast iron, brass, aluminium and copper.

**E3 Juego de machos para roscar manualmente HSS, con ranura recta, para rosca para tubos Whitworth DIN ISO 228**

**Ámbito de aplicación:**

Para roscas pasantes y roscas ciegas, adecuada para aceros aleados y no aleados hasta aprox. 850 N/mm<sup>2</sup>, así como fundición de acero, fundición maleable, latón, aluminio y cobre.



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |  | Code 706<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|-------------------------------------------------------------------------------------|----------------------|---------------|
| G 1/8"   | 28      | 63       | 20       | 5,5                    | Ø 8,8 mm                                                                            | 0070601600100        | 2             |
| G 1/4"   | 19      | 70       | 22       | 9                      | Ø 11,8 mm                                                                           | 0070602000100        | 2             |
| G 3/8"   | 19      | 70       | 22       | 9                      | Ø 15,25 mm                                                                          | 0070602400100        | 2             |
| G 1/2"   | 14      | 80       | 22       | 12                     | Ø 19 mm                                                                             | 0070602800100        | 2             |

\* Satz bestehend aus je 1 Stk. Vor- und Fertigschneider

\* Set consisting 1 pc. each pilot and finishing cutter

\* Juego compuesto por 1 unid. de precortador y macho acabador



**D HSS Einschnitt-Gewindebohrer, gerade genutet, für metrisches ISO-Gewinde DIN 13**

**Einsatzbereich:**

Für Durchgangsgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>, Stahlguss, Temperguss, Messing, Aluminium und Kupfer.

**E HSS single cut taps, straight fluted, for metric ISO-threads DIN 13**

**Range of application:**

For through hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>, cast steels, malleable cast iron, brass, aluminium and copper.

**ES Macho de corte HSS, con ranura recta, para rosca ISO métrica DIN 13**

**Ámbito de aplicación:**

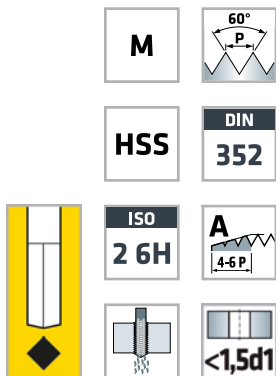
Para roscas pasantes, adecuada para aceros aleados y no aleados hasta aprox. 850 N/mm<sup>2</sup>, así como fundición de acero, fundición maleable, latón, aluminio y cobre.



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |           | Code 708<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|-----------|----------------------|---------------|
| M 2      | 0,4     | 36       | 8        | 2,1                    | Ø 1,6 mm  | 0070800200100        | 1             |
| M 3      | 0,5     | 40       | 11       | 2,7                    | Ø 2,5 mm  | 0070800300100        | 1             |
| M 4      | 0,7     | 45       | 13       | 3,4                    | Ø 3,3 mm  | 0070800400100        | 1             |
| M 5      | 0,8     | 48       | 16       | 4,9                    | Ø 4,2 mm  | 0070800500100        | 1             |
| M 6      | 1       | 50       | 19       | 4,9                    | Ø 5 mm    | 0070800600100        | 1             |
| M 8      | 1,25    | 56       | 22       | 4,9                    | Ø 6,8 mm  | 0070800800100        | 1             |
| M 10     | 1,5     | 70       | 24       | 5,5                    | Ø 8,5 mm  | 0070801000100        | 1             |
| M 12     | 1,75    | 75       | 29       | 7                      | Ø 10,2 mm | 0070801200100        | 1             |

**HSS-G Gewindebohrersatz, 16-tlg., Einschnittgewindebohrer**



16-tlg. / 16-pcs. / 16-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0070800016100

| Inhalt<br>Contents / Contenido                                           | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|--------------------------------------------------------------------------|-------------------------------------------|
| Einschnitt-Gewindebohrer<br>Single cut taps / Machos de corte,<br>M3-M12 | 1                                         |
| Schneideisen / Dies / Terrajas,<br>M3-M12                                | 1                                         |
| Schneideisenhalter / Die stocks / Portaterrajas,<br>Nr. 4                | 1                                         |
| Windeisen / Tap wrenches / Giramachos<br>Nr. 1 ½                         | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

**D Windeisen, Werkzeughalter und Schraubenausdreheratz**

**E Tap wrenches, tool holder and screw-remover set**

**ES Giramachos, portaherramientas y juego de extractores de tornillos**



Einzelverpackung  
Single pack  
Embalaje individual



| Windeisen Nr. 11/2<br>Tap wrenches<br>Giramachos                                         | l1<br>mm | Code 712<br>Art.-Nr.  | Inh.<br>Cont. |
|------------------------------------------------------------------------------------------|----------|-----------------------|---------------|
| M2 - M12                                                                                 | 180      | 0071200015100         | 1             |
| Windeisen Nr. 3<br>Tap wrenches<br>Giramachos                                            | l1<br>mm | Code 5430<br>Art.-Nr. | Inh.<br>Cont. |
| G 1/8" - G 1/2"                                                                          | 380      | 0543000030100         | 1             |
| Werkzeughalter mit Knarre<br>Tool holder with ratchet<br>Portaherramientas con trinquete | l1<br>mm | Code 713<br>Art.-Nr.  | Inh.<br>Cont. |
| M3 - M10, Größe 1 / Size 1 / Tamaño 1                                                    | 85       | 0071300001100         | 1             |
| M5 - M12, Größe 2 / Size 2 / Tamaño 2                                                    | 100      | 0071300002100         | 1             |
| Schraubenausdreheratz<br>Screw-remover set<br>Juego de extractores de tornillos          |          | Code 902<br>Art.-Nr.  | Inh.<br>Cont. |
| M3 - M18, 5-tlg. / 5 pcs / 5 unid.                                                       |          | 0000902002100         | 5             |
| Schraubenausdreher<br>Screw-remover<br>Juego de extractores de tornillos                 | l1<br>mm | Code 701<br>Art.-Nr.  | Inh.<br>Cont. |
| Größe 1 / Size 1 / Tamaño 1                                                              | 60       | 0070100001100         | 1             |
| Größe 2 / Size 2 / Tamaño 2                                                              | 68       | 0070100002100         | 1             |
| Größe 3 / Size 3 / Tamaño 3                                                              | 75       | 0070100003100         | 1             |
| Größe 4 / Size 4 / Tamaño 4                                                              | 82       | 0070100004100         | 1             |
| Größe 5 / Size 5 / Tamaño 5                                                              | 90       | 0070100005100         | 1             |

Schraubenausdreheratz BOX 5



5-tlg. / 5-pcs. / 5-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0000902003100

| Ø<br>mm               | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------|-------------------------------------------|
| Schraubenausdreheratz |                                           |
| Ø M5-M20              | 1                                         |

<sup>(1)</sup> Stück je Abmessung  
<sup>(1)</sup> Pieces each dimension  
<sup>(1)</sup> Piezas por diámetro

**D HSS Schneideisen für metrisches ISO-Gewinde DIN 13**

**E HSS dies for metric ISO-threads DIN 13**

**ES Terrajas HSS para rosca ISO métrica, DIN 13**

**Einsatzbereich:**

Geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>.

**Range of application:**

Suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>.

**Ámbito de aplicación:**

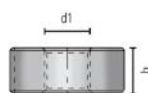
Adecuada para aceros aleados y no aleados con una resistencia a la extensión de 850 N/mm<sup>2</sup>.



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste



**M**

**HSS**

**WN**

**ISO 6g**

SB-Aufhänger

Plastic tag

Gancho para autoservicio



Einzelverpackung

Single pack

Embalaje individual

| d1<br>mm | P<br>mm | d2<br>mm | h<br>mm | Code 710<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|---------|----------------------|---------------|
| M 2      | 0,4     | 25,00    | 9       | 0071000200100        | 1             |
| M 3      | 0,5     | 25,00    | 9       | 0071000300100        | 1             |
| M 4      | 0,7     | 25,00    | 9       | 0071000400100        | 1             |
| M 5      | 0,8     | 25,00    | 9       | 0071000500100        | 1             |
| M 6      | 1       | 25,00    | 9       | 0071000600100        | 1             |
| M 8      | 1,25    | 25,00    | 9       | 0071000800100        | 1             |
| M 10     | 1,5     | 25,00    | 9       | 0071001000100        | 1             |
| M 12     | 1,75    | 25,00    | 9       | 0071001200100        | 1             |

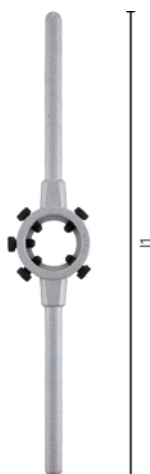


Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

① **Schneideisenhalter für runde Schneideisen DIN 223**

② **Die stocks for round dies DIN 223**

③ **Portaterrajas para terrajas redondas DIN 223**



**DIN EN 22568**

SB-Aufhänger  
Plastic tag  
Gancho para autoservicio



Einzelverpackung  
Single pack  
Embalaje individual

| Nr.<br>N.º | d2<br>mm | h<br>mm |    |                   | Code 711<br>Art.-Nr. | Inh.<br>Cont. |
|------------|----------|---------|----|-------------------|----------------------|---------------|
| 4          | 25,00    | 9       | M8 | M2-M12 (Code 710) | 0071102509100        | 1             |

HSS-G Gewindebohrersatz

HSS-G DIN Gewindebohrersatz



16-tlg. / 16-pcs. / 16-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0070800016100

37-tlg. / 37-pcs. / 37-unid.  
Stahlblechkassette / Metal cassette / Caja de metal  
Art.-Nr. 0070800031100

| Inhalt<br>Contents / Contenido                                       | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Inhalt<br>Contents / Contenido                                     | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|----------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| Einschnitt-Gewindebohrer / Single cut taps / Machos de corte, M3-M12 | 1                                         | Gewindebohrer / Taps / Machos para roscar M3-M12                   | 1                                         |
| Schneideisen / Dies / Terrajas, M3-M12                               | 1                                         | Schneideisen / Dies / Terrajas, M3-M12                             | 1                                         |
| Schneideisenhalter / Die stocks / Portaterrajas, Nr. 4               | 1                                         | Schneideisenhalter / Die stocks / Portaterrajas, Nr. 2, 3, 4, 5, 7 | 1                                         |
| Windeisen / Tap wrenches / Giramachos Nr. 1 ½                        | 1                                         | Windeisen / Tap wrenches / Giramachos Nr. 1, 2                     | 1                                         |
|                                                                      |                                           | Schraubendreher / Screwdriver / Destornillador                     | 1                                         |
|                                                                      |                                           | Gewindelehre / Gauge / Calibrador de roscas                        | 1                                         |

d2 = Angaben von Schneideisen  
d2 = Data of dies  
d2 = Datos de las terrajas

<sup>(1)</sup> Stück je Abmessung  
<sup>(1)</sup> Pieces each dimension  
<sup>(1)</sup> Piezas por diámetro



**D HSS Cobalt Maschinengewindebohrer, gerade genutet, für metrisches ISO-Gewinde DIN 13**
**Einsatzbereich:**

Für Durchgangsgewinde, besonders geeignet für rost- und säurebeständige Stähle sowie legierte und unlegierte Stähle bis ca. 1.000 N/mm<sup>2</sup>.

**E HSS Cobalt machine taps, straight fluted, for metric ISO-threads DIN 13**
**Range of application:**

For through hole threads, especially suitable for stainless and acid-resistant steels as well as alloyed and unalloyed steels up to appr. 1.000 N/mm<sup>2</sup>.

**ES Macho para roscar a máquina HSS Cobalt, con ranura recta, para rosca ISO métrica, DIN 13**
**Ámbito de aplicación:**

Para roscas pasantes, especialmente adecuada para aceros resistentes a los ácidos y la corrosión, así como para aceros aleados y no aleados hasta aprox. 1000 N/mm<sup>2</sup>.



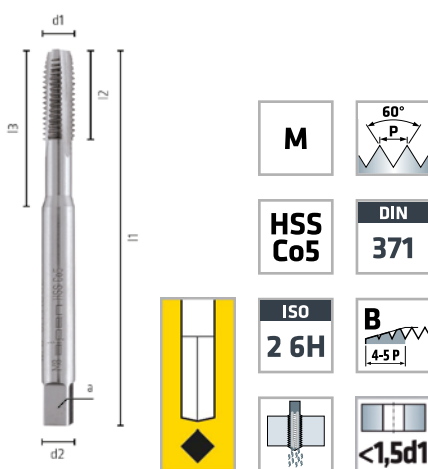
Industriequalität  
Industrial quality  
Calidad industrial



Präzise  
Precise  
Preciso

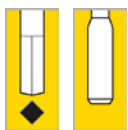


Verschleissfest  
Wear-resistant  
Resistente al desgaste



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |  | Code 704<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|-------------------------------------------------------------------------------------|----------------------|---------------|
| M 3      | 0,5     | 56       | 11       | 2,7                    | Ø 2,5 mm                                                                            | 0070400300100        | 1             |
| M 4      | 0,7     | 63       | 13       | 3,4                    | Ø 3,3 mm                                                                            | 0070400400100        | 1             |
| M 5      | 0,8     | 70       | 16       | 4,9                    | Ø 4,2 mm                                                                            | 0070400500100        | 1             |
| M 6      | 1       | 80       | 19       | 4,9                    | Ø 5 mm                                                                              | 0070400600100        | 1             |
| M 8      | 1,25    | 90       | 22       | 6,2                    | Ø 6,8 mm                                                                            | 0070400800100        | 1             |
| M 10     | 1,5     | 100      | 24       | 8                      | Ø 8,5 mm                                                                            | 0070401000100        | 1             |
| M 12     | 1,75    | 110      | 29       | 7                      | Ø 10,2 mm                                                                           | 0070401200100        | 1             |

**HSS-E DIN Maschinengewindebohrersatz KM 14**

14-tlg. / 14-pcs. / 14-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0070800014100

| Ø<br>mm                                           | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|---------------------------------------------------|-------------------------------------------|
| HSS Cobalt                                        |                                           |
| Ø 2,50 / 3,30 / 4,20 / 5,00 / 6,80 / 8,50 / 10,20 | 1                                         |
| Ø M3-M12                                          | 1                                         |

M3 - M10 = DIN 371 / M12 = DIN 376

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

**D HSS Cobalt Maschinengewindebohrer, spiral-genutet, für metrisches ISO-Gewinde DIN 13**

**Einsatzbereich:**

Für Grundgewinde, besonders geeignet für rost- und säurebeständige Stähle sowie legierte und unlegierte Stähle bis ca. 1.000 N/mm<sup>2</sup>.

**E HSS Cobalt machine taps, spiral fluted, for metric ISO-threads DIN 13**

**Range of application:**

For blind hole threads, especially suitable for stainless and acid-resistant steels as well as alloyed and unalloyed steels up to appr. 1.000 N/mm<sup>2</sup>.

**E Macho para roscar a máquina HSS Cobalt, con ranura en espiral, para rosca ISO métrica, DIN 13**

**Ámbito de aplicación:**

Para roscas ciegas, especialmente adecuada para aceros resistentes a los ácidos y la corrosión, así como para aceros aleados y no aleados hasta aprox. 1000 N/mm<sup>2</sup>.



Industriequalität  
Industrial quality  
Calidad industrial



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |           | Code 714<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|-----------|----------------------|---------------|
| M 3      | 0,5     | 56       | 6        | 2,7                    | Ø 2,5 mm  | 0071400300100        | 1             |
| M 4      | 0,7     | 63       | 7        | 3,4                    | Ø 3,3 mm  | 0071400400100        | 1             |
| M 5      | 0,8     | 70       | 8        | 4,9                    | Ø 4,2 mm  | 0071400500100        | 1             |
| M 6      | 1       | 80       | 10       | 4,9                    | Ø 5 mm    | 0071400600100        | 1             |
| M 8      | 1,25    | 90       | 14       | 6,2                    | Ø 6,8 mm  | 0071400800100        | 1             |
| M 10     | 1,5     | 100      | 16       | 8                      | Ø 8,5 mm  | 0071401000100        | 1             |
| M 12     | 1,75    | 110      | 18       | 7                      | Ø 10,2 mm | 0071401200100        | 1             |

**D HSS Maschinengewindebohrer, gerade genutet, für metrisches ISO-Gewinde DIN 13**
**Einsatzbereich:**

Maschinengewindebohrer mit Schälanschnitt für Durchgangsgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>, Temperguss, Sphäroguss, Zinklegierungen, Zinkdruckguss sowie Messing (langspanend).


