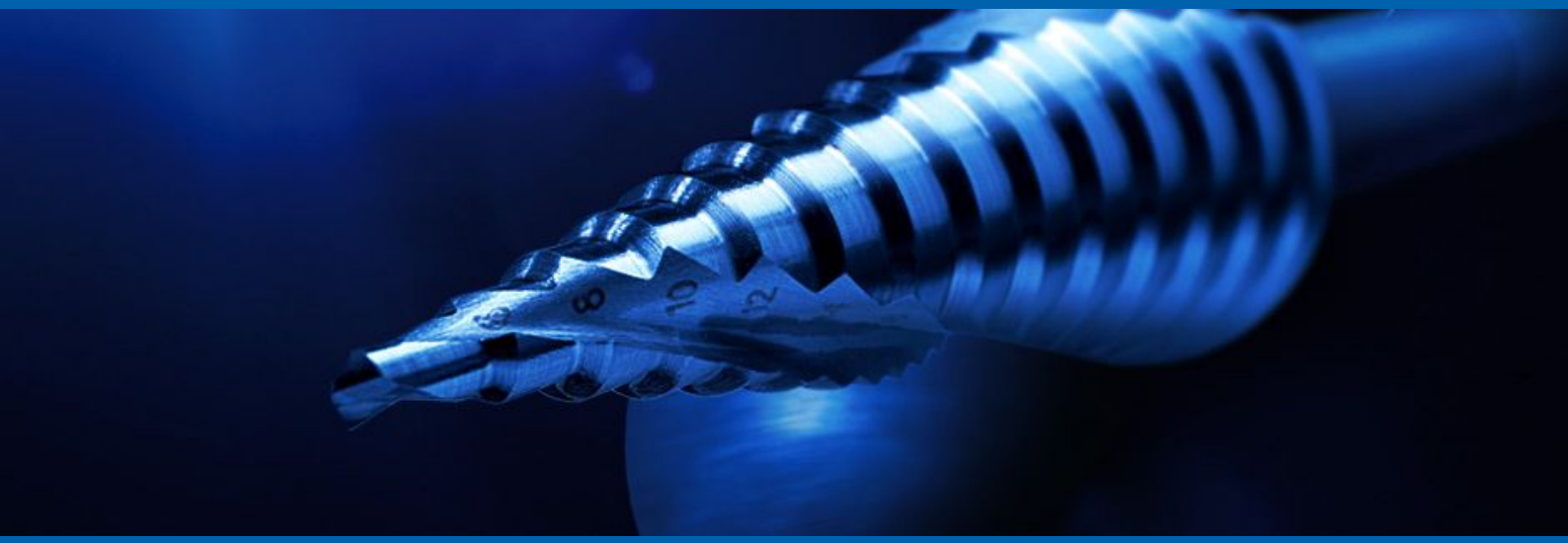
Каталог продукции
KRINO SPA



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Казахстан (7172)727-132

knw@nt-rt.ru || https://krino.nt-rt.ru/

Utensili per il taglio dei metalli
METAL CUTTING TOOLS

Outils à métaux
Utensilios para metales
Metallwerkzeuge



PUNTE PER IL TAGLIO DEI METALLI

page 20-129

Metal cutting twist drills
Forets à métaux
Brocas para metales
Metall-Spiralbohrer



UTENSILI CONICI, FRESE e SEGHE A TAZZA

page 130-213

Conical drill bits, hole cutters and hole saws
Forets coniques, fraises et scies trépans
Brocas conicas, fresas y coronas perforadoras
Blechschälbohrer und Lochsägen



MASCHI E FILIERE

page 214-324

Taps and dies
Tarauds et filiéres
Machos y terrajas
Gewindebohrer und Schneideisen



ALESATORI E FRESE FRONTALI

page 325-348

Hand reamers & end mills
Alésoirs et fraises à rainurer
Escariadores y fresas frontales
Reibahlen und langlochfräser

Utensili da taglio per edilizia
BUILDING AND CONSTRUCTION TOOLS

Outils pour bâtiment
Utensilios para construcción
Werkzeuge für Baumaterialien



UTENSILI PER MATERIALI EDILI

page 349-397

Building and contruction tools
Outils pour bâtiment
Utensilios para construcción
Werkzeuge für Baumaterialien

Utensili per il taglio del legno
WOODWORKING TOOLS

Outils à bois
Utensilios para madera
Holzwerkzeuge



UTENSILI PER IL TAGLIO DEL LEGNO

page 398-433

Woodworking tools
Outils à bois
Utensilios para madera
Holzwerkzeuge

Tabelle tecniche
TECHNICAL TABLES

TABELLE TECNICHE

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Technical tables
Tableaux techniques
Prospectos tecnico
Technische Tabellen



Case History

Una singolare “case history” di un’azienda in rapida espansione
La Krino è orgogliosa dei riconoscimenti sulla qualità dei propri utensili da taglio per asportazione di truciolo. La nostra Azienda, fondata nel 1982 a Montevecchia, a nord di Milano ed in prossimità del confine svizzero, appartiene ad un parco industriale di avanguardia specializzato nella produzione di utensili da taglio sin dai primi del 1900.
Lo sviluppo tumultuoso delle attività ha portato alla costruzione, quale polo produttivo e logistico, di un nuovissimo e ampio insediamento industriale a Monticello Brianza, al centro del parco tecnologico. Ciò ha contribuito allo sviluppo e al completamento delle varie linee di utensili di elevata qualità, nel pieno rispetto della ormai diffusa sensibilità ambientale.
Nell’estate 2011 si è completato il processo di acquisizione della Società LTI, azienda storica italiana fondata a Milano nel 1960 e famosa per la produzione di inserti e bussole per avvitatori di alta qualità, riconosciuta a livello internazionale. La produzione è ora effettuata nella sede Krino, avvalendosi degli stessi impianti produttivi e della stessa manodopera qualificata. L’acquisizione del marchio LTI rappresenta un passo importante per la nostra Società, perché ribadisce la volontà di investire in prodotti di qualità di fabbricazione italiana e permette di diversificare, all’interno del medesimo mercato, la già ampia offerta di prodotti.
Consultando il nuovo catalogo avrete modo di apprezzare la gamma e la qualità dei prodotti ed, insieme, conoscerete gli uomini che, partecipi del vostro successo, hanno reso grande la Krino.

Ingegneria degli utensili da taglio

Cutting tools engineering
Tecnologie des outils coupants
Ingenierìa de las herramientas de corte



Krino is proud of the International acclaims for the quality of its cutting tools. Our Company, established in Montevecchia in 1982 near north of Milan and the Swiss border, an industrial area specialized into the cutting tools production since the last century. The fast grow up of activities required a brand new logistic and production plant based in Monticello Brianza, exactly into the center of this technological area. This contributed to the development of a complete range of high quality tools and respectful of the environment. The acquisition of LTI, an internationally recognised Italian manufacturing Company founded in Milan in 1960 and famous for the production of high quality inserts and sockets for drivers, was completed in the summer of 2011. The production is now carried out at the Krino headquarters using the same production facilities and skilled labour. The acquisition of the LTI brand is an important milestone because it reaffirms our company's commitment to invest in high-quality products made in Italy, and allows diversifying the already wide range of products within the same market. Consulting the new catalogue you will appreciate the wide range of our products and you can make the knowledge of our staff who, participating to your success, makes Krino great.

Krino est fière des reconnaissances internationaux pour la qualité de ses produits. Notre société a été crée en 1982 à Montevecchia, à nord de Milan et près de la frontière Suisse, un pole industriel spécialisé dans la production des outils de coupe depuis le début du siècle passé. La rapide croissance de l'entreprise a motivé la création d'un nouveau centre de production et logistique à Monticello Brianza, exactement au centre du pole industriel. Cela a contribué à développer une gamme complète de outillage de coupe de qualité en respectant l'environnement. En el verano del 2011 se completó el proceso de adquisición de la Sociedad LTI, empresa histórica italiana fundada en Milán en 1960 y famosa por la producción de insertos y piezas para atornilladores de alta calidad, reconocida a nivel internacional. La producción actualmente se efectúa en la sede Krino, que utiliza las mismas instalaciones productivas y la misma mano de obra especializada. La adquisición de la marca LTI representa un paso importante para nuestra Sociedad, porque recalca nuestra voluntad de invertir en productos de alta calidad de fabricación italiana y permite diversificar, en el mismo mercado, la amplia oferta de productos ya existente.En consultant ce nouveau catalogue, Vous auriez la possibilité d'apprécier la gamme et la qualité des produits et au même temps Vous irez connaître l'équipe que, impliquée dans Votre réussite, a rendue grand Krino.

Krino es orgullosa de los reconocimientos por la calidad de su productos. Nuestra empresa fundada en el 1982 a Montevecchia, al norte de Milan y cerca de la frontera con la Suisa, hace parte de un parque industrial de vanguardia, especializado en la producción de herramienta de corte desde el principio del siglo pasado. El rapido desarrollo de las actividades ha sacado a la construcción de una nueva emplantación logistica y productiva en Monticello Brianza, en el centro del parco tecnologico y ha contribuido al desarrollo de varias calidades de utensilios de alta calidad, en el lleno respecto de la sensibilidad del medio ambiente. Le processus d'acquisition de la société LTI, entreprise historique italienne fondée à Milan en 1960 et célèbre pour la production d'inserts et de douilles pour visseuses de haute qualité, reconnue à un niveau international, s'est complété pendant l'été 2011. La production est désormais effectuée auprès du siège Krino, en utilisant les mêmes installations de production et la même main d'oeuvre qualifiée. L'acquisition de la marque LTI représente une étape importante pour notre société, car elle réitère la volonté d'investir dans des produits de qualité fabriqués en Italie et permet de diversifier, à l'intérieur du même marché, la déjà vaste offre de produits. Consultando el nuevo catálogo podrán estimar la gama y la calidad de los productos y podrán conocer nuestro equipo que ha hecho grande la Krino.

Campo di applicazione

Ricerca, progettazione e produzione di utensili da taglio e utensili per avvitatori

La Brianza, soprattutto quella Lecchese, ha un'antichissima tradizione nella lavorazione dei metalli, nucleo di un potente sviluppo artigianale e, poi, industriale. La prima industria per la produzione degli utensili per la lavorazione dei metalli ebbe, così, una naturale affermazione ed, attorno ad essa, nacquero piccoli laboratori artigiani, che ora sono valide realtà manifatturiere. La specializzazione è ora elevata, così che ognuna di queste imprese ha una sua propria identità produttiva: lavorazione del metallo duro così come del superrapido, lavorazioni standard come quelle a disegno. La Krino è orgogliosa di appartenere a questo parco tecnologico e di continuare questa tradizione, indice riconosciuto della qualità made in Italy. Oltre al catalogo dei prodotti standard a norme ISO, che contempla utensili standard tradizionali per utilizzi professionali ed hobbistici, sino a utensili innovativi e tecnologicamente avanzati per le lavorazioni industriali più difficoltose. Siamo in grado di produrre a richiesta utensili speciali a disegno.

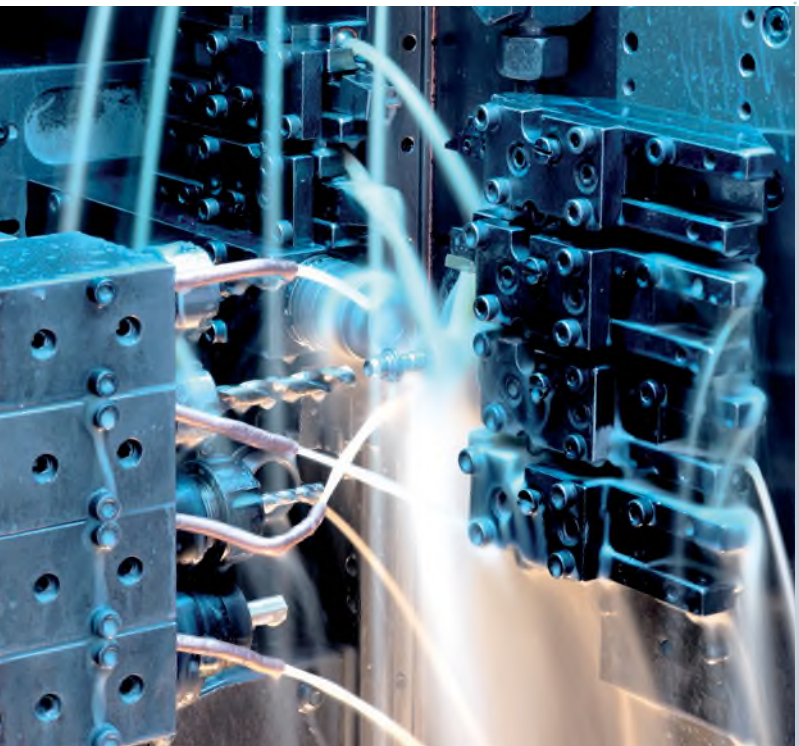
Brianza, above all the region of Lecco, has an ancient tradition of metal works, it was the center of a strong handy craft development that became industrial. The origin of cutting tools industry in our region in fact was born together with small workshops which are now well known manufacturing Companies. The specialization is now very high, so that every Company got its own production identity: hard metal works, high speed steel, standard production or under request. Krino is proud to be a part of this technological area and to carry on with the "made in Italy" tradition. In addition to the catalogue with standard products and in accordance with ISO standards, we are in a position to supply, under request, special tools.

Brianza et surtout la région de Lecco, a une ancienne tradition pour le travail des métaux. C'était le centre d'un fort développement artisanal devenu industriel. En effet l'origine de la production des outils coupants dans notre région a démarré avec les petits ateliers qui maintenant sont devenus des grandes sociétés productrices d' outils. La spécialisation est très élevée. Les sociétés ont suivi leur propre identité : lavoration des pièces en carbure, acier rapide, production standard et au dessin. Krino est orgueilleuse de faire partie de cette région technologique et de continuer la tradition du « Made in Italy ». Au-delà du catalogue avec les produits construits selon les normes ISO, nous sommes dans la position de fournir des outils spéciaux au dessin.

Brianza, sobre todo la región de Lecco, tienes una antigua tradición en el trabajo de los metales. Fue un centro de fuerte desarrollo artesanos que se quedaron industriales. Efectivamente la origen de la producción de utensilios de corte en nuestra region empezó con pequeños talleres que ahora son convertidos en grandes empresas productoras. La especialización es muy elevada y cada empresa a seguido su propia indentidad : trabajo de metal duro, acero rapido, producción estandard y sobre diseño. Krino es orgullosa de hacer parte de esta región tecnologica y de continuar la tradición del « Made in Italy » Más que el catalogo con productos segundo las normas ISO, podemos ofrecer utensilios de fabricaciones especiales.



PRODUZIONE / AUTOMAZIONE
INNOVAZIONE / FORMAZIONE

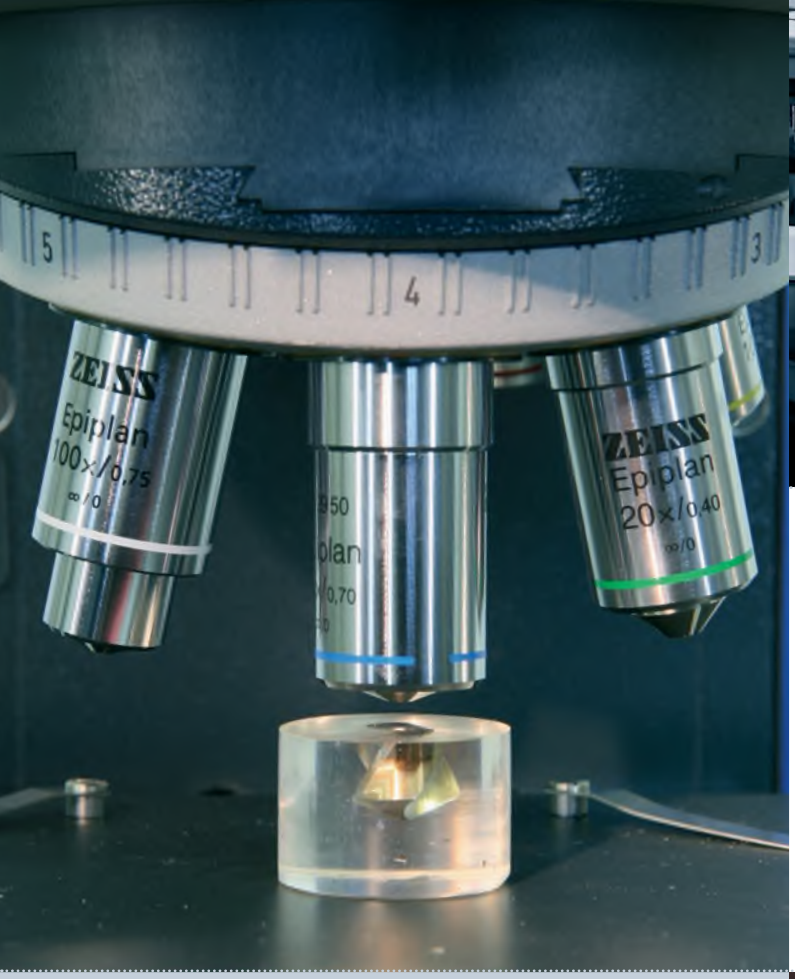


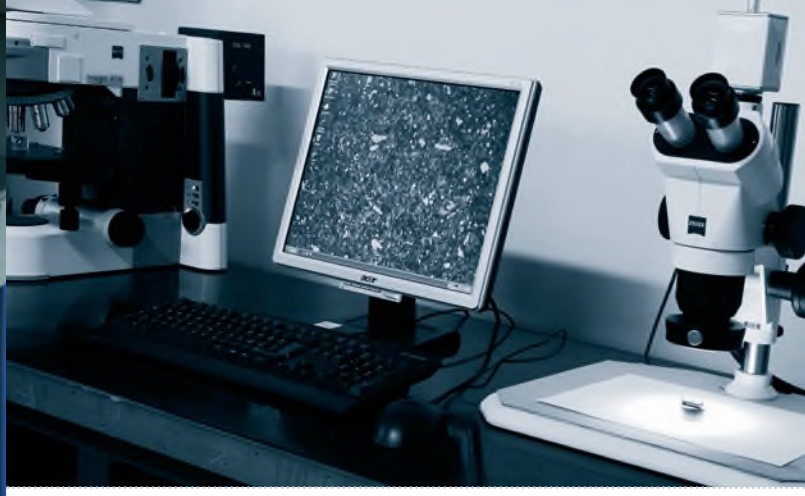
L'esperienza specifica più che trentennale nella produzione degli utensili da taglio in acciaio superrapido dei nostri ingegneri e dei tecnici di laboratorio permettono un'assistenza tecnica qualificata ai nostri clienti in tutte le problematiche che nascono nell'utilizzo industriale e professionale. La formazione del nostro personale è attuata direttamente con corsi specifici, sia all'interno della nostra azienda, così come presso le nostre associazioni di categoria come Confindustria. Corsi di formazione specifici sono inoltre effettuati, all'interno del nostro sito, rivolti alla nostra clientela; l'esperienza è sempre positiva e molto gradita.

Our long experience in high speed steel production and the full knowledge of our engineers and technical staff gives a full and qualified assistance to all our customers for any kind of use, industrial or professional.

Notre longue expérience dans la fabrication des outils en acier rapide et la connaissance de nos ingénieurs et de l'équipe technique donne une complète et qualifié assistance à tous nos clients pour toutes les utilisations soit industrielles que professionnelles.

La experiencia de más de treinta años en la producción de utensilios de corte en acero rapido de nuestro ingenieros y tecnicos de laboratorios, permiten una asistencia tecnica calificada a todos los clientes por cualquier problema de utilización industrial y profesional.





TECNOLOGIA

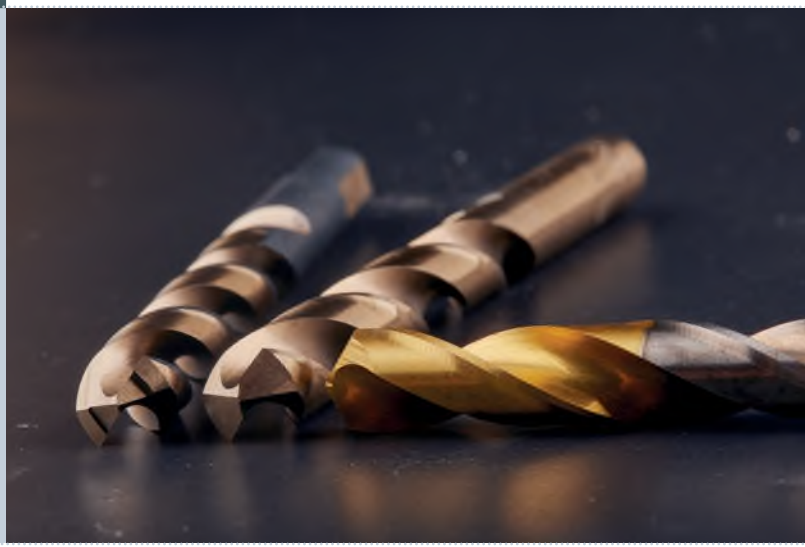
CONTROLLO QUALITÀ

L'attrezzato laboratorio di controllo qualità garantisce l'intera produzione dei nostri utensili. Specifici ed accurati controlli metallurgici sugli acciai di produzione europea, effettuati prima e dopo il trattamento termico, assicurano elevate prestazioni degli utensili nella sicurezza più completa.

The modern and very well equipped quality laboratory, guarantees the full production of our cutting tools. Specific and precise tests made on steels, before and after heat treatment, allow high performance totally on safety.

Un moderne et bien équipé laboratoire de qualité garantit une entière production d' outillage de coupe. Les tests spécifiques sur les aciers, effectués avant et après les traitements thermiques, permettent des performances élèves en total sécurité.

Un moderno y bien equipado laboratorio de calidad garantiza toda nuestra producción de productos de corte. Controles cuidados de los aceros de producción europea, hechos antes y después del tratamiento termico, aseguran elevadas prestaciones en seguridad.





ILTI® SCREWDRIVING TOOLS

UTENSILI SPECIALI A DISEGNO

La nostra Azienda, oltre alla produzione di inserti per avvitatori secondo le norme internazionali, ha una grande esperienza nella produzione di utensili speciali a disegno. È importante che ci inviate un disegno dettagliato, possibilmente insieme ad un campione, specificando in modo particolare il tipo di supporto sul quale avverrà l'operazione di avvitamento. In questo modo possiamo realizzare il trattamento termico specifico in funzione della resistenza che l'inserto incontrerà durante il lavoro. Infatti, avvitare sulla lamiera piuttosto che sulla plastica, in un pannello truciolare od in un foro maschiato, richiede sforzi del tutto differenti, che si traducono in altrettanto diverse esigenze di durezza e resistenza alla torsione.

Our factory is specialized in manufacturing quality screws bits since 1960, according to the international standards. We dedicate the same care in making special tools under your specific design. Just one more point that will permit us to create your tool with all the necessary characteristics regarding the type of support on which the screw driving operation will take place. The cycle of heat treatment that we will use in our plant can be studied in accordance with the function of resistance that the tool will face during the pressure. In fact, to screw on the thin sheet rather than on a plastic one or in a panel of composed wood or in a threaded hole requires different degrees of pressure, which mean different needs of hardness and torque resistance.



Per raggiungere l'eccellenza nel servizio alla clientela offriamo oggi la possibilità di realizzare set e valigette con contenuti specifici: il nostro parco macchine si è infatti ampliato con una fresatrice
taglia spugne che consente la realizzazione di sedi dedicate per l'inserimento di utensili e accessori su esigenza del cliente.

*To achieve excellence in customer service we can offer you to create sets and cases with specific contents: our machine fleet has in fact been expanded with a sponge milling machine that allows the creation
of dedicated seats for the insertion of tools and accessories on customer's request.*

*Pour atteindre l'excellence du service à la clientèle, nous offrons maintenant la possibilité de créer des ensembles et des boîtiers avec des contenus spécifiques: notre parc de machines a en effet été élargi avec
une fraiseuse à éponger qui permet la création de sièges dédiés pour l'insertion d'outils et d'accessoires à la demande du client.*

*Para alcanzar la excelencia en el servicio al cliente, ahora ofrecemos la posibilidad de crear conjuntos y cajas con contenidos específicos: nuestra flota de máquinas se ha ampliado con una fresadora de esponja
que permite la creación de asientos dedicados para la inserción de herramientas y accesorios a petición del cliente.*

customize

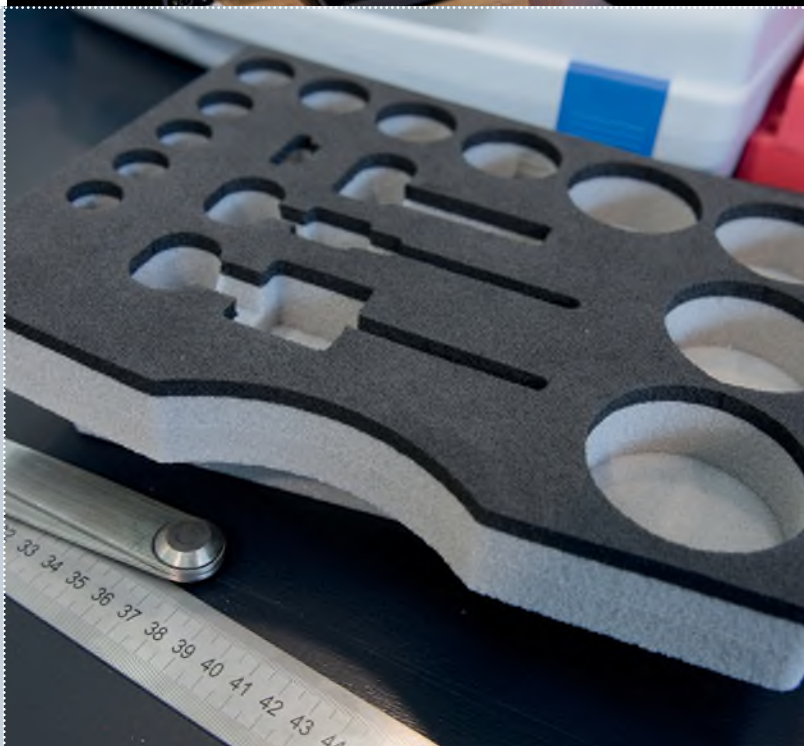


Il cliente può personalizzare il contenuto del set scegliendo gli utensili desiderati e decidendo il colore della spugna nella quale saranno disposti.

The customer can customize the contents of the set by choosing the desired tools and deciding the color of the sponge in which they will be arranged..

Le client peut personnaliser le contenu de l'ensemble en choisissant les outils souhaités et en choisissant la couleur de l'éponge dans laquelle ils seront disposés.

El cliente puede personalizar el contenido del conjunto seleccionando las herramientas deseadas y decidiendo el color de la esponja en la que se colocarán.



TiFaForare

Krino è presente anche sui social con tutorial, presentazioni di prodotto e tante altre idee, dimostrazione di un'azienda dinamica e al passo coi tempi che non si accontenta dei soliti standard comunicativi.

Krino is also present on social media with tutorials, product presentations and many other ideas, demonstration of a dynamic company that isn't satisfied with the usual communication standards.

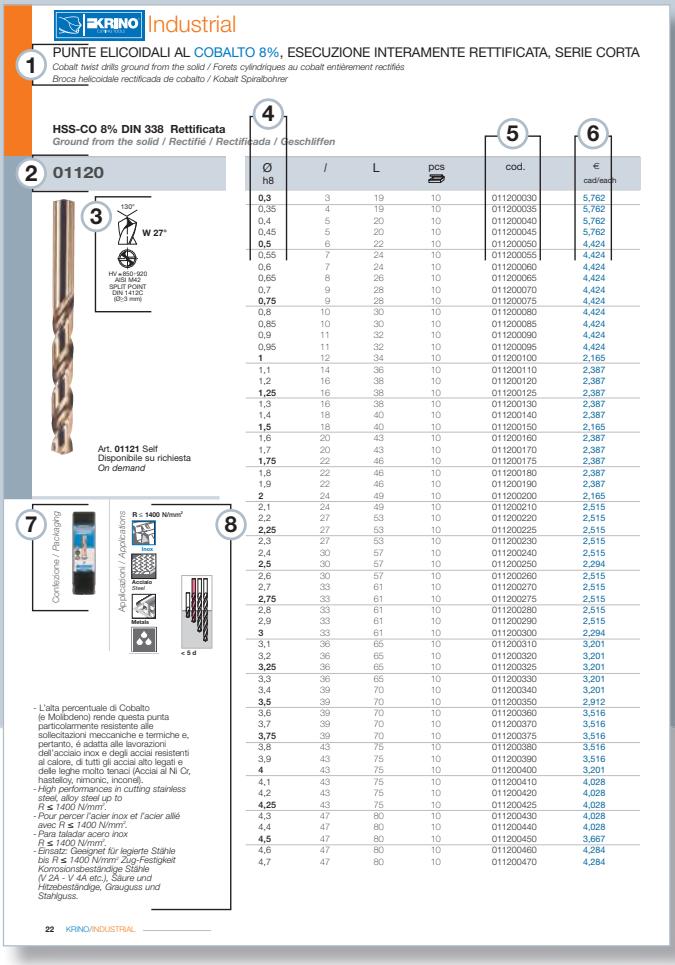
Krino est également présent sur les médias sociaux avec des tutoriels, des présentations de produits et de nombreuses autres idées, la démonstration d'une entreprise dynamique et en phase avec l'époque qui n'est pas satisfaite des standards de communication habituels.

Krino también está presente en las redes sociales con tutoriales, presentaciones de productos y muchas otras ideas, demostraciones de una empresa dinámica y en sintonía con los tiempos que no están satisfechos con los estándares de comunicación habituales.



Consultazione
reference/consultation/consultación

La struttura schematica della pagina rende la consultazione del catalogo rapida ed immediata anche grazie alla fotografia del prodotto, corredata da codici specifici, dimensioni, caratteristiche, confezionamento base e norme d'impiego. L'operatore è facilitato nell'impiego degli utensili da simboli molto semplici che specificano le effettive capacità e modalità d'uso.



KRINO Industrial

1 PUNTE ELICOIDALI AL COBALTO 8%, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE CORTA
Cobalt twist drills ground from the solid / Forets cylindriques au cobalt entièrement rectifiés
Broca helicoidale rectificada de cobalto / Kobalt Spiralbohrer

HSS-CO 8% DIN 338 Rettificata
Ground from the solid / Rectifié / Rectificada / Geschliffen

2 01120

3 W 27°, 130°, HV =850 -920 AISI M42 SPLIT POINT DIN 1412C (Ø≥3 mm)

Art. 01121 Self
Disponibile su richiesta
On demand

7 Confezione / Packaging

Applicazioni / Applications: R ≤ 1400 N/mm², Inox, Acciaio Steel, Metalli, < 5 d

8

- L'alta percentuale di Cobalto (e Molibdeno) rende questa punta particolarmente resistente alle sollecitazioni meccaniche e termiche e, pertanto, è adatta alle lavorazioni dell'acciaio inox e degli acciai resistenti al calore, di tutti gli acciai alto legati e delle leghe molto tenaci (Acciai al Ni Cr, hastelloy, nimonic, inconel).
- *High performances in cutting stainless steel, alloy steel up to R ≤ 1400 N/mm².*
- *Pour percer l'acier inox et l'acier allié avec R ≤ 1400 N/mm².*
- *Para taladar acero inox R ≤ 1400 N/mm².*
- *Einsatz: Geeignet für legierte Stähle bis R ≤ 1400 N/mm² Zug-Festigkeit Korrosionsbeständige Stähle (V 2A - V 4A etc.), Säure und Hitzebeständige, Grauguss und Stahlguss.*

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2,2	27	53	10	011200220	2,515
2,25	27	53	10	011200225	2,515
2,3	27	53	10	011200230	2,515
2,4	30	57	10	011200240	2,515
2,5	30	57	10	011200250	2,294
2,6	30	57	10	011200260	2,515
2,7	33	61	10	011200270	2,515
2,75	33	61	10	011200275	2,515
2,8	33	61	10	011200280	2,515
2,9	33	61	10	011200290	2,515
3	33	61	10	011200300	2,294
3,1	36	65	10	011200310	3,201
3,2	36	65	10	011200320	3,201
3,25	36	65	10	011200325	3,201
3,3	36	65	10	011200330	3,201
3,4	39	70	10	011200340	3,201
3,5	39	70	10	011200350	2,912
3,6	39	70	10	011200360	3,516
3,7	39	70	10	011200370	3,516
3,75	39	70	10	011200375	3,516
3,8	43	75	10	011200380	3,516
3,9	43	75	10	011200390	3,516
4	43	75	10	011200400	3,201
4,1	43	75	10	011200410	4,028
4,2	43	75	10	011200420	4,028
4,25	43	75	10	011200425	4,028
4,3	47	80	10	011200430	4,028
4,4	47	80	10	011200440	4,028
4,5	47	80	10	011200450	3,667
4,6	47	80	10	011200460	4,284
4,7	47	80	10	011200470	4,284

22 KRINO/INDUSTRIAL

1 DESCRIZIONE
Description/designation/descripción

2 CODICE FAMIGLIA
Code/code/codigo

3 CARATTERISTICHE
Features/caractéristiques/características

4 DIMENSIONI
Dimensions/dimensions/medídas

5 CODICE ARTICOLO
Item number/code ref./codigo art.

6 LISTINO PREZZI
Price list/tarif de prix/tarifa de precios

7 CONFEZIONAMENTO
Packaging/conditionnement/embalaje

8 APPLICAZIONI E MATERIALI
Applications and materials/applications et materiaux / aplicaciones y materiales

The catalogue is easy to consult, every page has item number, features, packaging and applications to the left side. To the right side appear: size, dimensions, code and gross price. The operator is helped to the tool choice by simple icons showing the real products purpose.

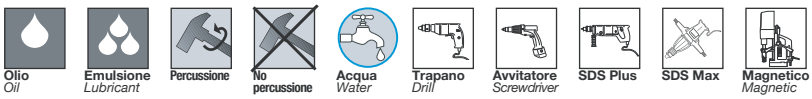
Ce catalogue est de facile consultation, chaque page porte, reference, caracteristiques, conditionnement, et applications dans le côté de gauche. A droite on trouve les dimensions, mesures, codes et tarif brut. L'opérateur est aidé dans le choix de l'outil par de simples icônes indiquant l'objectif réel du produit.

Este catálogo es facíl a consultar, cada página reporta a la izquierda, articulo, caracteristicas, envase y aplicaciones, a la derecha , medida, dimensiones, codigo y precios brutos. Se ayuda al operador a elegir la herramienta mediante iconos simples que muestran el propósito real de los productos.

Una dettagliata simbologia dei materiali da lavorare, di immediata visualizzazione, aiuta ad una agevole scelta.
All materials to work are easily identified by an icons system.
Les symboles détaillés des matériels à travailler, d'une visualisation immédiate, permettent un choix aisé.
Una detallada simbología de los materiales a trabajar de inmediata visualización, ayuda a elegir fácilmente.



MATERIALI
Materials
Materiaux
Materiales



APPLICAZIONI
Applications
Applications
Aplicaciones

Notevole e costante cura é stata dedicata alla costruzione dei nostri utensili, una qualità che significa massima efficienza ed, insieme totale sicurezza per gli utilizzatori. Rendimenti elevati si ottengono solo con un corretto utilizzo dell'utensile. Per questo motivo, invitiamo ad una scelta appropriata dell'utensile, prima di intraprendere una qualsiasi operazione di taglio, avvalendosi delle informazioni specifiche contenute nel catalogo, sulle confezioni dei prodotti e della consulenza tecnica diretta dei tecnici aziendali. Un corretto utilizzo significa anche e sopratutto usare sempre tutte le protezioni di sicurezza individuali richiesta dallo specifico lavoro. La vostra salute é un bene prezioso, difendetela.

A special care has been dedicated during the production of our tools, quality means perfect working order and total safety for the hand users. High performance are possible only with the right use of the tools. For this reason we invite you, before starting with any kind of cutting operation to choose the right tool thanks to the information given by this catalogue or on the products packaging and, when necessary directly from our technical staff. Always use the individual safety protections required by the specific work. Your health is precious, protect it!

Un grand et constant soin a été dédié à la production de nos outils, qualité signifie efficacité et aussi total sécurité pour les utilisateurs. On peut obtenir des performances élevées seulement avec un correct usage de l'outil. Pour cette raison là, nous Vous invitons, avant d'entreprendre n'importe quel opération de coupe, une choix appropriée de l'outil, en Vous référant aux informations spécifiques contenues dans le catalogue, dans les confections des produits et quand c'est nécessaire en demandant une consultation technique directement à notre staff d'entreprise. Usage correct signifie aussi: utiliser toujours toutes les protections de securité exigées par le travaille spécifique. Votre santé est précieux, protégez-la!

Gran atención ha sido dedicada para la construcción de nuestros utensilios, calidad significa máxima eficiencia y total seguridad para los utilizatores. Rendimientos elevados se pueden conseguir solamente con el utilizo correcto de los utensilios. Por esta razón, antes de empezar una operación de corte, elegir el utensilio apropriado gracias a las informaciones contenidas en el catálogo, en el envase de los productos y cuando es necesario preguntando directamente al servicio técnico de la empresa. Utilización correcta es también: utilizar siempre las protecciones de securidad individuales requeridas. Vuestra salud es preciosa, protegedla!

Lavorare in sicurezza
safety works
travailler en sécurité
trabajar en securidad



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KRINO CUTTING TOOLS ENGINEERING

Industrial
Professional

TAGLIO DEI METALLI Metal cutting

rettificate - serie corta
fully ground - rectifié - rectificada - geschliffen

cod.		DIN		pag.
01120		338	HSS-CO 8%	22
01122 01123		338	HSS-CO 8%	24
01145		338	HSS-CO 5%	28
01147 01146		338	HSS-CO 5%	30 31
01157		ANSI B94	HSS-CO 5% inches	122
01140		338	HSS-CO 5%	40
01305		338	HSS-CO+TiAlN	40
01139		338	HSS-CO 5%	42
01300		338	HSS-CO+TiAlN	43
01160		338	HSS-G+TiN	90
01163 01164		338	HSS-G+TiN	92
01162		ANSI B94	HSS-G+TiN inches	121
01089		338	Metallo duro Carbide	78
01220		338	HSS-G Speedmaster	44
01201		338	HSS-G Dual performer	46
01203 01209		338	HSS-G Dual performer	48
01060		338	HSS-G	52
01062 01063		338	HSS-G	54
01092 W		338	HSS-G Alu	59
01091 H		338	HSS-G	59
01090 LH		338	HSS-G	60
01093		338	HSS+HM Carbide tip	58
01066		338	HSS-G 118°	74
01320		338	HSS+TiN 118°	76
01070		338	HSS-G	82
01072 01074		338	HSS-G	84
01115		ANSI B94	HSS-G inches	124
01079		~338	HSS-G	86

rettificate - serie corta
fully ground - rectifié - rectificada - geschliffen

cod.		DIN		pag.
01080		338	HSS Black & white	104
01082 01084		338	HSS Black & white	105
01350		338	HSS Basic	96
01352 01354		338	HSS Basic	98 99

rullate - serie corta
roll forged - laminés - laminada - rollgewaltze

cod.		DIN		pag.
01006		338	HSS-CO 2%	108
01001		338	HSS	110
01003 01004		338	HSS	112
01030		ANSI B94	HSS inches	126
01034		ANSI B94	HSS inches	127

rettificate - serie extra corta
fully ground - rectifié - rectificada - geschliffen

cod.		DIN		pag.
01126		1897	HSS-CO 8%	25
01149		1897	HSS-CO 5%	32
01143		1897	HSS-CO 5%	41
01307		1897	HSS-CO+TiAlN	41
01166		1897	HSS-G+TiN	93
01119		1897	Metallo duro Carbide	79
01207		1897	HSS-G Dual performer	49
01094		1897	HSS-G	55
01067 LH		1897	HSS-G	61
01022		1897	HSS-G - 118°	76
01076		1897	HSS-G	85
01077		~1897	HSS-G	86
01087		1897	HSS Black & white	105
01356		1897	HSS-G Basic	100
01050		Norma Krino	HSS-G	85
01051			HSS-CO 5%	32
01148		~1897	HSS-CO 5%	33
01095		~1897	HSS-G	55

rullate - serie extra corta
roll forged - laminés - laminada - rollgewaltze

cod.		DIN		pag.
01018		1897	HSS	114

N= NEW

rettificate - serie lunga
fully ground - rectifié - rectificada - geschliffen

cod.		DIN		pag.
01128		340	HSS-CO 8%	25
01152		340	HSS-CO 5%	34
01376 01377 01378		1869/1 1869/2 1869/3	HSS-CO 5% Parabolic	35
01141		340	HSS-CO 5%	41
01306		340	HSS-CO+TiAlN	41
01168		340	HSS-G+TiN	93
01208		340	HSS-G Dual performer	49
01096		340	HSS-G	56
01078		340	HSS-G	87
01086		340	HSS Black & white	105
01358		340	HSS Basic	101

rullate - serie lunga
roll forged - laminés - laminada - rollgewaltze

cod.		DIN		pag.
01020		340	HSS	113

rettificate
fully ground - rectifié - rectificada - geschliffen

cod.		DIN		pag.
01098 01099 01100		1869/1 1869/2 1869/3	HSS-G	57
01370 01371 01372		1869/1 1869/2 1869/3	HSS-G Parabolic	57
01105		Norma Krino	HSS-G	58
01114			HSS-G	58
01129			HSS-G	56
01103		8376	HSS	64
01101		8374	HSS	64
01117		8378	HSS	65
01104		8377	HSS	64
01102		8375	HSS	64
01059 01058 01057		~8376 ~8374 ~8378	HSS	65
01110 01214	60°	333/A	HSS-G HSS-G + TiN	62
01112 01217	60°-120°	333/B	HSS-G HSS-G + TiN	63
01111 01216	60°	333/R	HSS-G HSS-G + TiN	63
01374	60°	~333/A	HSS-G	62
01375	60°	~333/A	HSS-G	62

TECH

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cod.		DIN		pag.
01364 01365	90° 120°	-	HSS-G	63
01361 01363	90° 120°	-	Metallo duro Carbide	79
01368 01366		6537K	Metallo duro+TiAlN Carbide+TiAlN	80
01369 01367		6537L	Metallo duro+TiAlN Carbide+TiAlN	81

codolo Morse
Morse taper - queue Morse - mango conico - MorseKegel

cod.		DIN		pag.
01150		345	HSS-CO 5% Fresata-Milled	36
01097		345	HSS Fresata-Milled	68
01213		345	HSS-HM Fresata-Milled	73
01025		345	HSS Rullata-Rolled	116
01028		341	HSS Fresata-Milled	70
01069		341	HSS Fresata-Milled	71
01088		1870/1	HSS Fresata-Milled	72
01171		≈1897	HSS-CO	146
01169		≈1897	HSS-CO+TiN	146
01172		-	HSS-CO	146
01173		-	HSS-CO+TiN	146
01179		-	Metallo duro+TiAlN Carbide+TiAlN	146
01174		-	HSS	147
01175		-	HSS	147
03142		-	Metallo duro Carbide	147
01185		335/C-90°	HSS	132
01260		335/C-90°	HSS+TiN	132
01261		335/C-90°	HSS-CO	132
01262		335/C-90°	HSS-CO+TiAlN	132
01263		335/C-90°	Metallo duro Carbide	133
01264		335/C-90°	Metallo duro+TiAlN Carbide+TiAlN	133
01192		335/C-90°	HSS 1 tagliente-1 flute	134
19001		335/C-90°	HSS	133
19003		335/C-90°	HSS	133
01193		335/C-90°	HSS	134
01196		335/D-90°	HSS	134
01197		75°	HSS	135
01186		334/C-60°	HSS	135
01188		90°	HSS	134

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Industrial
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01190	40°	HSS	135
01272 01273 01274	373	HSS	136
01182	-	HSS-G	137
01180	-	HSS-G	138
01200	-	HSS-G+TiN	139
01206	-	HSS-G+TiAlN	139
01215	-	HSS-G	138
01176	-	HSS C.V.	138
01183 01254	-	HSS-G	142 145
01230	-	HSS-G+TiN	144
01236	-	HSS-G+TiAlN	144
01239	-	HSS-G	143
01240	-	HSS-G	140
01244	-	HSS-G+TiN	141
01248	-	HSS-G+TiAlN	141
01241	-	HSS	140
21001	-	HSS-G	148
21011	-	HSS-CO	150
21300	-	HSS-G+TiN	152
21325	-	HSS-G+TiAlN	153
21040	-	T.C.T Denti HM	154
21042	-	T.C.T Denti HM	155
21200 Weldon	-	HSS-G	156
21202 Weldon	-	HSS-G	156
21206 Weldon	-	HSS-CO	157
21207 Weldon	-	HSS-CO	157
21204 Weldon	-	HSS-TiAlN	158
21205 Weldon	-	HSS-TiAlN	158
21216 Weldon	-	Metallo duro Carbide tip	159
21218 Weldon	-	Metallo duro Carbide tip	160
21211 Quick-IN®	-	HSS-CO 5%	160
21212 Quick-IN®	-	Metallo duro Carbide tip	161
28011 CE	-	-	162

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21060 21066	-	BIM M3/1 HSS	174 178
21090 21065	-	BIM M42 CO 8%	182 186
21070	-	HSS	175
21061	-	BIM M3/1 HSS	185
21069	-	BIM M42 CO 8%	191
21073	-	BIM M42 CO 8%	190
26070	-		192
26075	-		193
26001 26003	-	HSS Z2 HSS Z3	164
26031 26032	-	HSS+TiAlN Z2 HSS+TiAlN Z3	165
26015 26020	-	Metallo duro Carbide HM3 HM4	166
26016	-	Metallo duro Carbide HM3PLUS	170
26033 26034	-	Metallo duro+TiAlN Carbide +TiAlN HM3 HM4	168
26028 26027	-	Metallo duro Carbide long HM3PLUS HM4	172
26025 26026 Alu	-	Metallo duro Carbide HM1	173
27001 27002 27003	~UNI 4012	HSS VAPO	198
27011 27012 27013	~UNI 4012	HSS-CO VAPO	198
27050 27055	-	Metallo duro Carbide tip	199
27060 27070 Legno Wood	-	Metallo duro Carbide tip	200 201
26125	-	HSS-CO ASP30 HM Carbide	202
26150 26152 26154	4964/B 4964/A 4964/D	HSS-CO 10%	203
23001	-	BIM HSS-CO HSS	204
23005	-	Carbide grit	205
23010	-	Carbide grit	205
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N= NEW

cod.		DIN			pag.
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10250		371/B	HSS-CO	M	216
10165		376/B	HSS-G	M	216
10277 LH		371/B	HSS-CO	M	241
10278 LH		376/B	HSS-CO	M	241
10253		376/B	HSS-CO	M	216
10183		371/C 35°	HSS-G	M	219
10255		371/C 35°	HSS-CO	M	219
10279 LH		371/C 35°	HSS-CO	M	242
10180		376/C 35°	HSS-G	M	219
10288 LH		376/C 35°	HSS-CO	M	242
10257		376/C 35°	HSS-CO	M	219
10174		371/C 15°	HSS-G	M	218
10256		371/C 15°	HSS-CO	M	218
10177		376/C 15°	HSS-G	M	218
10258		376/C 15°	HSS-CO	M	218
10168		371/C	HSS-G	M	217
10251		371/C	HSS-CO	M	217
10263 LH		371/C	HSS-CO	M	241
10171		376/C	HSS-G	M	217
10254		376/C	HSS-CO	M	217
10264 LH		376/C	HSS-CO	M	241
10261		371/B	HSS-CO	M	221
10262		376/B	HSS-CO	M	221
10172		ISO 529/B	HSS-G	M	222
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10312					
10313		371/C-35°	HSS-CO	M	223
10314		376/C-35°			
10315					
10291		~371/B	HSS-CO	M	224
10292		~371/C 35°	HSS-CO	M	224
10273		357	HSS-CO	M	220
10290		357	HSS-CO	M	220
10297		371/B	HSS-CO	M	225
10298		376/B	HSS-CO	M	225
10299		371/C 35°	HSS-CO	M	225
10300		376/C 35°	HSS-CO	M	225

cod.		DIN			pag.
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10351		376/B	HSS-CO +TiN	M	226
10354		371/C 35°	HSS-CO +TiN	M	226
10355		376/C 35°	HSS-CO +TiN	M	226
10400		371/B	HSS-CO +TiAlN	M	229
10401		376/B	HSS-CO +TiAlN	M	229
10404		371/C 35°	HSS-CO +TiAlN	M	229
10405		376/C 35°	HSS-CO +TiAlN	M	229
10259		374/B	HSS-CO	MF	230
10286 LH		374/B	HSS-CO	MF	243
10260		374/C 35°	HSS-CO	MF	231
10287 LH		374/C 35°	HSS-CO	MF	243
10252		374/C	HSS-CO	MF	232
10198		374/C-15°	HSS-G	MF	232
10280		~2174	HSS-CO	M	233
10360		~2174	HSS-CO +TiN	M	233
10281		~2174	HSS-CO	M	233
10361		~2174	HSS-CO +TiN	M	233
10268		5156/B	HSS-CO	BSP	234
10204		374/C-15°	HSS-G	BSP	234
10267		5156/C-35°	HSS-CO	BSP	234
10276		5156/C	HSS-CO	BSP	234
10289 LH		5156/C	HSS-CO	BSP	242
10265		~371/B	HSS-CO	BSW	235
10266		~376/B	HSS-CO	BSW	235
10274		~371/C 35°	HSS-CO	BSW	235
10275		~376/C 35°	HSS-CO	BSW	235
10269		~371/B	HSS-CO	UNC	236
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10271		~371/C 35°	HSS-CO	UNC	236
10272		~376/C 35°	HSS-CO	UNC	236
10282		~371/B	HSS-CO	UNF	237
10283		~376/B	HSS-CO	UNF	237
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10285		~376/C 35°	HSS-CO	UNF	237

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10306		B	HSS-CO	NPTF	239
10307		C-35°	HSS-CO	NPTF	239
10308		C	HSS-CO	NPS	240
10309		C-35°	HSS-CO	NPS	240
10362 PM		371/B 376/B	HSS-CO + TiN	M	227
10363		371/C 40°	HSS-CO + TiN	M	227
10515		371/B 376/B	HSS-CO	M	228
10516		371/C 40° 376/C 40°	HSS-CO	M	228
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10505		376/B	HSS-CO	M	244
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10507		376/C 40°	HSS-CO	M	244
10500		371/B	HSS-CO	M	245
10501		376/B	HSS-CO	M	245
10502		371/C 40°	HSS-CO	M	245
10503		376/C 40°	HSS-CO	M	245
10508		371/C	HSS-CO	M	246
10509		376/C	HSS-CO	M	246
10510		371/A	HSS-CO	M	246
10511		371/C 40°	HSS-CO	M	247
10512		376/C 40°	HSS-CO	M	247
10513		371/C	HSS-CO	M	247
10514		376/C	HSS-CO	M	247
10330		371/C 40°	HSS-CO	M	228
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10144		352	HSS-CO	M	249
10147		352	HSS-CO	M	249
10155		352	HSS+TiN	M	250
10102 LH		352	HSS-G	M	250
10110		~352	HSS-G	BSW	256
10111 LH		~352	HSS-G	BSW	256
10120		~352	HSS-G	UNC	257
10122 LH		~352	HSS-G	UNC	257

cod.		DIN			pag.
10105		2181	HSS-G	MF	252
10146		2181	HSS-CO	MF	254
10107 LH		2181	HSS-G	MF	254
10115		5157	HSS-G	BSP	255
10148		5157	HSS-CO	BSP	255
10117 LH		5157	HSS-G	BSP	255
10112		~2181	HSS-G	BSF	256
10125		~2181	HSS-G	UNF	258
10127 LH		~2181	HSS-G	UNF	258
10136		40432	HSS-G	PG	251
10139		C	HSS-G	BSPT	259
10134		ANSI B2.1	HSS-G	NPT	259
10293		C	HSS-CO	NPT	259
10294		C	HSS-CO	BSPT	259
12060		223	HSS	M	260
12066		-	HSS	M	261
12067		-	HSS+TiN	M	261
12144		223	HSS-CO	M	262
12165		223	HSS+TiN	M	263
12062 LH		223	HSS	M	262
12065		223	HSS	MF	264
12146		223	HSS-CO	MF	266
12072 LH		223	HSS	MF	266
12069		223	HSS	MF	263
12070		223	HSS	BSW	268
12088 LH		223	HSS	BSW	268
12087		223	HSS	BSF	268
12080		223	HSS	UNC	269
12082 LH		223	HSS	UNC	269
12085		223	HSS	UNF	270
12086 LH		223	HSS	UNF	270
12079		223	HSS	UNEF	270
12075		5158	HSS	BSP	267
12148		5158	HSS-CO	BSP	267
12077 LH		5158	HSS	BSP	267
12089		-	HSS	BSPT	271
12091		-	HSS	NPT	271
12093		-	HSS	PG	263
12094		382	HSS	M	272
12096		382	HSS	MF	273
12098		382	HSS	BSP	273
15001		1814	Lega Alloy	-	309
15003		1814	Acciaio Steel	-	309
15010		-	Acciaio Steel	-	310
15011		-	Acciaio Steel	-	310
15005		-	-	-	310
15006		-	-	-	310
15030		225	Lega Alloy	-	311
15035		225	Lega Alloy	-	311
15032		225	Acciaio Steel	-	311
15037		225	Acciaio Steel	-	311
10065		-	-	-	312
SETS		-	HSS	-	280

N= NEW

cod.		DIN			pag.
10600		-	INOX Stainless Steel	-	286
10631					287
10605					288
10606					292
10625					293
10212		-	HSS-G	M	274
10230			HSS-G+TiN		274
10210			HSS-G		274
10211			HSS-G		275
10001		UNI 4535	C.V.	M	300
10010		UNI 2709	C.V.	BSW	303
10020		ANSI B1.1	C.V.	UNC	304
10003		UNI 4535	C.V.	M-MF	301
10012		UNI 2709	C.V.	BSF	303
10025		ANSI B1.1	C.V.	UNF	304
10015		UNI 338	C.V.	BSP	302
10017		UNI 6125	C.V.	BSPT	302
10032		ANSI B2.1	C.V.	NPT	304
10030		~357	C.V.	M	302
12001		~223	C.V.	M	305
12005		~223	C.V.	MF	305
12015		~223	C.V.	BSP	306
12017		~223	C.V.	BSPT	306
12010		~223	C.V.	BSW	307
12012		~223	C.V.	BSF	307
12020		~223	C.V.	UNC	308
12025		~223	C.V.	UNF	308
12032		~223	C.V.	NPT	308
SETS		-	C.V.	-	314
29020		212/2B	HSS-CO		326
29021		212/2C	HSS-CO		326
29026		208/B	HSS-CO		327
N 29039		311	HSS		327
29040		219B	HSS		328
29001		206B	HSS		329
29005		-	HSS		330
29006		859/B	HSS		
29010		9B	HSS		331
24013		844K	HSS-CO 8%		332
24015			HSS-CO 8%+TiAlN		
24014		844L	HSS-CO 8%		332
24016			HSS-CO 8%+TiAlN		
24017		844K	HSS-CO 8%		333
24019 NR			HSS-CO 8%+TiAlN		

cod.		DIN		pag.
24018		844L	HSS-CO 8%	333
24020 NR			HSS-CO 8%+TiAlN	
24021		844K	HSS-CO 8%	334
24023 NF			HSS-CO 8%+TiAlN	
24022		844L	HSS-CO 8%	334
24024 NF			HSS-CO 8%+TiAlN	
24009		844K	HSS-CO 8%	335
24011			HSS-CO 8%+TiAlN	
24010		844L	HSS-CO 8%	335
24012			HSS-CO 8%+TiAlN	
24001		327D	HSS-CO 8%	336
24003			HSS-CO 8%+TiAlN	
24002		844L	HSS-CO 8%	336
24004			HSS-CO 8%+TiAlN	
24005		327D	HSS-CO 8%	337
24007			HSS-CO 8%+TiAlN	
24006		Norma Krino	HSS-CO 8%	337
24008			HSS-CO 8%+TiAlN	
26100		-	HSS-G	337
24025		845K	HSS-CO 5%	338
24026		845L	HSS-CO 5%	338
24029		845K	HSS-CO 5%	339
NR				
24030		845L	HSS-CO 5%	339
NR				
24177		~6527L	Metallo duro+TiAlN Carbide+TiAlN	347
24185		~6527L	Metallo duro+TiAlN Carbide+TiAlN	
24178		Norma Krino	Metallo duro+TiAlN Carbide+TiAlN	
24186		~6527L	Metallo duro+TiAlN Carbide+TiAlN	
24176		~6527L	Metallo duro+TiAlN Carbide+TiAlN	348
24174		6527L	Metallo duro+TiAlN Carbide+TiAlN	
24175		6527L	Metallo duro+TiAlN Carbide+TiAlN	
24180		Norma Krino	Metallo duro Carbide	
24169		6527L	Metallo duro Carbide	341
24171		6527L	Metallo duro+TiAlN Carbide+TiAlN	
24170		Norma Krino	Metallo duro Carbide	
24172		Norma Krino	Metallo duro+TiAlN Carbide+TiAlN	
24165		6527K	Metallo duro Carbide	340
24167		6527K	Metallo duro+TiAlN Carbide+TiAlN	
24166		6527L	Metallo duro Carbide	
24168		6527L	Metallo duro+TiAlN Carbide+TiAlN	
24182		6527L	Metallo duro+TiAlN Carbide+TiAlN	
24183		6527L	Metallo duro+TiAlN Carbide+TiAlN	342
24184		6527L	Metallo duro+TiAlN Carbide+TiAlN	

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KRINO CUTTING TOOLS ENGINEERING

Industrial
Professional
High Quality Professional

cod.		DIN		pag.
24161		6527L	Metallo duro Carbide	343
24163		6527L	Metallo duro+TiAlN Carbide+TiAlN	
24162		Norma Krino	Metallo duro Carbide	
24164		Norma Krino	Metallo duro+TiAlN Carbide+TiAlN	
24181		Norma Krino	Metallo duro+TiAlN Carbide+TiAlN	
24156		~6527L	Metallo duro Carbide	344
24154		6527K	Metallo duro Carbide	
24155		Norma Krino	Metallo duro Carbide	
24150		6527K	Metallo duro Carbide	345
24152		6527K	Metallo duro+TiAlN Carbide+TiAlN	
24151		Norma Krino	Metallo duro Carbide	
24153		Norma Krino	Metallo duro+TiAlN Carbide+TiAlN	
24157		6527L	Metallo duro Carbide	346
24159		6527L	Metallo duro+TiAlN Carbide+TiAlN	
24158		Norma Krino	Metallo duro Carbide	
24160		Norma Krino	Metallo duro+TiAlN Carbide+TiAlN	
24179		6528	Metallo duro+TiAlN Carbide+TiAlN	

UTENSILI PER EDILIZIA
Building & construction cutting tools

cod.		DIN		pag.
03060		8039	Superior	350
03063				
03065		8039	Superior	350
03067				
03059		-	Superior	351
03072		-	Max4	352
03075		8039	Superspeed	353
03110		8039	Supergranit	354
03112				
03100		8039	Extreme Hard Cut	355
03069		8039	SDD	356
03077		8039	Multik	357
03076		8039	Multik	357
03080		8039	Foratutto	358
03082				
03089		-	Foratutto	359
03140		-	Vetro	359

cod.		DIN		pag.
03052		8039	Standard Plus	360
03053		8039	Standard Plus	360
03054				
03001		8039		362
03005		8039		363
03009				
03011		8039		364
03015				
03160		-	SDS plus K4	366
03169		-	SDS plus HAMMER	368
03167		-	SDS plus 4x4 Speedmaster	370
03155		-	SDS PLUS Standard	372
03156		-	SDS PLUS K8	374
03170		-	SDS MAX	376
03171		-	SDS MAX	377
N 03172		-	SDS PLUS	378
N 03172		-	SDS MAX	378
N 03221	Premium	-	SDS PLUS	379
N 03220		-	SDS PLUS	380
03222				
N 03210		-	SDS MAX	381
03212				
21110		-	M16 M22	382
21111				
21120		-	Conico 1:8	384
21122		-	Filetto a molla With spring	386

N= NEW

cod.		DIN		pag.
21015		-	MD Carbide tip	387
21105		-	MD Carbide grit	388
21106		-	M14	390
03122		-	HEX Keramaster Plus	391
03117		-	HEX Keramaster	392
21104		-	Keramaster	392
03125		-	CIL 6mm	394
03405 03505 03400 03500 03410 03510		-	-	395
03515		-	Special Gres	394

UTENSILI PER IL TAGLIO DEL LEGNO
Wood working cutting tools

cod.		DIN		pag.
05001		~7487	WS	400
05009		-	WS	402
05020 05025		-	WS	401
05200		~7487	HSS	402
05054		-	WS	403
05210 05212		-	WS	404
05030 05033		-	WS	405
05035 05036		-	WS	406

cod.		DIN		pag.
05040 05042 05044		-	WS	406
05037 05038		-	WS	407
05045 05048		-	WS	409
05063		~7483	WS	410
05067		~7483	WS	410
05065		~7483	Metallo duro Carbide tip	410
05058 05060		-	WS Metallo duro	411
05050		-	WS	409
05077		7489	WS	411
05076		-	-	411
05440		-	WS	412
05072 05070		-	WS	412
05432		-	CV	412
05078		-	Metallo duro Carbide tip	430
21100		-	Metallo duro Carbide tip	431
05080		-	WS	432
23405 23410 23415 23400		-	Starlock®	414 415 416 417
23505 23510 23515 23500 23529		-	Universal	418 418 419 419 419

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KRINO CUTTING TOOLS ENGINEERING

Industrial
Professional
High Quality Professional

cod.		DIN		pag.
23600		-	HCS	420
23610			BIM HSS	421
23620			HSS - BIM HSS	422
23630			HCS - HM	423
23700		-	HCS	424
23710			HSS	425
23720		-	BIM HSS	425
23800		-	HCS	426
23810			BIM HSS	427
23815			BIM HSS	428
23820			BIM HSS - HM	429
05400		-		433
05430				
05432				

ACCESSORI
Accessories

	cod.		DIN		pag.
	28150		2185	-	436
	28154		2187	-	436
	28160		-	-	437
	28165		-	-	437
	28158		317 318	-	437 437
N	**28001**		6349	-	438
	28002				438
	28003				438
	28010				438
N	**28004**				439
N	**2800910**		-	SDS PLUS	438
	2800710				439
N	**2800930**		-	SDS PLUS	438
	2800730				440
	2800920		-	1/4 QC	438
	28186100			SDS PLUS	439
	28186200			1/4 QC	439
	28186201			1/4 QC	439
	28186204		-	1/2x20 UNF	439
	28186203			1/2x20 UNF	439
	28186205			3/8x24 UNF	439
	28054		-	Camicia plastica Plastic sleeve	440
	28058				440
	28053		-	Camicia metallica Metal sleeve	440
N	**28055**		-	Camicia metallica Metal sleeve	440
	28051			Griffe MD Carbide jaws	440
	28031		-		441
	28030		-		441
	28032				441
N	**28034**		-		441
	28035				



PUNTE PER TAGLIO DEI METALLI

Twist drills for metal cutting
Forets à métaux
Brocas para metales
Metall-Spiralbohrer

HSS

METALLO DURO
CARBIDE

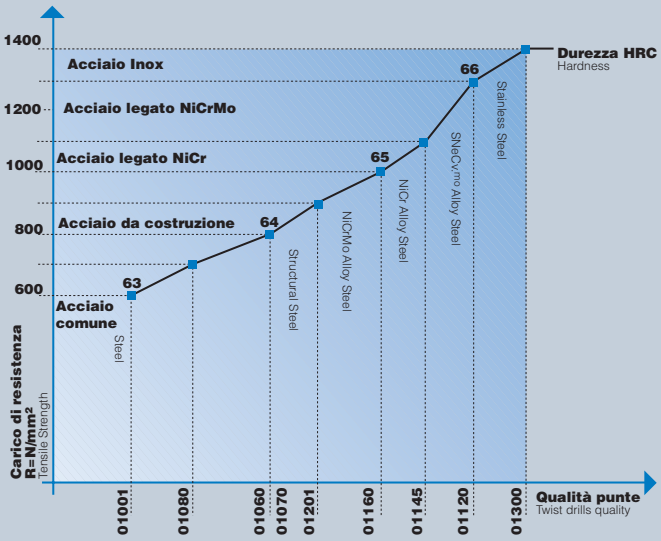
CUTTING TOOLS ENGINEERING

Metal working accounts for over than 60% all process and the great use of strong alloys push our Company to develop 10 models of HSS drills, every one with its own characteristics. Furthermore, in accordance with the international directives about pollution we develop more and more advanced and save tools which allow a real saving and a favorable impact on the environment.

Les perçages des métaux représente le 60% de tous les procès et la grand utilisation des alliages très dures a poussé notre Société au développement de 10 gammes de forets en acier HSS, tous avec leur propres caractéristiques. En outre, en accordance avec les normes internationales en matière de pollution, nous fabriquons des outillages sures et avancés, qui permettent un réel épargne et un favorable impact sur l'environnement.

El corte de los metales representa el 60% de todos los trabajos y la gran utilización de aleaciones muy duras a permitido a nuestra empresa de introducir 10 modelos de brocas HSS. Cada una con su propia caracteristica. Además, con respecto a las directivas internacionales en materia de inquinamento, fabricamos utensilios seguros y avanzados que permiten un real ahorro y un favorable impacto con el ambiente.

Punte per metalli HSS, diagramma dei campi di utilizzo
Table for the selection of metal drills



La lavorazione dei fori nei metalli occupa più del 60% di tutte le lavorazioni per asportazione di truciolo ed è, al tempo stesso, una delle operazione più difficoltose. L'esigenza di aumentare la produttività in queste lavorazioni e l'uso di materiali da forare sempre più duri hanno portato allo sviluppo di leghe di acciaio adeguate alle nuove ed impegnative richieste. La nostra Società, forte di una esperienza più che trentennale nella produzione di utensili per asportazione di truciolo, ha così sviluppato diverse linee di punte per trapano in acciaio superrapido e nuove famiglie di punte in metallo duro integrale, ognuna con caratteristiche proprie, adatte alle necessità industriali, professionali e per il fai da te. Insieme alle esigenze di competitività, che hanno spinto alle condizioni estreme i parametri di taglio, si va sempre più diffondendo una sensibilità ambientale che ha grande influenza sul modo di produrre e vendere i prodotti. Pertanto, mentre la nostra Azienda ottempera alle direttive internazionali sull'inquinamento, ha sviluppato utensili da taglio sempre più qualificati ed avanzati, che permettono un lavoro sicuro, rapido ed efficiente: ciò comporta un effettivo risparmio economico per il nostro cliente, con una benefica ricaduta ambientale.

PUNTE ELICOIDALI AL COBALTO 8%, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE CORTA

Cobalt twist drills ground from the solid / Forets cylindriques au cobalt entièrement rectifiés
Broca helicoidale rectificada de cobalto / Kobalt Spiralbohrer

HSS-CO 8% DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01120





HV ≈ 850÷920
AISI M42
SPLIT POINT
DIN 1412 C
(Ø≥3 mm)

Art. **01121** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*

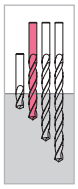


Applicazioni / *Applications*

R ≤ 1400 N/mm²



< 5 d



- L'alta percentuale di Cobalto (e Molibdeno) rende questa punta particolarmente resistente alle sollecitazioni meccaniche e termiche e, pertanto, é adatta alle lavorazioni dell'acciaio inox e degli acciai resistenti al calore, di tutti gli acciai alto legati e delle leghe molto tenaci (Acciai al Ni Cr, hastelloy, nimonic, inconel).
- *High performances in cutting stainless steel, alloy steel up to R ≤ 1400 N/mm².*
- *Pour percer l'acier inox et l'acier allié avec R ≤ 1400 N/mm².*
- *Para taladar acero inox R ≤ 1400 N/mm².*
- *Einsatz: Geeignet für legierte Stähle bis R ≤ 1400 N/mm² Zug-Festigkeit Korrosionsbeständige Stähle (V 2A - V 4A etc.), Säure und Hitzebeständige, Grauguss und Stahlguss.*

Ø h8	/	L	pcs	cod.
0,3	3	19	10	011200030
0,35	4	19	10	011200035
0,4	5	20	10	011200040
0,45	5	20	10	011200045
0,5	6	22	10	011200050
0,55	7	24	10	011200055
0,6	7	24	10	011200060
0,65	8	26	10	011200065
0,7	9	28	10	011200070
0,75	9	28	10	011200075
0,8	10	30	10	011200080
0,85	10	30	10	011200085
0,9	11	32	10	011200090
0,95	11	32	10	011200095
1	12	34	10	011200100
1,1	14	36	10	011200110
1,2	16	38	10	011200120
1,25	16	38	10	011200125
1,3	16	38	10	011200130
1,4	18	40	10	011200140
1,5	18	40	10	011200150
1,6	20	43	10	011200160
1,7	20	43	10	011200170
1,75	22	46	10	011200175
1,8	22	46	10	011200180
1,9	22	46	10	011200190
2	24	49	10	011200200
2,1	24	49	10	011200210
2,2	27	53	10	011200220
2,25	27	53	10	011200225
2,3	27	53	10	011200230
2,4	30	57	10	011200240
2,5	30	57	10	011200250
2,6	30	57	10	011200260
2,7	33	61	10	011200270
2,75	33	61	10	011200275
2,8	33	61	10	011200280
2,9	33	61	10	011200290
3	33	61	10	011200300
3,1	36	65	10	011200310
3,2	36	65	10	011200320
3,25	36	65	10	011200325
3,3	36	65	10	011200330
3,4	39	70	10	011200340
3,5	39	70	10	011200350
3,6	39	70	10	011200360
3,7	39	70	10	011200370
3,75	39	70	10	011200375
3,8	43	75	10	011200380
3,9	43	75	10	011200390
4	43	75	10	011200400
4,1	43	75	10	011200410
4,2	43	75	10	011200420
4,25	43	75	10	011200425
4,3	47	80	10	011200430
4,4	47	80	10	011200440
4,5	47	80	10	011200450
4,6	47	80	10	011200460
4,7	47	80	10	011200470

Ø h8	/	L	pcs	cod.
4,75	47	80	10	011200475
4,8	52	86	10	011200480
4,9	52	86	10	011200490
5	52	86	10	011200500
5,1	52	86	10	011200510
5,2	52	86	10	011200520
5,25	52	86	10	011200525
5,3	52	86	10	011200530
5,4	57	93	10	011200540
5,5	57	93	10	011200550
5,6	57	93	10	011200560
5,7	57	93	10	011200570
5,75	57	93	10	011200575
5,8	57	93	10	011200580
5,9	57	93	10	011200590
6	57	93	10	011200600
6,1	63	101	10	011200610
6,2	63	101	10	011200620
6,25	63	101	10	011200625
6,3	63	101	10	011200630
6,4	63	101	10	011200640
6,5	63	101	10	011200650
6,6	63	101	10	011200660
6,7	63	101	10	011200670
6,75	69	109	10	011200675
6,8	69	109	10	011200680
6,9	69	109	10	011200690
7	69	109	10	011200700
7,1	69	109	5	011200710
7,2	69	109	5	011200720
7,25	69	109	5	011200725
7,3	69	109	5	011200730
7,4	69	109	5	011200740
7,5	69	109	5	011200750
7,6	75	117	5	011200760
7,7	75	117	5	011200770
7,75	75	117	5	011200775
7,8	75	117	5	011200780
7,9	75	117	5	011200790
8	75	117	5	011200800
8,1	75	117	5	011200810
8,2	75	117	5	011200820
8,25	75	117	5	011200825
8,3	75	117	5	011200830
8,4	75	117	5	011200840
8,5	75	117	5	011200850
8,6	81	125	5	011200860
8,7	81	125	5	011200870
8,75	81	125	5	011200875
8,8	81	125	5	011200880
8,9	81	125	5	011200890
9	81	125	5	011200900
9,1	81	125	5	011200910
9,2	81	125	5	011200920
9,25	81	125	5	011200925
9,3	81	125	5	011200930
9,4	81	125	5	011200940
9,5	81	125	5	011200950
9,6	87	133	5	011200960
9,7	87	133	5	011200970

Ø h8	/	L	pcs	cod.
9,75	87	133	5	011200975
9,8	87	133	5	011200980
9,9	87	133	5	011200990
10	87	133	5	011201000
10,1	87	133	5	011201010
10,2	87	133	5	011201020
10,25	87	133	5	011201025
10,3	87	133	5	011201030
10,4	87	133	5	011201040
10,5	87	133	5	011201050
10,6	87	133	5	011201060
10,7	94	142	5	011201070
10,75	94	142	5	011201075
10,8	94	142	5	011201080
10,9	94	142	5	011201090
11	94	142	5	011201100
11,1	94	142	5	011201110
11,2	94	142	5	011201120
11,25	94	142	5	011201125
11,3	94	142	5	011201130
11,4	94	142	5	011201140
11,5	94	142	5	011201150
11,6	94	142	5	011201160
11,7	94	142	5	011201170
11,75	94	142	5	011201175
11,8	94	142	5	011201180
11,9	101	151	5	011201190
12	101	151	5	011201200
12,1	101	151	5	011201210
12,2	101	151	5	011201220
12,25	101	151	5	011201225
12,3	101	151	5	011201230
12,4	101	151	5	011201240
12,5	101	151	5	011201250
12,6	101	151	5	011201260
12,7	101	151	5	011201270
12,75	101	151	5	011201275
12,8	101	151	5	011201280
12,9	101	151	5	011201290
13	101	151	5	011201300
13,25	108	160	3	011201325
13,5	108	160	3	011201350
13,75	108	160	3	011201375
14	108	160	3	011201400
14,25	114	169	3	011201425
14,5	114	169	3	011201450
14,75	114	169	3	011201475
15	114	169	3	011201500
15,25	120	178	3	011201525
15,5	120	178	3	011201550
15,75	120	178	3	011201575
16	120	178	3	011201600
16,5	125	184	1	011201650
17	125	184	1	011201700
17,5	130	191	1	011201750
18	130	191	1	011201800
18,5	135	198	1	011201850
19	135	198	1	011201900
19,5	140	205	1	011201950
20	140	205	1	011202000

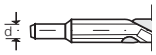
PUNTE ELICOIDALI CILINDRICHE AL COBALTO 8% CON CODOLO RIDOTTO

Cobalt reduced shank twist drills / Forets cylindriques à queue réduite au cobalt
Brocas helicoidales de cobalto con mango reducido / Kobalt-Spiralbohrer mit reduzierten Schaft

HSS-CO 8% DIN 338

01122



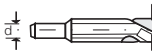


d=10 mm

Art. **01124** Self
Disponibile su richiesta / *On demand*

Ø h8	/	L	d	pcs	cod.
10,25	87	133	10	5	011221025
10,5	87	133	10	5	011221050
10,75	94	142	10	5	011221075
11	94	142	10	5	011221100
11,25	94	142	10	5	011221125
11,5	94	142	10	5	011221150
11,75	94	142	10	5	011221175
12	101	151	10	5	011221200
12,25	101	151	10	5	011221225
12,5	101	151	10	5	011221250
12,75	101	151	10	5	011221275
13	101	151	10	5	011221300
13,25	108	160	10	3	011221325
13,5	108	160	10	3	011221350
13,75	108	160	10	3	011221375
14	108	160	10	3	011221400
14,25	114	169	10	3	011221425
14,5	114	169	10	3	011221450
14,75	114	169	10	3	011221475
15	114	169	10	3	011221500
15,25	120	178	10	3	011221525
15,5	120	178	10	3	011221550
15,75	120	178	10	3	011221575
16	120	178	10	3	011221600
16,5	125	184	10	1	011221650
17	125	184	10	1	011221700
17,5	130	191	10	1	011221750
18	130	191	10	1	011221800
18,5	135	198	10	1	011221850
19	135	198	10	1	011221900
19,5	140	205	10	1	011221950
20	140	205	10	1	011222000

01123



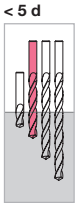
d=13 mm

Ø h8	/	L	d	pcs	cod.
13,25	108	160	13	3	011231325
13,5	108	160	13	3	011231350
13,75	108	160	13	3	011231375
14	108	160	13	3	011231400
14,25	114	169	13	3	011231425
14,5	114	169	13	3	011231450
14,75	114	169	13	3	011231475
15	114	169	13	3	011231500
15,25	120	178	13	3	011231525
15,5	120	178	13	3	011231550
15,75	120	178	13	3	011231575
16	120	178	13	3	011231600
16,5	125	184	13	1	011231650
17	125	184	13	1	011231700
17,5	130	191	13	1	011231750
18	130	191	13	1	011231800
18,5	135	198	13	1	011231850
19	135	198	13	1	011231900
19,5	140	205	13	1	011231950
20	140	205	13	1	011232000

Confezione / *Packaging*



< 5 d



PUNTE ELICOIDALI AL COBALTO 8%, SERIE EXTRA CORTA

Cobalt straight shank twist drills, stub serie / Forets au cobalt, série extra courte
Broca de cobalto, serie extra corta / Kobalt Spiralbohrer, extra kurz

HSS-CO 8% DIN 1897



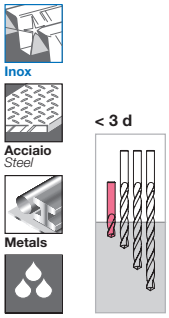


HV ≃ 850÷920
AISI M42
SPLIT POINT
DIN 1412 C

Confezione / *Packaging*



Applicazioni / *Applications*



Ø h8	/	L	pcs	cod.
3	16	46	10	011260300
3,25	18	49	10	011260325
3,5	20	52	10	011260350
3,75	20	52	10	011260375
4	22	55	10	011260400
4,25	22	55	10	011260425
4,5	24	58	10	011260450
4,75	24	58	10	011260475
5	26	62	10	011260500
5,5	28	66	10	011260550
6	28	66	10	011260600

01126



PUNTE ELICOIDALI CILINDRICHE AL COBALTO 8%, SERIE LUNGA

Cobalt long straight shank twist drills / Forets cylindriques série longue au cobalt
Brocas helicoidales serie larga de cobalto / Kobalt Spiralbohrer, lange Ausführung

HSS-CO 8% DIN 340



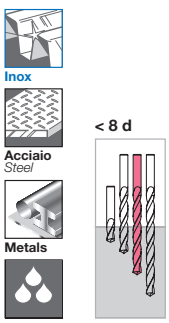


HV ≃ 850÷920
AISI M42
SPLIT POINT
DIN 1412 C

Confezione / *Packaging*

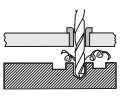


Applicazioni / *Applications*



Ø h8	/	L	pcs	cod.
3	66	100	10	011280300
3,25	69	106	10	011280325
3,5	73	112	10	011280350
3,75	73	112	10	011280375
4	78	119	10	011280400
4,25	78	119	10	011280425
4,5	82	126	10	011280450
4,75	82	126	10	011280475
5	87	132	10	011280500
5,25	87	132	10	011280525
5,5	91	139	10	011280550
5,75	91	139	10	011280575
6	91	139	10	011280600
6,5	97	148	5	011280650
7	102	156	5	011280700
7,5	102	156	5	011280750
8	109	165	5	011280800
8,5	109	165	5	011280850
9	115	175	5	011280900
9,5	115	175	5	011280950
10	121	184	5	011281000

01128



ASSORTIMENTI PUNTE AL COBALTO 8% IN ASTUCCI DI METALLO E ABS DI QUALITÀ

Sets of cobalt twist drills / Assortiments forets au cobalt
Juego brocas de cobalto / Kobalt-geschliffene Spiralbohrersätze

HSS-CO 8% DIN 338

Metal



19 pcs
Ø 1÷10 x 0,5 mm
01135401



25 pcs
Ø 1÷13 x 0,5 mm
01135402



37 pcs
Ø 1÷10 x 0,25 mm
01135411



49 pcs
Ø 1÷13 x 0,25 mm
01135412

Abs



19 pcs
Ø 1÷10 x 0,5 mm
01135301



25 pcs
Ø 1÷13 x 0,5 mm
01135302



19 pcs
Ø 1÷10 x 0,5 mm
01135250



25 pcs
Ø 1÷13 x 0,5 mm
01135251

Metal



51 pcs
Ø 1÷6 x 0,1 mm
01135403



41 pcs
Ø 6÷10 x 0,1 mm
01135404



91 pcs
Ø 1÷10 x 0,1 mm
01135406

Plastic



91 pcs
Ø 1÷10 x 0,1 mm
01135220



19 pcs
Ø 1÷10 x 0,5 mm
01135101



10 pcs
Ø 1÷10 x 1 mm
01135201



13 pcs
Ø 1,5 - 2 - 2,5 - 3 - 3,3
3,5 - 4 - 4,2 - 4,5 - 5
5,5 - 6 - 6,5
01135203



13 pcs
Ø 2÷8 x 0,5 mm
01135205



6 pcs
Ø 2 - 3 - 4 - 5 - 6 - 8
01135204



19 pcs
Ø 1÷10 x 0,5 mm
01135206

VALIGETTE MAGAZZENO PUNTE AL COBALTO 8%

Cobalt twist drills in metal cases / Forets cobalt en coffret métallique
Surtido de brocas cobalto en caja metalica / Lager Kästen mit Kobalt-geschliffene Spiralbohrersätze