 Präzise  
Precise  
Preciso

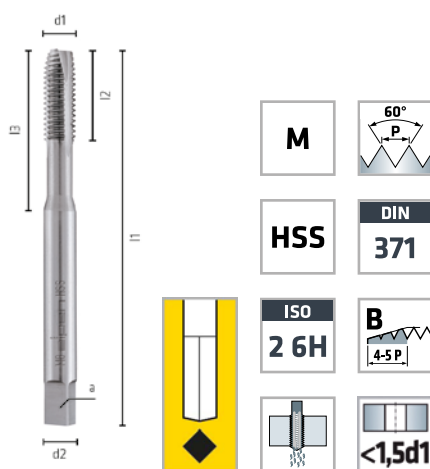
 Verschleissfest  
Wear-resistant  
Resistente al desgaste

**E HSS machine taps, straight fluted, for metric ISO-threads DIN 13**
**Range of application:**

Machine taps with spiral point for through hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>, malleable cast iron, spheroidal graphite, zinc alloys, zinc die castings as well as brass (long chipping).

**ES Macho para roscar a máquina HSS, con ranura recta, para rosca ISO métrica, DIN 13**
**Ámbito de aplicación:**

Macho para roscar a máquina con corte inicial helicoidal para roscas pasantes, adecuada para aceros aleados y no aleados hasta aprox. 850 N/mm<sup>2</sup>, así como fundición maleable, fundición nodular, aleaciones de cinc, cinc moldeado a presión y latón (de viruta larga).


 Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |  | Code 709<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|-------------------------------------------------------------------------------------|----------------------|---------------|
| M 3      | 0,5     | 56       | 11       | 2,7                    | Ø 2,5 mm                                                                            | 0070900300100        | 1             |
| M 4      | 0,7     | 63       | 13       | 3,4                    | Ø 3,3 mm                                                                            | 0070900400100        | 1             |
| M 5      | 0,8     | 70       | 16       | 4,9                    | Ø 4,2 mm                                                                            | 0070900500100        | 1             |
| M 6      | 1       | 80       | 19       | 4,9                    | Ø 5 mm                                                                              | 0070900600100        | 1             |
| M 8      | 1,25    | 90       | 22       | 6,2                    | Ø 6,8 mm                                                                            | 0070900800100        | 1             |
| M 10     | 1,5     | 100      | 24       | 8                      | Ø 8,5 mm                                                                            | 0070901000100        | 1             |
| M 12     | 1,75    | 110      | 29       | 7                      | Ø 10,2 mm                                                                           | 0070901200100        | 1             |

M3 - M10 = DIN 371 / M12 = DIN 376

**① HSS Maschinengewindebohrer, spiral-genutet, für metrisches ISO-Gewinde DIN 13**

**Einsatzbereich:**

Für Grundgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>, Temperguss, Sphäroguss, Zinklegierungen, Zinkdruckguss sowie Messing (langspanend).



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste

**② HSS machine taps, spiral fluted, for metric ISO-threads DIN 13**

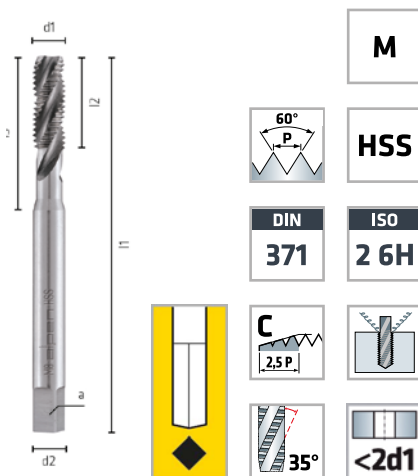
**Range of application:**

For blind hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>, malleable cast iron, spheroidal graphite, zinc alloys, zinc die castings as well as brass (long chipping).

**③ Macho para roscar a máquina HSS, con ranura en espiral, para rosca ISO métrica, DIN 13**

**Ámbito de aplicación:**

Para roscas ciegas, adecuada para aceros aleados y no aleados hasta aprox. 850 N/mm<sup>2</sup>, así como fundición maleable, fundición nodular, aleaciones de cinc, cinc moldeado a presión y latón (de viruta larga).



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm | a <sub>h12</sub><br>mm |  | Code 719<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|------------------------|-------------------------------------------------------------------------------------|----------------------|---------------|
| M 3      | 0,5     | 56       | 6        | 2,7                    | Ø 2,5 mm                                                                            | 0071900300100        | 1             |
| M 4      | 0,7     | 63       | 7        | 3,4                    | Ø 3,3 mm                                                                            | 0071900400100        | 1             |
| M 5      | 0,8     | 70       | 8        | 4,9                    | Ø 4,2 mm                                                                            | 0071900500100        | 1             |
| M 6      | 1       | 80       | 10       | 4,9                    | Ø 5 mm                                                                              | 0071900600100        | 1             |
| M 8      | 1,25    | 90       | 14       | 6,2                    | Ø 6,8 mm                                                                            | 0071900800100        | 1             |
| M 10     | 1,5     | 100      | 16       | 8                      | Ø 8,5 mm                                                                            | 0071901000100        | 1             |
| M 12     | 1,75    | 110      | 18       | 7                      | Ø 10,2 mm                                                                           | 0071901200100        | 1             |

**D HSS Einschnittgewindebohrer mit 1/4"-Sechskantschaft für metrisches ISO-Gewinde DIN 13**

**Einsatzbereich:**

Für Durchgangsgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>, Stahlguss, Temperguss, Messing, Aluminium und Kupfer.

**E HSS single cut taps with 1/4" hexagonal shank for metric ISO-threads DIN 13**

**Range of application:**

For through hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>, cast steels, malleable cast iron, brass, aluminium and copper.

**ES Machos de corte HSS con eje hexagonal 1/4" para roscas ISO métricas DIN 13**

**Ámbito de aplicación:**

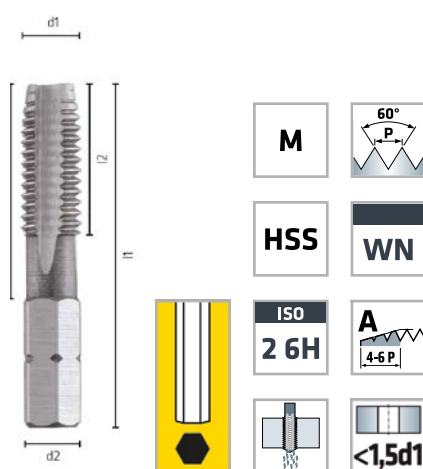
Para roscas pasantes, adecuada para aceros aleados y no aleados hasta aprox. 850 N/mm<sup>2</sup>, así como fundición de acero, fundición maleable, latón, aluminio y cobre.



Präzise  
Precise  
Preciso



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm |  | Code 702<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|-------------------------------------------------------------------------------------|----------------------|---------------|
| M 3      | 0,5     | 33       | 11       | Ø 2,5 mm                                                                            | 0070200300100        | 1             |
| M 4      | 0,7     | 35       | 12       | Ø 3,3 mm                                                                            | 0070200400100        | 1             |
| M 5      | 0,8     | 36       | 15       | Ø 4,2 mm                                                                            | 0070200500100        | 1             |
| M 6      | 1       | 39       | 18       | Ø 5 mm                                                                              | 0070200600100        | 1             |
| M 8      | 1,25    | 40       | 19       | Ø 6,8 mm                                                                            | 0070200800100        | 1             |
| M 10     | 1,5     | 41       | 21       | Ø 8,5 mm                                                                            | 0070201000100        | 1             |



Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

**D HSS Kombigewindebohrer mit 1/4"-Sechskantschaft für metrisches ISO-Gewinde DIN 13**

**Einsatzbereich:**

Zum Bohren, Gewindeschneiden und Senken.  
Für Durchgangsgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm<sup>2</sup>.



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Präzise  
Precise  
Preciso

**E HSS combination taps with 1/4" hexagonal shank for metric ISO-threads DIN 13**

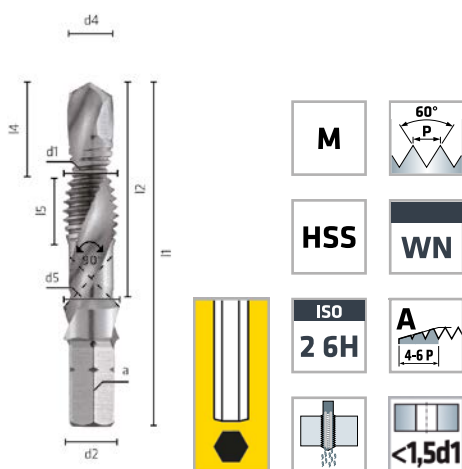
**Range of application:**

For drilling, tapping and countersinking. For through hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm<sup>2</sup>.

**E Machos para roscar combinados HSS con eje hexagonal 1/4" para roscas ISO métricas DIN 13**

**Ámbito de aplicación:**

Para taladrar, roscar y avellanar. Para roscas pasantes, adecuada para aceros aleados y no aleados hasta aprox. 850 N/mm<sup>2</sup>.



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | P<br>mm | l1<br>mm | l2<br>mm |          | Code 703<br>Art.-Nr. | Inh.<br>Cont. |
|----------|---------|----------|----------|----------|----------------------|---------------|
| M 3      | 0,5     | 36       | 24       | Ø 2,5 mm | 0070300300100        | 1             |
| M 4      | 0,7     | 39       | 27       | Ø 3,3 mm | 0070300400100        | 1             |
| M 5      | 0,8     | 41       | 29       | Ø 4,2 mm | 0070300500100        | 1             |
| M 6      | 1       | 44       | 32       | Ø 5 mm   | 0070300600100        | 1             |
| M 8      | 1,25    | 50       | 38       | Ø 6,8 mm | 0070300800100        | 1             |
| M 10     | 1,5     | 59       | 47       | Ø 8,5 mm | 0070301000100        | 1             |

**HSS Gewindebohrersatz BOX 6**



6-tlg. / 6-pcs. / 6-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0070300006100

| Ø<br>mm                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|------------------------------|-------------------------------------------|
| Gewindebohrer                |                                           |
| M3   M4   M5   M6   M8   M10 | 1                                         |

**Kombi Gewindebohrersatz KP 7**



7-tlg. / 7-pcs. / 7-unid.  
Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0070300016100

| Ø<br>mm                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|------------------------------|-------------------------------------------|
| Gewindebohrer                |                                           |
| M3   M4   M5   M6   M8   M10 | 1                                         |

Wera  
Bithalter / Bitholder / Soporte de broca

Schaft nach DIN 3126, Form C6.3, ISO 1173  
Shank DIN 3126, Form C6.3, ISO 1173  
Eje según DIN 3126, forma C6.3, ISO 1173



**D HSS Cobalt Kegelsenker  
ungleiche Teilung  
DIN 334 C, 60°**

**Einsatzbereich:**

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften durch ungleichgeteilte Schneiden.



Hitzebeständig  
Heat resistant  
Termoestable



Präzise  
Precise  
Preciso



Industriequalität  
Industrial quality  
Calidad industrial

**E HSS Cobalt countersinks  
different partition  
DIN 334 C, 60°**

**Range of application:**

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface by unequally divided cutting edges. Reduction of feed force and chatter marks on the countersinking surface due to reduced axial and radial force.

**ES Avellanador cónico HSS Cobalto,  
división irregular,  
DIN 334 C, 60°**

**Ámbito de aplicación:**

Para todos los metales E y NE y plásticos duros y blandos. Herramienta para desbarbar y avellanar de aplicación universal para agujeros de todo tipo. Excelentes características de corte, por corte desigual dividida.



Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio

| d1<br>mm | d4<br>mm |      | d2 <sub>h9</sub><br>mm | l1<br>mm | Z | Code 2270<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|------|------------------------|----------|---|-----------------------|---------------|
| 6,30     | 1,60     | M 3  | 5,00                   | 45       | 3 | 0227000630100         | 1             |
| 8,00     | 2,00     | M 4  | 6,00                   | 50       | 3 | 0227000800100         | 1             |
| 10,00    | 2,50     | M 5  | 6,00                   | 50       | 3 | 0227001000100         | 1             |
| 12,50    | 3,20     | M 6  | 8,00                   | 56       | 3 | 0227001250100         | 1             |
| 16,00    | 4,00     | M 8  | 10,00                  | 63       | 3 | 0227001600100         | 1             |
| 20,00    | 5,00     | M 10 | 10,00                  | 67       | 3 | 0227002000100         | 1             |
| 25,00    | 6,30     | M 12 | 10,00                  | 71       | 3 | 0227002500100         | 1             |



Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

① HSS Cobalt Kegelsenker, unglei-  
che Teilung DIN 335 C, 90°

**Einsatzbereich:**

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften durch ungleichgeteilte Schneiden.



Hitzebeständig  
Heat resistant  
Termoestable



Präzise  
Precise  
Preciso



Industriequalität  
Industrial quality  
Calidad industrial

② HSS Cobalt countersinks, differ-  
ent partition DIN 335 C, 90°

**Range of application:**

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface by unequally divided cutting edges. Reduction of feed force and chatter marks on the countersinking surface due to reduced axial and radial force.

③ Avellanador cónico HSS Cobalto,  
división irregular, DIN 335 C, 90°

**Ámbito de aplicación:**

Para todos los metales E y NE y plásticos du-  
ros y blandos. Herramienta para desbarbar y  
avellanar de aplicación universal para agujeros  
de todo tipo. Excelentes características de  
corte, por corte desigual dividida.



Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio



**ALUNIT®**  
Höhere Performance,  
längere Standzeit  
Higher performance,  
longer durability  
Rendimiento superior  
tiempo de uso más  
prolongado

Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio

| blank / bright / brillante |          |      |                        |          |   | ALUNIT®               |               |
|----------------------------|----------|------|------------------------|----------|---|-----------------------|---------------|
| d1<br>mm                   | d4<br>mm |      | d2 <sub>h9</sub><br>mm | l1<br>mm | Z | Code 2390<br>Art.-Nr. | Inh.<br>Cont. |
| 6,30                       | 1,50     | M 3  | 5,00                   | 45       | 3 | 0239000630100         | 1             |
| 8,30                       | 2,00     | M 4  | 6,00                   | 50       | 3 | 0239000830100         | 1             |
| 10,40                      | 2,50     | M 5  | 6,00                   | 50       | 3 | 0239001040100         | 1             |
| 12,40                      | 2,80     | M 6  | 8,00                   | 56       | 3 | 0239001240100         | 1             |
| 16,50                      | 3,20     | M 8  | 10,00                  | 60       | 3 | 0239001650100         | 1             |
| 20,50                      | 3,50     | M 10 | 10,00                  | 63       | 3 | 0239002050100         | 1             |
| 25,00                      | 3,80     | M 12 | 10,00                  | 67       | 3 | 0239002500100         | 1             |
| 31,00                      | 4,20     |      | 12,00                  | 71       | 3 | 0239003100100         | 1             |
|                            |          |      |                        |          |   | Code 2397<br>Art.-Nr. | Inh.<br>Cont. |
|                            |          |      |                        |          |   | 0239700630100         | 1             |
|                            |          |      |                        |          |   | 0239700830100         | 1             |
|                            |          |      |                        |          |   | 0239701040100         | 1             |
|                            |          |      |                        |          |   | 0239701240100         | 1             |
|                            |          |      |                        |          |   | 0239701650100         | 1             |
|                            |          |      |                        |          |   | 0239702050100         | 1             |
|                            |          |      |                        |          |   | 0239702500100         | 1             |
|                            |          |      |                        |          |   | 0239703100100         | 1             |

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| <b>HSS Cobalt Kegelsenker-Satz KM 4</b><br>    |                                           | <b>HSS Cobalt Kegelsenker-Satz KP 5</b><br>          |                                           | <b>HSS Cobalt Kegelsenker-Satz KM 4</b><br>  |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 4-tlg. / 4-pcs. / 4-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0239000004100                                                                                                           |                                           | 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0239000005100                                                                                                        |                                           | 4-tlg. / 4-pcs. / 4-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0239700004100                                                                                                             |                                           |
| Ø<br>mm                                                                                                                                                                                                          | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                            | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
| MAYKESTAG                                                                                                                                                                                                        |                                           | MAYKESTAG                                                                                                                                                                                                              |                                           | MAYKESTAG                                                                                                                                                                                                          |                                           |
| Ø 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                                  | 1                                         | Ø 6,30 / 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                                 | 1                                         | Ø 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                                    | 1                                         |
| <b>HSS Cobalt Kegelsenker-Satz KP 5</b><br>  |                                           | <b>Hartmetall-Set Frässtifte/Senker BOX 5</b><br>  |                                           |                                                                                                                                                                                                                    |                                           |
| 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0239700005100                                                                                                  |                                           | 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffbox / Plastic box / Caja de plástico<br>Art.-Nr. 0776000002100                                                                                                                  |                                           |                                                                                                                                                                                                                    |                                           |
| Ø<br>mm                                                                                                                                                                                                          | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                                                                                                                                                                                                | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |                                                                                                                                                                                                                    |                                           |
| MAYKESTAG                                                                                                                                                                                                        |                                           | HM-Frässtift                                                                                                                                                                                                           |                                           |                                                                                                                                                                                                                    |                                           |
| Ø 6,30 / 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                           | 1                                         | Ø 10x65, ZYA-S                                                                                                                                                                                                         | 1                                         |                                                                                                                                                                                                                    |                                           |
|                                                                                                                                                                                                                  |                                           | Ø 10x65, WRC                                                                                                                                                                                                           | 1                                         |                                                                                                                                                                                                                    |                                           |
|                                                                                                                                                                                                                  |                                           | Ø 10x65, SPG                                                                                                                                                                                                           | 1                                         |                                                                                                                                                                                                                    |                                           |
|                                                                                                                                                                                                                  |                                           | MAYKESTAG                                                                                                                                                                                                              |                                           |                                                                                                                                                                                                                    |                                           |
|                                                                                                                                                                                                                  |                                           | HSS Cobalt Kegelsenker Ø 10,40 / 12,40                                                                                                                                                                                 | 1                                         |                                                                                                                                                                                                                    |                                           |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D HSS Cobalt Kegelsenker,  
3-Flächenschaft, ungleiche  
Teilung, DIN 335 C, 90°**

**Einsatzbereich:**

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften durch ungleichgeteilte Schneiden.