HSS-CO 8% DIN 338



Metal 330x240x55

116 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	3
1,5	10	6,5	3
2	10	7	3
2,5	10	7,5	3
3	10	8	3
3,5	10	8,5	2
4	10	9	2
4,5	10	9,5	2
5	10	10	2
5,5	3		

01135450



Metal 550x310x55

128 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	3
1,5	10	8	3
2	10	8,5	2
2,5	10	9	2
3	10	9,5	2
3,5	10	10	2
4	10	10,5	2
4,5	10	11	2
5	10	11,5	2
5,5	3	12	2
6	3	12,5	2
6,5	3	13	2
7	3		

01135451

ESPOSITORE DA BANCO-MAGAZZENO PUNTE COBALTO 8%

Cobalt twist drills display / Display forets au cobalt
Expositor brocas de cobalto / Verkaufsschränke für Kobalt Spiralbohrer

HSS-CO 8% DIN 338



Metal 375x240x200

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	10	5,5	10	10	5
1,5	10	6	10	10,5	3
2	10	6,5	5	11	3
2,5	10	7	5	11,5	3
3	10	7,5	5	12	3
3,5	10	8	5	12,5	3
4	10	8,5	5	13	3
4,5	10	9	5		
5	10	9,5	5		

01135501



Metal 390x460x230

240 pcs

Ø	pcs	Ø	pcs	Ø	pcs	Ø	pcs
1	10	4,25	10	7,5	5	10,75	2
1,25	5	4,5	10	7,75	2	11	2
1,5	10	4,75	3	8	5	11,25	2
1,75	5	5	10	8,25	2	11,5	2
2	10	5,25	3	8,5	3	11,75	2
2,25	5	5,5	10	8,75	2	12	2
2,5	10	5,75	2	9	3	12,25	2
2,75	5	6	10	9,25	2	12,5	2
3	10	6,25	2	9,5	3	12,75	2
3,25	10	6,5	5	9,75	2	13	2
3,5	10	6,75	2	10	3		
3,75	10	7	5	10,25	2		
4	10	7,25	2	10,5	2		

01135507

PUNTE ELICOIDALI AL COBALTO 5%, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE CORTA

Cobalt twist drills ground from the solid / Forets cylindriques au cobalt entièrement rectifiés
Broca helicoidale rectificada de cobalto / Kobalt Spiralbohrer

HSS-CO 5% DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01145





HV ≃ 800÷860
AISI M35
SPLIT POINT
DIN 1412 C
(Ø≥3 mm)

Art. **01144** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*

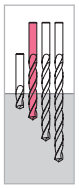


Applicazioni / *Applications*

R ≤ 1200 N/mm²



< 5 d



Ø h8	/	L	pcs	cod.
0,2	2,5	19	10	011450020
0,25	3	19	10	011450025
0,3	3	19	10	011450030
0,35	4	19	10	011450035
0,4	5	20	10	011450040
0,45	5	20	10	011450045
0,5	6	22	10	011450050
0,55	7	24	10	011450055
0,6	7	24	10	011450060
0,65	8	26	10	011450065
0,7	9	28	10	011450070
0,75	9	28	10	011450075
0,8	10	30	10	011450080
0,85	10	30	10	011450085
0,9	11	32	10	011450090
0,95	11	32	10	011450095
1	12	34	10	011450100
1,1	14	36	10	011450110
1,2	16	38	10	011450120
1,25	16	38	10	011450125
1,3	16	38	10	011450130
1,4	18	40	10	011450140
1,5	18	40	10	011450150
1,6	20	43	10	011450160
1,7	20	43	10	011450170
1,75	22	46	10	011450175
1,8	22	46	10	011450180
1,9	22	46	10	011450190
2	24	49	10	011450200
2,1	24	49	10	011450210
2,2	27	53	10	011450220
2,25	27	53	10	011450225
2,3	27	53	10	011450230
2,4	30	57	10	011450240
2,5	30	57	10	011450250
2,6	30	57	10	011450260
2,7	33	61	10	011450270
2,75	33	61	10	011450275
2,8	33	61	10	011450280
2,9	33	61	10	011450290
3	33	61	10	011450300
3,1	36	65	10	011450310
3,2	36	65	10	011450320
3,25	36	65	10	011450325
3,3	36	65	10	011450330
3,4	39	70	10	011450340
3,5	39	70	10	011450350
3,6	39	70	10	011450360
3,7	39	70	10	011450370
3,75	39	70	10	011450375
3,8	43	75	10	011450380
3,9	43	75	10	011450390
4	43	75	10	011450400
4,1	43	75	10	011450410

Ø h8	/	L	pcs	cod.
4,2	43	75	10	011450420
4,25	43	75	10	011450425
4,3	47	80	10	011450430
4,4	47	80	10	011450440
4,5	47	80	10	011450450
4,6	47	80	10	011450460
4,7	47	80	10	011450470
4,75	47	80	10	011450475
4,8	52	86	10	011450480
4,9	52	86	10	011450490
5	52	86	10	011450500
5,1	52	86	10	011450510
5,2	52	86	10	011450520
5,25	52	86	10	011450525
5,3	52	86	10	011450530
5,4	57	93	10	011450540
5,5	57	93	10	011450550
5,6	57	93	10	011450560
5,7	57	93	10	011450570
5,75	57	93	10	011450575
5,8	57	93	10	011450580
5,9	57	93	10	011450590
6	57	93	10	011450600
6,1	63	101	10	011450610
6,2	63	101	10	011450620
6,25	63	101	10	011450625
6,3	63	101	10	011450630
6,4	63	101	10	011450640
6,5	63	101	10	011450650
6,6	63	101	10	011450660
6,7	63	101	10	011450670
6,75	69	109	10	011450675
6,8	69	109	10	011450680
6,9	69	109	10	011450690
7	69	109	10	011450700
7,1	69	109	5	011450710
7,2	69	109	5	011450720
7,25	69	109	5	011450725
7,3	69	109	5	011450730
7,4	69	109	5	011450740
7,5	69	109	5	011450750
7,6	75	117	5	011450760
7,7	75	117	5	011450770
7,75	75	117	5	011450775
7,8	75	117	5	011450780
7,9	75	117	5	011450790
8	75	117	5	011450800
8,1	75	117	5	011450810
8,2	75	117	5	011450820
8,25	75	117	5	011450825
8,3	75	117	5	011450830
8,4	75	117	5	011450840
8,5	75	117	5	011450850
8,6	81	125	5	011450860

- Punte con ottima resistenza alle sollecitazioni termiche, adatte per forare acciai legati e non con R sino a 1200 N/mm², in modo particolare acciai da bonifica, acciai per lavorazioni a caldo e a freddo, acciai inossidabili, ghisa etc.
- *High performance in cutting alloy steel, cast iron, stainless steel and metals up to R ≤ 1200 N/mm².*
- *Pour percer l'acier allié, la fonte, l'acier inox avec R ≤ 1200 N/mm².*
- *Para taladar acero aleado, acero inox, fundicion R ≤ 1200 N/mm².*
- *Einsatz in legierte Stahl bis R ≤ 1200 N/mm² Zug-Festigkeit, Korrosionsbeständige Stähle, Grauguss und Stahlguss.*

Ø h8	/	L	pcs	cod.
8,7	81	125	5	011450870
8,75	81	125	5	011450875
8,8	81	125	5	011450880
8,9	81	125	5	011450890
9	81	125	5	011450900
9,1	81	125	5	011450910
9,2	81	125	5	011450920
9,25	81	125	5	011450925
9,3	81	125	5	011450930
9,4	81	125	5	011450940
9,5	81	125	5	011450950
9,6	87	133	5	011450960
9,7	87	133	5	011450970
9,75	87	133	5	011450975
9,8	87	133	5	011450980
9,9	87	133	5	011450990
10	87	133	5	011451000
10,1	87	133	5	011451010
10,2	87	133	5	011451020
10,25	87	133	5	011451025
10,3	87	133	5	011451030
10,4	87	133	5	011451040
10,5	87	133	5	011451050
10,6	87	133	5	011451060
10,7	94	142	5	011451070
10,75	94	142	5	011451075
10,8	94	142	5	011451080
10,9	94	142	5	011451090
11	94	142	5	011451100
11,1	94	142	5	011451110
11,2	94	142	5	011451120
11,25	94	142	5	011451125
11,3	94	142	5	011451130
11,4	94	142	5	011451140
11,5	94	142	5	011451150
11,6	94	142	5	011451160
11,7	94	142	5	011451170
11,75	94	142	5	011451175
11,8	94	142	5	011451180
11,9	101	151	5	011451190
12	101	151	5	011451200
12,1	101	151	5	011451210
12,2	101	151	5	011451220
12,25	101	151	5	011451225
12,3	101	151	5	011451230
12,4	101	151	5	011451240
12,5	101	151	5	011451250
12,6	101	151	5	011451260
12,7	101	151	5	011451270
12,75	101	151	5	011451275
12,8	101	151	5	011451280
12,9	101	151	5	011451290
13	101	151	5	011451300
13,1	101	151	3	011451310

Ø h8	/	L	pcs	cod.
13,2	101	151	3	011451320
13,25	108	160	3	011451325
13,3	108	160	3	011451330
13,4	108	160	3	011451340
13,5	108	160	3	011451350
13,6	108	160	3	011451360
13,7	108	160	3	011451370
13,75	108	160	3	011451375
13,8	108	160	3	011451380
13,9	108	160	3	011451390
14	108	160	3	011451400
14,1	108	160	3	011451410
14,2	114	169	3	011451420
14,25	114	169	3	011451425
14,3	114	169	3	011451430
14,4	114	169	3	011451440
14,5	114	169	3	011451450
14,6	114	169	3	011451460
14,7	114	169	3	011451470
14,75	114	169	3	011451475
14,8	114	169	3	011451480
14,9	114	169	3	011451490
15	114	169	3	011451500
15,1	120	178	3	011451510
15,2	120	178	3	011451520
15,25	120	178	3	011451525
15,3	120	178	3	011451530
15,4	120	178	3	011451540
15,5	120	178	3	011451550
15,6	120	178	3	011451560
15,7	120	178	3	011451570
15,75	120	178	3	011451575
15,8	120	178	3	011451580
15,9	120	178	3	011451590
16	120	178	3	011451600
16,25	125	184	1	011451625
16,5	125	184	1	011451650
16,75	125	184	1	011451675
17	125	184	1	011451700
17,25	130	191	1	011451725
17,5	130	191	1	011451750
17,75	130	191	1	011451775
18	130	191	1	011451800
18,25	135	198	1	011451825
18,5	135	198	1	011451850
18,75	135	198	1	011451875
19	135	198	1	011451900
19,25	140	205	1	011451925
19,5	140	205	1	011451950
19,75	140	205	1	011451975
20	140	205	1	011452000

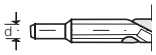
PUNTE ELICOIDALI AL COBALTO 5% CON CODOLO RIDOTTO, ESECUZIONE RETTIFICATA, SERIE CORTA

Cobalt twist drills ground from the solid / Forets cylindriques au cobalt entièrement rectifiés
Broca helicoidale rectificada de cobalto / Kobalt Spiralbohrer

HSS-CO 5% DIN 338

01147





d=10 mm

Art. **01151** Self
Disponibile su richiesta / *On demand*

Ø h8	/	L	d	pcs	cod.
10,25	87	133	10	5	011471025
10,5	87	133	10	5	011471050
10,75	94	142	10	5	011471075
11	94	142	10	5	011471100
11,25	94	142	10	5	011471125
11,5	94	142	10	5	011471150
11,75	94	142	10	5	011471175
12	101	151	10	5	011471200
12,25	101	151	10	5	011471225
12,5	101	151	10	5	011471250
12,75	101	151	10	5	011471275
13	101	151	10	5	011471300
13,25	108	160	10	3	011471325
13,5	108	160	10	3	011471350
13,75	108	160	10	3	011471375
14	108	160	10	3	011471400
14,25	114	169	10	3	011471425
14,5	114	169	10	3	011471450
14,75	114	169	10	3	011471475
15	114	169	10	3	011471500
15,25	120	178	10	3	011471525
15,5	120	178	10	3	011471550
15,75	120	178	10	3	011471575
16	120	178	10	3	011471600
16,5	125	184	10	1	011471650
17	125	184	10	1	011471700
17,5	130	191	10	1	011471750
18	130	191	10	1	011471800
18,5	135	198	10	1	011471850
19	135	198	10	1	011471900
19,5	140	205	10	1	011471950
20	140	205	10	1	011472000

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 1200 N/mm²



Inox



Acciaio
Steel



Metals



- Punte con ottima resistenza alle sollecitazioni termiche, adatte per forare acciai legati e non con R sino a 1200 N/mm2, in modo particolare acciai da bonifica, acciai per lavorazioni a caldo e a freddo, acciai inossidabili, ghisa etc.
- *High performance in cutting alloy steel, cast iron, stainless steel and metals up to R ≤ 1200 N/mm².*
- *Pour percer l'acier allié, la fonte, l'acier inox avec R ≤ 1200 N/mm².*
- *Para taladar acero aleado, acero inox, fundicion R ≤ 1200 N/mm².*
- *Einsatz in legierte Stahl bis R ≤ 1200 N/mm² Zug-Festigkeit, Korrosionsbeständige Stähle, Grauguss und Stahlguss.*

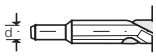
PUNTE ELICOIDALI AL COBALTO 5% CON CODOLO RIDOTTO, ESECUZIONE RETTIFICATA, SERIE CORTA

Cobalt twist drills ground from the solid / Forets cylindriques au cobalt entièrement rectifiés
Broca helicoidale rectificada de cobalto / Kobalt Spiralbohrer

HSS-CO 5% DIN 338

01146





Ø h8	/	L	d	pcs	cod.
13,25	108	160	13	3	011461325
13,5	108	160	13	3	011461350
13,75	108	160	13	3	011461375
14	108	160	13	3	011461400
14,25	114	169	13	3	011461425
14,5	114	169	13	3	011461450
14,75	114	169	13	3	011461475
15	114	169	13	3	011461500
15,25	120	178	13	3	011461525
15,5	120	178	13	3	011461550
15,75	120	178	13	3	011461575
16	120	178	13	3	011461600
16,5	125	184	13	1	011461650
17	125	184	13	1	011461700
17,5	130	191	13	1	011461750
18	130	191	13	1	011461800
18,5	135	198	13	1	011461850
19	135	198	13	1	011461900
19,5	140	205	13	1	011461950
20	140	205	13	1	011462000
20,5	145	213	13	1	011462050
21	145	213	13	1	011462100
21,5	150	221	13	1	011462150
22	150	221	13	1	011462200
22,5	150	221	13	1	011462250
23	155	229	13	1	011462300
23,5	155	229	13	1	011462350
24	160	236	13	1	011462400
24,5	160	236	13	1	011462450
25	160	236	13	1	011462500

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 1200 N/mm²



Inox



Acciaio
Steel



Metals



- Punte con ottima resistenza alle sollecitazioni termiche, adatte per forare acciai legati e non con R sino a 1200 N/mm², in modo particolare acciai da bonifica, acciai per lavorazioni a caldo e a freddo, acciai inossidabili, ghisa etc.
- *High performance in cutting alloy steel, cast iron, stainless steel and metals up to R ≤ 1200 N/mm².*
- *Pour percer l'acier allié, la fonte, l'acier inox avec R ≤ 1200 N/mm².*
- *Para taladar acero aleado, acero inox, fundicion R ≤ 1200 N/mm².*
- *Einsatz in legierte Stahl bis R ≤ 1200 N/mm² Zug-Festigkeit, Korrosionsbeständige Stähle, Grauguss und Stahlguss.*

PUNTE ELICOIDALI AL COBALTO 5%, SERIE EXTRA CORTA

Cobalt straight shank twist drills, stub serie / Forets au cobalt, série extra courte
Broca de cobalto, serie extra corta / Kobalt Spiralbohrer, extra kurz

HSS-CO 5% DIN 1897

Extra corta
Extra short

01149





HV ≃ 800÷860
AISI M35
SPLIT POINT
DIN 1412 C

Ø h8	/	L	pcs	cod.
3	16	46	10	011490300
3,2	18	49	10	011490320
3,25	18	49	10	011490325
3,5	20	52	10	011490350
3,75	20	52	10	011490375
4	22	55	10	011490400
4,2	22	55	10	011490420
4,25	22	55	10	011490425
4,5	24	58	10	011490450
4,75	24	58	10	011490475
5	26	62	10	011490500
5,25	26	62	10	011490525
5,5	28	66	10	011490550
5,75	28	66	10	011490575
6	28	66	10	011490600
6,5	31	70	10	011490650
7	34	74	10	011490700
7,5	34	74	5	011490750
8	37	79	5	011490800
8,5	37	79	5	011490850
9	40	84	5	011490900
9,5	40	84	5	011490950
10	43	89	5	011491000

NORMA KRINO HSS-CO 5%

Super corta
Super short

01051





HV ≃ 800÷860
AISI M35
SPLIT POINT
DIN 1412 C

Ø	/	L	pcs	cod.
3	16	35	10	010510300
3,25	19	40	10	010510325
3,5	19	40	10	010510350
3,75	19	40	10	010510375
4	20	40	10	010510400
4,25	20	40	10	010510425
4,5	23	42	10	010510450
5	23	45	10	010510500

Super corta - *Super short*

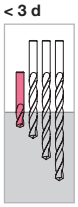


Confezione / *Packaging*



Applicazioni / *Applications*





Punte speciali per la foratura di lamiere e tubi in acciaio inox e lamiere metalliche in genere (acciaio, ferro, rame). Speciali per lattonieri, carpentieri, coperturisti, fabbri, installatori.
Super short twist drills for cutting stainless metal sheets. Special for journeymen's, carpenters, locksmith's, tinsmith's.



PUNTE ELICOIDALI AL COBALTO 5%, SERIE EXTRA CORTA

Cobalt straight shank twist drills, stub serie / Forets au cobalt, série extra courte
Broca de cobalto, serie extra corta / Kobalt Spiralbohrer, extra kurz

HSS-CO 5%

Elica contrapposta
Double ended

01148





Ø h8	/	L	pcs	cod.
2	10	38	10	011480200
2,5	10	43	10	011480250
3	10	46	10	011480300
3,25	10	49	10	011480325
3,5	12	52	10	011480350
3,75	12	55	10	011480375
4	12	55	10	011480400
4,1	12	55	10	011480410
4,25	12	58	10	011480425
4,5	12	58	10	011480450
4,75	13	62	10	011480475
4,9	13	62	10	011480490
5	13	62	10	011480500
5,1	13	62	10	011480510
5,5	16	66	10	011480550
6	16	66	10	011480600



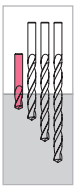
Confezione / *Packaging*



Applicazioni / *Applications*



< 3 d



PUNTE ELICOIDALI CILINDRICHE AL COBALTO 5%, SERIE LUNGA

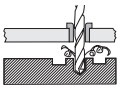
Cobalt long straight shank twist drills / Forets cylindriques série longue au cobalt
Brocas helicoidales serie larga de cobalto / Kobalt Spiralbohrer, lange Ausführung

HSS-CO 5% DIN 340

01152







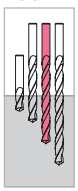
Confezione / *Packaging*



Applicazioni / *Applications*



< 8 d



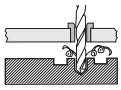
Ø h8	/	L	pcs	cod.
1	33	56	10	011520100
1,5	45	70	10	011520150
1,75	53	80	10	011520175
2	56	85	10	011520200
2,25	59	90	10	011520225
2,5	62	95	10	011520250
2,75	66	100	10	011520275
3	66	100	10	011520300
3,25	69	106	10	011520325
3,5	73	112	10	011520350
3,75	73	112	10	011520375
4	78	119	10	011520400
4,25	78	119	10	011520425
4,5	82	126	10	011520450
4,75	82	126	10	011520475
5	87	132	10	011520500
5,25	87	132	10	011520525
5,5	91	139	10	011520550
5,75	91	139	10	011520575
6	91	139	10	011520600
6,25	97	148	5	011520625
6,5	97	148	5	011520650
6,75	97	148	5	011520675
7	102	156	5	011520700
7,25	102	156	5	011520725
7,5	102	156	5	011520750
7,75	109	165	5	011520775
8	109	165	5	011520800
8,25	109	165	5	011520825
8,5	109	165	5	011520850
8,75	115	175	5	011520875
9	115	175	5	011520900
9,25	115	175	5	011520925
9,5	115	175	5	011520950
9,75	121	184	5	011520975
10	121	184	5	011521000
10,25	121	184	5	011521025
10,5	121	184	5	011521050
10,75	128	195	5	011521075
11	128	195	5	011521100
11,25	128	195	5	011521125
11,5	128	195	5	011521150
11,75	134	205	5	011521175
11,8	134	205	5	011521180
12	134	205	5	011521200
12,25	134	205	5	011521225
12,5	134	205	5	011521250
12,75	134	205	5	011521275
13	134	205	5	011521300
13,5	140	214	3	011521350
14	140	214	3	011521400
14,5	144	220	3	011521450
15	144	220	3	011521500
15,5	149	227	3	011521550
16	149	227	3	011521600
16,5	154	235	1	011521650
17	154	235	1	011521700
17,5	158	241	1	011521750
18	158	241	1	011521800
18,5	162	247	1	011521850
19	162	247	1	011521900
19,5	166	254	1	011521950
20	166	254	1	011522000

PUNTE ELICOIDALI CILINDRICHE AL COBALTO 5%, SERIE EXTRA LUNGA

Cobalt extra long straight shank twist drills / Forets cylindriques série extra longue au cobalt
Brocas helicoidales serie extra larga de cobalto / Kobalt Spiralbohrer, extra lange Ausführung

HSS-CO 5% Parabolic





Confezione / *Packaging*



Applicazioni / *Applications*



< 10 d



DIN 1869/1

01376

Ø h8	/	L	pcs	cod.
3	100	150	1	013760300
3,5	115	165	1	013760350
4	120	175	1	013760400
4,5	125	185	1	013760450
5	135	195	1	013760500
5,5	140	205	1	013760550
6	140	205	1	013760600
6,5	150	215	1	013760650
7	155	225	1	013760700
7,5	155	225	1	013760750
8	165	240	1	013760800
8,5	165	240	1	013760850
9	175	250	1	013760900
9,5	175	250	1	013760950
10	185	265	1	013761000

DIN 1869/2

01377

Ø h8	/	L	pcs	cod.
3	130	190	1	013770300
3,5	145	210	1	013770350
4	150	220	1	013770400
4,5	160	235	1	013770450
5	170	245	1	013770500
5,5	180	260	1	013770550
6	180	260	1	013770600
6,5	190	275	1	013770650
7	200	290	1	013770700
7,5	200	290	1	013770750
8	210	305	1	013770800
8,5	210	305	1	013770850
9	220	320	1	013770900
9,5	220	320	1	013770950
10	235	340	1	013771000

DIN 1869/3

01378

Ø h8	/	L	pcs	cod.
3	160	240	1	013780300
3,5	180	265	1	013780350
4	190	280	1	013780400
4,5	200	295	1	013780450
5	210	315	1	013780500
5,5	225	330	1	013780550
6	225	330	1	013780600
6,5	235	350	1	013780650
7	250	370	1	013780700
7,5	250	370	1	013780750
8	265	390	1	013780800
8,5	265	390	1	013780850
9	280	410	1	013780900
9,5	280	410	1	013780950
10	295	430	1	013781000
10,5	295	430	1	013781050
11	310	455	1	013781100
11,5	310	455	1	013781150
12	330	480	1	013781200
12,5	330	480	1	013781250
13	330	480	1	013781300

PUNTE ELICOIDALI AL COBALTO 5% CODOLO CONICO MORSE

Cobalt morse taper shank twist drills / Forets à queue conique morse au cobalt
Brocas helicoidales de cobalto con mango conico / Cobalt Spiralbohrer mit Morsekegel

HSS-CO 5% DIN 345

01150



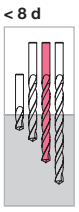


Confezione / *Packaging*



Applicazioni / *Applications*





- Punte con ottima resistenza alle sollecitazioni termiche, adatte per forare acciai legati e non, con R sino a 1200 N/mm², in modo particolare acciai da bonifica, acciai per lavorazioni a caldo e a freddo, acciai inossidabili, ghisa etc.
- *High performance in cutting alloy steel, cast iron, stainless steel and metals up to R ≤ 1200 N/mm².*
- *Pour percer l'acier allié, la fonte, l'acier inox avec R ≤ 1200 N/mm².*
- *Para taladar acero aleado, acero inox, fundicion R ≤ 1200 N/mm².*
- *Einsatz in legierte Stahl bis R ≤ 1200 N/mm² Zug-Festigkeit, Korrosionsbeständige Stähle, Grauguss und Stahlguss.*

Fresata / *Milled / Fraisé / Fresada / Gefräst*

Ø h8	M.K.	/	L	pcs	cod.
7	1	69	150	1	011500700
7,5	1	69	150	1	011500750
8	1	75	156	1	011500800
8,5	1	75	156	1	011500850
9	1	81	162	1	011500900
9,5	1	81	162	1	011500950
10	1	87	168	1	011501000
10,25	1	87	168	1	011501025
10,5	1	87	168	1	011501050
10,75	1	94	175	1	011501075
11	1	94	175	1	011501100
11,25	1	94	175	1	011501125
11,5	1	94	175	1	011501150
11,75	1	94	175	1	011501175
12	1	101	182	1	011501200
12,25	1	101	182	1	011501225
12,5	1	101	182	1	011501250
12,75	1	101	182	1	011501275
13	1	101	182	1	011501300
13,25	1	108	189	1	011501325
13,5	1	108	189	1	011501350
13,75	1	108	189	1	011501375
14	1	108	189	1	011501400
14,25	2	114	212	1	011501425
14,5	2	114	212	1	011501450
14,75	2	114	212	1	011501475
15	2	114	212	1	011501500
15,25	2	120	218	1	011501525
15,5	2	120	218	1	011501550
15,75	2	120	218	1	011501575
16	2	120	218	1	011501600
16,25	2	125	223	1	011501625
16,5	2	125	223	1	011501650
16,75	2	125	223	1	011501675
17	2	125	223	1	011501700
17,25	2	130	228	1	011501725
17,5	2	130	228	1	011501750
17,75	2	130	228	1	011501775
18	2	130	228	1	011501800
18,25	2	135	233	1	011501825
18,5	2	135	233	1	011501850
18,75	2	135	233	1	011501875
19	2	135	233	1	011501900
19,25	2	140	238	1	011501925
19,5	2	140	238	1	011501950
19,75	2	140	238	1	011501975
20	2	140	238	1	011502000
20,25	2	145	243	1	011502025
20,5	2	145	243	1	011502050
20,75	2	145	243	1	011502075
21	2	145	243	1	011502100
21,25	2	150	248	1	011502125
21,5	2	150	248	1	011502150
21,75	2	150	248	1	011502175
22		150	248	1	011502200

PUNTE ELICOIDALI AL COBALTO 5% CODOLO CONICO MORSE

Cobalt morse taper shank twist drills / Forets à queue conique morse au cobalt
Brocas helicoidales de cobalto con mango conico / Cobalt Spiralbohrer mit Morsekegel

Ø h8	M.K.	/	L	pcs	cod.
22,25	2	155	248	1	011502225
22,5	2	155	253	1	011502250
22,75	2	155	253	1	011502275
23	2	155	253	1	011502300
23,25	2	155	276	1	011502325
23,5		155	276	1	011502350
23,75	3	160	281	1	011502375
24	3	160	281	1	011502400
24,25	3	160	281	1	011502425
24,5	3	160	281	1	011502450
24,75	3	160	281	1	011502475
25	3	160	281	1	011502500
25,25	3	165	286	1	011502525
25,5	3	165	286	1	011502550
25,75	3	165	286	1	011502575
26	3	165	286	1	011502600
26,25	3	165	286	1	011502625
26,5	3	165	286	1	011502650
26,75	3	170	291	1	011502675
27	3	170	291	1	011502700
27,25	3	170	291	1	011502725
27,5	3	170	291	1	011502750
27,75	3	170	291	1	011502775
28	3	170	291	1	011502800
28,25	3	175	296	1	011502825
28,5	3	175	296	1	011502850
28,75	3	175	296	1	011502875
29	3	175	296	1	011502900
29,25	3	175	296	1	011502925
29,5	3	175	296	1	011502950
29,75	3	175	296	1	011502975
30	3	175	296	1	011503000
30,25	3	180	301	1	011503025
30,5	3	180	301	1	011503050
30,75	3	180	301	1	011503075
31	3	180	301	1	011503100
31,25	3	180	301	1	011503125
31,5	3	180	301	1	011503150
31,75	3	185	306	1	011503175
32	3	185	334	1	011503200
32,25	4	185	334	1	011503225
32,5	4	185	334	1	011503250
32,75	4	185	334	1	011503275
33	4	185	334	1	011503300
33,25	4	185	334	1	011503325
33,5	4	185	334	1	011503350
33,75	4	185	334	1	011503375
34	4	190	339	1	011503400
34,25	4	190	339	1	011503425
34,5	4	190	339	1	011503450
34,75	4	190	339	1	011503475
35	4	190	339	1	011503500
35,25	4	190	339	1	011503525
35,5	4	190	339	1	011503550
35,75	4	190	339	1	011503575
36	4	195	344	1	011503600

Ø h8	M.K.	/	L	pcs	cod.
36,25	4	195	344	1	011503625
36,5	4	195	344	1	011503650
36,75	4	195	344	1	011503675
37	4	195	344	1	011503700
37,25	4	195	344	1	011503725
37,5	4	195	344	1	011503750
37,75	4	195	344	1	011503775
38	4	200	349	1	011503800
38,25	4	200	349	1	011503825
38,5	4	200	349	1	011503850
38,75	4	200	349	1	011503875
39	4	200	349	1	011503900
39,25	4	200	349	1	011503925
39,5	4	200	349	1	011503950
39,75	4	200	349	1	011503975
40	4	200	349	1	011504000
40,5	4	205	354	1	011504050
41	4	205	354	1	011504100
41,5	4	205	354	1	011504150
42	4	205	354	1	011504200
42,5	4	205	354	1	011504250
43	4	210	359	1	011504300
43,5	4	210	359	1	011504350
44	4	210	359	1	011504400
44,5	4	210	359	1	011504450
45	4	210	359	1	011504500
45,5	4	215	364	1	011504550
46	4	215	364	1	011504600
46,5	4	215	364	1	011504650
47	4	215	364	1	011504700
47,5	4	215	364	1	011504750
48	4	220	369	1	011504800
48,5	4	220	369	1	011504850
49	4	220	369	1	011504900
49,5	4	220	369	1	011504950
50	4	220	369	1	011505000
50,5	4	225	374	1	011505050
51	4	225	412	1	011505100
51,5	5	225	412	1	011505150
52	5	225	412	1	011505200
52,5	5	225	412	1	011505250
53	5	225	412	1	011505300
53,5	5	230	417	1	011505350
54	5	230	417	1	011505400
54,5	5	230	417	1	011505450
55	5	230	417	1	011505500
55,5	5	230	417	1	011505550
56	5	230	417	1	011505600
56,5	5	235	422	1	011505650
57	5	235	422	1	011505700
57,5	5	235	422	1	011505750
58	5	235	422	1	011505800
58,5	5	235	422	1	011505850
59	5	235	422	1	011505900
59,5	5	235	422	1	011505950
60	5	235	422	1	011506000

ASSORTIMENTI PUNTE AL COBALTO 5% IN ASTUCCI DI METALLO E ABS DI QUALITÀ

Sets of cobalt twist drills / Assortiments forets au cobalt
Juego brocas de cobalto / Kobalt-geschliffene Spiralbohrersätze

HSS-CO 5% DIN 338

Metal



19 pcs
Ø 1÷10 x 0,5 mm
01155401



25 pcs
Ø 1÷13 x 0,5 mm
01155402



37 pcs
Ø 1÷10 x 0,25 mm
01155411



49 pcs
Ø 1÷13 x 0,25 mm
01155412

Abs



19 pcs
Ø 1÷10 x 0,5 mm
01155301



25 pcs
Ø 1÷13 x 0,5 mm
01155302



19 pcs
Ø 1÷10 x 0,5 mm
01155250



25 pcs
Ø 1÷13 x 0,5 mm
01155251

Metal



51 pcs
Ø 1÷6 x 0,1 mm
01155403



41 pcs
Ø 6÷10 x 0,1 mm
01155404



91 pcs
Ø 1÷10 x 0,1 mm
01155410

Plastic



91 pcs
Ø 1÷10 x 0,1 mm
01155220



19 pcs
Ø 1÷10 x 0,5 mm
01155101



10 pcs
Ø 1÷10 x 1 mm
01155201



13 pcs
Ø 1,5 - 2 - 2,5 - 3 - 3,3
3,5 - 4 - 4,2 - 4,5 - 5
5,5 - 6 - 6,5
01155203



13 pcs
Ø 2÷8 x 0,5 mm
01155205



6 pcs
Ø 2 - 3 - 4 - 5 - 6 - 8
01155204



19 pcs
Ø 1÷10 x 0,5 mm
01155206

VALIGETTE MAGAZZENO PUNTE AL COBALTO 5%

Cobalt 5% twist drills in metal cases / Forets cobalt 5% en coffret métallique
Surtido de brocas cobalto 5% en caja metalica / Lager Kästen mit Kobalt-geschliffene Spiralbohrersätze

HSS-CO 5% DIN 338



Metal 330x240x55

116 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	3
1,5	10	6,5	3
2	10	7	3
2,5	10	7,5	3
3	10	8	3
3,5	10	8,5	2
4	10	9	2
4,5	10	9,5	2
5	10	10	2
5,5	3		

01155450



Metal 550x310x55

128 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	3
1,5	10	8	3
2	10	8,5	2
2,5	10	9	2
3	10	9,5	2
3,5	10	10	2
4	10	10,5	2
4,5	10	11	2
5	10	11,5	2
5,5	3	12	2
6	3	12,5	2
6,5	3	13	2
7	3		

01155451

ESPOSITORE DA BANCO-MAGAZZENO PUNTE COBALTO 5%

5% Cobalt twist drills display / Display forets au cobalt 5%
Expositor brocas de cobalto 5% / Verkaufsschränke für Kobalt 5% Spiralbohrer

HSS-CO 5% DIN 338



Metal 375x240x200

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	10	5,5	10	10	5
1,5	10	6	10	10,5	3
2	10	6,5	5	11	3
2,5	10	7	5	11,5	3
3	10	7,5	5	12	3
3,5	10	8	5	12,5	3
4	10	8,5	5	13	3
4,5	10	9	5		
5	10	9,5	5		

01155501



Metal 390x460x230

255 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs	Ø	pcs	Ø	pcs
1	10	4,25	10	7,5	5	10,75	2
1,25	5	4,5	10	7,75	2	11	3
1,5	10	4,75	3	8	5	11,25	2
1,75	5	5	10	8,25	2	11,5	3
2	10	5,25	3	8,5	5	11,75	2
2,25	5	5,5	10	8,75	2	12	3
2,5	10	5,75	3	9	5	12,25	2
2,75	5	6	10	9,25	2	12,5	3
3	10	6,25	2	9,5	5	12,75	2
3,25	10	6,5	5	9,75	2	13	3
3,5	10	6,75	2	10	5		
3,75	10	7	5	10,25	2		
4	10	7,25	2	10,5	3		

01155507

PUNTE ELICOIDALI CON AFFILATURA A CROCE ED ELICA SPECIALE AD ALTA RESISTENZA PER FORATURE PROFONDE - SERIE CORTA

Twist drills cross cut sharpened and special "high resistance flute design" for deep in to cutting, short serie / Forets helicoidaux, affutage croix et spiral rapide pour perçages profonds / Brocas helicoidales corte forma cruz, helice rapida para perforaciones profundas

Parabolic

HSS-CO 5% DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01140 01305



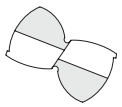


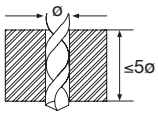
HSS-CO HSS-CO+TiAlN



Parabolic
DIN 1412/C

HV ≈ 800÷860
AFFILATURA A CROCE
CROSS SHARPENING







Ø h8	/	L	Art. 01140 HSS-CO cod.	pcs	Art. 01305 HSS-CO+TiAlN cod.	pcs
2	24	49	011400200	10	013050200	1
2,25	27	53	011400225	10	013050225	1
2,5	30	57	011400250	10	013050250	1
2,75	33	61	011400275	10	013050275	1
3	33	61	011400300	10	013050300	1
3,2	36	65	011400320	10	013050320	1
3,25	36	65	011400325	10	013050325	1
3,5	39	70	011400350	10	013050350	1
3,75	39	70	011400375	10	013050375	1
4	43	75	011400400	10	013050400	1
4,2	43	75	011400420	10	013050420	1
4,25	43	75	011400425	10	013050425	1
4,5	47	80	011400450	10	013050450	1
4,75	47	80	011400475	10	013050475	1
4,8	52	86	011400480	10	013050480	1
5	52	86	011400500	10	013050500	1
5,2	52	86	011400520	10	013050520	1
5,25	52	86	011400525	10	013050525	1
5,5	57	93	011400550	10	013050550	1
5,75	57	93	011400575	10	013050575	1
6	57	93	011400600	10	013050600	1
6,25	63	101	011400625	10	013050625	1
6,5	63	101	011400650	10	013050650	1
6,75	63	101	011400675	10	013050675	1
7	69	109	011400700	10	013050700	1
7,5	69	109	011400750	5	013050750	1
8	75	117	011400800	5	013050800	1
8,5	75	117	011400850	5	013050850	1
9	81	125	011400900	5	013050900	1
9,5	81	125	011400950	5	013050950	1
10	87	133	011401000	5	013051000	1
10,5	87	133	011401050	5	013051050	1
11	94	142	011401100	5	013051100	1
11,5	94	142	011401150	5	013051150	1
12	101	151	011401200	5	013051200	1
12,5	101	151	011401250	5	013051250	1
13	101	151	011401300	5	013051300	1

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 1200 N/mm²



Inox



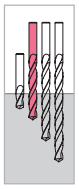
Acciaio
Steel



Metals



< 5 d



- Punte con ottima resistenza alle sollecitazioni termiche, adatte per forare acciai legati e non con R sino a 1200 N/mm², in modo particolare acciai da bonifica, acciai per lavorazioni a caldo e a freddo, acciai inossidabili, ghisa etc.
- *High performance in cutting alloy steel, cast iron, stainless steel and metals up to R ≤ 1200 N/mm².*
- *Pour percer l'acier allié, la fonte, l'acier inox avec R ≤ 1200 N/mm².*
- *Para taladar acero aleado, acero inox, fundicion R ≤ 1200 N/mm².*
- *Einsatz in legierte Stahl bis R ≤ 1200 N/mm² Zug-Festigkeit, Korrosionsbeständige Stähle, Grauguss und Stahlguss.*

HSS-CO 5% DIN 338 Metal



Metal
330x240x55

116 pcs Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1 *	10	6	3
1,5*	10	6,5	3
2	10	7	3
2,5	10	7,5	3
3	10	8	3
3,5	10	8,5	2
4	10	9	2
4,5	10	9,5	2
5	10	10	2
5,5	3		

01142450

*Ø 1mm, 1,5 mm Art. 01145



Abs

19 pcs
Ø 1÷10 x 0,5 mm

01142401 HSS-CO
01310305 HSS-CO+TiAlN



Abs

25 pcs
Ø 1÷13 x 0,5 mm

01142402 HSS-CO
01310306 HSS-CO+TiAlN

PUNTE ELICOIDALI CON AFFILATURA A CROCE ED ELICA SPECIALE AD ALTA RESISTENZA PER FORATURE PROFONDE

Twist drills cross cut sharpened and special "high resistance flute design" for deep in to cutting / Forets helicoidaux, affutage croix et spiral rapide pour perçages profonds / Brocas helicoidales corte forma cruz, helice rapida para perforaciones profundas

HSS-CO 5% DIN 340 Rettificata

Ground from the solid

01141 01306



Serie lunga *Long serie*

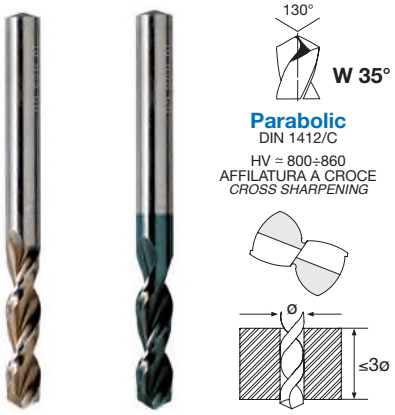
Ø h8	/	L	Art. 01141 HSS-CO cod.	pcs	Art. 01306 HSS-CO+TiAlN cod.	pcs
2,5	62	95	011410250	10	013060250	1
3	66	100	011410300	10	013060300	1
3,25	69	106	011410325	10	013060325	1
3,5	73	112	011410350	10	013060350	1
3,75	73	112	011410375	10	013060375	1
4	78	119	011410400	10	013060400	1
4,25	78	119	011410425	10	013060425	1
4,5	82	126	011410450	10	013060450	1
4,75	82	126	011410475	10	013060475	1
5	87	132	011410500	10	013060500	1
5,25	87	132	011410525	10	013060525	1
5,5	91	139	011410550	10	013060550	1
5,75	91	139	011410575	10	013060575	1
6	91	139	011410600	10	013060600	1
6,25	97	148	011410625	5	013060625	1
6,5	97	148	011410650	5	013060650	1
7	102	156	011410700	5	013060700	1
7,5	102	156	011410750	5	013060750	1
8	109	165	011410800	5	013060800	1
8,5	109	165	011410850	5	013060850	1
9	115	175	011410900	5	013060900	1
9,5	115	175	011410950	5	013060950	1
10	121	184	011411000	5	013061000	1
10,5	121	184	011411050	5	013061050	1
11	128	195	011411100	5	013061100	1
11,5	128	195	011411150	5	013061150	1
12	134	205	011411200	5	013061200	1
12,5	134	205	011411250	5	013061250	1
13	134	205	011411300	5	013061300	1

Parabolic

HSS-CO 5% DIN 1897 Rettificata

Ground from the solid

01143 01307



Serie extra corta *Extra short serie*

Ø h8	/	L	Art. 01143 HSS-CO cod.	pcs	Art. 01307 HSS-CO+TiAlN cod.	pcs
3	16	46	011430300	10	013070300	1
3,2	18	49	011430320	10	013070320	1
3,25	18	49	011430325	10	013070325	1
3,3	18	49	011430330	10	013070330	1
3,5	20	52	011430350	10	013070350	1
3,7	20	52	011430370	10	013070370	1
3,75	20	52	011430375	10	013070375	1
3,8	22	55	011430380	10	013070380	1
4	22	55	011430400	10	013070400	1
4,2	22	55	011430420	10	013070420	1
4,25	22	55	011430425	10	013070425	1
4,5	24	58	011430450	10	013070450	1
4,7	24	58	011430470	10	013070470	1
4,75	24	58	011430475	10	013070475	1
4,8	26	62	011430480	10	013070480	1
5	26	62	011430500	10	013070500	1
5,2	26	62	011430520	10	013070520	1
5,25	26	62	011430525	10	013070525	1
5,5	28	66	011430550	10	013070550	1
5,7	28	66	011430570	10	013070570	1
5,75	28	66	011430575	10	013070575	1
5,8	28	66	011430580	10	013070580	1
6	28	66	011430600	10	013070600	1
6,5	31	70	011430650	10	013070650	1
6,8	34	74	011430680	10	013070680	1
7	34	74	011430700	10	013070700	1
7,5	34	74	011430750	5	013070750	1
8	37	79	011430800	5	013070800	1
8,5	37	79	011430850	5	013070850	1
9	40	84	011430900	5	013070900	1
9,5	40	84	011430950	5	013070950	1
10	43	89	011431000	5	013071000	1
10,5	43	89	011431050	5	013071050	1
11	47	95	011431100	5	013071100	1
11,5	47	95	011431150	5	013071150	1
12	51	102	011431200	5	013071200	1
12,5	51	102	011431250	5	013071250	1
13	51	102	011431300	5	013071300	1

Parabolic

Confezione / *Packaging*



Applicazioni / *Applications*

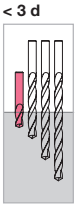
R ≤ 1200 N/mm²


Inox


Acciaio
Steel


Metals





PUNTE ELICOIDALI AL COBALTO 5% CON ELICA RAPIDA TIPO W, PER IL TAGLIO DEGLI ACCIAI INOX, ACCIAI RESISTENTI AL CALORE ED AUSTENITICI (V2A-V4A)

Cobalt twist drill with W type flute to cut stainless steel, heat resistant steel, austenitic steel (V2A-V4A)
Forets cylindriques HSS-CO avec eliche especial W / Brocas helicoidales HSS-CO con elica especial W

HSS-CO DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

W 36°

01139





HV ≈ 800÷860
AISI M35
SPLIT POINT
DIN 1412 C
(Ø≥3 mm)



Ø h8	/	L	pcs	cod.
1	12	34	10	011390100
1,25	16	38	10	011390125
1,5	18	40	10	011390150
1,75	22	46	10	011390175
2	24	49	10	011390200
2,25	27	53	10	011390225
2,5	30	57	10	011390250
2,75	33	61	10	011390275
2,8	33	61	10	011390280
3	33	61	10	011390300
3,2	36	65	10	011390320
3,25	36	65	10	011390325
3,3	36	65	10	011390330
3,4	39	70	10	011390340
3,5	39	70	10	011390350
3,7	39	70	10	011390370
3,75	39	70	10	011390375
3,8	43	75	10	011390380
4	43	75	10	011390400
4,1	43	75	10	011390410
4,2	43	75	10	011390420
4,25	43	75	10	011390425
4,5	47	80	10	011390450
4,75	47	80	10	011390475
4,8	52	86	10	011390480
5	52	86	10	011390500
5,2	52	86	10	011390520
5,25	52	86	10	011390525
5,5	57	93	10	011390550
5,75	57	93	10	011390575
6	57	93	10	011390600
6,25	63	101	10	011390625
6,5	63	101	10	011390650
6,75	69	109	10	011390675
7	69	109	10	011390700
7,25	69	109	5	011390725
7,5	69	109	5	011390750
7,75	75	117	5	011390775
8	75	117	5	011390800
8,25	75	117	5	011390825
8,5	75	117	5	011390850
8,75	81	125	5	011390875
9	81	125	5	011390900
9,25	81	125	5	011390925
9,5	81	125	5	011390950
9,75	87	133	5	011390975
10	87	133	5	011391000
10,25	87	133	5	011391025
10,5	87	133	5	011391050
10,75	94	142	5	011391075
11	94	142	5	011391100
11,25	94	142	5	011391125
11,5	94	142	5	011391150
11,75	94	142	5	011391175
12	101	151	5	011391200
12,25	101	151	5	011391225
12,5	101	151	5	011391250
12,75	101	151	5	011391275
13	101	151	5	011391300

Confezione / Packaging

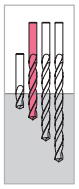


Applicazioni / Applications

R ≤ 1200 N/mm²



< 5 d



- V2A è la classificazione tedesca dell'acciaio inox 304, mentre V4A è l'inox 316.
- *V2A is german standard for 304 stainless steel, V4A is 316 stainless steel.*



Abs

19 pcs
Ø 1÷10 x 0,5 mm
01155303



25 pcs
Ø 1÷13 x 0,5 mm
01155304

HSS-CO W36° DIN 338 Metal



Metal 330x240x55

116 pcs Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	**6**	3
1,5	10	**6,5**	3
2	10	**7**	3
2,5	10	**7,5**	3
3	10	**8**	3
3,5	10	**8,5**	2
4	10	**9**	2
4,5	10	**9,5**	2
5	10	**10**	2
5,5	3		

01155454

PUNTE ELICOIDALI CILINDRICHE AL COBALTO RIVESTITE AL TiALN

HSS-CO TiAlN coated twist drills / Forets cylindriques HSS-CO revêtement TiAlN
Brocas helicoidales HSS-CO con recubrimiento de TiAlN / HSS-CO geschliffene Spiralbohrer, TiAlN-beschichtet

HSS-CO TiAlN DIN 338

01300





HV 0,05 ≃ 3300
Riv. TiAlN

Rivestimento TiAlN
TiAlN coating
443

Ø h8	/	L	pcs	cod.
1	12	34	1	013000100
1,25	16	38	1	013000125
1,5	18	40	1	013000150
1,75	22	46	1	013000175
2	24	49	1	013000200
2,25	27	53	1	013000225
2,5	30	57	1	013000250
2,75	33	61	1	013000275
3	33	61	1	013000300
3,2	36	65	1	013000320
3,25	36	65	1	013000325
3,5	39	70	1	013000350
3,75	39	70	1	013000375
4	43	75	1	013000400
4,2	43	75	1	013000420
4,25	43	75	1	013000425
4,5	47	80	1	013000450
4,75	47	80	1	013000475
4,8	52	86	1	013000480
5	52	86	1	013000500
5,2	52	86	1	013000520
5,25	52	86	1	013000525
5,5	57	93	1	013000550
5,75	57	93	1	013000575
6	57	93	1	013000600
6,25	63	101	1	013000625
6,5	63	101	1	013000650
6,75	69	109	1	013000675
7	69	109	1	013000700
7,25	69	109	1	013000725
7,5	69	109	1	013000750
7,75	75	117	1	013000775
8	75	117	1	013000800
8,25	75	117	1	013000825
8,5	75	117	1	013000850
8,75	81	125	1	013000875
9	81	125	1	013000900
9,25	81	125	1	013000925
9,5	81	125	1	013000950
9,75	87	133	1	013000975
10	87	133	1	013001000
10,25	87	133	1	013001025
10,5	87	133	1	013001050
10,75	94	142	1	013001075
11	94	142	1	013001100
11,25	94	142	1	013001125
11,5	94	142	1	013001150
11,75	94	142	1	013001175
12	101	151	1	013001200
12,25	101	151	1	013001225
12,5	101	151	1	013001250
12,75	101	151	1	013001275
13	101	151	1	013001300

Confezione / *Packaging*

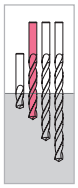


Applicazioni / *Applications*

R ≥ 900 N/mm²



< 5 d





19 pcs
Ø 1÷10 x 0,5 mm
01310301



25 pcs
Ø 1÷13 x 0,5 mm
01310302

- **Taglio a secco**, ad altissima velocità di rotazione ed avanzamento su tutti gli acciai durissimi (**acciai alto legati in genere, acciai inox**) e materiali fortemente abrasivi (ghisa, leghe Al-Si).
- *H.S.C. in high alloy steel, stainless steel, abrasive metals as cast iron, Al-Si Alloys.*
- *Les outils revêtues en TiAlN favorisent le coupe de l'acier allié, acier inox, métal abrasif (Alliage Al-Si) avec paramètre de coupe augmentées de 40%.*
- *El recubrimiento TiAlN permite aumentar la velocidad de corte y reducir desgastes de utensilios.*

HSS-CO TiAlN DIN 338 Metal



Metal 330x240x55

71 pcs Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	5	**6**	3
1,5	5	**6,5**	3
2	5	**7**	3
2,5	5	**7,5**	3
3	5	**8**	3
3,5	5	**8,5**	2
4	5	**9**	2
4,5	5	**9,5**	2
5	5	**10**	2
5,5	3		

01310452

PUNTE ELICOIDALI CILINDRICHE RETTIFICATE A DOPPIO CONOIDE Speedmaster®

HSS-G fully ground twist drills "Speedmaster®" / Forets cylindriques rectifiés "Speedmaster®"
Brocas helicoidales rectificadas "Speedmaster®" / Geschliffene Spiralbohrer "Speedmaster®"

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01220





W 27°
Doppio conoide
Double conoid
SPLIT POINT
(Ø ≥ 2,5 mm)

AISI M2
HV ≃ 820÷850

Art. **01221** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 900 N/mm²



Acciaio
Steel



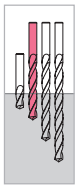
Inox



Metals



< 5 d



Ø h8	/	L	pcs	cod.
1	12	34	10	012200100
1,25	16	38	10	012200125
1,5	18	40	10	012200150
1,75	22	46	10	012200175
2	24	49	10	012200200
2,25	27	53	10	012200225
2,5	30	57	10	012200250
2,75	33	61	10	012200275
3	33	61	10	012200300
3,1	33	61	10	012200310
3,25	36	65	10	012200325
3,3	36	65	10	012200330
3,5	39	70	10	012200350
3,75	39	70	10	012200375
4	43	75	10	012200400
4,1	43	75	10	012200410
4,25	43	75	10	012200425
4,3	43	75	10	012200430
4,5	47	80	10	012200450
4,75	47	80	10	012200475
5	52	86	10	012200500
5,1	52	86	10	012200510
5,25	52	86	10	012200525
5,5	57	93	10	012200550
5,75	57	93	10	012200575
6	57	93	10	012200600
6,25	63	101	10	012200625
6,5	63	101	10	012200650
6,75	69	109	10	012200675
7	69	109	10	012200700
7,25	69	109	5	012200725
7,5	69	109	5	012200750
7,75	75	117	5	012200775
8	75	117	5	012200800
8,25	75	117	5	012200825
8,5	75	117	5	012200850
8,75	81	125	5	012200875
9	81	125	5	012200900
9,25	81	125	5	012200925
9,5	81	125	5	012200950
9,75	87	133	5	012200975
10	87	133	5	012201000
10,25	87	133	5	012201025
10,5	87	133	5	012201050
10,75	94	142	5	012201075
11	94	142	5	012201100
11,25	94	142	5	012201125
11,5	94	142	5	012201150
11,75	94	142	5	012201175
12	101	151	5	012201200
12,25	101	151	5	012201225
12,5	101	151	5	012201250
12,75	101	151	5	012201275
13	101	151	5	012201300



Abs

19 pcs
Ø 1÷10 x 0,5 mm
01229301



25 pcs
Ø 1÷13 x 0,5 mm
01229302

Caratteristiche tecniche / Technical features

3 pianetti antisdrucciolo (Ø > 5 mm):
Piena trasmissione della potenza
3 anti-skid flats (Ø > 5 mm):
Full power transmission
3 plats antirotation (Ø > 5 mm):
Plain transmission de la puissance
3 pianos antiresbaladizo (Ø > 5 mm):
Llena trasmisión de la potencia
3 rutschsicheren Pläne – volle
Übermittlung von der Macht

Cave ampie e lisce:
Facile estrazione dei trucioli
Wide and smooth flutes:
Easy chip removal
Rainures grandes et lisses:
Evacuation facile des copeaux
Ranuras anchas y lisas:
Fácil extracción de las virutas
Weiten und glatten Furchen:
einfacher Auszug des Hobelspannes

Affilatura speciale
Special Sharpening
Affûtage Spécial
Afiladura especial
Besonderes Schleifen



- Taglio altamente professionale con trapani portatili o stazionari in: acciai legati ed altamente legati, acciaio inox fino a R ≤ 900 N/mm², ferro, alluminio, metalli.
- *High quality cuts with portable or bench drilling machines into: alloy steel, high alloy steel, stainless steel up to R ≤ 900 N/mm², iron, aluminium, metals.*
- *Très professionnel découpage avec trépans portatifs ou (stationnaires) en: acier, acier inox jusqu'a R ≤ 900 N/mm², fer, aluminium et métaux.*
- *Corte altamente profesional con taladros portatiles o estacionarios en: aceros aleados y altamente aleados, acero inox hasta R ≤ 900 N/mm², hierro, aluminio, metales.*
- *Beruflicher Schnitt mit tragbaren Bohrers in: legiert und unlegiert Stahl, rostfreier Stahl bis R ≤ 900 N/mm², Aluminium, Eisen.*

ASSORTIMENTI PUNTE RETTIFICATE A DOPPIO CONOIDE Speedmaster®

HSS-G fully ground twist drills "Speedmaster®" / Forets cylindriques rectifiés "Speedmaster®"
Brocas helicoidales rectificadas "Speedmaster®" / Geschliffene Spiralbohrer "Speedmaster®"



HSS-G DIN 338

Metal



37 pcs
Ø 1÷10 x 0,25 mm

01229411

49 pcs
Ø 1÷13 x 0,25 mm

01229412



116 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	3
1,5	10	6,5	3
2	10	7	3
2,5	10	7,5	3
3	10	8	3
3,5	10	8,5	2
4	10	9	2
4,5	10	9,5	2
5	10	10	2
5,5	3		

Metal 330x240x55

01229450

128 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	3
1,5	10	8	3
2	10	8,5	2
2,5	10	9	2
3	10	9,5	2
3,5	10	10	2
4	10	10,5	2
4,5	10	11	2
5	10	11,5	2
5,5	3	12	2
6	3	12,5	2
6,5	3	13	2
7	3		

Metal 550x310x55

01229451

ESPOSITORE MAGAZZENO PER PUNTE HSS-G RETTIFICATE Speedmaster®

HSS-G twist drills display "Speedmaster®" / Display forets HSS-G rectifies "Speedmaster®"
Expositor de brocas HSS-G rectificadas "Speedmaster®" / Verkaufsschränke für Spiralbohrer "Speedmaster®"

HSS-G DIN 338



168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	5
1,5	10	8	5
2	10	8,5	5
2,5	10	9	5
3	10	9,5	5
3,5	10	10	5
4	10	10,5	3
4,5	10	11	3
5	10	11,5	3
5,5	10	12	3
6	10	12,5	3
6,5	5	13	3
7	5		

Metal 375x240x200

01229501



240 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs
1	10	7,25	2
1,25	5	7,5	5
1,5	10	7,75	2
1,75	5	8	5
2	10	8,25	2
2,25	5	8,5	3
2,5	10	8,75	2
2,75	5	9	3
3	10	9,25	2
3,25	10	9,5	3
3,5	10	9,75	2
3,75	10	10	3
4	10	10,25	2
4,25	10	10,5	2
4,5	10	10,75	2
4,75	3	11	2
5	10	11,25	2
5,25	3	11,5	2
5,5	10	11,75	2
5,75	2	12	2
6	10	12,25	2
6,25	2	12,5	2
6,5	5	12,75	2
6,75	2	13	2
7	5		

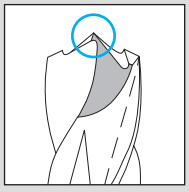
Metal 390x460x230

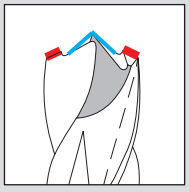
01229502

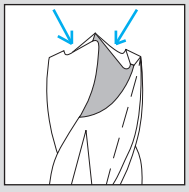
Micropunta autocentrante:
Facile centratura sul pezzo e agevole partenza del taglio.
Micro self-centering tip: Easiness of spot-drilling and start cut.
Micropunta autocentadora: Facilidad de centrado y de principio de corte.
Micro pointe auto-centrant: Facilité du centrage et du début de la coupe.

Doppia coppia di taglienti con spoglia variabile:
Massima capacità di taglio con grande durata del filo tagliente.
Double couple of cutting edges with variable relief: Maximum cutting capacity, with high resistance of the cutting edges.
Pareja doble de cortantes con ángulo de corte variable: Máxima capacidad de corte con elevada resistencia del corte.
Double couple de coupants avec dépouille vairable: Grande capacité de coupe avec une élevée résistance du fil coupant.

Coppia di rompitruciolo:
Evita la formazione di taglienti di riporto.
Double chip-breaker: Avoid the creation of built-up cutting edges.
Pareja de rompevirutas: Evita la formación de filos causados por virutas.
Couple brise-copeaux: Evite la création de tranchants causés par les coupeaux.









PUNTE ELICOIDALI CILINDRICHE, ESECUZIONE INTERAMENTE RETTIFICATA, "Dual Performer®"

Fully ground straight shank twist drills "Dual Performer®" / Forets cylindriques rectifiés "Dual Performer®"
Brocas helicoidales rectificadas "Dual Performer®" / Geschliffene Spiralbohrer "Dual Performer®"

HSS-G DIN 338 D.P. Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01201





HV ≈ 820
AISI M2 D.P.
SPLIT POINT
DIN 1412C
Ø≥3 mm

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 850 N/mm²



Acciaio
Steel



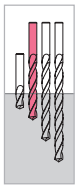
Inox



Metals



< 5 d



Ø h8	/	L	pcs	cod.
0,3	3	19	10	012010030
0,35	4	19	10	012010035
0,4	5	20	10	012010040
0,45	5	20	10	012010045
0,5	6	22	10	012010050
0,55	7	24	10	012010055
0,6	7	24	10	012010060
0,65	8	26	10	012010065
0,7	9	28	10	012010070
0,75	9	28	10	012010075
0,8	10	30	10	012010080
0,85	10	30	10	012010085
0,9	11	32	10	012010090
0,95	11	32	10	012010095
1	12	34	10	012010100
1,1	14	36	10	012010110
1,2	16	38	10	012010120
1,25	16	38	10	012010125
1,3	16	38	10	012010130
1,4	18	40	10	012010140
1,5	18	40	10	012010150
1,6	20	43	10	012010160
1,7	20	43	10	012010170
1,75	22	46	10	012010175
1,8	22	46	10	012010180
1,9	22	46	10	012010190
2	24	49	10	012010200
2,1	24	49	10	012010210
2,2	27	53	10	012010220
2,25	27	53	10	012010225
2,3	27	53	10	012010230
2,4	30	57	10	012010240
2,5	30	57	10	012010250
2,6	30	57	10	012010260
2,7	33	61	10	012010270
2,75	33	61	10	012010275
2,8	33	61	10	012010280
2,9	33	61	10	012010290
3	33	61	10	012010300
3,1	36	65	10	012010310
3,2	36	65	10	012010320
3,25	36	65	10	012010325
3,3	36	65	10	012010330
3,4	39	70	10	012010340
3,5	39	70	10	012010350
3,6	39	70	10	012010360
3,7	39	70	10	012010370
3,75	39	70	10	012010375
3,8	43	75	10	012010380
3,9	43	75	10	012010390
4	43	75	10	012010400
4,1	43	75	10	012010410

- Taglio dei materiali con R ≤ 850 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 850 N/mm².*
- *Puor percer métaux et acier avec R ≤ 850 N/mm².*
- *Para taladrar hierro e acero R ≤ 850 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 850 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe*

Ø h8	/	L	pcs	cod.
4,2	43	75	10	012010420
4,25	43	75	10	012010425
4,3	47	80	10	012010430
4,4	47	80	10	012010440
4,5	47	80	10	012010450
4,6	47	80	10	012010460
4,7	47	80	10	012010470
4,75	47	80	10	012010475
4,8	52	86	10	012010480
4,9	52	86	10	012010490
5	52	86	10	012010500
5,1	52	86	10	012010510
5,2	52	86	10	012010520
5,25	52	86	10	012010525
5,3	52	86	10	012010530
5,4	57	93	10	012010540
5,5	57	93	10	012010550
5,6	57	93	10	012010560
5,7	57	93	10	012010570
5,75	57	93	10	012010575
5,8	57	93	10	012010580
5,9	57	93	10	012010590
6	57	93	10	012010600
6,1	63	101	10	012010610
6,2	63	101	10	012010620
6,25	63	101	10	012010625
6,3	63	101	10	012010630
6,4	63	101	10	012010640
6,5	63	101	10	012010650
6,6	63	101	10	012010660
6,7	63	101	10	012010670
6,75	69	109	10	012010675
6,8	69	109	10	012010680
6,9	69	109	10	012010690
7	69	109	10	012010700
7,1	69	109	5	012010710
7,2	69	109	5	012010720
7,25	69	109	5	012010725
7,3	69	109	5	012010730
7,4	69	109	5	012010740
7,5	69	109	5	012010750
7,6	75	117	5	012010760
7,7	75	117	5	012010770
7,75	75	117	5	012010775
7,8	75	117	5	012010780
7,9	75	117	5	012010790
8	75	117	5	012010800
8,1	75	117	5	012010810
8,2	75	117	5	012010820
8,25	75	117	5	012010825
8,3	75	117	5	012010830
8,4	75	117	5	012010840

Ø h8	/	L	pcs	cod.
8,5	75	117	5	012010850
8,6	81	125	5	012010860
8,7	81	125	5	012010870
8,75	81	125	5	012010875
8,8	81	125	5	012010880
8,9	81	125	5	012010890
9	81	125	5	012010900
9,1	81	125	5	012010910
9,2	81	125	5	012010920
9,25	81	125	5	012010925
9,3	81	125	5	012010930
9,4	81	125	5	012010940
9,5	81	125	5	012010950
9,6	87	133	5	012010960
9,7	87	133	5	012010970
9,75	87	133	5	012010975
9,8	87	133	5	012010980
9,9	87	133	5	012010990
10	87	133	5	012011000
10,25	87	133	5	012011025
10,5	87	133	5	012011050
10,75	94	142	5	012011075
11	94	142	5	012011100
11,25	94	142	5	012011125
11,5	94	142	5	012011150
11,75	94	142	5	012011175
12	101	151	5	012011200
12,25	101	151	5	012011225
12,5	101	151	5	012011250
12,75	101	151	5	012011275
13	101	151	5	012011300
13,25	108	160	3	012011325
13,5	108	160	3	012011350
13,75	108	160	3	012011375
14	108	160	3	012011400
14,25	114	169	3	012011425
14,5	114	169	3	012011450
14,75	114	169	3	012011475
15	114	169	3	012011500
15,25	120	178	3	012011525
15,5	120	178	3	012011550
15,75	120	178	3	012011575
16	120	178	3	012011600
16,5	125	184	1	012011650
17	125	184	1	012011700
17,5	130	191	1	012011750
18	130	191	1	012011800
18,5	135	198	1	012011850
19	135	198	1	012011900
19,5	140	205	1	012011950
20	140	205	1	012012000

PUNTE ELICOIDALI CILINDRICHE RETTIFICATE CON CODOLO RIDOTTO "Dual Performer®"

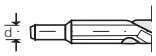
Fully ground straight shank twist drills "Dual Performer®" / Forets cylindriques rectifiés "Dual Performer®"
Brocas helicoidales rectificadas "Dual Performer®" / Geschliffene Spiralbohrer "Dual Performer®"

HSS-G DIN 338 D.P. Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01203

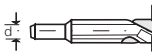




d=10 mm

Ø h8	/	L	d	pcs	cod.
10,25	87	133	10	5	012031025
10,5	87	133	10	5	012031050
10,75	94	142	10	5	012031075
11	94	142	10	5	012031100
11,25	94	142	10	5	012031125
11,5	94	142	10	5	012031150
11,75	94	142	10	5	012031175
12	101	151	10	5	012031200
12,25	101	151	10	5	012031225
12,5	101	151	10	5	012031250
12,75	101	151	10	5	012031275
13	101	151	10	5	012031300
13,25	108	160	10	3	012031325
13,5	108	160	10	3	012031350
13,75	108	160	10	3	012031375
14	108	160	10	3	012031400
14,25	114	169	10	3	012031425
14,5	114	169	10	3	012031450
14,75	114	169	10	3	012031475
15	114	169	10	3	012031500
15,25	120	178	10	3	012031525
15,5	120	178	10	3	012031550
15,75	120	178	10	3	012031575
16	120	178	10	3	012031600
16,5	125	184	10	1	012031650
17	125	184	10	1	012031700
17,5	130	191	10	1	012031750
18	130	191	10	1	012031800
18,5	135	198	10	1	012031850
19	135	198	10	1	012031900
19,5	140	205	10	1	012031950
20	140	205	10	1	012032000

01209



d=13 mm

Ø h8	/	L	d	pcs	cod.
13,25	108	160	13	3	012091325
13,5	108	160	13	3	012091350
13,75	108	160	13	3	012091375
14	108	160	13	3	012091400
14,25	114	169	13	3	012091425
14,5	114	169	13	3	012091450
14,75	114	169	13	3	012091475
15	114	169	13	3	012091500
15,25	120	178	13	3	012091525
15,5	120	178	13	3	012091550
15,75	120	178	13	3	012091575
16	120	178	13	3	012091600
16,5	125	184	13	1	012091650
17	125	184	13	1	012091700
17,5	130	191	13	1	012091750
18	130	191	13	1	012091800
18,5	135	198	13	1	012091850
19	135	198	13	1	012091900
19,5	140	205	13	1	012091950
20	140	205	13	1	012092000

Confezione / Packaging



Applicazioni / Applications

R ≤ 850 N/mm²



Acciaio
Steel



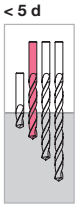
Inox



Metals



< 5 d



PUNTE ELICOIDALI CILINDRICHE RETTIFICATE, SERIE EXTRA CORTA "Dual Performer®"

Straight shank twist drills, stub serie "Dual Performer®" / Forets cylindriques, série extra courte "Dual Performer®"
Brocas helicoidales, serie extra corta "Dual Performer®" / Geschliffene Spiralbohrer, extra kurz "Dual Performer®"

HSS-G DIN 1897 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen





Confezione / *Packaging*



Applicazioni / *Applications*



Ø h8	/	L	pcs	cod.
3	16	46	10	012070300
3,25	18	49	10	012070325
3,5	20	52	10	012070350
3,75	20	52	10	012070375
4	22	55	10	012070400
4,25	22	55	10	012070425
4,5	24	58	10	012070450
4,75	24	58	10	012070475
5	26	62	10	012070500
5,25	26	62	10	012070525
5,5	28	66	10	012070550
5,75	28	66	10	012070575
6	28	66	10	012070600

01207



PUNTE ELICOIDALI CILINDRICHE RETTIFICATE, SERIE LUNGA "Dual Performer®"

Long straight shank twist drills "Dual Performer®" / Forets cylindriques série longue "Dual Performer®"
Brocas helicoidales serie larga "Dual Performer®" / Spiralbohrer, lange Ausführung "Dual Performer®"

HSS-G DIN 340 D.P. Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen





Confezione / *Packaging*

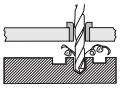


Applicazioni / *Applications*



Ø h8	/	L	pcs	cod.
3	66	100	10	012080300
3,25	69	106	10	012080325
3,5	73	112	10	012080350
3,75	73	112	10	012080375
4	78	119	10	012080400
4,25	78	119	10	012080425
4,5	82	126	10	012080450
4,75	82	126	10	012080475
5	87	132	10	012080500
5,25	87	132	10	012080525
5,5	91	139	10	012080550
5,75	91	139	10	012080575
6	91	139	10	012080600
6,5	97	148	5	012080650
7	102	156	5	012080700
7,5	102	156	5	012080750
8	109	165	5	012080800
8,5	109	165	5	012080850
9	115	175	5	012080900
9,5	115	175	5	012080950
10	121	184	5	012081000

01208



ASSORTIMENTI PUNTE HSS-G RETTIFICATE "Dual Performer®"

Set of HSS-G twist drills "Dual Performer®" / Assortiments forets rectifiés "Dual Performer®"
Juego brocas rectificadas en HSS-G "Dual Performer®" / Geschliffene Spiralbohrersätze "Dual Performer®"

HSS-G DIN 338 D.P.

Metal		Abs	
			
19 pcs Ø 1÷10 x 0,5 mm	25 pcs Ø 1÷13 x 0,5 mm	19 pcs Ø 1÷10 x 0,5 mm	25 pcs Ø 1÷13 x 0,5 mm
01205401	01205402	01205301	01205302

Metal			
			
37 pcs Ø 1÷10 x 0,25 mm	49 pcs Ø 1÷13 x 0,25 mm	51 pcs Ø 1÷6 x 0,1 mm	41 pcs Ø 6÷10 x 0,1 mm
01205411	01205412	01205404	01205405

Metal	Abs		
			
91 pcs Ø 1÷10 x 0,1 mm	91 pcs Ø 1÷10 x 0,1 mm	19 pcs Ø 1÷10 x 0,5 mm	25 pcs Ø 1÷13 x 0,5 mm
01205406	01205220	01205250	01205251

VALIGETTE ED ESPOSITORI MAGAZZENO PUNTE “Dual Performer®”

Metal case storage and display with HSS-G fully ground twist drills “Dual Performer®” / Display forets cylindriques rectifiés “Dual Performer®”
Expositor de brocas rectificadas “Dual Performer®” / Lager Kästen mit geschliffene Spiralbohrer “Dual Performer®”

HSS-G DIN 338 D.P.