Hitzebeständig  
Heat resistant  
Termoestable



Präzise  
Precise  
Preciso



3-Flächenschaft  
3-surface shank  
3 caras

**E HSS Cobalt countersinks,  
3-surface shank, different parti-  
tion, DIN 335 C, 90°**

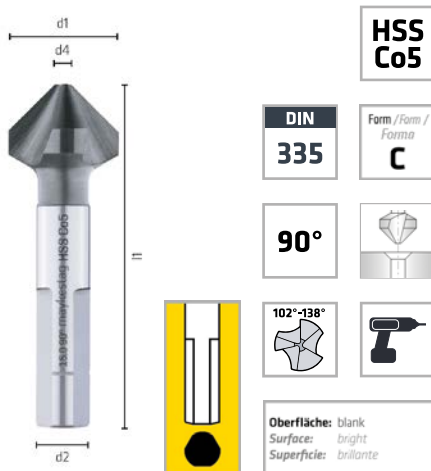
**Range of application:**

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface by unequally divided cutting edges.

**E3 Avellanador cónico HSS Cobalto,  
eje de 3 caras, división irregular,  
DIN 335 C, 90°**

**Ámbito de aplicación:**

Para todos los metales E y NE y plásticos du-ros y blandos. Herramienta para desbarbar y avellanar de aplicación universal para agujeros de todo tipo. Excelentes características de corte, por corte desigual dividida.



Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio



**ALUNIT®**  
Höhere Performance,  
längere Standzeit  
Higher performance,  
longer durability  
Rendimiento superior  
tiempo de uso más  
prolongado

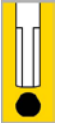
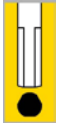
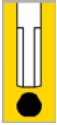
Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio

| blank / bright / brillante |          |      |                        |          |   | ALUNIT®               |               |
|----------------------------|----------|------|------------------------|----------|---|-----------------------|---------------|
| d1<br>mm                   | d4<br>mm |      | d2 <sub>h9</sub><br>mm | l1<br>mm | Z | Code 2380<br>Art.-Nr. | Inh.<br>Cont. |
| 6,30                       | 1,50     | M 3  | 5,00                   | 45       | 3 | 0238000630100         | 1             |
| 8,30                       | 2,00     | M 4  | 6,00                   | 50       | 3 | 0238000830100         | 1             |
| 10,40                      | 2,50     | M 5  | 6,00                   | 50       | 3 | 0238001040100         | 1             |
| 12,40                      | 2,80     | M 6  | 8,00                   | 56       | 3 | 0238001240100         | 1             |
| 16,50                      | 3,20     | M 8  | 10,00                  | 60       | 3 | 0238001650100         | 1             |
| 20,50                      | 3,50     | M 10 | 10,00                  | 63       | 3 | 0238002050100         | 1             |
| 25,00                      | 3,80     | M 12 | 10,00                  | 67       | 3 | 0238002500100         | 1             |
| 31,00                      | 4,20     |      | 12,00                  | 71       | 3 | 0238003100100         | 1             |
|                            |          |      |                        |          |   | Code 2387<br>Art.-Nr. | Inh.<br>Cont. |
|                            |          |      |                        |          |   | 0238700630100         | 1             |
|                            |          |      |                        |          |   | 0238700830100         | 1             |
|                            |          |      |                        |          |   | 0238701040100         | 1             |
|                            |          |      |                        |          |   | 0238701240100         | 1             |
|                            |          |      |                        |          |   | 0238701650100         | 1             |
|                            |          |      |                        |          |   | 0238702050100         | 1             |
|                            |          |      |                        |          |   | 0238702500100         | 1             |
|                            |          |      |                        |          |   | 0238703100100         | 1             |

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| <b>HSS Cobalt Kegelsenker-Satz KM 4</b><br><br>    |                     | <b>HSS Cobalt Kegelsenker-Satz KP 5</b><br><br>  |                     | <b>HSS Cobalt Kegelsenker-Satz KM 4</b><br><br>  |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 4-tlg. / 4-pcs. / 4-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0238000004100                                                                                                               |                     | 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0238000005100                                                                                                    |                     | 4-tlg. / 4-pcs. / 4-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0238700004100                                                                                                                 |                     |
| Ø                                                                                                                                                                                                                    | Stk. <sup>(1)</sup> | Ø                                                                                                                                                                                                                  | Stk. <sup>(1)</sup> | Ø                                                                                                                                                                                                                      | Stk. <sup>(1)</sup> |
| mm                                                                                                                                                                                                                   | pc. <sup>(1)</sup>  | mm                                                                                                                                                                                                                 | pc. <sup>(1)</sup>  | mm                                                                                                                                                                                                                     | pc. <sup>(1)</sup>  |
| MAYKESTAG                                                                                                                                                                                                            |                     | MAYKESTAG                                                                                                                                                                                                          |                     | MAYKESTAG                                                                                                                                                                                                              |                     |
| Ø 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                                      | 1                   | Ø 6,30 / 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                             | 1                   | Ø 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                                        | 1                   |
| <b>HSS Cobalt Kegelsenker-Satz KP 5</b><br><br>  |                     |                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                        |                     |
| 5-tlg. / 5-pcs. / 5-unid.<br>Kunststoffkassette / Plastic cassette / Caja de plástico<br>Art.-Nr. 0238700005100                                                                                                      |                     |                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                        |                     |
| Ø                                                                                                                                                                                                                    | Stk. <sup>(1)</sup> |                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                        |                     |
| mm                                                                                                                                                                                                                   | pc. <sup>(1)</sup>  |                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                        |                     |
| MAYKESTAG                                                                                                                                                                                                            |                     |                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                        |                     |
| Ø 6,30 / 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                                                               | 1                   |                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                        |                     |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D HSS Cobalt Kegelsenker lang, ungleiche Teilung DIN 335 C, 90°

### Einsatzbereich:

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften durch ungleichgeteilte Schneiden.



Hitzebeständig  
Heat resistant  
Termoestable



Präzise  
Precise  
Preciso



Industriequalität  
Industrial quality  
Calidad industrial

## E HSS Cobalt countersinks long series, different partition DIN 335 C, 90°

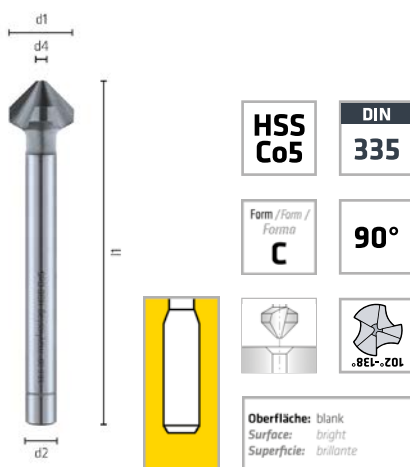
### Range of application:

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface by unequally divided cutting edges. Reduction of feed force and chatter marks on the countersinking surface due to reduced axial and radial force.

## ES Avellanador cónico HSS Cobalto, larga, división irregular, DIN 335 C, 90°

### Ámbito de aplicación:

Para todos los metales E y NE y plásticos duros y blandos. Herramienta para desbarbar y avellanar de aplicación universal para agujeros de todo tipo. Excelentes características de corte, por corte desigual dividida.



Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio



**ALUNIT®**  
Höhere Performance,  
längere Standzeit  
Higher performance,  
longer durability  
Rendimiento superior  
tiempo de uso más  
prolongado

Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio

|       |      |     |                  |     |   | blank / bright / brillante |       | ALUNIT®       |       |
|-------|------|-----|------------------|-----|---|----------------------------|-------|---------------|-------|
| d1    | d4   |     | d2 <sub>h9</sub> | l1  | Z | Code 2340                  | Inh.  | Code 2347     | Inh.  |
| mm    | mm   |     | mm               | mm  |   | Art.-Nr.                   | Cont. | Art.-Nr.      | Cont. |
| 6,30  | 1,50 | M3  | 5,00             | 104 | 3 | 0234000630100              | 1     | 0234700630100 | 1     |
| 8,30  | 2,00 | M4  | 6,00             | 105 | 3 | 0234000830100              | 1     | 0234700830100 | 1     |
| 10,40 | 2,50 | M5  | 6,00             | 107 | 3 | 0234001040100              | 1     | 0234701040100 | 1     |
| 12,40 | 2,80 | M6  | 8,00             | 108 | 3 | 0234001240100              | 1     | 0234701240100 | 1     |
| 16,50 | 3,20 | M8  | 10,00            | 111 | 3 | 0234001650100              | 1     | 0234701650100 | 1     |
| 20,50 | 3,50 | M10 | 10,00            | 114 | 3 | 0234002050100              | 1     | 0234702050100 | 1     |
| 25,00 | 3,80 | M12 | 10,00            | 118 | 3 | 0234002500100              | 1     | 0234702500100 | 1     |
| 31,00 | 4,20 | M16 | 12,00            | 140 | 3 | 0234003100100              | 1     | 0234703100100 | 1     |



## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

HSS Co5 Kegelsenker-Satz, 6-tlg.



6-tlg. / 6-pcs. / 6-unid.

Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0234000006100

HSS Co5 Kegelsenker-Satz, 6-tlg.



ALUNIT®



6-tlg. / 6-pcs. / 6-unid.

Kunststoffkassette / Plastic cassette / Caja de plástico  
Art.-Nr. 0234700006100

| Ø<br>mm                                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Ø<br>mm                                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------|-------------------------------------------|-----------------------------------------|-------------------------------------------|
| MAYKESTAG                               |                                           | MAYKESTAG                               |                                           |
| Ø 6,3 / 8,3 / 10,4 / 12,4 / 16,5 / 20,5 | 1                                         | Ø 6,3 / 8,3 / 10,4 / 12,4 / 16,5 / 20,5 | 1                                         |


 Gewinde-, Senk- und Schälwerkzeuge  
 Taps, dies, countersinks and conecut  
 herramientas para roscar, avellanar y escarpar
<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## ① HSS Cobalt Kegelsenker, DIN 335 C, 90°

### Einsatzbereich:

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften ohne "Rat-termarken", durch radialen Hinterschliff leicht nachschärfbar an der Spanfläche.



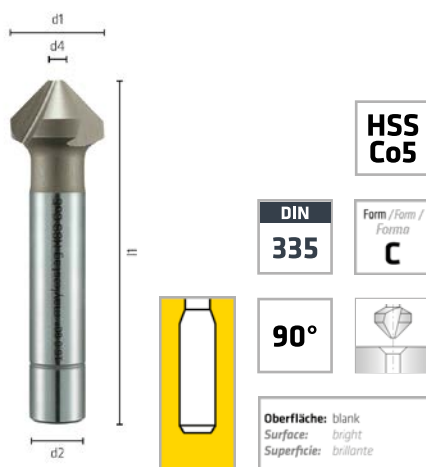
Hitzebeständig  
Heat resistant  
Termoestable



Präzise  
Precise  
Preciso



Industriequalität  
Industrial quality  
Calidad industrial



## ② HSS Cobalt countersinks, DIN 335 C, 90°

### Range of application:

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface without burrs; profile relief facilitates an easy regrind.

## ③ Avellanador cónico HSS Cobalto, DIN 335 C, 90°

### Ámbito de aplicación:

Para todos los metales E y NE y plásticos duros y blandos. Herramienta para desbarbar y avellanar de aplicación universal para agujeros de todo tipo. Excelentes características de corte sin "rayado transversal", fácil reaflado de la superficie de deslizamiento gracias al talón radial.



Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio



**ALUNIT®**  
Höhere Performance,  
längere Standzeit  
Higher performance,  
longer durability  
Rendimiento superior  
tiempo de uso más  
prolongado

Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio

|          |          |      |                        |          |   | blank / bright / brillante |               | ALUNIT®               |               |
|----------|----------|------|------------------------|----------|---|----------------------------|---------------|-----------------------|---------------|
| d1<br>mm | d4<br>mm |      | d2 <sub>90</sub><br>mm | l1<br>mm | Z | Code 2290<br>Art.-Nr.      | Inh.<br>Cont. | Code 2297<br>Art.-Nr. | Inh.<br>Cont. |
| 4,30     | 1,30     | M 2  | 4,00                   | 40       | 3 | 0229000430100              | 1             |                       |               |
| 5,00     | 1,50     |      | 4,00                   | 40       | 3 | 0229000500100              | 1             | 0229700500100         | 1             |
| 5,30     | 1,50     |      | 4,00                   | 40       | 3 | 0229000530100              | 1             |                       |               |
| 6,00     | 1,50     |      | 5,00                   | 45       | 3 | 0229000600100              | 1             | 0229700600100         | 1             |
| 6,30     | 1,50     | M 3  | 5,00                   | 45       | 3 | 0229000630100              | 1             | 0229700630100         | 1             |
| 8,00     | 2,00     |      | 6,00                   | 50       | 3 | 0229000800100              | 1             | 0229700800100         | 1             |
| 8,30     | 2,00     | M 4  | 6,00                   | 50       | 3 | 0229000830100              | 1             | 0229700830100         | 1             |
| 9,40     | 2,20     |      | 6,00                   | 50       | 3 | 0229000940100              | 1             |                       |               |
| 10,00    | 2,50     |      | 6,00                   | 50       | 3 | 0229001000100              | 1             | 0229701000100         | 1             |
| 10,40    | 2,50     | M 5  | 6,00                   | 50       | 3 | 0229001040100              | 1             | 0229701040100         | 1             |
| 11,50    | 2,80     |      | 8,00                   | 56       | 3 | 0229001150100              | 1             |                       |               |
| 12,40    | 2,80     | M 6  | 8,00                   | 56       | 3 | 0229001240100              | 1             | 0229701240100         | 1             |
| 13,40    | 2,90     |      | 8,00                   | 56       | 3 | 0229001340100              | 1             |                       |               |
| 15,00    | 3,20     |      | 10,00                  | 60       | 3 | 0229001500100              | 1             | 0229701500100         | 1             |
| 16,50    | 3,20     | M 8  | 10,00                  | 60       | 3 | 0229001650100              | 1             | 0229701650100         | 1             |
| 19,00    | 3,50     |      | 10,00                  | 63       | 3 | 0229001900100              | 1             | 0229701900100         | 1             |
| 20,50    | 3,50     | M 10 | 10,00                  | 63       | 3 | 0229002050100              | 1             | 0229702050100         | 1             |
| 23,00    | 3,80     |      | 10,00                  | 67       | 3 | 0229002300100              | 1             |                       |               |
| 25,00    | 3,80     | M 12 | 10,00                  | 67       | 3 | 0229002500100              | 1             | 0229702500100         | 1             |
| 31,00    | 4,20     |      | 12,00                  | 71       | 3 | 0229003100100              | 1             | 0229703100100         | 1             |

## D Kassetten, Sets

## E Cassettes, sets

## ES Cajas, juegos

| HSS Cobalt Kegelsenker-Satz KM 4                                                                                                                                    |                     | HSS Cobalt Kegelsenker-Satz KM 6                                                                                                                                    |                     | HSS Cobalt Kegelsenker-Satz KM 4                                                                                                                                        |                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|   |                     |   |                     |   |                     |
| 4-tlg. / 4-pcs. / 4-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0229000004100                                                              |                     | 6-tlg. / 6-pcs. / 6-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 02290000096100                                                             |                     | 4-tlg. / 4-pcs. / 4-unid.<br>Metallkassette / Metal cassette / Caja de metal<br>Art.-Nr. 0229700004100                                                                  |                     |
| Ø                                                                                                                                                                   | Stk. <sup>(1)</sup> | Ø                                                                                                                                                                   | Stk. <sup>(1)</sup> | Ø                                                                                                                                                                       | Stk. <sup>(1)</sup> |
| mm                                                                                                                                                                  | pc. <sup>(1)</sup>  | mm                                                                                                                                                                  | pc. <sup>(1)</sup>  | mm                                                                                                                                                                      | pc. <sup>(1)</sup>  |
| MAYKESTAG                                                                                                                                                           |                     | MAYKESTAG                                                                                                                                                           |                     | MAYKESTAG                                                                                                                                                               |                     |
| Ø 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                     | 1                   | Ø 6,30 / 8,30 / 10,40 / 12,40 / 16,50 / 20,50                                                                                                                       | 1                   | Ø 10,40 / 16,50 / 20,50 / 25,00                                                                                                                                         | 1                   |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**Beste Performance**

Dank des optimalen Hinterschliffs

**Best performance**

Due to the optimal relief

**El mejor rendimiento**

Gracias al talón óptimo

**Herausragende Ergebnisse**

Präzise Bohrleistungen sorgen für ein perfektes Senkbild

**Outstanding results**

Precise drilling performance ensures a perfect surface

**Resultados excelentes**

Las potencias de perforación precisas crean una imagen perforada perfecta

**Ruhiger Lauf**

Rattermarken werden vermieden

**Smooth running**

Avoiding chatter marks

**Funcionamiento tranquilo**

prevención de marcas por vibraciones



**D HSS Kegelsenker,  
ungleiche Teilung,  
DIN 335 C, 90°**
**Einsatzbereich:**

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften durch ungleichgeteilte Schneiden. Verringerung der Vorschubkraft und Ratterbildung an der Senkoberfläche durch reduzierte Axial- und Radialkraft.