01205450 Ø 1÷10 x 0,5 mm
01205451 Ø 1÷13 x 0,5 mm



150 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	5
1,5	10	6,5	5
2	10	7	5
2,5	10	7,5	5
3	20	8	5
3,5	10	8,5	5
4	10	9	5
4,5	10	9,5	5
5	10	10	5
5,5	5		

Metal 330x240x55

01205450

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	5
1,5	10	8	5
2	10	8,5	5
2,5	10	9	5
3	20	9,5	5
3,5	10	10	5
4	10	10,5	3
4,5	10	11	3
5	10	11,5	3
5,5	5	12	3
6	5	12,5	3
6,5	5	13	3
7	5		

Metal 550x310x55

01205451



Metal 375x240x200

540 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,5	10	10	10
1,5	30	6	20	10,5	5
2	50	6,5	5	11	5
2,5	50	7	5	11,5	5
3	80	7,5	5	12	5
3,5	50	8	10	12,5	5
4	80	8,5	5	13	5
4,5	30	9	5		
5	30	9,5	5		

01205501



Metal 390x460x230

700 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	20	5,25	5	9,5	5
1,25	10	5,5	30	9,75	2
1,5	30	5,75	5	10	10
1,75	10	6	30	10,25	2
2	40	6,25	3	10,5	3
2,25	10	6,5	20	10,75	2
2,5	50	6,75	2	11	3
2,75	10	7	5	11,25	2
3	100	7,25	2	11,5	2
3,25	10	7,5	5	11,75	2
3,5	50	7,75	2	12	3
3,75	10	8	10	12,25	2
4	60	8,25	2	12,5	2
4,25	10	8,5	5	12,75	2
4,5	50	8,75	2	13	3
4,75	10	9	5		
5	40	9,25	2		

01205507

PUNTE ELICOIDALI CILINDRICHE, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE CORTA

Fully ground straight shank twist drills / Forets cylindriques rectifiés
Brocas helicoidales rectificadas / Geschliffene Spiralbohrer

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01060





HV 820
AISI M2
SPLIT POINT
DIN 1412C
(Ø≥2,5)

MICRO DRILLS
HSS-G

Ø h8	/	L	pcs	cod.
0,2	2,5	19	10	010600020
0,21	2,5	19	10	010600021
0,22	2,5	19	10	010600022
0,23	2,5	19	10	010600023
0,24	2,5	19	10	010600024
0,25	3	19	10	010600025
0,26	3	19	10	010600026
0,27	3	19	10	010600027
0,28	3	19	10	010600028
0,29	3	19	10	010600029
0,3	3	19	10	010600030
0,35	4	19	10	010600035
0,4	5	20	10	010600040
0,45	5	20	10	010600045
0,5	6	22	10	010600050
0,55	7	24	10	010600055
0,6	7	24	10	010600060
0,65	8	26	10	010600065
0,7	9	28	10	010600070
0,75	9	28	10	010600075
0,8	10	30	10	010600080
0,85	10	30	10	010600085
0,9	11	32	10	010600090
0,95	11	32	10	010600095
1	12	34	10	010600100
1,1	14	36	10	010600110
1,2	16	38	10	010600120
1,25	16	38	10	010600125
1,3	16	38	10	010600130
1,4	18	40	10	010600140
1,5	18	40	10	010600150
1,6	20	43	10	010600160
1,7	20	43	10	010600170
1,75	22	46	10	010600175
1,8	22	46	10	010600180
1,9	22	46	10	010600190
2	24	49	10	010600200
2,1	24	49	10	010600210
2,2	27	53	10	010600220
2,25	27	53	10	010600225
2,3	27	53	10	010600230
2,4	30	57	10	010600240
2,5	30	57	10	010600250
2,6	30	57	10	010600260
2,7	33	61	10	010600270
2,75	33	61	10	010600275
2,8	33	61	10	010600280
2,9	33	61	10	010600290
3	33	61	10	010600300
3,1	36	65	10	010600310
3,2	36	65	10	010600320
3,25	36	65	10	010600325
3,3	36	65	10	010600330
3,4	39	70	10	010600340
3,5	39	70	10	010600350
3,6	39	70	10	010600360
3,7	39	70	10	010600370
3,75	39	70	10	010600375
3,8	43	75	10	010600380
3,9	43	75	10	010600390
4	43	75	10	010600400
4,1	43	75	10	010600410
4,2	43	75	10	010600420
4,25	43	75	10	010600425
4,3	47	80	10	010600430
4,4	47	80	10	010600440
4,5	47	80	10	010600450
4,6	47	80	10	010600460
4,7	47	80	10	010600470
4,75	47	80	10	010600475
4,8	52	86	10	010600480
4,9	52	86	10	010600490
5	52	86	10	010600500
5,1	52	86	10	010600510
5,2	52	86	10	010600520
5,25	52	86	10	010600525
5,3	52	86	10	010600530
5,4	57	93	10	010600540
5,5	57	93	10	010600550
5,6	57	93	10	010600560
5,7	57	93	10	010600570
5,75	57	93	10	010600575
5,8	57	93	10	010600580
5,9	57	93	10	010600590
6	57	93	10	010600600
6,1	63	101	10	010600610
6,2	63	101	10	010600620
6,25	63	101	10	010600625
6,3	63	101	10	010600630
6,4	63	101	10	010600640
6,5	63	101	10	010600650
6,6	63	101	10	010600660
6,7	63	101	10	010600670
6,75	69	109	10	010600675
6,8	69	109	10	010600680
6,9	69	109	10	010600690
7	69	109	10	010600700
7,1	69	109	5	010600710
7,2	69	109	5	010600720
7,25	69	109	5	010600725
7,3	69	109	5	010600730
7,4	69	109	5	010600740
7,5	69	109	5	010600750
7,6	75	117	5	010600760
7,7	75	117	5	010600770
7,75	75	117	5	010600775
7,8	75	117	5	010600780
7,9	75	117	5	010600790
8	75	117	5	010600800
8,1	75	117	5	010600810
8,2	75	117	5	010600820
8,25	75	117	5	010600825

Confezione / *Packaging*

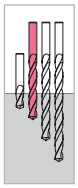


Applicazioni / *Applications*

R ≤ 800 N/mm²



< 5 d



- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

Ø h8	/	L	pcs	cod.
8,3	75	117	5	010600830
8,4	75	117	5	010600840
8,5	75	117	5	010600850
8,6	81	125	5	010600860
8,7	81	125	5	010600870
8,75	81	125	5	010600875
8,8	81	125	5	010600880
8,9	81	125	5	010600890
9	81	125	5	010600900
9,1	81	125	5	010600910
9,2	81	125	5	010600920
9,25	81	125	5	010600925
9,3	81	125	5	010600930
9,4	81	125	5	010600940
9,5	81	125	5	010600950
9,6	87	133	5	010600960
9,7	87	133	5	010600970
9,75	87	133	5	010600975
9,8	87	133	5	010600980
9,9	87	133	5	010600990
10	87	133	5	010601000
10,1	87	133	5	010601010
10,2	87	133	5	010601020
10,25	87	133	5	010601025
10,3	87	133	5	010601030
10,4	87	133	5	010601040
10,5	87	133	5	010601050
10,6	87	133	5	010601060
10,7	94	142	5	010601070
10,75	94	142	5	010601075
10,8	94	142	5	010601080
10,9	94	142	5	010601090
11	94	142	5	010601100
11,1	94	142	5	010601110
11,2	94	142	5	010601120
11,25	94	142	5	010601125
11,3	94	142	5	010601130
11,4	94	142	5	010601140
11,5	94	142	5	010601150
11,6	94	142	5	010601160
11,7	94	142	5	010601170
11,75	94	142	5	010601175
11,8	94	142	5	010601180
11,9	101	151	5	010601190
12	101	151	5	010601200
12,1	101	151	5	010601210
12,2	101	151	5	010601220
12,25	101	151	5	010601225
12,3	101	151	5	010601230
12,4	101	151	5	010601240
12,5	101	151	5	010601250
12,6	101	151	5	010601260
12,7	101	151	5	010601270
12,75	101	151	5	010601275
12,8	101	151	5	010601280
12,9	101	151	5	010601290

Ø h8	/	L	pcs	cod.
13	101	151	5	010601300
13,1	101	151	3	010601310
13,2	101	151	3	010601320
13,25	108	160	3	010601325
13,3	108	160	3	010601330
13,4	108	160	3	010601340
13,5	108	160	3	010601350
13,6	108	160	3	010601360
13,7	108	160	3	010601370
13,75	108	160	3	010601375
13,8	108	160	3	010601380
13,9	108	160	3	010601390
14	108	160	3	010601400
14,1	108	160	3	010601410
14,2	114	169	3	010601420
14,25	114	169	3	010601425
14,3	114	169	3	010601430
14,4	114	169	3	010601440
14,5	114	169	3	010601450
14,6	114	169	3	010601460
14,7	114	169	3	010601470
14,75	114	169	3	010601475
14,8	114	169	3	010601480
14,9	114	169	3	010601490
15	114	169	3	010601500
15,1	120	178	3	010601510
15,2	120	178	3	010601520
15,25	120	178	3	010601525
15,3	120	178	3	010601530
15,4	120	178	3	010601540
15,5	120	178	3	010601550
15,6	120	178	3	010601560
15,7	120	178	3	010601570
15,75	120	178	3	010601575
15,8	120	178	3	010601580
15,9	120	178	3	010601590
16	120	178	3	010601600
16,25	125	184	1	010601625
16,5	125	184	1	010601650
16,75	125	184	1	010601675
17	125	184	1	010601700
17,25	130	191	1	010601725
17,5	130	191	1	010601750
17,75	130	191	1	010601775
18	130	191	1	010601800
18,25	135	198	1	010601825
18,5	135	198	1	010601850
18,75	135	198	1	010601875
19	135	198	1	010601900
19,25	140	205	1	010601925
19,5	140	205	1	010601950
19,75	140	205	1	010601975
20	140	205	1	010602000

PUNTE ELICOIDALI CILINDRICHE CON CODOLO RIDOTTO, INTERAMENTE RETTIFICATE

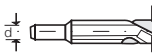
Reduced shank twist drills / Forets cylindriques à queue réduite
Brocas helicoidales con mango reducido / Geschliffene Spiralbohrer mit reduzierten Schaft

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01062

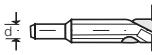




d=10 mm

Ø h8	/	L	d	pcs	cod.
10,25	87	133	10	5	010621025
10,5	87	133	10	5	010621050
10,75	94	142	10	5	010621075
11	94	142	10	5	010621100
11,25	94	142	10	5	010621125
11,5	94	142	10	5	010621150
11,75	94	142	10	5	010621175
12	101	151	10	5	010621200
12,25	101	151	10	5	010621225
12,5	101	151	10	5	010621250
12,75	101	151	10	5	010621275
13	101	151	10	5	010621300
13,25	108	160	10	3	010621325
13,5	108	160	10	3	010621350
13,75	108	160	10	3	010621375
14	108	160	10	3	010621400
14,25	114	169	10	3	010621425
14,5	114	169	10	3	010621450
14,75	114	169	10	3	010621475
15	114	169	10	3	010621500
15,25	120	178	10	3	010621525
15,5	120	178	10	3	010621550
15,75	120	178	10	3	010621575
16	120	178	10	3	010621600
16,5	125	184	10	1	010621650
17	125	184	10	1	010621700
17,5	130	191	10	1	010621750
18	130	191	10	1	010621800
18,5	135	198	10	1	010621850
19	135	198	10	1	010621900
19,5	140	205	10	1	010621950
20	140	205	10	1	010622000

01063



d=13 mm

Ø h8	/	L	d	pcs	cod.
13,25	108	160	13	3	010631325
13,5	108	160	13	3	010631350
13,75	108	160	13	3	010631375
14	108	160	13	3	010631400
14,25	114	169	13	3	010631425
14,5	114	169	13	3	010631450
14,75	114	169	13	3	010631475
15	114	169	13	3	010631500
15,25	120	178	13	3	010631525
15,5	120	178	13	3	010631550
15,75	120	178	13	3	010631575
16	120	178	13	3	010631600
16,5	125	184	13	1	010631650
17	125	184	13	1	010631700
17,5	130	191	13	1	010631750
18	130	191	13	1	010631800
18,5	135	198	13	1	010631850
19	135	198	13	1	010631900
19,5	140	205	13	1	010631950
20	140	205	13	1	010632000
20,5	145	213	13	1	010632050
21	145	213	13	1	010632100
21,5	150	221	13	1	010632150
22	150	221	13	1	010632200
22,5	150	221	13	1	010632250
23	155	229	13	1	010632300
23,5	155	229	13	1	010632350
24	160	236	13	1	010632400
24,5	160	236	13	1	010632450
25	160	236	13	1	010632500

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



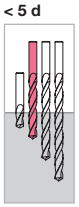
Acciaio
Steel



Metals



< 5 d



PUNTE ELICOIDALI CILINDRICHE, SERIE EXTRA CORTA, INTERAMENTE RETTIFICATE

Straight shank twist drills, stub serie / Forets cylindriques, série extra courte
Brocas helicoidales, serie extra corta / Geschliffene Spiralbohrer, extra kurz

HSS-G DIN 1897 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01094







Applicazioni / *Applications*

R ≤ 800 N/mm²



Acciaio
Steel



Metals



Ø h8	/	L	pcs	cod.
1,5	9	32	10	010940150
2	12	38	10	010940200
2,2	13	40	10	010940220
2,25	13	40	10	010940225
2,5	14	43	10	010940250
2,75	16	46	10	010940275
2,8	16	46	10	010940280
3	16	46	10	010940300
3,1	18	49	10	010940310
3,2	18	49	10	010940320
3,25	18	49	10	010940325
3,5	20	52	10	010940350
3,7	20	52	10	010940370
3,75	20	52	10	010940375
3,8	22	55	10	010940380
4	22	55	10	010940400
4,1	22	55	10	010940410
4,2	22	55	10	010940420
4,25	22	55	10	010940425
4,5	24	58	10	010940450
4,75	24	58	10	010940475
4,8	26	62	10	010940480
5	26	62	10	010940500
5,1	26	62	10	010940510
5,2	26	62	10	010940520
5,25	26	62	10	010940525
5,5	28	66	10	010940550
5,75	28	66	10	010940575
5,8	28	66	10	010940580

Ø h8	/	L	pcs	cod.
6	28	66	10	010940600
6,25	31	70	10	010940625
6,5	31	70	10	010940650
6,75	34	74	10	010940675
7	34	74	10	010940700
7,25	34	74	5	010940725
7,5	34	74	5	010940750
7,75	37	79	5	010940775
8	37	79	5	010940800
8,25	37	79	5	010940825
8,5	37	79	5	010940850
8,75	40	84	5	010940875
9	40	84	5	010940900
9,25	40	84	5	010940925
9,5	40	84	5	010940950
9,75	40	84	5	010940975
10	43	89	5	010941000
10,25	43	89	5	010941025
10,5	43	89	5	010941050
10,75	47	95	5	010941075
11	47	95	5	010941100
11,25	47	95	5	010941125
11,5	47	95	5	010941150
11,75	47	95	5	010941175
12	51	102	5	010941200
12,25	51	102	5	010941225
12,5	51	102	5	010941250
12,75	51	102	5	010941275
13	51	102	5	010941300

Art. **01373** Self
Disponibile su richiesta
On demand





Ø 2 ÷ 10x0,5
01068221 € 82,930

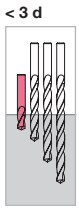
HSS-G Rettificata / *Ground from the solid / Rectifié / Rectificada / Geschliffen*

Elica contrapposta
Double ended

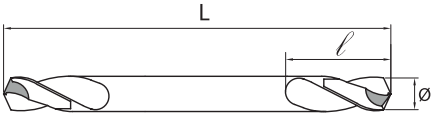
01095







Ø h8	/	L	pcs	cod.
2	10	38	10	010950200
2,5	10	43	10	010950250
3	11	46	10	010950300
3,2	11	49	10	010950320
3,25	11	49	10	010950325
3,3	11	49	10	010950330
3,4	14	52	10	010950340
3,5	14	52	10	010950350
3,75	14	55	10	010950375
4	14	55	10	010950400
4,1	14	55	10	010950410
4,2	17	58	10	010950420
4,25	17	58	10	010950425
4,5	17	58	10	010950450
4,75	17	62	10	010950475
4,9	17	62	10	010950490
5	17	62	10	010950500
5,1	17	62	10	010950510
5,5	17	66	10	010950550
6	17	66	10	010950600
6,5	17	66	10	010950650





PUNTE ELICOIDALI CILINDRICHE SERIE LUNGA, INTERAMENTE RETTIFICATE

Long straight shank twist drills / Forets cylindriques série longue
Brocas helicoidales serie larga / Spiralbohrer, lange Ausführung

HSS-G DIN 340 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01096





Ø h8	/	L	pcs	cod.
1	33	56	10	010960100
1,5	45	70	10	010960150
1,75	53	80	10	010960175
2	56	85	10	010960200
2,25	59	90	10	010960225
2,5	62	95	10	010960250
2,75	66	100	10	010960275
3	66	100	10	010960300
3,25	69	106	10	010960325
3,5	73	112	10	010960350
3,75	73	112	10	010960375
4	78	119	10	010960400
4,25	78	119	10	010960425
4,5	82	126	10	010960450
4,75	82	126	10	010960475
5	87	132	10	010960500
5,25	87	132	10	010960525
5,5	91	139	10	010960550
5,75	91	139	10	010960575
6	91	139	10	010960600
6,25	97	148	5	010960625
6,5	97	148	5	010960650
6,75	97	148	5	010960675
7	102	156	5	010960700
7,25	102	156	5	010960725
7,5	102	156	5	010960750
7,75	109	165	5	010960775
8	109	165	5	010960800
8,25	109	165	5	010960825
8,5	109	165	5	010960850
8,75	115	175	5	010960875
9	115	175	5	010960900

Ø h8	/	L	pcs	cod.
9,25	115	175	5	010960925
9,5	115	175	5	010960950
9,75	121	184	5	010960975
10	121	184	5	010961000
10,25	121	184	5	010961025
10,5	121	184	5	010961050
10,75	121	184	5	010961075
11	128	195	5	010961100
11,25	128	195	5	010961125
11,5	128	195	5	010961150
11,75	128	195	5	010961175
11,8	128	195	5	010961180
12	134	205	5	010961200
12,25	134	205	5	010961225
12,5	134	205	5	010961250
12,75	134	205	5	010961275
13	134	205	5	010961300
13,5	140	214	3	010961350
14	140	214	3	010961400
14,5	144	220	3	010961450
15	144	220	3	010961500
15,5	149	227	3	010961550
16	149	227	3	010961600
16,5	154	235	1	010961650
17	154	235	1	010961700
17,5	158	241	1	010961750
18	158	241	1	010961800
18,5	162	247	1	010961850
19	162	247	1	010961900
19,5	166	254	1	010961950
20	166	254	1	010962000

Confezione / Packaging



Applicazioni / Applications

R ≤ 800 N/mm²



HSS-G Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

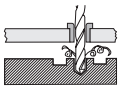
Speciale infissi
Special for casing

01129



Ø h8	/	L	pcs	cod.
3	16	100	10	011291000300
5	30	210	10	011292100500
5,3	30	210	10	011292100530
5,8	30	150	10	011291500580
5,8	30	210	10	011292100580





PUNTE ELICOIDALI CILINDRICHE, SERIE EXTRA LUNGA, INTERAMENTE RETTIFICATE

Extra long straight shank twist drills / Forets helicoidaux, série extra longue
Brocas helicoidales, serie extra larga / Spiralbohrer, extra lange Ausführung

HSS-G DIN 1869 Rettificata

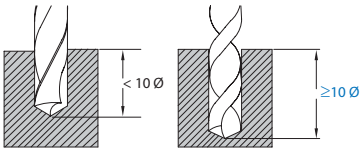
Ground from the solid / Rectifié
Rectificada / Geschliffen





HV 820
AISI M2
SPLIT POINT
DIN 1412C
(Ø≥3)

Parabolic



DIN 1869/1

Ø h8	/	L	pcs	Art. 01098 cod.	Parabolic Art. 01370 cod.
2	85	125	1	010980200	013700200
2,5	95	140	1	010980250	013700250
3	100	150	1	010980300	013700300
3,5	115	165	1	010980350	013700350
4	120	175	1	010980400	013700400
4,5	125	185	1	010980450	013700450
5	135	195	1	010980500	013700500
5,25	135	195	1	010980525	013700525
5,5	140	205	1	010980550	013700550
5,75	140	205	1	010980575	013700575
6	140	205	1	010980600	013700600
6,5	150	215	1	010980650	013700650
6,8	155	225	1	010980680	-
7	155	225	1	010980700	013700700
7,5	155	225	1	010980750	013700750
7,75	165	240	1	010980775	-
8	165	240	1	010980800	013700800
8,5	165	240	1	010980850	013700850
9	175	250	1	010980900	013700900
9,5	175	250	1	010980950	013700950
10	185	265	1	010981000	013701000
10,2	185	265	1	010981020	-
10,5	185	265	1	010981050	013701050
11	195	280	1	010981100	013701100
11,5	195	280	1	010981150	013701150
11,75	205	295	1	010981175	-
12	205	295	1	010981200	013701200
12,5	205	295	1	010981250	013701250
13	205	295	1	010981300	013701300

DIN 1869/2

Ø h8	/	L	pcs	Art. 01099 cod.	Art. 01371 cod.
3	130	190	1	010990300	013710300
3,5	145	210	1	010990350	013710350
4	150	220	1	010990400	013710400
4,5	160	235	1	010990450	013710450
5	170	245	1	010990500	013710500
5,5	180	260	1	010990550	013710550
5,75	180	260	1	010990575	-
6	180	260	1	010990600	013710600
6,5	190	275	1	010990650	013710650
7	200	290	1	010990700	013710700
7,5	200	290	1	010990750	013710750
8	210	305	1	010990800	013710800
8,5	210	305	1	010990850	013710850
9	220	320	1	010990900	013710900
9,5	220	320	1	010990950	013710950
10	235	340	1	010991000	013711000
10,5	235	340	1	010991050	013711050
11	250	365	1	010991100	013711100
11,5	250	365	1	010991150	013711150
12	260	375	1	010991200	013711200
12,5	260	375	1	010991250	013711250
13	260	375	1	010991300	013711300

DIN 1869/3

Ø h8	/	L	pcs	Art. 01100 cod.	Art. 01372 cod.
3,5	180	265	1	011000350	013720350
4	190	280	1	011000400	013720400
4,5	200	295	1	011000450	013720450
5	210	315	1	011000500	013720500
5,5	225	330	1	011000550	013720550
6	225	330	1	011000600	013720600
6,5	235	350	1	011000650	013720650
7	250	370	1	011000700	013720700
7,5	250	370	1	011000750	013720750
8	265	390	1	011000800	013720800
8,5	265	390	1	011000850	013720850
9	280	410	1	011000900	013720900
9,5	280	410	1	011000950	013720950
10	295	430	1	011001000	013721000
10,5	295	430	1	011001050	013721050
11	310	455	1	011001100	013721100
11,5	310	455	1	011001150	013721150
12	330	480	1	011001200	013721200
12,5	330	480	1	011001250	013721250
13	330	480	1	011001300	013721300

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



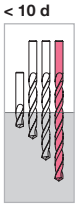
Acciaio
Steel



Metals



< 10 d



PUNTE ELICOIDALI CILINDRICHE HSS RETTIFICATE, SERIE SPECIALI SUPER LUNGHE

Long straight shank twist drills / Forets cylindriques série longue
Brocas helicoidales serie larga / Spiralbohrer, lange Ausführung

NORMA KRINO HSS-G Rettificata

Ground from the solid / Rectifié
Rectificada / Geschliffen

01105
01114





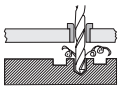


Art. 01105
L = 305 mm

Ø	/	L	d	pcs	cod.
6	228	305	6	1	011050600
6,5	228	305	6,5	1	011050650
7	228	305	7	1	011050700
7,5	228	305	7,5	1	011050750
8	228	305	8	1	011050800
8,5	228	305	8,5	1	011050850
9	228	305	9	1	011050900
9,5	228	305	9,5	1	011050950
10	228	305	10	1	011051000
10,5	228	305	10,5	1	011051050
11	228	305	11	1	011051100
11,5	228	305	11,5	1	011051150
12	228	305	12	1	011051200
12,5	228	305	12,5	1	011051250
13	228	305	13	1	011051300
14	228	305	13	1	011051400
15	228	305	13	1	011051500
16	228	305	13	1	011051600

Art. 01114
L = 460 mm

Ø	/	L	d	pcs	cod.
6	330	460	6	1	011140600
8	330	460	8	1	011140800
10	330	460	10	1	011141000
12	330	460	12	1	011141200
14	330	460	13	1	011141400
16	330	460	13	1	011141600



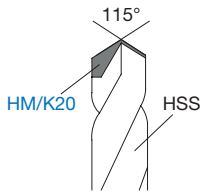
PUNTE ELICOIDALI CON PLACCHETTA IN METALLO DURO K20 PER IL TAGLIO DEI METALLI

Carbide tipped twist drills for metal cutting / Forets à mise rapportée carbure de tungstene pour métaux
Brocas helicoidales, corte de metal duro para acero / Spiralbohrer mit Schneidplatte aus Hartmetall für Metall

HSS-G DIN 338 Rettificata / *Ground from the solid / Rectifié / Rectificada / Geschliffen*

01093







154

Ø	/	L	pcs	cod.
2	24	49	1	010930200
2,5	30	57	1	010930250
3	33	61	1	010930300
3,5	39	70	1	010930350
4	43	75	1	010930400
4,5	47	80	1	010930450
5	52	86	1	010930500
5,5	57	93	1	010930550
6	57	93	1	010930600
6,5	63	101	1	010930650
7	69	109	1	010930700
7,5	69	109	1	010930750
8	75	117	1	010930800
8,5	75	117	1	010930850
9	81	125	1	010930900
9,5	81	125	1	010930950
10	87	133	1	010931000
10,5	87	133	1	010931050
11	94	142	1	010931100
11,5	94	142	1	010931150
12	101	151	1	010931200
12,5	101	151	1	010931250
13	101	151	1	010931300

- Taglio degli acciai duri trattati ed abrasivi con R da 750 N/mm² a 1400 N/mm², acciai per molle, acciai al manganese, molibdeno puro, ghisa in conchiglia con HB>300, bronzo duro.
- *For drilling in: Hardened steel, tough cast iron, manganese steel, bronze, abrasive tough steel.*
- *Pour percer: acier traité et au manganese, font, acier abrasif.*
- *Para taladar: metales muy abrasivos, aceros tratados, acero manganeso, bronze duro.*
- *Spiralbohrer nach dieser Norm eignen sich zum Bohren von Stahl mit 750 bis 1400 N/mm² (~75 bis 140 Kp/mm²) Zugfestigkeit sowie für Gußeisen, Hartguß, Temperguß, Rotguß, Bronze und Stahlguß.*



Ø 3-4-5-6-8
01068208



Ø 2-10x0,5
01068417

Ø 2-13x0,5
01068418

PUNTE PER ALLUMINIO E PER MATERIALI A TRUCIOLO LUNGO, SERIE CORTA

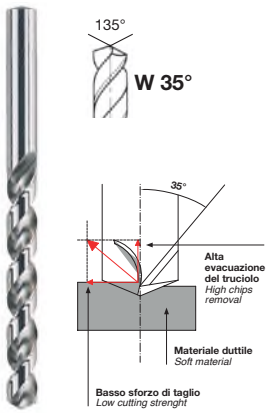
Fully ground twist drills for light alloys / Forets rectifiés pour aluminium et alliage léger
Brocas rectificadas para aluminio y aleaciones ligeras / Geschliffene Spiralbohrer für Alluminium und Leichtmetallegierung

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

Alu

01092



Ø h8	/	L	pcs	cod.
1	12	34	10	010920100
1,5	18	40	10	010920150
2	24	49	10	010920200
2,25	27	53	10	010920225
2,5	30	57	10	010920250
2,75	33	61	10	010920275
3	33	61	10	010920300
3,2	36	65	10	010920320
3,25	36	65	10	010920325
3,5	39	70	10	010920350
3,75	39	70	10	010920375
4	43	75	10	010920400
4,2	43	75	10	010920420
4,25	43	75	10	010920425
4,5	47	80	10	010920450
4,75	47	80	10	010920475
5	52	86	10	010920500
5,2	52	86	10	010920520
5,25	52	86	10	010920525
5,5	57	93	10	010920550
5,75	57	93	10	010920575
6	57	93	10	010920600

Ø h8	/	L	pcs	cod.
6,25	63	101	10	010920625
6,5	63	101	10	010920650
6,75	69	109	10	010920675
7	69	109	10	010920700
7,25	69	109	5	010920725
7,5	69	109	5	010920750
7,75	75	117	5	010920775
8	75	117	5	010920800
8,25	75	117	5	010920825
8,5	75	117	5	010920850
8,75	81	125	5	010920875
9	81	125	5	010920900
9,25	81	125	5	010920925
9,5	81	125	5	010920950
9,75	87	133	5	010920975
10	87	133	5	010921000
10,5	87	133	5	010921050
11	94	142	5	010921100
11,5	94	142	5	010921150
12	101	151	5	010921200
12,5	101	151	5	010921250
13	101	151	5	010921300



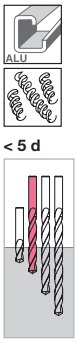
Ø 1÷10x0,5
01068303

Ø 1÷13x0,5
01068304

Confezione / *Packaging*



Applicazioni / *Applications*



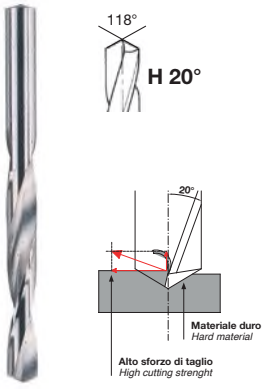
PUNTE PER OTTONE E PER MATERIALI A TRUCIOLO CORTO, SERIE CORTA

Fully ground twist drills for brass / Forets rectifiés pour laiton
Brocas rectificadas para laton / Geschliffene Spiralbohrer für Messing

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01091



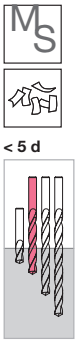
Ø h8	/	L	pcs	cod.
1	12	34	10	010910100
1,5	18	40	10	010910150
2	24	49	10	010910200
2,25	27	53	10	010910225
2,5	30	57	10	010910250
2,75	33	61	10	010910275
3	33	61	10	010910300
3,25	36	65	10	010910325
3,5	39	70	10	010910350
3,75	39	70	10	010910375
4	43	75	10	010910400
4,25	43	75	10	010910425
4,5	47	80	10	010910450
4,75	47	80	10	010910475
5	52	86	10	010910500
5,25	52	86	10	010910525
5,5	57	93	10	010910550
5,75	57	93	10	010910575
6	57	93	10	010910600
6,25	63	101	10	010910625
6,5	63	101	10	010910650

Ø h8	/	L	pcs	cod.
6,75	69	109	10	010910675
7	69	109	10	010910700
7,25	69	109	5	010910725
7,5	69	109	5	010910750
7,75	75	117	5	010910775
8	75	117	5	010910800
8,25	75	117	5	010910825
8,5	75	117	5	010910850
8,75	81	125	5	010910875
9	81	125	5	010910900
9,25	81	125	5	010910925
9,5	81	125	5	010910950
9,75	87	133	5	010910975
10	87	133	5	010911000
10,5	87	133	5	010911050
11	94	142	5	010911100
11,5	94	142	5	010911150
12	101	151	5	010911200
12,5	101	151	5	010911250
13	101	151	5	010911300

Confezione / *Packaging*



Applicazioni / *Applications*



PUNTE ELICOIDALI CILINDRICHE SINISTRE, INTERAMENTE RETTIFICATE

Straight shank twist drills, left hand / Forets helicoidaux, coupe à gauche
Brocas helicoidales izquierdas / Spiralbohrer mit Zylinderschaft, link

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

Serie corta
Short serie

01090





Sinistra
Left hand
Gauche
Izquierda
Link



Ø h8	/	L	pcs	cod.
1	12	34	10	010900100
1,5	18	40	10	010900150
2	24	49	10	010900200
2,1	24	49	10	010900210
2,2	27	53	10	010900220
2,3	27	53	10	010900230
2,4	30	57	10	010900240
2,5	30	57	10	010900250
2,6	30	57	10	010900260
2,7	33	61	10	010900270
2,8	33	61	10	010900280
2,9	33	61	10	010900290
3	33	61	10	010900300
3,2	36	65	10	010900320
3,3	36	65	10	010900330
3,4	36	65	10	010900340
3,5	39	70	10	010900350
3,7	39	70	10	010900370
3,8	43	75	10	010900380
4	43	75	10	010900400
4,1	43	75	10	010900410
4,2	43	75	10	010900420
4,5	47	80	10	010900450
4,6	47	80	10	010900460
4,7	47	80	10	010900470
4,8	52	86	10	010900480
5	52	86	10	010900500
5,1	52	86	10	010900510
5,2	52	86	10	010900520
5,5	57	93	10	010900550
5,8	57	93	10	010900580
6	57	93	10	010900600
6,2	57	101	10	010900620
6,3	57	101	10	010900630
6,5	63	101	10	010900650
7	69	109	10	010900700
7,5	69	109	5	010900750
7,8	69	117	5	010900780
8	75	117	5	010900800
8,5	75	117	5	010900850
8,7	75	117	5	010900870
9	81	125	5	010900900
9,5	81	125	5	010900950
10	87	133	5	010901000
10,5	87	133	5	010901050
11	94	142	5	010901100
11,5	94	142	5	010901150
12	101	151	5	010901200
12,5	101	151	5	010901250
13	101	151	5	010901300
13,5	101	151	5	010901350

Abs



Ø 1÷10x0,5
01068307

Ø 1÷13x0,5
01068308

Confezione / *Packaging*

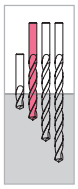


Applicazioni / *Applications*

R ≤ 800 N/mm²



< 5 d



PUNTE ELICOIDALI CILINDRICHE SINISTRE, INTERAMENTE RETTIFICATE SERIE EXTRA CORTA

Straight shank twist drills, left hand, stub serie / Forets helicoidaux, coupe à gauche, série extra courte
Brocas helicoidales izquierdas serie extra corta / Spiralbohrer mit Zylinderschaft, link, extra kurz

HSS-G DIN 1897 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

Serie extra corta
Extra short serie

01067





W 27°

Sinistra
Left hand
Gauche
Izquierda
Link



Ø h8	/	L	pcs	cod.
1,5	9	32	10	010670150
2	12	38	10	010670200
2,2	13	40	10	010670220
2,5	14	43	10	010670250
2,7	16	46	10	010670270
2,8	16	46	10	010670280
3	16	46	10	010670300
3,1	18	49	10	010670310
3,2	18	49	10	010670320
3,5	20	52	10	010670350
3,7	20	52	10	010670370
3,75	20	52	10	010670375
3,8	22	55	10	010670380
4	22	55	10	010670400
4,2	22	55	10	010670420
4,5	24	58	10	010670450
4,8	26	62	10	010670480
5	26	62	10	010670500
5,1	26	62	10	010670510
5,2	26	62	10	010670520
5,5	28	66	10	010670550
5,7	28	66	10	010670570
5,8	28	66	10	010670580
6	28	66	10	010670600
6,5	31	70	10	010670650
7	34	74	10	010670700
7,5	34	74	5	010670750
8	37	79	5	010670800
8,5	37	79	5	010670850
9	40	84	5	010670900
9,5	40	84	5	010670950
10	43	89	5	010671000
10,2	43	89	5	010671020
10,5	43	89	5	010671050
11	47	95	5	010671100
11,5	47	95	5	010671150
12	51	102	5	010671200
12,5	51	102	5	010671250
13	51	102	5	010671300
14	54	107	3	010671400
15	56	111	3	010671500
16	58	115	3	010671600

Confezione / Packaging



Applicazioni / Applications

R ≤ 800 N/mm²



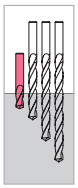
Acciaio
Steel



Metals



< 3 d



PUNTE A CENTRARE, ANGOLO DI SVASATURA 60°

Center drills 60° / Forets à centrer 60°
Brocas de centrar 60° / Zentrierbohrer 60°

HSS-G DIN 333/A 60°

01110 01214 NEW







Ø k12	D h8	L mm	pcs	Art. 01110 HSS-G cod.	Art. 01214 HSS-G + TiN cod.
1	3,15	31,5	1	011100100	012140100
1,6	4	35,5	1	011100160	012140160
2	5	40	1	011100200	012140200
2,5	6,3	45	1	011100250	012140250
3,15	8	50	1	011100315	012140315
4	10	56	1	011100400	012140400
5	12,5	63	1	011100500	012140500
6,3	16	71	1	011100630	012140630

HSS-G~DIN 333/A 60°

01374





Ø	D	L	pcs	cod.
1	4	120	1	013740100
1,6	5	120	1	013740160
2	6	120	1	013740200
2,5	8	120	1	013740250
3,15	10	120	1	013740315

HSS-G~DIN 333/A 60°

01375







Ø	D	L	S	pcs	cod.
1,6	4	35,5	3,25	1	013750160
2	5	40	4,2	1	013750200
2,5	6,3	45	5,35	1	013750250
3,15	8	50	6,95	1	013750315
4	10	56	8,4	1	013750400
5	12,5	63	10,95	1	013750500
6,3	16	71	14	1	013750630

PUNTE A CENTRARE, ANGOLO DI SVASATURA 60°

Center drills 60° / Forets à centrer 60°
Brocas de centrar 60° / Zentrierbohrer 60°

HSS-G DIN 333/B 60°/120°



Ø	D	L	pcs	Art. 01112 HSS-G cod.	Art. 01217 HSS-G + TiN cod.
1	4	35,5	1	011120100	012170100
1,6	6,3	45	1	011120160	012170160
2	8	50	1	011120200	012170200
2,5	10	56	1	011120250	012170250
3,15	11,2	60	1	011120315	012170315
4	14	67	1	011120400	012170400
5	18	75	1	011120500	012170500
6,3	20	80	1	011120630	012170630

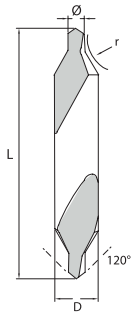
01112
01217
NEW

HSS-G DIN 333/R 60°



Ø	r	D	L	pcs	Art. 01111 HSS-G cod.	Art. 01216 HSS-G + TiN cod.
1	3,15	3,15	31,5	1	011110100	012160100
1,6	5	4	35,5	1	011110160	012160160
2	6,3	5	40	1	011110200	012160200
2,5	8	6,3	45	1	011110250	012160250
3,15	10	8	50	1	011110315	012160315
4	12,5	10	56	1	011110400	012160400
5	16	12,5	63	1	011110500	012160500
6,3	20	16	71	1	011110630	012160630

01111
01216
NEW



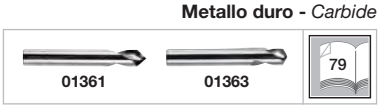
PUNTE A CENTRARE CILINDRICHE PER CENTRI CN 90°-120°

CNC center drills / Forêts à center pour machines CN

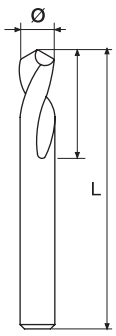


Ø	/ mm	L mm	pcs	Art. 01364 HSS-G 90° cod.	Art. 01365 HSS-G 120° cod.
3	12	46	1	013640300	013650300
4	12	55	1	013640400	013650400
5	14	62	1	013640500	013650500
6	16	66	1	013640600	013650600
8	21	79	1	013640800	013650800
10	25	89	1	013641000	013651000
12	30	102	1	013641200	013651200
14	33	107	1	013641400	013651400
16	37	115	1	013641600	013651600
20	45	131	1	013642000	013652000

Metallo duro - *Carbide*



01364
01365



PUNTE A GRADINO AD ELICHE INDIPENDENTI PER FORI SEDI VITI

Subland twist drills with independent spirals for screws holes / Forets étagés avec hélices indépendantes, pour têtes de vis
Brocas escalonadas con espirales indipendientes, para asientos de tornillos / Stufenbohrer mit selbständigen Schrauben für Zylinderschrauben

Per fori passanti - *For through holes - Pour trous débouchants - Para orificios pasantes - Für Durchgangslöcher*

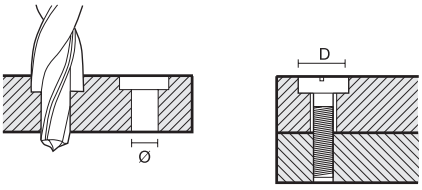
HSS

01103 01104



DIN 8376 DIN 8377

Eliche indipendenti
Independent spirals



Art. 01103 Grado fine / Fine grade

VITE *thread*	Ø	D	l_1	l	L	cod.
M 3	3,4	6	9	57	93	011030300
4	4,5	8	11	75	117	011030400
5	5,5	10	13	87	133	011030500
6	6,6	11	15	94	142	011030600
8	9	15	19	114	169	011030800
10	11	18	23	130	191	011031000

Art. 01104

VITE *thread*	Ø	D	l_1	l	L	M.K.	cod.
M 5	5,5	10	13	87	168	1	011040500
6	6,6	11	15	94	175	1	011040600
8	9	15	19	114	212	2	011040800
10	11	18	23	130	228	2	011041000
12	13,5	20	27	140	238	2	011041200
14	15,5	24	31	160	281	3	011041400
16	17,5	26	35	165	286	3	011041600
18	20	30	39	175	296	3	011041800
20	22	33	43	185	334	4	011042000

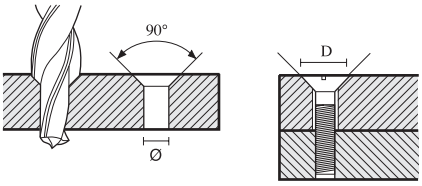
HSS

01101 01102



DIN 8374 DIN 8375

Eliche indipendenti
Independent spirals

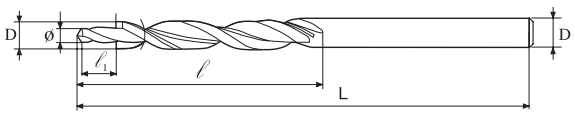


Art. 01101 Grado fine / Fine grade

VITE *thread*	Ø	D	l_1	l	L	cod.
M 3	3,2	6	9	57	93	011010300
4	4,3	8	11	75	117	011010400
5	5,3	10	13	87	133	011010500
6	6,4	11,5	15	94	142	011010600
8	8,4	15	19	114	169	011010800
10	10,5	19	23	135	198	011011000

Art. 01102

VITE *thread*	Ø	D	l_1	l	L	M.K.	cod.
M 5	5,5	11	13	94	175	1	011020500
6	6,6	13	15	101	182	1	011020600
8	9	17,2	19	130	228	2	011020800
10	11	21,5	23	150	248	2	011021000



Confezione / *Packaging*



Applicazioni / *Applications*

Acciaio *Steel*

Metals

Alu

PUNTA A GRADINO AD ELICHE INDIPENDENTI PER PREFORI DI FILETTATURA

Subland twist drills with independent spirals for thread core hole / Foret étagés avec hélices indépendantes pour trous de taraudage
Brocas escalonadas con espirales independientes para orificios de roscado / Stufenbohrer mit selbständigen Schrauben für Gewindelöcher

Per prefori di filettature - *For thread core holes - Pour trous de taraudage - Para orificios de roscado - Für Gewindelöcher*

HSS



DIN 8378

Eliche indipendenti
Independent spirals



Applicazioni / *Applications*



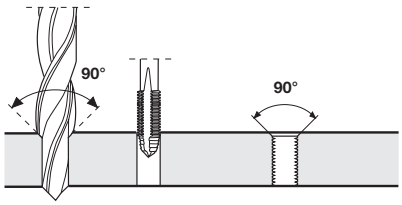
Acciaio
Steel

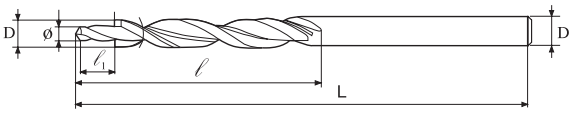


Metals

VITE *thread*	Ø	D	l_1	l	L	cod.
M 3	2,5	3,4	8,8	39	70	011170300
4	3,3	4,5	11,4	47	80	011170400
5	4,2	5,5	13,6	57	93	011170500
6	5	6,6	16,5	63	101	011170600
8	6,8	9,0	21	81	125	011170800
10	8,5	11	25,5	94	142	011171000
12	10,2	13,5	30	108	160	011171200

01117





PUNTE A GRADINO AD ELICA SINGOLA, SERIE CORTA

Subland twist drills, short serie / Forets étagés, série courte / Brocas escalonadas, serie corta / Stufenbohrer, Kurze Ausführung

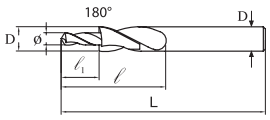
HSS

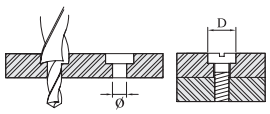
01059 01058 01057



Art. 01059 ~ DIN 8376 Grado fine / Fine grade

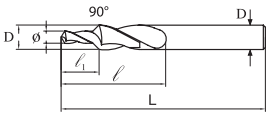
VITE *thread*	Ø	D	l_1	l	L	cod.
M 3	3,4	6	9	28	66	010590300
4	4,5	8	11	37	79	010590400
5	5,5	10	13	43	89	010590500
6	6,6	11	15	47	95	010590600
8	9,0	15	19	56	111	010590800
10	11,0	18	23	62	123	010591000

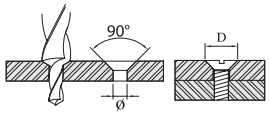




Art. 01058 ~ DIN 8374 Grado fine / Fine grade

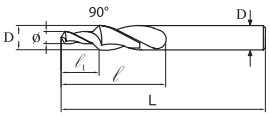
VITE *thread*	Ø	D	l_1	l	L	cod.
M 3	3,2	6	9	28	66	010580300
4	4,3	8	11	37	79	010580400
5	5,3	10	13	43	89	010580500
6	6,4	11,5	15	47	95	010580600
8	8,4	15	19	56	111	010580800
10	10,5	19	23	62	123	010581000

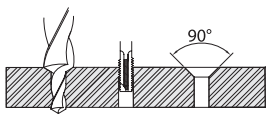




Art. 01057 ~ DIN 8378

VITE *thread*	Ø	D	l_1	l	L	cod.
M 3	2,5	3,4	8,8	20	52	010570300
4	3,3	4,5	11,4	24	58	010570400
5	4,2	5,5	13,6	28	66	010570500
6	5,0	6,6	16,5	31	70	010570600
8	6,8	9,0	21,0	40	84	010570800
10	8,5	11,0	25,5	47	95	010571000
12	10,2	13,5	30,0	54	107	010571200





Applicazioni / *Applications*



Acciaio
Steel



Metals

ASSORTIMENTI PUNTE HSS-G RETTIFICATE IN ASTUCCI DI METALLO E DI PLASTICA

Sets of HSS twist drills ground from the solid / Assortiments forets à metaux rectifiés
Juego brocas rectificadas en HSS / Geschliffene Spiralbohrersätze

HSS-G DIN 338

Metal



19 pcs
Ø 1÷10 x 0,5 mm
01068401

Abs



19 pcs
Ø 1÷10 x 0,5 mm
01068301

Metal



25 pcs
Ø 1÷13 x 0,5 mm
01068402

Abs



25 pcs
Ø 1÷13 x 0,5 mm
01068302

Metal



37 pcs
Ø 1÷10 x 0,25 mm
01068411

49 pcs
Ø 1÷13 x 0,25 mm
01068412

51 pcs
Ø 1÷6 x 0,1 mm
01068404

Metal



41 pcs
Ø 6÷10 x 0,1 mm
01068405

91 pcs
Ø 1÷10 x 0,1 mm
01068406

Plastic



19 pcs
Ø 1÷10 x 0,5 mm
01068101



10 pcs Ø 1÷10 x 1 mm
01068201

19 pcs Ø 1÷10 x 0,5 mm
01068206



91 pcs
Ø 1÷10 x 0,1 mm
01068220



19 pcs Ø 1÷10 x 0,5 mm
01068250

25 pcs Ø 1÷13 x 0,5 mm
01068251

VALIGETTE ED ESPOSITORI MAGAZZENO PUNTE HSS-G RETTIFICATE

Metal case storage display with HSS-G fully ground twist drills / Display forets cylindriques rectifiés
Expositor de brocas rectificadas / Lager Kästen mit geschliffene Spiralbohrer

HSS-G DIN 338

01068450 Ø 1÷10 x 0,5 mm
01068451 Ø 1÷13 x 0,5 mm



150 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	5
1,5	10	6,5	5
2	10	7	5
2,5	10	7,5	5
3	20	8	5
3,5	10	8,5	5
4	10	9	5
4,5	10	9,5	5
5	10	10	5
5,5	5		

Metal 330x240x55

01068450

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	5
1,5	10	8	5
2	10	8,5	5
2,5	10	9	5
3	20	9,5	5
3,5	10	10	5
4	10	10,5	3
4,5	10	11	3
5	10	11,5	3
5,5	5	12	3
6	5	12,5	3
6,5	5	13	3
7	5		

Metal 550x310x55

01068451



Metal 375x240x200

600 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,5	20	10	10
1,5	30	6	20	10,5	5
2	50	6,5	10	11	5
2,5	50	7	10	11,5	5
3	100	7,5	5	12	5
3,5	50	8	10	12,5	5
4	100	8,5	5	13	5
4,5	30	9	5		
5	30	9,5	5		

01068501



Metal 390x460x230

760 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,25	5	9,5	5
1,25	10	5,5	30	9,75	2
1,5	30	5,75	5	10	10
1,75	10	6	30	10,25	2
2	50	6,25	3	10,5	3
2,25	10	6,5	20	10,75	2
2,5	50	6,75	2	11	3
2,75	10	7	5	11,25	2
3	100	7,25	2	11,5	2
3,25	10	7,5	5	11,75	2
3,5	50	7,75	2	12	3
3,75	10	8	10	12,25	2
4	80	8,25	2	12,5	2
4,25	10	8,5	5	12,75	2
4,5	50	8,75	2	13	3
4,75	10	9	5		
5	60	9,25	2		

01068507

PUNTE ELICOIDALI CODOLO CONICO MORSE, ESECUZIONE FRESATA

Morse taper shank twist drills / Forets à queue conique morse / Brocas helicoidales con mango conico/ Spiralbohrer mit Morsekegel

HSS DIN 345 Fresata

Milled / Fraisé / Fresada / Gefräst

01097





HSS-CO



01150



Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



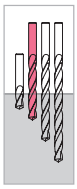
Acciaio
Steel



Metals



< 5 d



- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

Ø h8	M.K.	/	L	pcs	cod.
5	1	52	133	1	010970500
5,5	1	57	138	1	010970550
6	1	57	138	1	010970600
6,25	1	63	144	1	010970625
6,5	1	63	144	1	010970650
6,75	1	69	150	1	010970675
7	1	69	150	1	010970700
7,25	1	69	150	1	010970725
7,5	1	69	150	1	010970750
7,75	1	75	156	1	010970775
8	1	75	156	1	010970800
8,25	1	75	156	1	010970825
8,5	1	75	156	1	010970850
8,75	1	81	162	1	010970875
9	1	81	162	1	010970900
9,25	1	81	162	1	010970925
9,5	1	81	162	1	010970950
9,75	1	87	168	1	010970975
10	1	87	168	1	010971000
10,25	1	87	168	1	010971025
10,5	1	87	168	1	010971050
10,75	1	94	175	1	010971075
11	1	94	175	1	010971100
11,25	1	94	175	1	010971125
11,5	1	94	175	1	010971150
11,75	1	94	175	1	010971175
12	1	101	182	1	010971200
12,25	1	101	182	1	010971225
12,5	1	101	182	1	010971250
12,75	1	101	182	1	010971275
13	1	101	182	1	010971300
13,25	1	108	189	1	010971325
13,5	1	108	189	1	010971350
13,75	1	108	189	1	010971375
14	1	108	189	1	010971400
14,25	2	114	212	1	010971425
14,5	2	114	212	1	010971450
14,75	2	114	212	1	010971475
15	2	114	212	1	010971500
15,25	2	120	218	1	010971525
15,5	2	120	218	1	010971550
15,75	2	120	218	1	010971575
16	2	120	218	1	010971600
16,25	2	125	223	1	010971625
16,5	2	125	223	1	010971650
16,75	2	125	223	1	010971675
17	2	125	223	1	010971700
17,25	2	130	228	1	010971725
17,5	2	130	228	1	010971750
17,75	2	130	228	1	010971775
18	2	130	228	1	010971800
18,25	2	135	233	1	010971825
18,5	2	135	233	1	010971850
18,75	2	135	233	1	010971875
19	2	135	233	1	010971900
19,25	2	140	238	1	010971925
19,5	2	140	238	1	010971950
19,75	2	140	238	1	010971975
20	2	140	238	1	010972000
20,25	2	145	243	1	010972025
20,5	2	145	243	1	010972050
20,75	2	145	243	1	010972075
21	2	145	243	1	010972100
21,25	2	150	248	1	010972125
21,5	2	150	248	1	010972150
21,75	2	150	248	1	010972175
22	2	150	248	1	010972200
22,25	2	155	248	1	010972225

Ø h8	M.K.	/	L	pcs	cod.
22,5	2	155	253	1	010972250
22,75	2	155	253	1	010972275
23	2	155	253	1	010972300
23,25	3	155	276	1	010972325
23,5	3	155	276	1	010972350
23,75	3	160	281	1	010972375
24	3	160	281	1	010972400
24,25	3	160	281	1	010972425
24,5	3	160	281	1	010972450
24,75	3	160	281	1	010972475
25	3	160	281	1	010972500
25,25	3	165	286	1	010972525
25,5	3	165	286	1	010972550
25,75	3	165	286	1	010972575
26	3	165	286	1	010972600
26,25	3	165	286	1	010972625
26,5	3	165	286	1	010972650
26,75	3	170	291	1	010972675
27	3	170	291	1	010972700
27,25	3	170	291	1	010972725
27,5	3	170	291	1	010972750
27,75	3	170	291	1	010972775
28	3	170	291	1	010972800
28,25	3	175	296	1	010972825
28,5	3	175	296	1	010972850
28,75	3	175	296	1	010972875
29	3	175	296	1	010972900
29,25	3	175	296	1	010972925
29,5	3	175	296	1	010972950
29,75	3	175	296	1	010972975
30	3	175	296	1	010973000
30,25	3	180	301	1	010973025
30,5	3	180	301	1	010973050
30,75	3	180	301	1	010973075
31	3	180	301	1	010973100
31,25	3	180	301	1	010973125
31,5	3	180	301	1	010973150
31,75	3	185	306	1	010973175
32	4	185	334	1	010973200
32,25	4	185	334	1	010973225
32,5	4	185	334	1	010973250
32,75	4	185	334	1	010973275
33	4	185	334	1	010973300
33,25	4	185	334	1	010973325
33,5	4	185	334	1	010973350
33,75	4	185	334	1	010973375
34	4	190	339	1	010973400
34,25	4	190	339	1	010973425
34,5	4	190	339	1	010973450
34,75	4	190	339	1	010973475
35	4	190	339	1	010973500
35,25	4	190	339	1	010973525
35,5	4	190	339	1	010973550
35,75	4	190	339	1	010973575
36	4	195	344	1	010973600
36,25	4	195	344	1	010973625
36,5	4	195	344	1	010973650
36,75	4	195	344	1	010973675
37	4	195	344	1	010973700
37,25	4	195	344	1	010973725
37,5	4	195	344	1	010973750
37,75	4	195	344	1	010973775
38	4	200	349	1	010973800
38,25	4	200	349	1	010973825
38,5	4	200	349	1	010973850
38,75	4	200	349	1	010973875
39	4	200	349	1	010973900
39,25	4	200	349	1	010973925
39,5	4	200	349	1	010973950
39,75	4	200	349	1	010973975
40	4	200	349	1	010974000
40,5	4	205	354	1	010974050
41	4	205	354	1	010974100
41,5	4	205	354	1	010974150
42	4	205	354	1	010974200

Ø h8	M.K.	/	L	pcs	cod.
42,5	4	205	354	1	010974250
43	4	210	359	1	010974300
43,5	4	210	359	1	010974350
44	4	210	359	1	010974400
44,5	4	210	359	1	010974450
45	4	210	359	1	010974500
45,5	4	215	364	1	010974550
46	4	215	364	1	010974600
46,5	4	215	364	1	010974650
47	4	215	364	1	010974700
47,5	4	215	364	1	010974750
48	4	220	369	1	010974800
48,5	4	220	369	1	010974850
49	4	220	369	1	010974900
49,5	4	220	369	1	010974950
50	4	220	369	1	010975000
50,5	4	225	374	1	010975050
51	5	225	412	1	010975100
52	5	225	412	1	010975200
52,5	5	225	412	1	010975250
53	5	225	412	1	010975300
53,5	5	230	417	1	010975350
54	5	230	417	1	010975400
54,5	5	230	417	1	010975450
55	5	230	417	1	010975500
55,5	5	230	417	1	010975550
56	5	230	417	1	010975600
56,5	5	235	422	1	010975650
57	5	235	422	1	010975700
57,5	5	235	422	1	010975750
58	5	235	422	1	010975800
58,5	5	235	422	1	010975850
59	5	235	422	1	010975900
59,5	5	235	422	1	010975950
60	5	235	422	1	010976000
61	5	240	427	1	010976100
62	5	240	427	1	010976200
63	5	240	427	1	010976300
64	5	245	432	1	010976400
65	5	245	432	1	010976500
66	5	245	432	1	010976600
67	5	245	432	1	010976700
68	5	250	437	1	010976800
69	5	250	437	1	010976900
70	5	250	437	1	010977000
71	5	250	437	1	010977100
72	5	255	442	1	010977200
73	5	255	442	1	010977300
74	5	255	442	1	010977400
75	5	255	442	1	010977500
76	5	260	447	1	010977600
77	6	260	514	1	010977700
78	6	260	514	1	010977800
79	6	260	514	1	010977900
80	6	260	514	1	010978000
81	6	265	519	1	010978100
82	6	265	519	1	010978200
83	6	265	519	1	010978300
84	6	265	519	1	010978400
85	6	265	519	1	010978500
86	6	270	524	1	010978600
87	6	270	524	1	010978700
88	6	270	524	1	010978800
89	6	270	524	1	010978900
90	6	270	524	1	010979000
91	6	275	529	1	010979100
92	6	275	529	1	010979200
93	6	275	529	1	010979300
94	6	275	529	1	010979400
95	6	275	529	1	010979500
96	6	280	534	1	010979600
97	6	280	534	1	010979700
98	6	280	534	1	010979800
99	6	280	534	1	010979900
100	6	280	534	1	0109710000

PUNTE ELICOIDALI CODOLO CONICO MORSE, SERIE LUNGA, ESECUZIONE FRESATA

Cobalt long straight shank twist drills / Forets cylindriques série longue au cobalt
Brocas helicoidales serie larga de cobalto / Kobalt Spiralbohrer, lange Ausführung

HSS DIN 341 Fresata

Milled / Fraisé / Fresada / Gefräst

01028



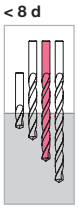


Confezione / *Packaging*



Applicazioni / *Applications*





Ø h8	M.K.	/	L	pcs	cod.
8	1	100	181	1	010280800
8,5	1	100	181	1	010280850
9	1	107	188	1	010280900
9,5	1	107	188	1	010280950
10	1	116	197	1	010281000
10,25	1	116	197	1	010281025
10,5	1	116	197	1	010281050
11	1	125	206	1	010281100
11,5	1	125	206	1	010281150
12	1	134	215	1	010281200
12,25	1	134	215	1	010281225
12,5	1	134	215	1	010281250
13	1	134	215	1	010281300
13,25	1	142	223	1	010281325
13,5	1	142	223	1	010281350
14	1	142	223	1	010281400
14,5	2	147	245	1	010281450
15	2	147	245	1	010281500
15,5	2	153	251	1	010281550
16	2	153	251	1	010281600
16,5	2	159	257	1	010281650
17	2	159	257	1	010281700
17,5	2	165	263	1	010281750
18	2	165	263	1	010281800
18,5	2	171	269	1	010281850
19	2	171	269	1	010281900
19,5	2	177	275	1	010281950
20	2	177	275	1	010282000
20,5	2	184	282	1	010282050
21	2	184	282	1	010282100
21,5	2	191	289	1	010282150
22	2	191	289	1	010282200
22,5	2	198	296	1	010282250
23	2	198	296	1	010282300
23,5	3	198	319	1	010282350
24	3	206	327	1	010282400
24,5	3	206	327	1	010282450
25	3	206	327	1	010282500
25,5	3	214	335	1	010282550
26	3	214	335	1	010282600
26,5	3	214	335	1	010282650
27	3	222	343	1	010282700
27,5	3	222	343	1	010282750
28	3	222	343	1	010282800
28,5	3	230	351	1	010282850
29	3	230	351	1	010282900
29,5	3	230	351	1	010282950
30	3	230	351	1	010283000
31	3	239	360	1	010283100
32	4	248	397	1	010283200
33	4	248	397	1	010283300
34	4	257	406	1	010283400
35	4	257	406	1	010283500
35,5	4	267	416	1	010283550
36	4	267	416	1	010283600
36,5	4	267	416	1	010283650
37	4	267	416	1	010283700
37,5	4	267	416	1	010283750
38	4	277	426	1	010283800
39	4	277	426	1	010283900
40	4	277	426	1	010284000
41	4	287	436	1	010284100
42	4	287	436	1	010284200
43	4	298	447	1	010284300
44	4	298	447	1	010284400
45	4	298	447	1	010284500
46	4	310	459	1	010284600
47	4	310	459	1	010284700
48	4	321	470	1	010284800
49	4	321	470	1	010284900
50	4	321	470	1	010285000

- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

PUNTE ELICOIDALI CODOLO CONICO MORSE CON FORI DI LUBROREFRIGERAZIONE

Morse taper shank twist drills with internal coolant / Forets a queue conique Morse avec trous réfrigérants
Brocas helicoidales con mango conico / Spiralbohrer mit Morsekegel mit Schmierloch

HSS DIN 341 Fresata

Milled / Fraisé / Fresada / Gefräst





Ø h8	M.K.	/	L	pcs	cod.
10	2	116	233	1	010691000
11	2	125	242	1	010691100
12	2	134	251	1	010691200
13	2	134	251	1	010691300
14	2	142	259	1	010691400
15	2	147	264	1	010691500
16	2	153	270	1	010691600
17	2	159	276	1	010691700
18	2	165	282	1	010691800
19	3	171	307	1	010691900
20	3	177	313	1	010692000
21	3	184	320	1	010692100
22	3	191	327	1	010692200
23	3	198	334	1	010692300
24	3	206	342	1	010692400
25	3	206	342	1	010692500
26	3	214	335	1	010692600
27	3	222	343	1	010692700
28	3	222	343	1	010692800
29	3	230	351	1	010692900
30	3	230	351	1	010693000
32	4	248	397	1	010693200

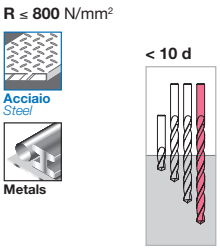
01069



Confezione / *Packaging*



Applicazioni / *Applications*



- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite, taglio di lamierini in pacchi. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

PUNTE ELICOIDALI CODOLO CONICO MORSE, SERIE EXTRA LUNGA, ESECUZIONE FRESATA

Morse taper shank twist drills, extra long serie / Forets à queue conique Morse, série extra longue
Brocas helicoidales con mango conico, serie extra larga / Spiralbohrer mit Morsekegel, extra lange Ausführung

HSS DIN 1870/1 Fresata

Milled / Fraisé / Fresada / Gefräst

01088



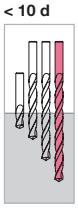


Confezione / *Packaging*



Applicazioni / *Applications*





Ø h8	M.K.	/	L	pcs	cod.
8	1	165	265	1	010880800
8,5	1	165	265	1	010880850
9	1	175	275	1	010880900
9,5	1	175	275	1	010880950
10	1	185	285	1	010881000
10,5	1	185	285	1	010881050
11	1	195	300	1	010881100
11,5	1	195	300	1	010881150
12	1	205	310	1	010881200
12,5	1	205	310	1	010881250
13	1	205	310	1	010881300
13,5	1	220	325	1	010881350
14	1	220	325	1	010881400
14,5	2	220	340	1	010881450
15	2	220	340	1	010881500
15,5	2	230	355	1	010881550
16	2	230	355	1	010881600
16,5	2	230	355	1	010881650
17	2	230	355	1	010881700
17,5	2	245	370	1	010881750
18	2	245	370	1	010881800
18,5	2	245	370	1	010881850
19	2	245	370	1	010881900
19,5	2	260	385	1	010881950
20	2	260	385	1	010882000
20,5	2	260	385	1	010882050
21	2	260	385	1	010882100
21,5	2	270	405	1	010882150
22	2	270	405	1	010882200
22,5	2	270	405	1	010882250
23	2	270	405	1	010882300
23,5	3	270	425	1	010882350
24	3	290	440	1	010882400
24,5	3	290	440	1	010882450
25	3	290	440	1	010882500
25,5	3	290	440	1	010882550
26	3	290	440	1	010882600
26,5	3	290	440	1	010882650
27	3	305	460	1	010882700
27,5	3	305	460	1	010882750
28	3	305	460	1	010882800
28,5	3	305	460	1	010882850
29	3	305	460	1	010882900
29,5	3	305	460	1	010882950
30	3	305	460	1	010883000
31	3	320	480	1	010883100
32	4	320	505	1	010883200
33	4	320	505	1	010883300
34	4	340	530	1	010883400
35	4	340	530	1	010883500
36	4	340	530	1	010883600
37	4	340	530	1	010883700
38	4	360	555	1	010883800
39	4	360	555	1	010883900
40	4	360	555	1	010884000
41	4	360	555	1	010884100
42	4	360	555	1	010884200
43	4	385	585	1	010884300
44	4	385	585	1	010884400
45	4	385	585	1	010884500
46	4	385	585	1	010884600
47	4	385	585	1	010884700
48	4	405	605	1	010884800
49	4	405	605	1	010884900
50	4	405	605	1	010885000

- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

PUNTE ELICOIDALI CODOLO CONICO MORSE CON TAGLIENTI IN METALLO DURO

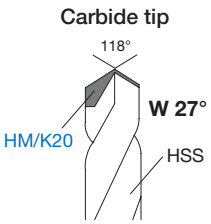
Morse taper shank twist drills with carbide tips / Forets à queue conique Morse
Brocas helicoidales con mango conico / Spiralbohrer mit Morsekegel

DIN 345 HSS/HM Fresata

Milled / Fraisé / Fresada / Gefräst

01213



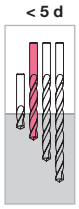


Confezione / *Packaging*



Applicazioni / *Applications*





Ø h8	M.K.	/	L	pcs	cod.
10	1	87	168	1	012131000
10,5	1	87	168	1	012131050
11	1	94	175	1	012131100
11,5	1	94	175	1	012131150
12	1	101	182	1	012131200
12,5	1	101	182	1	012131250
13	1	101	182	1	012131300
13,5	1	108	189	1	012131350
14	1	108	189	1	012131400
14,5	2	114	212	1	012131450
15	2	114	212	1	012131500
15,5	2	120	218	1	012131550
16	2	120	218	1	012131600
16,5	2	125	223	1	012131650
17	2	125	223	1	012131700
17,5	2	130	228	1	012131750
18	2	130	228	1	012131800
18,5	2	135	233	1	012131850
19	2	135	233	1	012131900
19,5	2	140	238	1	012131950
20	2	140	238	1	012132000
20,5	2	145	243	1	012132050
21	2	145	243	1	012132100
21,5	2	150	248	1	012132150
22	2	150	248	1	012132200
22,5	2	155	253	1	012132250
23	2	155	253	1	012132300
23,5	3	155	276	1	012132350
24	3	160	281	1	012132400
24,5	3	160	281	1	012132450
25	3	160	281	1	012132500
25,5	3	165	286	1	012132550
26	3	165	286	1	012132600
26,5	3	165	286	1	012132650
27	3	170	291	1	012132700
27,5	3	170	291	1	012132750
28	3	170	291	1	012132800
28,5	3	175	296	1	012132850
29	3	175	296	1	012132900
29,5	3	175	296	1	012132950
30	3	175	296	1	012133000
30,5	3	180	301	1	012133050
31	3	180	301	1	012133100
31,5	3	180	301	1	012133150
32	4	185	334	1	012133200
32,5	4	185	334	1	012133250
33	4	185	334	1	012133300
33,5	4	185	334	1	012133350
34	4	190	339	1	012133400
34,5	4	190	339	1	012133450
35	4	190	339	1	012133500

- Taglio di acciai duri con R ≤ 1100 N/mm², acciai per molle, ghisa temperata, molibdeno puro, bronzo duro, materie plastiche termoindurenti con azione abrasiva, materie sintetiche con fibre vetrose,…
- *Cut of hard steels R ≤ 1100 N/mm², spring steel, hard cast iron, Mo, hard bronze, abrasive thermosetting plastics, glass fiber reinforced plastics,…*
- *Pour travaille aciers durs avec R≤ 1100 N/mm², acier pour meule, de fer trempé, de molybdène pur, en bronze, matières plastiques thermodurcissables avec action abrasive, en plastique avec des fibres de verre,…*
- *Para trabajar aceros duro con R≤ 1100 N/mm², aceros de resorte, de hierro fundido templado, molibdeno puro, bronce, plástico termoestable con una acción abrasiva, plásticos con fibras de vidrio,…*

PUNTE ELICOIDALI CILINDRICHE, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE CORTA CON ANGOLO AL VERTICE DI 118°

MFully ground straight shank twist drills / Forets cylindriques rectifiés
Brocas helicoidales rectificadas / Geschliffene Spiralbohrer

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

118° CLASSIC

01066







AISI M2
HV ≈ 820

Confezione / *Packaging*

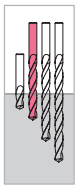


Applicazioni / *Applications*

R ≤ 800 N/mm²



< 5 d



Ø h8	/	L	pcs	cod.
1	12	34	10	010660100
1,1	14	36	10	010660110
1,2	16	38	10	010660120
1,25	16	38	10	010660125
1,3	16	38	10	010660130
1,4	18	40	10	010660140
1,5	18	40	10	010660150
1,6	20	43	10	010660160
1,7	20	43	10	010660170
1,75	22	46	10	010660175
1,8	22	46	10	010660180
1,9	22	46	10	010660190
2	24	49	10	010660200
2,1	24	49	10	010660210
2,2	27	53	10	010660220
2,25	27	53	10	010660225
2,3	27	53	10	010660230
2,4	30	57	10	010660240
2,5	30	57	10	010660250
2,6	30	57	10	010660260
2,7	33	61	10	010660270
2,75	33	61	10	010660275
2,8	33	61	10	010660280
2,9	33	61	10	010660290
3	36	61	10	010660300
3,1	36	65	10	010660310
3,2	36	65	10	010660320
3,25	36	65	10	010660325
3,3	36	65	10	010660330
3,4	39	70	10	010660340
3,5	39	70	10	010660350
3,6	39	70	10	010660360
3,7	39	70	10	010660370
3,75	39	70	10	010660375
3,8	43	75	10	010660380
3,9	43	75	10	010660390
4	43	75	10	010660400
4,1	43	75	10	010660410
4,2	43	75	10	010660420
4,25	43	75	10	010660425
4,3	47	80	10	010660430
4,4	47	80	10	010660440
4,5	47	80	10	010660450
4,6	47	80	10	010660460
4,7	47	80	10	010660470
4,75	47	80	10	010660475
4,8	52	86	10	010660480
4,9	52	86	10	010660490
5	52	86	10	010660500
5,1	52	86	10	010660510
5,2	52	86	10	010660520
5,25	52	86	10	010660525
5,3	52	86	10	010660530
5,4	57	93	10	010660540
5,5	57	93	10	010660550
5,6	57	93	10	010660560
5,7	57	93	10	010660570
5,75	57	93	10	010660575
5,8	57	93	10	010660580
5,9	57	93	10	010660590
6	57	93	10	010660600
6,1	63	101	10	010660610
6,2	63	101	10	010660620
6,25	63	101	10	010660625
6,3	63	101	10	010660630
6,4	63	101	10	010660640
6,5	63	101	10	010660650

- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

Ø h8	/	L	pcs	cod.
6,6	63	101	10	010660660
6,7	63	101	10	010660670
6,75	69	109	10	010660675
6,8	69	109	10	010660680
6,9	69	109	10	010660690
7	69	109	10	010660700
7,1	69	109	5	010660710
7,2	69	109	5	010660720
7,25	69	109	5	010660725
7,3	69	109	5	010660730
7,4	69	109	5	010660740
7,5	69	109	5	010660750
7,6	75	117	5	010660760
7,7	75	117	5	010660770
7,75	75	117	5	010660775
7,8	75	117	5	010660780
7,9	75	117	5	010660790
8	75	117	5	010660800
8,1	75	117	5	010660810
8,2	75	117	5	010660820
8,25	75	117	5	010660825
8,3	75	117	5	010660830
8,4	75	117	5	010660840
8,5	75	117	5	010660850
8,6	81	125	5	010660860
8,7	81	125	5	010660870
8,75	81	125	5	010660875
8,8	81	125	5	010660880
8,9	81	125	5	010660890
9	81	125	5	010660900
9,1	81	125	5	010660910
9,2	81	125	5	010660920
9,25	81	125	5	010660925
9,3	81	125	5	010660930
9,4	81	125	5	010660940
9,5	81	125	5	010660950
9,6	87	133	5	010660960
9,7	87	133	5	010660970
9,75	87	133	5	010660975

Ø h8	/	L	pcs	cod.
9,8	87	133	5	010660980
9,9	87	133	5	010660990
10	87	133	5	010661000
10,1	87	133	5	010661010
10,2	87	133	5	010661020
10,25	87	133	5	010661025
10,3	87	133	5	010661030
10,4	87	133	5	010661040
10,5	87	133	5	010661050
10,6	87	133	5	010661060
10,7	94	142	5	010661070
10,75	94	142	5	010661075
10,8	94	142	5	010661080
10,9	94	142	5	010661090
11	94	142	5	010661100
11,1	94	142	5	010661110
11,2	94	142	5	010661120
11,25	94	142	5	010661125
11,3	94	142	5	010661130
11,4	94	142	5	010661140
11,5	94	142	5	010661150
11,6	94	142	5	010661160
11,7	94	142	5	010661170
11,75	94	142	5	010661175
11,8	94	142	5	010661180
11,9	101	151	5	010661190
12	101	151	5	010661200
12,1	101	151	5	010661210
12,2	101	151	5	010661220
12,25	101	151	5	010661225
12,3	101	151	5	010661230
12,4	101	151	5	010661240
12,5	101	151	5	010661250
12,6	101	151	5	010661260
12,7	101	151	5	010661270
12,75	101	151	5	010661275
12,8	101	151	5	010661280
12,9	101	151	5	010661290
13	101	151	5	010661300



19 pcs
Ø 1÷10 x 0,5 mm

01068431

25 pcs
Ø 1÷13 x 0,5 mm

01068432



19 pcs
Ø 1÷10 x 0,5 mm

01068311

25 pcs
Ø 1÷13 x 0,5 mm

01068312



37 pcs
Ø 1÷10 x 0,25 mm

01068413



49 pcs
Ø 1÷13 x 0,25 mm

01068414



Metal 330x240x55

150 pcs Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	**6**	5
1,5	10	**6,5**	5
2	10	**7**	5
2,5	10	**7,5**	5
3	20	**8**	5
3,5	10	**8,5**	5
4	10	**9**	5
4,5	10	**9,5**	5
5	10	**10**	5
5,5	5		

01068460

PUNTE ELICOIDALI CILINDRICHE, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE EXTRA CORTA CON ANGOLO AL VERTICE DI 118°

Fully ground straight shank twist drills, stub serie / Forets cylindriques rectifiés, série extra courte
Braocas helicoidales rectificadas, serie extra corta / Geschliffene Spiralbohrer, extra kurz

HSS-G DIN 1897 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01022







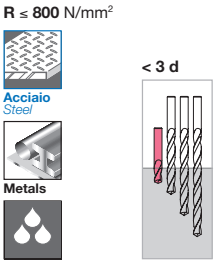
Ø h8	/	L	pcs	cod.
2,5	14	43	10	010220250
3	16	46	10	010220300
3,2	18	49	10	010220320
3,25	18	49	10	010220325
3,5	20	52	10	010220350
3,7	20	52	10	010220370
3,75	20	52	10	010220375
4	22	55	10	010220400
4,2	22	55	10	010220420
4,25	22	55	10	010220425
4,5	24	58	10	010220450
5	26	62	10	010220500
5,5	28	66	10	010220550
6	28	66	10	010220600

- Taglio dei materiali con R≤800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R≤800 N/mm².*
- *Pour percer métaux et acier avec R≤800 N/mm².*
- *Para taladrar hierro y acero R≤800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R≤800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

Confezione / *Packaging*



Applicazioni / *Applications*



PUNTE ELICOIDALI CILINDRICHE CON RIVESTIMENTO AL NITRURO DI TITANIO SUI TAGLIENTI E CON ANGOLO AL VERTICE DI 118°

TiN coated twist drills / Forets cylindriques au nitrure de titan / Brocas helicoidales con recubrimiento de titanio / Geschliffene Spiralbohrer, TiN-beschichtet

HSS-G DIN 338 Rivestita al Titanio sui taglienti / *Titanium coated / Titan / Titanio / TiN-beschichtet* — 118° TiN

01320









Ø h8	/	L	pcs	cod.
2	24	49	10	013200200
2,1	24	49	10	013200210
2,2	27	53	10	013200220
2,25	27	53	10	013200225
2,3	27	53	10	013200230
2,4	30	57	10	013200240
2,5	30	57	10	013200250
2,6	30	57	10	013200260
2,7	33	61	10	013200270
2,75	33	61	10	013200275
2,8	33	61	10	013200280
2,9	33	61	10	013200290
3	33	61	10	013200300
3,1	36	65	10	013200310
3,2	36	65	10	013200320
3,25	36	65	10	013200325
3,3	36	65	10	013200330
3,4	39	70	10	013200340
3,5	39	70	10	013200350
3,6	39	70	10	013200360
3,7	39	70	10	013200370
3,75	39	70	10	013200375
3,8	43	75	10	013200380
3,9	43	75	10	013200390
4	43	75	10	013200400
4,1	43	75	10	013200410
4,2	43	75	10	013200420
4,25	43	75	10	013200425

Ø h8	/	L	pcs	cod.
4,3	47	80	10	013200430
4,4	47	80	10	013200440
4,5	47	80	10	013200450
4,6	47	80	10	013200460
4,7	47	80	10	013200470
4,75	47	80	10	013200475
4,8	52	86	10	013200480
4,9	52	86	10	013200490
5	52	86	10	013200500
5,1	52	86	10	013200510
5,2	52	86	10	013200520
5,25	52	86	10	013200525
5,3	52	86	10	013200530
5,4	57	93	10	013200540
5,5	57	93	10	013200550
5,6	57	93	10	013200560
5,7	57	93	10	013200570
5,75	57	93	10	013200575
5,8	57	93	10	013200580
5,9	57	93	10	013200590
6	57	93	10	013200600
6,1	63	101	10	013200610
6,2	63	101	10	013200620
6,25	63	101	10	013200625
6,3	63	101	10	013200630
6,4	63	101	10	013200640
6,5	63	101	10	013200650
6,6	63	101	10	013200660

01320

Ø h8	/	L	pcs	cod.
6,7	63	101	10	013200670
6,75	69	109	10	013200675
6,8	69	109	10	013200680
6,9	69	109	10	013200690
7	69	109	10	013200700
7,1	69	109	5	013200710
7,2	69	109	5	013200720
7,25	69	109	5	013200725
7,3	69	109	5	013200730
7,4	69	109	5	013200740
7,5	69	109	5	013200750
7,6	75	117	5	013200760
7,7	75	117	5	013200770
7,75	75	117	5	013200775
7,8	75	117	5	013200780
7,9	75	117	5	013200790
8	75	117	5	013200800
8,1	75	117	5	013200810
8,2	75	117	5	013200820
8,25	75	117	5	013200825
8,3	75	117	5	013200830
8,4	75	117	5	013200840
8,5	75	117	5	013200850
8,6	81	125	5	013200860
8,7	81	125	5	013200870
8,75	81	125	5	013200875
8,8	81	125	5	013200880
8,9	81	125	5	013200890
9	81	125	5	013200900
9,1	81	125	5	013200910
9,2	81	125	5	013200920
9,25	81	125	5	013200925
9,3	81	125	5	013200930
9,4	81	125	5	013200940
9,5	81	125	5	013200950
9,6	87	133	5	013200960
9,7	87	133	5	013200970
9,75	87	133	5	013200975
9,8	87	133	5	013200980

Ø h8	/	L	pcs	cod.
9,9	87	133	5	013200990
10	87	133	5	013201000
10,1	87	133	5	013201010
10,2	87	133	5	013201020
10,25	87	133	5	013201025
10,3	87	133	5	013201030
10,4	87	133	5	013201040
10,5	87	133	5	013201050
10,6	87	133	5	013201060
10,7	94	142	5	013201070
10,75	94	142	5	013201075
10,8	94	142	5	013201080
10,9	94	142	5	013201090
11	94	142	5	013201100
11,1	94	142	5	013201110
11,2	94	142	5	013201120
11,25	94	142	5	013201125
11,3	94	142	5	013201130
11,4	94	142	5	013201140
11,5	94	142	5	013201150
11,6	94	142	5	013201160
11,7	94	142	5	013201170
11,75	94	142	5	013201175
11,8	94	142	5	013201180
11,9	101	151	5	013201190
12	101	151	5	013201200
12,1	101	151	5	013201210
12,2	101	151	5	013201220
12,25	101	151	5	013201225
12,3	101	151	5	013201230
12,4	101	151	5	013201240
12,5	101	151	5	013201250
12,6	101	151	5	013201260
12,7	101	151	5	013201270
12,75	101	151	5	013201275
12,8	101	151	5	013201280
12,9	101	151	5	013201290
13	101	151	5	013201300

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 900 N/mm²



Acciaio
Steel



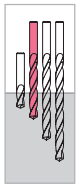
Inox



Metals



< 5 d



- Rendimenti elevati e maggiore durata dei taglienti nella foratura degli acciai legati, nelle ghise e nei metalli in genere.
- *High level of performances in cutting alloy steel, cast iron, metals up to R ≤ 900 N/mm².*
- *Pour percer métaux et acier allié avec R ≤ 900 N/mm².*
- *Para taladrar acero aleado con elevada velocidad de corte R ≤ 900 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis zu einer Zug-Festigkeit von R ≤ 900 N/mm², Temperguss, Sintereisen, Aluminium legiert und unlegiert, Kupfer, Bronze.*



19 pcs
Ø 1÷10 x 0,5 mm
Ø 1÷1,5 mm art. 01160

01170311

25 pcs
Ø 1÷13 x 0,5 mm
Ø 1÷1,5 mm art. 01160

01170312



Metal 330x240x55

116 pcs Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	**6**	3
1,5	10	**6,5**	3
2	10	**7**	3
2,5	10	**7,5**	3
3	10	**8**	3
3,5	10	**8,5**	2
4	10	**9**	2
4,5	10	**9,5**	2
5	10	**10**	2
5,5	3		

Ø 1÷1,5 mm art. 01160

01170452

PUNTE ELICOIDALI CILINDRICHE IN METALLO DURO INTEGRALE PER CENTRI DI LAVORO CNC

Tungsten carbide drill bits for CNC / Forets en carbure pour CNC
Broca de metal duro para CNC / Hartmetall Spiralbohrer für CNC

VHM ~ DIN 338 Metallo Duro
Carbide / Carbure / Metal duro / Hartmetall

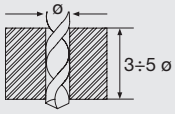
Serie corta
Short serie

01089





Metallo duro
Solid Carbide



Ø h7	/	L	pcs	cod.
1	12	34	1	010890100
1,1	14	36	1	010890110
1,2	16	38	1	010890120
1,3	16	38	1	010890130
1,4	18	40	1	010890140
1,5	18	40	1	010890150
1,6	20	43	1	010890160
1,7	20	43	1	010890170
1,8	22	46	1	010890180
1,9	22	46	1	010890190
2	24	49	1	010890200
2,1	24	49	1	010890210
2,2	27	53	1	010890220
2,3	27	53	1	010890230
2,4	30	57	1	010890240
2,5	30	57	1	010890250
2,6	30	57	1	010890260
2,7	33	61	1	010890270
2,8	33	61	1	010890280
2,9	33	61	1	010890290
3	33	61	1	010890300
3,1	36	65	1	010890310
3,2	36	65	1	010890320
3,3	36	65	1	010890330
3,4	39	70	1	010890340
3,5	39	70	1	010890350
3,6	39	70	1	010890360
3,7	39	70	1	010890370
3,8	43	75	1	010890380
3,9	43	75	1	010890390
4	43	75	1	010890400
4,1	43	75	1	010890410
4,2	43	75	1	010890420
4,3	47	80	1	010890430
4,4	47	80	1	010890440
4,5	47	80	1	010890450
4,6	47	80	1	010890460
4,7	47	80	1	010890470
4,8	52	86	1	010890480
4,9	52	86	1	010890490
5	52	86	1	010890500
5,1	52	86	1	010890510
5,2	52	86	1	010890520
5,3	52	86	1	010890530
5,4	57	93	1	010890540
5,5	57	93	1	010890550
5,6	57	93	1	010890560
5,7	57	93	1	010890570
5,8	57	93	1	010890580

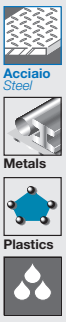
Ø h7	/	L	pcs	cod.
5,9	57	93	1	010890590
6	57	93	1	010890600
6,1	63	101	1	010890610
6,2	63	101	1	010890620
6,3	63	101	1	010890630
6,4	63	101	1	010890640
6,5	63	101	1	010890650
6,6	63	101	1	010890660
6,7	63	101	1	010890670
6,8	69	109	1	010890680
6,9	69	109	1	010890690
7	69	109	1	010890700
7,1	69	109	1	010890710
7,2	69	109	1	010890720
7,3	69	109	1	010890730
7,4	69	109	1	010890740
7,5	69	109	1	010890750
7,6	75	117	1	010890760
7,7	75	117	1	010890770
7,8	75	117	1	010890780
7,9	75	117	1	010890790
8	75	117	1	010890800
8,1	75	117	1	010890810
8,2	75	117	1	010890820
8,3	75	117	1	010890830
8,4	75	117	1	010890840
8,5	75	117	1	010890850
8,6	81	125	1	010890860
8,7	81	125	1	010890870
8,8	81	125	1	010890880
8,9	81	125	1	010890890
9	81	125	1	010890900
9,1	81	125	1	010890910
9,2	81	125	1	010890920
9,3	81	125	1	010890930
9,4	81	125	1	010890940
9,5	81	125	1	010890950
9,6	87	133	1	010890960
9,7	87	133	1	010890970
9,8	87	133	1	010890980
9,9	87	133	1	010890990
10	87	133	1	010891000
10,2	87	133	1	010891020
10,5	87	133	1	010891050
10,8	94	142	1	010891080
11	94	142	1	010891100
11,5	94	142	1	010891150
12	101	151	1	010891200

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 1400 N/mm²



< 5 d



- Taglio di ghisa, acciai duri al manganese, bronzi e metalli abrasivi, plastiche rinforzate con fibre.
- *Suitable for cutting into cast iron, Mn hard steel, bronzes, abrasive materials, fiber reinforced plastics.*

Caratteristiche del metallo duro
Features of hard metal
Caractéristiques du metal dur
Caracteristicas del metal duro

Il metallo duro è un prodotto sinterizzato costituito principalmente da WC e Co in proporzioni variabili. Da questa proporzione dipendono le caratteristiche specifiche dell'utensile: la qualità a grana fine K20 che usiamo per i nostri prodotti è composta dal 94% di WC e dal restante 6% di Co e presenta una resistenza a rottura di 2200 MPa e una durezza di 91.9 HVA. Tale prodotto è caratterizzato da un'ottima resistenza a usura e da una discreta resistenza a flessione anche se, naturalmente, si consiglia di evitare qualsiasi urto o eccessivo sforzo flettente. Vista l'elevata durezza, l'utensile è infatti discretamente fragile e sensibile a condizioni di lavoro non omogenee. Si consideri poi che il metallo duro è mediamente rigido il doppio rispetto all'acciaio superrapido: pertanto, con punte in metallo duro, si producono di norma fori molto più cilindrici.

The hard metal is produced by sintering of WC and Co powders. The main features of the product depend on the content of these 2 components: we chose K20 fine grain type, which means 94% WC and 6% Co, with 2200 MPa resistance and 91.9 HVA hardness. This product has an excellent wear resistance and a good bending resistance. By the way, it's recommended to avoid any accidental crash, because the product is very hard and thus fragile. The hard metal stiffness is quite double comparing to the high speed steel one: you can drill "very cylindrical" holes with an hard metal tool.

Le métal dur est un produit fritté constitué principalement de WC et Co en proportions variables. C'est de ces proportions que dépendent les caractéristiques spécifiques de l'outil : la qualité à grain fin K20 que nous utilisons pour nos produits est composée de 94% de WC et du restant 6% de Co et présente une résistance à la rupture de 2200 MPa et une dureté de 91,9 HVA. Ce produit se distingue par une excellente résistance à l'usure et à une résistance correcte à la flexion même si, naturellement, nous conseillons d'éviter tout choc ou effort de flexion excessif. Étant donnée la dureté élevée, l'outil est en fait assez fragile et sensible aux conditions de travail non homogènes. Il faut aussi considérer que le métal dur est en moyenne deux fois plus rigide que l'acier super rapide : de fait, des trous bien plus cylindriques sont produits en général avec des forets en métal dur.

El metal duro es un producto sinterizado constituido principalmente por WC y Co en proporciones variables. De esta proporción dependen las características específicas del utensilio: el tipo de grano fino K20 que usamos para nuestros productos está formado por el 94% de WC y por el restante 6% de Co; y presenta una resistencia a la ruptura de 2200 MPa y una dureza de 91.9 HVA. Este producto se caracteriza por una óptima resistencia al desgaste y por una discreta resistencia a la flexión aunque, naturalmente, se aconseja evitar cualquier golpe o excesivo esfuerzo de flexión. Considerada la elevada dureza, el utensilio es bastante frágil y sensible en condiciones de trabajo no homogéneas. Hay que considerar que el metal duro es medianamente el doble de rígido con respecto al acero super rápido: por tanto, con puntas de metal duro, normalmente se realizan orificios mucho más cilíndricos.

PUNTE ELICOIDALI CILINDRICHE IN METALLO DURO INTEGRALE PER CENTRI DI LAVORO CNC

Tungsten carbide drill bits for CNC / Forets en carbure pour CNC
Broca de metal duro para CNC / Hartmetall Spiralbohrer für CNC

VHM DIN 1897/6539 Metallo duro

Carbide / Carbure / Metal duro / Hartmetall

Serie extra corta
Extra short serie



Ø h7	/	L	pcs	cod.
0,5	6	26	1	011190050
0,6	6	26	1	011190060
0,7	6	26	1	011190070
0,8	6	26	1	011190080
0,9	6	26	1	011190090
1	6	26	1	011190100
1,1	7	28	1	011190110
1,2	8	30	1	011190120
1,3	8	30	1	011190130
1,4	9	32	1	011190140
1,5	9	32	1	011190150
1,6	10	34	1	011190160
1,7	10	34	1	011190170
1,8	11	36	1	011190180
1,9	11	36	1	011190190
2	12	38	1	011190200
2,1	12	38	1	011190210
2,2	13	40	1	011190220
2,3	13	40	1	011190230
2,4	14	43	1	011190240
2,5	14	43	1	011190250
2,6	14	43	1	011190260
2,7	16	46	1	011190270
2,8	16	46	1	011190280
2,9	16	46	1	011190290
3	16	46	1	011190300
3,1	18	49	1	011190310
3,2	18	49	1	011190320
3,3	18	49	1	011190330
3,4	20	52	1	011190340
3,5	20	52	1	011190350
3,6	20	52	1	011190360
3,7	20	52	1	011190370
3,8	22	55	1	011190380
3,9	22	55	1	011190390
4	22	55	1	011190400
4,1	22	55	1	011190410
4,2	22	55	1	011190420
4,3	24	58	1	011190430
4,4	24	58	1	011190440
4,5	24	58	1	011190450
4,6	24	58	1	011190460
4,7	24	58	1	011190470
4,8	26	62	1	011190480
4,9	26	62	1	011190490
5	26	62	1	011190500
5,1	26	62	1	011190510
5,2	26	62	1	011190520
5,3	26	62	1	011190530
5,4	28	66	1	011190540
5,5	28	66	1	011190550
5,6	28	66	1	011190560
5,7	28	66	1	011190570
5,8	28	66	1	011190580
5,9	28	66	1	011190590

Ø h7	/	L	pcs	cod.
6	28	66	1	011190600
6,1	31	70	1	011190610
6,2	31	70	1	011190620
6,3	31	70	1	011190630
6,4	31	70	1	011190640
6,5	31	70	1	011190650
6,6	31	70	1	011190660
6,7	31	70	1	011190670
6,8	34	74	1	011190680
6,9	34	74	1	011190690
7	34	74	1	011190700
7,1	34	74	1	011190710
7,2	34	74	1	011190720
7,3	34	74	1	011190730
7,4	34	74	1	011190740
7,5	34	74	1	011190750
7,6	36	79	1	011190760
7,7	36	79	1	011190770
7,8	36	79	1	011190780
7,9	36	79	1	011190790
8	36	79	1	011190800
8,1	36	79	1	011190810
8,2	36	79	1	011190820
8,3	36	79	1	011190830
8,4	36	79	1	011190840
8,5	36	79	1	011190850
8,6	40	84	1	011190860
8,7	40	84	1	011190870
8,8	40	84	1	011190880
8,9	40	84	1	011190890
9	40	84	1	011190900
9,1	40	84	1	011190910
9,2	40	84	1	011190920
9,3	40	84	1	011190930
9,4	40	84	1	011190940
9,5	40	84	1	011190950
9,6	43	89	1	011190960
9,7	43	89	1	011190970
9,8	43	89	1	011190980
9,9	43	89	1	011190990
10	43	89	1	011191000
10,2	43	89	1	011191020
10,5	43	89	1	011191050
10,8	47	95	1	011191080
11	47	95	1	011191100
11,5	47	95	1	011191150
12	51	102	1	011191200
12,5	51	102	1	011191250
13	51	102	1	011191300
13,5	54	107	1	011191350
14	54	107	1	011191400
14,5	56	111	1	011191450
15	56	111	1	011191500
15,5	58	115	1	011191550
16	58	115	1	011191600

01119

Carbide

PUNTE A CENTRARE IN METALLO DURO INTEGRALE PER CENTRI DI LAVORO CNC

Solid carbide center drills for CNC / Forets à centrer en carbure pour CNC
Brocas de puntear CNC en metal duro integral / Hartmetall Zentrierbohrer für CNC

VHM Metallo duro / *Carbide / Carbure / Metal duro / Hartmetall*

01361



01363



Ø h7	/	L	pcs	cod. 90°	cod. 120°
5	10	50	1	013610500	013630500
6	15	50	1	013610600	013630600
8	20	63	1	013610800	013630800
10	22	72	1	013611000	013631000
12	22	73	1	013611200	013631200
14	25	75	1	013611400	013631400
16	25	82	1	013611600	013631600
20	30	104	1	013612000	013632000

01361
01363

PUNTE IN METALLO DURO INTEGRALE RIVESTITE TiAlN CON GAMBO RINFORZATO, SERIE CORTA DIN 6537K

TiAlN coated tungsten carbide drill bits with reinforced shank, short serie DIN 6537K /Forets en carbure, série courte DIN 6537K, avec TiAlN Broca de metal duro, serie corta DIN 6537K con TiAlN / Hartmetall Spiralbohrer, kurz Ausführung DIN 6537K, mit TiAlN

VHM+TiAlN DIN 6537K Metallo Duro

Carbide / Carbure / Metal duro / Hartmetall

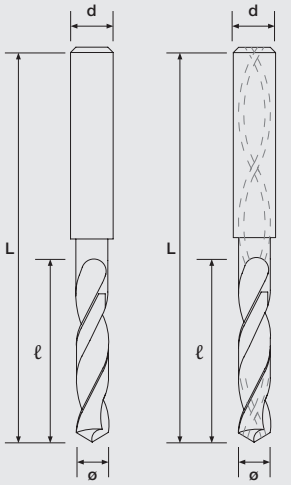
01368 01366



VHM+TiAlN VHM+TiAlN



Metallo duro
Solid Carbide



Profondità di foratura 3 ø
Cutting depth 3 ø

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 1200 N/mm²

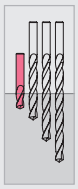


Acciaio
Steel



Metals

< 3 d



Rivestimento TiAlN
TiAlN coating



- Acciai induriti, acciai per lavorazioni a caldo, acciai legati fino a 1200 N/mm², acciai dolci, bronzo, ghisa, leghe Al-Si.
- *Structural and case hardened steels, cast steels, heat treatable steels, alloyed steels up to 1200 N/mm², carbon steels, bronze, cast iron, high alloyed Al-Si alloys.*

Ø m7	d h6	/	L	pcs	**Art. 01368** senza fori / without holes cod.	**Art. 01366** con fori / with holes cod.
3	6	20	62	1	013680300	013660300
3,1	6	20	62	1	013680310	013660310
3,2	6	20	62	1	013680320	013660320
3,3	6	20	62	1	013680330	013660330
3,4	6	20	62	1	013680340	013660340
3,5	6	20	62	1	013680350	013660350
3,6	6	20	62	1	013680360	013660360
3,7	6	20	62	1	013680370	013660370
3,8	6	24	66	1	013680380	013660380
3,9	6	24	66	1	013680390	013660390
4	6	24	66	1	013680400	013660400
4,1	6	24	66	1	013680410	013660410
4,2	6	24	66	1	013680420	013660420
4,3	6	24	66	1	013680430	013660430
4,4	6	24	66	1	013680440	013660440
4,5	6	24	66	1	013680450	013660450
4,6	6	24	66	1	013680460	013660460
4,7	6	28	66	1	013680470	013660470
4,8	6	28	66	1	013680480	013660480
4,9	6	28	66	1	013680490	013660490
5	6	28	66	1	013680500	013660500
5,1	6	28	66	1	013680510	013660510
5,2	6	28	66	1	013680520	013660520
5,3	6	28	66	1	013680530	013660530
5,4	6	28	66	1	013680540	013660540
5,5	6	28	66	1	013680550	013660550
5,6	6	28	66	1	013680560	013660560
5,7	6	28	66	1	013680570	013660570
5,8	6	28	66	1	013680580	013660580
5,9	6	28	66	1	013680590	013660590
6	6	28	66	1	013680600	013660600
6,1	8	34	79	1	013680610	013660610
6,2	8	34	79	1	013680620	013660620
6,3	8	34	79	1	013680630	013660630
6,4	8	34	79	1	013680640	013660640
6,5	8	34	79	1	013680650	013660650
6,6	8	34	79	1	013680660	013660660
6,7	8	34	79	1	013680670	013660670
6,8	8	34	79	1	013680680	013660680
6,9	8	34	79	1	013680690	013660690
7	8	34	79	1	013680700	013660700
7,1	8	41	79	1	013680710	013660710
7,2	8	41	79	1	013680720	013660720
7,3	8	41	79	1	013680730	013660730
7,4	8	41	79	1	013680740	013660740
7,5	8	41	79	1	013680750	013660750
7,6	8	41	79	1	013680760	013660760
7,7	8	41	79	1	013680770	013660770
7,8	8	41	79	1	013680780	013660780
7,9	8	41	79	1	013680790	013660790
8	8	41	79	1	013680800	013660800
8,1	10	47	89	1	013680810	013660810
8,2	10	47	89	1	013680820	013660820
8,3	10	47	89	1	013680830	013660830
8,4	10	47	89	1	013680840	013660840
8,5	10	47	89	1	013680850	013660850
8,6	10	47	89	1	013680860	013660860
8,7	10	47	89	1	013680870	013660870
8,8	10	47	89	1	013680880	013660880
8,9	10	47	89	1	013680890	013660890
9	10	47	89	1	013680900	013660900
9,1	10	47	89	1	013680910	013660910
9,2	10	47	89	1	013680920	013660920
9,3	10	47	89	1	013680930	013660930
9,4	10	47	89	1	013680940	013660940
9,5	10	47	89	1	013680950	013660950
9,6	10	47	89	1	013680960	013660960
9,7	10	47	89	1	013680970	013660970
9,8	10	47	89	1	013680980	013660980
10	10	47	89	1	013681000	013661000
10,2	12	55	102	1	013681020	013661020
10,5	12	55	102	1	013681050	013661050
11	12	55	102	1	013681100	013661100
11,5	12	55	102	1	013681150	013661150
12	12	55	102	1	013681200	013661200
12,5	14	60	107	1	013681250	013661250
13	14	60	107	1	013681300	013661300
13,5	14	60	107	1	013681350	013661350
14	14	60	107	1	013681400	013661400
14,5	16	65	115	1	013681450	013661450
15	16	65	115	1	013681500	013661500
15,5	16	65	115	1	013681550	013661550
16	16	65	115	1	013681600	013661600

PUNTE IN METALLO DURO INTEGRALE RIVESTITE TiAlN CON GAMBO RINFORZATO, SERIE LUNGA DIN 6537L

TiAlN coated tungsten carbide drill bits with reinforced shank, long serie DIN 6537L / Forets en carbure, série longue DIN 6537L, avec TiAlN
Broca de metal duro, serie larga DIN 6537L con TiAlN / Hartmetall Spiralbohrer, lange Ausführung DIN 6537L, mit TiAlN

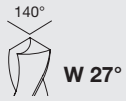
VHM+TiAlN DIN 6537L Metallo Duro

Carbide / Carbure / Metal duro / Hartmetall

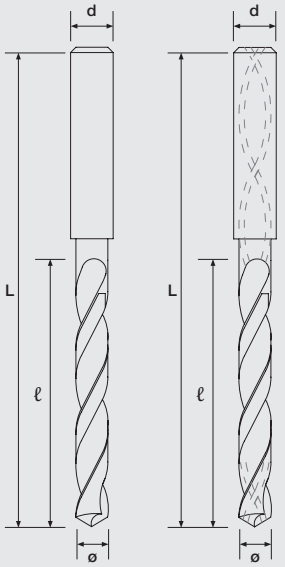
01369 01367



VHM+TiAlN VHM+TiAlN



Metallo duro
Solid Carbide



Profondità di foratura 5 ø
Cutting depth 5 ø

Confezione / *Packaging*

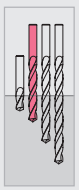


Applicazioni / *Applications*

R ≤ 1200 N/mm²



< 5 d



- Acciai induriti, acciai per lavorazioni a caldo, acciai legati fino a 1200 N/mm², acciai dolci, bronzo, ghisa, leghe Al-Si.
- *Structural and case hardened steels, cast steels, heat treatable steels, alloyed steels up to 1200 N/mm², carbon steels, bronze, cast iron, high alloyed Al-Si alloys.*

Ø m7	d h6	/	L	pcs	Art. 01369 senza fori / without holes cod.	Art. 01367 con fori / with holes cod.
3	6	28	66	1	013690300	013670300
3,1	6	28	66	1	013690310	013670310
3,2	6	28	66	1	013690320	013670320
3,3	6	28	66	1	013690330	013670330
3,4	6	28	66	1	013690340	013670340
3,5	6	28	66	1	013690350	013670350
3,6	6	28	66	1	013690360	013670360
3,7	6	28	66	1	013690370	013670370
3,8	6	36	74	1	013690380	013670380
3,9	6	36	74	1	013690390	013670390
4	6	36	74	1	013690400	013670400
4,1	6	36	74	1	013690410	013670410
4,2	6	36	74	1	013690420	013670420
4,3	6	36	74	1	013690430	013670430
4,4	6	36	74	1	013690440	013670440
4,5	6	36	74	1	013690450	013670450
4,6	6	36	74	1	013690460	013670460
4,7	6	44	82	1	013690470	013670470
4,8	6	44	82	1	013690480	013670480
4,9	6	44	82	1	013690490	013670490
5	6	44	82	1	013690500	013670500
5,1	6	44	82	1	013690510	013670510
5,2	6	44	82	1	013690520	013670520
5,3	6	44	82	1	013690530	013670530
5,4	6	44	82	1	013690540	013670540
5,5	6	44	82	1	013690550	013670550
5,6	6	44	82	1	013690560	013670560
5,7	6	44	82	1	013690570	013670570
5,8	6	44	82	1	013690580	013670580
5,9	6	44	82	1	013690590	013670590
6	6	44	82	1	013690600	013670600
6,1	8	53	91	1	013690610	013670610
6,2	8	53	91	1	013690620	013670620
6,3	8	53	91	1	013690630	013670630
6,4	8	53	91	1	013690640	013670640
6,5	8	53	91	1	013690650	013670650
6,6	8	53	91	1	013690660	013670660
6,7	8	53	91	1	013690670	013670670
6,8	8	53	91	1	013690680	013670680
6,9	8	53	91	1	013690690	013670690
7	8	53	91	1	013690700	013670700
7,1	8	53	91	1	013690710	013670710
7,2	8	53	91	1	013690720	013670720
7,3	8	53	91	1	013690730	013670730
7,4	8	53	91	1	013690740	013670740
7,5	8	53	91	1	013690750	013670750
7,6	8	53	91	1	013690760	013670760
7,7	8	53	91	1	013690770	013670770
7,8	8	53	91	1	013690780	013670780
7,9	8	53	91	1	013690790	013670790
8	8	53	91	1	013690800	013670800
8,1	10	61	103	1	013690810	013670810
8,2	10	61	103	1	013690820	013670820
8,3	10	61	103	1	013690830	013670830
8,4	10	61	103	1	013690840	013670840
8,5	10	61	103	1	013690850	013670850
8,6	10	61	103	1	013690860	013670860
8,7	10	61	103	1	013690870	013670870
8,8	10	61	103	1	013690880	013670880
8,9	10	61	103	1	013690890	013670890
9	10	61	103	1	013690900	013670900
9,1	10	61	103	1	013690910	013670910
9,2	10	61	103	1	013690920	013670920
9,3	10	61	103	1	013690930	013670930
9,4	10	61	103	1	013690940	013670940
9,5	10	61	103	1	013690950	013670950
9,6	10	61	103	1	013690960	013670960
9,7	10	61	103	1	013690970	013670970
9,8	10	61	103	1	013690980	013670980
10	10	61	103	1	013691000	013671000
10,2	12	71	118	1	013691020	013671020
10,5	12	71	118	1	013691050	013671050
11	12	71	118	1	013691100	013671100
11,5	12	71	118	1	013691150	013671150
12	12	71	118	1	013691200	013671200
12,5	14	77	124	1	013691250	013671250
13	14	77	124	1	013691300	013671300
13,5	14	77	124	1	013691350	013671350
14	14	77	124	1	013691400	013671400
14,5	16	83	133	1	013691450	013671450
15	16	83	133	1	013691500	013671500
15,5	16	83	133	1	013691550	013671550
16	16	83	133	1	013691600	013671600

PUNTE ELICOIDALI CILINDRICHE, INTERAMENTE RETTIFICATE, SERIE CORTA, FINITURA BRILLANTE

Fully ground straight shank twist drills / Forets cylindriques rectifiés
Brocas helicoidales rectificadas / Geschliffene Spiralbohrer

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01070



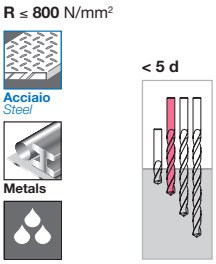


Art. **01071** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*



- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe*

Ø h8	/	L	pcs	cod.
0,3	3	19	10	010700030
0,35	4	19	10	010700035
0,4	5	20	10	010700040
0,45	5	20	10	010700045
0,5	6	22	10	010700050
0,55	7	24	10	010700055
0,6	7	24	10	010700060
0,65	8	26	10	010700065
0,7	9	28	10	010700070
0,75	9	28	10	010700075
0,8	10	30	10	010700080
0,85	10	30	10	010700085
0,9	11	32	10	010700090
0,95	11	32	10	010700095
1	12	34	10	010700100
1,1	14	36	10	010700110
1,2	16	38	10	010700120
1,25	16	38	10	010700125
1,3	16	38	10	010700130
1,4	18	40	10	010700140
1,5	18	40	10	010700150
1,6	20	43	10	010700160
1,7	20	43	10	010700170
1,75	22	46	10	010700175
1,8	22	46	10	010700180
1,9	22	46	10	010700190
2	24	49	10	010700200
2,1	24	49	10	010700210
2,2	27	53	10	010700220
2,25	27	53	10	010700225
2,3	27	53	10	010700230
2,4	30	57	10	010700240
2,5	30	57	10	010700250
2,6	30	57	10	010700260
2,7	33	61	10	010700270
2,75	33	61	10	010700275
2,8	33	61	10	010700280
2,9	33	61	10	010700290
3	33	61	10	010700300
3,1	36	65	10	010700310
3,2	36	65	10	010700320
3,25	36	65	10	010700325
3,3	36	65	10	010700330
3,4	39	70	10	010700340
3,5	39	70	10	010700350
3,6	39	70	10	010700360
3,7	39	70	10	010700370
3,75	39	70	10	010700375
3,8	43	75	10	010700380
3,9	43	75	10	010700390
4	43	75	10	010700400
4,1	43	75	10	010700410
4,2	43	75	10	010700420

Ø h8	/	L	pcs	cod.
4,25	43	75	10	010700425
4,3	47	80	10	010700430
4,4	47	80	10	010700440
4,5	47	80	10	010700450
4,6	47	80	10	010700460
4,7	47	80	10	010700470
4,75	47	80	10	010700475
4,8	52	86	10	010700480
4,9	52	86	10	010700490
5	52	86	10	010700500
5,1	52	86	10	010700510
5,2	52	86	10	010700520
5,25	52	86	10	010700525
5,3	52	86	10	010700530
5,4	57	93	10	010700540
5,5	57	93	10	010700550
5,6	57	93	10	010700560
5,7	57	93	10	010700570
5,75	57	93	10	010700575
5,8	57	93	10	010700580
5,9	57	93	10	010700590
6	57	93	10	010700600
6,1	63	101	10	010700610
6,2	63	101	10	010700620
6,25	63	101	10	010700625
6,3	63	101	10	010700630
6,4	63	101	10	010700640
6,5	63	101	10	010700650
6,6	63	101	10	010700660
6,7	63	101	10	010700670
6,75	69	109	10	010700675
6,8	69	109	10	010700680
6,9	69	109	10	010700690
7	69	109	10	010700700
7,1	69	109	5	010700710
7,2	69	109	5	010700720
7,25	69	109	5	010700725
7,3	69	109	5	010700730
7,4	69	109	5	010700740
7,5	69	109	5	010700750
7,6	75	117	5	010700760
7,7	75	117	5	010700770
7,75	75	117	5	010700775
7,8	75	117	5	010700780
7,9	75	117	5	010700790
8	75	117	5	010700800
8,1	75	117	5	010700810
8,2	75	117	5	010700820
8,25	75	117	5	010700825
8,3	75	117	5	010700830
8,4	75	117	5	010700840
8,5	75	117	5	010700850
8,6	81	125	5	010700860

Ø h8	/	L	pcs	cod.
8,7	81	125	5	010700870
8,75	81	125	5	010700875
8,8	81	125	5	010700880
8,9	81	125	5	010700890
9	81	125	5	010700900
9,1	81	125	5	010700910
9,2	81	125	5	010700920
9,25	81	125	5	010700925
9,3	81	125	5	010700930
9,4	81	125	5	010700940
9,5	81	125	5	010700950
9,6	87	133	5	010700960
9,7	87	133	5	010700970
9,75	87	133	5	010700975
9,8	87	133	5	010700980
9,9	87	133	5	010700990
10	87	133	5	010701000
10,2	87	133	5	010701020
10,25	87	133	5	010701025
10,4	87	133	5	010701040
10,5	87	133	5	010701050
10,75	94	142	5	010701075
11	94	142	5	010701100
11,25	94	142	5	010701125
11,5	94	142	5	010701150
11,75	94	142	5	010701175
12	101	151	5	010701200
12,25	101	151	5	010701225
12,4	101	151	5	010701240
12,5	101	151	5	010701250
12,75	101	151	5	010701275
13	101	151	5	010701300
13,25	108	160	3	010701325
13,5	108	160	3	010701350
13,75	108	160	3	010701375
14	108	160	3	010701400
14,25	114	169	3	010701425
14,5	114	169	3	010701450
14,75	114	169	3	010701475
15	114	169	3	010701500
15,25	120	178	3	010701525
15,5	120	178	3	010701550
15,75	120	178	3	010701575
16	120	178	3	010701600
16,5	125	184	1	010701650
17	125	184	1	010701700
17,5	130	191	1	010701750
18	130	191	1	010701800
18,5	135	198	1	010701850
19	135	198	1	010701900
20	140	205	1	010702000

PUNTE ELICOIDALI CILINDRICHE CON CODOLO RIDOTTO INTERAMENTE RETTIFICATE

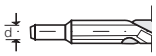
Fully ground straight shank twist drills / Forets cylindriques rectifiés
Brocas helicoidales rectificadas / Geschliffene Spiralbohrer

HSS-G DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01072



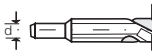


d=10 mm

Art. **01073** Self
Disponibile su richiesta / *On demand*

Ø h8	/	L	d	pcs	cod.
10,25	87	133	10	5	010721025
10,5	87	133	10	5	010721050
10,75	94	142	10	5	010721075
11	94	142	10	5	010721100
11,25	94	142	10	5	010721125
11,5	94	142	10	5	010721150
11,75	94	142	10	5	010721175
12	101	151	10	5	010721200
12,25	101	151	10	5	010721225
12,5	101	151	10	5	010721250
12,75	101	151	10	5	010721275
13	101	151	10	5	010721300
13,25	108	160	10	3	010721325
13,5	108	160	10	3	010721350
13,75	108	160	10	3	010721375
14	108	160	10	3	010721400
14,25	114	169	10	3	010721425
14,5	114	169	10	3	010721450
14,75	114	169	10	3	010721475
15	114	169	10	3	010721500
15,25	120	178	10	3	010721525
15,5	120	178	10	3	010721550
15,75	120	178	10	3	010721575
16	120	178	10	3	010721600
16,5	125	184	10	1	010721650
17	125	184	10	1	010721700
17,5	130	191	10	1	010721750
18	130	191	10	1	010721800
18,5	135	198	10	1	010721850
19	135	198	10	1	010721900
19,5	140	205	10	1	010721950
20	140	205	10	1	010722000

01074



d=13 mm

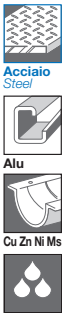
Ø h8	/	L	d	pcs	cod.
13,25	108	160	13	3	010741325
13,5	108	160	13	3	010741350
13,75	108	160	13	3	010741375
14	108	160	13	3	010741400
14,25	114	169	13	3	010741425
14,5	114	169	13	3	010741450
14,75	114	169	13	3	010741475
15	114	169	13	3	010741500
15,25	120	178	13	3	010741525
15,5	120	178	13	3	010741550
15,75	120	178	13	3	010741575
16	120	178	13	3	010741600
16,5	125	184	13	1	010741650
17	125	184	13	1	010741700
17,5	130	191	13	1	010741750
18	130	191	13	1	010741800
18,5	135	198	13	1	010741850
19	135	198	13	1	010741900
19,5	140	205	13	1	010741950
20	140	205	13	1	010742000

Confezione / *Packaging*

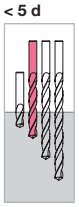


Applicazioni / *Applications*

R ≤ 800 N/mm²



< 5 d



PUNTE ELICOIDALI CILINDRICHE INTERAMENTE RETTIFICATE, SERIE EXTRA CORTA

Straight shank twist drills, stub serie / Forets cylindriques, série extra courte
Brocas helicoidales, serie extra corta / Geschliffene Spiralbohrer, extra kurz

HSS-G DIN 1897 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

Extra corta
Extra short

01076





Ø h8	/	L	pcs	cod.
1,5	9	32	10	010760150
2	12	38	10	010760200
2,2	13	40	10	010760220
2,25	13	40	10	010760225
2,5	14	43	10	010760250
2,75	16	46	10	010760275
2,8	16	46	10	010760280
3	16	46	10	010760300
3,1	18	49	10	010760310
3,2	18	49	10	010760320
3,25	18	49	10	010760325
3,3	18	49	10	010760330
3,5	20	52	10	010760350
3,7	20	52	10	010760370
3,75	20	52	10	010760375
3,8	22	55	10	010760380
4	22	55	10	010760400
4,1	22	55	10	010760410
4,2	22	55	10	010760420
4,25	22	55	10	010760425
4,5	24	58	10	010760450
4,75	24	58	10	010760475
4,8	26	62	10	010760480
5	26	62	10	010760500

Ø h8	/	L	pcs	cod.
5,1	26	62	10	010760510
5,2	26	62	10	010760520
5,25	26	62	10	010760525
5,5	28	66	10	010760550
5,75	28	66	10	010760575
5,8	28	66	10	010760580
6	28	66	10	010760600
6,25	31	70	10	010760625
6,5	31	70	10	010760650
6,75	34	74	10	010760675
7	34	74	10	010760700
7,5	34	74	5	010760750
8	37	79	5	010760800
8,5	37	79	5	010760850
9	40	84	5	010760900
9,5	40	84	5	010760950
10	43	89	5	010761000
10,5	43	89	5	010761050
11	47	95	5	010761100
11,5	47	95	5	010761150
12	51	102	5	010761200
12,5	51	102	5	010761250
13	51	102	5	010761300

Confezione / *Packaging*





Ø 2 ÷ 10x0,5 mm

01075221
€ 74,178

10211

275

PUNTE ELICOIDALI SUPERCORTE PER LATTONIERI

Extra short twist drills for portable applications / Forets cylindriques série extra courte spécial
Brocas helicoidales, serie extra corta special / Spiralbohrer, spezial extra kurz

NORMA KRINO HSS-G Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

Supercorta
Supershort

01050





Ø	/	L	pcs	cod.
3	16	35	10	010500300
3,2	19	40	10	010500320
3,25	19	40	10	010500325
3,3	19	40	10	010500330
3,5	19	40	10	010500350
3,6	19	40	10	010500360
3,75	19	40	10	010500375
4	20	40	10	010500400
4,1	20	40	10	010500410
4,2	20	40	10	010500420
4,25	20	40	10	010500425
4,5	23	42	10	010500450
5	23	45	10	010500500

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



Acciaio
Steel



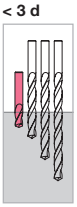
Alu



Cu Zn Ni Ms



< 3 d



- Punte speciali per lattonieri, carpentieri, coperturisti, fabbri, installatori. Foratura dolce e precisa, grazie all'affilatura split point autocentrante, su lamiere e tubi in acciaio, rame e plastica.
- *Super short twist drills for cutting metal sheets, special for journeymen's, carpenters, locksmith's, tinsmith's.*



Super corta - *Super short*

01051



HSS-CO

32

PUNTE ELICOIDALI INTERAMENTE RETTIFICATE

Fully ground twist drills / Forets rectifiés avec
Brocas rectificadas / Geschliffene Spiralbohrer

HSS-G Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

Elica contrapposta
Double ended

01077

NEW



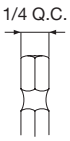


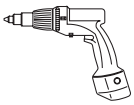
Ø h8	/	L	pcs	cod.
2	10	38	10	010770200
2,5	10	43	10	010770250
3	11	46	10	010770300
3,2	11	49	10	010770320
3,25	11	49	10	010770325
3,3	11	49	10	010770330
3,4	14	52	10	010770340
3,5	14	52	10	010770350
3,75	14	55	10	010770375
4	14	55	10	010770400
4,1	14	55	10	010770410
4,2	17	58	10	010770420
4,25	17	58	10	010770425
4,5	17	58	10	010770450
4,75	17	62	10	010770475
4,9	17	62	10	010770490
5	17	62	10	010770500
5,1	17	62	10	010770510
5,5	17	66	10	010770550
6	17	66	10	010770600

HSS-G ~DIN 338

01079







Ø h8	d ⬡	/	L	pcs	cod.
1,5	1/4	18	60	10	010790150
2	1/4	24	69	10	010790200
2,5	1/4	30	77	10	010790250
3	1/4	33	81	10	010790300
3,25	1/4	36	85	10	010790325
3,5	1/4	39	90	10	010790350
4	1/4	43	95	10	010790400
4,25	1/4	43	95	10	010790425
4,5	1/4	47	100	10	010790450
5	1/4	52	106	10	010790500
5,5	1/4	57	113	10	010790550
6	1/4	57	113	10	010790600
6,5	1/4	63	121	10	010790650
7	1/4	69	109	10	010790700
7,5	1/4	69	109	5	010790750
8	1/4	75	117	5	010790800
8,5	1/4	75	117	5	010790850
9	1/4	81	125	5	010790900
9,5	1/4	81	125	5	010790950
10	1/4	87	133	5	010791000



Ø 3-4-5-6-8 mm

01068700

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



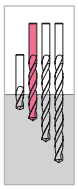
Acciaio
Steel



Metals



< 5 d



PUNTE ELICOIDALI CILINDRICHE SERIE LUNGA, INTERAMENTE RETTIFICATE, FINITURA BRILLANTE

Long straight shank twist drills / Forets cylindriques série longue
Brocas helicoidales serie larga / Spiralbohrer, lange Ausführung

HSS-G DIN 340 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01078





Ø h8	/	L	pcs	cod.
1,5	45	70	10	010780150
1,75	53	80	10	010780175
2	56	85	10	010780200
2,25	59	90	10	010780225
2,5	62	95	10	010780250
2,75	66	100	10	010780275
3	66	100	10	010780300
3,25	69	106	10	010780325
3,5	73	112	10	010780350
3,75	73	112	10	010780375
4	78	119	10	010780400
4,25	78	119	10	010780425
4,5	82	126	10	010780450
4,75	82	126	10	010780475
5	87	132	10	010780500
5,25	87	132	10	010780525
5,5	91	139	10	010780550
5,75	91	139	10	010780575
6	91	139	10	010780600
6,25	97	148	5	010780625
6,5	97	148	5	010780650
6,75	97	148	5	010780675
7	102	156	5	010780700
7,25	102	156	5	010780725
7,5	102	156	5	010780750
7,75	109	165	5	010780775
8	109	165	5	010780800
8,25	109	165	5	010780825
8,5	109	165	5	010780850
8,75	115	175	5	010780875
9	115	175	5	010780900
9,25	115	175	5	010780925
9,5	115	175	5	010780950
9,75	121	184	5	010780975
10	121	184	5	010781000
10,5	121	184	5	010781050
11	128	195	5	010781100
11,5	128	195	5	010781150
12	134	205	5	010781200
12,5	134	205	5	010781250
13	134	205	5	010781300
13,5	140	214	3	010781350
14	140	214	3	010781400
14,5	144	220	3	010781450
15	144	220	3	010781500
15,5	149	227	3	010781550
16	149	227	3	010781600
16,5	154	235	1	010781650
17	154	235	1	010781700
17,5	158	241	1	010781750
18	158	241	1	010781800
18,5	162	247	1	010781850
19	162	247	1	010781900
19,5	166	254	1	010781950
20	166	254	1	010782000

Confezione / Packaging



Applicazioni / Applications

R ≤ 800 N/mm²



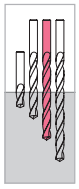
Acciaio
Steel

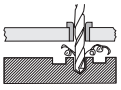


Metals



< 8 d





ASSORTIMENTI PUNTE HSS-G RETTIFICATE BRILLANTI IN ASTUCCI DI METALLO E DI PLASTICA

Sets of HSS twist drills ground from the solid / Assortiments forets à metaux rectifiés
Juego brocas rectificadas en HSS / Geschliffene Spiralbohrersätze

HSS-G DIN 338

Metal



51 pcs
Ø 1÷6 x 0,1 mm
01075407



41 pcs
Ø 6÷10 x 0,1 mm
01075408



91 pcs
Ø 1÷10 x 0,1 mm
01075410

Plastic



19 pcs
Ø 1÷10 x 0,5 mm
01075101



10 pcs Ø 1÷10 x 1 mm
01075201

19 pcs Ø 1÷10 x 0,5 mm
01075206



91 pcs
Ø 1÷10 x 0,1 mm
01075220

Plastic



19 pcs Ø 1÷10 x 0,5 mm
01075250

25 pcs Ø 1÷13 x 0,5 mm
01075251

Abs



19 pcs
Ø 1÷10 x 0,5 mm
01075301

Abs



25 pcs
Ø 1÷13 x 0,5 mm
01075302



19 pcs
Ø 1÷10 x 0,5 mm
01075401



25 pcs
Ø 1÷13 x 0,5 mm
01075402

VALIGETTA MAGAZZENO ED ESPOSITORI PUNTE HSS-G RETTIFICATE BRILLANTI

Metal case storage display with HSS-G fully ground twist drills / Display forets cylindriques rectifiés
Expositor de brocas rectificadas / Lager Kästen mit geschliffene Spiralbohrer

HSS-G DIN 338

01075450 Ø 1÷10 x 0,5 mm
01075451 Ø 1÷13 x 0,5 mm



150 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	5
1,5	10	6,5	5
2	10	7	5
2,5	10	7,5	5
3	20	8	5
3,5	10	8,5	5
4	10	9	5
4,5	10	9,5	5
5	10	10	5
5,5	5		

Metal 330x240x55

01075450

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	5
1,5	10	8	5
2	10	8,5	5
2,5	10	9	5
3	20	9,5	5
3,5	10	10	5
4	10	10,5	3
4,5	10	11	3
5	10	11,5	3
5,5	5	12	3
6	5	12,5	3
6,5	5	13	3
7	5		

Metal 550x310x55

01075451



Metal 375x240x200

600 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,5	20	10	10
1,5	30	6	20	10,5	5
2	50	6,5	10	11	5
2,5	50	7	10	11,5	5
3	100	7,5	5	12	5
3,5	50	8	10	12,5	5
4	100	8,5	5	13	5
4,5	30	9	5		
5	30	9,5	5		

01075501



Metal 390x460x230

760 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,25	5	9,5	5
1,25	10	5,5	30	9,75	2
1,5	30	5,75	5	10	10
1,75	10	6	30	10,25	2
2	50	6,25	3	10,5	3
2,25	10	6,5	20	10,75	2
2,5	50	6,75	2	11	3
2,75	10	7	5	11,25	2
3	100	7,25	2	11,5	2
3,25	10	7,5	5	11,75	2
3,5	50	7,75	2	12	3
3,75	10	8	10	12,25	2
4	80	8,25	2	12,5	2
4,25	10	8,5	5	12,75	2
4,5	50	8,75	2	13	3
4,75	10	9	5		
5	60	9,25	2		

01075507

PUNTE ELICOIDALI CILINDRICHE CON RIVESTIMENTO AL NITRURO DI TITANIO

TiN coated twist drills / Forets cylindriques au nitrure de titan
Brocas helicoidales con recubrimiento de titanio / Geschliffene Spiralboher, TiN-beschichtet

HSS-G DIN 338 Rivestita al titanio

Titanium coated / Titan /Titanio / TiN-beschichtet

01160





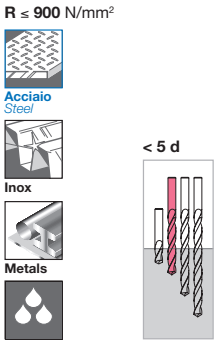


Art. **01161** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*



- Rendimenti elevati e maggiore durata dei taglienti nella foratura degli acciai legati, nelle ghise e nei metalli in genere.
- *High level of performances in cutting alloy steel, cast iron, metals up to R ≤ 900 N/mm².*
- *Pour percer métaux et acier allié avec R ≤ 900 N/mm².*
- *Para taladrar acero aleado con elevada velocidad de corte R ≤ 900 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis zu einer Zug-Festigkeit von R ≤ 900 N/mm², Temperguss, Sintereisen, Aluminium legiert und unlegiert, Kupfer, Bronze.*

Ø h8	/	L	pcs	cod.
1	12	34	10	011600100
1,1	14	36	10	011600110
1,2	16	38	10	011600120
1,25	16	38	10	011600125
1,3	16	38	10	011600130
1,4	18	40	10	011600140
1,5	18	40	10	011600150
1,6	20	43	10	011600160
1,7	20	43	10	011600170
1,75	22	46	10	011600175
1,8	22	46	10	011600180
1,9	22	46	10	011600190
2	24	49	10	011600200
2,1	24	49	10	011600210
2,2	27	53	10	011600220
2,25	27	53	10	011600225
2,3	27	53	10	011600230
2,4	30	57	10	011600240
2,5	30	57	10	011600250
2,6	30	57	10	011600260
2,7	33	61	10	011600270
2,75	33	61	10	011600275
2,8	33	61	10	011600280
2,9	33	61	10	011600290
3	33	61	10	011600300
3,1	36	65	10	011600310
3,2	36	65	10	011600320
3,25	36	65	10	011600325
3,3	36	65	10	011600330
3,4	39	70	10	011600340
3,5	39	70	10	011600350
3,6	39	70	10	011600360
3,7	39	70	10	011600370
3,75	39	70	10	011600375
3,8	43	75	10	011600380
3,9	43	75	10	011600390
4	43	75	10	011600400
4,1	43	75	10	011600410
4,2	43	75	10	011600420
4,25	43	75	10	011600425
4,3	47	80	10	011600430
4,4	47	80	10	011600440
4,5	47	80	10	011600450
4,6	47	80	10	011600460
4,7	47	80	10	011600470
4,75	47	80	10	011600475
4,8	52	86	10	011600480
4,9	52	86	10	011600490
5	52	86	10	011600500
5,1	52	86	10	011600510
5,2	52	86	10	011600520
5,25	52	86	10	011600525
5,3	52	86	10	011600530
5,4	57	93	10	011600540
5,5	57	93	10	011600550
5,6	57	93	10	011600560
5,7	57	93	10	011600570
5,75	57	93	10	011600575
5,8	57	93	10	011600580

Ø h8	/	L	pcs	cod.
5,9	57	93	10	011600590
6	57	93	10	011600600
6,1	63	101	10	011600610
6,2	63	101	10	011600620
6,25	63	101	10	011600625
6,3	63	101	10	011600630
6,4	63	101	10	011600640
6,5	63	101	10	011600650
6,6	63	101	10	011600660
6,7	63	101	10	011600670
6,75	69	109	10	011600675
6,8	69	109	10	011600680
6,9	69	109	10	011600690
7	69	109	10	011600700
7,1	69	109	5	011600710
7,2	69	109	5	011600720
7,25	69	109	5	011600725
7,3	69	109	5	011600730
7,4	69	109	5	011600740
7,5	69	109	5	011600750
7,6	75	117	5	011600760
7,7	75	117	5	011600770
7,75	75	117	5	011600775
7,8	75	117	5	011600780
7,9	75	117	5	011600790
8	75	117	5	011600800
8,1	75	117	5	011600810
8,2	75	117	5	011600820
8,25	75	117	5	011600825
8,3	75	117	5	011600830
8,4	75	117	5	011600840
8,5	75	117	5	011600850
8,6	81	125	5	011600860
8,7	81	125	5	011600870
8,75	81	125	5	011600875
8,8	81	125	5	011600880
8,9	81	125	5	011600890
9	81	125	5	011600900

Ø h8	/	L	pcs	cod.
9,1	81	125	5	011600910
9,2	81	125	5	011600920
9,25	81	125	5	011600925
9,3	81	125	5	011600930
9,4	81	125	5	011600940
9,5	81	125	5	011600950
9,6	87	133	5	011600960
9,7	87	133	5	011600970
9,75	87	133	5	011600975
9,8	87	133	5	011600980
9,9	87	133	5	011600990
10	87	133	5	011601000
10,25	87	133	5	011601025
10,5	87	133	5	011601050
10,75	94	142	5	011601075
11	94	142	5	011601100
11,25	94	142	5	011601125
11,5	94	142	5	011601150
11,75	94	142	5	011601175
12	101	151	5	011601200
12,25	101	151	5	011601225
12,5	101	151	5	011601250
12,75	101	151	5	011601275
13	101	151	5	011601300
13,5	108	160	3	011601350
14	108	160	3	011601400
14,5	114	169	3	011601450
15	114	169	3	011601500
15,5	120	178	3	011601550
16	120	178	3	011601600
16,5	125	184	1	011601650
17	125	184	1	011601700
17,5	130	191	1	011601750
18	130	191	1	011601800
18,5	135	198	1	011601850
19	135	198	1	011601900
19,5	140	205	1	011601950
20	140	205	1	011602000

Caratteristiche del rivestimento TiN
Features of TiN coating
Caractéristiques du revêtement TiN
Caracteristicas del recubrimiento TiN

Il rivestimento monostrato TiN ha lo scopo di incrementare la resistenza a fenomeni di usura e ossidazione cui gli utensili sono sottoposti durante le lavorazioni di foratura: ha ottime caratteristiche di microdurezza (HV 0.05 2300), un basso coefficiente di attrito (0.4), una temperatura massima di esercizio pari a 500°C. Il rivestimento di pochi µm, depositato per via fisica mediante vapore (Physical Vapour Deposition), consente pertanto di aumentare la vita utile degli utensili da taglio, migliorando anche la finitura superficiale ed il conseguente scorrimento dei trucioli di lavorazione.

TiN monolayer coating can increase both wear and oxidation resistance of every tool. It has high hardness (HV 0.05 2300), low friction coefficient (0.4), maximum working temperature 500°C. The coating thickness is very low (µm) and it's produced by Physical Vapour Deposition. TiN coating increases the life cycle of the tool, also improving the surface finishing and the drilling chips removal.

Le revêtement monocouche TiN sert à augmenter la résistance aux phénomènes d'usure et d'oxydation auxquels les outils sont soumis pendant les travaux de perçage : il possède des caractéristiques optimales de microdureté (HV 0,05 2300), un coefficient de frottement faible (0,4), une température maximale de fonctionnement égale à 500°C. Le revêtement de quelques µm, déposé par un procédé physique par le biais de la vapeur (Physical Vapour Deposition), permet donc d'augmenter la vie utile des outils de coupe, en améliorant aussi la finition de la surface et donc l'évacuation des copeaux d'usinage produits.

El recubrimiento monocapa TiN tiene la finalidad de aumentar la resistencia al desgaste y a la oxidación que sufren los utensilios durante los trabajos de perforado: tiene óptimas características de microdureza (HV 0.05 2300), un bajo coeficiente de fricción (0.4), una temperatura máxima de funcionamiento equivalente a 500°C. El recubrimiento de pocos µm, depositado físicamente con vapor (Physical Vapour Deposition), consiente aumentar la duración de los utensilios de corte, mejorando también el acabado superficial y el consiguiente deslizamiento de las virutas generadas durante la actividad.

PUNTE ELICOIDALI CILINDRICHE CON CODOLO RIDOTTO RIVESTITE AL TiN

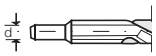
Reduced shank TiN coated twist drills / Forets cylindriques au nitrure de titan à queue degageé
Brocas helicoidales con recubrimiento de titanio y mango reducido / Geschliffene Spiralbohrer TiN-beschichtet mit reduzierten Schaft

HSS-G DIN 338 Rivestita al titanio

Titanium coated / Titan /Titanio / TiN-beschichtet

01163

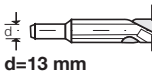




d=10 mm

Ø h8	/	L	d	pcs	cod.
10,25	87	133	10	5	011631025
10,5	87	133	10	5	011631050
10,75	94	142	10	5	011631075
11	94	142	10	5	011631100
11,25	94	142	10	5	011631125
11,5	94	142	10	5	011631150
11,75	94	142	10	5	011631175
12	101	151	10	5	011631200
12,25	101	151	10	5	011631225
12,5	101	151	10	5	011631250
12,75	101	151	10	5	011631275
13	101	151	10	5	011631300
13,5	108	160	10	3	011631350
14	108	160	10	3	011631400
14,5	114	169	10	3	011631450
15	114	169	10	3	011631500
15,5	120	178	10	3	011631550
16	120	178	10	3	011631600
16,5	125	184	10	1	011631650
17	125	184	10	1	011631700
17,5	130	191	10	1	011631750
18	130	191	10	1	011631800
18,5	135	198	10	1	011631850
19	135	198	10	1	011631900
19,5	140	205	10	1	011631950
20	140	205	10	1	011632000

01164



d=13 mm

Ø h8	/	L	d	pcs	cod.
13,5	108	160	13	3	011641350
14	108	160	13	3	011641400
14,5	114	169	13	3	011641450
15	114	169	13	3	011641500
15,5	120	178	13	3	011641550
16	120	178	13	3	011641600
16,5	125	184	13	1	011641650
17	125	184	13	1	011641700
17,5	130	191	13	1	011641750
18	130	191	13	1	011641800
18,5	135	198	13	1	011641850
19	135	198	13	1	011641900
19,5	140	205	13	1	011641950
20	140	205	13	1	011642000

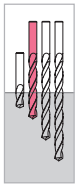
Confezione / Packaging



Applicazioni / Applications



< 5 d



PUNTE HSS-G RETTIFICATE RIVESTITE AL TiN, SERIE EXTRA CORTA

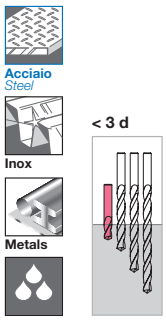
HSS-G TiN coated twist drills, stub serie / Forets au nitrure de Titan, série extra courte
Brocas de Titanio serie extra corta / TiN-beschichtet Spiralbohrer, extra kurz

HSSG+TiN DIN 1897









Ø h8	/	L	pcs	cod.
3	16	46	10	011660300
3,25	18	49	10	011660325
3,5	20	52	10	011660350
3,75	20	52	10	011660375
4	22	55	10	011660400
4,5	24	58	10	011660450
5	26	62	10	011660500
5,5	28	66	10	011660550
6	28	66	10	011660600
6,5	28	66	10	011660650

01166



PUNTE ELICOIDALI HSS-G RETTIFICATE RIVESTITE AL TiN, SERIE LUNGA

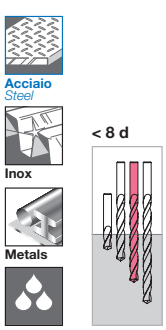
HSS-G TiN coated twist drills, long serie / Forets au nitrure de Titan, série longue
Brocas de Titanio serie larga / TiN-beschichtet Spiralbohrer, lange Ausführung

HSSG+TiN DIN 340



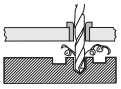






Ø h8	/	L	pcs	cod.
3	66	100	10	011680300
3,25	69	106	10	011680325
3,5	73	112	10	011680350
3,75	73	112	10	011680375
4	78	119	10	011680400
4,25	78	119	10	011680425
4,5	82	126	10	011680450
4,75	82	126	10	011680475
5	87	132	10	011680500
5,25	87	132	10	011680525
5,5	91	139	10	011680550
5,75	91	139	10	011680575
6	91	139	10	011680600
6,5	97	148	5	011680650
7	102	156	5	011680700
7,5	102	156	5	011680750
8	109	165	5	011680800
8,5	109	165	5	011680850
9	115	175	5	011680900
9,5	115	175	5	011680950
10	121	184	5	011681000

01168



ASSORTIMENTI PUNTE AL TITANIO IN ASTUCCI DI METALLO E ABS

Sets of TiN coated twist drills / Assortiments forets au titan
Juego brocas de titanio / HSS-TiN Spiralbohrersätze

HSSG+TiN DIN 338

Metal



19 pcs
Ø 1÷10 x 0,5 mm
01170401



25 pcs
Ø 1÷13 x 0,5 mm
01170402



37 pcs
Ø 1÷10 x 0,25 mm
01170411



49 pcs
Ø 1÷13 x 0,25 mm
01170412

Abs



19 pcs
Ø 1÷10 x 0,5 mm
01170301



25 pcs
Ø 1÷13 x 0,5 mm
01170302

Plastic



19 pcs
Ø 1÷10 x 0,5 mm
01170101



19 pcs Ø 1÷10 x 0,5 mm
01170250

25 pcs Ø 1÷13 x 0,5 mm
01170251

Metal



51 pcs
Ø 1÷6 x 0,1 mm
01170407



41 pcs
Ø 6÷10 x 0,1 mm
01170408



91 pcs
Ø 1÷10 x 0,1 mm
01170410



91 pcs
Ø 1÷10 x 0,1 mm
01170220



10 pcs
Ø 1÷10 x 1 mm
01170201



13 pcs
Ø 1,5 - 2 - 2,5 - 3 - 3,3
3,5 - 4 - 4,2 - 4,5 - 5
5,5 - 6 - 6,5
01170203



13 pcs
Ø 2÷8 x 0,5 mm
01170205



6 pcs
Ø 2 - 3 - 4 - 5 - 6 - 8
01170204



19 pcs
Ø 1÷10 x 0,5 mm
01170206

VALIGETTE MAGAZZENO PUNTE AL TITANIO

HSSG+TiN twist drills in metal cases / Forets HSSG+TiN en coffret métallique
Surtido de brocas HSSG+TiN en caja metalica / Lager Kästen mit HSSG+TiN Spiralbohrersätze

HSSG+TiN DIN 338



Metal 330x240x55

116 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	3
1,5	10	6,5	3
2	10	7	3
2,5	10	7,5	3
3	10	8	3
3,5	10	8,5	2
4	10	9	2
4,5	10	9,5	2
5	10	10	2
5,5	3		

01170450



Metal 550x310x55

128 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	3
1,5	10	8	3
2	10	8,5	2
2,5	10	9	2
3	10	9,5	2
3,5	10	10	2
4	10	10,5	2
4,5	10	11	2
5	10	11,5	2
5,5	3	12	2
6	3	12,5	2
6,5	3	13	2
7	3		

01170451

ESPOSITORE DA BANCO-MAGAZZENO PUNTE AL TITANIO

HSSG+TiN twist drills display / Display forets au HSSG+TiN
Expositor brocas de HSSG+TiN / Verkaufsschränke für HSSG+TiN Spiralbohrer

HSSG+TiN DIN 338



Metal 375x240x200

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	10	5,5	10	10	5
1,5	10	6	10	10,5	3
2	10	6,5	5	11	3
2,5	10	7	5	11,5	3
3	10	7,5	5	12	3
3,5	10	8	5	12,5	3
4	10	8,5	5	13	3
4,5	10	9	5		
5	10	9,5	5		

01170501



Metal 390x460x230

255 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs	Ø	pcs	Ø	pcs
1	10	4,25	10	7,5	5	10,75	2
1,25	5	4,5	10	7,75	2	11	3
1,5	10	4,75	3	8	5	11,25	2
1,75	5	5	10	8,25	2	11,5	3
2	10	5,25	3	8,5	5	11,75	2
2,25	5	5,5	10	8,75	2	12	3
2,5	10	5,75	3	9	5	12,25	2
2,75	5	6	10	9,25	2	12,5	3
3	10	6,25	2	9,5	5	12,75	2
3,25	10	6,5	5	9,75	2	13	3
3,5	10	6,75	2	10	5		
3,75	10	7	5	10,25	2		
4	10	7,25	2	10,5	3		

01170507

PUNTE ELICOIDALI CILINDRICHE "BASIC", ESECUZIONE RETTIFICATA, SERIE CORTA, FINITURA LUCIDA

"Basic" fully ground straight shank twist drills / Forets cylindriques rectifiés "basic"
Brocas helicoidales rectificadas "basic" / Geschliffene Spiralbohrer "basic"

HSS DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01350





HV ≃ 750÷820
SPLIT POINT
DIN 1412C
(Ø≥3 mm)

Art. **01351** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*

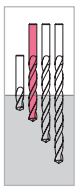


Applicazioni / *Applications*

R ≤ 700 N/mm²



< 5 d



Ø h8	/	L	pcs	cod.
0,2	2,5	19	10	013500020
0,25	3	19	10	013500025
0,3	3	19	10	013500030
0,35	4	19	10	013500035
0,4	5	20	10	013500040
0,45	5	20	10	013500045
0,5	6	22	10	013500050
0,55	7	24	10	013500055
0,6	7	24	10	013500060
0,65	8	26	10	013500065
0,7	9	28	10	013500070
0,75	9	28	10	013500075
0,8	10	30	10	013500080
0,85	10	30	10	013500085
0,9	11	32	10	013500090
0,95	11	32	10	013500095
1	12	34	10	013500100
1,1	14	36	10	013500110
1,2	16	38	10	013500120
1,25	16	38	10	013500125
1,3	16	38	10	013500130
1,4	18	40	10	013500140
1,5	18	40	10	013500150
1,6	20	43	10	013500160
1,7	20	43	10	013500170
1,75	22	46	10	013500175
1,8	22	46	10	013500180
1,9	22	46	10	013500190
2	24	49	10	013500200
2,1	24	49	10	013500210
2,2	27	53	10	013500220
2,25	27	53	10	013500225
2,3	27	53	10	013500230
2,4	30	57	10	013500240
2,5	30	57	10	013500250
2,6	30	57	10	013500260
2,7	33	61	10	013500270
2,75	33	61	10	013500275
2,8	33	61	10	013500280
2,9	33	61	10	013500290
3	33	61	10	013500300
3,1	36	65	10	013500310
3,2	36	65	10	013500320
3,25	36	65	10	013500325
3,3	36	65	10	013500330
3,4	39	70	10	013500340
3,5	39	70	10	013500350
3,6	39	70	10	013500360
3,7	39	70	10	013500370
3,75	39	70	10	013500375
3,8	43	75	10	013500380
3,9	43	75	10	013500390
4	43	75	10	013500400
4,1	43	75	10	013500410
4,2	43	75	10	013500420
4,25	43	75	10	013500425
4,3	47	80	10	013500430
4,4	47	80	10	013500440
4,5	47	80	10	013500450
4,6	47	80	10	013500460
4,7	47	80	10	013500470
4,75	47	80	10	013500475
4,8	52	86	10	013500480
4,9	52	86	10	013500490
5	52	86	10	013500500
5,1	52	86	10	013500510
5,2	52	86	10	013500520
5,25	52	86	10	013500525
5,3	52	86	10	013500530
5,4	57	93	10	013500540
5,5	57	93	10	013500550

- Taglio dei materiali con R ≤ 700 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 700 N/mm².*
- *Puor percer métaux et acier avec R ≤ 700 N/mm².*
- *Para taladrar hierro e acero R ≤ 700 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 700 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

Ø h8	/	L	pcs	cod.
5,6	57	93	10	013500560
5,7	57	93	10	013500570
5,75	57	93	10	013500575
5,8	57	93	10	013500580
5,9	57	93	10	013500590
6	57	93	10	013500600
6,1	63	101	10	013500610
6,2	63	101	10	013500620
6,25	63	101	10	013500625
6,3	63	101	10	013500630
6,4	63	101	10	013500640
6,5	63	101	10	013500650
6,6	63	101	10	013500660
6,7	63	101	10	013500670
6,75	69	109	10	013500675
6,8	69	109	10	013500680
6,9	69	109	10	013500690
7	69	109	10	013500700
7,1	69	109	5	013500710
7,2	69	109	5	013500720
7,25	69	109	5	013500725
7,3	69	109	5	013500730
7,4	69	109	5	013500740
7,5	69	109	5	013500750
7,6	75	117	5	013500760
7,7	75	117	5	013500770
7,75	75	117	5	013500775
7,8	75	117	5	013500780
7,9	75	117	5	013500790
8	75	117	5	013500800
8,1	75	117	5	013500810
8,2	75	117	5	013500820
8,25	75	117	5	013500825
8,3	75	117	5	013500830
8,4	75	117	5	013500840
8,5	75	117	5	013500850
8,6	81	125	5	013500860
8,7	81	125	5	013500870
8,75	81	125	5	013500875
8,8	81	125	5	013500880
8,9	81	125	5	013500890
9	81	125	5	013500900
9,1	81	125	5	013500910
9,2	81	125	5	013500920
9,25	81	125	5	013500925
9,3	81	125	5	013500930
9,4	81	125	5	013500940
9,5	81	125	5	013500950
9,6	87	133	5	013500960
9,7	87	133	5	013500970
9,75	87	133	5	013500975
9,8	87	133	5	013500980
9,9	87	133	5	013500990
10	87	133	5	013501000
10,1	87	133	5	013501010
10,2	87	133	5	013501020
10,25	87	133	5	013501025
10,3	87	133	5	013501030
10,4	87	133	5	013501040
10,5	87	133	5	013501050
10,6	87	133	5	013501060
10,7	94	142	5	013501070
10,75	94	142	5	013501075
10,8	94	142	5	013501080
10,9	94	142	5	013501090
11	94	142	5	013501100
11,1	94	142	5	013501110
11,2	94	142	5	013501120
11,25	94	142	5	013501125
11,3	94	142	5	013501130
11,4	94	142	5	013501140

Ø h8	/	L	pcs	cod.
11,5	94	142	5	013501150
11,6	94	142	5	013501160
11,7	94	142	5	013501170
11,75	94	142	5	013501175
11,8	94	142	5	013501180
11,9	101	151	5	013501190
12	101	151	5	013501200
12,1	101	151	5	013501210
12,2	101	151	5	013501220
12,25	101	151	5	013501225
12,3	101	151	5	013501230
12,4	101	151	5	013501240
12,5	101	151	5	013501250
12,6	101	151	5	013501260
12,7	101	151	5	013501270
12,75	101	151	5	013501275
12,8	101	151	5	013501280
12,9	101	151	5	013501290
13	101	151	5	013501300
13,1	101	151	3	013501310
13,2	101	151	3	013501320
13,25	108	160	3	013501325
13,3	108	160	3	013501330
13,4	108	160	3	013501340
13,5	108	160	3	013501350
13,6	108	160	3	013501360
13,7	108	160	3	013501370
13,75	108	160	3	013501375
13,8	108	160	3	013501380
13,9	108	160	3	013501390
14	108	160	3	013501400
14,1	108	160	3	013501410
14,2	114	169	3	013501420
14,25	114	169	3	013501425
14,3	114	169	3	013501430
14,4	114	169	3	013501440
14,5	114	169	3	013501450
14,6	114	169	3	013501460
14,7	114	169	3	013501470
14,75	114	169	3	013501475
14,8	114	169	3	013501480
14,9	114	169	3	013501490
15	114	169	3	013501500
15,1	120	178	3	013501510
15,2	120	178	3	013501520
15,25	120	178	3	013501525
15,3	120	178	3	013501530
15,4	120	178	3	013501540
15,5	120	178	3	013501550
15,6	120	178	3	013501560
15,7	120	178	3	013501570
15,75	120	178	3	013501575
15,8	120	178	3	013501580
15,9	120	178	3	013501590
16	120	178	3	013501600
16,25	125	184	1	013501625
16,5	125	184	1	013501650
16,75	125	184	1	013501675
17	125	184	1	013501700
17,25	130	191	1	013501725
17,5	130	191	1	013501750
17,75	130	191	1	013501775
18	130	191	1	013501800
18,25	135	198	1	013501825
18,5	135	198	1	013501850
18,75	135	198	1	013501875
19	135	198	1	013501900
19,25	140	205	1	013501925
19,5	140	205	1	013501950
19,75	140	205	1	013501975
20	140	205	1	013502000

Professional

PUNTE ELICOIDALI CILINDRICHE “BASIC”, CON CODOLO RIDOTTO, INTERAMENTE RETTIFICATE, FINITURA LUCIDA

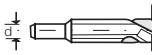
Fully ground straight shank twist drills / Forets cylindriques rectifiés
Brocas helicoidales rectificadas / Geschliffene Spiralbohrer

HSS DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01352





d=10 mm

Ø	/	L	d	pcs	cod.
10,25	87	133	10	5	013521025
10,5	87	133	10	5	013521050
10,75	94	142	10	5	013521075
11	94	142	10	5	013521100
11,25	94	142	10	5	013521125
11,5	94	142	10	5	013521150
11,75	94	142	10	5	013521175
12	101	151	10	5	013521200
12,25	101	151	10	5	013521225
12,5	101	151	10	5	013521250
12,75	101	151	10	5	013521275
13	101	151	10	5	013521300
13,25	108	160	10	3	013521325
13,5	108	160	10	3	013521350
13,75	108	160	10	3	013521375
14	108	160	10	3	013521400
14,25	114	169	10	3	013521425
14,5	114	169	10	3	013521450
14,75	114	169	10	3	013521475
15	114	169	10	3	013521500
15,25	120	178	10	3	013521525
15,5	120	178	10	3	013521550
15,75	120	178	10	3	013521575
16	120	178	10	3	013521600
16,5	125	184	10	1	013521650
17	125	184	10	1	013521700
17,5	130	191	10	1	013521750
18	130	191	10	1	013521800
18,5	135	198	10	1	013521850
19	135	198	10	1	013521900
19,5	140	205	10	1	013521950
20	140	205	10	1	013522000

Confezione / Packaging

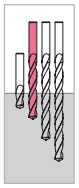


Applicazioni / Applications

R ≤ 700 N/mm²



< 5 d



PUNTE ELICOIDALI CILINDRICHE “BASIC”, CON CODOLO RIDOTTO, INTERAMENTE RETTIFICATE, FINITURA LUCIDA

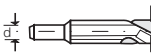
Fully ground straight shank twist drills / Forets cylindriques rectifiés
Brocas helicoidales rectificadas / Geschliffene Spiralbohrer

HSS DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01354



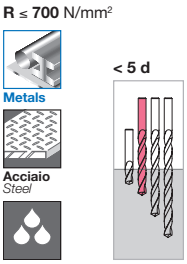


Ø	/	L	d	pcs	cod.
13,25	108	160	13	3	013541325
13,5	108	160	13	3	013541350
13,75	108	160	13	3	013541375
14	108	160	13	3	013541400
14,25	114	169	13	3	013541425
14,5	114	169	13	3	013541450
14,75	114	169	13	3	013541475
15	114	169	13	3	013541500
15,25	120	178	13	3	013541525
15,5	120	178	13	3	013541550
15,75	120	178	13	3	013541575
16	120	178	13	3	013541600
16,5	125	184	13	1	013541650
17	125	184	13	1	013541700
17,5	130	191	13	1	013541750
18	130	191	13	1	013541800
18,5	135	198	13	1	013541850
19	135	198	13	1	013541900
19,5	140	205	13	1	013541950
20	140	205	13	1	013542000
20,5	145	213	13	1	013542050
21	145	213	13	1	013542100
21,5	150	221	13	1	013542150
22	150	221	13	1	013542200
22,5	150	221	13	1	013542250
23	155	229	13	1	013542300
23,5	155	229	13	1	013542350
24	160	236	13	1	013542400
24,5	160	236	13	1	013542450
25	160	236	13	1	013542500

Confezione / Packaging



Applicazioni / Applications



PUNTE ELICOIDALI CILINDRICHE "BASIC", RETTIFICATE LUCIDE, SERIE EXTRA CORTA

Straight shank twist drills, stub serie / Forets cylindriques, série extra courte
Brocas helicoidales, serie extra corta / Geschliffene Spiralbohrer, extra kurz

HSS DIN 1897 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01356







Ø	/	L	pcs	cod.
1,5	9	32	10	013560150
2	12	38	10	013560200
2,2	13	40	10	013560220
2,25	13	40	10	013560225
2,5	14	43	10	013560250
2,75	16	46	10	013560275
2,8	16	46	10	013560280
3	16	46	10	013560300
3,1	18	49	10	013560310
3,2	18	49	10	013560320
3,25	18	49	10	013560325
3,5	20	52	10	013560350
3,7	20	52	10	013560370
3,75	20	52	10	013560375
4	22	55	10	013560400
4,1	22	55	10	013560410
4,2	22	55	10	013560420
4,25	22	55	10	013560425
4,5	24	58	10	013560450
4,75	24	58	10	013560475
4,8	26	62	10	013560480
5	26	62	10	013560500
5,1	26	62	10	013560510
5,2	26	62	10	013560520
5,25	26	62	10	013560525
5,5	28	66	10	013560550
5,75	28	66	10	013560575
6	28	66	10	013560600
6,25	31	70	10	013560625
6,5	31	70	10	013560650
6,75	34	74	10	013560675
7	34	74	10	013560700
7,25	34	74	5	013560725
7,5	34	74	5	013560750
7,75	37	79	5	013560775
8	37	79	5	013560800
8,25	37	79	5	013560825
8,5	37	79	5	013560825
8,75	40	84	5	013560875
9	40	84	5	013560900
9,25	40	84	5	013560925
9,5	40	84	5	013560950
9,75	40	84	5	013560975
10	43	89	5	013561000
10,25	43	89	5	013561025
10,5	43	89	5	013561050
10,75	47	95	5	013561075
11	47	95	5	013561100
11,25	47	95	5	013561125
11,5	47	95	5	013561150
11,75	47	95	5	013561175
12	51	102	5	013561200
12,25	51	102	5	013561225
12,5	51	102	5	013561250
12,75	51	102	5	013561275
13	51	102	5	013561300

Confezione / Packaging

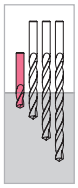


Applicazioni / Applications

R ≤ 700 N/mm²



< 3 d



PUNTE ELICOIDALI CILINDRICHE "BASIC", RETTIFICATE LUCIDE, SERIE LUNGA

Long straight shank twist drills / Forets cylindriques, série longue
Brocas helicoidales, serie larga / Geschliffene Spiralbohrer, lange Ausführung

HSS DIN 340 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01358





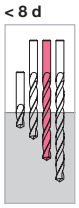
HV ≈ 750÷820
SPLIT POINT
DIN 1412C

Confezione / *Packaging*

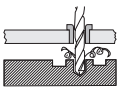


Applicazioni / *Applications*





Ø	/	L	pcs	cod.
1	33	56	10	013580100
1,5	45	70	10	013580150
1,75	53	80	10	013580175
2	56	85	10	013580200
2,25	59	90	10	013580225
2,5	62	95	10	013580250
2,75	66	100	10	013580275
3	66	100	10	013580300
3,25	69	106	10	013580325
3,5	73	112	10	013580350
3,75	73	112	10	013580375
4	78	119	10	013580400
4,25	78	119	10	013580425
4,5	82	126	10	013580450
4,75	82	126	10	013580475
5	87	132	10	013580500
5,25	87	132	10	013580525
5,5	91	139	10	013580550
5,75	91	139	10	013580575
6	91	139	10	013580600
6,25	97	148	5	013580625
6,5	97	148	5	013580650
6,75	97	148	5	013580675
7	102	156	5	013580700
7,25	102	156	5	013580725
7,5	102	156	5	013580750
7,75	109	165	5	013580775
8	109	165	5	013580800
8,25	109	165	5	013580825
8,5	109	165	5	013580850
8,75	115	175	5	013580875
9	115	175	5	013580900
9,25	115	175	5	013580925
9,5	115	175	5	013580950
9,75	121	184	5	013580975
10	121	184	5	013581000
10,25	121	184	5	013581025
10,5	121	184	5	013581050
10,75	128	195	5	013581075
11	128	195	5	013581100
11,25	128	195	5	013581125
11,5	128	195	5	013581150
11,75	134	205	5	013581175
11,8	134	205	5	013581180
12	134	205	5	013581200
12,25	134	205	5	013581225
12,5	134	205	5	013581250
12,75	134	205	5	013581275
13	134	205	5	013581300
13,5	140	214	3	013581350
14	140	214	3	013581400
14,5	144	220	3	013581450
15	144	220	3	013581500
15,5	149	227	3	013581550
16	149	227	3	013581600
16,5	154	235	1	013581650
17	154	235	1	013581700
17,5	158	241	1	013581750
18	158	241	1	013581800
18,5	162	247	1	013581850
19	162	247	1	013581900
19,5	166	254	1	013581950
20	166	254	1	013582000



Professional

ASSORTIMENTI PUNTE HSS "BASIC", RETTIFICATE LUCIDE, IN ASTUCCI DI METALLO E DI PLASTICA

Sets of HSS twist drills ground from the solid / Assortiments forets à metaux rectifiés
Juego brocas rectificadas en HSS / Geschliffene Spiralbohrersätze

HSS DIN 338

Metal



19 pcs
Ø 1÷10 x 0,5 mm

01360401



25 pcs
Ø 1÷13 x 0,5 mm

01360402



37 pcs
Ø 1÷10 x 0,25 mm

01360411



49 pcs
Ø 1÷13 x 0,25 mm

01360412

Plastic



19 pcs
Ø 1÷10 x 0,5 mm

01360101

Abs



19 pcs Ø 1÷10 x 0,5 mm
01360301

25 pcs Ø 1÷13 x 0,5 mm
01360302



19 pcs Ø 1÷10 x 0,5 mm
01360250

25 pcs Ø 1÷13 x 0,5 mm
01360251

VALIGETTE MAGAZZENO ED ESPOSITORI CON PUNTE HSS “BASIC”, RETTIFICATE LUCIDE

Ground drills storage displays / Display forets cylindriques rectifiés
Expositor de brocas rectificadas / Lager Kästen mit geschliffene Spiralbohrer

HSS DIN 338

01360450 Ø 1÷10 x 0,5 mm
01360451 Ø 1÷13 x 0,5 mm



150 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	5
1,5	10	6,5	5
2	10	7	5
2,5	10	7,5	5
3	20	8	5
3,5	10	8,5	5
4	10	9	5
4,5	10	9,5	5
5	10	10	5
5,5	5		

Metal 330x240x55

01360450

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	5
1,5	10	8	5
2	10	8,5	5
2,5	10	9	5
3	20	9,5	5
3,5	10	10	5
4	10	10,5	3
4,5	10	11	3
5	10	11,5	3
5,5	5	12	3
6	5	12,5	3
6,5	5	13	3
7	5		

Metal 550x310x55

01360451



Metal 375x240x200

600 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,5	20	10	10
1,5	30	6	20	10,5	5
2	50	6,5	10	11	5
2,5	50	7	10	11,5	5
3	100	7,5	5	12	5
3,5	50	8	10	12,5	5
4	100	8,5	5	13	5
4,5	30	9	5		
5	30	9,5	5		

01360502



Metal 390x460x230

760 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,25	5	9,5	5
1,25	10	5,5	30	9,75	2
1,5	30	5,75	5	10	10
1,75	10	6	30	10,25	2
2	50	6,25	3	10,5	3
2,25	10	6,5	20	10,75	2
2,5	50	6,75	2	11	3
2,75	10	7	5	11,25	2
3	100	7,25	2	11,5	2
3,25	10	7,5	5	11,75	2
3,5	50	7,75	2	12	3
3,75	10	8	10	12,25	2
4	80	8,25	2	12,5	2
4,25	10	8,5	5	12,75	2
4,5	50	8,75	2	13	3
4,75	10	9	5		
5	60	9,25	2		

01360507

PUNTE ELICOIDALI CILINDRICHE RETTIFICATE, QUALITÀ STANDARD, FINITURA BLACK & WHITE

Standard fully ground straight shank twist drills / Forets cylindriques rectifiés, qualité standard
Brocas helicoidales rectificada standard / Geschliffene Spiralbohrer standard

HSS DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen

01080



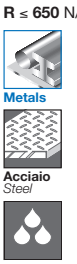


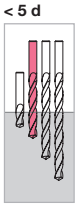
Art. **01081** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*





- Taglio del ferro, acciaio, metalli in genere con R ≤ 650 N/mm².
- *For drilling in iron, steel, metals up to R ≤ 650 N/mm².*
- *Pour percer fer, acier, métaux avec R ≤ 650 N/mm².*
- *Para taladrar hierro y aceros R ≤ 650 N/mm².*
- *Einsatz in Eisen, Stahl bis R ≤ 650 N/mm².*

Ø	/	L	pcs	cod.
1	12	34	10	010800100
1,1	14	36	10	010800110
1,2	16	38	10	010800120
1,25	16	38	10	010800125
1,3	16	38	10	010800130
1,4	18	40	10	010800140
1,5	18	40	10	010800150
1,6	20	43	10	010800160
1,7	20	43	10	010800170
1,75	22	46	10	010800175
1,8	22	46	10	010800180
1,9	22	46	10	010800190
2	24	49	10	010800200
2,1	24	49	10	010800210
2,2	27	53	10	010800220
2,25	27	53	10	010800225
2,3	27	53	10	010800230
2,4	30	57	10	010800240
2,5	30	57	10	010800250
2,6	30	57	10	010800260
2,7	33	61	10	010800270
2,75	33	61	10	010800275
2,8	33	61	10	010800280
2,9	33	61	10	010800290
3	33	61	10	010800300
3,1	36	65	10	010800310
3,2	36	65	10	010800320
3,25	36	65	10	010800325
3,3	36	65	10	010800330
3,4	39	70	10	010800340
3,5	39	70	10	010800350
3,6	39	70	10	010800360
3,7	39	70	10	010800370
3,75	39	70	10	010800375
3,8	43	75	10	010800380
3,9	43	75	10	010800390
4	43	75	10	010800400
4,1	43	75	10	010800410
4,2	43	75	10	010800420
4,25	43	75	10	010800425
4,3	47	80	10	010800430
4,4	47	80	10	010800440
4,5	47	80	10	010800450
4,6	47	80	10	010800460
4,7	47	80	10	010800470
4,75	47	80	10	010800475
4,8	52	86	10	010800480
4,9	52	86	10	010800490
5	52	86	10	010800500
5,1	52	86	10	010800510
5,2	52	86	10	010800520
5,25	52	86	10	010800525
5,3	52	86	10	010800530
5,4	57	93	10	010800540
5,5	57	93	10	010800550
5,6	57	93	10	010800560
5,7	57	93	10	010800570
5,75	57	93	10	010800575
5,8	57	93	10	010800580
5,9	57	93	10	010800590
6	57	93	10	010800600
6,1	63	101	10	010800610
6,2	63	101	10	010800620
6,25	63	101	10	010800625
6,3	63	101	10	010800630
6,4	63	101	10	010800640
6,5	63	101	10	010800650
6,6	63	101	10	010800660
6,7	63	101	10	010800670
6,75	69	109	10	010800675
6,8	69	109	10	010800680
6,9	69	109	10	010800690
7	69	109	10	010800700
7,1	69	109	5	010800710
7,2	69	109	5	010800720
7,25	69	109	5	010800725
7,3	69	109	5	010800730
7,4	69	109	5	010800740
7,5	69	109	5	010800750
7,6	75	117	5	010800760
7,7	75	117	5	010800770
7,75	75	117	5	010800775
7,8	75	117	5	010800780
7,9	75	117	5	010800790
8	75	117	5	010800800
8,1	75	117	5	010800810
8,2	75	117	5	010800820
8,25	75	117	5	010800825
8,3	75	117	5	010800830
8,4	75	117	5	010800840
8,5	75	117	5	010800850
8,6	81	125	5	010800860
8,7	81	125	5	010800870
8,75	81	125	5	010800875
8,8	81	125	5	010800880
8,9	81	125	5	010800890
9	81	125	5	010800900
9,1	81	125	5	010800910
9,2	81	125	5	010800920
9,25	81	125	5	010800925
9,3	81	125	5	010800930
9,4	81	125	5	010800940
9,5	81	125	5	010800950
9,6	87	133	5	010800960
9,7	87	133	5	010800970
9,75	87	133	5	010800975
9,8	87	133	5	010800980
9,9	87	133	5	010800990
10	87	133	5	010801000
10,25	87	133	5	010801025
10,5	87	133	5	010801050
10,75	94	142	5	010801075
11	94	142	5	010801100
11,25	94	142	5	010801125
11,5	94	142	5	010801150
11,75	94	142	5	010801175
12	101	151	5	010801200
12,25	101	151	5	010801225
12,5	101	151	5	010801250
12,75	101	151	5	010801275
13	101	151	5	010801300
13,25	108	160	3	010801325
13,5	108	160	3	010801350
13,75	108	160	3	010801375
14	108	160	3	010801400
14,25	114	169	3	010801425
14,5	114	169	3	010801450
14,75	114	169	3	010801475
15	114	169	3	010801500
15,25	120	178	3	010801525
15,5	120	178	3	010801550
15,75	120	178	3	010801575
16	120	178	3	010801600
16,5	125	184	1	010801650
17	125	184	1	010801700
17,5	130	191	1	010801750
18	130	191	1	010801800
18,5	135	198	1	010801850
19	135	198	1	010801900
19,5	140	205	1	010801950
20	140	205	1	010802000

PUNTE ELICOIDALI CILINDRICHE RETTIFICATE, QUALITÀ STANDARD

Standard fully ground straight shank twist drills / Forets cylindriques rectifiés, qualité standard
Brocas helicoidales rectificada standard / Geschliffene Spiralbohrer standard

HSS DIN 338 Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen



01082 d=10 mm

Ø	/	L	pcs	cod.
10,25	87	133	5	010821025
10,5	87	133	5	010821050
10,75	94	142	5	010821075
11	94	142	5	010821100
11,25	94	142	5	010821125
11,5	94	142	5	010821150
11,75	94	142	5	010821175
12	101	151	5	010821200
12,25	101	151	5	010821225
12,5	101	151	5	010821250
12,75	101	151	5	010821275
13	101	151	5	010821300
13,25	101	151	3	010821325
13,5	108	160	3	010821350
13,75	108	160	3	010821375
14	108	160	3	010821400
14,25	114	169	3	010821425
14,5	114	169	3	010821450
14,75	114	169	3	010821475
15	114	169	3	010821500
15,25	120	178	3	010821525
15,5	120	178	3	010821550
15,75	120	178	3	010821575
16	120	178	3	010821600
16,5	125	184	1	010821650
17	125	184	1	010821700
17,5	130	191	1	010821750
18	130	191	1	010821800
18,5	135	198	1	010821850
19	135	198	1	010821900
19,5	140	205	1	010821950
20	140	205	1	010822000

01084 d=13 mm

Ø	/	L	pcs	cod.
13,25	101	151	3	010841325
13,5	108	160	3	010841350
13,75	108	160	3	010841375
14	108	160	3	010841400
14,25	114	169	3	010841425
14,5	114	169	3	010841450
14,75	114	169	3	010841475
15	114	169	3	010841500
15,25	120	178	3	010841525
15,5	120	178	3	010841550
15,75	120	178	3	010841575
16	120	178	3	010841600
16,5	125	184	1	010841650
17	125	184	1	010841700
17,5	130	191	1	010841750
18	130	191	1	010841800
18,5	135	198	1	010841850
19	135	198	1	010841900
19,5	140	205	1	010841950
20	140	205	1	010842000

01082
01084

HSS DIN 1897 - serie corta

01087 **01086**



Ø	/	L	pcs	cod.
3	16	46	10	010870300
3,25	18	49	10	010870325
3,5	20	52	10	010870350
3,75	20	52	10	010870375
4	22	55	10	010870400
4,25	22	55	10	010870425
4,5	24	58	10	010870450

Ø	/	L	pcs	cod.
4,75	24	58	10	010870475
5	26	62	10	010870500
5,25	26	62	10	010870525
5,5	28	66	10	010870550
5,75	28	66	10	010870575
6	28	66	10	010870600

01087

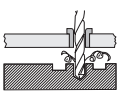


HSS DIN 340 - serie lunga

Ø	/	L	pcs	cod.
3	66	100	10	010860300
3,25	69	106	10	010860325
3,5	73	112	10	010860350
3,75	73	112	10	010860375
4	78	119	10	010860400
4,25	78	119	10	010860425
4,5	82	126	10	010860450
4,75	82	126	10	010860475
5	87	132	10	010860500
5,25	87	132	10	010860525
5,5	91	139	10	010860550

Ø	/	L	pcs	cod.
5,75	91	139	10	010860575
6	91	139	10	010860600
6,5	97	148	5	010860650
7	102	156	5	010860700
7,5	102	156	5	010860750
8	109	165	5	010860800
8,5	109	165	5	010860850
9	115	175	5	010860900
9,5	115	175	5	010860950
10	121	184	5	010861000

01086



ASSORTIMENTI PUNTE HSS-G RETTIFICATE, QUALITÀ STANDARD, IN ASTUCCI DI METALLO E PLASTICA

Sets of HSS twist drills ground from the solid / Assortiments forets à metaux rectifiés
Juego brocas rectificadas en HSS / Geschliffene Spiralbohrersätze

HSS DIN 338

Metal



19 pcs Ø 1÷10 x 0,5 mm	25 pcs Ø 1÷13 x 0,5 mm
01085401	01085402



19 pcs Ø 1÷10 x 0,5 mm	25 pcs Ø 1÷13 x 0,5 mm
01085301	01085302



37 pcs
Ø 1÷10 x 0,25 mm

01085411



49 pcs
Ø 1÷13 x 0,25 mm

01085412

Metal



19 pcs
Ø 1÷10 x 0,5 mm

01085101



19 pcs Ø 1÷10 x 0,5 mm	25 pcs Ø 1÷13 x 0,5 mm
01085250	01085251

VALIGETTA MAGAZZENO ED ESPOSITORI PUNTE HSS RETTIFICATE STANDARD

Metal case storage and display with HSS fully ground twist drills / Display forets cylindriques rectifiés
Expositor de brocas rectificadas / Lager Kästen mit geschliffene Spiralbohrer

HSS DIN 338

01085450 Ø 1÷10 x 0,5 mm
01085451 Ø 1÷13 x 0,5 mm



150 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	5
1,5	10	6,5	5
2	10	7	5
2,5	10	7,5	5
3	20	8	5
3,5	10	8,5	5
4	10	9	5
4,5	10	9,5	5
5	10	10	5
5,5	5		

Metal 330x240x55

01085450

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	5
1,5	10	8	5
2	10	8,5	5
2,5	10	9	5
3	20	9,5	5
3,5	10	10	5
4	10	10,5	3
4,5	10	11	3
5	10	11,5	3
5,5	5	12	3
6	5	12,5	3
6,5	5	13	3
7	5		

Metal 550x310x55

01085451



Metal 375x240x200

720 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,5	30	10	10
1,5	30	6	40	10,5	5
2	50	6,5	10	11	5
2,5	70	7	10	11,5	5
3	100	7,5	5	12	5
3,5	70	8	20	12,5	5
4	100	8,5	5	13	5
4,5	50	9	5		
5	50	9,5	5		

01085501



Metal 390x460x230

900 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	30	5,25	5	9,5	5
1,25	10	5,5	30	9,75	2
1,5	30	5,75	5	10	10
1,75	10	6	30	10,25	2
2	50	6,25	3	10,5	5
2,25	10	6,5	20	10,75	2
2,5	50	6,75	3	11	5
2,75	10	7	10	11,25	2
3	100	7,25	2	11,5	5
3,25	10	7,5	5	11,75	2
3,5	100	7,75	2	12	5
3,75	10	8	20	12,25	2
4	100	8,25	2	12,5	5
4,25	10	8,5	5	12,75	2
4,5	50	8,75	2	13	5
4,75	10	9	5		
5	100	9,25	2		

01085507

Professional

PUNTE ELICOIDALI CILINDRICHE DI ALTA QUALITÀ AL COBALTO 2%, ESECUZIONE RULLATA, CON TAGLIENTI SPECIALI ROMPITRUCIOLO

Cobalt rolled straight shank twist drills / Forets cylindriques au cobalt laminés
Broca helicoidale laminada de cobalto / Kobalt Rollgewalzte spiralbohrer

HSS-CO 2%

01006





W 27°

HV ≃ 800÷820
SPLIT POINT
DIN 1412C
(Ø≥3 mm)

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 700 N/mm²



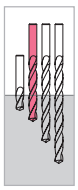
Metals



Acciaio
Steel



< 5 d



Ø	/	L	pcs	cod.
1	12	34	10	010060100
1,25	16	38	10	010060125
1,5	18	40	10	010060150
1,75	22	46	10	010060175
2	24	49	10	010060200
2,25	27	53	10	010060225
2,5	30	57	10	010060250
2,75	33	61	10	010060275
3	33	61	10	010060300
3,25	36	65	10	010060325
3,5	39	70	10	010060350
3,75	39	70	10	010060375
4	43	75	10	010060400
4,25	43	75	10	010060425
4,5	47	80	10	010060450
4,75	47	80	10	010060475
5	52	86	10	010060500
5,25	52	86	10	010060525
5,5	57	93	10	010060550
5,75	57	93	10	010060575
6	57	93	10	010060600
6,25	63	101	10	010060625
6,5	63	101	10	010060650
6,75	69	109	10	010060675
7	69	109	10	010060700
7,25	69	109	5	010060725
7,5	69	109	5	010060750
7,75	75	117	5	010060775
8	75	117	5	010060800
8,25	75	117	5	010060825
8,5	75	117	5	010060850
8,75	81	125	5	010060875
9	81	125	5	010060900
9,25	81	125	5	010060925
9,5	81	125	5	010060950
9,75	87	133	5	010060975
10	87	133	5	010061000
10,25	87	133	5	010061025
10,5	87	133	5	010061050
10,75	94	142	5	010061075
11	94	142	5	010061100
11,25	94	142	5	010061125
11,5	94	142	5	010061150
11,75	94	142	5	010061175
12	101	151	5	010061200
12,25	101	151	5	010061225
12,5	101	151	5	010061250
12,75	101	151	5	010061275
13	101	151	5	010061300

- Taglio dei materiali con R ≤ 700 N/mm² quali acciai legati, ghise, tutti i metalli in genere, la grafite.
- *High performances in cutting alloy steel up to R ≤ 700 N/mm².*
- *Puor percer métaux et acier avec R ≤ 700 N/mm².*
- *Para taladrar hierro e acero R ≤ 700 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 700 N/mm2 Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

ASSORTIMENTI PUNTE RULLATE AL COBALTO 2% IN ASTUCCI DI METALLO DI QUALITÀ

HSS-CO 2% rolled twist drills in high quality metal cases / Forets HSS-CO 2% laminés en coffret métallique
Surtido de brocas laminada en caja metalica / Rollgewalzte Spiralbohrersätze in Metallkassetten

HSS-CO 2%

Metal		Abs	
			
19 pcs Ø 1÷10 x 0,5 mm	**25 pcs** Ø 1÷13 x 0,5 mm	**19 pcs** Ø 1÷10 x 0,5 mm	**25 pcs** Ø 1÷13 x 0,5 mm
01008401	**01008402**	**01008301**	**01008302**

Descrizione / *Description / Description / Descripciòn*

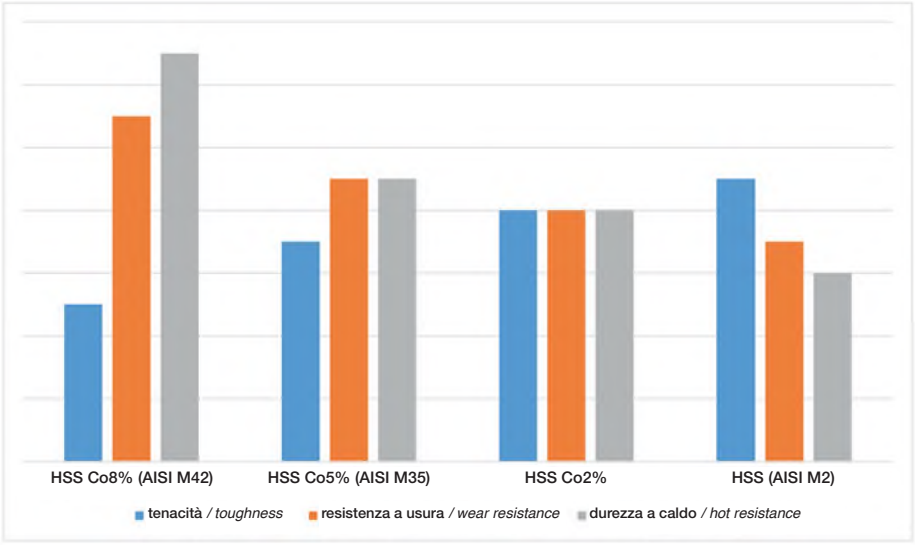
Punta con affilatura che funziona da rompitruciolo, per lavorare tutti quei materiali con trucioli lunghi che potrebbero diventare pericolosi durante il processo di foratura. Il doppio angolo di affilatura dei taglienti crea infatti una discontinuità che favorisce la rottura del truciolo appena generato. La punta è rullata e viene costruita con un acciaio superrapido al cobalto 2%. Questo contributo di cobalto favorisce il mantenimento delle caratteristiche dell'utensile anche a temperature elevate. La punta può pertanto essere utilizzata nella foratura di materiali più duri e resistenti rispetto alla semplice punta rullata in HSS (art. 01001).