Hitzebeständig  
Heat resistant  
Termoestable



Präzise  
Precise  
Preciso



Industriequalität  
Industrial quality  
Calidad industrial

**E HSS countersinks,  
different partition,  
DIN 335 C, 90°**
**Range of application:**

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface by unequally divided cutting edges. Reduction of feed force and chatter marks on the countersinking surface due to reduced axial and radial force.

**ES Avellanador cónico HSS,  
división irregular,  
DIN 335 C, 90°**
**Ámbito de aplicación:**

Para todos los metales E y NE y plásticos duros y blandos. Herramienta para desbarbar y avellanar de aplicación universal para agujeros de todo tipo. Excelentes características de corte, por corte desigual dividida. Reducción del avance y de vibración en la superficie avellanada gracias a las fuerzas axiales y radiales reducidas.



Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio

| d1<br>mm | d4<br>mm |  | d2 <sub>h9</sub><br>mm | l1<br>mm | Z | Code 2320<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|-------------------------------------------------------------------------------------|------------------------|----------|---|-----------------------|---------------|
| 6,30     | 1,50     | M 3                                                                                 | 5,00                   | 45       | 0 | 0232000630100         | 1             |
| 8,30     | 2,00     | M 4                                                                                 | 6,00                   | 50       | 0 | 0232000830100         | 1             |
| 10,40    | 2,50     | M 5                                                                                 | 6,00                   | 50       | 0 | 0232001040100         | 1             |
| 12,40    | 2,80     | M 6                                                                                 | 8,00                   | 56       | 0 | 0232001240100         | 1             |
| 16,50    | 3,20     | M 8                                                                                 | 10,00                  | 60       | 0 | 0232001650100         | 1             |
| 20,50    | 3,50     | M 10                                                                                | 10,00                  | 63       | 0 | 0232002050100         | 1             |
| 25,00    | 3,80     | M 12                                                                                | 10,00                  | 67       | 0 | 0232002500100         | 1             |
| 31,00    | 4,20     |                                                                                     | 12,00                  | 71       | 0 | 0232003100100         | 1             |

**Standard  
Kegelsenker**  
Standard  
countersink  
Avellanador  
cónico estándar

**mit ungleicher  
Teilung**  
with different  
partition  
con división  
irregular



**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

HSS Kegelsenker-Satz KP 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0232000003100

| Ø<br>mm                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------|-------------------------------------------|
| Sink Hero               |                                           |
| Ø 12,40 / 16,50 / 20,50 | 1                                         |

HSS Kegelsenker-Satz KM 6



6-tlg. / 6-pcs. / 6-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0232000006100

| Ø<br>mm                                       | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------|-------------------------------------------|
| Sink Hero                                     |                                           |
| Ø 6,30 / 8,30 / 10,40 / 12,40 / 16,50 / 20,50 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



## D HSS Kegelsenker, DIN 335 C, 90°

### Einsatzbereich:

Für alle E- und NE-Metalle, Kunststoffe hart und weich. Universell einsetzbares Entgrat- und Senkwerkzeug für Bohrungen aller Art. Sehr gute Schneideigenschaften ohne "Rat-termarken", durch radialen Hinterschliff leicht nachschärfbar an der Spanfläche.



Hitzebeständig  
Heat resistant  
Termoestable



Präzise  
Precise  
Preciso



Industriequalität  
Industrial quality  
Calidad industrial

## E HSS countersinks, DIN 335 C, 90°

### Range of application:

For ferrous and non-ferrous metals, synthetic materials soft and hard. Universal deburring and sink tool for all kind of borings. Excellent cutting features guarantee a smooth surface without burrs; profile relief facilitates an easy regrind.

## ES Avellanador cónico HSS, DIN 335 C, 90°

### Ámbito de aplicación:

Para todos los metales E y NE y plásticos duros y blandos. Herramienta para desbarbar y avellanar de aplicación universal para agujeros de todo tipo. Excelentes características de corte sin "rayado transversal", fácil reafilado de la superficie de deslizamiento gracias al talón radial.



Einzelverpackung mit Aufhänger  
Single pack with tag  
Embalaje individual con gancho para autoservicio

| d1<br>mm | d4<br>mm |      | d2 <sub>h9</sub><br>mm | l1<br>mm | Z | Code 2292<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|------|------------------------|----------|---|-----------------------|---------------|
| 6,30     | 1,50     | M 3  | 5,00                   | 45       | 3 | 0229200630100         | 1             |
| 8,30     | 2,00     | M 4  | 6,00                   | 50       | 3 | 0229200830100         | 1             |
| 10,40    | 2,50     | M 5  | 6,00                   | 50       | 3 | 0229201040100         | 1             |
| 12,40    | 2,80     | M 6  | 8,00                   | 56       | 3 | 0229201240100         | 1             |
| 16,50    | 3,20     | M 8  | 10,00                  | 60       | 3 | 0229201650100         | 1             |
| 20,50    | 3,50     | M 10 | 10,00                  | 63       | 3 | 0229202050100         | 1             |
| 25,00    | 3,80     | M 12 | 10,00                  | 67       | 3 | 0229202500100         | 1             |



**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

HSS Kegelsenker-Satz KM 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0229200003100

| Ø<br>mm                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------|-------------------------------------------|
| HSS Kegelsenker         |                                           |
| Ø 12,40 / 16,50 / 20,50 | 1                                         |

HSS Kegelsenker-Satz KM 6



6-tlg. / 6-pcs. / 6-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0229200096100

| Ø<br>mm                                       | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------|-------------------------------------------|
| HSS Kegelsenker                               |                                           |
| Ø 6,30 / 8,30 / 10,40 / 12,40 / 16,50 / 20,50 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

## D HSS Cobalt Entgradsenker mit Querlochbohrung

### Einsatzbereich:

Die günstige Schneidengeometrie ergibt einen leichten schälenden Schnitt. Die Späne werden in Schafrichtung abgeführt und können die Senkung nicht beschädigen. Zum leichten und ratterfreien Entgraden von Bohrungen. Besonders geeignet für weiche langspanende Werkstoffe.



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Präzise  
Precise  
Preciso

## E HSS Cobalt slotted countersink hole type

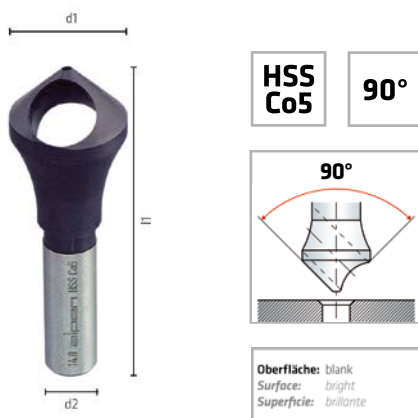
### Range of application:

Countersink and deburring tool with through hole which is ideal for long chip materials, such as aluminium and very effective on both hard and softwoods. Spoil is removed through centre of cutter to prevent damage to tool.

## ES Broca avellanadora para desbarbar HSS Cobalt con taladro para agujeros transversales

### Ámbito de aplicación:

La geometría de corte idónea facilita un corte escarpado. Las virutas se eliminan en la dirección del eje y no pueden causar daños en el avellanado. Para el desbarbado de agujeros fácil y sin vibraciones. Especialmente adecuada para materiales blandos de virutas largas.



Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio

| Größe<br>Size / Tamaño | d1<br>mm | d2<br>mm | Bereich / Range<br>Intervalo Ø mm | Code 2291<br>Art.-Nr. | Inh.<br>Cont. |
|------------------------|----------|----------|-----------------------------------|-----------------------|---------------|
| 1                      | 10,00    | 6        | 2-5                               | 0229101000100         | 1             |
| 2                      | 14,00    | 8        | 5-10                              | 0229101400100         | 1             |
| 3                      | 21,00    | 10       | 10-15                             | 0229102100100         | 1             |
| 4                      | 28,00    | 12       | 15-20                             | 0229102800100         | 1             |
| 5                      | 35,00    | 15       | 20-25                             | 0229103500100         | 1             |

### HSS Cobalt Querlochsensersatz BOX 3



3-tlg. / 3-pcs. / 3-unid.  
Kunststoffbox / Plastic box / Caja de plástico  
Art.-Nr. 0229100003100

| Ø<br>mm                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------|-------------------------------------------|
| HSS Cobalt              |                                           |
| Ø 10,00 / 14,00 / 21,00 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

**D HSS Kegelsenker 90° mit 1/4"-Sechskantschaft**

**Einsatzbereich:**

Zum Senken, Anfasen und Entgraten, für Metall- und Kunststoffbearbeitung. Zur direkten Verwendung in Elektro-Handbohrmaschinen, Elektro-Schraubern und Akku-Maschinen mit Sechskantaufnahme oder über magnetischen Universalhalter.



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Präzise  
Precise  
Preciso

**E HSS countersink 90° with 1/4" hexagonal shank**

**Range of application:**

Countersink and deburring tool suitable for either metal or synthetic materials. Manufactured with 1/4" hexagonal shank for direct use in standard chuck, cordless drills or through a magnetic bit holder.

**E3 Avellanador cónico HSS, 90° con eje hexagonal 1/4"**

**Ámbito de aplicación:**

Para el avellanado, el biselado y el desbarbado, para el procesamiento de metal y plástico. Para su uso directo en taladradoras manuales eléctricas, destornilladores eléctricos y máquinas a batería con toma hexagonal o mediante soporte universal magnético.



Drehpack mit Aufhänger

Twistpack with tag

Paquete giratorio con gancho para autoservicio

| d1<br>mm |      |      | l1<br>mm | Z | Code 720<br>Art.-Nr. | Inh.<br>Cont. |
|----------|------|------|----------|---|----------------------|---------------|
| 6,30     | M 3  | 1/4" | 31       | 3 | 0072000630100        | 1             |
| 8,30     | M 4  | 1/4" | 31       | 3 | 0072000830100        | 1             |
| 10,40    | M 5  | 1/4" | 34       | 3 | 0072001040100        | 1             |
| 12,40    | M 6  | 1/4" | 35       | 3 | 0072001240100        | 1             |
| 16,50    | M 8  | 1/4" | 40       | 3 | 0072001650100        | 1             |
| 20,50    | M 10 | 1/4" | 41       | 3 | 0072002050100        | 1             |

**HSS Senkerbitsatz BOX 3**



3-tlg. / 3-pcs. / 3-unid.

Kunststoffbox / Plastic box / Caja de plástico

Art.-Nr. 0072000003100

| Ø<br>mm                 | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------|-------------------------------------------|
| HSS                     |                                           |
| Ø 12,40 / 16,50 / 20,50 | 1                                         |

<sup>(1)</sup> Schaft nach DIN 3126, Form C6.3, ISO 1173

Shank DIN 3126, Form C6.3, ISO 1173

Eje según DIN 3126, forma C6.3, ISO 1173

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

**D Stufenbohrer**

**E Step drill**

**ES Broca progresiva**

**Einsatzbereich:**

Zum Bohren zylindrischer Löcher in Material bis 4 bzw. 6 mm Stärke. Bohren und Entgraten erfolgt in einem Arbeitsgang durch die schrägen Schneiden der nächstfolgenden Bohrstufe. Zur Vermeidung von Materialan-satz Bohrpaste (Code 721000021) verwenden.



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Präzise  
Precise  
Preciso

**Range of application:**

Multiple step and countersink tool for drilling and countersinking in one smooth operation. Suitable for materials with a maximum thickness of 4-6 mm, dependent on hardness. The use of cutting paste (Code 721000021) is recommended.

**Ámbito de aplicación:**

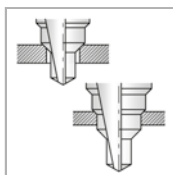
Para el taladrado de agujeros cilíndricos en materiales con un grosor de 4 mm a 6 mm. El taladrado y el desbarbado se realizan en una sola operación gracias a los filos oblicuos del siguiente nivel de broca. Debe utilizarse pasta para taladrar (código 721000021) para evitar las rebabas de material.



**HSS Co5 TiN**

**HSS Co5**

**HSS**



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio



Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio



**TiN**

Hohe Performance,  
lange Standzeit  
High performance,  
long durability  
Rendimiento elevado,  
duración prolongada

Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio

| Größe<br>Size / Tamaño                                 | d1 - d4<br>mm        | d2<br>mm | HSS                          |                       | HSS Co5              |               | HSS Co5 TiN          |               |
|--------------------------------------------------------|----------------------|----------|------------------------------|-----------------------|----------------------|---------------|----------------------|---------------|
|                                                        |                      |          | Code 722<br>Art.-Nr.         | Inh.<br>Cont.         | Code 726<br>Art.-Nr. | Inh.<br>Cont. | Code 728<br>Art.-Nr. | Inh.<br>Cont. |
| 1                                                      | 4,00-12,00           | 6        | 0072200412100                | 1                     | 0072600412100        | 1             |                      |               |
| 2                                                      | 4,00-20,00           | 8        | 0072201220100                | 1                     | 0072600620100        | 1             |                      |               |
| 3                                                      | 6,00-30,00           | 10       | 0072200630100                | 1                     | 0072600630100        | 1             | 0072800630100        | 1             |
| 4                                                      | 6,00-37,00 (PG 7-29) | 10       | 0072200729100                | 1                     | 0072600729100        | 1             | 0072800729100        | 1             |
| <b>Bohrpaste / Cutting paste / Pasta para taladrar</b> |                      |          |                              |                       |                      |               |                      |               |
| <b>Gewicht<br/>Weight / Peso</b>                       |                      |          | <b>Code 721<br/>Art.-Nr.</b> | <b>Inh.<br/>Cont.</b> |                      |               |                      |               |
| 18 g                                                   |                      |          | 00 721000021 00              | 1                     |                      |               |                      |               |

Oberfläche: blank/TiN Code 728 TiN-beschichtet  
Surface: bright/TiN Code 728 TiN-coated  
Superficie: brillante/TiN Code 728 Recubierto con TiN

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

HSS Stufenbohrer KM 3



3-tlg. / 3-pcs. / 3-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0072200003100

HSS Cobalt Stufenbohrer KM 3



3-tlg. / 3-pcs. / 3-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0072600003100

| Inhalt<br><i>Contents / Contenido</i>           | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Inhalt<br><i>Contents / Contenido</i>           | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-------------------------------------------------|-------------------------------------------|-------------------------------------------------|-------------------------------------------|
| Größe / Size / Tamaño:<br>12,00 / 20,00 / 30,00 | 1                                         | Größe / Size / Tamaño:<br>12,00 / 20,00 / 30,00 | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro



## D Blechschälbohrer

## E Conecut

## ES Broca cónica para chapa

### Einsatzbereich:

Zum Bohren größerer Löcher in dünnes Material oder zum Aufbohren bereits vorhandener Löcher. Zum grat- und rattermarkenfreien Bohren oder Aufbohren (ohne Vorbohren) in Nirostablechen und weichen Werkstoffen. Für Hand- oder Ständerbohrmaschinen geeignet.



Verschleissfest  
Wear-resistant  
Resistente al desgaste



Präzise  
Precise  
Preciso

### Range of application:

For drilling large-diameter holes in thin material or for expanding pre-cut holes. For drilling without burr or chatter marks and widening holes (without piloting) in non-rusting sheet and soft materials. Suitable for hand-held and upright drilling machines.

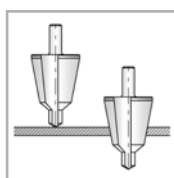
### Ámbito de aplicación:

Para taladrar agujeros grandes en material fino o ampliar agujeros ya existentes. Para taladrar o ampliar (sin taladrado previo) agujeros sin dejar rebabas ni marcas en chapas con acero inoxidable y materiales blandos. Adecuada para taladradoras manuales o con soporte.