This twist drill has a proper sharpening that works as a chipbreaker, to cut into all those long chipped materials that could become dangerous during the drilling process. The double sharpening angle of the cutting edges creates a discontinuity that helps the breakage of the newly generated chip. The tip is rolled forged and it's made with a 2% cobalt high speed steel. This cobalt content promotes the maintenance of the tool characteristics even at high temperatures. This twist drill can therefore be used to drill into harder and more resistant materials than the simple rolled drill bit made of HSS (item 01001).

Ce foret hélicoïdal a un affûtage approprié qui fonctionne comme un brise-copeaux, pour couper tous les matériaux à copeaux longs qui pourraient devenir dangereux pendant le processus de forage. Le double angle d'affûtage des arêtes de coupe crée une discontinuité qui favorise la rupture de la nouvelle puce. L'embout est laminé et fabriqué avec un acier rapide à 2% de cobalt. Cette teneur en cobalt favorise le maintien des caractéristiques de l'outil même à des températures élevées. Ce foret hélicoïdal peut donc être utilisé pour forer des matériaux plus durs et plus résistants que le simple foret laminé en HSS (art. 01001).

Esta broca helicoidale tiene un afilado adecuado que funciona como un rompevirutas, para cortar en todos esos materiales largos astillados que podrían volverse peligrosos durante el proceso de perforación. El doble ángulo de afilado de los bordes cortantes crea una discontinuidad que ayuda a la rotura del chip recién generado. La punta está laminada y está hecha con un acero HSS al 2% de cobalto. Este contenido de cobalto promueve el mantenimiento de las características de la herramienta incluso a altas temperaturas. Por lo tanto, esta broca helicoidal se puede utilizar para taladrar en materiales más duros y más resistentes que la broca laminada simple hecha de HSS (art. 01001).

Confronto di alcune proprietà di acciai superrapidi
Properties comparison of some high speed steels
Comparaison de certaines propriétés des aciers HSS
Comparación de algunas propiedades de los aceros HSS



PUNTE ELICOIDALI CILINDRICHE, SERIE CORTA, ESECUZIONE RULLATA

Rolled straight shank twist drills / Forets cylindriques laminés
Broca helicoidale laminada / Rollgewalzte spiralbohrer

HSS DIN 338 Esecuzione Rullata

Rolled / Laminé / Laminada / Rollgewalzt

01001



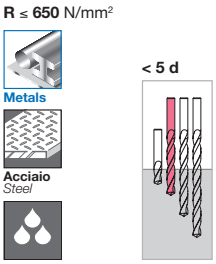


Art. **01002** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*



Ø	/	L	pcs	cod.
0,3	3	19	10	010010030
0,35	4	19	10	010010035
0,4	5	20	10	010010040
0,45	5	20	10	010010045
0,5	6	22	10	010010050
0,55	7	24	10	010010055
0,6	7	24	10	010010060
0,65	8	26	10	010010065
0,7	9	28	10	010010070
0,75	9	28	10	010010075
0,8	10	30	10	010010080
0,85	10	30	10	010010085
0,9	11	32	10	010010090
0,95	11	32	10	010010095
1	12	34	10	010010100
1,1	14	36	10	010010110
1,2	16	38	10	010010120
1,25	16	38	10	010010125
1,3	16	38	10	010010130
1,4	18	40	10	010010140
1,5	18	40	10	010010150
1,6	20	43	10	010010160
1,7	20	43	10	010010170
1,75	22	46	10	010010175
1,8	22	46	10	010010180
1,9	22	46	10	010010190
2	24	49	10	010010200
2,1	24	49	10	010010210
2,2	27	53	10	010010220
2,25	27	53	10	010010225
2,3	27	53	10	010010230
2,4	30	57	10	010010240
2,5	30	57	10	010010250
2,6	30	57	10	010010260
2,7	33	61	10	010010270
2,75	33	61	10	010010275
2,8	33	61	10	010010280
2,9	33	61	10	010010290
3	33	61	10	010010300
3,1	36	65	10	010010310
3,2	36	65	10	010010320
3,25	36	65	10	010010325
3,3	36	65	10	010010330
3,4	39	70	10	010010340
3,5	39	70	10	010010350
3,6	39	70	10	010010360
3,7	39	70	10	010010370
3,75	39	70	10	010010375
3,8	43	75	10	010010380
3,9	43	75	10	010010390
4	43	75	10	010010400
4,1	43	75	10	010010410
4,2	43	75	10	010010420
4,25	43	75	10	010010425
4,3	47	80	10	010010430
4,4	47	80	10	010010440
4,5	47	80	10	010010450
4,6	47	80	10	010010460
4,7	47	80	10	010010470
4,75	47	80	10	010010475
4,8	52	86	10	010010480
4,9	52	86	10	010010490
5	52	86	10	010010500
5,1	52	86	10	010010510
5,2	52	86	10	010010520
5,25	52	86	10	010010525

- Per forare: tutti i metalli, ferro, acciaio etc...
- *For drilling in: iron, steel, metals...*
- *Pour percer: fer, acier, métaux...*
- *Para taladrar: hierro, acero etc...*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 650 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe*

Ø	/	L	pcs	cod.
5,3	52	86	10	010010530
5,4	57	93	10	010010540
5,5	57	93	10	010010550
5,6	57	93	10	010010560
5,7	57	93	10	010010570
5,75	57	93	10	010010575
5,8	57	93	10	010010580
5,9	57	93	10	010010590
6	57	93	10	010010600
6,1	63	101	10	010010610
6,2	63	101	10	010010620
6,25	63	101	10	010010625
6,3	63	101	10	010010630
6,4	63	101	10	010010640
6,5	63	101	10	010010650
6,6	63	101	10	010010660
6,7	63	101	10	010010670
6,75	69	109	10	010010675
6,8	69	109	10	010010680
6,9	69	109	10	010010690
7	69	109	10	010010700
7,1	69	109	5	010010710
7,2	69	109	5	010010720
7,25	69	109	5	010010725
7,3	69	109	5	010010730
7,4	69	109	5	010010740
7,5	69	109	5	010010750
7,6	75	117	5	010010760
7,7	75	117	5	010010770
7,75	75	117	5	010010775
7,8	75	117	5	010010780
7,9	75	117	5	010010790
8	75	117	5	010010800
8,1	75	117	5	010010810
8,2	75	117	5	010010820
8,25	75	117	5	010010825
8,3	75	117	5	010010830
8,4	75	117	5	010010840
8,5	75	117	5	010010850
8,6	81	125	5	010010860
8,7	81	125	5	010010870
8,75	81	125	5	010010875
8,8	81	125	5	010010880
8,9	81	125	5	010010890
9	81	125	5	010010900
9,1	81	125	5	010010910
9,2	81	125	5	010010920
9,25	81	125	5	010010925
9,3	81	125	5	010010930
9,4	81	125	5	010010940
9,5	81	125	5	010010950
9,6	87	133	5	010010960
9,7	87	133	5	010010970
9,75	87	133	5	010010975
9,8	87	133	5	010010980
9,9	87	133	5	010010990
10	87	133	5	010011000
10,1	87	133	5	010011010
10,2	87	133	5	010011020
10,25	87	133	5	010011025
10,3	87	133	5	010011030
10,4	87	133	5	010011040
10,5	87	133	5	010011050
10,6	87	133	5	010011060
10,7	94	142	5	010011070
10,75	94	142	5	010011075

Ø	/	L	pcs	cod.
10,8	94	142	5	010011080
10,9	94	142	5	010011090
11	94	142	5	010011100
11,1	94	142	5	010011110
11,2	94	142	5	010011120
11,25	94	142	5	010011125
11,3	94	142	5	010011130
11,4	94	142	5	010011140
11,5	94	142	5	010011150
11,6	94	142	5	010011160
11,7	94	142	5	010011170
11,75	94	142	5	010011175
11,8	94	142	5	010011180
11,9	101	151	5	010011190
12	101	151	5	010011200
12,1	101	151	5	010011210
12,2	101	151	5	010011220
12,25	101	151	5	010011225
12,3	101	151	5	010011230
12,4	101	151	5	010011240
12,5	101	151	5	010011250
12,6	101	151	5	010011260
12,7	101	151	5	010011270
12,75	101	151	5	010011275
12,8	101	151	5	010011280
12,9	101	151	5	010011290
13	101	151	5	010011300
13,25	108	160	3	010011325
13,5	108	160	3	010011350
13,75	108	160	3	010011375
14	108	160	3	010011400
14,25	114	169	3	010011425
14,5	114	169	3	010011450
14,75	114	169	3	010011475
15	114	169	3	010011500
15,25	120	178	3	010011525
15,5	120	178	3	010011550
15,75	120	178	3	010011575
16	120	178	3	010011600
16,25	125	184	1	010011625
16,5	125	184	1	010011650
16,75	125	184	1	010011675
17	125	184	1	010011700
17,25	130	191	1	010011725
17,5	130	191	1	010011750
17,75	130	191	1	010011775
18	130	191	1	010011800
18,25	135	198	1	010011825
18,5	135	198	1	010011850
18,75	135	198	1	010011875
19	135	198	1	010011900
19,25	140	205	1	010011925
19,5	140	205	1	010011950
19,75	140	205	1	010011975
20	140	205	1	010012000
20,5	145	213	1	010012050
21	145	213	1	010012100
21,5	150	221	1	010012150
22	150	221	1	010012200
22,5	150	221	1	010012250
23	155	229	1	010012300
23,5	155	229	1	010012350
24	160	236	1	010012400
24,5	160	236	1	010012450
25	160	236	1	010012500

PUNTE ELICOIDALI CILINDRICHE CON CODOLO RIDOTTO, ESECUZIONE RULLATA

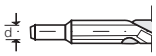
Reduced shank twist drills / Forets cylindriques à queue réduite
Brocas helicoidales con mango reducido / Rollgewalzte Spiralbohrer mit reduzierten Schaft

HSS DIN 338 Esecuzione Rullata

Rolled / Laminé / Laminada / Rollgewalzt

01003



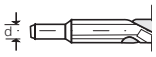


d=10 mm

Art. **01005** Self
Disponibile su richiesta / *On demand*

Ø	/	L	d	pcs	cod.
10,25	87	133	10	5	010031025
10,5	87	133	10	5	010031050
10,75	94	142	10	5	010031075
11	94	142	10	5	010031100
11,25	94	142	10	5	010031125
11,5	94	142	10	5	010031150
11,75	94	142	10	5	010031175
12	101	151	10	5	010031200
12,25	101	151	10	5	010031225
12,5	101	151	10	5	010031250
12,75	101	151	10	5	010031275
13	101	151	10	5	010031300
13,25	108	160	10	3	010031325
13,5	108	160	10	3	010031350
13,75	108	160	10	3	010031375
14	108	160	10	3	010031400
14,25	114	169	10	3	010031425
14,5	114	169	10	3	010031450
14,75	114	169	10	3	010031475
15	114	169	10	3	010031500
15,25	120	178	10	3	010031525
15,5	120	178	10	3	010031550
15,75	120	178	10	3	010031575
16	120	178	10	3	010031600
16,25	125	184	10	1	010031625
16,5	125	184	10	1	010031650
16,75	125	184	10	1	010031675
17	125	184	10	1	010031700
17,25	125	184	10	1	010031725
17,5	130	191	10	1	010031750
17,75	130	191	10	1	010031775
18	130	191	10	1	010031800
18,25	130	191	10	1	010031825
18,5	135	198	10	1	010031850
18,75	135	198	10	1	010031875
19	135	198	10	1	010031900
19,25	135	198	10	1	010031925
19,5	140	205	10	1	010031950
19,75	140	205	10	1	010031975
20	140	205	10	1	010032000

01004



d=13 mm

Ø	/	L	d	pcs	cod.
13,25	108	160	13	3	010041325
13,5	108	160	13	3	010041350
13,75	108	160	13	3	010041375
14	108	160	13	3	010041400
14,25	114	169	13	3	010041425
14,5	114	169	13	3	010041450
14,75	114	169	13	3	010041475
15	114	169	13	3	010041500
15,25	120	178	13	3	010041525
15,5	120	178	13	3	010041550
15,75	120	178	13	3	010041575
16	120	178	13	3	010041600
16,25	125	184	13	1	010041625
16,5	125	184	13	1	010041650
16,75	125	184	13	1	010041675
17	125	184	13	1	010041700
17,25	130	191	13	1	010041725
17,5	130	191	13	1	010041750
17,75	130	191	13	1	010041775
18	130	191	13	1	010041800
18,25	135	198	13	1	010041825
18,5	135	198	13	1	010041850
18,75	135	198	13	1	010041875
19	135	198	13	1	010041900
19,25	140	205	13	1	010041925
19,5	140	205	13	1	010041950
19,75	140	205	13	1	010041975
20	140	205	13	1	010042000
20,5	145	213	13	1	010042050
21	145	213	13	1	010042100
21,5	150	221	13	1	010042150
22	150	221	13	1	010042200
22,5	150	221	13	1	010042250
23	155	229	13	1	010042300
23,5	155	229	13	1	010042350
24	160	236	13	1	010042400
24,5	160	236	13	1	010042450
25	160	236	13	1	010042500

Confezione / Packaging



Applicazioni / Applications

R ≤ 650 N/mm²



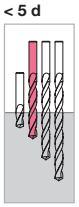
Metals



Acciaio
Steel



< 5 d



PUNTE ELICOIDALI CILINDRICHE SERIE LUNGA, ESECUZIONE RULLATA

Straight shank twist drills, long serie / Forets cylindriques, série longue
Brocas helicoidales, serie larga / Spiralbohrer, lange Ausführung, rollgewalzt

HSS DIN 340 Esecuzione Rullata

Rolled / Laminé / Laminada / Rollgewalzt

01020



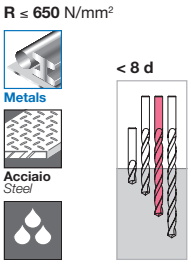


Art. **01021** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*

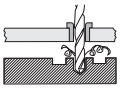


Applicazioni / *Applications*



Ø	/	L	pcs	cod.
1,5	45	70	10	010200150
1,75	53	80	10	010200175
2	56	85	10	010200200
2,2	59	90	10	010200220
2,25	59	90	10	010200225
2,5	62	95	10	010200250
2,75	66	100	10	010200275
2,8	66	100	10	010200280
3	66	100	10	010200300
3,2	69	106	10	010200320
3,25	69	106	10	010200325
3,5	73	112	10	010200350
3,75	73	112	10	010200375
3,8	78	119	10	010200380
4	78	119	10	010200400
4,2	78	119	10	010200420
4,25	78	119	10	010200425
4,5	82	126	10	010200450
4,75	82	126	10	010200475
4,8	87	132	10	010200480
5	87	132	10	010200500
5,2	87	132	10	010200520
5,25	87	132	10	010200525
5,5	91	139	10	010200550
5,75	91	139	10	010200575
5,8	91	139	10	010200580
6	91	139	10	010200600
6,25	97	148	5	010200625
6,5	97	148	5	010200650
6,75	97	148	5	010200675
7	102	156	5	010200700
7,25	102	156	5	010200725
7,5	102	156	5	010200750
7,75	109	165	5	010200775
8	109	165	5	010200800
8,25	109	165	5	010200825
8,5	109	165	5	010200850
8,75	115	175	5	010200875
9	115	175	5	010200900
9,25	115	175	5	010200925
9,5	115	175	5	010200950
9,75	121	184	5	010200975
10	121	184	5	010201000
10,5	121	184	5	010201050
11	128	195	5	010201100
11,5	128	195	5	010201150
12	134	205	5	010201200
12,5	134	205	5	010201250
13	134	205	5	010201300
13,5	140	214	3	010201350
14	140	214	3	010201400
14,5	144	220	3	010201450
15	144	220	3	010201500
15,5	149	227	3	010201550
16	149	227	3	010201600
17	154	235	1	010201700
18	158	241	1	010201800
19	162	247	1	010201900
20	166	254	1	010202000

- Per forare: tutti i metalli, ferro, acciaio etc...
- *For drilling in: iron, steel, metals...*
- *Pour percer: fer, acier, métaux...*
- *Para taladrar: hierro, acero etc...*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 650 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe*



PUNTE ELICOIDALI CILINDRICHE SERIE EXTRA CORTA, ESECUZIONE RULLATA

Straight shank twist drills-stub serie / Forets cylindriques, série extra courte
Brocas helicoidales, serie extra corta / Rollgewalzte Spiralbohrer, extra kurz

HSS DIN 1897 Esecuzione Rullata

Rolled / Laminé / Laminada / Rollgewalzt

01018



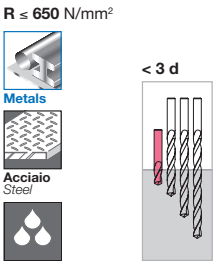


Art. **01019** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*



Ø	/	L	pcs	cod.
2	12	38	10	010180200
2,2	13	40	10	010180220
2,25	13	40	10	010180225
2,5	14	43	10	010180250
2,75	16	46	10	010180275
2,8	16	46	10	010180280
3	16	46	10	010180300
3,2	18	49	10	010180320
3,25	18	49	10	010180325
3,3	18	49	10	010180330
3,5	20	52	10	010180350
3,75	20	52	10	010180375
3,8	22	55	10	010180380
4	22	55	10	010180400
4,2	22	55	10	010180420
4,25	22	55	10	010180425
4,5	24	58	10	010180450
4,75	24	58	10	010180475
4,8	26	62	10	010180480
5	26	62	10	010180500
5,2	26	62	10	010180520
5,25	26	62	10	010180525
5,5	28	66	10	010180550
5,75	28	66	10	010180575
5,8	28	66	10	010180580
6	28	66	10	010180600
6,5	31	70	5	010180650
7	34	74	5	010180700
7,5	34	74	5	010180750
8	37	79	5	010180800
8,5	37	79	5	010180850
9	40	84	5	010180900
9,5	40	84	5	010180950
10	43	89	5	010181000





PUNTE ELICOIDALI SUPERCORTE PER LATTONIERI

Extra short twist drills for portable applications / Forets cylindriques série extra courte spécial
Brocas helicoidales, serie extra corta special / Spiralbohrer, spezial extra kurz

NORMA KRINO HSS-G Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen





HV ≃ 750÷820
SPLIT POINT
DIN 1412C

Ø	/	L	pcs	cod.
3	16	35	10	010500300
3,2	19	40	10	010500320
3,25	19	40	10	010500325
3,3	19	40	10	010500330
3,5	19	40	10	010500350
3,6	19	40	10	010500360
3,75	19	40	10	010500375
4	20	40	10	010500400
4,1	20	40	10	010500410
4,2	20	40	10	010500420
4,25	20	40	10	010500425
4,5	23	42	10	010500450
5	23	45	10	010500500

01050

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



- Punte speciali per lattonieri, carpentieri, coperturisti, fabbri, installatori. Foratura dolce e precisa, grazie all'affilatura split point autocentrante, su lamiere e tubi in acciaio, rame e plastica.
- *Super short twist drills for cutting metal sheets, special for journeymen's, carpenters, locksmith's, tinsmith's.*





PUNTE ELICOIDALI SUPERCORTE AL COBALTO PER LATTONIERI

HSS-CO extra short twist drills for portable applications / Forets extra court spécial au cobalt
Brocas helicoidales, serie extra corta de cobalto / Cobalt Spiralbohrer, spezial extra kurz

NORMA KRINO HSS-CO Rettificata

Ground from the solid / Rectifié / Rectificada / Geschliffen





HV ≃ 850
SPLIT POINT
DIN 1412C

Ø	/	L	pcs	cod.
3	16	35	10	010510300
3,25	19	40	10	010510325
3,5	19	40	10	010510350
3,75	19	40	10	010510375
4	20	40	10	010510400
4,25	20	40	10	010510425
4,5	23	42	10	010510450
5	23	45	10	010510500

01051

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 1200 N/mm²



- Punte speciali per la foratura di lamiere e tubi in acciaio inox e lamiere metalliche in genere (acciaio, ferro, rame). Speciali per lattonieri, carpentieri, coperturisti, fabbri, installatori.
- *Super short twist drills for cutting stainless metal sheets. Special for journeymen's, carpenters, locksmith's, tinsmith's.*





PUNTE ELICOIDALI CODOLO CONICO MORSE, ESECUZIONE RULLATA

Morse taper shank twist drills / Forets à queue conique morse
Brocas helicoidales con mango conico / Spiralbohrer mit Morsekegel

HSS DIN 345 Esecuzione Rullata

Rolled / Laminé / Laminada / Rollgewalzt

01025



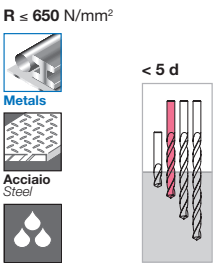




Confezione / *Packaging*



Applicazioni / *Applications*



Ø	M.K.	/	L	pcs	cod.
5	1	52	133	1	010250500
6	1	57	138	1	010250600
6,25	1	63	144	1	010250625
6,5	1	63	144	1	010250650
6,75	1	69	150	1	010250675
7	1	69	150	1	010250700
7,25	1	69	150	1	010250725
7,5	1	69	150	1	010250750
7,75	1	75	156	1	010250775
8	1	75	156	1	010250800
8,25	1	75	156	1	010250825
8,5	1	75	156	1	010250850
8,75	1	81	162	1	010250875
9	1	81	162	1	010250900
9,25	1	81	162	1	010250925
9,5	1	81	162	1	010250950
9,75	1	87	168	1	010250975
10	1	87	168	1	010251000
10,25	1	87	168	1	010251025
10,5	1	87	168	1	010251050
10,75	1	94	175	1	010251075
11	1	94	175	1	010251100
11,25	1	94	175	1	010251125
11,5	1	94	175	1	010251150
11,75	1	94	175	1	010251175
12	1	101	182	1	010251200
12,25	1	101	182	1	010251225
12,5	1	101	182	1	010251250
12,75	1	101	182	1	010251275
13	1	101	182	1	010251300
13,25	1	108	189	1	010251325
13,5	1	108	189	1	010251350
13,75	1	108	189	1	010251375
14	1	108	189	1	010251400
14,25	2	114	212	1	010251425
14,5	2	114	212	1	010251450
14,75	2	114	212	1	010251475
15	2	114	212	1	010251500
15,25	2	120	218	1	010251525
15,5	2	120	218	1	010251550
15,75	2	120	218	1	010251575
16	2	120	218	1	010251600
16,25	2	125	223	1	010251625
16,5	2	125	223	1	010251650
16,75	2	125	223	1	010251675
17	2	125	223	1	010251700
17,25	2	130	228	1	010251725
17,5	2	130	228	1	010251750
17,75	2	130	228	1	010251775
18	2	130	228	1	010251800
18,25	2	135	233	1	010251825
18,5	2	135	233	1	010251850
18,75	2	135	233	1	010251875
19	2	135	233	1	010251900
19,25	2	140	238	1	010251925
19,5	2	140	238	1	010251950
19,75	2	140	238	1	010251975
20	2	140	238	1	010252000
20,25	2	145	243	1	010252025
20,5	2	145	243	1	010252050
20,75	2	145	243	1	010252075
21	2	145	243	1	010252100
21,25	2	150	248	1	010252125
21,5	2	150	248	1	010252150
21,75	2	150	248	1	010252175
22	2	150	248	1	010252200
22,25	2	150	248	1	010252225
22,5	2	155	253	1	010252250
22,75	2	155	253	1	010252275
23	2	155	253	1	010252300
23,25	3	155	276	1	010252325
23,5	3	155	276	1	010252350
23,75	3	160	281	1	010252375
24	3	160	281	1	010252400
24,25	3	160	281	1	010252425
24,5	3	160	281	1	010252450
24,75	3	160	281	1	010252475

- Taglio dei materiali con R ≤ 650 N/mm² quali acciai legati, ghise tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 650 N/mm².*
- *Puor percer métaux et acier avec R ≤ 650 N/mm².*
- *Para taladrar hierro e acero R ≤ 650 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 650 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

Ø	M.K.	/	L	pcs	cod.
25	3	160	281	1	010252500
25,25	3	165	286	1	010252525
25,5	3	165	286	1	010252550
25,75	3	165	286	1	010252575
26	3	165	286	1	010252600
26,25	3	165	286	1	010252625
26,5	3	165	286	1	010252650
26,75	3	170	291	1	010252675
27	3	170	291	1	010252700
27,25	3	170	291	1	010252725
27,5	3	170	291	1	010252750
27,75	3	170	291	1	010252775
28	3	170	291	1	010252800
28,25	3	175	296	1	010252825
28,5	3	175	296	1	010252850
28,75	3	175	296	1	010252875
29	3	175	296	1	010252900
29,25	3	175	296	1	010252925
29,5	3	175	296	1	010252950
29,75	3	175	296	1	010252975
30	3	175	296	1	010253000
30,25	3	180	301	1	010253025
30,5	3	180	301	1	010253050
30,75	3	180	301	1	010253075
31	3	180	301	1	010253100
31,25	3	180	301	1	010253125
31,5	3	180	301	1	010253150
31,75	4	185	306	1	010253175
32	4	185	334	1	010253200
32,25	4	185	334	1	010253225
32,5	4	185	334	1	010253250
32,75	4	185	334	1	010253275
33	4	185	334	1	010253300
33,25	4	185	334	1	010253325
33,5	4	185	334	1	010253350
33,75	4	185	334	1	010253375
34	4	190	339	1	010253400
34,25	4	190	339	1	010253425
34,5	4	190	339	1	010253450
34,75	4	190	339	1	010253475
35	4	190	339	1	010253500
35,25	4	190	339	1	010253525
35,5	4	190	339	1	010253550
35,75	4	190	339	1	010253575
36	4	195	344	1	010253600
36,25	4	195	344	1	010253625
36,5	4	195	344	1	010253650
36,75	4	195	344	1	010253675
37	4	195	344	1	010253700
37,25	4	195	344	1	010253725
37,5	4	195	344	1	010253750
37,75	4	195	344	1	010253775
38	4	200	349	1	010253800
38,25	4	200	349	1	010253825
38,5	4	200	349	1	010253850
38,75	4	200	349	1	010253875
39	4	200	349	1	010253900
39,25	4	200	349	1	010253925
39,5	4	200	349	1	010253950
39,75	4	200	349	1	010253975
40	4	200	349	1	010254000
40,25	4	205	354	1	010254025
40,5	4	205	354	1	010254050
40,75	4	205	354	1	010254075
41	4	205	354	1	010254100
41,25	4	205	354	1	010254125
41,5	4	205	354	1	010254150
41,75	4	205	354	1	010254175
42	4	205	354	1	010254200
42,25	4	205	354	1	010254225
42,5	4	205	354	1	010254250
42,75	4	205	354	1	010254275
43	4	210	359	1	010254300
43,25	4	210	359	1	010254325
43,5	4	210	359	1	010254350
43,75	4	210	359	1	010254375

Ø	M.K.	/	L	pcs	cod.
44	4	210	359	1	010254400
44,25	4	210	359	1	010254425
44,5	4	210	359	1	010254450
44,75	4	210	359	1	010254475
45	4	210	359	1	010254500
45,25	4	215	364	1	010254525
45,5	4	215	364	1	010254550
45,75	4	215	364	1	010254575
46	4	215	364	1	010254600
46,25	4	215	364	1	010254625
46,5	4	215	364	1	010254650
46,75	4	215	364	1	010254675
47	4	215	364	1	010254700
47,25	4	215	364	1	010254725
47,5	4	215	364	1	010254750
47,75	4	215	364	1	010254775
48	4	220	369	1	010254800
48,25	4	220	369	1	010254825
48,5	4	220	369	1	010254850
48,75	4	220	369	1	010254875
49	4	220	369	1	010254900
49,25	4	220	369	1	010254925
49,5	4	220	369	1	010254950
49,75	4	220	369	1	010254975
50	4	220	369	1	010255000
50,5	4	225	374	1	010255050
51	5	225	412	1	010255100
52	5	225	412	1	010255200
53	5	225	412	1	010255300
54	5	230	417	1	010255400
55	5	230	417	1	010255500
56	5	230	417	1	010255600
57	5	235	422	1	010255700
58	5	235	422	1	010255800
59	5	235	422	1	010255900
60	5	235	422	1	010256000
61	5	240	427	1	010256100
62	5	240	427	1	010256200
63	5	240	427	1	010256300
64	5	245	432	1	010256400
65	5	245	432	1	010256500
66	5	245	432	1	010256600
67	5	245	432	1	010256700
68	5	250	437	1	010256800
69	5	250	437	1	010256900
70	5	250	437	1	010257000
71	5	250	437	1	010257100
72	5	255	442	1	010257200
73	5	255	442	1	010257300
74	5	255	442	1	010257400
75	5	255	442	1	010257500
76	6	260	447	1	010257600
77	6	260	514	1	010257700
78	6	260	514	1	010257800
79	6	260	514	1	010257900
80	6	260	514	1	010258000
81	6	265	519	1	010258100
82	6	265	519	1	010258200
83	6	265	519	1	010258300
84	6	265	519	1	010258400
85	6	265	519	1	010258500
86	6	270	524	1	010258600
87	6	270	524	1	010258700
88	6	270	524	1	010258800
89	6	270	524	1	010258900
90	6	270	524	1	010259000
91	6	275	529	1	010259100
92	6	275	529	1	010259200
93	6	275	529	1	010259300
94	6	275	529	1	010259400
95	6	275	529	1	010259500
96	6	280	534	1	010259600
97	6	280	534	1	010259700
98	6	280	534	1	010259800
99	6	280	534	1	010259900
100	6	280	534	1	0102510000

ASSORTIMENTI PUNTE HSS RULLATE IN ASTUCCI DI METALLO DI QUALITÀ

HSS rolled twist drills in high quality metal cases / Forets HSS laminés en coffret métallique
Surtido de brocas laminada en caja metalica / Rollgewalzte Spiralbohrersätze in Metallkassetten

HSS-DIN 338

Metal



19 pcs
Ø 1÷10 x 0,5 mm
01016401



25 pcs
Ø 1÷13 x 0,5 mm
01016402



19 fori - holes
Ø 1÷10 x 0,5 mm
01016401V



25 fori - holes
Ø 1÷13 x 0,5 mm
01016402V



19 pcs
Ø 1÷10 x 0,5 mm
01016405



25 pcs
Ø 1÷13 x 0,5 mm
01016406



19 fori - holes
Ø 1÷10 x 0,5 mm
01016405V



25 fori - holes
Ø 1÷13 x 0,5 mm
01016406V



37 pcs
Ø 1÷10 x 0,25 mm
01016411



49 pcs
Ø 1÷13 x 0,25 mm
01016412



37 fori - holes
Ø 1÷10 x 0,25 mm
01016411V



49 fori - holes
Ø 1÷13 x 0,25 mm
01016412V



51 pcs
Ø 1÷6 x 0,1 mm
01016407



41 pcs
Ø 6÷10 x 0,1 mm
01016408

91 pcs
Ø 1÷10 x 0,1 mm
01016410

ASSORTIMENTI PUNTE HSS RULLATE

HSS rolled twist drills sets / Assortiments forets HSS laminés
Juegos brocas helicoidales en HSS laminadas / Rollgewalzte Spiralbohrersätze

HSS-DIN 338

Abs



19 pcs
Ø 1÷10 x 0,5 mm

01016305

Abs



25 pcs
Ø 1÷13 x 0,5 mm

01016306



10 pcs
Ø 1÷10 x 1 mm

01016201

13 pcs
Ø 2 ÷ 8 x 0,5 mm

01016205

19 pcs
Ø 1÷10 x 0,5 mm

01016206



6 pcs Ø 2 ÷ 8 mm
Ø 2 - 3 - 4 - 5 - 6 - 8

01016204

13 pcs Ø 1,5 ÷ 6,5 mm
Ø 1,5 - 2 - 2,5 - 3 - 3,3 - 3,5
4 - 4,2 - 4,5 - 5 - 5,5 - 6 - 6,5

01016203

7 pcs Ø 1,5 ÷ 6 mm
Ø 1,5 - 2 - 3 - 4 - 5 - 5,5 - 6

01016202



19 pcs Ø 1÷10 x 0,5 mm

01016250

25 pcs Ø 1÷13 x 0,5 mm

01016251



8 pcs
4 pcs Ø 4 - 5 - 6 - 8
4 pcs Ø 4 - 5 - 6 - 8

09010230



9 pcs
5 pcs Ø 3 - 4 - 5 - 6 - 8
4 pcs Ø 4 - 5 - 6 - 8

09010231



9 pcs
3 pcs Ø 4 - 6 - 8
3 pcs Ø 4 - 6 - 8
3 pcs Ø 4 - 6 - 8

09010232



91 pcs
Ø 1÷10 x 0,1 mm

01016220



19 pcs HSS
Ø 1÷10 x 0,5 mm

01016101



19 pcs HSS + W
13 pcs Ø 1-1,5-2-2,5-3-3,5 4-4,5-5-5,5-6-8-10
6 pcs Ø 4-5-6-8-9-10

09001102



18 pcs
6 pcs Ø 3 - 4 - 5 - 6 - 8 - 10
6 pcs Ø 3 - 4 - 5 - 6 - 8 - 10
6 pcs Ø 3 - 4 - 5 - 6 - 8 - 10

09005105



19 pcs HSS + W + BITS
HSS Ø 2 - 3 - 4 - 5 - 6 - 8 - 10
W Ø 4 - 5 - 6 - 8 - 10
BITS Ø 4,5 - 6 - 1 - 2 Pz1 Pz2
Porta inserti magnetico *magnetic holder* 1Pc

09001107

ESPOSITORE DA BANCO-MAGAZZENO PUNTE TRAPANO HSS RULLATE

HSS rolled twist drills display / Display forets HSS laminés
Expositor de brocas HSS laminada / Verkaufsschränke für Spiralbohrer

HSS-DIN 338



Metal 330x240x55

150 pcs
Ø 1÷10 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	6	5
1,5	10	6,5	5
2	10	7	5
2,5	10	7,5	5
3	20	8	5
3,5	10	8,5	5
4	10	9	5
4,5	10	9,5	5
5	10	10	5
5,5	5		

01016450



Metal 550x310x55

168 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	10	7,5	5
1,5	10	8	5
2	10	8,5	5
2,5	10	9	5
3	20	9,5	5
3,5	10	10	5
4	10	10,5	3
4,5	10	11	3
5	10	11,5	3
5,5	5	12	3
6	5	12,5	3
6,5	5	13	3
7	5		

01016451

HSS-DIN 338



Plastic 400x345x210

610 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs
1	30	7,5	5
1,5	50	8	10
2	50	8,5	5
2,5	50	9	5
3	100	9,5	5
3,5	50	10	10
4	100	10,5	5
4,5	30	11	5
5	30	11,5	5
5,5	10	12	5
6	20	12,5	5
6,5	10	13	5
7	10		

01016510



Plastic 390x460x230

1.100 pcs
Ø 1÷13 x 0,25 mm

Ø	pcs	Ø	pcs
1	50	7,25	5
1,25	10	7,5	30
1,5	50	7,75	3
1,75	10	8	30
2	50	8,25	3
2,25	10	8,5	20
2,5	100	8,75	3
2,75	20	9	20
3	100	9,25	2
3,25	20	9,5	20
3,5	100	9,75	2
3,75	20	10	10
4	100	10,25	2
4,25	10	10,5	5
4,5	50	10,75	2
4,75	10	11	5
5	50	11,25	2
5,25	10	11,5	5
5,5	30	11,75	2
5,75	10	12	5
6	30	12,25	2
6,25	10	12,5	5
6,5	30	12,75	2
6,75	10	13	5
7	30		

01016507



Metal 375x240x200

880 pcs
Ø 1÷13 x 0,5 mm

Ø	pcs	Ø	pcs	Ø	pcs
1	50	5,5	10	10	10
1,5	100	6	20	10,5	5
2	100	6,5	10	11	5
2,5	100	7	10	11,5	5
3	150	7,5	5	12	5
3,5	100	8	10	12,5	5
4	100	8,5	5	13	5
4,5	30	9	5		
5	30	9,5	5		

01016501

710 pcs *COMBI SET*
HSS DIN 8039

Ø	pcs	Ø	pcs	Ø	pcs
1	50	6	20	3	5
1,5	50	6,5	10	4	10
2	50	7	10	5	5
2,5	50	8	10	6	5
3	100	9	10	7	5
3,5	50	10	10	8	10
4	100	11	5	9	5
4,5	30	12	5	10	5
5	20	13	5	12	5
5,5	20			14	5

09020502

PUNTE ELICOIDALI CILINDRICHE CON RIVESTIMENTO AL NITRURO DI TITANIO

TiN coated twist drills / Forets cylindriques au nitrure de titan
Brocas helicoidales con recubrimiento de titanio / TiN Geschliffene Spiralbohrer aus Zoll

POLLICI / **INCHES** / POUCE / PULGADA / ZOLL

HSS-G+TiN ANSI B94 Rettificata */ Ground from the solid / Rectifié / Rectificada / Geschliffen*

01162

INCHES





HV 0,05 ≈ 2500
SPLIT POINT
DIN 1412 C

Rivestimento TiN
TiN coating



Ø inch	Ø mm	/ inch	L inch	pcs	cod.
1/16	1,59	7/8	1-7/8	10	0116214
5/64	1,98	1"	2"	10	0116215
3/32	2,38	1-1/4	2-1/4	10	0116216
7/64	2,78	1-1/2	2-5/8	10	0116217
1/8	3,17	1-5/8	2-3/4	10	0116218
9/64	3,57	1-3/4	2-7/8	10	0116219
5/32	3,97	2"	3-1/8	10	0116220
11/64	4,37	2-1/8	3-1/4	10	0116221
3/16	4,76	2-5/16	3-1/2	10	0116222
13/64	5,16	2-7/16	3-5/8	10	0116223
7/32	5,56	2-1/2	3-3/4	10	0116224
15/64	5,95	2-5/8	3-7/8	10	0116225
1/4	6,35	2-3/4	4"	10	0116226
17/64	6,75	2-7/8	4-1/8	10	0116227
9/32	7,14	2-15/16	4-1/4	5	0116228
19/64	7,54	3-1/16	4-3/8	5	0116229
5/16	7,94	3-3/16	4-1/2	5	0116230
21/64	8,33	3-5/16	4-5/8	5	0116231
11/32	8,73	3-7/16	4-3/4	5	0116232
23/64	9,13	3-1/2	4-7/8	5	0116233
3/8	9,52	3-5/8	5"	5	0116234
25/64	9,92	3-3/4	5-1/8	5	0116235
13/32	10,32	3-7/8	5-1/4	5	0116236
27/64	10,72	3-15/16	5-3/8	5	0116237
7/16	11,11	4-1/16	5-1/2	5	0116238
29/64	11,51	4-3/16	5-5/8	5	0116239
15/32	11,91	4-5/16	5-3/4	5	0116240
31/64	12,30	4-7/16	5-7/8	5	0116241
1/2	12,70	4-1/2	6"	5	0116242

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 900 N/mm²



Acciaio
Steel



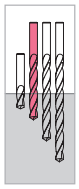
Inox



Metals



< 5 d



- Rendimenti elevati e maggiore durata dei taglienti nella foratura degli acciai legati, nelle ghise e nei metalli in genere con R ≤ 900 N/mm².
- *High level of performances in cutting alloy steel, cast iron, metals up to R ≤ 900 N/mm².*
- *Pour percer mètaux et acier allié avec R ≤ 900 N/mm².*
- *Para taladrar acero aleado con elevada velocidad de corte R ≤ 900 N/mm².*



Abs

21 pcs
Ø 1/16÷3/8 x 1/64

01167401



Abs

29 pcs
Ø 1/16÷1/2 x 1/64

01167402

PUNTE ELICOIDALI IN POLLICI AL COBALTO 5%, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE CORTA

Cobalt twist drills ground from the solid in inches / Forets cylindriques au cobalt entièrement rectifiés en pouce
Broca helicoidale rectificada de cobalto in pulgada / Kobalt Spiralbohrer aus Zoll

POLLICI / **INCHES** / POUCE / PULGADA / ZOLL

HSS-CO 5% ANSI B94 Rettificata */ Ground from the solid / Rectifié / Rectificada / Geschliffen*

01157





HV ≃ 800÷860
AISI M35
SPLIT POINT
DIN 1412 C

Ø inch	Ø mm	/ inch	L inch	pcs	cod.
1/16	1,59	7/8	1-7/8	10	0115714
5/64	1,98	1"	2"	10	0115715
3/32	2,38	1-1/4	2-1/4	10	0115716
7/64	2,78	1-1/2	2-5/8	10	0115717
1/8	3,17	1-5/8	2-3/4	10	0115718
9/64	3,57	1-3/4	2-7/8	10	0115719
5/32	3,97	2"	3-1/8	10	0115720
11/64	4,37	2-1/8	3-1/4	10	0115721
3/16	4,76	2-5/16	3-1/2	10	0115722
13/64	5,16	2-7/16	3-5/8	10	0115723
7/32	5,56	2-1/2	3-3/4	10	0115724
15/64	5,95	2-5/8	3-7/8	10	0115725
1/4	6,35	2-3/4	4"	10	0115726
17/64	6,75	2-7/8	4-1/8	10	0115727
9/32	7,14	2-15/16	4-1/4	5	0115728
19/64	7,54	3-1/16	4-3/8	5	0115729
5/16	7,94	3-3/16	4-1/2	5	0115730
21/64	8,33	3-5/16	4-5/8	5	0115731
11/32	8,73	3-7/16	4-3/4	5	0115732
23/64	9,13	3-1/2	4-7/8	5	0115733
3/8	9,52	3-5/8	5"	5	0115734
25/64	9,92	3-3/4	5-1/8	5	0115735
13/32	10,32	3-7/8	5-1/4	5	0115736
27/64	10,72	3-15/16	5-3/8	5	0115737
7/16	11,11	4-1/16	5-1/2	5	0115738
29/64	11,51	4-3/16	5-5/8	5	0115739
15/32	11,91	4-5/16	5-3/4	5	0115740
31/64	12,30	4-7/16	5-7/8	5	0115741
1/2	12,70	4-1/2	6"	5	0115742

Confezione / *Packaging*

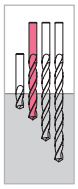


Applicazioni / *Applications*

R ≤ 1200 N/mm²



< 5 d



- Punte con ottima resistenza alle sollecitazioni termiche, adatte per forare acciai legati e non con R sino a 1200 N/mm², in modo particolare acciai da bonifica, acciai per lavorazioni a caldo e a freddo, acciai inossidabili, ghisa etc.
- *High performance in cutting alloy steel, cast iron, stainless steel and metals up to R ≤ 1200 N/mm².*
- *Pour percer l'acier allié, la fonte, l'acier inox avec R ≤ 1200 N/mm².*
- *Para taladar acero aleado, acero inox, fundicion R ≤ 1200 N/mm².*
- *Einsatz in legierte Stahl bis R ≤ 1200 N/mm² Zug-Festigkeit, Korrosionsbeständige Stähle, Grauguss und Stahlguss.*

ASSORTIMENTI PUNTE AL COBALTO IN POLLICI

HSS-CO fully ground twist drills sets in inches / Assortiments forets HSS-CO rectifié en pouce
Expositor de brocas de cobalto rectificadas in pulgada / HSS-CO geschliffene Spiralbohrersätze aus Zoll

INCHES

HSS-CO 5%

Abs



21 pcs
Ø 1/16÷3/8 x 1/64

01159401

Abs



29 pcs
Ø 1/16÷1/2 x 1/64

01159402



Metal 330x240x55

122 pcs
Ø 1/16÷3/8 x 1/64

Ø	pcs	Ø	pcs
1/16	10	15/64	3
5/64	10	1/4	3
3/32	10	17/64	3
7/64	10	9/32	3
1/8	10	19/64	3
9/64	10	5/16	3
5/32	10	21/64	2
11/64	10	11/32	2
3/16	3	23/64	2
13/64	3	3/8	2
7/32	3		

01159450



Metal 375x240x200

168 pcs
Ø 1/16÷1/2 x 1/64

Ø	pcs	Ø	pcs
1/16	10	19/64	3
5/64	10	5/16	3
3/32	10	21/64	3
7/64	10	11/32	3
1/8	10	23/64	3
9/64	10	3/8	3
5/32	10	25/64	2
11/64	10	13/32	2
3/16	3	27/64	2
13/64	3	7/16	2
7/32	3	29/64	2
15/64	3	15/32	2
1/4	3	31/64	2
17/64	3	1/2	2
9/32	3		

01159501

PUNTE ELICOIDALI CILINDRICHE IN POLLICI, ESECUZIONE INTERAMENTE RETTIFICATA, SERIE CORTA, FINITURA BRILLANTE

Fully ground straight shank twist drills in inches / Forets cylindriques rectifiés en pouce
Brocas helicoidales rectificadas in pulgada / Geschliffene Spiralbohrer aus Zoll

POLLICI / **INCHES** / POUCE / PULGADA / ZOLL

HSS-G ANSI B94 Rettificata */ Ground from the solid / Rectifié / Rectificada / Geschliffen*

01115





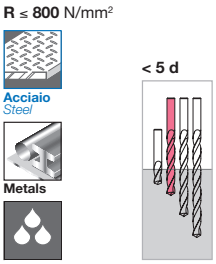
Bright finish

Ø inch	Ø mm	/ inch	L inch	pcs	cod.
1/16	1,59	7/8	1-7/8	10	0111514
5/64	1,98	1"	2"	10	0111515
3/32	2,38	1-1/4	2-1/4	10	0111516
7/64	2,78	1-1/2	2-5/8	10	0111517
1/8	3,17	1-5/8	2-3/4	10	0111518
9/64	3,57	1-3/4	2-7/8	10	0111519
5/32	3,97	2"	3-1/8	10	0111520
11/64	4,37	2-1/8	3-1/4	10	0111521
3/16	4,76	2-5/16	3-1/2	10	0111522
13/64	5,16	2-7/16	3-5/8	10	0111523
7/32	5,56	2-1/2	3-3/4	10	0111524
15/64	5,95	2-5/8	3-7/8	10	0111525
1/4	6,35	2-3/4	4"	10	0111526
17/64	6,75	2-7/8	4-1/8	10	0111527
9/32	7,14	2-15/16	4-1/4	5	0111528
19/64	7,54	3-1/16	4-3/8	5	0111529
5/16	7,94	3-3/16	4-1/2	5	0111530
21/64	8,33	3-5/16	4-5/8	5	0111531
11/32	8,73	3-7/16	4-3/4	5	0111532
23/64	9,13	3-1/2	4-7/8	5	0111533
3/8	9,52	3-5/8	5"	5	0111534
25/64	9,92	3-3/4	5-1/8	5	0111535
13/32	10,32	3-7/8	5-1/4	5	0111536
27/64	10,72	3-15/16	5-3/8	5	0111537
7/16	11,11	4-1/16	5-1/2	5	0111538
29/64	11,51	4-3/16	5-5/8	5	0111539
15/32	11,91	4-5/16	5-3/4	5	0111540
31/64	12,30	4-7/16	5-7/8	5	0111541
1/2	12,70	4-1/2	6"	5	0111542

Confezione / *Packaging*



Applicazioni / *Applications*



- Taglio dei materiali con R ≤ 800 N/mm² quali acciai legati, ghise tutti i metalli in genere, la grafite. Precisione di foratura e costanza di rendimenti elevati.
- *High precision and high performances in cutting alloy steel up to R ≤ 800 N/mm².*
- *Puor percer métaux et acier avec R ≤ 800 N/mm².*
- *Para taladrar hierro e acero R ≤ 800 N/mm².*
- *Einsatz in Stahl und Stahlguss, legiert und unlegiert bis R ≤ 800 N/mm² Zug-Festigkeit, Ne-Metalle, Kunststoffe.*

ASSORTIMENTI PUNTE HSS RETTIFICATE IN POLLICI

HSS fully ground twist drills sets in inches / Assortiments forets HSS rectifiés en pouce
Expositor de brocas HSS rectificadas in pulgada / Geschliffene HSS Spiralbohrersätze aus Zoll

INCHES

HSS-G

Abs



21 pcs
Ø 1/16÷3/8 x 1/64

01118401

Abs



29 pcs
Ø 1/16÷1/2 x 1/64

01118402



Metal 330x240x55

150 pcs
Ø 1/16÷3/8 x 1/64

Ø	pcs	Ø	pcs
1/16	10	15/64	5
5/64	10	1/4	5
3/32	10	17/64	5
7/64	10	9/32	5
1/8	10	19/64	5
9/64	10	5/16	5
5/32	10	21/64	5
11/64	10	11/32	5
3/16	10	23/64	5
13/64	5	3/8	5
7/32	5		

01118450



Metal 375x240x200

540 pcs
Ø 1/16÷1/2 x 1/64

Ø	pcs	Ø	pcs
1/16	50	19/64	5
5/64	50	5/16	10
3/32	50	21/64	5
7/64	50	11/32	5
1/8	50	23/64	5
9/64	50	3/8	10
5/32	50	25/64	5
11/64	30	13/32	5
3/16	30	27/64	5
13/64	10	7/16	5
7/32	10	29/64	5
15/64	10	15/32	5
1/4	10	31/64	5
17/64	5	1/2	5
9/32	5		

01118501

PUNTE HSS RULLATE IN POLLICI

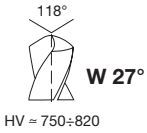
HSS roll-forged straight shank twist drills-jobber's length / Forets cylindriques laminés en HSS en Pouce
Broca helicoidale laminada HSS in pulgada / HSS rollgewalzt Spiralbohrer aus Zoll

POLLICI / **INCHES** / POUCE / PULGADA / ZOLL

HSS ANSI B94 Esecuzione rullata */ Rolled / Laminé / Laminada / Rollgewalzt*

01030



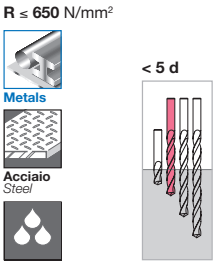


Ø inch	Ø mm	/ inch	L inch	pcs	cod.
1/64	0,40	13/64	7/8	10	0103011
1/32	0,79	13/32	1-1/4	10	0103012
3/64	1,19	5/8	1-3/4	10	0103013
1/16	1,59	7/8	1-7/8	10	0103014
5/64	1,98	1"	2"	10	0103015
3/32	2,38	1-1/4	2-1/4	10	0103016
7/64	2,78	1-1/2	2-5/8	10	0103017
1/8	3,17	1-5/8	2-3/4	10	0103018
9/64	3,57	1-3/4	2-7/8	10	0103019
5/32	3,97	2"	3-1/8	10	0103020
11/64	4,37	2-1/8	3-1/4	10	0103021
3/16	4,76	2-5/16	3-1/2	10	0103022
13/64	5,16	2-7/16	3-5/8	10	0103023
7/32	5,56	2-1/2	3-3/4	10	0103024
15/64	5,95	2-5/8	3-7/8	10	0103025
1/4	6,35	2-3/4	4"	10	0103026
17/64	6,75	2-7/8	4-1/8	10	0103027
9/32	7,14	2-15/16	4-1/4	5	0103028
19/64	7,54	3-1/16	4-3/8	5	0103029
5/16	7,94	3-3/16	4-1/2	5	0103030
21/64	8,33	3-5/16	4-5/8	5	0103031
11/32	8,73	3-7/16	4-3/4	5	0103032
23/64	9,13	3-1/2	4-7/8	5	0103033
3/8	9,52	3-5/8	5"	5	0103034
25/64	9,92	3-3/4	5-1/8	5	0103035
13/32	10,32	3-7/8	5-1/4	5	0103036
27/64	10,72	3-15/16	5-3/8	5	0103037
7/16	11,11	4-1/16	5-1/2	5	0103038
29/64	11,51	4-3/16	5-5/8	5	0103039
15/32	11,91	4-5/16	5-3/4	5	0103040
31/64	12,30	4-7/16	5-7/8	5	0103041
1/2	12,70	4-1/2	6"	5	0103042
33/64	13,00	4-13/16	6-5/8	5	0103043
17/32	13,50	4-13/16	6-5/8	3	0103044
35/64	14,00	4-13/16	6-5/8	3	0103045
9/16	14,30	4-13/16	6-5/8	3	0103046
37/64	14,70	4-13/16	6-5/8	3	0103047
19/32	15,00	5-3/16	7-1/8	3	0103048
39/64	15,50	5-3/16	7-1/8	3	0103049
5/8	16,00	5-3/16	7-1/8	3	0103050
11/16	17,50	5-3/16	7-1/8	1	0103054
3/4	19,00	5-5/16	7-3/8	1	0103058

Confezione / *Packaging*



Applicazioni / *Applications*



- Per forare: tutti i metalli, ferro, acciaio etc...
- *For drilling in: iron, steel, metals...*
- *Pour percer: fer, acier, metaux...*
- *Para taladrar: hierro, acero...*
- *Einsatz: Stahl und Stahlguss, Zug-Festigkeit Ne-Metalle*

PUNTE HSS RULLATE IN POLLICI CON CODOLO RIDOTTO

Reduced shank HSS roll-forged straight shank twist drills-jobber's length / Forets cylindriques laminés en HSS en Pouce avec queue degageé
Broca helicoidale laminada HSS in pulgada con mango reducido / HSS rollgewalzt Spiralbohrer aus Zoll mit reduzierten Schaft

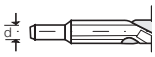
SILVER&DEMING HSS ANSI B94 Esecuzione fresata

Milled / Fraisé / fresada / Gefräst

01034

INCHES





Ø inch	Ø mm	d	/ inch	L inch	pcs	cod.
17/32	13,50	1/2"	3-1/8	6"	1	0103402
9/16	14,30	1/2"	3-1/8	6"	1	0103404
19/32	15,00	1/2"	3-1/8	6"	1	0103406
5/8	16,00	1/2"	3-1/8	6"	1	0103408
21/32	16,70	1/2"	3-1/8	6"	1	0103410
11/16	17,50	1/2"	3-1/8	6"	1	0103412
23/32	18,25	1/2"	3-1/8	6"	1	0103414
3/4	19,00	1/2"	3-1/8	6"	1	0103416
25/32	20,00	1/2"	3-1/8	6"	1	0103418
13/16	20,50	1/2"	3-1/8	6"	1	0103420
27/32	21,50	1/2"	3-1/8	6"	1	0103422
7/8	22,25	1/2"	3-1/8	6"	1	0103424
29/32	23,00	1/2"	3-1/8	6"	1	0103426
15/16	24,00	1/2"	3-1/8	6"	1	0103428
31/32	24,50	1/2"	3-1/8	6"	1	0103430
1"	25,40	1/2"	3-1/8	6"	1	0103432
1.3/32	27,75	1/2"	3-1/8	6"	1	0103438
1.1/8	28,50	1/2"	3-1/8	6"	1	0103440
1.1/4	31,75	1/2"	3-1/8	6"	1	0103448
1.3/8	35,00	1/2"	3-1/8	6"	1	0103456
1.1/2	38,00	1/2"	3-1/8	6"	1	0103464

Confezione / *Packaging*

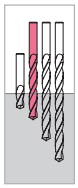


Applicazioni / *Applications*

R ≤ 650 N/mm²



< 5 d



- Per forare: tutti i metalli, ferro, acciaio etc...
- *For drilling in: iron, steel, metals...*
- *Pour percer: fer, acier, metaux...*
- *Para taladrar: hierro, acero...*
- *Einsatz: Stahl und Stahlguss, Zug-Festigkeit Ne-Metalle*

ASSORTIMENTI PUNTE HSS RULLATE IN POLLICI

HSS rolled twist drills sets in inches / Assortiments forets HSS laminés en pouce
Juego brocas HSS laminadas in pulgada / Rollgewaltze Spiralbohrersätze aus Zoll

POLLICI / **INCHES** / POUCE / PULGADA / ZOLL

HSS

Abs



21 pcs
Ø 1/16÷3/8 x 1/64

01040401

Abs



29 pcs
Ø 1/16÷1/2 x 1/64

01040402

Plastic



21 pcs
Ø 1/16÷3/8 x 1/64

01040101



18 pcs
13 pcs Ø 1/16 - 5/64 - 3/32 - 7/64 - 1/8 - 5/32
11/64 - 3/16 - 7/32 - 1/4(2x) - 5/16 - 3/8
5 pcs Ø 1/8 - 3/16 - 1/4 - 5/16 - 3/8

09001106

Plastic



7 pcs
Ø 1/16 - 3/32 - 1/8 - 5/32 - 3/16
7/32 - 1/4

01040201



13 pcs
Ø 1/16 - 5/64 - 3/32 - 7/64 - 1/8
9/64 - 5/32 - 11/64 - 3/16 - 13/64
7/32 - 15/64 - 1/4

01040202



21 pcs
Ø 1/16 ÷ 3/8 x 1/64

01040203

ASSORTIMENTI PUNTE HSS RULLATE IN POLLICI IN VALIGETTA DI METALLO

HSS twist drills set in inches / Assortiments forets HSS en pouce
Expositor de brocas HSS laminada in pulgada / Spiralbohrersätze aus Zoll

INCHES

HSS



Metal 330x240x55

150 pcs
Ø 1/16÷3/8 x 1/64

Ø	pcs	Ø	pcs
1/16	10	15/64	5
5/64	10	1/4	5
3/32	10	17/64	5
7/64	10	9/32	5
1/8	10	19/64	5
9/64	10	5/16	5
5/32	10	21/64	5
11/64	10	11/32	5
3/16	10	23/64	5
13/64	5	3/8	5
7/32	5		

01040450

ASSORTIMENTI PUNTE HSS RULLATE IN POLLICI

HSS twist drills in inches in metal display / Assortiments forets HSS en Pouce
Expositor de brocas HSS laminada in pulgada / Verkaufsschränke für Spiralbohrer aus Zoll

HSS

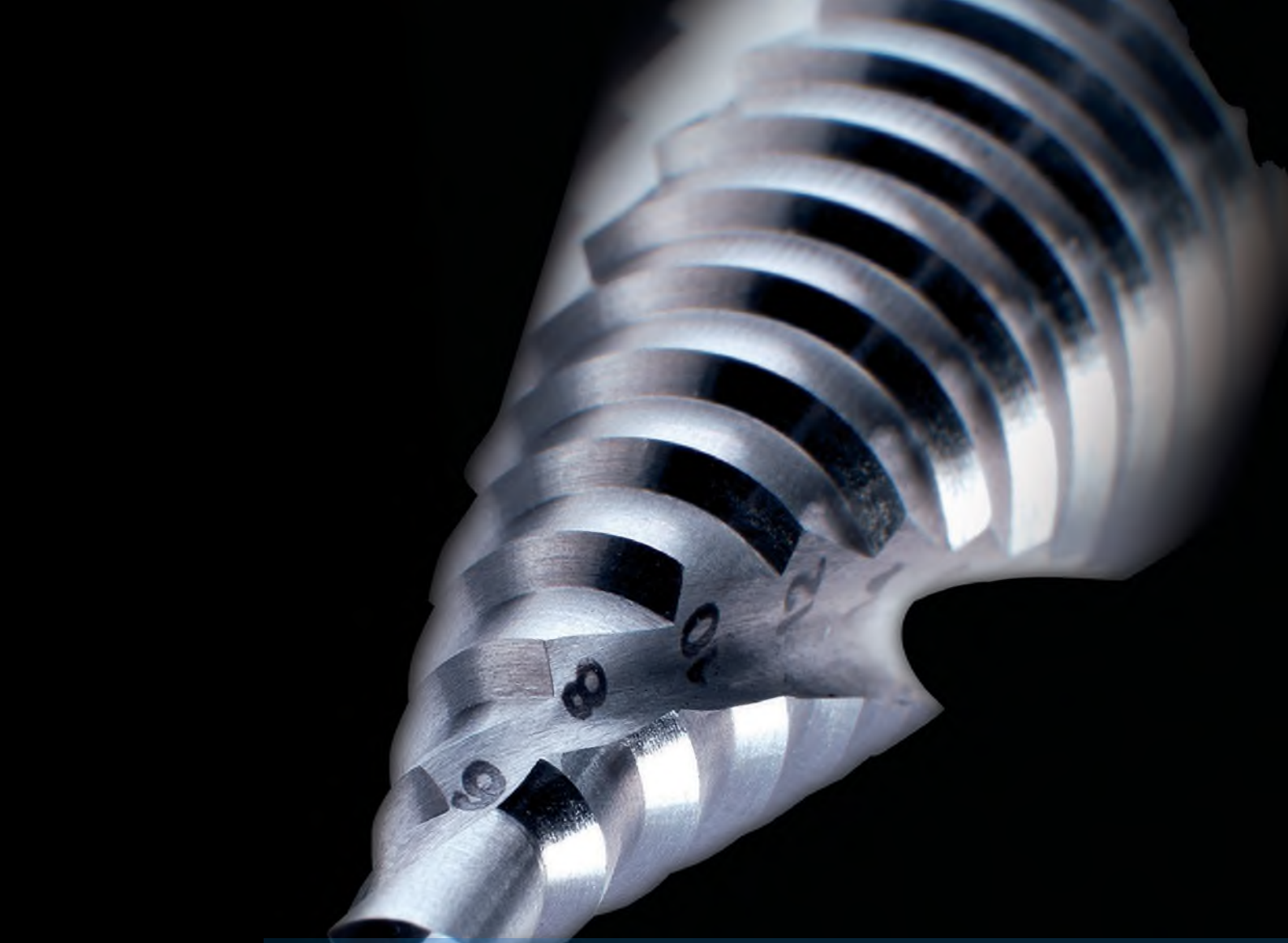


Metal 375x240x200

920 pcs
Ø 1/16÷1/2 x 1/64

Ø	pcs	Ø	pcs
1/16	50	19/64	5
5/64	50	5/16	10
3/32	50	21/64	5
7/64	100	11/32	5
1/8	150	23/64	5
9/64	100	3/8	10
5/32	150	25/64	5
11/64	30	13/32	5
3/16	50	27/64	5
13/64	20	7/16	5
7/32	30	29/64	5
15/64	10	15/32	5
1/4	30	31/64	5
17/64	10	1/2	5
9/32	10		

01040501



UTENSILI PER TAGLIO LAMIERE METALLICHE

Conical drill bits, hole cutters and hole saws
Forets coniques, fraises et scies trépans
Brocas conicas, fresas y coronas perforadoras
Blechschälbohrer und Lochsägen

HSS

METALLO DURO
CARBIDE

CUTTING TOOLS ENGINEERING

The processing of metal sheet and all thin materials is becoming increasingly important to industrial and professional users alike. Furthermore, stainless steel is now used for the vast majority of mechanical assemblies. As a result, Krino's range of tools for cutting sheet metal and all related processes has evolved in line with new cutting requirements, the use of highspeed cobalt steel and Titanium and Titanium-Alluminium new coatings suggested with high performances with very hard materials. Is now also available a new section of Spot drills with TiN coating too. We recommend to see the section technical Tables at the end of this catalogue.

Le travail de la tôle et de tous les matériaux de fin épaisseur en général prend de plus en plus d'importance dans toutes les activités professionnelles et dans l'industrie, l'acier inoxydable est désormais présent dans la plupart des constructions mécaniques. Par conséquent, la gamme de nos outils de coupe de la tôle et de tous les Travaux connexes a évolué au niveau de la géométrie de la coupe, de l'utilisation d'aciers super rapides au cobalt et des nouveaux revêtements au nitrure de Titane et au nitrure de Titane – Aluminium, indiqués pour le perçage des matériaux très durs avec des performances optimales. Une famille complète de fraises pour points de soudure est maintenant disponibles en version revêtue au Titan. Nous recommandons de consulter les tableaux techniques au fond de ce catalogue.

La elaboración de la chapa y en general de todos los materiales de espesor sutil va adquiriendo siempre más importancia en todas las actividades profesionales y en la industria; el acero inoxydable, ademàs, ya està presente en gran parte de la construcciones mecànicas. Por lo tanto, la gama de nuestras herramientas de corte de la chapa y de todas las elaboraciones conectadas se ha desarrollada en las nuevas geometrias de corte, en el uso de aceros superràpidos al cobalto y en los nuevos revestimientos al Titanio y al Titanio –Aluminio para el corte de materiales muy duros con optimo rendimiento. Ahora una famílla completa de fresas para puntos de solduras es disponibles con recubrimiento de Titanio también. Recomendamos la consultación de los prospectos tecnico al fondo de este catálogo.

La lavorazione della lamiera e di tutti i materiali in genere a spessore sottile assume sempre più importanza in tutte le attività professionali e nell'industria; l'acciaio inossidabile, inoltre, è presente in gran parte delle costruzioni meccaniche. Pertanto, la gamma dei nostri utensili per il taglio della lamiera e di tutte le lavorazioni connesse è evoluta nelle nuove geometrie di taglio, nell'impiego di acciai superrapidi al cobalto e nei rivestimenti al nitruro di titanio e al nitruro di titanio-alluminio, particolarmente adatti al taglio dei materiali molto duri, con ottimi rendimenti. Sono anche disponibili le famiglie complete delle punte-frese per rimuovere punti di saldatura, anche nelle esecuzioni con rivestimento al TiN. Si consiglia vivamente di seguire tutte le istruzioni indicate nel capitolo e nelle tabelle tecniche riportate in fondo al catalogo.

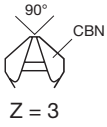
FRESE AD INCASSARE E SVASARE A 3 TAGLI

Deburring tools with 3 flutes / Fraise conique à ébavurer avec 3 coupes / Fresas de avellanar con 3 cortes / Kegelsenker mit 3 Schneiden

01185 01260





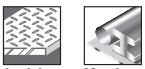


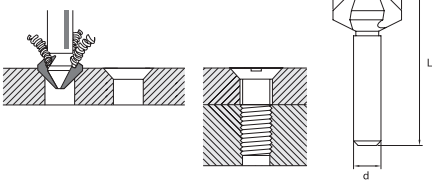
Z = 3

443

HSS **HSS+TiN**

Applicazioni / *Applications*





DIN 335/C-90°

Ø mm	d	L	Per viti / *For screws* DIN 74 AF	DIN 74 BF	01185 HSS cod.	01260 HSS+TiN cod.
4,3	4	40			011850430	012600430
5	4	40	M 2,5		011850500	012600500
5,3	4	40			011850530	012600530
5,8	5	45			011850580	012600580
6	5	45	M 3		011850600	012600600
6,3	5	45		M 3	011850630	012600630
7	6	50	M 3,5		011850700	012600700
7,3	6	50			011850730	012600730
8	6	50	M 4		011850800	012600800
8,3	6	50		M 4	011850830	012600830
9,4	6	50			011850940	012600940
10	6	50	M 5		011851000	012601000
10,4	6	50		M 5	011851040	012601040
11,5	8	56	M 6		011851150	012601150
12,4	8	56		M 6	011851240	012601240
13,4	8	56			011851340	012601340
15	10	60	M 8		011851500	012601500
16,5	10	60		M 8	011851650	012601650
19	10	63	M 10		011851900	012601900
20,5	10	63		M 10	011852050	012602050
23	10	67	M 12		011852300	012602300
25	10	67		M 12	011852500	012602500
26	12	67	M 14		011852600	012602600
28	12	71		M 14	011852800	012602800
30	12	71	M 16		011853000	012603000
31	12	71		M 16	011853100	012603100
40	15	80			011854000	012604000

Confezione / *Packaging*





6 pcs Ø 6,3-8,3-10,4-12,4-16,5-20,5

01270107 - HSS



6 pcs Ø 6,3-8,3-10,4-12,4-16,5-20,5

01270109 - HSS+TiN



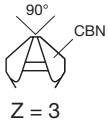
17 pcs Ø 4,3-5-6- 6,3-7-8-8,3-10-10,4 11,5-12,4-15-16,5-19-20,5-23-25

01270400 HSS

01261 01262







Z = 3

443

HSS-CO **HSS-CO+TiAlN**

Applicazioni / *Applications*



DIN 335/C-90°

Ø mm	d	L	Per viti / *For screws* DIN 74 AF	DIN 74 BF	01261 HSS-CO cod.	01262 HSS-CO+TiAlN cod.
6,3	5	45		M 3	012610630	012620630
8,3	6	50		M 4	012610830	012620830
10,4	6	50		M 5	012611040	012621040
12,4	8	56		M 6	012611240	012621240
15	10	60	M 8		012611500	012621500
16,5	10	60		M 8	012611650	012621650
20,5	10	63		M 10	012612050	012622050
25	10	67		M 12	012612500	012622500
28	12	71		M 16	012612800	012622800
30	12	71			012613000	012623000
31	12	71			012613100	012623100
40	15	80			012614000	012624000



6 pcs
Ø 6,3-8,3-10,4-12,4-16,5-20,5

01270110 - HSS-CO



6 pcs
Ø 6,3-8,3-10,4-12,4-16,5-20,5

01270111 - HSS-CO+TiAlN

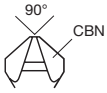
FRESE AD INCASSARE E SVASARE A 3 TAGLI IN METALLO DURO

Carbide deburring tools with 3 flutes / Fraise coniques à ébavurer carbure avec 3 coupes
Fresas de avellanar metal duro con 3 cortes / Kegelsenker VHM mit 3 Schneiden

01263 01264







443

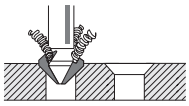
Metallo Duro / *Carbide*

Metallo Duro / *Carbide*
DIN 335/C-90°

Ø *h10*	d *h7*	L	Per viti *For screws* DIN 74 BF	**Art. 01263 MD** cod.	**Art. 01264 MD+TiAlN** cod.
6,3	6	50	M 3	012630630	012640630
8,3	6	50	M 4	012630830	012640830
10,4	6	50	M 5	012631040	012641040
12,4	8	50	M 6	012631240	012641240
16,5	10	60	M 8	012631650	012641650
20,5	10	63	M 10	012632050	012642050
25	10	67	M 12	012632500	012642500

Applicazioni / *Applications*



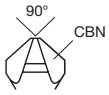


SVASATORI A 90° CON ATTACCO ESAGONALE 1/4”

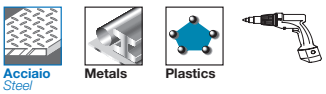
90° countersink with 1/4” hexagon shank / Fraise conique a 90° avec 6 pans de 1/4”
Avellanador a 90° con mango esagonal 1/4” / Kagelsenker-bits 90°, mit 1/4” sechskant-Aufnahme

19003



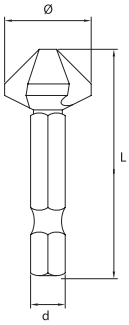


Applicazioni / *Applications*



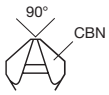
HSS DIN 335/C-90°

Ø	L	d ⬡	Per viti *For screws* DIN 74 BF	cod.
6,3	40	1/4	M 3	190030630
8,3	45	1/4	M 4	190030830
10,4	47	1/4	M 5	190031040
12,4	49	1/4	M 6	190031240
16,5	52	1/4	M 8	190031650
20,5	55	1/4	M 10	190032050

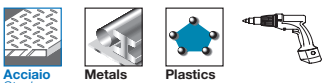


19001





Applicazioni / *Applications*



HSS DIN 335/C-90°

Ø	L	d ⬡	Per viti *For screws* DIN 74 BF	cod.
6,3	31	1/4	M 3	19001063
8,3	31	1/4	M 4	19001083
10,4	34	1/4	M 5	19001104
12,4	35	1/4	M 6	19001124
16,5	40	1/4	M 8	19001165
20,5	41	1/4	M 10	19001205



6 pcs
Ø 6,3 - 8,3 - 10,4
12,4 - 16,5 - 20,5
19020214 - HSS-G

Art. **19002** Self
Disponibile su richiesta / *On demand*



Magnetico
Magnetic

ØxL	cod.
33x120	19001000



FRESE AD INCASSARE E SVASARE IN HSS

HSS deburring tools / Fraise conique à ébavurer en HSS
Fresas de avellanar HSS / Kegelsenker HSS

01193

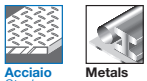


HSS



Z = 3

Applicazioni / *Applications*



HSS DIN 335/C-90°

Serie lunga - Long serie

Ø mm	d	L	cod.
6,3	5	104	011930630
8,3	6	105	011930830
10,4	6	107	011931040
12,4	8	108	011931240
15	10	109	011931500
16,5	10	111	011931650
20,5	10	114	011932050
25	10	118	011932500

Lunghezza del codolo 100 mm
Shank lenght 100 mm



6 pcs
Ø 6,3 - 8,3 - 10,4
12,4 - 16,5 - 20,5

01270207 - HSS

01196

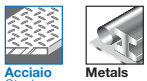


HSS



Z = 3

Applicazioni / *Applications*



HSS DIN 335/D 90°

Ø mm	MK	L	Per viti / *For screws* DIN 74 AF	DIN 74 BF	cod.
15	1	85	M 8		011961500
16,5	1	85		M 8	011961650
19	2	100	M 10		011961900
20,5	2	100		M 10	011962050
23	2	106	M 12		011962300
25	2	106		M 12	011962500
26	2	106	M 14		011962600
28	2	112		M 14	011962800
30	2	112	M 16		011963000
31	2	112		M 16	011963100
34	2	118	M 18	M 18	011963400
37	2	118	M 20	M 20	011963700
40	3	140			011964000
50	3	150			011965000

01192

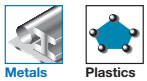


HSS



Z = 1

Applicazioni / *Applications*



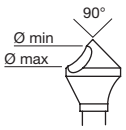
HSS DIN 335/C 90°

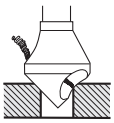
Ø mm	d	L	cod.
6	5	45	011920600
8	6	50	011920800
10	6	50	011921000
12	8	56	011921200
16	10	60	011921600
20	10	63	011922000
25	10	67	011922500
30	12	71	011923000

01188



HSS





Applicazioni / *Applications*



HSS-90°

Gr.	Ø min-max	d	L	cod.
1	2 ÷ 5	6	45	0118801
2	5 ÷ 10	8	48	0118802
3	10 ÷ 15	10	65	0118803
4	15 ÷ 20	12	85	0118804
5	20 ÷ 25	15	102	0118805
6	25 ÷ 30	15	115	0118806
7	30 ÷ 35	15	127	0118807
8	35 ÷ 40	15	136	0118808
9	40 ÷ 50	20	166	0118809



Abs

4 pcs
2-5 5-10 10-15 15-20

01270108 HSS
€ 152,349

Speciale per alluminio, metalli leggeri e plastica. Lavora senza vibrazioni, ottima finitura.
Pour aluminium, metaux légers et plastiques. Pour ébavurage et petits chanfreirie. Meilleur état de surface. Travaille sans vibrations.
For alluminium, metals and plastics. For deburring and small chamfers. Best surface finish. Works without vibrations.

FRESE AD INCASSARE E SVASARE IN HSS

HSS deburring tools / Fraise conique à ébavurer en HSS
Fresas de avellanar HSS / Kegelsenker HSS

01197



HSS



Z = 3

Applicazioni / *Applications*



Acciaio
Steel



Metals

HSS - 75°

Ø mm	d	L	cod.
6,3	5	45	011970630
8,3	6	50	011970830
10,4	6	50	011971040
12,4	8	56	011971240
13,4	8	56	011971340
16,5	10	63	011971650
20,5	10	67	011972050
25	10	71	011972500

01186



HSS



Z = 3

Applicazioni / *Applications*



Acciaio
Steel



Metals

HSS DIN 334/C 60°

Ø mm	d	L	cod.
6,3	5	45	011860630
8	6	50	011860800
10	6	53	011861000
12,5	8	56	011861250
16	10	63	011861600
20	10	67	011862000
25	10	71	011862500
31,5	12	76	011863150

SBAVATORI A MANO

Hand deburres / Fraises à ébavurer / Fresas de avellanar / Handentgrater

01187



HSS



Z = 3



Magnetico
Magnetic

HSS DIN 335/C-90°

Ø	L	cod.
6,3	121	011870630
8,3	122	011870830
10,4	124	011871040
12,4	126	011871240
16,5	130	011871650
20,5	130	011872050



Manico
Handle

ØxL	cod.
33x120	19001000

01190





Z = 6

Art. **01191** Self
Disponibile su richiesta
On demand

HSS - 40°

Gr.	Ø min-max	L	cod.
1	10 ÷ 34	155	0119001

Speciale per sbavare condutture elettriche, tubi in rame o tubi in generale e grossi fori.
Quick and effective deburring of electrical conduit, copper pipe or any tubes or large holes.

SVASATORI CON PERNO GUIDA PER SEDE VITI A TESTA CILINDRICA

HSS deburring tools / Fraise conique à ébavurer en HSS
Fresas de avellanar HSS / Kegelsenker HSS

Per fori passanti - *For through holes - Pour trous débouchants - Para orificios pasantes - Für Durchgangslöcher*

01273 01274 01277



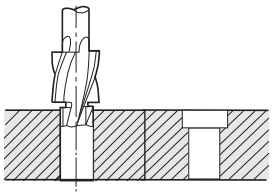
HSS DIN 373

Art. 01273 Grado fine *- Fine grade - Degré fin - Grado fino - Fein Grad*

vite *thread*	Ø	d_1	L	d	cod.
M 3	6	3,2	71	5	0127303
4	8	4,3	71	5	0127304
5	10	5,3	80	8	0127305
6	11	6,4	80	8	0127306
8	15	8,4	100	12,5	0127308
10	18	10,5	100	12,5	0127310
12	20	13,0	100	12,5	0127312



6 pcs M 3÷10
01275100



Grado medio
Medium grade - Degré Moyen
Grado Medio - Mittelgrad

vite *thread*	Ø	d_1	L	d	**Art. 01274 HSS** cod.	**Art. 01277 HSS+TiAlN** cod.
M 3	6	3,4	71	5	0127403	0127703
4	8	4,5	71	5	0127404	0127704
5	10	5,5	80	8	0127405	0127705
6	11	6,6	80	8	0127406	0127706
8	15	9,0	100	12,5	0127408	0127708
10	18	11,0	100	12,5	0127410	0127710
12	20	14,0	100	12,5	0127412	0127712



6 pcs M 3÷10
01275101 HSS
01275120 HSS+TiAlN

Confezione / *Packaging*



Grado fine per viteria/bulloneria di precisione.
Grado medio per meccanica standard.
Fine grade to fit precision screwing.
Medium grade to fit standard coupling.

Per prefori di filettature - *For thread core holes - Pour trous de taraudage - Para orificios de roscado - Für Gewindelöcher*

01272



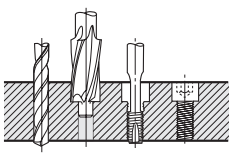
HSS DIN 373

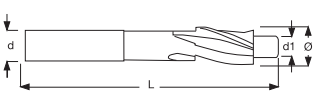
Art. 01272

vite *thread*	Ø	d_1	L	d	cod.
M 3	6	2,5	71	5	0127203
4	8	3,3	71	5	0127204
5	10	4,2	80	8	0127205
6	11	5,0	80	8	0127206
8	15	6,8	100	12,5	0127208
10	18	8,5	100	12,5	0127210
12	20	10,2	100	12,5	0127212



6 pcs M 3÷10
01275105





Applicazioni / *Applications*



DIN 8376 01103 DIN 8377 01104 64

UTENSILI CONICI INTEGRALI IN HSS-G CON SCALATURA ELICOIDALE E SPOGLIA MULTIPLA PER FORARE E ALLARGARE LAMIERE E TUBI

Conical drill bits with spiral flute and multiple clearance for metal sheets and tubes / Forets coniques et étages avec affutage à multiples facettes pour travaillé la tole et les tubes / Brocas conicas y escalonadas con afilatura multipla para trabajar las planchas de metal y los tubos Blechschalbohrer mit Spiralnute und Vielfaches Hinterarbeitung

01182





AISI M2
HV:820

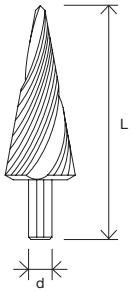
Gambo antisdrucciolo
Spoglia multipla
High grip shank
Multiple clearance

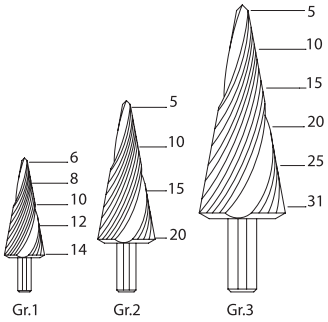
Confezione / *Packaging*

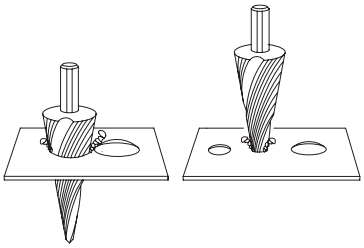


HSS-G Interamente rettificata - ***Fully ground***

Gr.	Ø min-max	d	l	L	cod.
1	**3 ÷ 14**	6	35	60	0118201
2	**6 ÷ 20**	8	45	70	0118202
3	**5 ÷ 31**	10	80	105	0118203







Grande capacità di taglio, grande rendimento grazie alla nuova scanalatura a spirale e alla spoglia multipla. Usare una leggera pressione durante il taglio: l'elicoide è autoalimentante.

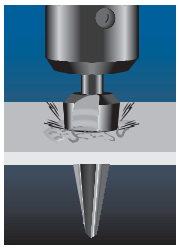
Better cutting performances due to the new spiral flute and multiple clearance. Please use a very soft press when drilling: the tool proceeds by itself.



01182100 HSS-G

Gr.1 3÷14 mm
Gr.2 6÷20 mm
Gr.3 5÷31 mm

Applicazioni / *Applications*



R ≤ 800 N/mm²



- Per forare lamiere in acciaio, tubi, profilati in acciaio e leghe leggere, plexiglass, plastica sino a 5 mm di spessore
- For hole-making into metal sheets, pipes, structurals, light alloys sheets, plastics, plexiglass up to 5 mm thickness
- Pour le perçage des trous dans tous matèriaux de faible épaisseur (épaisseur max. 5 mm)
- Broca-avellanador para cortar tubo y chapa de hierro y acero, aleaciones ligeras, plexiglass (5 mm de profundidad)
- Zum Bohren größerer Löcher in dünnwandige Materialien oder zum Aufbohren bereits vorhandener Löcher

Pasta lubrificante per il taglio

Cutting paste / Lubrifiant de coupe
Pasta de corte / Bohrpaste



4100401

Olio da taglio minerale intero 0,5 lt

Cutting oil 0,5 lt



28020004

Olio da taglio emulsionabile in tanica 5 Kg (5lt)

Cutting oil tank 5 lt



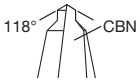
28020005

UTENSILI CONICI INTEGRALI IN HSS-G PER FORARE ED ALLARGARE LAMIERE E TUBI

Conical drill bits for metal sheets and tubes / Forets coniques et étages pour la tôle
Brocas conicas para planchas / Blechschälbohrer

01180





AISI M2
HV:820

Gambo antisdrucciolo
High grip shank

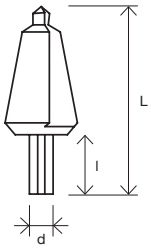
Confezione / *Packaging*

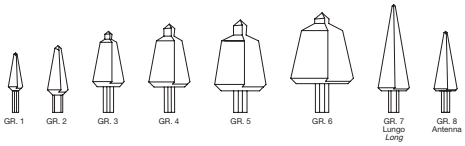


Art. **01181** Self
Disponibile su richiesta
On demand

HSS-G

Gr.	Ø min-max	d mm	l mm	L mm	cod.
1	**3 ÷ 14**	6	21	58	0118001
2	**6 ÷ 20**	8	21	70	0118002
3	**16 ÷ 30,5**	10	25	79	0118003
4	**26 ÷ 40**	10	25	86	0118004
5	**36 ÷ 50**	13	25	90	0118005
6	**40 ÷ 61**	13	25	97	0118006
7	**3 ÷ 31**	10	21	109	0118007
8	**3 ÷ 22,5**	8	21	85	0118008







01195101
HSS-G

Composizione
Description
Gr.1 3÷14 mm
Gr.2 6÷20 mm
Gr.3 16÷30,5 mm

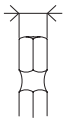
01215



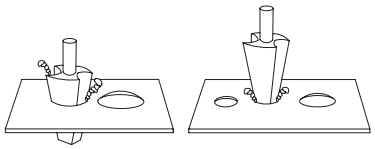


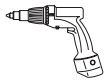
AISI M2
HV:820

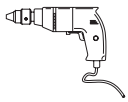
1/4 Q.C.



Gr.	Ø min-max	d ⬡	l mm	L mm	cod.
2	**8 ÷ 20**	1/4	20	68	0121502





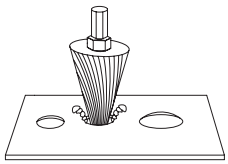


FRESA CONICA ALLARGAFORI PER LAMIERE, SPECIALE PER MECCANICI, ELETTRAUTO, CARROZZIERI

Conical drill bits for metal sheets / Forets coniques pour la tôle / Brocas conicas para planchas / Blechschälbohrer

01176





Art. **01177** Self
Disponibile su richiesta
On demand

HSS

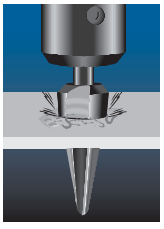
Ø x l	d	cod.
25 x 40	8	0117601
32 x 50	10	0117603
45 x 60	10	0117604

CV

Ø x l	d	cod.
25 x 40	8	0117602

La fresa allargafori va usata con velocità massima di 420 giri/min per allargare fori in lamiere di materiali dolci con spessore inferiore a 0,5 mm.
The conical drill bit shoud work at max 420 rpm to enlarge holes inside mild steel sheet 0,5 mm thick.

Applicazioni
Applications



R ≤ 800 N/mm²

Metals **Acciaio** *Steel* **Alu** **Plastics**

- Per forare lamiere in acciaio, tubi, profilati in acciaio e leghe leggere, plexiglass, plastica sino a 5 mm di spessore
- For hole-making into metal sheets, pipes, structurals, light alloys sheets, plastics, plexiglass up to 5 mm thickness
- Pour le perçage des trous dans tous matèriaux de faible épaisseur (épaisseur max. 5 mm)
- Broca-avellanador para cortar tubo y chapa de hierro y acero, aleaciones ligeras, plexiglass (5 mm de profundidad)
- Zum Bohren größerer Löcher in dünnwandige Materialien oder zum Aufbohren bereits vorhandener Löcher

UTENSILI CONICI RIVESTITI AL TiN E AL TiAlN PER FORARE ED ALLARGARE LAMIERE E TUBI

TiN and TiAlN coated conical drill bits / Forets coniques et étages revêtus au TiN et TiAlN

Brocas conicas con recubrimiento de TiN y TiAlN para planchas / Blechschälbohrer TiN und TiAlN beschichtet

01200





HSS-G+TIN
HV 0,05 = 2300

Gambo antisdrucciolo
High grip shank



Confezione / *Packaging*



HSS-G + TiN

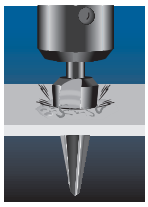
Gr.	Ø min-max	d mm	l mm	L mm	cod.
1	3 ÷ 14	6	21	58	0120001
2	6 ÷ 20	8	21	70	0120002
3	16 ÷ 30,5	10	25	79	0120003
4	26 ÷ 40	10	25	86	0120004
5	36 ÷ 50	13	25	90	0120005
6	40 ÷ 61	13	25	97	0120006
7	3 ÷ 31	10	21	109	0120007
8	3 ÷ 22,5	8	21	85	0120008



01195110
HSS-G + TiN

Composizione / *Description*
Gr.1 3÷14 mm
Gr.2 6÷20 mm
Gr.3 16÷30,5 mm

USO INTENSIVO
INTENSIVE USE
R≤1000 N/mm²



ACCIAIO LEGATO
ALLOY STEEL



01206





HSS-G+TiAlN
HV 0,05 = 3300

Gambo antisdrucciolo
High grip shank



Confezione / *Packaging*



HSS-G + TiAlN

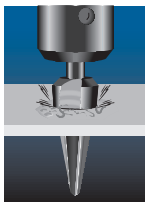
Gr.	Ø min-max	d mm	l mm	L mm	cod.
1	3 ÷ 14	6	21	58	0120601
2	6 ÷ 20	8	21	70	0120602
3	16 ÷ 30,5	10	25	79	0120603
4	26 ÷ 40	10	25	86	0120604
5	36 ÷ 50	13	25	90	0120605
6	40 ÷ 61	13	25	97	0120606
7	3 ÷ 31	10	21	109	0120607
8	3 ÷ 22,5	8	21	85	0120608



01195111
HSS-G + TiAlN

Composizione / *Description*
Gr.1 3÷14 mm
Gr.2 6÷20 mm
Gr.3 16÷30,5 mm

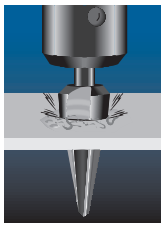
USO INTENSIVO
INTENSIVE USE
R≤1200 N/mm²



ACCIAIO INOX
ACCIAIO ALTO LEGATO
STAINLESS STEEL
HIGH ALLOY STEEL

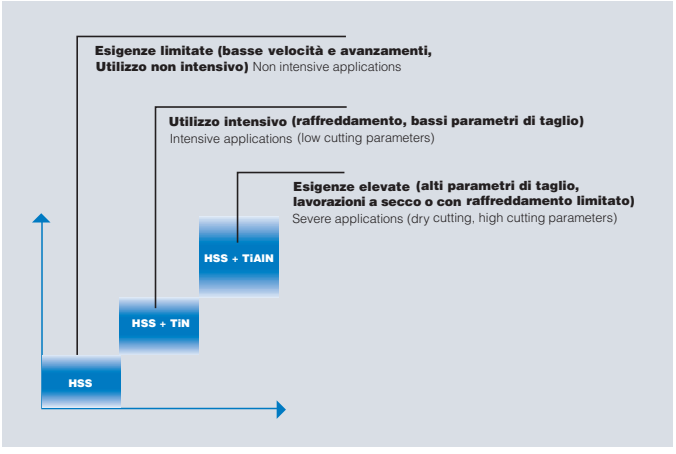


Applicazioni
Applications



- Per forare lamiere in acciaio, tubi, profilati in acciaio e leghe leggere, plexiglass, plastica sino a 5 mm di spessore
- For hole-making into metal sheets, pipes, structurals, light alloys sheets, plastics, plexiglass up to 5 mm thickness
- Pour le perçage des trous dans tous matèriaux de faible épaisseur (épaisseur max. 5 mm)
- Broca-avellanador para cortar tubo y chapa de hierro y acero, aleaciones ligeras, plexiglass (5 mm de profundidad)
- Zum Bohren größerer Löcher in dünnwandige Materialien oder zum Aufbohren bereits vorhandener Löcher

Campo di applicazione degli utensili conici rivestiti
Range of application for HSS conical drill-bits

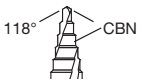


UTENSILI CONICI A GRADINO CON TAGLIENTI ELICOIDALI AD ALTO RENDIMENTO

Spiral step drill bits / Forets étages hélicoïdaux
Brocas escalonadas helicoidale / Stufenbohrer mit Spiralnute

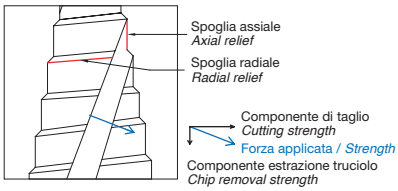
01240

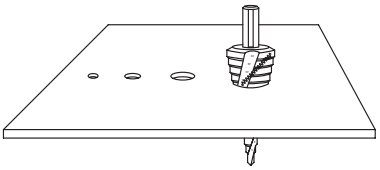




HSS-G
HV 820

Gambo antisdrucciolo
High grip shank

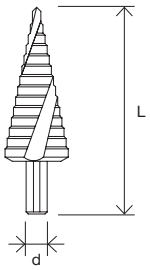




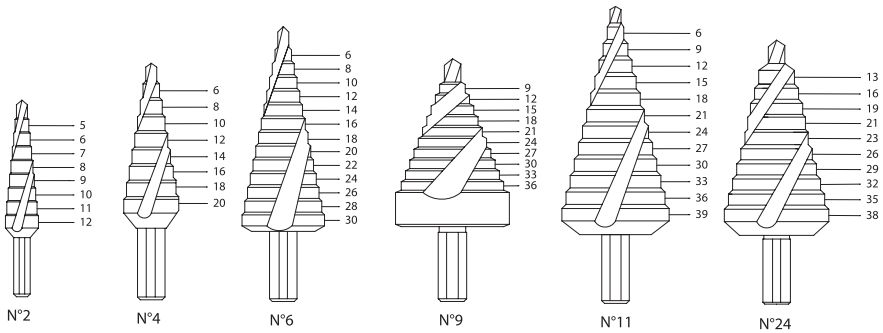
Esercitare solo una lieve pressione durante il taglio. L'elicoide è autoalimentante grazie alla componente assiale della forza di taglio.
Please use a very soft press while drilling. The tool proceeds by itself, due to the axial cutting strenght.

HSS-G

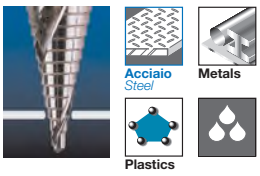
Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d mm	L mm	cod.
2	4 ÷ 12	1	9	6	70	0124002
4	4 ÷ 20	2	9	10	85	0124004
6	4 ÷ 30	2	13	10	100	0124006
9	6 ÷ 36	3	10	10	80	0124009
11	4 ÷ 39	3	13	10	107	0124011
24	6 ÷ 38	-	11	10	96	0124024



Esercitare solo una lieve pressione durante il taglio. L'elicoide è autoalimentante grazie alla componente assiale della forza di taglio.
Please use a very soft press while drilling. The tool proceeds by itself, due to the axial cutting strenght.



R ≤ 800 N/mm²





HSS-G

01259107
HSS-G

Composizione / *Description*
Gr.2 4÷12 mm
Gr.3 4÷20 mm
Gr.4 4÷30 mm

UTENSILI A GRADINO CON TAGLIENTI ELICOIDALI AD ALTO RENDIMENTO CON ATTACCO ¼" QC

Spiral step drill bits / Forets étages hélicoïdaux / Brocas escalonadas helicoidale / Stufenbohrer mit Spiralnute

01241

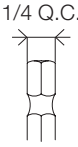




HSS-G
HV 820

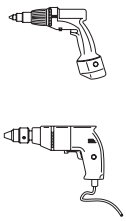
Gambo antisdrucciolo
High grip shank

1/4 Q.C.



HSS

Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d ⬡	ℓ	*L*	cod.
4	4 ÷ 20	2	9	1/4	25	76	0124104
6	4 ÷ 30	2	13	1/4	25	100	0124106



UTENSILI CONICI A GRADINO RIVESTITI AL TiN E AL TiAlN CON TAGLIENTI ELICOIDALI AD ALTO RENDIMENTO

TiN and TiAlN spiral step drill bits / Forets étages hélicoïdaux au TiN et TiAlN

Brocas escalonadas helicoidale con recubrimiento de TiN y TiAlN / Stufenbohrer mit Spiralnute TiN und TiAlN

01244



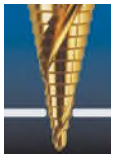
CBN

HSS-G+TIN
HV 0,05=2300

Gambo antisdrucciolo
High grip shank

443

R ≤ 1000 N/mm²



Inox

Acciaio
Steel

Metals

HSS-G + TiN

Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d mm	L mm	cod.
2	4 ÷ 12	1	9	6	70	0124402
4	4 ÷ 20	2	9	10	85	0124404
6	4 ÷ 30	2	13	10	100	0124406
9	6 ÷ 36	3	10	10	80	0124409
11	4 ÷ 39	3	13	10	107	0124411
24	6 ÷ 38	-	11	10	96	0124424



HSS-G + TiN

01259108
HSS-G + TiN

Composizione / *Description*
Gr.2 4÷12 mm
Gr.4 4÷20 mm
Gr.6 4÷30 mm

01248



CBN

HSS-G+TiAlN
HV 0,05=3300

Gambo antisdrucciolo
High grip shank

443

R ≤ 1400 N/mm²



Inox

Acciaio
Steel

Metals

HSS-G + TiAlN

Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d mm	L mm	cod.
2	4 ÷ 12	1	9	6	70	0124802
4	4 ÷ 20	2	9	10	85	0124804
6	4 ÷ 30	2	13	10	100	0124806
9	6 ÷ 36	3	10	10	80	0124809
11	4 ÷ 39	3	13	10	107	0124811
24	6 ÷ 38	-	11	10	96	0124824



HSS-G + TiAlN

01259109
HSS-G + TiAlN

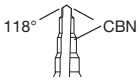
Composizione / *Description*
Gr.2 4÷12 mm
Gr.4 4÷20 mm
Gr.6 4÷30 mm

UTENSILI CONICI INTEGRALI A GRADINO IN HSS-G PER LA FORATURA ED ALLARGATURA DELLA LAMIERA

HSS step drill bits / Forets étages HSS-G
Brocas escalonadas HSS-G / HSS-G Stufenbohrer

01183





AISI M2
HV:820

Gambo antisdrucciolo
High grip shank

Art. **01184** Self
Disponibile su richiesta
On demand

HSS-G — Metric - per costruzione - *for construction*

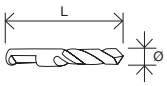
Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d mm	L mm	cod.
1	4 ÷ 12	2	5	6	56	0118301
2	4 ÷ 12	1	9	6	70	0118302
3	12 ÷ 20	1	9	10	85	0118303
4	4 ÷ 20	2	9	10	85	0118304
5	20 ÷ 30	1	11	10	97	0118305
6	4 ÷ 30	2	13	10	97	0118306
7	30 ÷ 40	1	11	13	97	0118307
8	40 ÷ 50	1	11	13	100	0118308
9	6 ÷ 36	3	10	10	80	0118309
10	25 ÷ 58	3	12	13	90	0118310
11	4 ÷ 39	3	13	10	107	0118311
24	6 ÷ 38	-	11	10	96	0118324
					Pg	
21	6,3 ÷ 26,75	-	7	10	91	0118321
22	6 ÷ 30,5	-	7	10	80	0118322
23	6 ÷ 37	-	7	10	85	0118323



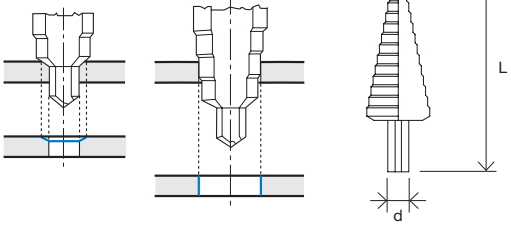
Confezione / *Packaging*

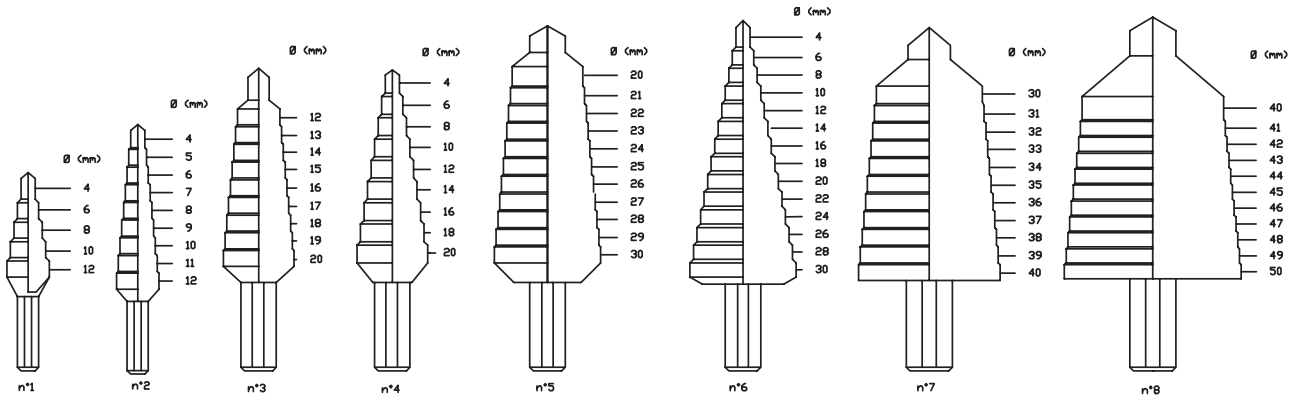


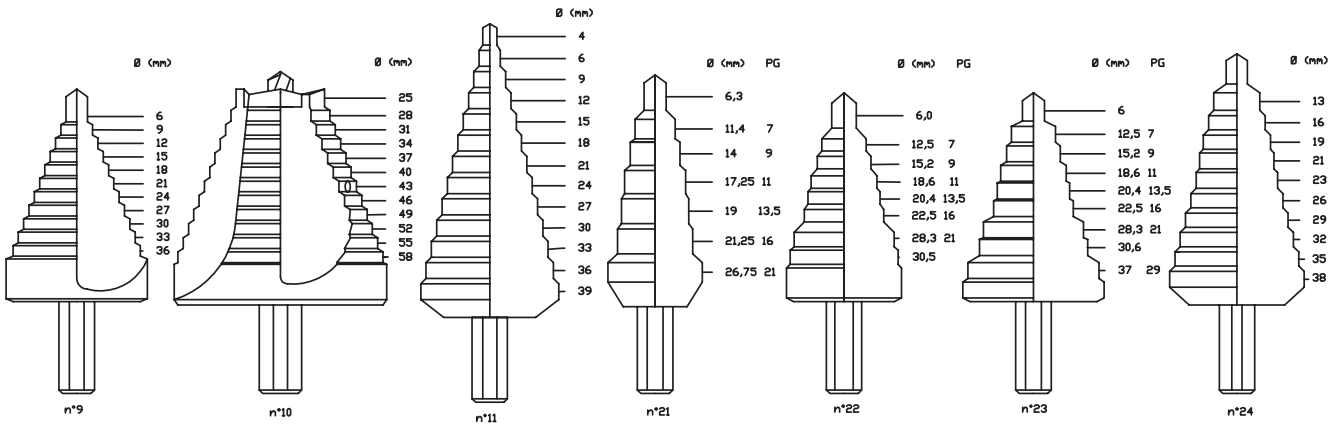
***Ricambio - Spare part**



ØxL	cod.
10x48	0118300







ASSORTIMENTI UTENSILI CONICI HSS-G

HSS-G conical drill bits sets / Assortiments de forets coniques et étages HSS-G
Surtidos de brocas conicas HSS-G para planchas / HSS-G Blechschälbohrer Sortimente

01259102 **01259105** **01259110**

Abs







	Composizione / *Description*
01259102 HSS-G	Gr.2 4÷12 mm Gr.4 4÷20 mm Gr.6 4÷30 mm
01259105 HSS-G	Gr.2 4÷12 mm Gr.3 12÷20 mm Gr.5 20÷30 mm
01259110 HSS-G	Gr.6 4÷30 mm HSS 25÷40 mm HSS 6x90 mm



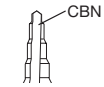
01195860

UTENSILI CONICI A GRADINO IN HSS-G CON ATTACCO 1/4" Q.C. PER FORARE E ALLARGARE LAMIERE E TUBI

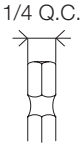
HSS-G step drill bits,1/4" shank / Forets étages HSS-G avec queue 1/4"
Brocas escalonadas HSS-G con mango 1/4" / HSS-G Stufenbohrer

01239





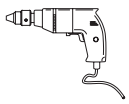
AISI M2
HV:820



HSS-G

Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d	L mm	cod.
2	4 ÷ 12	1	9	1/4	68	0123902
4	4 ÷ 20	2	9	1/4	78	0123904
6	4 ÷ 30	2	13	1/4	101	0123906







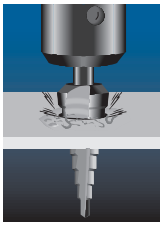
Abs

	Composizione / *Description*
01259118 HSS-G	Gr.2 4÷12 mm Gr.4 4÷20 mm Gr.6 4÷30 mm

Confezione / *Packaging*



Applicazioni
Applications



R ≤ 800 N/mm²

Acciaio *Steel* · **Metals** · **Alu** · **Plastics**

- Per fori cilindrici e precisi in lamiere di acciaio, tubi, profilati, leghe leggere, plastica, plexiglass sino a 5 mm spessore. Taglio veloce, alto rendimento.
- For parallel and precise holes in metal sheets, pipes, structurals, light alloys, plastics, plexiglass up to 5 mm thickness. Fast cutting, high performance.
- Perçage precise et haute rendement dans tous matèriaux de faible épaisseur (max 5 mm).
- Grande rendimiento y precision para cortar tubo y chapa de acero, aleaciones ligeras, plexiglass (5 mm profondidad).
- Große Präzision und Leistung zum Bohren größerer Löcher in dünnwandige Materialien oder zum Aufbohren bereits vorhandener Löcher

UTENSILI CONICI A GRADINO RIVESTITI AL TiN E TiAlN

TiN and TiAlN coated step drill bits / Forets étages revêtus au TiN et TiAlN
Brocas escalonadas con recubrimiento de TiN y TiAlN / Stufenbohrer TiN-TiAlN beschichtet

01230



CBN

HSS-G + TIN
HV 0,05 = 2300

Gambo antisdrucciolo
High grip shank

Confezione / *Packaging*





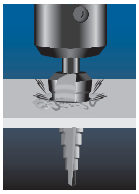
Gr. 2-4-6
01259103
HSS-G + TiN

HSS-G + TiN — Metric - per costruzione - *for construction*

Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d mm	L mm	cod.
1	4 ÷ 12	2	5	6	56	0123001
2	4 ÷ 12	1	9	6	70	0123002
3	12 ÷ 20	1	9	10	85	0123003
4	4 ÷ 20	2	9	10	85	0123004
5	20 ÷ 30	1	11	10	97	0123005
6	4 ÷ 30	2	13	10	97	0123006
7	30 ÷ 40	1	11	13	97	0123007
8	40 ÷ 50	1	11	13	100	0123008
9	6 ÷ 36	3	10	10	80	0123009
10	25 ÷ 58	3	12	13	90	0123010
11	4 ÷ 39	3	13	10	107	0123011
24	6 ÷ 38	-	11	10	96	0123024
					Pg	
21	6,3 ÷ 26,75	-	7	10	91	0123021
22	6 ÷ 30,5	-	7	10	80	0123022
23	6 ÷ 37	-	7	10	85	0123023



Applicazioni *Applications*



USO INTENSIVO
INTENSIVE USE
R ≤ 1000 N/mm²



- Per fori cilindrici e precisi in lamiere di acciaio, tubi, profilati, leghe leggere, plastica, plexiglass sino a 5 mm spessore.
- For parallel and precise holes in metal sheets, pipes, structurals, light alloys, plastics, plexiglass up to 5 mm thickness.
- Perçage precise et haute rendement dans tous matèriaux de faible épaisseur (max 5 mm).
- Grande rendimiento y precision para cortar tubo y chapa de acero, aleaciones ligeras, plexiglass (5 mm profondidad).
- Große Präzision und Leistung zum Bohren größerer Löcher in dünnwandige Materialien oder zum Aufbohren bereits vorhandener Löcher

01236



CBN

HSS-G + TiAlN
HV 0,05 = 3300

Gambo antisdrucciolo
High grip shank



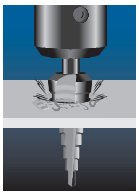
Gr. 2-4-6
01259104
HSS-G + TiAlN

HSS-G + TiAlN — Metric - per costruzione - *for construction*

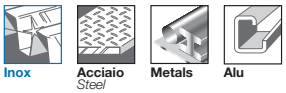
Gr.	Ø min-max	Progressione *Step* (mm)	N° Gradini *N° Steps*	d mm	L mm	cod.
1	4 ÷ 12	2	5	6	56	0123601
2	4 ÷ 12	1	9	6	70	0123602
3	12 ÷ 20	1	9	10	85	0123603
4	4 ÷ 20	2	9	10	85	0123604
5	20 ÷ 30	1	11	10	97	0123605
6	4 ÷ 30	2	13	10	97	0123606
7	30 ÷ 40	1	11	13	97	0123607
8	40 ÷ 50	1	11	13	100	0123608
9	6 ÷ 36	3	10	10	80	0123609
10	25 ÷ 58	3	12	13	90	0123610
11	4 ÷ 39	3	13	10	107	0123611
24	6 ÷ 38	-	11	10	96	0123624
					Pg	
21	6,3 ÷ 26,75	-	7	10	91	0123621
22	6 ÷ 30,5	-	7	10	80	0123622
23	6 ÷ 37	-	7	10	85	0123623



Applicazioni *Applications*



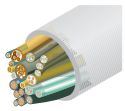
USO INTENSIVO
INTENSIVE USE
R ≤ 1200 N/mm²



- Per fori cilindrici e precisi in lamiere di acciaio, tubi, profilati, leghe leggere, plastica, plexiglass sino a 5 mm spessore.
- For parallel and precise holes in metal sheets, pipes, structurals, light alloys, plastics, plexiglass up to 5 mm thickness.
- Perçage precise et haute rendement dans tous matèriaux de faible épaisseur (max 5 mm).
- Grande rendimiento y precision para cortar tubo y chapa de acero, aleaciones ligeras, plexiglass (5 mm profondidad).
- Große Präzision und Leistung zum Bohren größerer Löcher in dünnwandige Materialien oder zum Aufbohren bereits vorhandener Löcher

UTENSILI CONICI UNIVERSALI PER PREFORI DI FILETTATURA DI TUBI PER CAVI DI CONDUZIONE ELETTRICA

Universal step drill bits for cables connections / Forets étages universelles pour tubes avec armature en acier
Brocas escalonadas universales para tubos de conducción eléctrica / Universal-Stufenbohrer für Kabelverschraubungen



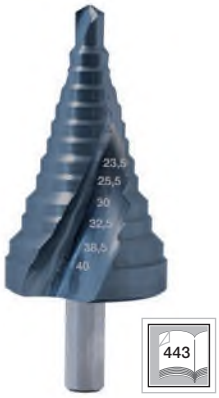
0125405 0125406 0125407 — METRIC - DIN-EN 60423



HSS-G



HSS-G + TiN

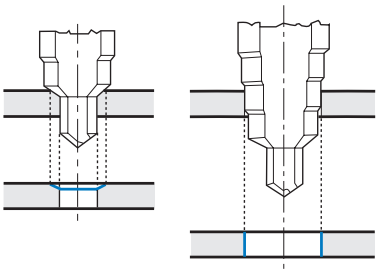


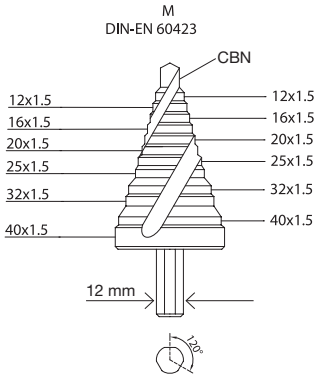
HSS-G + TiAlN

Metric Universal

0125405 HSS-G	Composizione / *Description* Ø 7÷40,5 mm M 12x1,5÷40x1,5
0125406 HSS-G + TiN	Composizione / *Description* Ø 7÷40,5 mm M 12x1,5÷40x1,5
0125407 HSS-G + TiAlN	Composizione / *Description* Ø 7÷40,5 mm M 12x1,5÷40x1,5

Combinato UNIVERSALE: per fori nocciolo e fori passanti DIN EN 60423





COMBINATO UNIVERSALE: per fori nocciolo (quando è prevista la successiva filettatura) e fori passanti (quando si inserisce un raccordo filettato serrato con un relativo dado).

UNIVERSAL COMBINED: for core holes (when the thread is needed) and through holes (when inserting a threaded connection with a relative nut).

UNIVERSAL COMBINED: pour les trous de noyau (lorsque le filetage suivant est fourni) et les trous de passage (lors de l'insertion d'une connexion filetée avec un écrou relatif).

UNIVERSAL COMBINADO: para orificios centrales (cuando se proporciona la siguiente rosca) y orificios pasantes (cuando se inserta una conexión roscada con una tuerca relativa).

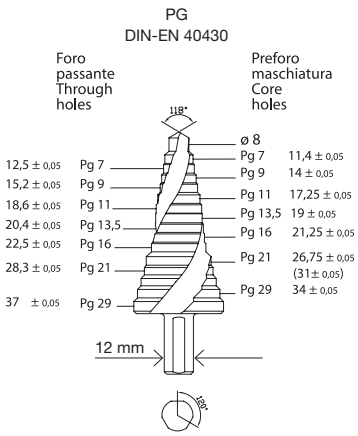
0125404 0125403 — PG - DIN-EN 40430



HSS-G + TiN



HSS-G



PG Drill Universal

0125404 HSS-G + TiN	Composizione / *Description* Ø 6÷30,5 mm Pg 7÷29
0125403 HSS-G	Composizione / *Description* Ø 8÷37 mm Pg 7÷29

Combinato UNIVERSALE: per fori nocciolo e fori passanti DIN EN 40430
COMBINED UNIVERSAL: for core holes and through holes DIN EN 40430

PUNTA FRESA IN HSS-CO PER RIMUOVERE PUNTI DI SALDATURA E PER FORARE LAMIERE IN GENERE

HSS-CO spot drills / Fraise pour points de soudure / Fresas para puntos de soldaduras / Schweisspunktbohrer

01171 01169



~DIN 1412/E

≃ DIN 1897

Confezione / *Packaging*

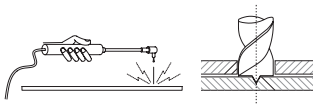


Art. 01171 HSS-CO

Ø	d	L	cod.
6	6	66	011710600
7	7	74	011710700
8	8	79	011710800
10	10	89	011711000

Art. 01169 HSS-CO+TiN

Ø	d	L	cod.
6	6	66	011690600
7	7	74	011690700
8	8	79	011690800
10	10	89	011691000





4 pcs TiN
01178200

4 pcs HSSCO
01178205

PUNTA FRESA IN HSS-CO PER RIMUOVERE PUNTI DI SALDATURA CON MACCHINE PNEUMATICHE

Milling drill for removing spot welds with pneumatic tools / Fraise pour enlever les points de soudure avec machines pneumatiques
Fresa para quitar los puntos de soldadura con las máquinas neumaticás / Schweißpunktfräser für pneumatische Maschinen

01172 01173



~DIN 1412/E

Velocità consigliata **3.000** giri/min
Recommended speed 3.000 rpm

Art. 01172 HSS-CO

Ø	d	L	cod.
6,5	6,5	40	011720650
6,5 vario	8	44	011720650V
8	8	40	011720800
8 vario	8	44	011720800V

Art. 01173 HSS-CO+TiN

Ø	d	L	cod.	€ cad/each
6,5	6,5	40	011730650	
6,5 vario	8	44	011730650V	
8	8	40	011730800	
8 vario	8	44	011730800V	



2 pcs TiN
Ø 6,5 vario - 8 vario
01178210

2 pcs TiN
Ø 6,5 - 8
01178215

01179



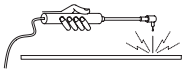
443

MD + TiAlN
Solid carbide + TiAlN

Velocità consigliata **10.000** giri/min
Recommended speed 10.000 rpm

Art. 01179 Metallo duro - Solid carbide - Carbure - Metal duro + TiAlN

Ø	d	L	cod.
6,5	8	40	011790650
8	8	40	011790800
10	8	44	011791000





3 pcs
01178220

Speciale per taglio di acciai molto duri con carico di resistenza fino a 1500N/mm²; grande rendimento grazie all'accoppiamento metallo duro + rivestimento TiAlN multistrato.
Specially designed for cutting very hard metal sheets up to 1500N/mm² tensile strenght; great performances due to the combination of solid carbide and TiAlN multilayer coating.

FRESA PER RIMUOVERE I PUNTI DI SALDATURA SU LAMIERE METALLICHE

Milling cutter for removing spot welds from metal sheets / Fraise pour enlever les points de soudure de la tôle
Fresa para quitar los puntos de soldadura de las planchas metálicas / Schweißpunktfräser für Bleche



HSS

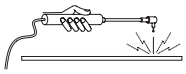
Ø	d	L	cod.	**01174**
10	7	72	01174100	

Ricambi - *Spare parts*



01174101

01174102



PUNTA FRESA UNIVERSALE PER LA FORATURA E FRESATURA DI LAMIERE E MATERIALI SOTTILI IN LEGNO E PLASTICA

Universal milling drill for cutting and milling metal sheets and thin wooden or plastic materials / Fraise universel pour couper et fraiser la tôle et les matériaux fins en bois ou plastique / Fresa universal para cortar y fresar planchas y materiales finos de madera y plástico
Mehrzweckfräser für die Bohrung und das Fräser von Bleche und dunnen Holz-Kunststoffmaterialen

01175



HSS



05432



CV



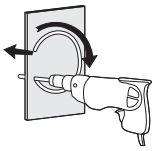


HSS

ØxL	cod.	**01175 05432**
6x90	011750600	

C.V.

ØxL	cod.
6x90	05432120





5 pcs
01178100



Ø 8x40 2 pcs
Ø 8 2 pcs
Ø 6 1 pcs

5 pcs
01178101



Ø 8x44 2 pcs
Ø 8 2 pcs
Ø 6 1 pcs

PUNTE PER TRACCIARE CON RIPORTO IN METALLO DURO

Carbide scribers / Pointe carbure à tracer / Punta para trazar / Hartmetall Reißspitze

0314201



0314202





L	cod.	**03142**
200	0314201	
150	0314202	

PUNTERUOLO

Punch



CV

L	cod.	**41001**
78	4100101	

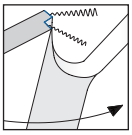
FRESE PERFORATRICI A TAZZA IN HSS-G INTERAMENTE RETTIFICATE PER FORARE LAMIERE IN ACCIAIO, FERRO, LEGHE LEGGERE, TUTTI I MATERIALI METALLICI, PLASTICA DURA

HSSG fully ground hole cutters / Scies trépans HSSG rectifiées
Coronas perforadoras HSSG rectificadas - HSSG Lochsägen

HSS-G

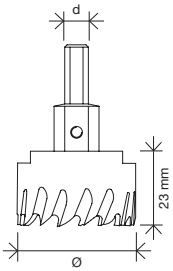
21001





Taglio laterale: miglior estrazione dei trucioli
Side cut: easy chips removal

HSS-G
HRC ≃ 64



- Innovativo disegno dei denti e taglio laterale: migliore scarico dei trucioli con grande rendimento del taglio.
- Upgrade teeth design and side cut: easy chips removal with high cutting performances
- Dessin innovateur de la denture et coup latéral: meilleur extraction des copeaux avec un élevé rendement du coupe
- Diseño innovador de los dientes y corte lateral: mejor extracción de las virutas con un alto rendimiento de corte
- Erneuerungszeichnung der Zahnung und Seitenschnitt: besser Abziehen der Späne mit Hochleistung des Schnitts.

Confezione *Packaging*



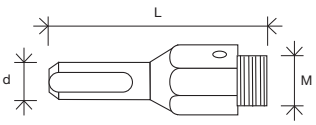
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21	8	2100102100
22	8	2100102200
23	8	2100102300
24	8	2100102400
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31	12	2100103100
32	12	2100103200
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36	12	2100103600
37	12	2100103700
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39	12	2100103900
40	14	2100104000
41	14	2100104100

*__Integrale:__ One piece

Ø	Z	cod.
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46	16	2100104600
47	16	2100104700
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75	22	2100107500
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85	24	2100108500
90	24	2100109000
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100	24	2100110000
120	30	2100112000

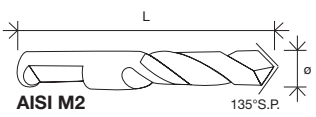
	pcs	cod.
Ø ≥ 20mm	5	21005098

Gambo - *Arbor*



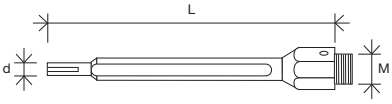
Per frese *Fit hole cutters*	L	d	M	cod.
Ø 12 ÷ 14	56	8	10 x 1,25	21005099
Ø 15 ÷ 34	56	10	12 x 1,25	21005100
Ø 35 ÷ 50	56	10	14 x 1,5	21005102
Ø 51 ÷ 100	60	12	16 x 1,5	21005101

Punta pilota - *Pilot drill*



Per frese *Fit hole cutters*	ø x L	cod.
Ø 10	4 x 50	21005109
Ø 12 ÷ 100	6 x 52	21005110

Prolunga 400 mm - *Extension*



Per frese *Fit hole cutters*	L	d	M	cod.
Ø 15 ÷ 34	400	13	12 x 1,25	21005120
Ø 35 ÷ 50	400	13	14 x 1,5	21005122
Ø 51 ÷ 100	400	13	16 x 1,5	21005121

ASSORTIMENTI FRESE PERFORATRICI A TAZZA IN HSS-G

HSS-G hole-cutters sets / Assortiments de scies trépans HSS-G
Juegos de corona perforadoras HSS-G / HSS-G Lochsägensätze



39 pcs
Ø 12÷50x1mm
21010100

31 pcs
Ø 12÷40x1+45-50mm
21010101



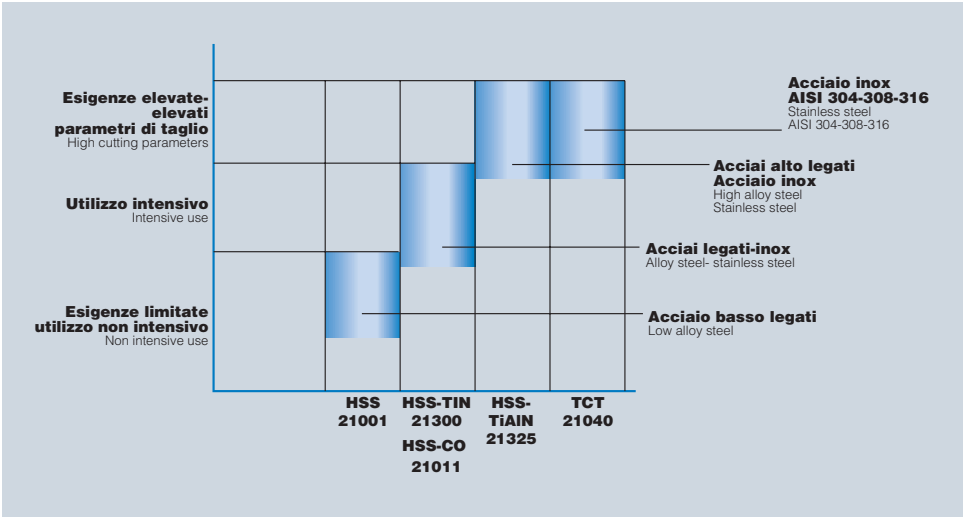
21 pcs
Ø 18÷35x1+36-38-40mm
21010102

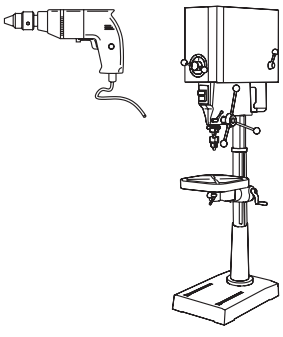
8 pcs
Ø 16-18-20-22-25-30-32-35
21010300

11 pcs
Ø 16-18-20-21-22-25
27-28-30-32-35mm
21010104

6 pcs
Ø 16-18-20-22-25-30
21010301

Guida alla scelta della tazza / *Choosing chart*











Applicazioni
Applications



R ≤ 800 N/mm²

Acciaio *Steel* | Alu | Cu Zn Ni Ms | Plastics

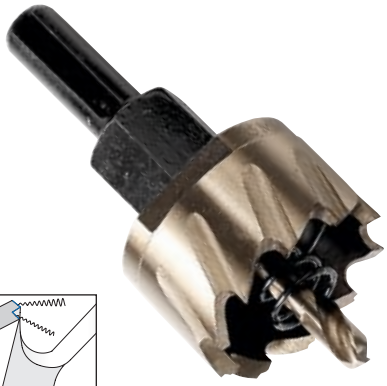
- Dentatura ricavata interamente di rettifica, taglio laterale rompitruciolo, molla di espulsione del dischetto. **Profondità di foratura sino a 5 mm**. Grande rendimento, precisione di foratura nel taglio anche profondo di tutte le lamiere in acciaio, leghe leggere, materiali metallici in genere, utensile riaffilabile.
- Fully ground cutting teeth with chipbreaker, regrindable, **cutting depth up to 5 mm**. High performances and precision in hole-making into metal sheets, light alloys, all kind of metals.
- Trépan HSS rectifié avec coupe lateral pour perçage haute rendement en acier et métaux courants en construction mécanique, entretien, installations électriques et sanitaires. **Epaisseur de coupe: 5 mm**. Outil reaffilable.
- Corona perforadora rectificada con corte lateral para cortar planchas y tubos de hierro, acero, metales. **Profondidad de corte: 5 mm**. utensilio reafilable.
- HSS Lochsägen mit geschliffene Zähnen für die präzise Schneide und größe Leistung in Stahlblätter.

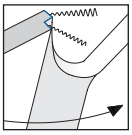
FRESE PERFORATRICI A TAZZA IN HSS-CO INTERAMENTE RETTIFICATE PER FORARE LAMIERE IN ACCIAIO INOX, ACCIAI ALTAMENTE LEGATI, FERRO, LEGHE LEGGERE E METALLI IN GENERE.

HSS-CO fully ground hole cutters / Scies trépans HSS-CO rectifiées
Coronas perforadoras HSS-CO rectificadas - HSS-CO Lochsägen

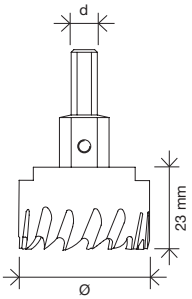
COBALT

21011





HSS-CO AISI M35
HRC ≃ 64÷65



Confezione / *Packaging*

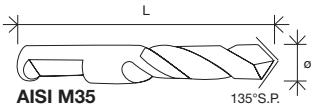


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20	6	2101102000
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26	8	2101102600
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38	10	2101103800

Ø	Z	cod.
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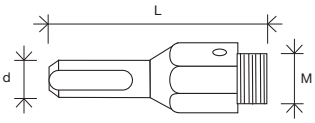
	pcs	cod.
Ø ≥ 20mm	5	21005098

Punta pilota - *Pilot drill*



Per frese *Fit hole cutters*	ø x L	cod.
Ø 12 ÷ 80	6 x 52	21005115

Gambo - *Arbor*



148

ASSORTIMENTI FRESE PERFORATRICI A TAZZA IN HSS-CO

HSS-CO hole-cutters sets / Assortiments de scies trépans HSS-CO
Juegos de corona perforadoras HSS-CO / HSS-CO Lochsägensätze



39 pcs
Ø 12÷50x1mm
21012100

31 pcs
Ø 12÷40x1+45-50mm
21012101

21 pcs
Ø 18÷35x1+36-38-40mm
21012102

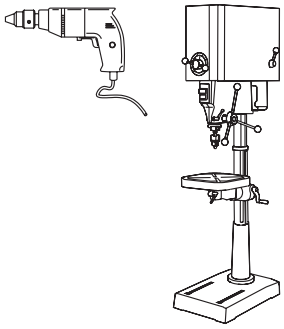


8 pcs
Ø 16-18-20-22-25-30-32-35
21012300

6 pcs
Ø 16-18-20-22-25-30
21012301







R ≤ 1000 N/mm²

Inox | Acciaio *Steel* | Alu | Cu Zn Ni Ms

Applicazioni Applications



- L'innovativo disegno dei taglienti, insieme all'elevata qualità dell'acciaio al cobalto AISI M35, la rendono particolarmente adatta al taglio **dell'acciaio inox**, degli acciai altolegati, leghe leggere e metalli in genere: grande rendimento e precisione di foratura nel taglio di spessori sino a 5 mm.
- The upgrade teeth design together with the high quality of the cobalt steel AISI M35 make it particularly suitable for cutting **stainless steel**, high-alloy steels, light alloys and metals: high performance and precision of the cut in sections up to 5 mm thick.
- Le dessin innovateur de la denture ainsi que l'éleveé qualité de l'acier au cobalt AISI M35 la rendent particulièrement indiquéè pour le coupe **de l'acier inoxydable**, des aciers alliés, alliages légers et métaux en général: élevé rendement et précisions du coupe de sections jusqu'à 5 mm d'épaisseur.
- El diseño innovador de los dientes junto a la elevada calidad del acero de cobalto AISI M35 la renden particularmente apta para el corte **del acero inoxidable**, de los aceros ligados, aleaciones ligeras y metales en general: elevado rendimiento y precision de corte de espesores hasta 5 mm.
- Die Erneuerungszeichnung der Zahnung und die hohe Qualität des Kobaltsthal AISI M35 machen sie sehr geeignet für den Schnitt **von rostfreiem** Stahl, hochlegierten Stähle, Leichtmetall-Legierungen und Metalle: Hochleistung und Genauigkeit des Schnitts von Dicke bis 5 mm.

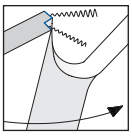
FRESE PERFORATRICI A TAZZA IN HSS-G RETTIFICATE RIVESTITE AL TiN PER FORARE LAMIERE IN ACCIAIO ALTOLEGATO, ACCIAIO INOX, FERRO, TUTTI I MATERIALI METALLICI, PLASTICA DURA

HSS-G+TiN fully ground hole cutters / Scies trépans HSS-G+TiN rectifiées
Coronas perforadoras HSS-G+TiN rectificadas - HSS-G+TiN Lochsägen

TiN

21300



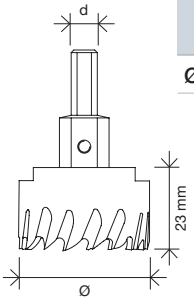


HSS-G+TiN
HV 0,05 ≃ 2300

443

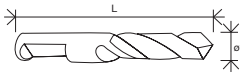
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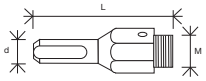
	pcs	cod.	€ cad/each
Ø ≥ 20mm	5	21005098	0,630

Punta pilota HSS-CO - *Pilot drill*



ø x L	cod.
6 x 52	21005115

Gambo - *Arbor*



148



39 pcs
Ø 12÷50x1mm
21320100

31 pcs
Ø 12÷40x1+45-50mm
21320101

21 pcs
Ø 18÷35x1+36-38-40mm
21320102



8 pcs
Ø 16-18-20-22-25-30-32-35
21320300

6 pcs
Ø 16-18-20-22-25-30
21320301







Applicazioni / Applications



R ≤ 1000 N/mm²

Inox · Acciaio *Steel* · Metals · Plastics

- Il Rivestimento in Nitruro di Titanio, elevando la durezza superficiale e riducendo notevolmente il coefficiente di attrito, permette il taglio negli acciai alto legati ed in particolare nell'acciaio inox. Le frese al TiN sono, inoltre molto adatte per il taglio dell'alluminio e di tutti i materiali abrasivi (plastica dura, vetroresina). Naturalmente, il rendimento nel taglio degli acciai dolci è elevatissimo.
- The Titanium Nitride Coating allows high performances in stainless steel cutting, low alloy steel cutting. Aluminium and abrasive materials such as fiberglass.
- Le revêtement ou Nitrure de titane, élève la dureté superficial et réduit le coefficient de friction, en permettent de percer dans des aciers haute alliés et particulièrement dans l'acier inoxydable. Les fraises au TiN sont aussi indiquées pour percer dans l'aluminium et tous les matériaux abrasifs (plastique dure; polyester renforcé de verre). Naturellement le coupe dans les acier doux est très élevé.
- El recubrimiento en Nitruro de Titanio, levatando la dureza superficial y reduciendo el coeficiente de fricción, permite el corte en los aceros altamente aliados y particularmente en el acero inoxidable. Les fresas al TiN son tanbien indicadas para el corte en el aluminio y en todos los materiales abrasivos (plasticos duros, vidrio-resina). Naturalmente, el rendimiento de los cortes en los aceros dulces es muy elevado.
- HSS Lochsägen mit geschliffene und TIN-beschichtete Zähnen für die präzise Schneide und größe Leistung in Edelstahl und Schleifmaterialien.

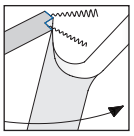
FRESE PERFORATRICI A TAZZA IN HSS-G RIVESTITE AL TiAlN PER FORARE LAMIERE IN ACCIAIO ALTOLEGATO, ACCIAIO INOX, FERRO, TUTTI I MATERIALI METALLICI, PLASTICA DURA

HSS-TiAlN fully ground hole cutters / Scies trépans HSS-TiAlN rectifiées
Coronas perforadoras HSS-TiAlN rectificadas - HSS-TiAlN Lochsägen

TiAlN

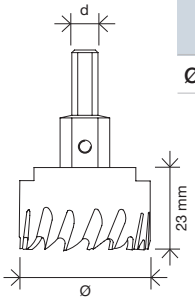
21325





HSS-G+TiAlN
HV 0,05 ≃ 3300

443

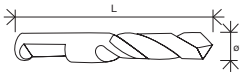


	pcs	cod.	€ cad/each
Ø ≥ 20mm	5	21005098	0,630

Ø	cod.
12	2132501200
13	2132501300
14	2132501400
15	2132501500
16	2132501600
17	2132501700
18	2132501800
19	2132501900
20	2132502000
21	2132502100
22	2132502200
23	2132502300
24	2132502400
25	2132502500
26	2132502600
27	2132502700
28	2132502800
29	2132502900
30	2132503000
31	2132503100
32	2132503200
33	2132503300
34	2132503400
35	2132503500
36	2132503600
37	2132503700
38	2132503800
39	2132503900
40	2132504000

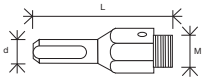
Ø	cod.
41	2132504100
42	2132504200
43	2132504300
44	2132504400
45	2132504500
46	2132504600
47	2132504700
48	2132504800
49	2132504900
50	2132505000
51	2132505100
52	2132505200
53	2132505300
54	2132505400
55	2132505500
56	2132505600
57	2132505700
58	2132505800
59	2132505900
60	2132506000
65	2132506500
70	2132507000
75	2132507500
80	2132508000
85	2132508500
90	2132509000
95	2132509500
100	2132510000

Punta pilota HSS-CO - *Pilot drill*



ø x L	cod.
6 x 52	21005115

Gambo - *Arbor*



148



39 pcs
Ø 12÷50x1mm
21335100

31 pcs
Ø 12÷40x1+45-50mm
21335101

21 pcs
Ø 18÷35x1+36-38-40mm
21335102



8 pcs
Ø 16-18-20-22-25-30-32-35
21335300

6 pcs
Ø 16-18-20-22-25-30
21335301







Applicazioni / *Applications*



R ≤ **1300** N/mm²

Inox | Acciaio *Steel* | Metals | Plastics

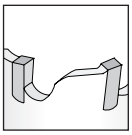
- **Frese a tazza HSS+TiAlN**: più si "scalda", più rende. È un esclusivo rivestimento PVD che permette il taglio a secco ad elevati parametri di taglio e con rendimenti eccezionali nell'acciaio inox e in tutti i materiali in genere.
- **HSS+TiAlN hole cutters**: The more it "heats" the more it performs. It is a special PVD Coating which allows the dry cut with high cutting parameters, and a great performance while drilling into the stainless steel and all kind of materials.
- **Scies trépan en acier rapid + TiAlN**: Plus "chaude" elle devient, plus c'est performante. C'est une exclusive revêtement PVD qui permet le coupe à froid avec des hautes paramètres de perforation avec des performances exceptionnelles en travaillant dans l'acier inoxydable et tous les matériaux.
- **Corona perforadora en acero rapido + TiAlN**: Lo mas se "calenta", lo mas es performante. Es un recubrimiento PVD esclusivo, permite el corte seco con elevados parametros de corte y con optimos rendimientos cortando en el acero inoxidable y todos los materiales.
- **HSS Lochsägen mit geschliffene und TiAlN-beschichtete** Zähnen für Hitzbeständige Stähle und für die präzise Schneide und größe Leistung in Edelstahl und Schleifmaterialien.

FRESE A TAZZA TCT AD ALBERO MOBILE PER FORARE LAMIERE IN ACCIAIO INOX, ACCIAI DURI TRATTATI

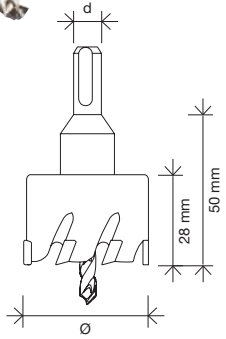
Tungsten carbide tipped hole saws for stainless and hard metal sheets / Scies trépans au carbure de tungstene pour la tôle en acier inox
Coronas con dientes de metal duro para planchas en acero inoxidable y duro / Hartmetallochsägen für nicht rostenden Stahl

21040





Inserti in metallo duro
Carbide tips



Confezione / *Packaging*



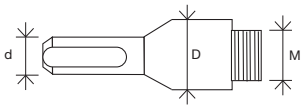
	pcs	cod.	€ cad/each
Ø ≥ 15mm	5	21045098	0,630

Ø	d	cod.
15	10	2104001500
16	10	2104001600
17	10	2104001700
18	10	2104001800
19	10	2104001900
20	10	2104002000
21	10	2104002100
22	10	2104002200
23	10	2104002300
24	10	2104002400
25	10	2104002500
26	10	2104002600
27	10	2104002700
28	10	2104002800
29	10	2104002900
30	10	2104003000
31	10	2104003100
32	10	2104003200
33	10	2104003300
34	10	2104003400
35	10	2104003500
36	10	2104003600
37	10	2104003700
38	13	2104003800
39	13	2104003900
40	13	2104004000
41	13	2104004100
42	13	2104004200
43	13	2104004300
44	13	2104004400
45	13	2104004500
46	13	2104004600
47	13	2104004700

Ø	d	cod.
48	13	2104004800
49	13	2104004900
50	13	2104005000
51	13	2104005100
52	13	2104005200
53	13	2104005300
54	13	2104005400
55	13	2104005500
56	13	2104005600
57	13	2104005700
58	13	2104005800
59	13	2104005900
60	13	2104006000
65	13	2104006500
70	13	2104007000
75	13	2104007500
76	13	2104007600
80	13	2104008000
85	13	2104008500
90	13	2104009000
95	13	2104009500
100	13	2104010000
*105	13	2104010500
*110	13	2104011000
*115	13	2104011500
*120	13	2104012000
*125	13	2104012500
*130	13	2104013000
*135	13	2104013500
*140	13	2104014000
*145	13	2104014500
*150	13	2104015000

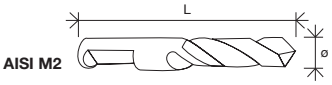
***105÷150 frese integrali One piece**

Gambo - *Arbor*



Per frese *Fit hole cutters*	d	D	M	cod.
Ø 15 ÷ 21	10	15	12 x 1,5	21045120
Ø 22 ÷ 37	10	19	14 x 1,5	21045121
Ø 38 ÷ 100	13	22	14 x 1,5	21045122

Punta pilota - *Pilot drill*



Per frese *Fit hole cutters*	ø x L	cod.
Ø 15 ÷ 100	6 x 62	21045100
Ø 105 ÷ 120	8 x 62	21045101



28 pcs
Ø 15÷40x1+45-50mm
21055130

21 pcs
Ø 18÷35x1+36-38-40mm
21055131

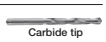


8 pcs
Ø 16-18-20-22-25-30-32-35
21055300

6 pcs
Ø 16-18-20-22-25-30
21055301

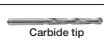


8 pcs

Ø 51÷54mm	
Ø 51÷54mm	
210705546B	
Ø 6÷8mm	 Carbide tip
HM4 Ø12	

21055302

8 pcs

Ø 54÷57mm	
Ø 54÷57mm	
210705546B	
Ø 6÷8mm	 Carbide tip
HM4 Ø12	

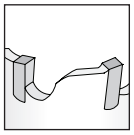
21055303

FRESE A TAZZA TCT AD ALBERO MOBILE PER FORARE LAMIERE, TUBI, PROFILATI IN ACCIAIO INOX E ACCIAI DURI TRATTATI

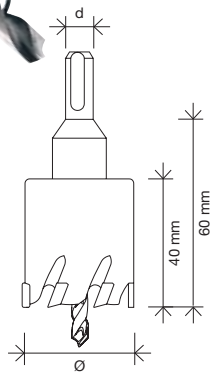
Tungsten carbide tipped hole saws for stainless and hard metal sheets / Scies trépans au carbure de tungstène pour la tôle en acier inox Coronas con dientes de metal duro para planchas en acero inoxidable y duro / Hartmetallochsägen für nicht rostenden Stahl

21042





Inserti in metallo duro
Carbide tips



Confezione / *Packaging*



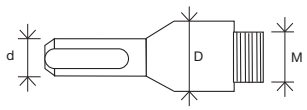
	pcs	cod.	€ cad/each
Ø ≥ 15mm	5	21045098	0,630

Serie lunga / Long serie / Sèrie longue / Serie larga / Lange Ausführung

Ø	d	cod.
20	10	2104202000
21	10	2104202100
22	10	2104202200
23	10	2104202300
24	10	2104202400
25	10	2104202500
26	10	2104202600
27	10	2104202700
28	10	2104202800
29	10	2104202900
30	10	2104203000
31	10	2104203100
32	10	2104203200
33	10	2104203300
34	10	2104203400
35	10	2104203500
36	10	2104203600
37	10	2104203700
38	10	2104203800
39	13	2104203900
40	13	2104204000
41	13	2104204100
42	13	2104204200
43	13	2104204300
44	13	2104204400

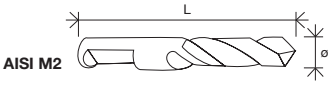
Ø	d	cod.
45	13	2104204500
46	13	2104204600
47	13	2104204700
48	13	2104204800
49	13	2104204900
50	13	2104205000
51	13	2104205100
52	13	2104205200
53	13	2104205300
54	13	2104205400
55	13	2104205500
56	13	2104205600
57	13	2104205700
58	13	2104205800
59	13	2104205900
60	13	2104206000
65	13	2104206500
70	13	2104207000
75	13	2104207500
80	13	2104208000
85	13	2104208500
90	13	2104209000
95	13	2104209500
100	13	2104210000

Gambo - *Arbor*



Per frese *Fit hole cutters*	d	D	M	cod.
Ø 15 ÷ 21	10	15	12 x 1,5	21045120
Ø 22 ÷ 38	10	19	14 x 1,5	21045121
Ø 39 ÷ 100	13	22	14 x 1,5	21045122

Punta pilota - *Pilot drill*



AISI M2

ø x L	cod.
6 x 78	21045102



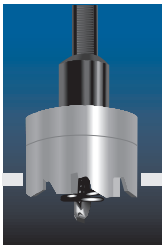
23 pcs
Ø 20÷40x1+45-50mm
21055135







Applicazioni / *Applications*



R ≤ **1300** N/mm²



- La speciale geometria variabile dei denti in metallo duro di altissima qualità consente il taglio altamente professionale e con grande rendimento in tubi, profilati e lamiere in acciaio inox, acciai alto-legati e materiali composti ad elevata resistenza. Spessore massimo di taglio; 5 mm
- The special variable geometry of the high-quality tungsten carbide teeth makes it possible to realise a very professional and efficient cut in pipes, structural sections and metal sheets in stainless steel, high-alloy steel and high-resistance materials. Maximum cutting thickness: 5mm
- La spéciale géométrie variable de la denture en métal dur de haute qualité permit de couper professionnellement et avec un rendement très élevé la tôle, les tubes et les profilés en acier inoxydable, acier allié et matériaux à résistance élevée. Epaisseur maximum de coupe: 5mm
- La especial geometría variable de los dientes de metal duro de elevada calidad permite de realizar un corte profesional y de grande rendimiento en tubos, perfilados y planchas en acero inoxidable, acero ligado y materiales de elevada resistencia. Espesor máximo de corte: 5mm
- Die veränderbare Sondergeometrie der Zahnung aus Hartmetall erlaubt einen beruflichen Schnitt von Röhren, Profile und Bleche aus rostfreierem Stahl, hochlegierterem Stahl und hochfesterem Stahl. Größte Schnitt-Dicke: 5 mm

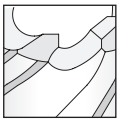
FRESE A CAROTARE IN HSS-G CON ATTACCO WELDON PER MACCHINE A SUPPORTO MAGNETICO E TRAPANI A COLONNA CON ATTACCO MORSE

Weldon shank HSS core drills for magnetic and pillar drilling machines / Fraises HSS à carotter avec Weldon queue pour machines à embase magnétique et perceuses fixes /Fresas HSS con mango Weldon para maquinas con base magnética y taladros estacionarios

HSS-G **WELDON**

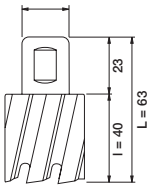
21200 **21202**

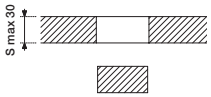




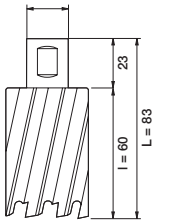


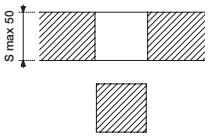
Weldon 19,05



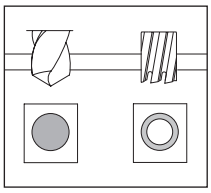


Weldon 19,05

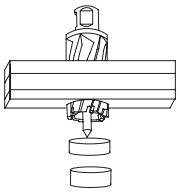




Vantaggi
Advantages



Acciaio accoppiato
Stacked steel



21200 L= 30 mm

Serie corta / Short serie / Sèrie courte
Serie corta / Kurze Ausführung

Ø	l	L	cod.
12	40	63	212001200
13	40	63	212001300
14	40	63	212001400
15	40	63	212001500
16	40	63	212001600
17	40	63	212001700
18	40	63	212001800
19	40	63	212001900
20	40	63	212002000
21	40	63	212002100
22	40	63	212002200
23	40	63	212002300
24	40	63	212002400
25	40	63	212002500
26	40	63	212002600
27	40	63	212002700
28	40	63	212002800
29	40	63	212002900
30	40	63	212003000
31	40	63	212003100
32	40	63	212003200
33	40	63	212003300
34	40	63	212003400
35	40	63	212003500
36	40	63	212003600
37	40	63	212003700
38	40	63	212003800
39	40	63	212003900
40	40	63	212004000
41	40	63	212004100
42	40	63	212004200
43	40	63	212004300
44	40	63	212004400
45	40	63	212004500
46	40	63	212004600
47	40	63	212004700
48	40	63	212004800
49	40	63	212004900
50	40	63	212005000
51	40	63	212005100
52	40	63	212005200
53	40	63	212005300
54	40	63	212005400
55	40	63	212005500
60	40	63	212006000

ø 6,35x77 163

21202 L= 50 mm

Serie lunga / Long serie / Sèrie longu
Serie larga / Lange Ausführung

Ø	l	L	cod.
12	60	83	212021200
13	60	83	212021300
14	60	83	212021400
15	60	83	212021500
16	60	83	212021600
17	60	83	212021700
18	60	83	212021800
19	60	83	212021900
20	60	83	212022000
21	60	83	212022100
22	60	83	212022200
23	60	83	212022300
24	60	83	212022400
25	60	83	212022500
26	60	83	212022600
27	60	83	212022700
28	60	83	212022800
29	60	83	212022900
30	60	83	212023000
31	60	83	212023100
32	60	83	212023200
33	60	83	212023300
34	60	83	212023400
35	60	83	212023500
36	60	83	212023600
37	60	83	212023700
38	60	83	212023800
39	60	83	212023900
40	60	83	212024000
41	60	83	212024100
42	60	83	212024200
43	60	83	212024300
44	60	83	212024400
45	60	83	212024500
46	60	83	212024600
47	60	83	212024700
48	60	83	212024800
49	60	83	212024900
50	60	83	212025000
51	60	83	212025100
52	60	83	212025200
53	60	83	212025300
54	60	83	212025400
55	60	83	212025500
60	60	83	212026000

ø 6,35x102 163



16 pcs
Ø 14-15-16-17-18-19-20-21
22-23-24-25-28-30-32-35

	21210300
	21210302



6 pcs
Ø 12-14-16-18-20-22
1 pcs

	21210400
	21210402

Applicazioni / *Applications*



R ≤ 850 N/mm²


Acciaio
Steel


Alu


Cu Zn Ni Ms













- Le frese a carotare permettono un taglio molto veloce ed economico nel ferro, acciaio da costruzione, ghisa, leghe leggere e metalli non ferrosi in genere. Speciale per piatti e lamiere di grande spessore, tubi, putrelle e profilati.
- The core drills allow a very fast and economical cut in, structural steel, iron, cast iron, light alloys and non-ferrous metals. Special for very thick metal plates and sheets, pipes, iron beam and structural steel.
- Les fraises à carotter permettent une coupe rapide et économique, dans le fer, l'acier de construction, la fonte, les alliages légères et les métaux non ferreux. Spécial pour les plates en acier et la tôle, les tubes, les poutrelles et les profilés en acier.
- Las coronas permiten el corte rapido y economico en hierro, acero de construcción, fundición, aleaciones ligeras y materiales no ferricos. Especial para platos de metal y chapas de gran espesor, tubos, vigas y perfilados.