**HSS Co5  
TiN**

**HSS Co5** **HSS**



Oberfläche: blank  
Surface: bright  
Superficie: brillante



Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio



Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio



**TiN**

Hohe Performance,  
lange Standzeit  
High performance,  
long durability  
Rendimiento elevado,  
duración prolongada

Drehpack mit Aufhänger  
Twistpack with tag  
Paquete giratorio con gancho para autoservicio

| Größe<br>Size / Tamaño                          | d1 - d4<br>mm | d2<br>mm | blank / bright / brillante |               | HSS Co5              |               | HSS Co5 TiN          |               |
|-------------------------------------------------|---------------|----------|----------------------------|---------------|----------------------|---------------|----------------------|---------------|
|                                                 |               |          | Code 721<br>Art.-Nr.       | Inh.<br>Cont. | Code 723<br>Art.-Nr. | Inh.<br>Cont. | Code 725<br>Art.-Nr. | Inh.<br>Cont. |
| 1                                               | 3,50 - 14,00  | 6        | 0072100314100              | 1             | 0072300314100        | 1             | 0072500314100        | 1             |
| 2                                               | 6,00 - 20,00  | 8        | 0072100820100              | 1             | 0072300620100        | 1             | 0072500620100        | 1             |
| 3                                               | 16,00 - 30,00 | 10       | 0072101630100              | 1             | 0072301630100        | 1             | 0072501630100        | 1             |
| 4                                               | 26,00 - 40,00 | 12       | 0072102640100              | 1             |                      |               |                      |               |
| 5                                               | 36,00 - 50,00 | 13       | 0072103650100              | 1             |                      |               |                      |               |
| 6                                               | 40,00 - 61,00 | 13       | 0072104061100              | 1             |                      |               |                      |               |
| L                                               | 6,00 - 30,00  | 10       | 0072100430100              | 1             |                      |               |                      |               |
| 2A                                              | 3,00 - 22,00  | 8        | 0072100522100              | 1             |                      |               |                      |               |
| 2A                                              | 5,00 - 25,00  | 8        | 007202500100               | 1             |                      |               |                      |               |
| Bohrpaste / Cutting paste / Pasta para taladrar |               |          |                            |               |                      |               |                      |               |
| Gewicht<br>Weight / Peso                        |               |          | Code 721<br>Art.-Nr.       | Inh.<br>Cont. |                      |               |                      |               |
| 18 g                                            |               |          | 00 721000021 00            | 1             |                      |               |                      |               |

Oberfläche: blank/TiN Code 728 TiN-beschichtet / Surface: bright/TiN Code 728 TiN-coated / Superficie: brillante/TiN Code 728 Recubierto con TiN  
Oberfläche: blank/TiN Code 725 TiN-beschichtet / Surface: bright/TiN Code 725 TiN-coated / Superficie: brillante/TiN Code 725 Recubierto con TiN

**D** Kassetten, Sets

**E** Cassettes, sets

**ES** Cajas, juegos

HSS Blechschälbohrer KM 3



3-tlg. / 3-pcs. / 3-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0072100003100

HSS Cobalt Blechschälbohrer KM 3



3-tlg. / 3-pcs. / 3-unid.  
Metallkassette / Metal cassette / Caja de metal  
Art.-Nr. 0072300003100

| Inhalt<br>Contents / Contenido                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> | Inhalt<br>Contents / Contenido                      | Stk. <sup>(1)</sup><br>pc. <sup>(1)</sup> |
|-----------------------------------------------------|-------------------------------------------|-----------------------------------------------------|-------------------------------------------|
| Größe / Size / Tamaño: 1 / 2 / 3<br>Ø 3,5 - 30,0 mm | 1                                         | Größe / Size / Tamaño: 1 / 2 / 3<br>Ø 3,5 - 30,0 mm | 1                                         |

<sup>(1)</sup> Stück je Abmessung / Pieces each dimension / Piezas por diámetro

# D Universal-Fräsböhrer

# E Drill file rasp

# ES Broca fresadora universal

## Einsatzbereich:

Zum Bohren und anschließendem Ausfräsen von Blech und dünnwandigem Material. Besonders bei Montagearbeiten gut geeignet, um mit diesem kleinen Böhrer größere Löcher und verschiedene Formen herzustellen.

## Range of application:

For drilling and cutting holes in sheet metal and similar thin materials. Ideal for large holes and irregular shapes, manufactured in TiN coated HSS.

## Ámbito de aplicación:

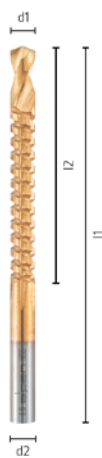
Para el taladrado y el fresado de chapas y material fi no. Especialmente adecuado en trabajos de montaje para hacer agujeros más grandes y diferentes formas con esta broca pequeña.



Verschleissfest  
Wear-resistant  
Resistente al desgaste

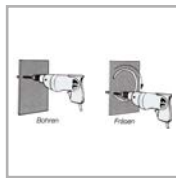


Präzise  
Precise  
Preciso



HSS  
TiN

118°



Oberfläche: TiN  
Surface: TiN  
Superficie: TiN



Einzelverpackung  
Single pack  
Embalaje individual

| d1<br>mm | l1<br>mm | l2<br>mm | Code 721<br>Art.-Nr. | Inh.<br>Cont. |
|----------|----------|----------|----------------------|---------------|
| 6,00     | 89       | 57       | 0072100001100        | 1             |
| 8,00     | 93       | 57       | 0072100011100        | 1             |

Oberfläche: blank/TiN Code 728 TiN-beschichtet / Surface: bright/TiN Code 728 TiN-coated / Superficie: brillante/TiN Code 728 Recubierto con TiN  
Oberfläche: blank/TiN Code 725 TiN-beschichtet / Surface: bright/TiN Code 725 TiN-coated / Superficie: brillante/TiN Code 725 Recubierto con TiN

Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conical  
herramientas para roscar, avellanar y escarpar

D Drehzahlen

E Spindle speeds

ES Velocidades

Die angegebenen Drehzahlempfehlungen beziehen sich auf Standardanwendungen.

n: Drehzahl U/min

The recommended spindle speeds refer to standard applications.

n: Spindle speed rpm

Las recomendaciones indicadas de las velocidades se refieren a aplicaciones estándar.

n: Velocidad r.p.m.

Maschinengewindebohrer / Machine taps / Macho para roscar a máquina



Code 704, 709, 714, 719

| Ø<br>mm                             |  |  |  |  |  |  |  |
|-------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                     | n                                                                                   | n                                                                                   | n                                                                                   | n                                                                                   | n                                                                                     | n                                                                                     | n                                                                                     |
| 3                                   | 1698                                                                                | 1698                                                                                | 1273                                                                                | 1061                                                                                | 1273                                                                                  | 1910                                                                                  | 1061                                                                                  |
| 4                                   | 1273                                                                                | 1273                                                                                | 955                                                                                 | 796                                                                                 | 955                                                                                   | 1432                                                                                  | 796                                                                                   |
| 5                                   | 1019                                                                                | 1019                                                                                | 764                                                                                 | 637                                                                                 | 764                                                                                   | 1146                                                                                  | 637                                                                                   |
| 6                                   | 849                                                                                 | 849                                                                                 | 637                                                                                 | 531                                                                                 | 637                                                                                   | 955                                                                                   | 531                                                                                   |
| 8                                   | 637                                                                                 | 637                                                                                 | 477                                                                                 | 398                                                                                 | 477                                                                                   | 716                                                                                   | 398                                                                                   |
| 10                                  | 509                                                                                 | 509                                                                                 | 382                                                                                 | 318                                                                                 | 382                                                                                   | 573                                                                                   | 318                                                                                   |
| 12                                  | 424                                                                                 | 424                                                                                 | 318                                                                                 | 265                                                                                 | 318                                                                                   | 477                                                                                   | 265                                                                                   |
| Kühlung<br>Coolant<br>Refrigeración | E/O                                                                                 | E/O                                                                                 | E/O                                                                                 | T                                                                                   | E/O                                                                                   | E/O                                                                                   | T/D                                                                                   |

E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido

# D Kernlochdurchmesser für Gewindebohren

# E Core hole diameters for tapping

# ES Diámetro de agujeros para machos para roscar

| M                                                                                 |         | MF                                                                                |         | G       |                                                                                   | UNC     |                                                                                        | UNF     |                                                                                          |         |
|-----------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------|---------|---------|-----------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------|---------|
|  | Ø<br>mm |  | P<br>mm | Ø<br>mm |  | Ø<br>mm |  P/1" | Ø<br>mm |  P/1" | Ø<br>mm |
| M 1                                                                               | 0,75    | MF 2                                                                              | x0,25   | 1,75    | G 1/16"                                                                           | 6,8     | Nr. 1 – 64                                                                             | 1,5     | Nr. 0 – 80                                                                               | 1,3     |
| M 1,1                                                                             | 0,85    | MF 2,2                                                                            | x0,25   | 1,95    | G 1/8"                                                                            | 8,8     | Nr. 2 – 56                                                                             | 1,8     | Nr. 1 – 72                                                                               | 1,6     |
| M 1,2                                                                             | 0,95    | MF 2,3                                                                            | x0,25   | 2,05    | G 1/4"                                                                            | 11,8    | Nr. 3 – 48                                                                             | 2,1     | Nr. 2 – 64                                                                               | 1,9     |
| M 1,4                                                                             | 1,1     | MF 2,5                                                                            | x0,35   | 2,15    | G 3/8"                                                                            | 15,25   | Nr. 4 – 40                                                                             | 2,3     | Nr. 3 – 56                                                                               | 2,1     |
| M 1,6                                                                             | 1,25    | MF 2,6                                                                            | x0,35   | 2,25    | G 1/2"                                                                            | 19,0    | Nr. 5 – 40                                                                             | 2,6     | Nr. 4 – 48                                                                               | 2,4     |
| M 1,7                                                                             | 1,3     | MF 3                                                                              | x0,35   | 2,65    | G 5/8"                                                                            | 21,0    | Nr. 6 – 32                                                                             | 2,8     | Nr. 5 – 44                                                                               | 2,7     |
| M 1,8                                                                             | 1,45    | MF 3,5                                                                            | x0,35   | 3,15    | G 3/4"                                                                            | 24,5    | Nr. 8 – 32                                                                             | 3,5     | Nr. 6 – 40                                                                               | 3,0     |
| M 2                                                                               | 1,6     | MF 4                                                                              | x0,35   | 3,65    | G 7/8"                                                                            | 28,25   | Nr. 10 – 24                                                                            | 3,9     | Nr. 8 – 36                                                                               | 3,5     |
| M 2,2                                                                             | 1,75    | MF 4                                                                              | x0,5    | 3,5     | G 1"                                                                              | 30,75   | Nr. 12 – 24                                                                            | 4,5     | Nr. 10 – 32                                                                              | 4,1     |
| M 2,3                                                                             | 1,9     | MF 5                                                                              | x0,5    | 4,5     | G 1 1/8"                                                                          | 35,5    | 1/4" – 20                                                                              | 5,2     | Nr. 12 – 28                                                                              | 4,7     |
| M 2,5                                                                             | 2,05    | MF 6                                                                              | x0,5    | 5,5     | G 1 1/4"                                                                          | 39,5    | 5/16" – 18                                                                             | 6,6     | 1/4" – 28                                                                                | 5,5     |
| M 2,6                                                                             | 2,1     | MF 6                                                                              | x0,75   | 5,2     | G 1 3/8"                                                                          | 42,0    | 3/8" – 16                                                                              | 8,0     | 5/16" – 24                                                                               | 6,9     |
| M 3                                                                               | 2,5     | MF 7                                                                              | x0,75   | 6,2     | G 1 1/2"                                                                          | 45,0    | 7/16" – 14                                                                             | 9,4     | 3/8" – 24                                                                                | 8,5     |
| M 3,5                                                                             | 2,9     | MF 8                                                                              | x0,5    | 7,5     | G 1 3/4"                                                                          | 51,0    | 1/2" – 13                                                                              | 10,75   | 7/16" – 20                                                                               | 9,9     |
| M 4                                                                               | 3,3     | MF 8                                                                              | x0,75   | 7,2     | G 2"                                                                              | 57,0    | 9/16" – 12                                                                             | 12,25   | 1/2" – 20                                                                                | 11,5    |
| M 4,5                                                                             | 3,7     | MF 8                                                                              | x1      | 7,0     |                                                                                   |         | 5/8" – 11                                                                              | 13,5    | 9/16" – 18                                                                               | 12,9    |
| M 5                                                                               | 4,2     | MF 9                                                                              | x1      | 8,0     | BSW                                                                               |         | 3/4" – 10                                                                              | 16,5    | 5/8" – 18                                                                                | 14,5    |
| M 6                                                                               | 5,0     | MF 10                                                                             | x0,75   | 9,2     |                                                                                   |         | 7/8" – 9                                                                               | 19,5    | 3/4" – 16                                                                                | 17,5    |
| M 7                                                                               | 6,0     | MF 10                                                                             | x1      | 9,0     |  | Ø<br>mm | 1" – 8                                                                                 | 22,25   | 7/8" – 14                                                                                | 20,5    |
| M 8                                                                               | 6,8     | MF 10                                                                             | x1,25   | 8,8     |                                                                                   |         | 1 1/8" – 7                                                                             | 25,0    | 1" – 12                                                                                  | 23,25   |
| M 9                                                                               | 7,8     | MF 11                                                                             | x1      | 10,0    | W 1/16"                                                                           | 1,2     | 1 1/4" – 7                                                                             | 28,0    | 1 1/8" – 12                                                                              | 26,5    |
| M 10                                                                              | 8,5     | MF 12                                                                             | x1      | 11,0    | W 3/32"                                                                           | 1,9     | 1 3/8" – 6                                                                             | 30,75   | 1 1/4" – 12                                                                              | 29,5    |
| M 11                                                                              | 9,5     | MF 12                                                                             | x1,25   | 10,8    | W 1/8"                                                                            | 2,5     | 1 1/2" – 6                                                                             | 34,0    | 1 3/8" – 12                                                                              | 32,75   |
| M 12                                                                              | 10,2    | MF 12                                                                             | x1,5    | 10,5    | W 5/32"                                                                           | 3,2     | 1 3/8" – 5                                                                             | 39,5    | 1 1/2" – 12                                                                              | 36,0    |
| M 14                                                                              | 12,0    | MF 14                                                                             | x1      | 13,0    | W 3/16"                                                                           | 3,6     | 2" – 4 1/2                                                                             | 45,0    |                                                                                          |         |
| M 16                                                                              | 14,0    | MF 14                                                                             | x1,25   | 12,8    | W 7/32"                                                                           | 4,5     |                                                                                        |         |                                                                                          |         |
| M 18                                                                              | 15,5    | MF 14                                                                             | x1,5    | 12,5    | W 1/4"                                                                            | 5,1     |                                                                                        |         |                                                                                          |         |
| M 20                                                                              | 17,5    | MF 15                                                                             | x1      | 14,0    | W 5/16"                                                                           | 6,5     |                                                                                        |         |                                                                                          |         |
| M 22                                                                              | 19,5    | MF 15                                                                             | x1,5    | 13,5    | W 3/8"                                                                            | 7,9     |                                                                                        |         |                                                                                          |         |
| M 24                                                                              | 21,0    | MF 16                                                                             | x1      | 15,0    | W 7/16"                                                                           | 9,2     |                                                                                        |         |                                                                                          |         |
| M 27                                                                              | 24,0    | MF 16                                                                             | x1,5    | 14,5    | W 1/2"                                                                            | 10,5    |                                                                                        |         |                                                                                          |         |
| M 30                                                                              | 26,5    | MF 18                                                                             | x1      | 17,0    | W 9/16"                                                                           | 12,0    |                                                                                        |         |                                                                                          |         |
| M 33                                                                              | 29,5    | MF 18                                                                             | x1,5    | 16,5    | W 5/8"                                                                            | 13,25   |     | Ø<br>mm |     | Ø<br>mm |
| M 36                                                                              | 32,0    | MF 18                                                                             | x2      | 16,0    | W 3/4"                                                                            | 16,25   |                                                                                        |         |                                                                                          |         |
| M 39                                                                              | 35,0    | MF 20                                                                             | x1      | 19,0    | W 7/8"                                                                            | 19,25   | 1/16"                                                                                  | 6,3     | PG 7                                                                                     | 11,4    |
| M 42                                                                              | 37,5    | MF 20                                                                             | x1,5    | 18,5    | W 1"                                                                              | 22,0    | 1/8"                                                                                   | 8,5     | PG 9                                                                                     | 14,0    |
| M 45                                                                              | 40,5    | MF 20                                                                             | x2      | 18,0    | W 1 1/8"                                                                          | 24,75   | 1/4"                                                                                   | 11,1    | PG 11                                                                                    | 17,25   |
| M 48                                                                              | 43,0    | MF 22                                                                             | x1      | 21,0    | W 1 1/4"                                                                          | 28,0    | 3/8"                                                                                   | 14,5    | PG 13,5                                                                                  | 19,0    |
| M 52                                                                              | 47,0    | MF 22                                                                             | x1,5    | 20,5    | W 1 3/8"                                                                          | 30,5    | 1/2"                                                                                   | 17,75   | PG 16                                                                                    | 21,25   |
| M 56                                                                              | 50,5    | MF 22                                                                             | x2      | 20,0    | W 1 1/2"                                                                          | 33,5    | 3/4"                                                                                   | 23,0    | PG 21                                                                                    | 27,0    |
| M 60                                                                              | 54,5    | MF 24                                                                             | x1      | 23,0    | W 1 5/8"                                                                          | 35,5    | 1"                                                                                     | 29,0    | PG 29                                                                                    | 35,5    |
| M 64                                                                              | 58,0    | MF 24                                                                             | x1,5    | 22,5    | W 1 3/4"                                                                          | 39,0    | 1 1/4"                                                                                 | 38,0    | PG 36                                                                                    | 45,5    |
| M 68                                                                              | 62,0    | MF 24                                                                             | x2      | 22,0    | W 2"                                                                              | 44,5    | 1 1/2"                                                                                 | 44,0    | PG 42                                                                                    | 52,5    |
|                                                                                   |         | MF 25                                                                             | x1,5    | 23,5    |                                                                                   |         | 2"                                                                                     | 56,0    | PG 48                                                                                    | 58,0    |
|                                                                                   |         | MF 26                                                                             | x1,5    | 24,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 27                                                                             | x1,5    | 25,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 27                                                                             | x2      | 25,0    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 28                                                                             | x1,5    | 26,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 30                                                                             | x1      | 29,0    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 30                                                                             | x1,5    | 28,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 30                                                                             | x2      | 28,0    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 32                                                                             | x1,5    | 30,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 33                                                                             | x1,5    | 31,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 33                                                                             | x2      | 31,0    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 34                                                                             | x1,5    | 32,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
|                                                                                   |         | MF 35                                                                             | x1,5    | 33,5    |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 36                                                                             | x1,5    | 34,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 36                                                                             | x2      | 34,0                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 36                                                                             | x3      | 33,0                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 38                                                                             | x1,5    | 36,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 40                                                                             | x1,5    | 38,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 42                                                                             | x1,5    | 40,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 45                                                                             | x1,5    | 43,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 48                                                                             | x1,5    | 46,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 50                                                                             | x1,5    | 48,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |
| MF 52                                                                             | x1,5    | 50,5                                                                              |         |         |                                                                                   |         |                                                                                        |         |                                                                                          |         |