28012

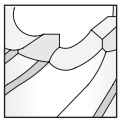
FRESE A CAROTARE IN HSS-CO 5% CON ATTACCO WELDON PER MACCHINE A SUPPORTO MAGNETICO E TRAPANI A COLONNA CON ATTACCO MORSE

Weldon shank HSS-CO 5% core drills for magnetic and pillar drilling machines / Fraises HSS-CO 5% à carotter avec Weldon queue pour machines à embase magnétique et perceuses fixes / Fresas HSS-CO 5% con mango Weldon para maquinas con base magnética y taladros estacionarios

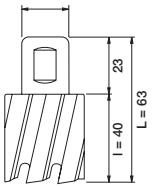
HSS-CO 5% **WELDON**

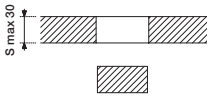
21206 **21207**





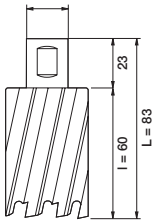
Weldon 19,05

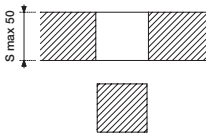




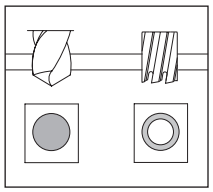


Weldon 19,05

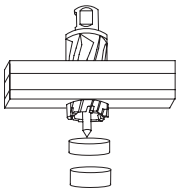




Vantaggi
Advantages



Acciaio accoppiato
Stacked steel



21206 L= 30 mm

Serie corta / Short serie / Sèrie courte
Serie corta / Kurze Ausführung

Ø	l	L	cod.
12	40	63	212061200
13	40	63	212061300
14	40	63	212061400
15	40	63	212061500
16	40	63	212061600
17	40	63	212061700
18	40	63	212061800
19	40	63	212061900
20	40	63	212062000
21	40	63	212062100
22	40	63	212062200
23	40	63	212062300
24	40	63	212062400
25	40	63	212062500
26	40	63	212062600
27	40	63	212062700
28	40	63	212062800
29	40	63	212062900
30	40	63	212063000
31	40	63	212063100
32	40	63	212063200
33	40	63	212063300
34	40	63	212063400
35	40	63	212063500
36	40	63	212063600
37	40	63	212063700
38	40	63	212063800
39	40	63	212063900
40	40	63	212064000
41	40	63	212064100
42	40	63	212064200
43	40	63	212064300
44	40	63	212064400
45	40	63	212064500
46	40	63	212064600
47	40	63	212064700
48	40	63	212064800
49	40	63	212064900
50	40	63	212065000
55	40	63	212065500
60	40	63	212066000

ø 6,35x77 163

21207 L= 50 mm

Serie lunga / Long serie / Sèrie longu
Serie larga / Lange Ausführung

Ø	l	L	cod.
12	60	83	212071200
13	60	83	212071300
14	60	83	212071400
15	60	83	212071500
16	60	83	212071600
17	60	83	212071700
18	60	83	212071800
19	60	83	212071900
20	60	83	212072000
21	60	83	212072100
22	60	83	212072200
23	60	83	212072300
24	60	83	212072400
25	60	83	212072500
26	60	83	212072600
27	60	83	212072700
28	60	83	212072800
29	60	83	212072900
30	60	83	212073000
31	60	83	212073100
32	60	83	212073200
33	60	83	212073300
34	60	83	212073400
35	60	83	212073500
36	60	83	212073600
37	60	83	212073700
38	60	83	212073800
39	60	83	212073900
40	60	83	212074000
41	60	83	212074100
42	60	83	212074200
43	60	83	212074300
44	60	83	212074400
45	60	83	212074500
46	60	83	212074600
47	60	83	212074700
48	60	83	212074800
49	60	83	212074900
50	60	83	212075000
55	60	83	212075500
60	60	83	212076000

ø 6,35x102 163



16 pcs
Ø 14-15-16-17-18-19-20-21
22-23-24-25-28-30-32-35

21210306

21210307



6 pcs
Ø 12-14-16-18-20-22
1 pcs

21210406

21210407

Applicazioni / *Applications*

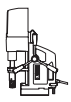


R ≤ 1200 N/mm²











28012

- Le frese a carotare al cobalto 5% permettono un taglio molto veloce ed economico nell'acciaio inox, acciaio da costruzione, ferro, ghisa, leghe leggere e metalli non ferrosi in genere. Speciale per piatti e lamiere di grande spessore, tubi, putrelle e profilati.
- The 5% cobalt core drills allow a very fast and economical cut in, stainless steel, structural steel, iron, cast iron, light alloys and non-ferrous metals. Special for very thick metal plates and sheets, pipes, iron beam and structural steel.
- Les fraises à carotter au 5% du cobalt permettent une coupe rapide et économique, dans l'acier inox, l'acier de construction, le fer, la fonte, les alliages légères et les métaux non ferreux. Spécial pour les plates en acier et la tôle, les tubes, les poutrelles et les profilés en acier.
- Las coronas de cobalto 5% permiten el corte rapido y economico en acero inoxidable, acero de construcción, fundición, aleaciones ligeras y materiales no ferricos. Especial para platos de metal y chapas de gran espesor, tubos, vigas y perfilados.
- Die Kernbohrer aus Kobalt 5% erlauben einen schnellen und sparsamen Schnitt in rostfreier Stahl, Flacheisen, Baustahl, Gusseisen, Leichtmetall-Legierungen und Nichteisenmaterialen. Geeignet für Flächen und Bleche aus Stahl von großer Stärke, Röhren, Eisenträger und Profilstähle.

Confezione / *Packaging*



FRESE A CAROTARE IN HSS + TiAlN CON ATTACCO WELDON PER MACCHINE A SUPPORTO MAGNETICO E TRAPANI A COLONNA CON ATTACCO MORSE

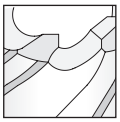
Weldon shank HSS + TiAlN core drills for magnetic and pillar drilling machines / Fraises HSS + TiAlN à carotter avec Weldon queue pour machines à embase magnétique et perceuses fixes / Fresas HSS + TiAlN con mango Weldon para maquinas con base magnética y taladros estacionarios

HSS + TiAlN **WELDON**

21204 **21205**

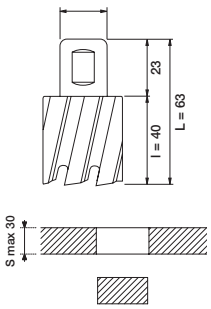




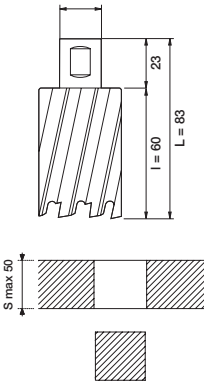




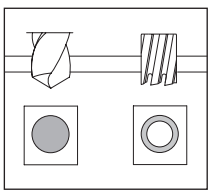
Weldon 19,05



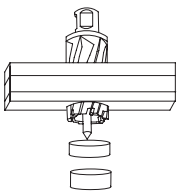
Weldon 19,05



Vantaggi
Advantages



Acciaio accoppiato
Stacked steel



21204 L= 30 mm

Serie corta / Short serie / Sèrie courte
Serie corta / Kurze Ausführung

Ø	l	L	cod.
12	40	63	212041200
13	40	63	212041300
14	40	63	212041400
15	40	63	212041500
16	40	63	212041600
17	40	63	212041700
18	40	63	212041800
19	40	63	212041900
20	40	63	212042000
21	40	63	212042100
22	40	63	212042200
23	40	63	212042300
24	40	63	212042400
25	40	63	212042500
26	40	63	212042600
27	40	63	212042700
28	40	63	212042800
29	40	63	212042900
30	40	63	212043000
31	40	63	212043100
32	40	63	212043200
33	40	63	212043300
34	40	63	212043400
35	40	63	212043500
36	40	63	212043600
37	40	63	212043700
38	40	63	212043800
39	40	63	212043900
40	40	63	212044000
41	40	63	212044100
42	40	63	212044200
43	40	63	212044300
44	40	63	212044400
45	40	63	212044500
46	40	63	212044600
47	40	63	212044700
48	40	63	212044800
49	40	63	212044900
50	40	63	212045000
55	40	63	212045500
60	40	63	212046000

ø 6,35x77

21205 L= 50 mm

Serie lunga / Long serie / Sèrie longu
Serie larga / Lange Ausführung

Ø	l	L	cod.
12	60	83	212051200
13	60	83	212051300
14	60	83	212051400
15	60	83	212051500
16	60	83	212051600
17	60	83	212051700
18	60	83	212051800
19	60	83	212051900
20	60	83	212052000
21	60	83	212052100
22	60	83	212052200
23	60	83	212052300
24	60	83	212052400
25	60	83	212052500
26	60	83	212052600
27	60	83	212052700
28	60	83	212052800
29	60	83	212052900
30	60	83	212053000
31	60	83	212053100
32	60	83	212053200
33	60	83	212053300
34	60	83	212053400
35	60	83	212053500
36	60	83	212053600
37	60	83	212053700
38	60	83	212053800
39	60	83	212053900
40	60	83	212054000
41	60	83	212054100
42	60	83	212054200
43	60	83	212054300
44	60	83	212054400
45	60	83	212054500
46	60	83	212054600
47	60	83	212054700
48	60	83	212054800
49	60	83	212054900
50	60	83	212055000
55	60	83	212055500
60	60	83	212056000

ø 6,35x102



6 pcs
Ø 12-14-16-18-20-22
1 pcs

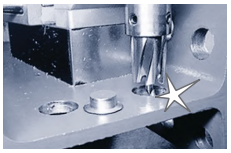


21210404



21210405











28012

Applicazioni / *Applications*



R ≤ 1200 N/mm²



Inox



Acciaio
Steel



Alu



Cu Zn Ni Ms

- Le frese a carotare, per le caratteristiche illustrate, permettono un taglio molto veloce ed economico nel ferro, acciaio da costruzione, ghisa, leghe leggere e materiali non ferrosi in genere. Speciale per piatti e lamiere in acciaio di grande spessore, tubi, putrelle, profilati etc.
- As shown, the core drills allow a very fast and economic cut in iron, structural steel, cast iron, light alloys and nonferrous metals. Special for very thick metal plates and sheets, pipes, iron beam and structural steel.
- Comme illustré, les fraises à carotter permettent un coupe très vite et économique dans le fer, l'acier de construction, la fonte, les alliages légers et les matériaux qui ne son pas ferreux. Spécial pour les plates en acier et la tôle, les tubes, poutrelles et profilés en acier.
- Las fresas para sondear, cómo ilustrado, permiten de cortar muy rápidamente y económicamente hierro, acero de construcción, fundición, aleaciones ligeras y materiales no ferrosos en general. Especial para platos de metal y planchas muy gruesos, tubos, vigas y perfilados.
- Wie illustriert erlauben die Kernbohrer einen schnellen und sparsamen Schnitt in Flacheisen, Baustahl, Gusseisen, Leichtmetall-Legierungen und Nichteisenmaterialen. Geeignet für Flächen und Bleche aus Stahl, Röhren, Eisenträger und Profilstähle.

Confezione / *Packaging*



FRESE A CAROTARE CON TAGLIENTI IN METALLO DURO E CON ATTACCO WELDON PER MACCHINE A SUPPORTO MAGNETICO

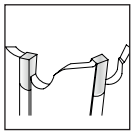
Weldon shank carbide tip core drill for magnetic drilling machines / Fraises à carotter au carbure de tungstène avec Weldon queue pour machines à embase magnétique / Fresas con dientes de metal duro y mango Weldon para maquinas con base magnética

Metallo duro
Carbide

WELDON

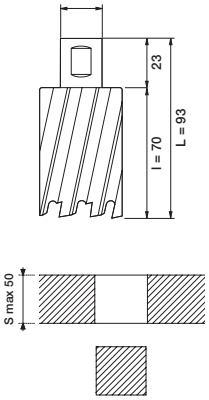
21216



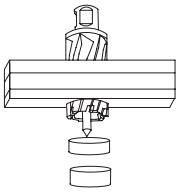


Inserti in metallo duro
Carbide tips

Weldon 19,05



Acciaio accoppiato
Stacked steel



Serie lunga / Long serie / Sèrie longu / Serie larga / Lange Ausführung

Ø	l	L	cod.
12	70	93	212161200
14	70	93	212161400
15	70	93	212161500
16	70	93	212161600
17	70	93	212161700
18	70	93	212161800
19	70	93	212161900
20	70	93	212162000
21	70	93	212162100
22	70	93	212162200
23	70	93	212162300
24	70	93	212162400
25	70	93	212162500
26	70	93	212162600
27	70	93	212162700
28	70	93	212162800
29	70	93	212162900
30	70	93	212163000
31	70	93	212163100
32	70	93	212163200
33	70	93	212163300
34	70	93	212163400
35	70	93	212163500
36	70	93	212163600
37	70	93	212163700
38	70	93	212163800

Ø	l	L	cod.
39	70	93	212163900
40	70	93	212164000
41	70	93	212164100
42	70	93	212164200
43	70	93	212164300
44	70	93	212164400
45	70	93	212164500
46	70	93	212164600
47	70	93	212164700
48	70	93	212164800
49	70	93	212164900
50	70	93	212165000
51	70	93	212165100
52	70	93	212165200
53	70	93	212165300
54	70	93	212165400
55	70	93	212165500
56	70	93	212165600
57	70	93	212165700
58	70	93	212165800
59	70	93	212165900
60	70	93	212166000
65	70	93	212166500
70	70	93	212167000
75	70	93	212167500
80	70	93	212168000

ø 6,35x112 mm per frese ø 12 mm — **21216000**

ø 7,1x112 mm per frese ø 14÷16 mm — **21216001**

ø 8,0x112 mm per frese ø 17÷80 mm — **21216002**

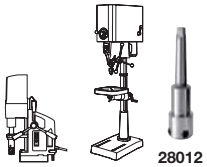


16 pcs
Ø 14-15-16-17-18-19-20-21
22-23-24-25-28-30-32-35

21210308



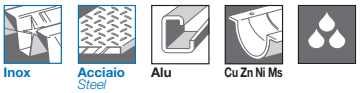




Applicazioni / *Applications*



R ≤ 1200 N/mm²



- Consigliate per il taglio molto veloce, economico e con grande rendimento in acciaio inox, acciai refrattari, acciai resistenti agli acidi, HARDOX®, WELDOX®400, tutti gli acciai in genere, ghisa… Particolarmente adatto al taglio delle putrelle e delle rotaie. The core drills allow a very fast and economical cut in stainless steel, acid resistant steel, HARDOX®, WELDOX®400, steel and cast iron… Suitable for cut iron beam and rails. Recommandé pour la coupe très rapide, en l'acier inoxydable avec une grande efficacité, en acier réfractaire, inoxydable, résistant aux acides, HARDOX®, WELDOX®400, tous les aciers en fonte générale... Particulièrement adapté pour couper les poutres et les rails. Recomendado para el corte muy rápido y con gran eficiencia en l'acero inoxidable, acero refractario, acero resistente a los ácidos, HARDOX®, WELDOX®400, todos los aceros en hierro fundido en general, especialmente adecuados para el corte de las vigas.
- Nota: HARDOX® è un acciaio resistente all'abrasione; è identificato solitamente da un numero che ne indica la durezza (HBW).
WELDOX® è un acciaio ad alta resistenza, identificato da un numero che ne fornisce la resistenza a snervamento (MPa).
Note: HARDOX® is an abrasion resistant steel; it's defined by a number which gives its hardness (HBW).
WELDOX® is a structural-high strength steel; it's defined by a number which gives its yield strength (MPa).

Confezione / *Packaging*



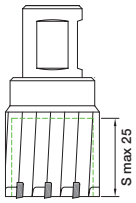
FRESE A CAROTARE SPECIALI PER ROTAIE, CON ATTACCO WELDON PER MACCHINE A SUPPORTO MAGNETICO

Weldon shank carbide tip core drill for magnetic drilling machines / Fraises à carotter au carbure de tungstène avec Weldon queue pour machines à embase magnétique / Fresas con dientes de metal duro y mango Weldon para maquinas con base magnética

Metallo duro
Carbide

21218





Ø	l	L	cod.
19	37	60	212181900
20	37	60	212182000
21	37	60	212182100
22	37	60	212182200
23	37	60	212182300
24	37	60	212182400
25	37	60	212182500
26	37	60	212182600
26,5	37	60	212182650
27	37	60	212182700

Ø	l	L	cod.
27,5	37	60	212182750
28	37	60	212182800
29	37	60	212182900
30	37	60	212183000
31	37	60	212183100
32	37	60	212183200
33	37	60	212183300
34	37	60	212183400
35	37	60	212183500
36	37	60	212183600

ø 8x90 **21218000**

FRESE A CAROTARE HSS-CO CON ATTACCO QUICK-IN 18 MM PER MACCHINE A SUPPORTO MAGNETICO

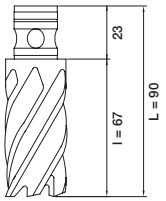
Quick-IN 18 mm shank HSS-CO core drill for magnetic drilling machines / HSS-CO fraises à carotter avec Quick-IN 18 mm queue pour machines à embase magnétique / Fresas HSS-CO con mango Quick-IN 18 mm para maquinas con base magnética

HSS-CO 5% **Quick-IN®**

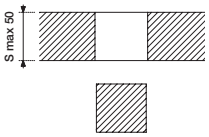
21211



Quick-IN 18







Serie lunga / Long serie / Sèrie longu / Serie larga / Lange Ausführung

Ø	l	L	cod.
12	67	90	2121101200
13	67	90	2121101300
14	67	90	2121101400
15	67	90	2121101500
16	67	90	2121101600
17	67	90	2121101700
18	67	90	2121101800
19	67	90	2121101900
20	67	90	2121102000
21	67	90	2121102100
22	67	90	2121102200
23	67	90	2121102300
24	67	90	2121102400
25	67	90	2121102500
26	67	90	2121102600
27	67	90	2121102700
28	67	90	2121102800
29	67	90	2121102900
30	67	90	2121103000
31	67	90	2121103100

Ø	l	L	cod.
32	67	90	2121103200
33	67	90	2121103300
34	67	90	2121103400
35	67	90	2121103500
36	67	90	2121103600
37	67	90	2121103700
38	67	90	2121103800
39	67	90	2121103900
40	67	90	2121104000
41	67	90	2121104100
42	67	90	2121104200
43	67	90	2121104300
44	67	90	2121104400
45	67	90	2121104500
46	67	90	2121104600
47	67	90	2121104700
48	67	90	2121104800
49	67	90	2121104900
50	67	90	2121105000

ø 6,35x102 **28016002**

Applicazioni / *Applications*



R ≤ 1200 N/mm²



- Consigliate per il taglio molto veloce, economico e con grande rendimento in acciaio inox, acciai da costruzione, ferro, ghisa, leghe leggere e metalli non ferrosi in genere. Particolarmente adatto al taglio di piatti e lamiere di grandi spessori,tubi, putrelle e profilati.
- The core drills allow a very fast and economical cut in stainless steel, structural steel, iron, cast iron, light alloys and non-ferrous metals. Special for very thick metal plates and sheets, pipes, iron beam and structural steel.
- Les fraises à carotter permettent une coupe rapide et économique dans l'acier inox, l'acier de construction, le fer, la fonte, les alliages légères et les métaux non ferreux. Spécial pour les plates en acier et la tôle, les tubes, les poutrelles et les profilés en acier.
- Las coronas permiten el corte rapido y economico en acero inoxidable, acero de construcción, fundición, aleaciones ligeras y materiales no ferricos. Especial para platos de metal y chapas de gran espesor, tubos, vigas y perfilados.



16 pcs
Ø 14-15-16-17-18-19-20-21
22-23-24-25-28-3-32-35

21210309

FRESE A CAROTARE IN METALLO DURO CON ATTACCO QUICK-IN 18 MM PER MACCHINE A SUPPORTO MAGNETICO

Quick-IN 18 mm shank carbide tip core drill for magnetic drilling machines / Fraises à carotter au carbure de tungstène avec Quick-IN 18 mm queue pour machines à embase magnétique / Fresas con dientes de metal duro y mango Quick-IN 18 mm para maquinas con base magnética

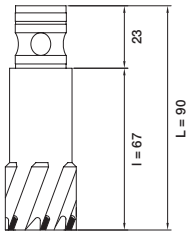
Metallo duro
Carbide

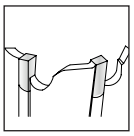
Quick-IN®

21212

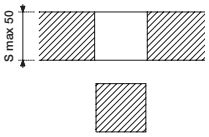


Quick-IN 18





Inserti in metallo duro
Carbide tips



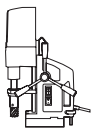
Serie lunga / Long serie / Sèrie longu / Serie larga / Lange Ausführung

Ø	l	L	cod.
12	65	88	212121200
13	65	88	212121300
14	65	88	212121400
15	65	88	212121500
16	65	88	212121600
17	65	88	212121700
18	65	88	212121800
19	65	88	212121900
20	65	88	212122000
21	65	88	212122100
22	65	88	212122200
23	65	88	212122300
24	65	88	212122400
25	65	88	212122500
26	65	88	212122600
27	65	88	212122700
28	65	88	212122800
29	65	88	212122900
30	65	88	212123000
31	65	88	212123100
32	65	88	212123200

Ø	l	L	cod.
33	65	88	212123300
34	65	88	212123400
35	65	88	212123500
36	65	88	212123600
37	65	88	212123700
38	65	88	212123800
39	65	88	212123900
40	65	88	212124000
41	65	8	212124100
42	65	88	212124200
43	65	88	212124300
44	65	88	212124400
45	65	88	212124500
46	65	88	212124600
47	65	88	212124700
48	65	88	212124800
49	65	88	212124900
50	65	88	212125000
55	65	88	212125500
60	65	88	212126000

Confezione / *Packaging*





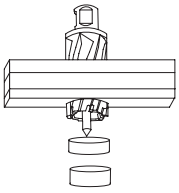
ø 6,35x102 — **28016002**



16 pcs
Ø 14-15-16-17-18-19-20-21
22-23-24-25-28-30-32-35

21210310

Acciaio accoppiato
Stacked steel



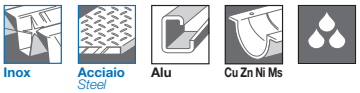




Applicazioni / *Applications*



R ≤ 1200 N/mm²



- Consigliate per il taglio molto veloce, economico e con grande rendimento in acciaio inox, acciai refrattari, acciai resistenti agli acidi, HARDOX®, WELDOX®400, tutti gli acciai in genere, ghisa… Particolarmente adatto al taglio delle putrelle e delle rotaie. The core drills allow a very fast and economical cut in stainless steel, acid resistant steel, HARDOX®, WELDOX®400, steel and cast iron… Suitable for cut iron beam and rails. Recommandé pour la coupe très rapide, en l'acier inoxydable avec une grande efficacité, en acier réfractaire, inoxydable, résistant aux acides, HARDOX®, WELDOX®400, tous les aciers en fonte générale… Particulièrement adapté pour couper les poutres et les rails. Recomendado para el corte muy rápido y con gran eficiencia en l'acero inoxidable, acero refractario, acero resistente a los ácidos, HARDOX®, WELDOX®400, todos los aceros en hierro fundido en general, especialmente adecuados para el corte de las vigas.
- Nota: HARDOX® è un acciaio resistente all'abrasione; è identificato solitamente da un numero che ne indica la durezza (HBW).
WELDOX® è un acciaio ad alta resistenza, identificato da un numero che ne fornisce la resistenza a snervamento (MPa).
Note: HARDOX® is an abrasion resistant steel; it's defined by a number which gives its hardness (HBW).
WELDOX® is a structural-high strength steel; it's defined by a number which gives its yield strength (MPa).

MACCHINE PERFORATRICI A SUPPORTO ELETTROMAGNETICO CON ATTACCO WELDON

Magnetic stand drilling machines / Perceuses à embase électromagnétique / Máquinas de cortar con base electromagnética / Magnetständerbohrmaschinen

28011100



14 Kg

La base magnetica deve lavorare su una superficie metallica pulita spessa almeno 15 mm.
The magnetic base must adhere to a clean metallic surface with at latest 15 mm. thickness.

Forza di coesione magnetica *Magnetic cohesion strength*	7.350	N
Potenza assorbita *Absorbed power*	1.100	W
Tensione in entrata *Input voltage*	230	V
N. giri motore *Speed*	780	min^{-1}
Corsa utile *Useful stroke*	100	mm
Rotazione *Rotation*	DX *Right*	

Dimensioni trapano / *Drilling machine dimensions*
270x390x100
Dimensioni confezione in plastica / *Plastic case dimensions*
550x400x160

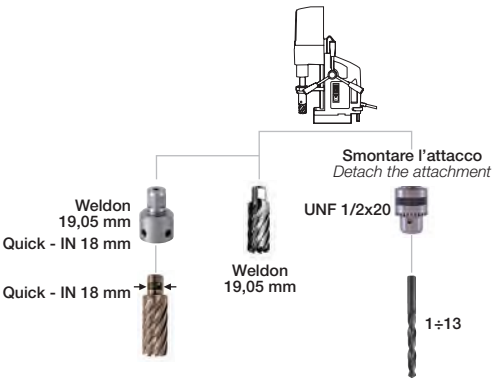
28011100

Raffredamento *Cooling*	incorporato *incorporated*

Capacità - *Working range*

Weldon 19,05 — *13÷35 mm*

DIN 338: 1÷13 mm



28011101



23 Kg

Forza di coesione magnetica *Magnetic cohesion strength*	22.540	N
Potenza assorbita *Absorbed power*	1.850	W
Tensione in entrata *Input voltage*	230	V
N. giri motore - 1ª velocità *Speed*	450 750	min^{-1} min^{-1}
Corsa utile *Useful stroke*	135	mm
Rotazione *Rotation*	DX *Right*	

Dimensioni trapano / *Drilling machine dimensions*
300x550x100
Dimensioni confezione in plastica / *Plastic case dimensions*
580x480x160

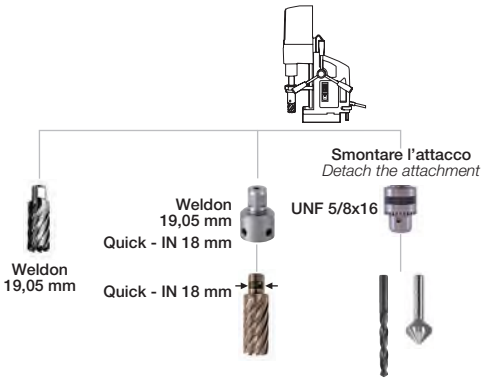
28011101

Raffredamento *Cooling*	incorporato *incorporated*

Capacità - *Working range*

Weldon 19,05 — *18÷60 mm*

DIN 338: 1÷16 mm



28011102



23 Kg

Forza di coesione magnetica *Magnetic cohesion strength*	22.540	N
Potenza assorbita *Absorbed power*	1.850	W
Tensione in entrata *Input voltage*	230	V
N. giri motore - 1ª velocità *Speed*	450 750	min^{-1} min^{-1}
Corsa utile *Useful stroke*	135	mm
Rotazione *Rotation*	DX *Right*	

Dimensioni trapano / *Drilling machine dimensions*
300x550x100
Dimensioni confezione in plastica / *Plastic case dimensions*
580x480x160

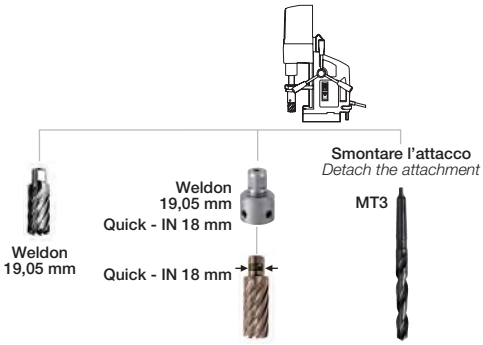
28011102

Raffredamento *Cooling*	incorporato *incorporated*

Capacità - *Working range*

Weldon 19,05 — *18÷60 mm*

DIN 338:1÷16 mm
DIN 345:1÷25 mm



ACCESSORI PER L'UTILIZZO DELLE FRESE A CAROTARE

Accessories for core drills / Accessoires pour fraises à carotter / Accesorios para coronas fresas / Zubehör für Kernbohrmaschinen

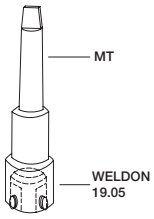
28012



001
002

Mandrino senza lubrificazione interna

Holder without lubrication / Mandrin sans lubrification
Portabroca sin lubrificación / Bohrfutter ohne Schmierung



MT	L	Weldon 19,05 mm		pcs	cod.
2	160	12÷60	-	1	28012001
3	175	12÷60	28011102	1	28012002

28013



001
002
003
004

Mandrino con lubrificazione interna

Holder with lubrification / Mandrin avec lubrification
Portabroca con lubrificación / Bohrfutter mit Schmierung

MT	L	Weldon 19,05 mm		pcs	cod.
2	160	12÷60	-	1	28013001
3	160	12÷60	28011102	1	28013002
2	160	12÷60	-	1	28013003
3	160	12÷60	28011102	1	28013004

28014



001
002
003
004

Mandrino a serraggio rapido con lubrificazione

Automatic quick-in arbor with interior lubrication / Mandrin à serrage automatique avec lubrification
Portabroca automático con lubrificación / Automatisches Spannfutter mit Schmierung

MT	L	Weldon 19,05 mm		pcs	cod.
2	160	12÷60	-	1	28014001
3	160	12÷60	28011102	1	28014002
2	160	12÷60	-	1	28014003
3	160	12÷60	28011102	1	28014004

28015



001
002
003
004

Adattatori

Adaptors / Adaptateurs / Adaptadores / Adapter

	pcs	cod.
WELDON - 18 Quick IN	1	28015001
18 Quick IN - WELDON	1	28015002
M14 -1/2 UNF	1	28015003
WELDON - 1/2 UNF	1	28015004

Non adatti all'uso con adattatori art. 28015
They cannot be used with adaptors item n. 28015



Espulsori

Ejector / Ejecteurs / Expulsores / Abzieher

	L	pcs	cod.
Ø 6,35 x 77	L = 63 mm	1	28016001
Ø 6,35 x 102	L = 83 mm	1	28016002
Ø 6,35 x 123	L = 83 mm	1	28016003
Ø 6,35 x 112	L = 93 mm	1	21216000
Ø 7,1 x 112	L = 93 mm	1	21216001
Ø 8,0 x 112	L = 93 mm	1	21216002
Ø 8,0 x 90	L = 60 mm	1	21218000

FRESE ROTATIVE IN HSS

HSS rotary files / Fraises rotatives HSS / Fresas rotativas en HSS / HSS Fräserstifte

26001 26003

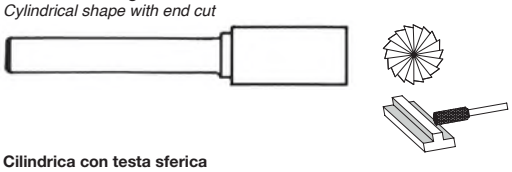
HSS



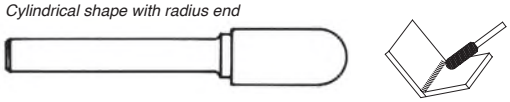
Confezione / *Packaging*

Art. **26004** Self
Disponibile su richiesta / *On demand*

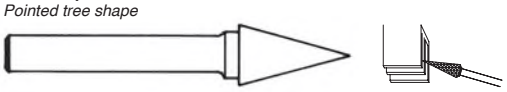
Cilindrica con taglio frontale
Cylindrical shape with end cut



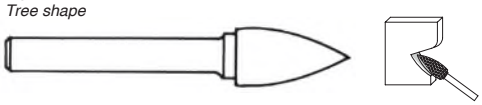
Cilindrica con testa sferica
Cylindrical shape with radius end



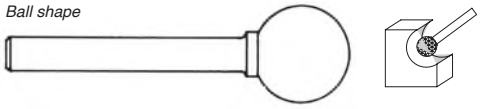
Conica a punta
Pointed tree shape



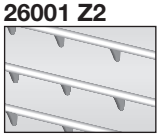
Ogiva a punta
Tree shape



Sferica
Ball shape

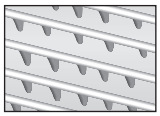


26001 Z2



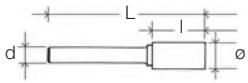
TAGLIO BASTARDO per leghe leggere, rame, ottone, bronzo, acciaio dolce.
Velocità consigliata: 220÷250 m/min.
For cutting light alloys, copper, brass, bronze, mild steel.
Cutting speed: 220÷250 m/min.

26003 Z3



Taglio mezzo dolce per acciai, ghisa. Vt 80÷220 m/min.
For cutting steel, cast iron. Cutting speed 80÷220 m/min.





HRC ≃ 63				26001 Z2	26003 Z3
Ø	/	L	d	cod.	cod.
6	20	60	6	2600100106	2600300106
8	30	70	6	2600100108	2600300108
10	30	70	6	2600100110	2600300110
12	30	70	6	2600100112	2600300112
15	30	70	6	2600100115	2600300115
6	20	60	6	2600100206	2600300206
8	30	70	6	2600100208	2600300208
10	30	70	6	2600100210	2600300210
12	30	70	6	2600100212	2600300212
15	30	70	6	2600100215	2600300215
6	20	60	6	2600100306	2600300306
8	30	70	6	2600100308	2600300308
10	30	70	6	2600100310	2600300310
12	30	70	6	2600100312	2600300312
15	30	70	6	2600100315	2600300315
6	20	60	6	2600100406	2600300406
8	30	70	6	2600100408	2600300408
10	30	70	6	2600100410	2600300410
12	30	70	6	2600100412	2600300412
15	30	70	6	2600100415	2600300415
6	5	50	6	2600100506	2600300506
8	7	52	6	2600100508	2600300508
10	9	54	6	2600100510	2600300510
12	10	55	6	2600100512	2600300512
15	14	59	6	2600100515	2600300515



5 pcs Ø10 Z2 **26008203**
5 pcs Ø10 Z3 **26008201**
5 pcs Ø12 Z2 **26008204**
5 pcs Ø12 Z3 **26008200**



Abs

10 pcs Ø10 Z2+Z3
Tutte le forme - *All the shapes*
26008401

10 pcs Ø12 Z2+Z3
Tutte le forme - *All the shapes*
26008402



Abs

5 pcs Ø10 Z3
Tutte le forme - *All the shapes*
26008404

5 pcs Ø12 Z3
Tutte le forme - *All the shapes*
26008405



50 pcs Z2+Z3: Ø 6-8-10-12-15
Tutte le forme - *All the shapes*
26008501

FRESE ROTATIVE HSS RIVESTITE AL TiAlN

HSS TiAlN rotary files / Fraises rotatives HSS revêtues au TiAlN

Fresas rotativas HSS con recrubimiento de TiAlN - HSS Fräserstifte TiAlN-beschichtet

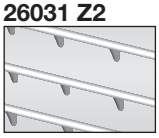
26031 26032

HSS + TiAlN



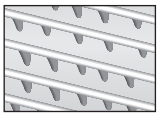
443

26031 Z2

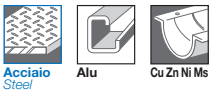


TAGLIO BASTARDO per leghe leggere, rame, ottone, bronzo, acciaio dolce.
Velocità consigliata: 220÷250 m/min.
For cutting light alloys, copper, brass, bronze, mild steel.
Cutting speed: 220÷250 m/min.

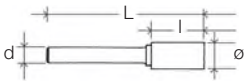
26032 Z3



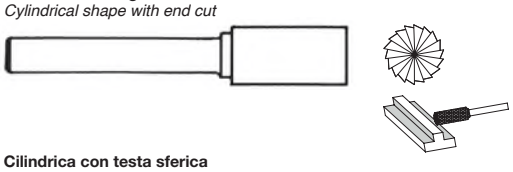
Taglio mezzo dolce per acciai, ghisa. Vt 80÷220 m/min.
For cutting steel, cast iron. Cutting speed 80÷220 m/min.



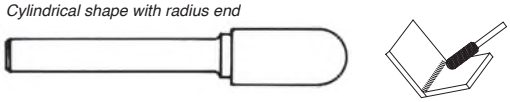
Acciaio *Steel* | Alu | Cu Zn Ni Ms



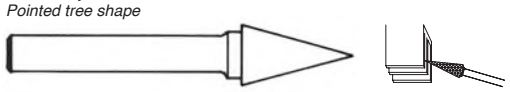
Cilindrica con taglio frontale
Cylindrical shape with end cut



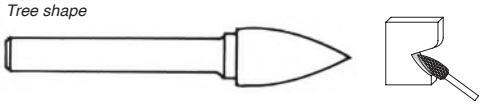
Cilindrica con testa sferica
Cylindrical shape with radius end



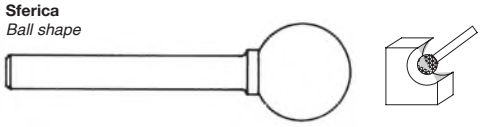
Conica a punta
Pointed tree shape



Ogiva a punta
Tree shape



Sferica
Ball shape



HV 0,05 ≈ 3300				26031 Z2	26032 Z3
Ø	/	L	d	cod.	cod.
6	20	60	6	2603100106	2603200106
8	30	70	6	2603100108	2603200108
10	30	70	6	2603100110	2603200110
12	30	70	6	2603100112	2603200112
15	30	70	6	2603100115	2603200115
6	20	60	6	2603100206	2603200206
8	30	70	6	2603100208	2603200208
10	30	70	6	2603100210	2603200210
12	30	70	6	2603100212	2603200212
15	30	70	6	2603100215	2603200215
6	20	60	6	2603100306	2603200306
8	30	70	6	2603100308	2603200308
10	30	70	6	2603100310	2603200310
12	30	70	6	2603100312	2603200312
15	30	70	6	2603100315	2603200315
6	20	60	6	2603100406	2603200406
8	30	70	6	2603100408	2603200408
10	30	70	6	2603100410	2603200410
12	30	70	6	2603100412	2603200412
15	30	70	6	2603100415	2603200415
6	5	50	6	2603100506	2603200506
8	7	52	6	2603100508	2603200508
10	9	54	6	2603100510	2603200510
12	10	55	6	2603100512	2603200512
15	14	59	6	2603100515	2603200515



5 pcs Ø10 Z2 **26035203**

5 pcs Ø10 Z3 **26035201**

5 pcs Ø12 Z2 **26035204**

5 pcs Ø12 Z3 **26035200**



Abs

10 pcs Ø10 Z2+Z3
Tutte le forme - *All the shapes*
26035401

10 pcs Ø12 Z2+Z3
Tutte le forme - *All the shapes*
26035402



Abs

5 pcs Ø10 Z3
Tutte le forme - *All the shapes*
26035404

5 pcs Ø12 Z3
Tutte le forme - *All the shapes*
26035405



50 pcs Z2+Z3: Ø 6-8-10-12-15
Tutte le forme - *All the shapes*
26035501

FRESE ROTATIVE IN METALLO DURO CON TAGLI HM3 E HM4

HM3 and HM4 cut carbide rotary files / Fraises rotatives carbure avec HM3 et HM4 coupants
Fresas rotativas de metal duro con HM3 y HM4 cortantes / Hartmetall Fräserstifte HM3 und HM4

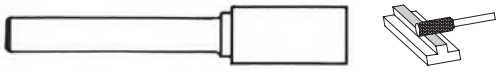
26015 26020

Metallo duro K20 / Solid carbide K20

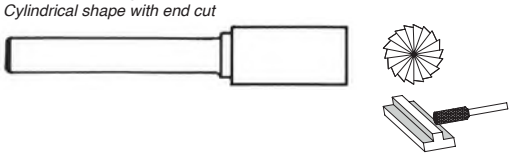
Grana fine / Fine grain
Utilizzo universale / Universal uses



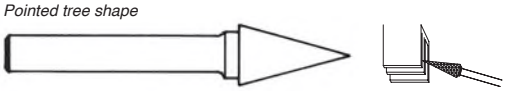
Cilindrica con fronte liscia
Cylindrical shape



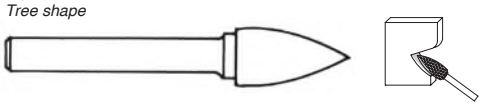
Cilindrica con taglio frontale
Cylindrical shape with end cut



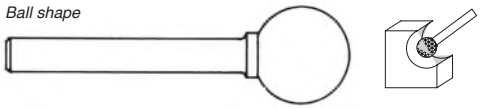
Conica a punta
Pointed tree shape



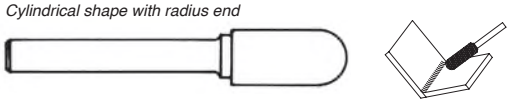
Ogiva a punta
Tree shape



Sferica
Ball shape



Cilindrica con testa sferica
Cylindrical shape with radius end



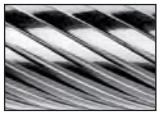
Confezione *Packaging*



Applicazioni *Applications*

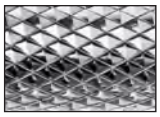


26015 HM3



TAGLIO STANDARD per acciaio, acciaio temprato, ghisa, cordoni di saldatura, materiali metallici in genere. Buon grado di finitura con ottimi rendimenti.
Velocità consigliata: 300÷400 m/min.
Standard cut in low and high tensile steel, welded points, metals.
Cutting speed: 300÷400 m/min.

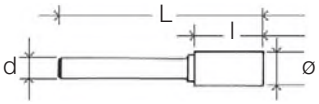
26020 HM4



TAGLIO INCROCIATO per acciaio trattato, acciaio inox, materiali metallici in genere. Vibrazioni ridotte, buona finitura superficiale, ottimi rendimenti.
Velocità consigliata: 300÷400 m/min.
Diamond cut: finish work in high alloy steel, stainless steel, metals, less vibrations, high performances. Cutting speed: 300÷400 m/min.

Ø	/	L	d	26015 HM3 cod.	26020 HM4 cod.
*3	16	38	3	2601500103	2602000103
4	14	50	6	2601500104	2602000104
6	18	50	6	2601500106	2602000106
8	18	63	6	2601500108	2602000108
10	20	65	6	2601500110	2602000110
12	25	70	6	2601500112	2602000112
16	25	70	6	2601500116	2602000116
*3	16	38	3	2601500203	2602000203
4	14	50	6	2601500204	2602000204
6	18	50	6	2601500206	2602000206
8	18	63	6	2601500208	2602000208
10	20	65	6	2601500210	2602000210
12	25	70	6	2601500212	2602000212
16	25	70	6	2601500216	2602000216
*3	16	38	3	2601500303	2602000303
4	14	50	6	2601500304	2602000304
6	18	50	6	2601500306	2602000306
8	18	63	6	2601500308	2602000308
10	20	65	6	2601500310	2602000310
12	25	70	6	2601500312	2602000312
16	25	70	6	2601500316	2602000316
*3	16	38	3	2601500403	2602000403
4	14	50	6	2601500404	2602000404
6	18	50	6	2601500406	2602000406
8	18	63	6	2601500408	2602000408
10	20	65	6	2601500410	2602000410
12	25	70	6	2601500412	2602000412
16	25	70	6	2601500416	2602000416
*3	3	38	3	2601500503	2602000503
4	4	50	6	2601500504	2602000504
6	5	50	6	2601500506	2602000506
8	7	63	6	2601500508	2602000508
10	9	65	6	2601500510	2602000510
12	10	70	6	2601500512	2602000512
16	14	70	6	2601500516	2602000516
*3	16	38	3	2601500603	2602000603
4	14	50	6	2601500604	2602000604
6	18	50	6	2601500606	2602000606
8	18	63	6	2601500608	2602000608
10	20	65	6	2601500610	2602000610
12	25	70	6	2601500612	2602000612
16	25	70	6	2601500616	2602000616

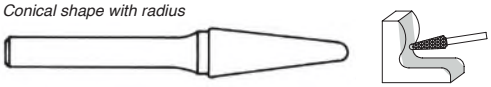
*** Microfrese /** Micro rotary files



FRESE ROTATIVE IN METALLO DURO CON TAGLI HM3 E HM4

HM3 and HM4 cut carbide rotary files / Fraises rotatives carbure avec HM3 et HM4 coupants
Fresas rotativas de metal duro con HM3 y HM4 cortantes / Hartmetall Fräserstifte HM3 und HM4

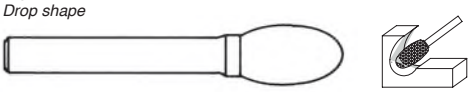
Conica a punta arrotondata
Conical shape with radius



Ogiva a punta arrotondata o a fiamma
Tree shape with radius



A goccia
Drop shape



Ø	/	L	d	26015 HM3 cod.	26020 HM4 cod.
*3	16	38	3	2601500703	2602000703
4	14	50	6	2601500704	2602000704
6	18	50	6	2601500706	2602000706
8	18	63	6	2601500708	2602000708
10	20	65	6	2601500710	2602000710
12	25	70	6	2601500712	2602000712
16	25	70	6	2601500716	2602000716
*3	16	38	3	2601500803	2602000803
4	14	50	6	2601500804	2602000804
6	18	50	6	2601500806	2602000806
8	18	63	6	2601500808	2602000808
10	20	65	6	2601500810	2602000810
12	25	70	6	2601500812	2602000812
16	25	70	6	2601500816	2602000816
*3	6	38	3	2601500903	2602000903
4	6	50	6	2601500904	2602000904
6	10	50	6	2601500906	2602000906
8	13	58	6	2601500908	2602000908
10	16	61	6	2601500910	2602000910
12	20	65	6	2601500912	2602000912
16	25	70	6	2601500916	2602000916



5 pcs Ø10 HM3 **26030206**

5 pcs Ø10 HM4 **26030203**

5 pcs Ø12 HM3 **26030207**

5 pcs Ø12 HM4 **26030202**



Abs

10 pcs Ø10 HM3+HM4
Tutte le forme - *All the shapes*
26030401

10 pcs Ø12 HM3+HM4
Tutte le forme - *All the shapes*
26030402

5 pcs Ø8 HM4
5 pcs Ø12 HM4
26030403



Abs

5 pcs Ø10 HM4



26030404

5 pcs Ø12 HM4



26030405



45 pcs
Ø 6-8-10-12-16 HM4
26030502

FRESE ROTATIVE IN METALLO DURO RIVESTITE AL TiAlN CON TAGLI HM3 E HM4

HM3 and HM4 cut carbide rotary files TiAlN coated / Fraises rotatives au carbure revêtues au TiAlN avec HM3 et HM4 coupants
Fresas rotativas de metal duro con recrubimiento de TiAlN con HM3 y HM4 cortantes / Hartmetall Fräserstifte TiAlN-beschichtet HM3 und HM4

26033 26034

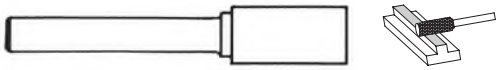
K20 + TiAlN / Carbide K20 + TiAlN

Grana fine / Fine grain
Utilizzo universale / Universal uses

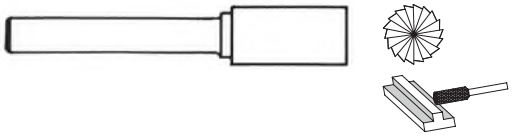


443

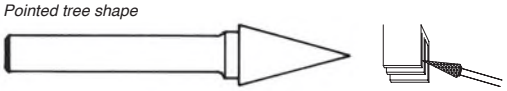
Cilindrica con fronte liscia
Cylindrical shape



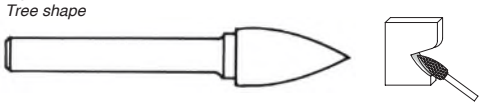
Cilindrica con taglio frontale
Cylindrical shape with end cut



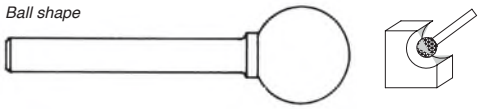
Conica a punta
Pointed tree shape



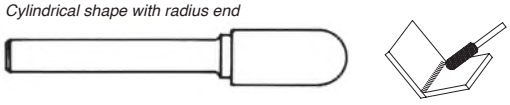
Ogiva a punta
Tree shape



Sferica
Ball shape



Cilindrica con testa sferica
Cylindrical shape with radius end



Confezione *Packaging*

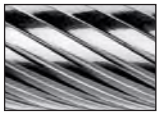


Applicazioni *Applications*



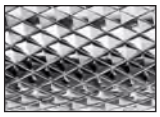
Inox — **Acciaio** *Steel* — **Metals**

26033 HM3



TAGLIO STANDARD per acciaio, acciaio temprato, ghisa, cordoni di saldatura, materiali metallici in genere. Buon grado di finitura con ottimi rendimenti.
Velocità consigliata: 450÷600 m/min.
Standard cut in low and high tensile steel, welded points, metals.
Cutting speed: 450÷600 m/min.

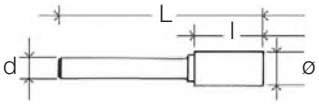
26034 HM4



TAGLIO INCROCIATO per acciaio trattato, acciaio inox, materiali metallici in genere. Vibrazioni ridotte, buona finitura superficiale, ottimi rendimenti.
Velocità consigliata: 450÷600 m/min.
Diamond cut: finish work in high alloy steel, stainless steel, metals, less vibrations, high performances. Cutting speed: 450÷600 m/min.

Ø	/	L	d	26033 HM3 cod.	26034 HM4 cod.
*3	16	38	3	2603300103	2603400103
4	14	50	6	2603300104	2603400104
6	18	50	6	2603300106	2603400106
8	18	63	6	2603300108	2603400108
10	20	65	6	2603300110	2603400110
12	25	70	6	2603300112	2603400112
16	25	70	6	2603300116	2603400116
*3	16	38	3	2603300203	2603400203
4	14	50	6	2603300204	2603400204
6	18	50	6	2603300206	2603400206
8	18	63	6	2603300208	2603400208
10	20	65	6	2603300210	2603400210
12	25	70	6	2603300212	2603400212
16	25	70	6	2603300216	2603400216
*3	16	38	3	2603300303	2603400303
4	14	50	6	2603300304	2603400304
6	18	50	6	2603300306	2603400306
8	18	63	6	2603300308	2603400308
10	20	65	6	2603300310	2603400310
12	25	70	6	2603300312	2603400312
16	25	70	6	2603300316	2603400316
*3	16	38	3	2603300403	2603400403
4	14	50	6	2603300404	2603400404
6	18	50	6	2603300406	2603400406
8	18	63	6	2603300408	2603400408
10	20	65	6	2603300410	2603400410
12	25	70	6	2603300412	2603400412
16	25	70	6	2603300416	2603400416
*3	3	38	3	2603300503	2603400503
4	4	50	6	2603300504	2603400504
6	5	50	6	2603300506	2603400506
8	7	63	6	2603300508	2603400508
10	9	65	6	2603300510	2603400510
12	10	70	6	2603300512	2603400512
16	14	70	6	2603300516	2603400516
*3	16	38	3	2603300603	2603400603
4	14	50	6	2603300604	2603400604
6	18	50	6	2603300606	2603400606
8	18	63	6	2603300608	2603400608
10	20	65	6	2603300610	2603400610
12	25	70	6	2603300612	2603400612
16	25	70	6	2603300616	2603400616

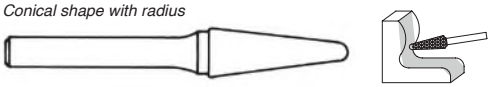
*** Microfrese /** Micro rotary files



FRESE ROTATIVE IN METALLO DURO RIVESTITE AL TiAlN CON TAGLI HM3 E HM4

HM3 and HM4 cut carbide rotary files TiAlN coated / Fraises rotatives au carbure revêtues au TiAlN avec HM3 et HM4 coupants
Fresas rotativas de metal duro con recrubimiento de TiAlN con HM3 y HM4 cortantes / Hartmetall Fräserstifte TiAlN-beschichtet HM3 und HM4

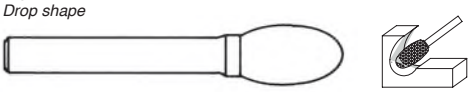
Conica a punta arrotondata
Conical shape with radius



Ogiva a punta arrotondata o a fiamma
Tree shape with radius



A goccia
Drop shape



Ø	/	L	d	26033 HM3 cod.	26034 HM4 cod.
*3	16	38	3	2603300703	2603400703
4	16	50	6	2603300704	2603400704
6	18	50	6	2603300706	2603400706
8	18	63	6	2603300708	2603400708
10	20	65	6	2603300710	2603400710
12	25	70	6	2603300712	2603400712
16	25	70	6	2603300716	2603400716
*3	16	38	3	2603300803	2603400803
4	14	50	6	2603300804	2603400804
6	18	50	6	2603300806	2603400806
8	18	63	6	2603300808	2603400808
10	20	65	6	2603300810	2603400810
12	25	70	6	2603300812	2603400812
16	25	70	6	2603300816	2603400816
*3	6	38	3	2603300903	2603400903
4	6	50	6	2603300904	2603400904
6	10	50	6	2603300906	2603400906
8	13	58	6	2603300908	2603400908
10	16	61	6	2603300910	2603400910
12	20	65	6	2603300912	2603400912
16	25	70	6	2603300916	2603400916



5 pcs Ø10 HM3 **26030210**

5 pcs Ø10 HM4 **26030211**

5 pcs Ø12 HM3 **26030212**

5 pcs Ø12 HM4 **26030213**



Abs

10 pcs Ø10 HM3+HM4
Tutte le forme - *All the shapes*
26030410

10 pcs Ø12 HM3+HM4
Tutte le forme - *All the shapes*
26030411



Abs

5 pcs Ø10 HM4



26030412

5 pcs Ø12 HM4



26030413



45 pcs Ø 6-8-10-12-16 HM4
Tutte le forme - *All the shapes*
26030504

FRESE ROTATIVE IN METALLO DURO CON TAGLIO HM3 PLUS

HM3 PLUS cut carbide rotary files / Fraises rotatives carbure avec HM3 PLUS coupant
Fresas rotativas de metal duro con HM3 PLUS cortantes / Hartmetall Fräserstifte HM3 PLUS

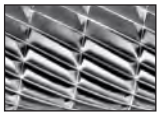
26016

Metallo duro K20 / Solid carbide K20

Grana fine / Fine grain
Utilizzo universale / Universal uses

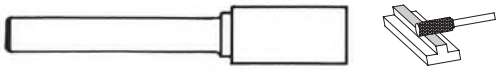


26016 HM3 PLUS

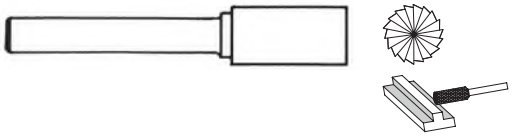


TAGLIO STANDARD CON ROMPITRUCIOLO per acciaio, acciaio temprato, ghisa, cordoni di saldatura, materiali metallici in genere. Buon grado di finitura con ottimi rendimenti. Velocità consigliata: 450÷600 m/min.
Standard cut with chip breaker in low and high tensile steel, welded points, metals. Cutting speed: 450÷600 m/min.

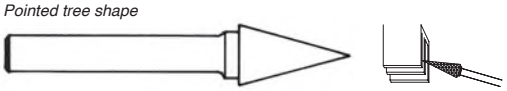
Cilindrica con fronte liscia
Cylindrical shape



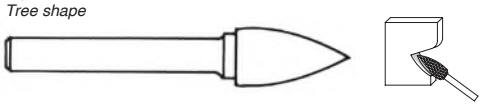
Cilindrica con taglio frontale
Cylindrical shape with end cut



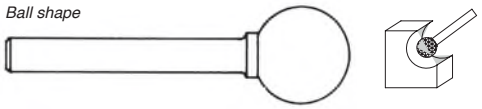
Conica a punta
Pointed tree shape



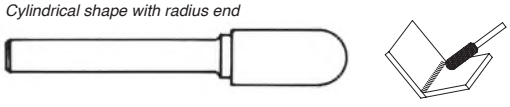
Ogiva a punta
Tree shape



Sferica
Ball shape

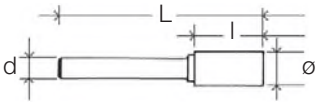


Cilindrica con testa sferica
Cylindrical shape with radius end



Ø	/	L	d	cod.
*3	16	38	3	2601600103
4	14	50	6	2601600104
6	18	50	6	2601600106
8	18	63	6	2601600108
10	20	65	6	2601600110
12	25	70	6	2601600112
16	25	70	6	2601600116
*3	16	38	3	2601600203
4	14	50	6	2601600204
6	18	50	6	2601600206
8	18	63	6	2601600208
10	20	65	6	2601600210
12	25	70	6	2601600212
16	25	70	6	2601600216
*3	16	38	3	2601600303
4	14	50	6	2601600304
6	18	50	6	2601600306
8	18	63	6	2601600308
10	20	65	6	2601600310
12	25	70	6	2601600312
16	25	70	6	2601600316
*3	16	38	3	2601600403
4	14	50	6	2601600404
6	18	50	6	2601600406
8	18	63	6	2601600408
10	20	65	6	2601600410
12	25	70	6	2601600412
16	25	70	6	2601600416
*3	3	38	3	2601600503
4	4	50	6	2601600504
6	5	50	6	2601600506
8	7	63	6	2601600508
10	9	65	6	2601600510
12	10	70	6	2601600512
16	14	70	6	2601600516
*3	16	38	3	2601600603
4	14	50	6	2601600604
6	18	50	6	2601600606
8	18	63	6	2601600608
10	20	65	6	2601600610
12	25	70	6	2601600612
16	25	70	6	2601600616

*** Microfrese** / Micro rotary files



Confezione *Packaging*



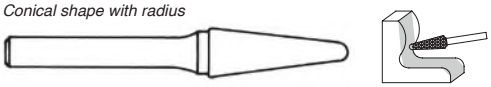
Applicazioni *Applications*



FRESE ROTATIVE IN METALLO DURO CON TAGLIO HM3 PLUS

HM3 PLUS cut carbide rotary files / Fraises rotatives carbure avec HM3 PLUS coupant
Fresas rotativas de metal duro con HM3 PLUS cortantes / Hartmetall Fräserstifte HM3 PLUS

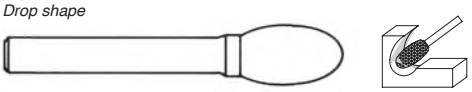
Conica a punta arrotondata
Conical shape with radius



Ogiva a punta arrotondata o a fiamma
Tree shape with radius



A goccia
Drop shape



Ø	/	L	d	cod.
*3	16	38	3	2601600703
4	14	50	6	2601600704
6	18	50	6	2601600706
8	18	63	6	2601600708
10	20	65	6	2601600710
12	25	70	6	2601600712
16	25	70	6	2601600716
*3	16	38	3	2601600803
4	14	50	6	2601600804
6	18	50	6	2601600806
8	18	63	6	2601600808
10	20	65	6	2601600810
12	25	70	6	2601600812
16	25	70	6	2601600816
*3	6	38	3	2601600903
4	6	50	6	2601600904
6	10	50	6	2601600906
8	13	58	6	2601600908
10	16	61	6	2601600910
12	20	65	6	2601600912
16	25	70	6	2601600916



Abs

5 pcs Ø10



26030416

5 pcs Ø12 HM4



26030417

5 pcs Ø8
5 pcs Ø12



26030415

FRESE ROTATIVE IN METALLO DURO, SERIE LUNGA

Carbide rotary files, long series - Fraises rotatives carbure, série longue
Fresas rotativas de metal duro, serie larga - Hartmetall Fräserstifte, lange Ausführung

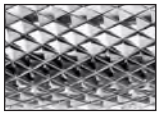
26028 26027

Metallo duro K20 / Solid carbide K20

Grana fine / Fine grain
Utilizzo universale / Universal uses

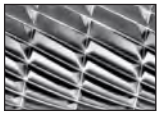


26028 HM4



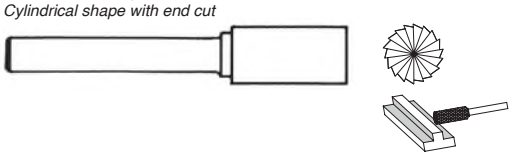
TAGLIO INCROCIATO per acciaio trattato, acciaio inox, materiali metallici in genere. Vibrazioni ridotte, buona finitura superficiale, ottimi rendimenti. Velocità consigliata: 300÷400 m/min.
Diamond cut: finish work in high alloy steel, stainless steel, metals, less vibrations, high performances. Cutting speed: 300÷400 m/min.

26027 HM3 PLUS

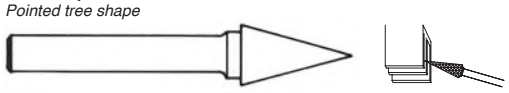


TAGLIO STANDARD CON ROMPITRUCIOLO per acciaio, acciaio temprato, ghisa, cordoni di saldatura, materiali metallici in genere. Buon grado di finitura con ottimi rendimenti. Velocità consigliata: 450÷600 m/min.
Standard cut with chip breaker in low and high tensile steel, welded points, metals. Cutting speed: 450÷600 m/min.

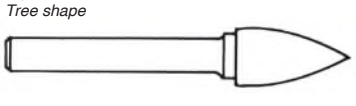
Cilindrica con taglio frontale
Cylindrical shape with end cut



Conica a punta
Pointed tree shape



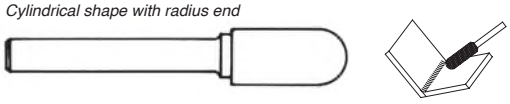
Ogiva a punta
Tree shape



Sferica
Ball shape



Cilindrica con testa sferica
Cylindrical shape with radius end



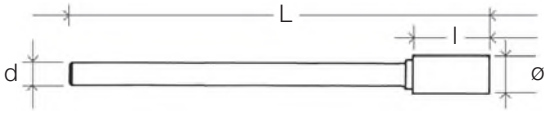
				26028 HM4	26027 HM3 PLUS
Ø	/	L	d	cod.	cod.
8	18	120	6	2602800208	2602700208
12	25	120	6	2602800212	2602700212
8	18	120	6	2602800308	2602700308
12	25	120	6	2602800312	2602700312
8	18	120	6	2602800408	2602700408
12	25	120	6	2602800412	2602700412
8	7	120	6	2602800508	2602700508
12	10	120	6	2602800512	2602700512
8	18	120	6	2602800608	2602700608
12	25	120	6	2602800612	2602700612

Confezione *Packaging*



Applicazioni *Applications*





FRESE ROTATIVE IN METALLO DURO, SPECIALE PER ALLUMINIO

Cobalt twist drills ground from the solid / Forets cylindriques au cobalt entièrement rectifiés
Broca helicoidale rectificada de cobalto / Kobalt Spiralbohrer

26025

Metallo duro K20 / Solid carbide K20

Grana fine / Fine grain
Utilizzo universale / Universal uses



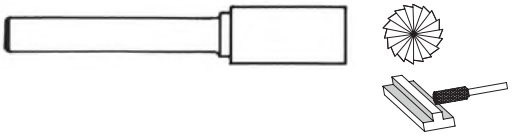
Alu

HM1

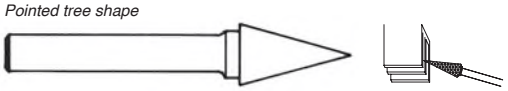


TAGLIO ALLUMINIO adatto a alluminio, magnesio, plastiche e gomma dura. Buon rendimento con un alto tasso di asportazione del materiale, che previene l'incollaggio dei trucioli.
ALUMINIUM CUT suitable for cutting into aluminium, magnesium, plastic and hard rubber. High efficiency with good removal rate, thus preventing the chips clogging the tool.

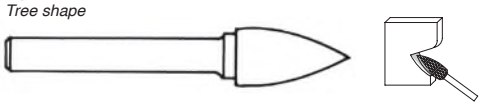
Cilindrica con taglio frontale
Cylindrical shape with end cut



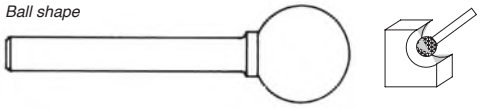
Conica a punta
Pointed tree shape



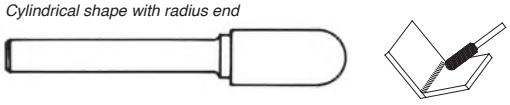
Ogiva a punta
Tree shape



Sferica
Ball shape



Cilindrica con testa sferica
Cylindrical shape with radius end

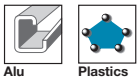


Ø	/	L	d	26025 Serie corta / Short serie cod.	26026 L=120mm Serie lunga / Long serie cod.
6	18	61	6	2602500206	-
8	18	65	6	2602500208	2602600208
10	20	65	6	2602500210	-
12	25	70	6	2602500212	2602600212
16	25	70	6	2602500216	-
6	18	63	6	2602500306	-
8	18	65	6	2602500308	2602600308
10	20	65	6	2602500310	-
12	25	70	6	2602500312	2602600312
16	25	70	6	2602500316	-
6	18	63	6	2602500406	-
8	18	65	6	2602500408	2602600408
10	20	65	6	2602500410	-
12	25	70	6	2602500412	2602600412
16	25	70	6	2602500416	-
6	5	50	6	2602500506	-
8	7	52	6	2602500508	2602600508
10	9	54	6	2602500510	-
12	10	56	6	2602500512	2602600512
16	14	60	6	2602500516	-
6	18	61	6	2602500606	-
8	18	65	6	2602500608	2602600608
10	20	65	6	2602500610	-
12	25	70	6	2602500612	2602600612
16	25	70	6	2602500616	-

Confezione *Packaging*



Applicazioni *Applications*



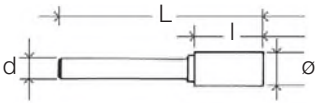


Abs

5 pcs Ø10



26030430



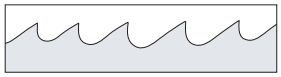
SEGHE A TAZZA BIMETALLICHE HSS A DENTATURA VARIABILE

HSS bimetal hole saws / Scies trépans bimetal HSS
Coronas perforadoras bimetalicas HSS / HSS-bimetall Lochsägen

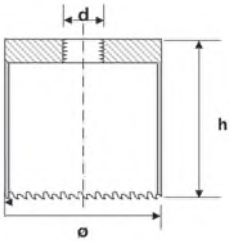
21060
21062



Variabile - *Variable Z 4-6*



BIM. - HSS M3/1



h	ø
57±1	14÷17
51±1	19÷37
44±1	38÷305

Art. **21068** Self
Disponibile su richiesta / *On demand*

HSS M3/1




Ø mm	Ø Pollici *Inch*	d Filetto *Thread*	21060 cod.	21062 cod.
14	9/16	UNF 1/2 x 20	2106001400	2106201400
16	5/8		2106001600	2106201600
17	11/16		2106001700	2106201700
19	3/4		2106001900	2106201900
20			2106002000	2106202000
21	13/16		2106002100	2106202100
22	7/8		2106002200	2106202200
24	15/16		2106002400	2106202400
25	1"		2106002500	2106202500
27	1,1/16		2106002700	2106202700
29	1,1/8		2106002900	2106202900
30	1,3/16		2106003000	2106203000
32	1,1/4	UNF 5/8 x 18	2106003200	2106203200
33	1,5/16		2106003300	2106203300
35	1,3/8		2106003500	2106203500
37	1,7/16		2106003700	2106203700
38	1,1/2		2106003800	2106203800
40	1,9/16		2106004000	2106204000
41	1,5/8		2106004100	2106204100
43	1,11/16		2106004300	2106204300
44	1,3/4		2106004400	2106204400
45	-		2106004500	2106204500
46	1,13/16		2106004600	2106204600
48	1,7/8		2106004800	2106204800
50	-		2106005000	2106205000
51	2"		2106005100	2106205100
52	2,1/16		2106005200	2106205200
54	2,1/8		2106005400	2106205400
55	-		2106005500	2106205500
56	-		2106005600	2106205600
57	2,1/4		2106005700	2106205700
59	2,5/16		2106005900	2106205900
60	2,3/8		2106006000	2106206000
62	-		2106006200	2106206200
64	2,1/2		2106006400	2106206400
65	2,9/16		2106006500	2106206500
67	2,5/8		2106006700	2106206700
68	-		2106006800	2106206800
70	2,3/4		2106007000	2106207000
73	2,7/8		2106007300	2106207300
75	-		2106007500	2106207500
76	3"		2106007600	2106207600
79	3,1/8		2106007900	2106207900
83	3,1/4		2106008300	2106208300
86	3,3/8		2106008600	2106208600
89	3,1/2		2106008900	2106208900
92	3,5/8		2106009200	2106209200
95	3,3/4		2106009500	2106209500
98	3,7/8		2106009800	2106209800
100	-		2106010000	2106210000
102	4"		2106010200	2106210200
105	4,1/8		2106010500	2106210500
108	4,1/4		2106010800	2106210800
111	4,3/8		2106011100	2106211100
114	4,1/2		2106011400	2106211400
121	4,3/4		2106012100	2106212100
127	5"		2106012700	2106212700
133	5,1/4		2106013300	2106213300
140	5,1/2		2106014000	2106214000
146	5,3/4"		2106014600	2106214600
152	6"		2106015200	2106215200
160	6,5/16		2106016000	-
168	6,5/8		2106016800	-
177	6,31/32		2106017700	-
200	7,7/8		2106020000	-
210	8,5/16		2106021000	-
220	8",3/4		2106022000	-
233	9",1/8		2106023300	-
250	9",7/8		2106025000	-
260	10",1/4		2106026000	-
265	10",1/2		2106026500	-
280	11"		2106028000	-
305	12"		2106030500	-

Confezione / *Packaging*




21060 **21062**

Applicazioni / *Applications*





- Seghe bimetalliche HSS a dentatura variabile e spoglia positiva per il taglio altamente professionale di qualsiasi materiale a spessore sottile quale acciaio, ghisa, alluminio, rame, bronzo, ottone, legno, plastica, fibra di vetro, resine sintetiche, formica, cartongesso. Grande rendimento e durata, taglio pulito, max. profondità di foratura 5 mm.
- Variable tooth bimetal hole saws for faster and smoother cuts in: iron, steel, aluminium, brass, copper, cast iron, stainless steel, wood and plywood, plastics, fibreglass etc… Max. cutting depth: 13/64.
- Scies cloches bimetal-HSS à denture progressive pour l'emploi professionel. Pour percer les métaux, fer, fonte, acier inox, bois, plastique. Profondeur de coupe: 5 mm.
- Coronas perforadoras bimetalicas HSS con diente variable y angulo positivo para taladrar acero, laton, bronce, aluminio, madera, plastico etc. Profondidad de corte: 5 mm.
- HSS Bi-Metall-Lochsägen mit vario-verzahnung für schnellen Bohrfortschritt in Stahl, Guss, Küpfer, Bronze, Aluminium, Kunstoffe, Gipskarton, Holz.

ALBERI PER SEGHE A TAZZA BIMETAL (INTERCAMBIABILI CON QUALSIASI ALTRA MARCA)

Arbors for bimetal hole saws / Arbres de montage pour scies trépans bimetal
Husillos para coronas bimetalicas / Aufnahmeschäfte

ALBERI PER SEGHE BIMETAL Ø 14÷30 mm - *Fit hole saws Ø 14÷30*

210705514



210705515
Q.C.



210705519
210705519B



210705518

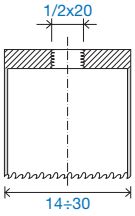


210705519 SDS
210705519 SDSB



SDS-PLUS

Per seghe *Fit hole saws*	d mm	cod.
Ø 14 ÷ 30	Ø 6,35	210705514
Ø 14 ÷ 30	HEX 6,35 Q.C.	210705515
Ø 14 ÷ 17	HEX 8,5	210705519B
Ø 19 ÷ 30	HEX 8,5	210705519
Ø 14 ÷ 30	HEX 11	210705518
Ø 14 ÷ 17	SDS PLUS	210705519SDSB
Ø 19 ÷ 30	SDS PLUS	210705519SDS



ALBERI PER SEGHE BIMETAL Ø 32÷305 mm - *Fit hole saws Ø 32÷305*

210705520



210705521
Q.C.



210705546



210705547



210705548
Q.C.



210705546 SDS



SDS-PLUS

210705549 SDS



SDS-PLUS

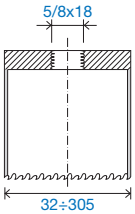
210705546



210705545



Per seghe *Fit hole saws*	d mm	cod.
Ø 32 ÷ 305	HEX 11	210705520
Ø 32 ÷ 305	HEX 6,35 Q.C.	210705521
Ø 32 ÷ 305	HEX 8,5	210705546
Ø 32 ÷ 305	HEX 11	210705547
Ø 32 ÷ 305	HEX 8,5 Q.C.	210705548
Ø 32 ÷ 305	SDS PLUS	210705546SDS
Ø 32 ÷ 305	SDS PLUS	210705549SDS
Ø 32 ÷ 305	HEX 11	210705545
Ø 32 ÷ 305	HEX 16	210705573



Art. **21071** Self
Disponibile su richiesta / *On demand*

21070200



21070202



21070201



21070300



21070302



Confezione
Packaging



Punta pilota *Pilot drill*	Per alberi *Fit arbors*	cod.
Ø 6,35 x 105	5514-5520 5545-5573-5518	21070200
Ø 6,35 x 90	5519B-5519SDSB	21070202
Ø 6,35 x 80	5515-5519-5519SDS 5521-5546-5546SDS 5547-5548-5549SDS	21070201
Adattatore - montato su alberi 5514-5519 permette di portare frese da Ø 32 a Ø 305 *Arbor adapter - Allows 5514-5519 to be used with 1.1/4" through 6" hole saws*		21070300
Prolunga - HEX 11 L = 300 mm *12" extension - to be used with arbors 5518-5520-5547-5545*		21070302

ASSORTIMENTI SEGHE A TAZZA BIMETALLICHE HSS IN VALIGETTE DI PLASTICA

HSS Bi-metal hole saws kits in plastic cases / Assortiments de scies trépans HSS bimetal en coffret plastique
Juegos de coronas perforadoras bimetalica HSS en estuche de plastico / HSS Lochsägen Sortimente in Plastikköfferchen

Variabile - *Variable* Z 4-6

BIM. - HSS M3/1

Kit per elettricisti - *Electrician's kit*



Cod.	Composizione *Description*
21080201K Ø 22÷64 6 pcs	Ø 22-29-35 44-51-64 5519 - 5546 1
21080202K Ø 16÷51 (METRIC) 6 pcs	Ø 16-20-25 32-40-51 5519 - 5546 1



Cod.	Composizione *Description*
21080209K Ø 22÷68 7 pcs	Ø 22-29-35 38-44-51 68 5519 - 5546 1
21080207K Ø 16÷60 (Pg 9÷48) 13 pcs	Ø 16-19-20-21 22-25-29-32 38-48-51-54 60 5519 - 5546 1 1

Kit per idraulici - *Plumber's kit*



Cod.	Composizione *Description*
21080204K Ø 19÷57 6 pcs	Ø 19-22-29 38-44-57 5519 - 5546 1

Kit per installatori - *Journeyman's kit*



Cod.	Composizione *Description*
21080205K Ø 19÷64 9 pcs	Ø 19-22-29-35 38-44-51-57 64 5519 - 5546 1 1



Cod.	Composizione *Description*
21080211K Ø 20÷64 11 pcs	Ø 20-22-25-30 32-35-40-44 51-60-64 5519 - 5546 1

Kit per installatori - *Journeyman's kit*



Cod.	Composizione *Description*
21080212K Ø 19÷83 11 pcs	Ø 19-22-25-30 35-40-51-60 64-76-83 5519 - 5546 1

Kit industriale - *Industrial kit*



Cod.	Composizione *Description*
21080206K Ø 19÷114 15 pcs	Ø 19-22-29-35 38-44-51-57 64-76-83-92 95-105-114 5519 - 5546 1

ESPOSITORE SEGHE A TAZZA BIMETALLICHE HSS

Bimetal hole saws display - Display de scies trépans bimetal
Expositor de coronas bimetalicas - Lochsägen Sortimente

21080504K



23x18x50 cm

Cod.	Composizione *Description*	
21080504K Ø 16÷102 49 pcs	Ø Sega *Hole saw*	pcs
	16	2
	19	2
	20	2
	22	2
	25	2
	30	2
	32	2
	35	2
	38	2
	40	2
	48	2
	51	2
	57	2
	60	2
	70	2
	83	2
	102	2
	5519 14÷30	4
	5546 32÷210	6
	21070201	5

21080503K



Cod.	Composizione *Description*	
21080503K Ø 16÷83 24 pcs	Ø Sega *Hole saw*	pcs
	16	1
	19	1
	20	1
	22	1
	25	1
	27	1
	29	1
	30	1
	32	1
	35	1
	38	1
	40	1
	44	1
	51	1
	54	1
	60	1
	64	1
	70	1
	76	1
	83	1
	5519 14÷30	2
	5546 32÷210	2

SEGHE A TAZZA BIMETALLICHE HSS A DENTATURA VARIABILE

HSS bimetal hole saws / Scies trépans bimetal HSS
Coronas perforadoras bimetalicas HSS / HSS-bimetall Lochsägen

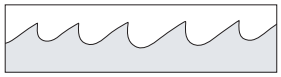
Personalizza con il tuo logo
Put your private label

Finitura nera / *Black finish*

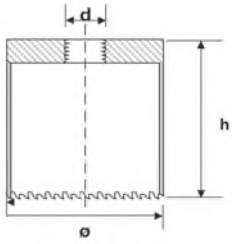
21066



Variabile - *Variable Z 4-6*



BIM. - HSS M3/1



h	ø
57±1	14÷17
51±1	19÷37
44±1	38÷210

Confezione / *Packaging*

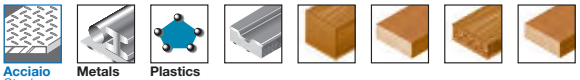


Esempio Krino
Krino example

HSS M3/1

Ø mm	Ø Pollici *Inch*	d Filetto *Thread*	cod.
14	9/16	UNF 1/2 x 20	2106601400
16	5/8		2106601600
17	11/16		2106601700
19	3/4		2106601900
20			2106602000
21	13/16		2106602100
22	7/8		2106602200
24	15/16		2106602400
25	1"		2106602500
27	1,1/16		2106602700
29	1,1/8		2106602900
30	1,3/16		2106603000
32	1,1/4	UNF 5/8 x 18	2106603200
33	1,5/16		2106603300
35	1,3/8		2106603500
37	1,7/16		2106603700
38	1,1/2		2106603800
40	1,9/16		2106604000
41	1,5/8		2106604100
43	1,11/16		2106604300
44	1,3/4		2106604400
45	-		2106604500
46	1,13/16		2106604600
48	1,7/8		2106604800
50	-		2106605000
51	2"		2106605100
52	2,1/16		2106605200
54	2,1/8		2106605400
55	-		2106605500
56	-		2106605600
57	2,1/4		2106605700
59	2,5/16		2106605900
60	2,3/8		2106606000
62	-		2106606200
64	2,1/2		2106606400
65	2,9/16		2106606500
67	2,5/8		2106606700
68	-		2106606800
70	2,3/4		2106607000
73	2,7/8		2106607300
75	-		2106607500
76	3"		2106607600
79	3,1/8		2106607900
83	3,1/4		2106608300
86	3,3/8		2106608600
89	3,1/2		2106608900
92	3,5/8		2106609200
95	3,3/4		2106609500
98	3,7/8		2106609800
100	-		2106610000
102	4"		2106610200
105	4,1/8		2106610500
108	4,1/4		2106610800
111	4,3/8		2106611100
114	4,1/2		2106611400
121	4,3/4		2106612100
127	5"		2106612700
133	5,1/4		2106613300
140	5,1/2		2106614000
146	5,3/4"		2106614600
152	6"		2106615200
160	6,5/16		2106616000
168	6,5/8		2106616800
177	6,31/32		2106617700
190	7,1/2		2106619000
200	7,7/8		2106620000
210	8,5/16		2106621000

Applicazioni / *Applications*





- Seghe bimetalliche HSS a dentatura variabile e spoglia positiva per il taglio altamente professionale di qualsiasi materiale a spessore sottile quale acciaio, ghisa, alluminio, rame, bronzo, ottone, legno, plastica, fibra di vetro, resine sintetiche, formica, cartongesso. Grande rendimento e durata, taglio pulito, max. profondità di foratura 5 mm.
- Variable tooth bimetal hole saws for faster and smoother cuts in: iron, steel, aluminium, brass, copper, cast iron, stainless steel, wood and plywood, plastics, fibreglass etc… Max. cutting depth: 13/64
- Scies cloches bimetal-HSS à denture progressive pour l'emploi professionel. Pour percer les métaux, fer, fonte, acier inox, bois, plastique. Profondeur de coupe: 5 mm
- Coronas perforadoras bimetalicas HSS con diente variable y angulo positivo para taladrar acero, laton, bronce, aluminio, madera, plastico etc. Profondidad de corte: 5 mm.
- HSS Bi-Metall-Lochsägen mit vario-verzahnung für schnellen Bohrfortschritt in Stahl, Guss, Küpfer, Bronze, Aluminium, Kunstoffe, Gipskarton, Holz.