**M:** Metrisches ISO-Gewinde DIN 13  
Metric ISO-thread DIN 13  
Rosca métrica ISO, DIN 13

**MF:** Metrisches ISO-Feingewinde DIN 13  
Metric ISO fine thread DIN 13  
Rosca fina métrica ISO, DIN 13

**BSW:** Whitworth-Gewinde BSW, DIN 11  
Whitworth thread BSW, DIN 11  
Rosca Whitworth BSW, DIN 11

**UNC:** Unified Grobgewinde UNC ANSI B 1.1  
Unified coarse thread UNC ANSI B 1.1  
Rosca gruesa unificada UNC ANSI 1.1

**UNF:** Unified Feingewinde UNF ANSI B 1.1  
Unified fine thread UNF ANSI B 1.1  
Rosca fina unificada UNF ANSI B 1.1

**G:** Whitworth-Rohrgewinde DIN ISO 228  
Whitworth pipe thread DIN ISO 228  
Rosca para tubos Whitworth DIN ISO 228

 Nenndurchmesser  
Nominal diameter  
Diámetro nominal

**P:** Steigung  
Pitch  
Paso

**Ø:** Kernlochdurchmesser  
Core hole diameter  
Diámetro de agujeros para machos para roscar

## D Drehzahlen und Vorschübe

Die angegebenen Schnittwertempfehlungen beziehen sich auf Standardanwendungen.

## E Spindle speeds and feeds

The recommended cutting data refer to standard applications.

## ES Velocidades y avances

Las recomendaciones indicadas de los valores de corte se refieren a aplicaciones estándar.

n: Drehzahl  
f: Vorschub

U/min  
mm/U

n: Spindle speed  
f: Feed

rpm  
mm/rev

n: Velocidad  
f: Avance

r.p.m.  
mm/giro

### HSS und HSS Co5 Kegelsenker und Entgratsenker / HSS and HSS Co5 Countersinks and slotted countersink / Avellanador cónico y broca avellanadora para desbarbar HSS e HSS Co5



#### Code 720, 2270, 2290, 2291, 2292, 2297, 2320, 2340, 2347, 2380, 2387, 2390, 2397

| Ø<br>mm                             | <br>< 400 N/mm² |      | <br>< 850 N/mm² |      | <br>< 1100 N/mm² |      | <br>< 1300 N/mm² |      |  |      | <br>Ti |      | <br>GRAUGUSS<br>CAST IRON<br>GISHA GRIGIA |      | <br>Cu<br>Ms<br>Ni<br>Zn |      | <br>Alu |      |  |      |
|-------------------------------------|----------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|------|
|                                     | n                                                                                                  | f    | n                                                                                                  | f    | n                                                                                                   | f    | n                                                                                                   | f    | n                                                                                   | f    | n                                                                                         | f    | n                                                                                                                              | f    | n                                                                                                             | f    | n                                                                                            | f    | n                                                                                     | f    |
| 4,3                                 | 1925                                                                                               | 0,06 | 1629                                                                                               | 0,04 | 1629                                                                                                | 0,04 | 592                                                                                                 | 0,03 | 518                                                                                 | 0,04 | 518                                                                                       | 0,04 | 888                                                                                                                            | 0,06 | 2443                                                                                                          | 0,08 | 2443                                                                                         | 0,08 | 2221                                                                                  | 0,10 |
| 5,0                                 | 1655                                                                                               | 0,07 | 1401                                                                                               | 0,05 | 1401                                                                                                | 0,05 | 509                                                                                                 | 0,04 | 446                                                                                 | 0,05 | 446                                                                                       | 0,05 | 764                                                                                                                            | 0,07 | 2101                                                                                                          | 0,09 | 2101                                                                                         | 0,09 | 1910                                                                                  | 0,11 |
| 5,3                                 | 1562                                                                                               | 0,07 | 1321                                                                                               | 0,05 | 1321                                                                                                | 0,05 | 480                                                                                                 | 0,04 | 420                                                                                 | 0,05 | 420                                                                                       | 0,05 | 721                                                                                                                            | 0,07 | 1982                                                                                                          | 0,09 | 1982                                                                                         | 0,09 | 1802                                                                                  | 0,11 |
| 6,0                                 | 1379                                                                                               | 0,08 | 1167                                                                                               | 0,06 | 1167                                                                                                | 0,06 | 424                                                                                                 | 0,04 | 371                                                                                 | 0,05 | 371                                                                                       | 0,05 | 637                                                                                                                            | 0,07 | 1751                                                                                                          | 0,10 | 1751                                                                                         | 0,10 | 1592                                                                                  | 0,12 |
| 6,3                                 | 1314                                                                                               | 0,08 | 1112                                                                                               | 0,06 | 1112                                                                                                | 0,06 | 404                                                                                                 | 0,04 | 354                                                                                 | 0,05 | 354                                                                                       | 0,05 | 606                                                                                                                            | 0,07 | 1667                                                                                                          | 0,10 | 1667                                                                                         | 0,10 | 1516                                                                                  | 0,12 |
| 8,0                                 | 1035                                                                                               | 0,09 | 875                                                                                                | 0,07 | 875                                                                                                 | 0,07 | 318                                                                                                 | 0,05 | 279                                                                                 | 0,06 | 279                                                                                       | 0,06 | 477                                                                                                                            | 0,08 | 1313                                                                                                          | 0,11 | 1313                                                                                         | 0,11 | 1194                                                                                  | 0,13 |
| 8,3                                 | 997                                                                                                | 0,09 | 844                                                                                                | 0,07 | 844                                                                                                 | 0,07 | 307                                                                                                 | 0,05 | 268                                                                                 | 0,06 | 268                                                                                       | 0,06 | 460                                                                                                                            | 0,08 | 1266                                                                                                          | 0,11 | 1266                                                                                         | 0,11 | 1151                                                                                  | 0,13 |
| 9,4                                 | 880                                                                                                | 0,10 | 745                                                                                                | 0,08 | 745                                                                                                 | 0,08 | 271                                                                                                 | 0,05 | 237                                                                                 | 0,06 | 237                                                                                       | 0,06 | 406                                                                                                                            | 0,08 | 1117                                                                                                          | 0,12 | 1117                                                                                         | 0,12 | 1016                                                                                  | 0,14 |
| 10,0                                | 828                                                                                                | 0,10 | 700                                                                                                | 0,08 | 700                                                                                                 | 0,08 | 255                                                                                                 | 0,05 | 223                                                                                 | 0,06 | 223                                                                                       | 0,06 | 382                                                                                                                            | 0,08 | 1050                                                                                                          | 0,12 | 1050                                                                                         | 0,12 | 955                                                                                   | 0,14 |
| 10,4                                | 796                                                                                                | 0,10 | 673                                                                                                | 0,08 | 673                                                                                                 | 0,08 | 245                                                                                                 | 0,05 | 214                                                                                 | 0,06 | 214                                                                                       | 0,06 | 367                                                                                                                            | 0,08 | 1010                                                                                                          | 0,12 | 1010                                                                                         | 0,12 | 918                                                                                   | 0,14 |
| 11,5                                | 720                                                                                                | 0,11 | 609                                                                                                | 0,09 | 609                                                                                                 | 0,09 | 221                                                                                                 | 0,06 | 194                                                                                 | 0,06 | 194                                                                                       | 0,06 | 332                                                                                                                            | 0,09 | 913                                                                                                           | 0,13 | 913                                                                                          | 0,13 | 830                                                                                   | 0,15 |
| 12,4                                | 667                                                                                                | 0,11 | 565                                                                                                | 0,09 | 565                                                                                                 | 0,09 | 205                                                                                                 | 0,06 | 180                                                                                 | 0,06 | 180                                                                                       | 0,06 | 308                                                                                                                            | 0,10 | 847                                                                                                           | 0,13 | 847                                                                                          | 0,13 | 770                                                                                   | 0,16 |
| 13,4                                | 618                                                                                                | 0,11 | 523                                                                                                | 0,09 | 523                                                                                                 | 0,09 | 190                                                                                                 | 0,07 | 166                                                                                 | 0,07 | 166                                                                                       | 0,07 | 285                                                                                                                            | 0,10 | 784                                                                                                           | 0,13 | 784                                                                                          | 0,13 | 713                                                                                   | 0,16 |
| 15,0                                | 552                                                                                                | 0,12 | 467                                                                                                | 0,10 | 467                                                                                                 | 0,10 | 170                                                                                                 | 0,08 | 149                                                                                 | 0,07 | 149                                                                                       | 0,07 | 255                                                                                                                            | 0,11 | 700                                                                                                           | 0,14 | 700                                                                                          | 0,14 | 637                                                                                   | 0,17 |
| 16,5                                | 502                                                                                                | 0,12 | 424                                                                                                | 0,10 | 424                                                                                                 | 0,10 | 154                                                                                                 | 0,08 | 135                                                                                 | 0,07 | 135                                                                                       | 0,07 | 231                                                                                                                            | 0,12 | 637                                                                                                           | 0,14 | 637                                                                                          | 0,14 | 579                                                                                   | 0,18 |
| 19,0                                | 436                                                                                                | 0,14 | 369                                                                                                | 0,12 | 369                                                                                                 | 0,12 | 134                                                                                                 | 0,09 | 117                                                                                 | 0,08 | 117                                                                                       | 0,08 | 201                                                                                                                            | 0,15 | 553                                                                                                           | 0,17 | 553                                                                                          | 0,17 | 503                                                                                   | 0,20 |
| 20,5                                | 404                                                                                                | 0,14 | 342                                                                                                | 0,12 | 342                                                                                                 | 0,12 | 124                                                                                                 | 0,09 | 109                                                                                 | 0,08 | 109                                                                                       | 0,08 | 186                                                                                                                            | 0,16 | 512                                                                                                           | 0,18 | 512                                                                                          | 0,18 | 466                                                                                   | 0,20 |
| 23,0                                | 360                                                                                                | 0,16 | 304                                                                                                | 0,13 | 304                                                                                                 | 0,13 | 111                                                                                                 | 0,10 | 97                                                                                  | 0,09 | 97                                                                                        | 0,09 | 166                                                                                                                            | 0,18 | 457                                                                                                           | 0,20 | 457                                                                                          | 0,20 | 415                                                                                   | 0,22 |
| 25,0                                | 331                                                                                                | 0,18 | 280                                                                                                | 0,14 | 280                                                                                                 | 0,14 | 102                                                                                                 | 0,10 | 89                                                                                  | 0,09 | 89                                                                                        | 0,09 | 153                                                                                                                            | 0,20 | 420                                                                                                           | 0,22 | 420                                                                                          | 0,22 | 382                                                                                   | 0,24 |
| 31,0                                | 267                                                                                                | 0,20 | 226                                                                                                | 0,16 | 226                                                                                                 | 0,16 | 82                                                                                                  | 0,11 | 72                                                                                  | 0,10 | 72                                                                                        | 0,10 | 123                                                                                                                            | 0,22 | 339                                                                                                           | 0,24 | 339                                                                                          | 0,24 | 308                                                                                   | 0,27 |
| Kühlung<br>Coolant<br>Refrigeración | E                                                                                                  |      | E                                                                                                  |      | E                                                                                                   |      | E                                                                                                   |      | O                                                                                   |      | T/E                                                                                       |      | O                                                                                                                              |      | E/O                                                                                                           |      | E                                                                                            |      | T                                                                                     |      |

E: Emulsion | Emulsion | emulsión, O: Öl | Oil | aceite, T: trocken | dry | seco, D: Druckluft | compressed air | aire comprimido, W: Wasser | Water | agua, A: Luft | Air | Aire





## D Drehzahlen

## E Spindle speeds

## ES Velocidades

Die angegebenen Drehzahlempfehlungen beziehen sich auf Standardanwendungen. Bohren ins Volle möglich. Wir empfehlen mit Ø 4,0 bzw. Ø 6,0 mm vorzubohren.

n: Drehzahl U/min

The recommended spindle speeds refer to standard applications. Drilling into the whole material possible. We would recommend to pre-drill with Ø 4,0 or Ø 6,0 mm.

n: Spindle speed rpm

Las recomendaciones indicadas de las velocidades se refieren a aplicaciones estándar. Recomendamos pretaladrar con Ø 4,0 o 6,0 mm.

n: Velocidad r.p.m.

HSS und HSS Co5 Stufenbohrer und Bleeschälbohrer / HSS and HSS Co5 step drill and conecut /  
Brocas progresivas y brocas cónicas para chapa HSS e HSS Co5



Code 721, 722, 723, 725, 726, 728

| Ø<br>mm                             |  |  |  |  |  |  |  |  |
|-------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                     | n                                                                                   | n                                                                                   | n                                                                                   | n                                                                                   | n                                                                                   | n                                                                                     | n                                                                                     | n                                                                                     |
| 4,0                                 | 1989                                                                                | 1592                                                                                | 1194                                                                                | 796                                                                                 | 4377                                                                                | 2387                                                                                  | 2387                                                                                  | 1194                                                                                  |
| 5,0                                 | 1592                                                                                | 1273                                                                                | 955                                                                                 | 637                                                                                 | 3501                                                                                | 1910                                                                                  | 1910                                                                                  | 955                                                                                   |
| 6,0                                 | 1326                                                                                | 1061                                                                                | 796                                                                                 | 531                                                                                 | 2918                                                                                | 1592                                                                                  | 1592                                                                                  | 796                                                                                   |
| 7,0                                 | 1137                                                                                | 909                                                                                 | 682                                                                                 | 455                                                                                 | 2501                                                                                | 1364                                                                                  | 1364                                                                                  | 682                                                                                   |
| 8,0                                 | 995                                                                                 | 796                                                                                 | 597                                                                                 | 398                                                                                 | 2188                                                                                | 1194                                                                                  | 1194                                                                                  | 597                                                                                   |
| 9,0                                 | 884                                                                                 | 707                                                                                 | 531                                                                                 | 354                                                                                 | 1945                                                                                | 1061                                                                                  | 1061                                                                                  | 531                                                                                   |
| 10,0                                | 796                                                                                 | 637                                                                                 | 477                                                                                 | 318                                                                                 | 1751                                                                                | 955                                                                                   | 955                                                                                   | 477                                                                                   |
| 11,0                                | 723                                                                                 | 579                                                                                 | 434                                                                                 | 289                                                                                 | 1592                                                                                | 868                                                                                   | 868                                                                                   | 434                                                                                   |
| 12,0                                | 663                                                                                 | 531                                                                                 | 398                                                                                 | 265                                                                                 | 1459                                                                                | 796                                                                                   | 796                                                                                   | 398                                                                                   |
| 12,5                                | 637                                                                                 | 509                                                                                 | 382                                                                                 | 255                                                                                 | 1401                                                                                | 764                                                                                   | 764                                                                                   | 382                                                                                   |
| 14,0                                | 568                                                                                 | 455                                                                                 | 341                                                                                 | 227                                                                                 | 1251                                                                                | 682                                                                                   | 682                                                                                   | 341                                                                                   |
| 15,2                                | 524                                                                                 | 419                                                                                 | 314                                                                                 | 209                                                                                 | 1152                                                                                | 628                                                                                   | 628                                                                                   | 314                                                                                   |
| 16,0                                | 497                                                                                 | 398                                                                                 | 298                                                                                 | 199                                                                                 | 1094                                                                                | 597                                                                                   | 597                                                                                   | 298                                                                                   |
| 18,0                                | 442                                                                                 | 354                                                                                 | 265                                                                                 | 177                                                                                 | 973                                                                                 | 531                                                                                   | 531                                                                                   | 265                                                                                   |
| 18,6                                | 428                                                                                 | 342                                                                                 | 257                                                                                 | 171                                                                                 | 941                                                                                 | 513                                                                                   | 513                                                                                   | 257                                                                                   |
| 20,0                                | 398                                                                                 | 318                                                                                 | 239                                                                                 | 159                                                                                 | 875                                                                                 | 477                                                                                   | 477                                                                                   | 239                                                                                   |
| 20,4                                | 390                                                                                 | 312                                                                                 | 234                                                                                 | 156                                                                                 | 858                                                                                 | 468                                                                                   | 468                                                                                   | 234                                                                                   |
| 22,0                                | 362                                                                                 | 289                                                                                 | 217                                                                                 | 145                                                                                 | 796                                                                                 | 434                                                                                   | 434                                                                                   | 217                                                                                   |
| 24,0                                | 332                                                                                 | 265                                                                                 | 199                                                                                 | 133                                                                                 | 729                                                                                 | 398                                                                                   | 398                                                                                   | 199                                                                                   |
| 26,0                                | 306                                                                                 | 245                                                                                 | 184                                                                                 | 122                                                                                 | 673                                                                                 | 367                                                                                   | 367                                                                                   | 184                                                                                   |
| 28,0                                | 284                                                                                 | 227                                                                                 | 171                                                                                 | 114                                                                                 | 625                                                                                 | 341                                                                                   | 341                                                                                   | 171                                                                                   |
| 30,0                                | 265                                                                                 | 212                                                                                 | 159                                                                                 | 106                                                                                 | 584                                                                                 | 318                                                                                   | 318                                                                                   | 159                                                                                   |
| 34,0                                | 234                                                                                 | 187                                                                                 | 140                                                                                 | 94                                                                                  | 515                                                                                 | 281                                                                                   | 281                                                                                   | 140                                                                                   |
| 37,0                                | 215                                                                                 | 172                                                                                 | 129                                                                                 | 86                                                                                  | 473                                                                                 | 258                                                                                   | 258                                                                                   | 129                                                                                   |
| Kühlung<br>Coolant<br>Refrigeración | Bohrpaste<br>Cutting paste<br>Pasta para taladrar                                   | Bohrpaste<br>Cutting paste<br>Pasta para taladrar                                   | Bohrpaste<br>Cutting paste<br>Pasta para taladrar                                   | Bohrpaste<br>Cutting paste<br>Pasta para taladrar                                   | Druckluft<br>compressed air<br>aire comprimido                                      | Druckluft<br>compressed air<br>aire comprimido                                        | Bohrpaste<br>Cutting paste<br>Pasta para taladrar                                     | Wasser/trocken<br>Water/dry<br>Agua/seco                                              |

1) kurzspanend / short chipping / de viruta corta 2) langspanend / long chipping / de viruta larga

Gewinde-, Senk- und Schälwerkzeuge  
Taps, dies, countersinks and conecut  
herramientas para roscar, avellanar y escarpar

## D Verkaufs- und Lieferbedingungen

### 1. Angebot, Auftrag, Preis

1.1 Die nachstehenden Verkaufs- und Lieferbedingungen gelten für alle mit uns abgeschlossenen Verträge. Anderslautende Bedingungen sind für uns nur dann bindend, wenn sie von uns schriftlich anerkannt werden. Das gilt auch für den Fall, dass ein Besteller auf seine eigenen Einkaufsbedingungen verweist. Mündliche Vereinbarungen, die für uns eine zusätzliche Verpflichtung beinhalten, sind nur dann bindend, wenn sie von uns schriftlich bestätigt werden.

1.2. Unsere Preise sind freibleibend. Die in der Preisliste angegebenen Maße entsprechen den jeweils gültigen Normen und werden bei Änderung der Normmaße entsprechend abgeändert.

1.3. Unsere Preise verstehen sich ohne die gesetzliche Mehrwertsteuer ab Werk. Verpackung, Fracht und Transportversicherungskosten gehen zu Lasten des Bestellers.

1.4. Bei einer auf elektronischem Wege bestellten Ware werden wir den Zugang der Bestellung des Kunden unverzüglich bestätigen. Die Zugangsbestätigung stellt noch keine verbindliche Annahmeerklärung der Bestellung dar; außer wenn wir dies ausdrücklich erklären. Bei auf elektronischem Wege bestellter Ware sind wir berechtigt, die Bestellung innerhalb von drei Werktagen nach Eingang bei uns anzunehmen.

### 2. Zahlungsziel, Zahlungsbedingungen, Rücktritt

2.1. Unsere Bedingungen sind 30 Tage ab Rechnungsdatum netto ohne Abzug zur Zahlung fällig. Der Kaufpreis ist sofort fällig, wenn der Besteller uns gegenüber mit anderen Zahlungsverpflichtungen in Zahlungsverzug gerät. Bei Überschreitung der Zahlungsfrist werden unter Vorbehalt der Geltendmachung eines weiteren Verzugs Schadens 12% Verzugszinsen ab Verfalltag bis zum Zahlungstag in Rechnung gestellt.

2.2. Der Besteller hat ein Recht zur Aufrechnung nur, wenn seine Ansprüche rechtskräftig festgestellt wurden oder durch uns anerkannt wurden.

2.3. Bleibt der Besteller mit der Zahlung länger als 30 Tage im Rückstand, werden bei ihm Pfändungen durchgeführt oder verschlechtert sich seine Vermögenslage beträchtlich, sind wir berechtigt, von allen noch nicht erfüllten Lieferverträgen zurückzutreten oder Vorauszahlungen zu fordern.

### 3. Lieferung

3.1. Teillieferungen sind zulässig.

3.2. Wir sind bemüht die Lieferfristen so genau wie möglich einzuhalten. Lieferfristen sind nicht verbindlich. Fällt das Ende der Lieferfrist in die Zeit des Betriebsurlaubs, so verlängert sich die Lieferfrist um die Dauer des Betriebsurlaubs. Auf jeden Fall sind Schadenersatzansprüche oder Aufhebung des Vertrages wegen verspäteter Lieferung ausgeschlossen, wenn uns nicht krass grobe Fahrlässigkeit nachgewiesen wird.

### 4. Gefahrübergang

Der Versand erfolgt stets auf Rechnung und Gefahr des Bestellers. Für Beschädigungen und Verluste während des Transportes haften wir nicht. Mangels besonderer Versandvorschriften des Bestellers haben wir die Versendung auf dem nach unserem Ermessen besten Weg zu bewirken. Werden vom Besteller keine anderweitigen Vorschriften über die Versicherung gegen Transportschäden gemacht, so kann dies auf Kosten des Bestellers von uns ohne weiteres vorgenommen werden. Eine Versicherungspflicht unsererseits besteht jedoch nicht.

### 5. Eigentumsvorbehalt

Die gelieferte Ware bleibt unbeschadet des früheren Gefahrüberganges bis zur vollständigen Bezahlung aller aus dem Liefervertrag entstandenen Verbindlichkeiten des Bestellers unser Eigentum. Solange die Ware unser Eigentum ist, ist der Besteller nicht berechtigt, die gelieferte Ware einem Dritten zu verpfänden oder sicherungsweise zu übereignen. Droht unserem Eigentum von dritter Seite Gefahr, so sind wir unverzüglich zu benachrichtigen. Sollte ein Gerichtsvollzieher die gelieferte Ware pfänden wollen, so ist gegenüber dem Gerichtsvollzieher unser Eigentum unter Nennung unserer Firma und unserer Anschrift zu behaupten. Der Besteller hat uns alle Schäden und Kosten zu ersetzen, die durch einen Verstoß gegen diese Verpflichtungen und durch erforderliche Interventionsmaßnahmen gegen Zugriffe Dritter auf die Ware entstehen.

### 6. Gewährleistung, Haftungsbeschränkung und -Freistellung

6.1. Der Besteller hat eine Lieferung sofort nach Anlieferung eingehend zu untersuchen. Beanstandungen wegen unvollständiger Lieferung oder wegen entdeckter Mängel sind binnen 8 Tagen nach Empfang der einzelnen Lieferungen schriftlich anzuzeigen, andernfalls die Lieferung als vorbehaltlos angenommen gilt und auf diesbezügliche Gewährleistungs- und Schadenersatzansprüche verzichtet wird. Der Mangel ist nach Art und Umfang so deutlich zu kennzeichnen, dass wir den Grund der Beanstandung deutlich erkennen können. Der Besteller ist verpflichtet, für die einstweilige Aufbewahrung der beanstandeten

Ware zu sorgen. Im Übrigen haften wir für Mängel der Lieferung unter Ausschluss weiterer Ansprüche wie folgt: Alle diejenigen Teile sind unentgeltlich nach unserer Wahl auszubessern oder neu zu liefern, welche innerhalb von sechs Monaten, ab Lieferdatum gerechnet, nachweisbar infolge eines vor dem Gefahrübergang liegenden Umstandes, insbesondere wegen fehlerhafter Bauart, schlechter Stoffe oder mangelhafter Ausführung unbrauchbar werden bzw deren Brauchbarkeit erheblich beeinträchtigt wurde. Natürlicher Verschleiß, sachwidrige Behandlung, übermäßige Inanspruchnahme, Nachlässigkeit und Änderungen ohne unsere Genehmigung schließen eine Gewährleistung aus. Gewährleistungsansprüche können nur anerkannt werden, wenn sie unverzüglich nach Feststellung der Fehlerhaftigkeit schriftlich bei uns erhoben werden. Solche Teile müssen uns franko eingesandt werden. Das ersetzte Stück wird bei Ersatzlieferung oder Gutschrift unser Eigentum.

6.2. Außerhalb des Anwendungsbereiches des Produkthaftungsgesetzes beschränkt sich unsere Haftung auf Vorsatz und krass grobe Fahrlässigkeit. Die Haftung für schlicht grobe und leichte Fahrlässigkeit, der Ersatz von Folgeschäden und Vermögensschäden, nicht erzielten Ersparnissen, Zinsverlusten und von Schäden aus Ansprüchen Dritter gegen den Besteller sind ausgeschlossen. Ein Regress nach § 12 PHG gegen uns ist ausgeschlossen.

6.3. Wir haften nur für eigene Inhalte auf der Website unseres Online-Shops. Soweit wir mit Links den Zugang zu anderen Websites ermöglichen, sind wir für die dort enthaltenen fremden Inhalte nicht verantwortlich. Wir machen uns die fremden Inhalte nicht zu Eigen. Sofern wir Kenntnis von rechtswidrigen Inhalten auf externen Websites erhalten, werden wir den Zugang zu diesen Seiten unverzüglich sperren.

## 7. Abnahme, Abruf, Rückgabe

7.1. Auf Abruf gekaufte Ware ist binnen zwölf Monaten ab Bestelldatum abzunehmen. Bei nichtrechtzeitiger Abnahme sind wir berechtigt, die versandfertige Ware auf Kosten und Gefahr des Bestellers einzulagern und unter Belastung aller entstehenden Kosten als geliefert in Rechnung zu stellen. Bei Abnahmeverzug über den genannten zwölfmonatigen Zeitraum hinaus sind wir auf jeden Fall berechtigt, vom Vertrage zurückzutreten und unbeschadet weitergehender Ansprüche vom Besteller eine 10%ige Stornogebühr zu begehren.

7.2. Bestellte Ware wird ausnahmslos nicht zurückgenommen. Etwaige Rücklieferungen werden daher nicht angenommen und auf Kosten und Gefahr des Bestellers zurückgeschickt.

## 8. Schutzrechte, Zeichnungen, Muster

Der Besteller haftet dafür, dass durch seine Vorgaben bzw. durch die Verwendung uns zu Verfügung gestellter Zeichnungen, Muster und sonstiger Ausführungsvorschriften Schutzrechte Dritter, insbesondere Marken-, Muster-, Patent- und Urheberrechte, nicht verletzt werden. Der Besteller ist verpflichtet uns diesbezüglich schad- und klaglos zu halten. Für den Verlust oder die Beschädigung von zur Verfügung gestellter Unterlagen wird keine Haftung übernommen. Eine diesbezügliche Versicherung wird nur über ausdrücklichen Auftrag und auf Kosten des Bestellers abgeschlossen.

## 9. Datenschutz

9.1. Mit unserer „Datenschutzinformation“ unterrichten wir unsere Kunden über: Art, Umfang und Zweck der Erhebung, Verarbeitung und Nutzung der für die Ausführung von Bestellungen sowie Abrechnungen erforderlichen personenbezogenen Daten; sein Widerspruchsrecht zur Erstellung und Verwendung seines anonymisierten Nutzungsprofils für Zwecke der Werbung und zur bedarfsgerechten Gestaltung unseres Angebotes; die Weitergabe von Daten an von uns beauftragte und zur Beachtung der gesetzlichen Datenschutzbestimmungen verpflichtete Unternehmen zum Zwecke und für die Dauer der Bonitätsprüfung sowie der Versendung der Ware; das Recht auf unentgeltliche Auskunft seiner bei uns gespeicherten personenbezogenen Daten; das Recht auf Berichtigung, Löschung und Sperrung seiner bei uns gespeicherten personenbezogenen Daten; Jede über Ziff. 1 hinausgehende Erhebung, Verarbeitung und Nutzung der personenbezogenen Daten bedarf der Einwilligung des Kunden. Der Kunde hat die Möglichkeit, diese Einwilligung vor Erklärung seiner Bestellung zu erteilen. Dem Kunden steht das Recht auf jederzeitigen Widerruf der Einwilligung mit der Wirkung für die Zukunft zu (siehe „Datenschutzrechtliche Einwilligung“).

## 10. Allgemeines, Erfüllungsort, Gerichtsstand, Rechtswahl

10.1. Rechtliche Unwirksamkeit eines Teiles dieser Verkaufs- und Lieferbedingungen berührt die Gültigkeit der übrigen Bestimmungen nicht. Maßgeblich ist jeweils die zum Zeitpunkt der Vertragschließung gültige Fassung der ABG.

10.2. Erfüllungsort für Lieferung und Zahlung ist ausschließlich A 5412 Puch bei Hallein, sofern sich aus der Auftragsbestätigung nichts anderes ergibt.

10.3. Salzburg ist ausschließlicher Gerichtsstand bei allen sich aus diesem Vertragsverhältnis mittelbar oder unmittelbar ergebenden Streitigkeiten.

10.4. Diese AGB und die unter diesen AGB abzuschließenden Verträge unterliegen österreichischem materiellem Recht unter Ausschluss der Verweisungsnormen und des UN-Kaufrechts (CISG).

10.5. Zwingende Rechte eines Verbrauchers nach dem Konsumentenschutzgesetz werden durch die vorgenannten Bedingungen nicht eingeschränkt.

## E General sales conditions

### 1. Quotation, order, price

1.1. The following sales and supply terms & conditions apply to all contracts concluded with us. Any rival terms & conditions are only binding on us if they are acknowledged by us in writing. This also applies in the event that a customer refers to its own purchasing terms & conditions. Oral agreements that contain an additional obligation upon us are only binding if they are confirmed by us in writing.

1.2. Our prices are subject to amendment. The measurements given in the pricelist correspond with the relevant applicable standards and will be amended in line with a change in the standard measurements.

1.3. Our prices are deemed to be ex works and to exclude the statutory Value Added Tax. Packaging, freight and transportation insurance costs are borne by the customer.

1.4. If goods are ordered by electronic means, we will confirm access to the customer's order without delay. Confirmation of access does not yet represent a binding declaration of acceptance of the order unless we expressly declare this. With goods ordered by electronic means we are entitled to accept the order within three working days of its receipt by us.

### 2. Payment terms, payment conditions, withdrawal

2.1. Our invoices are due for payment 30 days net following the invoice date without deduction. The purchase price is due immediately if the customer falls into arrears with us with other payment obligations. If the payment terms are exceeded, subject to a claim for further losses due to delayed payment, 12% interest on arrears will be charged from the due date until the date of payment.

2.2. The customer has a right of setoff only if its claims have been determined by action of law or acknowledged by us.

2.3. If the customer remains in arrears for longer than 30 days, if it is subject to distraints or attachments or if its asset situation deteriorates considerably, we are entitled to withdraw from all supply contracts not yet fulfilled or to demand payment in advance.

### 3. Delivery

3.1. Part deliveries are permitted.

3.2. We make every effort to meet delivery times as exactly as possible. Delivery times are not binding. If the end of the delivery time falls within the period of the company holiday, the delivery time is extended by the duration of the company holiday. In any event, compensation claims or cancellation of the contract as a result of delayed delivery are excluded if they cannot be attributed to our severe gross negligence.

### 4. Transfer of risk

Dispatch is always at the customer's expense and risk. We are not liable for damage or losses in transit. In the absence of special dispatch instructions by the customer, we can make the dispatch by what we consider to be the best means. If the customer does not give any contrary instructions regarding insurance against damage in transit, this may be arranged by us at the customer's expense without further consent. However, we are not obliged to provide insurance cover.

### 5. Reservation of title

Regardless of the earlier transfer of risk, the goods delivered remain our property until full payment of all the customer's liabilities arising from the supply contract. As long as the goods are our property, the customer is not entitled to pledge the goods or assign them as security to a third party. If a third party threatens our property, we are to be informed of this without delay. If a bailiff intends to distrain the goods delivered, our ownership claims are to be put forward to the bailiff, quoting the name and address of our company. The customer must compensate us for all losses and costs that arise from breach of these obligations and for the intervention measures necessary against third party claims on the goods.

### 6. Guarantee, limitation of liability and release from liability

6.1. The customer must thoroughly inspect any delivery immediately upon receipt. Complaints about incomplete delivery or arising from defects discovered are to be reported in writing within 8 days following receipt of the individual deliveries, otherwise the delivery is deemed to be accepted without reservation and claims for these under the guarantee or for damage/losses are waived. The defect is to be clearly indicated as to its nature and extent so that we can clearly identify the basis of the complaint. The customer is obliged to look after the temporary storage of the goods complained about. In addition, we are liable for defects in the delivery with the exclusion of other claims, as follows: We may choose either to repair or replace free of charge all such parts that evidently become unusable or whose usability has been significantly affected as a result of a circumstance prevailing before the transfer of risk, in particular as a result of defective design, poor materials or defective work within six months counting from the delivery date. Normal wear and tear, incorrect treatment, excessive use, neglect and changes without our consent invalidate the guarantee. Guarantee claims can only be recognised if they are made to us in writing without delay after discovery of the fault. Such parts must be sent to us carriage paid. The replaced part becomes our property upon replacement delivery or issue of a credit note.

6.2. Outside the area of applicability of the Produkthaftungsgesetz (PHG, Product Liability Act) our liability is limited to deliberate act and severe gross negligence. Our liability for simple gross negligence and slight negligence, compensation for consequential loss and damage to property, savings not achieved, loss of interest and for losses arising from third party claims against the customer are excluded. Redress against us in accordance with § 12 PHG is excluded.

6.3. We are liable only for our own content on the website of our online shop. In so far as we provide access to other websites with links, we are not liable for the third party content contained therein. We do not adopt the third party content. If we become aware of illegal content on external websites, we will block access to these sites without delay.

## 7. Acceptance, call-off, return

7.1. Goods purchased on call-off are to be accepted within twelve months of the order date. In the event of them not being accepted on time, we are entitled to store the goods ready for dispatch at the customer's expense and risk and to invoice for them as if delivered including all costs incurred. In the event of delay in acceptance beyond the above-mentioned twelve-month period, we are in any event entitled to withdraw from the contract and to demand a 10% cancellation fee from the customer without prejudice to further claims.

7.2. Without exception, goods ordered are not taken back. Therefore returns are not accepted and they are returned at the customer's expense and risk.

## 8. Intellectual property rights, drawings, samples

The customer is liable for ensuring that the intellectual property rights of third parties, in particular trade mark, sample and patent rights and copyright, are not infringed by its specifications or by the use of drawings, samples and other implementation specifications provided to us. The customer is obliged to indemnify us against any losses or complaints arising from this. No liability is accepted for loss or damage to the documents provided to us. Insurance against this will only be taken out on the customer's express instruction and at its expense.

## 9. Data protection

9.1. With our "Data protection information" we inform our customers about: the nature, extent and purpose of the recording, processing and use of the personal data required for fulfilling orders and invoicing; his rights to object to the production and use of his anonymised use profile for purposes of advertising and for the design of our product range in line with demand; the passing on of data to companies engaged by us and obliged to observe the statutory provisions of data protection for the purpose and duration of the creditworthiness check and the dispatch of the goods; the right to information free of charge regarding his personal data stored by us; the right to the correction, deletion and blocking of his personal data stored by us; Any recording, processing or use of the personal data going beyond Point 1 requires the customer's consent. The customer has an option to grant this consent before giving his order. The customer is entitled to withdraw consent at any time with future effect. (See "Data protection law consent").

## 10. General, place of fulfilment, place of jurisdiction, choice of law

10.1. The legal invalidity of a part of these sales and supply terms & conditions does not affect the remaining terms. It is the version of these STCs valid at the date of conclusion of the contract that applies in each case.

10.2. The place of fulfilment for delivery and payment is exclusively

A 5412 Puch bei Hallein, in so far as not stated otherwise on the order confirmation.

10.3. Salzburg is the exclusive place of jurisdiction for all disputes arising directly or indirectly from this contractual relationship.

10.4. These STCs and the contracts to be signed under these STCs are subject to Austrian property law, with the exclusion of the reference provisions of the UN Convention on Contracts for the International Sale of Goods (CISG).

10.5. Consumers' statutory rights under the Konsumentenschutzgesetz (Consumer Protection Act) are not restricted by the above-mentioned terms.

## ES **Condiciones de venta y entrega**

### **1. Ofertas, pedidos, precios**

1.1. Las siguientes condiciones de venta y suministro se aplican a todos los contratos celebrados con la empresa. Solo serán vinculantes otras condiciones si las hemos aceptado por escrito. Esto se aplica igualmente en el caso de que el comprador remita a sus propias condiciones de compra. Los acuerdos verbales que supongan una obligación adicional para nosotros solo serán vinculantes si los hemos confirmado previamente por escrito.

1.2. Precios sin compromiso. Los importes incluidos en la lista de precios corresponden a las normas vigentes y se modificarán de modo correspondiente al cambiar dichas normas.

1.3. Nuestros precios no incluyen el IVA vigente de fábrica. El embalaje, la carga y los costes del seguro de transportes son responsabilidad del comprador.

1.4. Los productos solicitados electrónicamente se confirmarán inmediatamente tras recibir el pedido del cliente. La confirmación de la recepción no supone una declaración vinculante de la aceptación del pedido, a menos que así lo declaremos de forma expresa. En el caso de productos solicitados electrónicamente estamos autorizados a aceptar el pedido transcurridos tres días laborales desde la recepción.

### **2. Periodo de pago, condiciones de pago, renuncia**

2.1. El importe neto y sin deducciones de las facturas ha de pagarse en los 30 días posteriores a la fecha de la factura. El precio de venta habrá de abonarse de inmediato si el comprador incurre en demora con otras obligaciones de pago. Al superar el plazo de pago, se cargará un interés por demora del 12 %, salvo en caso de que se hagan efectivos daños por demora adicionales.

2.2. El comprador tiene derecho a una compensación solo si sus reclamaciones son jurídicamente válidas o las hemos reconocido nosotros.

2.3. Si el comprador incurre en demora del pago en más de 30 días, se procederá a iniciar un embargo o si empeora notablemente su situación financiera, tenemos derecho a renunciar a todos los contratos de suministro aún pendientes o a exigir el pago anticipado.

### **3. Suministro**

3.1. Es posible realizar suministros parciales.

3.2. Nos esforzamos por mantener en la medida de lo posible los plazos de suministro. Los plazos de suministro no son vinculantes. Si el final del plazo de suministro coincide en el tiempo con las vacaciones de la empresa, el plazo de suministro se prolonga hasta el final de dichas vacaciones. En todo caso, se excluye el derecho a indemnizaciones o la anulación del contrato debido al retraso en el suministro si no puede demostrarse que se debe a negligencia muy grave por nuestra parte.

### **4. Cesión de riesgos**

El envío se realiza siempre por cuenta y riesgo del comprador. No nos hacemos responsables de los daños y las pérdidas causadas por el transporte. La ausencia de instrucciones especiales de envío por parte del comprador causa que hagamos el envío según nuestro mejor parecer. Si el comprador no da ninguna instrucción en relación con el seguro para los daños originados durante el transporte, nos reservamos el derecho de transferirlo al comprador sin previo aviso. No obstante, no estamos obligados a contratar ningún seguro.

### **5. Reserva de propiedad**

La mercancía entregada sigue siendo de nuestra propiedad hasta el pago completo de todas las obligaciones originadas por el contrato de suministro, independientemente de la cesión de riesgos anterior. Mientras la mercancía sea de nuestra propiedad, el comprador no tiene derecho a darla en prenda a terceros o transferirla como garantía. Si un tercero amenaza nuestra propiedad, debemos ser informados de inmediato. Si un agente judicial pretende embargar la mercancía suministrada, habrá de indicarse al agente judicial la propiedad y mencionar la empresa y la dirección. El comprador deberá abonarnos todos los daños y costes que se han originado por la vulneración de estas obligaciones y las medidas necesarias contra el acceso de terceros a la mercancía.

### **6. Garantía, limitación de responsabilidad y exención de responsabilidad**

6.1. El comprador debe comprobar de inmediato el suministro tras su recepción. Las reclamaciones por la omisión de productos en el envío o deficiencias en los productos han de comunicarse por escrito en un periodo de 8 días tras la recepción de cada suministro; en caso contrario, se considera que el suministro se ha recibido correctamente y que se renuncia a cualquier reclamación de la garantía y derecho al pago de indemnizaciones. El tipo y el alcance de las deficiencias han de describirse claramente, de forma que podamos reconocer con facilidad el motivo de la reclamación. El comprador está obligado a almacenar temporalmente la mercancía objeto de la reclamación. Asimismo somos responsables de las deficiencias del suministro excluyendo los derechos siguientes: nosotros decidimos si es preciso reparar o sustituir las piezas que, en un plazo de seis meses a partir de la fecha de entrega, no puedan usarse o su uso haya resultado mermado notablemente y de forma evidente como consecuencia de una situación previa a la cesión de riesgos, en especial debido a un diseño defectuoso, materiales deficientes o fabricación incorrecta. El desgaste natural, el manejo inadecuado, el uso excesivo, la negligencia y la ejecución de modificaciones sin nuestra autorización son causa de anulación de la garantía. Solo se reconocerán los derechos de garantía si se nos ha comunicado por escrito inmediatamente después de haber detectado la deficiencia. Dichas piezas han de enviarse con los portes pagados. La pieza sustituida es de nuestra propiedad tras el envío de sustitución o tras realizar un abono en cuenta.

6.2. Fuera del ámbito de aplicación de la ley austriaca de responsabilidad por productos defectuosos, nuestra responsabilidad se limita a la culpa intencional y la culpa muy grave. No se incluye la responsabilidad por culpa grave y leve, la indemnización por daños directos y daños patrimoniales, ahorros no logrados, pérdida de intereses y daños por reclamaciones de terceros al comprador. Según el art. 12 de la ley austriaca de responsabilidad por productos defectuosos se excluyen los recursos a la empresa.

6.3. Solo nos hacemos responsables de los contenidos propios del sitio web de nuestra tienda en línea. Aunque facilitamos el acceso mediante enlaces a otros sitios web, no nos hacemos responsables del contenido ajeno de dichos sitios. No tenemos la propiedad de los contenidos ajenos. En el momento en el que tengamos conocimiento de contenidos ilegales en sitios web externos, bloquearemos de inmediato el acceso a estas páginas.



**7. Aceptación, reclamación de la entrega, devolución**

7.1. La mercancía adquirida a demanda debe aceptarse en un plazo de 12 meses a partir de la fecha del pedido. Si no se acepta en este plazo de tiempo, tenemos derecho a almacenar la mercancía lista para enviar por cuenta y riesgo del comprador y facturarla como si se hubiera entregado, incluyendo todos los costes derivados. En el caso de demora en la aceptación, transcurridos los doce meses antes mencionados, tenemos derecho a desistir del contrato y a demandar al comprador una tasa de cancelación del 10 % sin perjuicio de otras reclamaciones.

7.2. La mercancía pedida no podrá devolverse en ningún caso. Por dicho motivo no se aceptará ningún envío de devolución y se devolverá al comprador por su cuenta y riesgo.

**8. Derechos de propiedad intelectual, diseños, muestras**

El comprador es responsable de que no se infrinjan los derechos de propiedad intelectual de terceros, en especial los derechos de marcas, muestras, patentes y de autor, por sus especificaciones o el uso de diseños, muestras y otras especificaciones de ejecución puestos a nuestra disposición. El comprador está obligado a indemnizarnos por cualquier pérdida o reclamación que se derive. No nos responsabilizamos de la pérdida o el daño de los documentos que se hayan puesto a nuestra disposición. Solo se suscribirá un seguro si el comprador así lo solicita de forma expresa y a sus expensas.

**9. Protección de datos**

9.1. Nuestra "información sobre la protección de datos" ofrece a nuestros clientes más información acerca de:

- El tipo, el alcance y el objeto de la recopilación, el procesamiento y el uso de los datos personales necesarios para la ejecución de pedidos y facturas;
- Su derecho de oposición a la creación y uso de un perfil anónimo para publicidad y la adaptación de nuestra oferta a la demanda;
- La transmisión de datos a empresas contratadas por nosotros y obligadas a observar las disposiciones legales de la protección de datos con el objeto y la duración de la verificación de la solvencia, así como el envío de la mercancía;
- El derecho a la información gratuita acerca de sus datos personales guardados;
- El derecho a la rectificación, la eliminación y el bloqueo de los datos personales guardados;
- Es necesaria la autorización del cliente para cualquier recopilación, procesamiento y uso de los datos personales derivados del punto 1. El cliente tiene la posibilidad de conceder esta autorización antes de realizar el pedido. El cliente tiene el derecho de retirar en cualquier momento su autorización con efecto futuro (véase "Autorización conforme con el derecho de protección de datos").

**10. Generalidades, lugar de ejecución, jurisdicción, legislación aplicable**

10.1. La invalidez legal de una parte de estas condiciones de venta y suministro no afecta a la validez de las restantes disposiciones. Se aplica la versión de las condiciones generales de contratación vigente en el momento de la celebración del contrato.

10.2. El lugar de ejecución del suministro y el pago es únicamente A 5412 Puch en Hallein (Austria), a menos que en la confirmación del contrato se indique lo contrario.

10.3. Salzburgo es la única jurisdicción para cualquier disputa que se derive directa o indirectamente de este contrato.

10.4. Estas condiciones y los contratos celebrados según estas condiciones están sujetos al derecho austriaco, con la excepción de las normas de reenvío y la convención de las Naciones Unidas sobre los contratos de compraventa internacional (CISG).

10.5. Los derechos preceptivos de los consumidores según la ley de protección de consumidores no quedan limitados por las condiciones antes mencionadas.

Überreicht durch:

*With the compliments of:*

*Recomendado por:*

#### ÖSTERREICH

ALPEN-MAYKESTAG GmbH

Urstein Nord 67 | A-5412 Puch / Salzburg

Tel: +43 (0) 662 449 01-0

Fax: +43 (0) 662 449 01-110

Fax Export: +43 (0) 662 449 01-130

verkauf@a-mk.com

export@a-mk.com

#### DEUTSCHLAND

ALPEN-MAYKESTAG GmbH

Dechenstraße 15 a | D-40878 Ratingen

Tel: +49 (0) 2102 7066514

verkauf@a-mk.com

#### ITALIA

ALPEN-MAYKESTAG s.r.l.

Via Volontari Del Sangue 54 | I-20093 Cologno Monzese (MI)

Tel: +39 (02) 48 84 30 38

Fax: +39 (02) 45 70 14 19

info@a-mk.it

#### ČESKÁ REPUBLIKA

ALPEN-MAYKESTAG s.r.o.

U Koruny 414 | CZ-50002 Hradec Králové

Tel. +420 495 58 23 22

Fax +420 495 58 23 25

info@a-mk.cz

#### MAGYARORSZÁG

ALPEN-MAYKESTAG Kft.

Gyár utca 5 | H-8500 Pápa

Tel. +36 (0) 89 5115 15

Fax +36 (0) 89 5115 16

info@a-mk.hu

[www.alpen-drills.com](http://www.alpen-drills.com)

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