ALBERI PER SEGHE A TAZZA BIMETAL (INTERCAMBIABILI CON QUALSIASI ALTRA MARCA)

Arbors for bimetal hole saws / Arbres de montage pour scies trépans bimetal
Husillos para coronas bimetalicas / Aufnahmeschäfte

ALBERI PER SEGHE BIMETAL Ø 14÷30 mm - *Fit hole saws Ø 14÷30*

210705514



210705515
Q.C.



210705519
210705519B



210705518

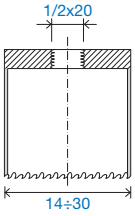


210705519 SDS
210705519 SDSB



SDS-PLUS

Per seghe *Fit hole saws*	d mm	cod.
Ø 14 ÷ 30	Ø 6,35	210705514
Ø 14 ÷ 30	HEX 6,35 Q.C.	210705515
Ø 14 ÷ 17	HEX 8,5	210705519B
Ø 19 ÷ 30	HEX 8,5	210705519
Ø 14 ÷ 30	HEX 11	210705518
Ø 14 ÷ 17	SDS PLUS	210705519SDSB
Ø 19 ÷ 30	SDS PLUS	210705519SDS



ALBERI PER SEGHE BIMETAL Ø 32÷210 mm - *Fit hole saws Ø 32÷210*

210705520



210705521
Q.C.



210705546



210705547



210705548
Q.C.



210705546 SDS



SDS-PLUS

210705549 SDS



SDS-PLUS

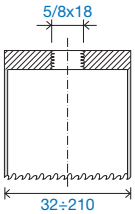
210705545



210705573



Per seghe *Fit hole saws*	d mm	cod.
Ø 32 ÷ 210	HEX 11	210705520
Ø 32 ÷ 210	HEX 6,35 Q.C.	210705521
Ø 32 ÷ 210	HEX 8,5	210705546
Ø 32 ÷ 210	HEX 11	210705547
Ø 32 ÷ 210	HEX 8,5 Q.C.	210705548
Ø 32 ÷ 210	SDS PLUS	210705546SDS
Ø 32 ÷ 210	SDS PLUS	210705549SDS
Ø 32 ÷ 210	HEX 11	210705545
Ø 32 ÷ 210	HEX 16	210705573



21070200



21070202



21070201



21070300



21070302



Punta pilota *Pilot drill*	Per alberi *Fit arbors*	cod.
Ø 6,35 x 105	5514-5520 5545-5573-5518	21070200
Ø 6,35 x 90	5519B-5519SDSB	21070202
Ø 6,35 x 80	5515-5519-5519SDS 5521-5546-5546SDS 5547-5548-5549SDS	21070201
Adattatore - montato su alberi 5514-5519 permette di portare frese da Ø 32 a Ø 210 *Arbor adapter - Allows 5514-5519 to be used with 1.1/4" through 6" hole saws*		21070300
Prolunga - HEX 11 L = 300 mm *12" extension - to be used with arbors 5518-5520-5547-5545*		21070302

Confezione
Packaging



Esempio Krino
Krino example

ASSORTIMENTI PERSONALIZZABILI SEGHE A TAZZA BIMETALLICHE HSS IN VALIGETTE DI PLASTICA

HSS Bi-metal hole saws kits in customizable plastic cases / Assortiments de scies trépans HSS bimetal en coffret plastique
Juegos de coronas perforadoras bimetalica HSS en estuche de plastico / HSS Lochsägen Sortimente in Plastikköfferchen

Variabile - *Variable* Z 4-6

BIM. - HSS M3/1

Esempi Krino - *Krino examples*

Kit per elettricisti - *Electrician's kit*



Cod.	Composizione *Description*
21080201N Ø 22÷64 6 pcs	Ø 22-29-35 44-51-64 5519 - 5546 1
21080202N Ø 16÷51 (METRIC) 6 pcs	Ø 16-20-25 32-40-51 5519 - 5546 1



Cod.	Composizione *Description*
21080209N Ø 22÷68 7 pcs	Ø 22-29-35 38-44-51 68 5519 - 5546 1
21080207N Ø 16÷60 (Pg 9÷48) 13 pcs	Ø 16-19-20-21 22-25-29-32 38-48-51-54 60 5519 - 5546 1 1

Kit per idraulici - *Plumber's kit*



Cod.	Composizione *Description*
21080204N Ø 19÷57 6 pcs	Ø 19-22-29 38-44-57 5519 - 5546 1

Kit per installatori - *Journeyman's kit*



Cod.	Composizione *Description*
21080205N Ø 19÷64 9 pcs	Ø 19-22-29-35 38-44-51-57 64 5519 - 5546 1 1



Cod.	Composizione *Description*
21080211N Ø 20÷64 11 pcs	Ø 20-22-25-30 32-35-40-44 51-60-64 5519 - 5546 1

Kit per installatori - *Journeyman's kit*



Cod.	Composizione *Description*
21080212N Ø 19÷83 11 pcs	Ø 19-22-25-30 35-40-51-60 64-76-83 5519 - 5546 1

Kit industriale - *Industrial kit*



Cod.	Composizione *Description*
21080206N Ø 19÷114 15 pcs	Ø 19-22-29-35 38-44-51-57 64-76-83-92 95-105-114 5519 - 5546 1

ESPOSITORE PERSONALIZZABILE SEGHE A TAZZA BIMETALLICHE HSS

Bimetal hole saws customizable display - Display de scies trépans bimetal
Expositor de coronas bimetalicas - Lochsägen Sortimente

21080504N

Personalizza con il tuo logo
Put your private label



23x18x50 cm

Cod.	Composizione *Description*	
21080504N Ø 16÷102 49 pcs	Ø Sega *Hole saw*	pcs
	16	2
	19	2
	20	2
	22	2
	25	2
	30	2
	32	2
	35	2
	38	2
	40	2
	48	2
	51	2
	57	2
	60	2
	70	2
	83	2
	102	2
	5519 14÷30	4
	5546 32÷210	6
	21070201	5

Esempi Krino - *Krino examples*

21080503N

Personalizza con il tuo logo
Put your private label



Cod.	Composizione *Description*	
21080503N Ø 16÷83 24 pcs	Ø Sega *Hole saw*	pcs
	16	1
	19	1
	20	1
	22	1
	25	1
	27	1
	29	1
	30	1
	32	1
	35	1
	38	1
	40	1
	44	1
	51	1
	54	1
	60	1
	64	1
	70	1
	76	1
	83	1
	5519 14÷30	2
	5546 32÷210	2

Esempi Krino - *Krino examples*

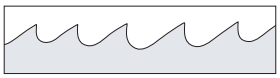
SEGHE A TAZZA BIMETALLICHE AL COBALTO 8% AISI M42 A DENTATURA VARIABILE

HSS-CO 8% AISI M42 bimetal hole saws with variable teeth / Scies trépans bimétalliques HSS-CO 8% AISI M42 avec denture variable
Coronas perforadoras bimetalicas HSS-CO 8% AISI M42 con dentadura variable / HSS-CO 8% AISI M42 Bimetall Lochsägen mit veränderbarer Zahnung

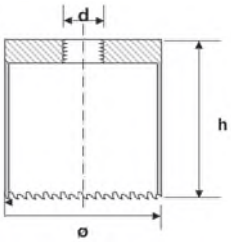
21090
21092



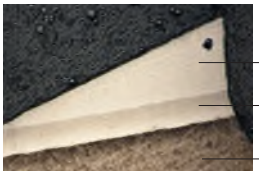
Variabile: nuovo disegno
dei denti più performanti Z 4-6
Variable: new upgrade teeth design Z 4-6



BIM. - HSS-CO 8% AISI M42



h	ø
67±1	14÷17
61±1	19÷37
54±1	38÷152
44±1	160÷305



Microdurezza verificata direttamente sul tagliente
Micro-hardness tested directly on the cutting tooth

Confezione / *Packaging*



21090 **21092**

HSS-CO8% M42			21090	21092
Ø mm	Ø Pollici *Inch*	d Filetto *Thread*	cod.	cod.
14	9/16	UNF 1/2 x 20	2109001400	2109201400
16	5/8		2109001600	2109201600
17	11/16		2109001700	2109201700
19	3/4		2109001900	2109201900
20	-		2109002000	2109202000
21	13/16		2109002100	2109202100
22	7/8		2109002200	2109202200
24	15/16		2109002400	2109202400
25	1"		2109002500	2109202500
27	1,1/16		2109002700	2109202700
29	1,1/8		2109002900	2109202900
30	1,3/16		2109003000	2109203000
32	1,1/4	UNF 5/8 x 18	2109003200	2109203200
33	1,5/16		2109003300	2109203300
35	1,3/8		2109003500	2109203500
37	1,7/16		2109003700	2109203700
38	1,1/2		2109003800	2109203800
40	1,9/16		2109004000	2109204000
41	1,5/8		2109004100	2109204100
43	1,11/16		2109004300	2109204300
44	1,3/4		2109004400	2109204400
45	-		2109004500	2109204500
46	1,13/16		2109004600	2109204600
48	1,7/8		2109004800	2109204800
50	-		2109005000	2109205000
51	2"		2109005100	2109205100
52	2,1/16		2109005200	2109205200
54	2,1/8		2109005400	2109205400
57	2,1/4		2109005700	2109205700
59	2,5/16		2109005900	2109205900
60	2,3/8		2109006000	2109206000
64	2,1/2		2109006400	2109206400
65	2,9/16		2109006500	2109206500
67	2,5/8		2109006700	2109206700
68	-		2109006800	2109206800
70	2,3/4		2109007000	2109207000
73	2,7/8		2109007300	2109207300
75	-		2109007500	2109207500
76	3"		2109007600	2109207600
79	3,1/8		2109007900	2109207900
83	3,1/4		2109008300	2109208300
86	3,3/8		2109008600	2109208600
89	3,1/2		2109008900	2109208900
92	3,5/8		2109009200	2109209200
95	3,3/4		2109009500	2109209500
98	3,7/8		2109009800	2109209800
100	-		2109010000	2109210000
102	4"		2109010200	2109210200
105	4,1/8		2109010500	2109210500
108	4,1/4		2109010800	2109210800
111	4,3/8		2109011100	2109211100
114	4,1/2		2109011400	2109211400
121	4,3/4		2109012100	2109212100
127	5"		2109012700	2109212700
140	5,1/2		2109014000	2109214000
146	5,3/4"		2109014600	-
152	6"		2109015200	2109215200
160	6,5/16		2109016000	-
168	6,5/8		2109016800	-
177	6,31/32		2109017700	-
200	7,7/8		2109020000	-
210	8,5/16		2109021000	-
220	8",3/4		2109022000	-
233	9", 1/8		2109023300	-
250	9",7/8		2109025000	-
260	10",1/4		2109026000	-
265	10",1/2		2109026500	-
280	11"		2109028000	-
305	12"		2109030500	-



Universale/*multipurpose*
21100

431

Applicazioni / *Applications*

- Seghe a tazza di altissima qualità, con taglienti in acciaio al Cobalto 8% per i lavori più gravosi; taglio professionale e profondo nell'acciaio **inox**, acciai duri, ghisa, alluminio, bronzo, ottone, legno duro e derivati, resine sintetiche, laminati plastici, gomma dura, cartongesso, etc.
- High quality hole saws with HSS-CO 8% cutting edges for the toughest jobs; deep and professional cut in **stainless steel**, hard steel, cast iron, aluminium, bronze, brass, wood and its by-products, synthetic resins, laminated plastic, hard rubber, etc.
- Scies trépans de haute qualité avec tranchants au HSS-CO 8% pour les travails les plus durs; coupe professionnel et profond dans l'acier **inoxydable**, aciers durs, fonte, aluminium, bronze, laiton, bois dur et produits dérivés, résines synthétiques, laminés plastiques, caoutchouc dur, etc.
- Coronas perforadoras de calidad con cortes de HSS-CO 8% para los trabajos más gravosos; corte profesional y profundo en acero **inoxidable**, aceros duros, fundición, aluminio, bronces, latón, madera dura y productos derivados, resinas sintéticas, laminados plásticos, goma dura, etc.
- Qualitativen Lochsägen mit Schneiden aus HSS-CO 8% für die härtesten Berufe. Beruflich Tiefschnitt im **rostfreieren** Stahl, Hartstähle, Gusseisen, Aluminium, Bronze, Messing, Hartholz und Holzprodukte, Kunstharze, Kautschuk, etc.

ALBERI PER SEGHE A TAZZA BIMETAL HSS-CO 8%

Arbors for HSS-CO 8% bimetal hole saws / Arbres de montage pour scies trépans bimetal HSS-CO 8%
Husillos para coronas bimetalicas HSS-CO 8% / Aufnahmeschäfte für HSS-CO 8% Lochsägen

ALBERI PER SEGHE BIMETAL Ø 14÷30 mm - *Fit hole saws Ø 14÷30*

210705514B



210705515B
Q.C.



210705519B



210705518B

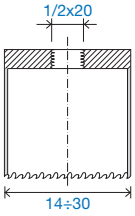


210705519 SDSB



SDS-PLUS

Per seghe *Fit hole saws*	d mm	cod.
Ø 14 ÷ 30	Ø 6,35	210705514B
Ø 14 ÷ 30	HEX 6,35 Q.C.	210705515B
Ø 19 ÷ 30	HEX 8,5	210705519B
Ø 14 ÷ 30	HEX 11	210705518B
Ø 19 ÷ 30	SDS PLUS	210705519SDSB



ALBERI PER SEGHE BIMETAL Ø 32÷305 mm - *Fit hole saws Ø 32÷305*

210705520B



210705521B
Q.C.



210705546B



210705547B



210705548B
Q.C.



210705546 SDSB



SDS-PLUS

210705549 SDSB



SDS-PLUS

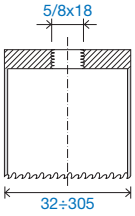
210705545B



210705573B



Per seghe *Fit hole saws*	d mm	cod.
Ø 32 ÷ 305	HEX 11	210705520B
Ø 32 ÷ 305	HEX 6,35 Q.C.	210705521B
Ø 32 ÷ 305	HEX 8,5	210705546B
Ø 32 ÷ 305	HEX 11	210705547B
Ø 32 ÷ 305	HEX 8,5 Q.C.	210705548B
Ø 32 ÷ 305	SDS PLUS	210705546SDSB
Ø 32 ÷ 305	SDS PLUS	210705549SDSB
Ø 32 ÷ 305	HEX 11	210705545B
Ø 32 ÷ 305	HEX 16	210705573B
Ø 32 ÷ 305	HEX 8,5	210705546
Ø 32 ÷ 305	HEX 11	210705545



21070203



21070204



21070202



21070300



21070302



Confezione *Packaging*



Punta pilota *Pilot drill*	Per alberi *Fit arbors*	cod.
Ø 6,35 x 115	5514B-5520B 5545B-5573B-5518B	21070203
Ø 6,35 x 100	5519L-5519SDSL	21070204
Ø 6,35 x 90	5515B-5519B-5519SDSB 5521B-5546B-5546SDSB 5547B-5548B-5549SDSB	21070202
Adattatore - montato su alberi 5514B-5519B permette di portare frese da Ø 32 a Ø 305 *Arbor adapter - Allows 5514B-5519B to be used with 1.1/4" through 6" hole saws*		21070300
Prolunga - HEX 11 L = 300 mm *12" extension - to be used with arbors 5518B-5520B-5547B-5545B*		21070302

Industrial

ASSORTIMENTI SEGHE A TAZZA BIMETALLICHE HSS-CO 8%

HSS-CO 8% Bi-metal hole saws kits / Assortiments de scies trépans HSS-CO 8% bimetal
Juegos de coronas perforadoras bimetalica HSS-CO 8% / HSS-CO 8% Lochsägen Sortimente

Kit per elettricisti - *Electrician's kit*



Cod.	Composizione *Description*	
21013201K Ø 22÷64 6 pcs	Ø 22-29-35 44-51-64	5519B - 5546B 1
21013202K Ø 16÷51 (METRIC) 6 pcs	Ø 16-20-25 32-40-51	5519B - 5546B 1



Cod.	Composizione *Description*	
21013209K Ø 22÷68 7 pcs	Ø 22-29-35 38-44-51 68	5519B - 5546B 1
21013207K Ø 16÷60 (Pg 9÷48) 13 pcs	Ø 16-19-20-21 22-25-29-32 38-48-51-54 60	5519B - 5546B 1

Kit per idraulici - *Plumber's kit*



Cod.	Composizione *Description*	
21013204K Ø 19÷57 6 pcs	Ø 19-22-29 38-44-57	5519B - 5546B 1

Kit per installatori - *Journeyman's kit*



Cod.	Composizione *Description*		
21013205K Ø 19÷64 9 pcs	Ø 19-22-29-35 38-44-51-57 64	5519B - 5546B 1	1



Cod.	Composizione *Description*	
21013215K Ø 19÷76 11 pcs	Ø 19-22-25-29 35-38-44-51 57-64-76	5519B - 5546B 1
21013216K Ø 16÷76 12 pcs	Ø 16-19-22-25 29-32-35-38 44-51-64-76	5519B - 5546B 1
21013211K Ø 20÷64 11 pcs	Ø 20-22-25-30 32-35-40-44 51-60-64	5519B - 5546B 1
21013212K Ø 19÷83 11 pcs	Ø 19-22-25-30 35-40-51-60 64-76-83	5519B - 5546B 1

Kit industriale - *Industrial kit*



Cod.	Composizione *Description*	
21013206K Ø 19÷114 15 pcs	Ø 19-22-29-35-38 44-51-57-64-76 83-92-95-105-114	5519B - 5546B 1

Espositori - *Display*



23x18x50 cm

Cod.	Composizione *Description*	
21013504K Ø 16÷102 49 pcs	Ø 16-19-20-22-25-30 32-35-38-40-48-51 57-60-70-83-102	2x
	5519B 14÷30 5546B 32÷152	4x 6x
	21070202	5x



Cod.	Composizione *Description*	
21013503K Ø 16÷83 24 pcs	Ø 16-19-20-22-25-27 29-30-32-35-38-40-44 51-54-60-64-70-76-83	1x
	5519B 14÷30 5546B 32÷152	2x 2x

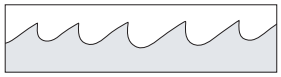
SEGHE A TAZZA BIMETALLICHE HSS A DENTATURA VARIABILE AD ALBERO FISSO

One piece HSS bimetal hole saws with fixed arbor / Scies trépans bimetal HSS avec arbres de montage fixé
Coronas perforadoras bimetalicas HSS con mango incorporado / HSS-bimetall lochsägen mit festeingebaut Aufnahmeschäfte

21061

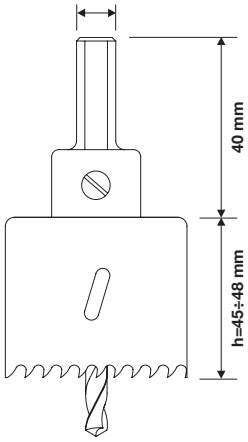


Variabile - *Variable* Z 4-6



BIM. - HSS M3/1

(1/2”-12,7 mm o 3/8”-9 mm a seconda del diametro) HEX



Integrale
one-piece

HSS M3/1

Ø mm	Ø Pollici *Inch*	cod.
16	5/8	2106101600
19	3/4	2106101900
21	13/16	2106102100
22	7/8	2106102200
24	15/16	2106102400
25	1”	2106102500
27	1,1/16	2106102700
29	1,1/8	2106102900
30	1,3/16	2106103000
32	1,1/4	2106103200
33	1,5/16	2106103300
35	1,3/8	2106103500
38	1,1/2	2106103800
40	1,9/16	2106104000
41	1,5/8	2106104100
44	1,3/4	2106104400
48	1,7/8	2106104800
51	2”	2106105100
54	2,1/8	2106105400
57	2,1/4	2106105700
60	2,3/8	2106106000
64	2,1/2	2106106400
67	2,5/8	2106106700
70	2,3/4	2106107000
76	3”	2106107600
79	3,1/8	2106107900
83	3,1/4	2106108300
89	3,1/2	2106108900
92	3,5/8	2106109200
95	3,3/4	2106109500
102	4”	2106110200

Punta pilota *Pilot drill*	cod.
Ø 6,35 x 80	21070201



Confezione / Packaging



Applicazioni / Applications



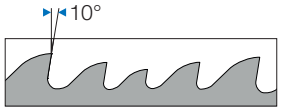
- Seghe bimetalliche HSS a dentatura variabile e spoglia positiva per il taglio altamente professionale di qualsiasi materiale a spessore sottile quale acciaio, ghisa, alluminio, rame, bronzo, ottone, legno, plastica, fibra di vetro, resine sintetiche, formica, cartongesso. Grande rendimento e durata, taglio pulito, max. profondità di foratura 5 mm. nel metallo e 30 mm nel legno.
- Variable tooth bimetal hole saws for faster and smoother cuts in: iron, steel, aluminium, brass, copper, cast iron, stainless steel, wood and plywood, plastics, fibreglass etc… Max. cutting depth: 13/64.
- Scies cloches bimetal-HSS à denture progressive pour l’emploi professionel. Pour percer les métaux, fer, fonte, acier inox, bois, plastique. Profondeur de coupe: 5 mm.
- Coronas perforadoras bimetalicas HSS con diente variable y angulo positivo para taladrar acero, laton, bronce, aluminio, madera, plastico etc. Profondidad de corte: 5 mm.
- HSS Bi-Metall-Lochsägen mit vario-verzahnung für schnellen Bohrfortschritt in Stahl, Guss, Küpfer, Bronze, Aluminium, Kunstoffe, Gipskarton, Holz.

SEGHE A TAZZA BIMETALLICHE HSS-CO 8% A DENTATURA VARIABILE ORIGINALI “BLU-MOL”

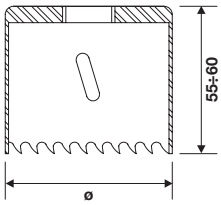
HSS-Co 8% bimetal hole saws / Scies trépans bimetal HSS-Co 8%
Coronas perforadoras bimetalicas HSS-Co 8% / HSS-Co 8% bimetall Lochsägen

21065





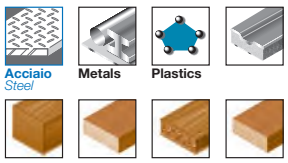
Z 4÷6 - BIM. AISI M42 - Co8%



Confezione / *Packaging*



Applicazioni / *Applications*



- Seghe bimetalliche HSS-Co 8% a dentatura variabile e spoglia positiva per il taglio altamente professionale di qualsiasi materiale a spessore sottile quale acciaio, ghisa, alluminio, rame, bronzo, ottone, legno, plastica, fibra di vetro, resine sintetiche, formica, cartongesso. Grande rendimento e durata, taglio pulito, max. profondità di foratura 5 mm nei metalli.
- Variable tooth bimetal hole saws for faster and smoother cuts in: iron, steel, aluminium, brass, copper, cast iron, stainless steel, wood and plywood, plastics, fibreglass etc… Max. cutting depth: 13/64
- Scies cloches bimetal-HSS-Co 8% à denture progressive pour l’emploi professionel. Pour percer les metaux, fer, fonte, acier inox, bois, plastique. Profondité de coupe: 5 mm
- Coronas perforadoras bimetalicas HSS-Co 8% con diente variable y angulo positivo para taladrar acero, laton, bronce, aluminio, madera, plastico etc. Profondidad de corte: 5 mm.
- HSS-Co 8% Bi-Metall-Lochsägen mit vario-verzahnung für schnellen Bohrfortschritt in Stahl, Guss, Küpfer, Bronze, Aluminium, Kunstoffe, Gipskarton, Holz.

Ø Nom. mm	Ø Pollici *Inch*	pcs	cod.
14	9/16	1	2106501400
16	5/8	1	2106501600
17	11/16	1	2106501700
19	3/4	1	2106501900
20	–	1	2106502000
21	13/16	1	2106502100
22	7/8	1	2106502200
24	15/16	1	2106502400
25	1”	1	2106502500
27	1,1/16	1	2106502700
29	1,1/8	1	2106502900
30	1,3/16	1	2106503000
32	1,1/4	1	2106503200
33	1,5/16	1	2106503300
35	1,3/8	1	2106503500
37	1,7/16	1	2106503700
38	1,1/2	1	2106503800
40	1,9/16	1	2106504000
41	1,5/8	1	2106504100
43	1,11/16	1	2106504300
44	1,3/4	1	2106504400
45	–	1	2106504500
46	1,13/16	1	2106504600
48	1,7/8	1	2106504800
50	–	1	2106505000
51	2”	1	2106505100
52	2,1/16	1	2106505200
54	2,1/8	1	2106505400
55	–	1	2106505500
57	2,1/4	1	2106505700
59	2,5/16	1	2106505900
60	2,3/8	1	2106506000
64	2,1/2	1	2106506400
65	2,9/16	1	2106506500
67	2,5/8	1	2106506700
68	–	1	2106506800
70	2,3/4	1	2106507000
73	2,7/8	1	2106507300
75	–	1	2106507500
76	3”	1	2106507600
79	3,1/8	1	2106507900
83	3,1/4	1	2106508300
86	3,3/8	1	2106508600
89	3,1/2	1	2106508900
92	3,5/8	1	2106509200
95	3,3/4	1	2106509500
98	3,7/8	1	2106509800
100	–	1	2106510000
102	4”	1	2106510200
105	4,1/8	1	2106510500
108	4,1/4	1	2106510800
111	4,3/8	1	2106511100
114	4,1/2	1	2106511400
121	4,3/4	1	2106512100
127	5”	1	2106512700
140	5,1/2	1	2106514000
146	5,3/4	1	2106514600
152	6”	1	2106515200

ALBERI PER SEGHE A TAZZA BIMETAL (INTERCAMBIABILI CON QUALSIASI ALTRA MARCA)

Arbors for bimetal hole saws / Arbres de montage pour scies trépans bimetal
Husillos para coronas bimetalicas / Aufnahmeschäfte

ALBERI PER SEGHE BIMETAL Ø 14÷30 mm - *Fit hole saws Ø 14÷30*

210705514B



210705515B
Q.C.



210705519B



210705518B

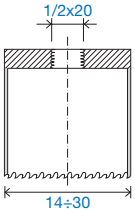


210705519 SDSB



SDS-PLUS

Per seghe *Fit hole saws*	d mm	cod.
Ø 14 ÷ 30	Ø 6,35	210705514B
Ø 14 ÷ 30	HEX 6,35 Q.C.	210705515B
Ø 14 ÷ 30	HEX 8,5	210705519B
Ø 14 ÷ 30	HEX 11	210705518B
Ø 14 ÷ 30	SDS PLUS	210705519SDSB



ALBERI PER SEGHE BIMETAL Ø 32÷152 mm - *Fit hole saws Ø 32÷152*

210705520B



210705521B
Q.C.



210705546B



210705547B



210705548B
Q.C.



210705546 SDSB



SDS-PLUS

210705549 SDSB



SDS-PLUS

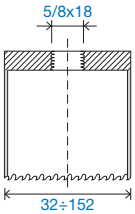
210705545B



210705573B



Per seghe *Fit hole saws*	d mm	cod.
Ø 32 ÷ 152	HEX 11	210705520B
Ø 32 ÷ 152	HEX 6,35 Q.C.	210705521B
Ø 32 ÷ 152	HEX 8,5	210705546B
Ø 32 ÷ 152	HEX 11	210705547B
Ø 32 ÷ 152	HEX 8,5 Q.C.	210705548B
Ø 32 ÷ 152	SDS PLUS	210705546SDSB
Ø 32 ÷ 152	SDS PLUS	210705549SDSB
Ø 32 ÷ 152	HEX 11	210705545B
Ø 32 ÷ 152	HEX 16	210705573B



21070203



21070202



21070300



21070302



Punta pilota *Pilot drill*	Per alberi *Fit arbors*	cod.
Ø 6,35 x 115	5514B-5520B 5545B-5573B-5518B	21070203
Ø 6,35 x 90	5515B-5519B-5519SDSB 5521B-5546B-5546SDSB 5547B-5548B-5549SDSB	21070202
Adattatore - montato su alberi 5514B-5519B permette di portare frese da Ø 32 a Ø 152 *Arbor adapter - Allows 5514B-5519B to be used with 1.1/4" through 6" hole saws*		21070300
Prolunga - HEX 11 L = 300 mm *12" extension - to be used with arbors 5518B-5520B-5547B-5545B*		21070302

Confezione *Packaging*



ASSORTIMENTI SEGHE A TAZZA BIMETALLICHE “BLU-MOL” IN VALIGETTE DI PLASTICA

Bi-metal hole saws kits in plastic cases / Assortiments de scies trépans bimetal en coffret plastique
Juegos de coronas perforadoras en estucho plastico / Lochsägen Sortimente

21080200



KIT per lavori domestici
Handyman's Kit

21080200		
Kit per lavori domestici *Handyman's Kit*	Ø 22-25-29 32-38	5514B 1

21080201



KIT per elettricisti
Electrician's Kit

21080201		
Kit per elettricisti *Electrician's Kit*	Ø 22-29-35 44-51-64	5514B-5545B 1

21080202



KIT metrico per elettricisti
Metric electrician's Kit

21080202		
Kit metrico per elettricisti *Metric electrician's Kit*	Ø 16-20-25 32-40-51	5514B-5545B 1

21080203



KIT per fabbri
Locksmith's Kit

21080203		
Kit per fabbri *Locksmith's Kit*	Ø 22-25-32 38-44-54	5514B-5545B 1

ASSORTIMENTI SEGHE A TAZZA BIMETALLICHE “BLU-MOL” IN VALIGETTE DI PLASTICA

Bi-metal hole saws kits in plastic cases / Assortiments de scies trépans bimetal en coffret plastique
Juegos de coronas perforadoras en estucho plastico / Lochsägen Sortimente

21080204



KIT per idraulici
Plumber's Kit

21080204		
KIT per idraulici *Plumber's Kit*	Ø 19-22-29 38-44-57	5514B-5545B 1

21080205



KIT per installatori
Journeyman's Kit

21080205		
KIT per installatori *Journeyman's Kit*	Ø 19-22-29 35-38-44 51-57-64	5514B-5545B 1 21070203

21080206



KIT uso industriale in valigetta di metallo
Industrial kit in metal case

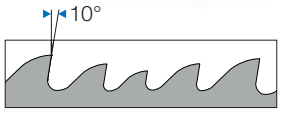
21080206		
Kit uso industriale in valigetta di metallo *Industrial kit* *in metal case*	Ø 19-22-29 35-38-44-51 57-64-76-83 92-95-105 114	5514B-5546B 1 21070203 21070203

SEGHE A TAZZA BIMETALLICHE HSSCO8% DI NUOVA GENERAZIONE “XTREME”

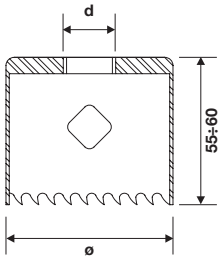
Ultimate bimetal hole saws / Scies cloches bimétal de nouvelle génération
Coronas bimetalicas de nuova generacion

21073





Z 4÷6 - BIM. AISI M42 - Co8%





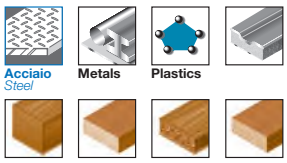
Fondo rinforzato
Solid steel plated

Larghe aperture per un’agevole rimozione del disco
Large openings provide for easy plug ejection

Confezione *Packaging*



Applicazioni *Applications*





21080215



Kit per installatori
Journeyman’s Kit

Ø 19-22-29 — 5515B
35-38-44 — 5548B
51-57-64 — 1
21070202 — 1



21080216



Kit per lavori domestici
Handyman’s Kit

Ø 22-25-29 — 5515B
32-38 — 1

Ø mm	Ø Pollici *Inch*	d Filetto *Thread*	pcs	cod.
14	9/16	UNF 1/2 x 20	1	2107301400
16	5/8		1	2107301600
17	11/16		1	2107301700
19	3/4		1	2107301900
20	-		1	2107302000
21	13/16		1	2107302100
22	7/8		1	2107302200
24	15/16		1	2107302400
25	1”		1	2107302500
27	1,1/16		1	2107302700
29	1,1/8		1	2107302900
30	1,3/16		1	2107303000
32	1,1/4	UNF 5/8 x 18	1	2107303200
33	1,5/16		1	2107303300
35	1,3/8		1	2107303500
37	1,7/16		1	2107303700
38	1,1/2		1	2107303800
40	1,9/16		1	2107304000
41	1,5/8		1	2107304100
43	1,11/16		1	2107304300
44	1,3/4		1	2107304400
45	-		1	2107304500
46	1,13/16		1	2107304600
48	1,7/8		1	2107304800
50	-		1	2107305000
51	2”		1	2107305100
52	2,1/16		1	2107305200
54	2,1/8		1	2107305400
55	-		1	2107305500
57	2,1/4		1	2107305700
59	2,5/16		1	2107305900
60	2,3/8		1	2107306000
64	2,1/2		1	2107306400
65	2,9/16		1	2107306500
67	2,5/8		1	2107306700
68	-		1	2107306800
70	2,3/4		1	2107307000
73	2,7/8		1	2107307300
75	-		1	2107307500
76	3”		1	2107307600
79	3,1/8		1	2107307900
83	3,1/4		1	2107308300
86	3,3/8		1	2107308600
89	3,1/2		1	2107308900
92	3,5/8		1	2107309200
95	3,3/4		1	2107309500
98	3,7/8		1	2107309800
100	-		1	2107310000
102	4”		1	2107310200
105	4,1/8		1	2107310500
108	4,1/4		1	2107310800
111	4,3/8		1	2107311100
114	4,1/2		1	2107311400
121	4,3/4		1	2107312100
127	5”		1	2107312700
140	5,1/2		1	2107314000
146	-		1	2107314600
152	6”		1	2107315200



ø	d mm	cod.
Ø 14 ÷ 30	HEX 6,35Q.C.	210705515B
Ø 32 ÷ 152	HEX 8,5Q.C.	210705548B
	6,35x90	21070202

SEGHE A TAZZA BIMETAL AISI M42-CO8% A PASSO FISSO PER LAMIERE SOTTILI

AISI M42-Co8% constant pitch Bimetal hole saws for metal sheets

Scies cloches bimétal AISI M42-Co8% a denture fixe pour tôles fines / Coronas bimetalicas AISI M42-Co8% a paso fixo para chapas finas

21069



Ø mm	Ø Pollici *Inch*	Attacco *Shank*	pcs	cod.
16	5/8	1/4"	1	210691600
19	3/4	1/4"	1	210691900
20	-	1/4"	1	210692000
22	7/8	1/4"	1	210692200
25	1"	1/4"	1	210692500
27	1,1/16	1/4"	1	210692700
29	1,1/8	1/4"	1	210692900
30	1,3/16	1/4"	1	210693000
32	1,1/4	1/4"	1	210693200
35	1,3/8	1/4"	1	210693500
38	1,1/2	1/4"	1	210693800

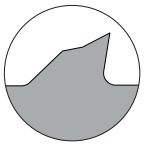


Speciali per trapani a batteria e avvitatori a impulsi
Special for cordless power drills and impact power tools

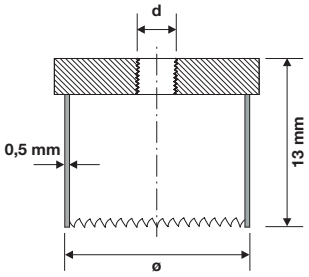
Z = 8



BIM. AISI M42 - Co8%



Speciale disegno del dente: taglio veloce e pulito
Advanced tooth design: smooth and fast cutting



Confezione / *Packaging*





Il potere della lama fine:
Minimizza il consumo delle batterie e produce meno trucioli per un taglio più veloce e sicuro

The power of the thin blade: Lightweight blades maximize the use of chargeable impact drivers and drills by using a reduced motor and operation load. Sheet Metal Hole Saws produce fewer chips for easier and safer drilling

Fermo di sicurezza
Safety collar stop





Applicazioni / *Applications*



- Il sottile spessore della lama e la dentatura costante in AISI M42 le rendono particolarmente adatte al taglio di lamiere sottili di acciaio inox, acciai legati e non, alluminio, metalli non ferrosi, plastica.
- The thin blade thickness and the AISI M42 constant pitch make these saws special for cutting into thin stainless steel sheet, alloyed steel and non-alloyed steel, non-ferrous metals and plastic.
- Le bas épaisseur de la lame en AISI M42 et le pas fixe des dents, rendent ces cloches parfait puor le parçage dans la töle de acier inox trés fines, les aciers alliés et non-alliés, les métaux non-ferreux et la plastique.
- El espesor de la lama en AISI M42 y el paso fixo de los dientes, hacen esta corona adapta por el corte de las chapas finas en acero inoxidable, aceros aleados y en non aleados, metales no-ferricos, plastico.

PUNZONI STANDARD CON CUSCINETTO

Standard ball bearing punches / Emporte pieces standard
Punzonador standard / Schraub-locher

26070

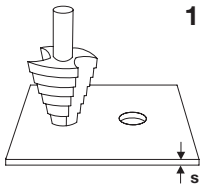


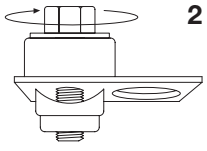
Ø mm	Pg/M	S	cod.
10		1,5	2607001000
11		1,5	2607001100
12		1,5	2607001200
12,5	Pg 7/M 12x1,5	1,5	2607001250
13		1,5	2607001300
14		1,5	2607001400
15		1,5	2607001500
15,2	Pg 9	1,5	2607001520
16		2	2607001600
16,5	M 16x1,5	2	2607001650
17		2	2607001700
18		2	2607001800
18,6	Pg 11	2	2607001860
19		2	2607001900
20		2	2607002000
20,5	Pg 13,5/M 20x1,5	2	2607002050
21		2	2607002100
22		2	2607002200
22,5	Pg 16	2	2607002250
23		2	2607002300
24		2	2607002400
25		2	2607002500
25,5	M 25x1,5	2	2607002550
26		2	2607002600
27		2	2607002700
28		2	2607002800
28,3	Pg 21	2	2607002830
29		2	2607002900
30		2	2607003000
30,5		2	2607003050
32		2	2607003200
32,5	M 32x1,5	2	2607003250
33		2	2607003300
34		2	2607003400
35		2	2607003500
36		2	2607003600
37	Pg 29	2	2607003700

Ø mm	Pg/M	S	cod.
38		2	2607003800
39		2	2607003900
40		2	2607004000
40,5	M 40x1,5	2	2607004050
41		2	2607004100
42		2	2607004200
43		2	2607004300
44		2	2607004400
45		2	2607004500
46		2	2607004600
47	Pg 36	2	2607004700
48		2	2607004800
50		2	2607005000
50,5	M 50x1,5	3	2607005050
51		3	2607005100
52		3	2607005200
52,5		3	2607005250
54	Pg 42	3	2607005400
55		3	2607005500
57		3	2607005700
58		3	2607005800
59		3	2607005900
60	Pg 48	3	2607006000
60,5		3	2607006050
61		3	2607006100
62		3	2607006200
63		3	2607006300
63,5	M 63x1,5	3	2607006350
64		3	2607006400
65		3	2607006500
70		3,5	2607007000
73		3,5	2607007300
75		3,5	2607007500
80		3,5	2607008000
85		3,5	2607008500
89		3,5	2607008900
102		3,5	2607010200

Art. 26071

Tiranti con cuscinetti
Draw stud





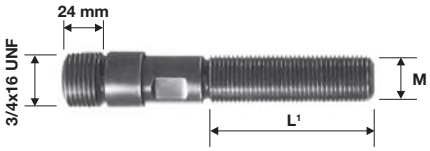


M	a	per punzoni *for punches*	cod.
6x1	5	Ø 10÷13	2607106X1
8x1	13	Ø 14÷15.2	2607108X1
10x1	17	Ø 16÷38	2607110X1
12x1,5	19	Ø 39÷50	2607112X15
16x1,5	24	Ø 51÷62	2607116X15
20x1,5	30	Ø 66÷85	2607120X15
24x1,5	36	Ø 86÷102	2607124X15

a = Dimensione della chiave per la testa del tirante

Art. 26084

Tiranti per pompa idraulica 2607514-2607515
Draw stud for hydraulic pump 2607514-2607515



M	L¹	per punzoni *for punches*	cod.
8 x 1	38	Ø14÷15,2	2608408x1
10 x 1	40	Ø16÷38	2608410x1
12 x 1,5	50	Ø39÷50	2608412x15
16 x1,5	60	Ø51÷62	2608416x15
20 x 1,5	73	Ø63÷85	2608420x15
24 x 1,5	81	Ø89÷102	2608424x15

Applicazioni *Applications*



- Adatti per fori precisi in lamiere di acciaio, acciaio inox, tutti i metalli, plastica
- For precise holes in steel and stainless steel metal sheets, metals, plastics
- Pour trous précis dans le tole en acier, acie inoxydable, tous le métaux, plastique
- Para agujeros precisos en chapa de acero inoxidable, todos los metales, plastico

Assortimenti punzoni - *Set of ball bearing punches*

Utilizzo con chiave
To be used with wrench

Utilizzo con pompa idraulica
To be used with hydraulic pump



26085100

Pg 7 - Pg 29

Ø 12,5-15,2-18,6-20,5
22,5-28,3-37



26085110

Pg 7 - Pg 48

Ø 12,5-15,2-18,6-20,5
22,5-28,3-37-47-54-60

Ø 7÷21 mm

26085111

M 12x1,5 - M 63x1,5

Ø 12,5-16,5-20,5-25,5
32,5-40,5-50,5-63,5

26085112

Pg 9 - Pg 48

Ø 15,2-18,6-20,5-22,5
28,3-37-47-54-60

26085113

M 16x1,5 - M 63x1,5

Ø 16,5-20,5-25,5-32,5
40,5-50,5-63,5

Assortimenti punzoni con pompa idraulica - *Set of ball bearing punches with hydraulic pump*



26085120

Pg 9 - Pg 29

Ø 15,2-18,6-20,5
22,5-28,3-37

Pompa/*Pump* Art. 2607514

26085121

M 16x1,5 - M 40x1,5

Ø 16,5-20,5-25,5
32,5-40,5

Pompa/*Pump* Art. 2607514

Pompa idraulica - *Hydraulic pump*

Pompa idraulica manuale a testa orientabile (600 bar)
Utilizzo con punzoni fino a 63,5 mm.
Contirne 4 tiranti e 4 spessori.
Hydraulic pump with revolving head.
With 4 drawstud and 4 shims.



2607514

* Pompa idraulica manuale (700 bar)
Utilizzo con punzoni fino a 150 mm. Lunghezza tubo: 0,9 m.
Hand hydraulic pump

* In esaurimento
To be discontinued



2607515

ESPOSITORI UTENSILI DA TAGLIO

Cutting tools display / Display outils coupant
Expositor utensilios de corte / Schneidwerkzeuge Aussteller



60x44x190 cm

La vetrina è in omaggio per ordini di 6 ripiani di utensili a scelta
The display is free of charge in case of an order with 6 shelves with tools at your choice / La vitrine est gratuite en cas de commande de 6 plateaux avec outils à votre choix / La vitrina es gratuita en caso de pedido con 6 rellanos con utensilios a Vuestra preferencia / Der Schaukasten ist unentgeltlich für Ordnungen von Werkzeugen mit 6 Flächen, nach freier Wahl



Cod.	Composizione *Description*	
01195861 82 pcs HSS-G	**21001**	Ø12÷50+55-60 (2x)
01195876 82 pcs HSS-Co	**21011**	Ø12÷50+55-60 (2x)
01195871 41 pcs HSS-G	**21001**	Ø12÷50+55-60 (1x)
01195869 41 pcs HSS+TiN	**21300**	Ø12÷50+55-60 (1x)



Cod.	Composizione *Description*	
01195862 82 pcs HSS-G HSS+TiN	**21001**	Ø12÷50+55-60 (2x)
	21300	Ø12÷50+55-60 (1x)



Cod.	Composizione *Description*			
01195860 53 pcs	**01180**	Gr. 1-2-3-4-5-7-8 1 pc	**01200**	Gr. 1-2-3-4 1 pc
	01183	Gr. 2-3-4-5-6-9-24 1 pc	**01230**	Gr. 2-3-4-5-6-9-24 1 pc
	01185	Ø 4.3-5.3-6.3-7.3-8.3 9.4-10.4-12.4-15-16.5 20.5-25-28-31 1 pc	**01188**	Gr 1-2-3-4 1 pc
	0117601	5 pcs	**011750600**	5 pcs



Cod.	Composizione *Description*			
01195859 53 pcs	**01180**	Gr. 1-2-3-4 2 pc Gr. 5-7-8 1 pc	**0117601**	5 pcs
	01183	Gr. 2-3-4-5-6-9-24 2 pc	**01188**	Gr. 1-2-3-4 1 pc
	01185	Ø 4.3-5.3-6.3-7.3-8.3 9.4-10.4-12.4-15-16.5 20.5-25-28-31 1 pc	**011750600**	5 pcs



Cod.	Composizione *Description*	
01195865 72 pcs HSS M3/1	**21060** Ø 16-17-19-20-21-22-24-25 27-29-30-32-33-35-37-38 40-41-44-46-48-51-54 (2x) Ø 57-60-64-70-76-79-83 89-92-102 (1x)	**210705519** 8 pcs **210705546** 8 pcs
01195877 72 pcs	**21066** Ø 16-17-19-20-21-22-24-25 27-29-30-32-33-35-37-38 40-41-44-46-48-51-54 (2x) Ø 57-60-64-70-76-79-83 89-92-102 (1x)	**210705519** 8 pcs **210705546** 8 pcs



Cod.	Composizione *Description*	
01195879 72 pcs M42 CO 8%	**21090** Ø 16-17-19-20-21-22-24-25 27-29-30-32-33-35-37-38 40-41-44-46-48-51-54 (2x) Ø 57-60-64-70-76-79-83 89-92-102 (1x)	**210705519B** 8 pcs **210705546B** 8 pcs



Cod.	Composizione *Description*
01195880 28 pcs HSS	**21200** **Weldon** Ø12÷35x1 +38-40-45-50



Cod.	Composizione *Description*
01195864 32 pcs T.C.T.	**21040** Ø15÷40x1+42-45-48 50-55-60



Cod.	Composizione *Description*
01195866 32 pcs	**21015** Ø 16-22-25-27-30-35-38-40 45-50-55-60-65-70-80 (2x) Ø 85-100 (1x)



Cod.	Composizione *Description*
26008501 50 pcs HSS Z2+Z3	**26001-26003** Ø6-8-10-12-15 (5x)



Cod.	Composizione *Description*
26030502 45 pcs HM4	**26020** Ø 6-8-10-12-16 (9x)
26030504 45 pcs HM4+TiALN	**26034** Ø 6-8-10-12-16 (9x)



Cod.	Composizione *Description*		
21116112 24 pcs	**21110** Ø 30-35-40	**21111** 50-65-80-90-100	
	HEX 12 4 pcs	**SDS** 4 pcs	8 pcs

Cod.	Composizione *Description*			
21116117 29 pcs	**21122** Ø 40-50-60-66-80-90-100			
	21130316 10 pcs	**21130110** 6 pcs	**21130300** 3 pcs	**21130305** 3 pcs

ESPOSITORI UTENSILI DA TAGLIO

Cutting tools display / Display outils coupant
Expositor utensilios de corte / Schneidwerkzeuge Aussteller



44x31x52 cm

La vetrina è in omaggio per ordini di 2 ripiani di utensili a scelta
The display is free of charge in case of an order with 2 shelves with tools at your choice / La vitrine est gratuite en cas de commande de 2 plateaux avec outils à votre choix / La vitrina es gratuita en caso de pedido con 2 rellanos con utensilios a Vuestra preferencia / Der Schaukasten ist unentgeltlich für Ordnungen von Werkzeugen mit 2 Flächen, nach freier Wahl



Cod.	Composizione *Description*	
01195761 59 pcs HSS-G	**21001**	HSS-G Ø15÷37x2 + 38÷50x1



Cod.	Composizione *Description*			
01195760 45 pcs	**01180**	Gr. 1-2-3-4-5-7-8 1 pc	**01200**	Gr. 1-2-3-4 1 pc
	01183	Gr. 2-4-6-9-24 1 pc	**01230**	Gr. 2-4-6-9-24 1 pc
	01185	Ø 5.3-6.3-8.3-10.4 12.4-15-16.5-20.5 25-28 1 pc	**01188**	Gr 1-2-3-4 1 pc
	0117601	5 pcs	**011750600**	5 pcs



Cod.	Composizione *Description*
01195786 38 pcs HSS+TiN	**21300** Ø15÷50+55-60x1



Cod.	Composizione *Description*
01195764 38 pcs HSS-G+TiALN	**21325**



Cod.	Composizione *Description*
01195762 38 pcs T.C.T.	**21040** Ø15÷50x1+55-60

Cod.	Composizione *Description*
01195778 23 pcs HSS	**21200** **Weldon** +32-35-38-40

Cod.	Composizione *Description*		
01195773 47 pcs HSS M3/1	**21060** Ø 16-19-20-21-22-24-25 27-29-30 (2x) Ø 32-35-37-38-40-41-44 48-51-54-57-60-64-70-76 (1x)		
	210705519 6 pcs	**210705546** 6 pcs	

Cod.	Composizione *Description*		
01195780 47 pcs M42 CO 8%	**21090** Ø 16-19-20-21-22-24-25 27-29-30 (2x) Ø 32-35-37-38-40-41-44 48-51-54-57-60-64-70-76 (1x)		
	210705519B 6 pcs	**210705546B** 6 pcs	



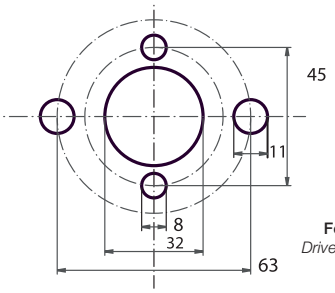
Cod.	Composizione *Description*				
01195774 31 pcs	**21110** Ø 25-30-35-40 (2x)	**21111** 50-65 (2x) 80-90-100 (1x)			
	21115501 2 pcs	**21115521** 2 pcs	**21115504** 2 pcs	**21115524** 2 pcs	**21115506** 8 pcs

SEGHE CIRCOLARI IN HSS E HSS-CO PER IL TAGLIO DI ACCIAI E MATERIALI METALLICI

HSS and HSS-CO circular saw blades for cutting steel and metals / Scies circulaires HSS et HSS-CO pour couper l'acier et les métaux
Hojas HSS y HSS-CO para sierras circulares y tronzadoras para cortar acero y metales / HSS und HSS-CO Sägeblatter für den Schnitt von Stahl und Metalle

~UNI 4012





N°2 Ø 11x63 mm
N°2 Ø 8x45 mm
Fori di trascinamento
Drive holes - Trouse guide
Orificios de arrastre

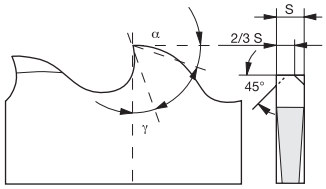
Troncatrici lente - *Slow cutting-off machines*

HSS
R≤900 N/mm²
Acciaio *Steel* · Inox · Metals

HSS-CO
R≤1200 N/mm²
Inox · Acciaio *Steel* · Metals

Profilati *Structurals*

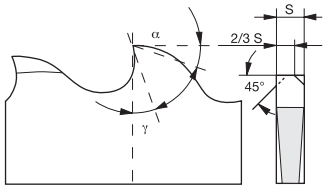
BW DIN 1838 t4



Ø mm	s spessore *thickness*	d foro *hole*	z n. denti *teeth*	Art. 27001 HSS Vapo cod.	Art. 27011 HSS-CO Vapo cod.
200	1,8	32	160	27001200	27011200
225	1,9	32	180	27001225	27011225
250	2	32	200	27001250	27011250
275	2,5	32	220	27001275	27011275
300	2,5	32	220	27001300	27011300
315	2,5	32	240	27001315	27011315
350	2,5	32	280	27001350	27011350

Pieni-profilati *Full section-structurals*

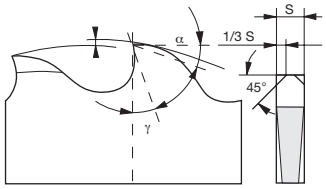
BW DIN 1838 t5



Ø mm	s spessore *thickness*	d foro *hole*	z n. denti *teeth*	Art. 27002 HSS Vapo cod.	Art. 27012 HSS-CO Vapo cod.
200	1,8	32	128	27002200	27012200
225	1,9	32	140	27002225	27012225
250	2	32	160	27002250	27012250
275	2,5	32	180	27002275	27012275
300	2,5	32	180	27002300	27012300
315	2,5	32	200	27002315	27012315
350	2,5	32	220	27002350	27012350

Pieni *Full section*

C (HZ) t6



Ø mm	s spessore *thickness*	d foro *hole*	z n. denti *teeth*	Art. 27003 HSS Vapo cod.	Art. 27013 HSS-CO Vapo cod.
200	1,8	32	100	27003200	27013200
225	1,9	32	120	27003225	27013225
250	2	32	128	27003250	27013250
275	2,5	32	140	27003275	27013275
300	2,5	32	160	27003300	27013300
315	2,5	32	160	27003315	27013315
350	2,5	32	180	27003350	27013350

Confezione *Packaging*



t = è il passo tra due denti consecutivi espresso in mm.

SEGHE CIRCOLARI CON DENTI IN METALLO DURO PER ALLUMINIO

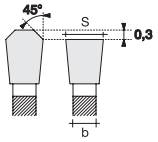
Carbide tipped circular blades for Aluminium / Lames de scies circulaires carbure pour Aluminium
Sierras circulares con dientes de metal duro para Aluminium / Kreissägeblätter für Ne-Metall



27050

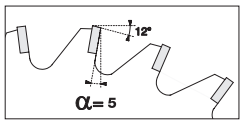
Ø mm	s spessore *thickness*	b	d foro *hole*	z n. denti *teeth*	α spoglia *hook angle*	cod.
250	3,2	2,2	32	60	5	270502503260
250	3,2	2,2	32	80	5	270502503280
300	3,2	2,4	32	72	5	270503003272
300	3,2	2,4	32	84	5	270503003284
300	3,2	2,4	32	96	5	270503003296
350	3,4	2,8	32	84	5	270503503284
350	3,4	2,8	32	96	5	270503503296
350*	3,6	2,8	32	108	5	2705035032108
400	3,6	2,8	32	96	5	270504003296
400*	3,6	2,8	32	120	5	2705040032120
420	3,8	3,0	32	108	5	2705042032108
450*	3,8	3,0	32	96	5	270504503296
450*	3,8	3,0	32	108	5	2705045032108
500*	4,0	3,2	32	120	5	2705050032120

* Incisioni anti rumore - *Anti noise notches*



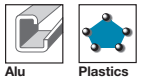
Dentatura sbozzatore-finitore
Rough and finishing teeth

N°2 Ø 11x63 mm
Fori di trascinamento
Drive holes - Trouse guide
Orificios de arrastre





Applicazioni / Applications



Velocità di taglio *Cutting speed* 452

- Seghe adatte per il taglio di profilati e pieni in Alluminio, leghe non ferrose, resine e plastica dura. Il taglio non deve fuoriuscire dal materiale oltre 10-15 mm.
- For cutting structurals and solids of Aluminium and light alloys. The circular blade can't go out the work-piece material further than 10÷15 mm.
- Indiquée pour la coupe de profiles et solides en Aluminium et alliages légeres. La scie circulaire ne peut pas sortir de la pièce à couper plus que 10-15mm.
- Para el corte de perfiles y piezos macizos de Aluminio y aleaciones ligeras. La sierra circular no puede salir de la pieza a cortar más de 10-15mm.
- Zum sägen von profilen und voll Materialien aus Aluminium und Ne-Metall.

SEGA CIRCOLARE UNIVERSALE CON DENTI IN METALLO DURO

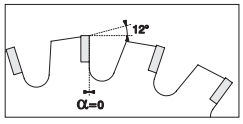
Universal carbide tipped circular sawblade / Lame de scie circulaire carbure universelle
Sierra circular universal con dientes de metal duro / Mehrzweck-Sägeblatt

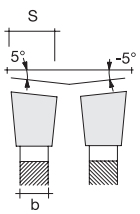
Multiuso / multi-purpose



27055

Ø mm	s spessore *thickness*	b	d foro *hole*	z n. denti *teeth*	α spoglia *hook angle*	cod.
160	2,2	1,6	20	28	0°	270551602028
160	2,2	1,6	30	28	0°	270551603028
180	2,2	1,6	30	32	0°	270551803032
190	2,2	1,6	30	32	0°	270551903032
230	2,2	1,6	30	40	0°	270552303040
240	2,2	1,6	30	42	0°	270552403042
250	2,4	2,0	**20**	48	0°	270552502048
250	2,4	1,8	30	48	0°	270552503048
300	2,4	1,8	30	60	0°	270553003060
300	2,4	1,8	30	80	0°	270553003080
305	2,4	1,8	**25,4**	80	0°	270553052580
350	2,5	2,0	30	70	0°	270553503070
350	2,5	2,0	30	90	0°	270553503090





Applicazioni / Applications



Velocità di taglio *Cutting speed* 452

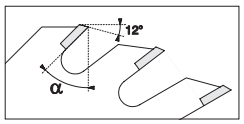
- Lama circolare con denti in metallo duro per il taglio a secco di ferro, acciaio dolce, alluminio, leghe leggere, materiali composti (pannelli isolanti, laminati), plastica dura, legno e truciolati. Il taglio non deve fuoriuscire dal materiale oltre 10-15 mm.
- Ideal for cutting in iron, soft steel, Aluminium, brass, copper, plastics, plexiglass, chipboards, composites. Applications on portable or bench sawing machines. The circular blade can't go out the work-piece material further than 10÷15 mm.
- Indiquée pour la coupe de fer, acier, Aluminium et alliages légeres, plastique, plexiglass, agglomeré, composites. Utilisation pour machines electroportatives et stationaires. La scie circulaire ne peut pas sortir de la pièce à couper plus que 10-15mm.
- Para el corte de hierro, acero dulce, Aluminio y aleaciones ligeras, aglomerado, plastica, paneles. La sierra circular no puede salir de la pieza a cortar más de 10-15mm.
- Ideal für licht Stahl, Aluminium, Messing, Kupfer, Kunststoffe, Plexiglass, Spanplatten, Mineralstoffplatten.

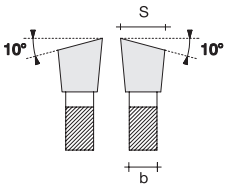
SEGHE CIRCOLARI PER LEGNO CON DENTI IN METALLO DURO PER SEGATRICI PORTATILI

Carbide tipped circular sawblades for wood for portable machines / Lames de scies avec dente carbure pour bois avec machines electroportatives
Sierras para madera para maquinas portatiles / Kreissägeblätter für Holz mit handkreissägen Maschinen

27060

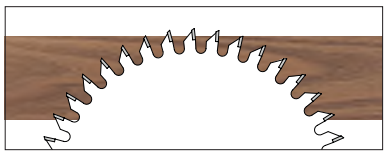






Dentatura alternata
Alternated teeth

Ø mm	*s* spessore *thickness*	b	d foro *hole*	z n. denti *teeth*	α spoglia *hook angle*	cod.
130	2,5	1,6	20	20	15°	270601302020
140	2,5	1,6	20	20	15°	270601402020
150	2,5	1,6	16	24	15°	270601501624
150	2,5	1,6	20	24	15°	270601502024
150	2,5	1,6	16	40	15°	270601501640
150	2,5	1,6	20	40	12°	270601502040
160	2,5	1,6	20	24	15°	270601602024
160	2,5	1,6	30	24	15°	270601603024
160	2,5	1,6	20	40	12°	270601602040
160	2,5	1,6	30	40	12°	270601603040
170	2,5	1,6	30	24	15°	270601703024
170	2,5	1,6	30	40	12°	270601703040
180	2,5	1,6	20	24	15°	270601802024
180	2,5	1,6	30	24	15°	270601803024
180	2,5	1,6	20	40	12°	270601802040
180	2,5	1,6	30	40	12°	270601803040
190	2,5	1,6	20	24	15°	270601902024
190	2,5	1,6	30	24	15°	270601903024
200	2,8	1,8	30	24	15°	270602003024
200	2,8	1,8	30	48	12°	270602003048
210	2,8	1,8	30	24	15°	270602103024
210	2,8	1,8	30	48	12°	270602103048
230	2,8	1,8	30	24	15°	270602303024
230	2,8	1,8	30	48	12°	270602303048
235	2,8	1,8	30	24	15°	270602353024
235	2,8	1,8	30	48	12°	270602353048
240	2,8	1,8	30	24	15°	270602403024
240	2,8	1,8	30	48	12°	270602403048



La sega circolare deve fuoriuscire dal materiale lavorato di una quantità pari all'altezza dei denti. Il numero di denti impegnati nel taglio deve essere di 2÷3 alla volta.
The overlap of the circular saw blade teeth over the cutting material must be equal to the height of the carbide tip. The number of teeth cutting simulteneously must be 2÷3.

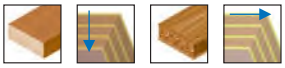
Per avere indicazioni circa il numero di denti adatto alla lavorazione, conoscendo il diametro della sega circolare ø e lo spessore del materiale da lavorare L, è possibile utilizzare la seguente formula Z = ø x β / L, dove β è:
7=nel taglio di legno naturale in direzione parallela alle nervature
9=nel taglio di legno naturale in direzione trasversale alle nervature
11=nel taglio di legno duro in direzione trasversale alle nervature e pannelli compositi.
To choose the teeth suitable for processing, if you know the diameter ø of the circular saw blade and the thickness L of the material to be processed it is possible to use the following formula Z = ø x β / L, where β is:
7 = natural wood cutting, parallel to the ribs
9 = natural wood cutting, transverse to the ribs
11 = hard wood and composite panels, transverse to the ribs



Velocità di taglio
Cutting speed
452

Confezione / Packaging

Applicazioni / Applications



- Raccomandate per il taglio su macchine portatili di legno, truciolari, laminati, etc… Il taglio non deve fuoriuscire dal materiale oltre 10-15 mm.
- Universal use in wood and chipboard materials with portable machines.The circular blade can't go out the work-piece material further than 10÷15 mm.
- Coupe en bois et derivés (agglomerés, contreplaqués), stratifié ou lamifiés et plastiques avec machines electroportatives.La scie circulaire ne peut pas sortir de la pièce à couper plus que 10-15mm.
- Para cortar madera y sus derivaciones con machina portatile. La sierra circular no puede salir de la pieza a cortar más de 10-15mm.
- Ideal für Holz mit Handkreissägen Maschinen.

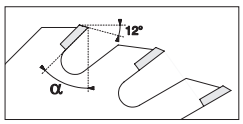
LAME PROFESSIONALI CON DENTI IN METALLO DURO PER LEGNO

Carbide tipped circular sawblades for wood / Lames de scies circulaires carbure pour bois
Sierras circulaires de metal duro para madera / Kreissägeblätter für Holz

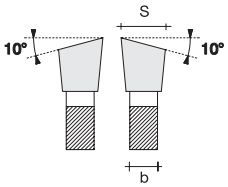
27070



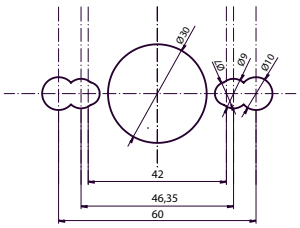
Ø mm	s spessore *thickness*	b	d foro *hole*	z n. denti *teeth*	α spoglia *hook angle*	cod.
200	3,2	2,2	30	64	10°	270702003064
250	3,2	2,2	30	40	10°	270702503040
250	3,2	2,2	30	60	10°	270702503060
250	3,2	2,2	30	80	10°	270702503080
280	3,2	2,2	30	64	10°	270702803064
280	3,2	2,2	30	80	10°	270702803080
300	3,2	2,2	30	48	12°	270703003048
300	3,2	2,2	30	60	12°	270703003060
300	3,2	2,2	30	72	10°	270703003072
300	3,2	2,2	30	96	10°	270703003096
305	3,2	2,2	30	72	10°	270703053072
305	3,2	2,2	30	96	10°	270703053096
350	3,5	2,5	30	54	12°	270703503054
350	3,5	2,5	30	72	12°	270703503072
350	3,5	2,5	30	84	10°	270703503084
400	3,8	2,8	30	64	12°	270704003064
400	3,8	2,8	30	80	12°	270704003080
400	3,8	2,8	30	96	10°	270704003096
450	4,0	2,8	30	72	12°	270704503072



Dentatura alternata
Alternated teeth

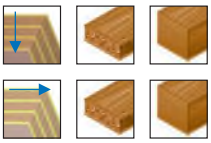


N°2 Ø 7x42 mm
N°2 Ø 9x46,35 mm
N°2 Ø 10x60 mm
Fori di trascinamento
Drive holes - Trouse guide
Orificios de arrastre



Velocità di taglio
Cutting speed
452

Applicazioni / *Applications*

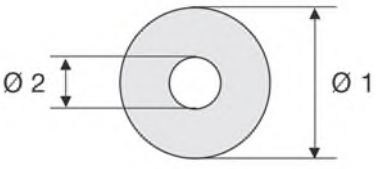


- Indicate per il taglio sia longitudinale che trasversale nel legno e derivati (agglomerati, stratificati) con seghe circolari a banco e troncatrici. Il taglio non deve fuoriuscire dal materiale oltre 10-15 mm.
- Crosswise and lengthwise cutting in woods and chipboards for any professional use. The circular blade can't go out the work-piece material further than 10÷15 mm.
- Coupe en long et traverse des bois et derivés (agglomerés, contreplaqués). La scie circulaire ne peut pas sortir de la pièce à couper plus que 10-15mm.
- Indicados para el corte longitudinal y trasversal de maderas in general. La sierra circular no puede salir de la pieza a cortar más de 10-15mm.
- Blätter für längs- und querschnitte bei allen Holztypen.

ANELLI DI RIDUZIONE PER TUTTI I TIPI DI LAME CIRCOLARI

Reduction ring for every kind of circular blades / Bagues de réduction pour toutes les scies circulaires
Anillos para reduccion / Reduzierringe

27072



Rame
Copper

Ø 1 / Ø 2	pcs	cod.
35 / 30	3	270723530
35 / 25	3	270723525
35 / 20	3	270723520
32 / 30	3	270723230
32 / 25	3	270723225
32 / 20	3	270723220
30 / 25	3	270723025
30 / 20	3	270723020
30 / 18	3	270723018
30 / 16	3	270723016
25 / 20	3	270722520
20 / 16	3	270722016

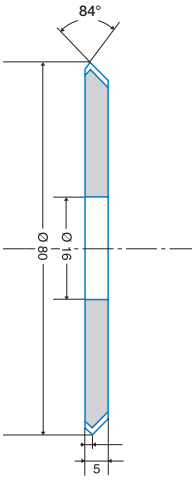
FRESE A DISCO PER CHIAVI

Milling cutters for keys / Fraises pour clefs
Fresas para llaves / Fräser für Schlüssel

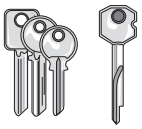
26125

Frese biconiche
Prismatic milling cutters





PER MACCHINE DUPLICATRICI DI CHIAVI:
for key cutting machines:

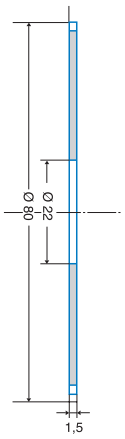


Rekord – Rekord plus, Rekord 2000,
Special Super, Special Master,
Bravo Super, Bravo Master,
Bravo Europa, Poker-s, Poker Plus, etc.

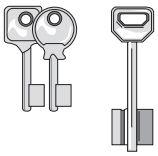
Dimensioni *Sizes*	z Denti / *Teeth*	cod.
Ø 80x5x16 HSS-CO	110	26125001
Ø 80x5x16 HSS-CO	120	26125002
Ø 80x5x16 ASP 30 - CO8%	110	26125003
Ø 80x5x16 Metallo duro/*Carbide*	80	26125005

Frese a disco a 3 tagli
Three cutting milling cutters





PER MACCHINE DUPLICATRICI DI CHIAVI:
for key cutting machines:

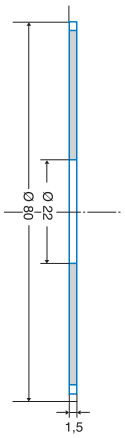


Targa –Targa 2000 –Targa 2000 P
Tech 3, Modular IV, Serenissima,
Opera IV, X80, GT 40B, GT 40C,
GT 40D, Super Dar, Mini Jolly, etc.

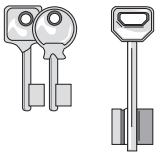
Dimensioni *Sizes*	z Denti / *Teeth*	cod.
Ø 80x1,5x22 HSS-CO8%	100	26125010
Ø 80x1,5x22 ASP 30 - CO8%	100	26125012
Ø 80x1,5x22 Metallo duro/*Carbide*	100	26125015

Frese a disco a taglio periferico
Peripherical milling cutters





PER MACCHINE DUPLICATRICI DI CHIAVI:
for key cutting machines:



Targa –Targa 2000 –Targa 2000 P
Tech 3, Modular IV, Serenissima,
Opera IV, X80, GT 40B, GT 40C,
GT 40D, Super Dar, Mini Jolly, etc.

Dimensioni *Sizes*	z Denti / *Teeth*	cod.
Ø 80x1,5x22 HSS-CO8%	100	26125020
Ø 80x1,5x22 ASP 30* - CO8%	100	26125022
Ø 80x1,5x22 Metallo duro/*Carbide*	100	26125025

** ASP 30 Acciaio superrapido sinterizzato (Metallurgia delle polveri) - Sinterized steel C 1,28% - Cr 4,2% - Mo 5% - W 6,4% - Co 8,5% - V 3,1% -*

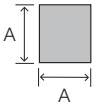
BARRETTE TRATTATE E RETTIFICATE IN HSS-CO 10%

HSS-CO 10% tool bits / Tiges traitées en HSS-CO 10%
Cuchillas HSS de Cobalto 10% para tornio - HSS-CO 10% Stabstahl

HSS-CO 10%



Art. 26150 DIN 4964/B

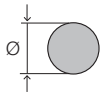


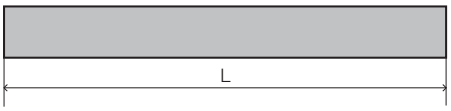


AxA h14	L mm	cod.	€ cad/each
6 x 6	160	261500606160	16,357
6 x 6	200	261500606200	20,336
8 x 8	160	261500808160	23,202
8 x 8	200	261500808200	29,581
10 x 10	160	261501010160	40,268
10 x 10	200	261501010200	51,653
12 x 12	160	261501212160	52,339
12 x 12	200	261501212200	67,148
14 x 14	160	261501414160	62,130

AxA h14	L mm	cod.
14 x 14	200	261501414200
16 x 16	160	261501616160
16 x 16	200	261501616200
18 x 18	160	261501818160
18 x 18	200	261501818200
20 x 20	160	261502020160
20 x 20	200	261502020200
30 x 30	200	261503030200

Art. 26152 DIN 4964/A

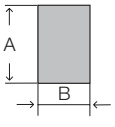




Ø h14	L mm	cod.	€ cad/each
4,0	100	2615204100	7,638
5,0	100	2615205100	8,173
6,0	100	2615206100	8,847
6,0	160	2615206160	12,829
6,0	200	2615206200	15,471
8,0	100	2615208100	12,503
8,0	160	2615208160	20,047
8,0	200	2615208200	22,747
10,0	100	2615210100	19,103
10,0	160	2615210160	35,727
10,0	200	2615210200	44,156

Ø h14	L mm	cod.
12	160	2615212160
12	200	2615212200
14	160	2615214160
14	200	2615214200
15	200	2615215200
16	160	2615216160
16	200	2615216200
18	200	2615218200
20	160	2615220160
20	200	2615220200

Art. 26154 DIN 4964/D





AxB h14	L mm	cod.	€ cad/each
10 x 4	160	261541004160	26,798
10 x 5	200	261541005200	30,955
12 x 6	200	261541206200	39,139
12 x 8	200	261541208200	48,300
15 x 4	200	261541504200	40,058
16 x 4	160	261541604160	33,446
16 x 4	200	261541604200	40,663

AxB h14	L mm	cod.
16 x 10	200	261541610200
20 x 4	200	261542004200
20 x 5	200	261542005200
20 x 6	200	261542006200
20 x 8	200	261542008200
20 x 10	200	261542010200
20 x 12	200	261542012200

Confezione / *Packaging*



Professional

LAMA A MANO PER IL TAGLIO DI TUTTI I METALLI

Hack saw blades for metal cutting / Lames de scies à main pour métaux
Hojas de sierra a mano / Sägeblätter



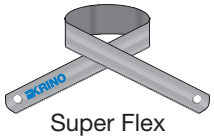
~UNI 4000

BIMETAL HSS-CO8% SUPERFLEX

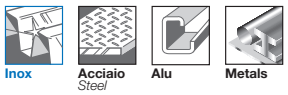




HRC 66÷67
HRC 40÷42



Super Flex



Caratteristiche:
Lama di grandissima qualità con una durezza sui denti di circa 67 gradi Rockwell C, notevolmente superiore ad una lama tradizionale.
Il corpo, più dolce, garantisce una perfetta flessibilità, pur mantenendo una buona rigidità torsionale, per un lavoro preciso e sicuro.
Queste caratteristiche permettono un taglio ineguagliabile per dolcezza, rendimento, precisione e durata negli acciai inox, acciai duri legati, acciai da costruzione, leghe leggere, tutti i metalli, etc.

cod.	Dimensioni *Sizes*	z N. denti / *T.p.i.*
23001101	300x13x0,65 12"x1/2x0,025	18
23001100	300x13x0,65 12"x1/2x0,025	24
23001102	300x13x0,65 12"x1/2x0,025	32

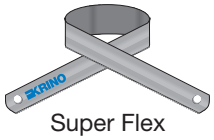
Features:
- *High performances, safe and smooth cut in stainless steel, high alloy steel, structural steel, light alloys, metals.*
- *Pour des travaux dans des aciers très durs, aciers inoxydables, aciers réfractaires pour une précision et sécurité garantis.*
- *Para cortar materiales muy duros, acero inox, acero tratado, aleaciones ligeras, metales. Corte seguro y preciso.*
- *Einsatz: Stahl und Stahlguss, V2A - V4A etc.*

HSS-BIMETAL





HRC 64
HRC 38÷40



Super Flex

cod.	Dimensioni *Sizes*	z N. denti / *T.p.i.*
23001110	300x13x0,65 12"x1/2x0,025	18
23001120	300x13x0,65 12"x1/2x0,025	24
23001130	300x13x0,65 12"x1/2x0,025	32

- Lama superflessibile professionale per il taglio degli acciai duri, dolci, tutti i metalli.
- Shatterproof blades for cutting iron, alloy steel, light alloys, any kind of metal.
- Lames de scies professionnel pour acier dur, alliages légers, métaux.
- Hoja de sierra professional para cortar acero duro, acero aleado, aleaciones ligeras, metales.
- Einsatz: Stahl und Stahlguss, Ne-Metall.

HSS





HRC 64

Art. **21141** Self
Disponibile su richiesta / *On demand*

cod.	Dimensioni *Sizes*	z N. denti / *T.p.i.*
23001150	300x13x0,65 12"x1/2x0,025	24

- Lama professionale HSS a tempra integrale per un taglio preciso ad alto rendimento in tutti gli acciai duri, acciai in genere, leghe leggere, metalli.
- All hard HSS hack saw blades.
- Lame HSS professionnelle pour un découpage précis en tous les aciers durs et les métaux.
- Hoja de sierra profesional HSS a temple integral para el corte preciso de alto rendimiento en todos los aceros duros, aceros, aleaciones ligeras, metales.
- Berufliches HSS Lama für einen genaue Schnitt.

High carbon flexible





HRC 60

cod.	Dimensioni *Sizes*	z N. denti / *T.p.i.*
23001160	300x13x0,65 12"x1/2x0,025	24

- Lama in acciaio da utensile per il taglio occasionale e non professionale di materiali dolci.
- Carbon flexible hack saw blades for occasional usage.
- Lame en acier pour outils destinés aux découpages pas professionnels et occasionnels des métaux doux.
- Hoja de sierra en acero al carbono flexible para el corte ocasional y no profesional en materiales dulces.
- Lama aus Stahl für nicht beruflichen und gelegentlichen Schnitte.

Confezione / *Packaging*  100 pcs

LAMA A MANO RIVESTITA IN GRANI DI CARBURO DI TUNGSTENO PER IL TAGLIO DEI MATERIALI PIÙ DURI ED ABRASIVI

Carbide grit-edge hack saw blades / Lame de scies au carbure de tungstène
Hojas de sierra de metal duro / Diamant Sägeblätter



cod.	Dimensioni *Sizes*
23010060	300x13x0,65 12"x1/2x0,025





- Le particelle di carburo di tungsteno sono metallurgicamente e permanentemente legate al corpo in acciaio e permettono il taglio di materiali duri che una normale lama non può neanche scalfire. **Taglio piano e dolce**, in entrambe le direzioni in: bulloni, catene, acciai duri trattati in barre o tubi, ceramica, marmo, granito, gres, fibra di cemento, fibra di vetro, cristallo.
- *Carbide grit particles permanently bounded to alloy steel, designed to cut materials that a standard won't even scratch. Straight cuts in hardened steel, such as chain and bolts, as well as ceramic tile, stranded cable, hydraulic hose and glass.*
- *Perçage droit des matériaux très durs et abrasifs.*
- *Corte plano de materiales muy duros y abrasivos.*
- *Einsatz: Schneiden der ganzen harten und schleifen Materialien.*

Packaging 10 pcs

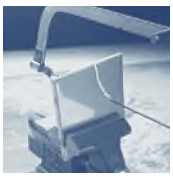
Art. **23011** Self
Disponibile su richiesta / *On demand*

LAME IN FILO TONDO IN CARBURO DI TUNGSTENO PER TAGLI IN QUALSIASI DIREZIONE DI TUTTI I MATERIALI DIFFICILI DA LAVORARE

Carbide grit-edge rod saws / Lame-fil de carbure de tungstène
Cordones de metal duro / Diamant Sägeblätter



cod.	Dimensioni *Sizes*
23005050	300 12"

Le particelle di carburo di tungsteno sono permanentemente legate al corpo di acciaio e permettono un **taglio piano o curvo in tutte le direzioni**, anche nelle posizioni inaccessibili ad altri utensili.
Taglia in modo dolce e progressivo:
- Acciaio inox e acciai duri trattati, tutti gli acciai in genere.
- Bulloni, catene temperate, cavi di trazione
- Ceramica, marmo, granito, gres, fibra di cemento
- Vetro e cristallo

- *Coupe en façon progressive: acier inox, aciers durs, tous les aciers, boulons, câbles, céramique, marbre, granit, grès, ciment, verre, cristal.*
- *Corte en manera dulce y progresiva: acero inox y aceros duros tratados, todos los aceros, pernos, cadenas templadas, cables de tracción, cerámica, mármol, granito, gres, fibra de cemento, vidrio y cristal.*
- *Schneidet in einer Progressivweise: rostfreier Stahl, hart Stahl, Bolzen, Ketten, Keramik, emailliert Steingut, Glass und Kristall.*

Packaging 10 pcs

Art. **23006** Self
Disponibile su richiesta / *On demand*

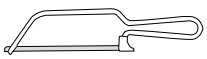
Sostituisce il tagliabulloni, le mole abrasive ed il taglio all'acetilene per molte operazioni!

Carbide grit particles permanently bounded to alloy steel rod can be substituted for bolt cutters, acetylene torches and abrasive wheel, cuts "unsawble materials" like glass, ceramic tile and hardened tool steel. Cuts in any direction and works in tight spaces.

Lama a mano per seghetti tipo "PUK®"
Hack saw blades type "PUK®"
Lame de scie à main type "PUK®"
Hoja de sierra de cinta tipo "PUK®"
Händliches Sägeblatter für Metallsäge "PUK®"

HCS





cod.	Dimensioni *Sizes*	z *tpi*
23012100	150 mm 6"	24

Packaging 10 pcs

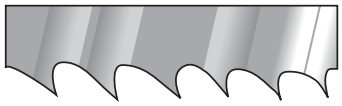
Art. **23012** Self
Disponibile su richiesta / *On demand*

LAME A NASTRO BIMETALLICHE MULTIUSO - HSS AISI M42

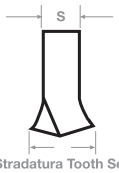
Bimetal band saw blades - HSS AISI M42 / Lames de scie à ruban bimetalliques - HSS AISI M42
Hojas de sierra de cinta bimetálicas - HSS AISI M42 / Bandsägeblätter HSS AISI M42

LAMA MULTIUSO - *Multipurpose blade*

25010

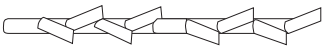


Dentatura / *Teeth*
AISI M42 - 8%Co
HRC: 67/69
Strip di supporto / *Body*
HRC: 44/46



Stradatura Tooth Set

Normale dritta - *Straight raker set*



la più utilizzata
most used



Moduli dentature a passo variabile
Variable pitch modules
Modules de dentures à pas variable
Módulos de dentaduras a paso variable

Variabile - *Variable*



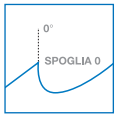
Moduli dentature a passo costante
Constant pitch modules
Modules de dentures à pas constante
Módulos de dentaduras a paso constante

Fissa - *Regular*





SPOGLIA POSITIVA 8° - *Positive rake 8°*
- **Dentatura variabile** - *variable tooth*
(z - tpi 1,4/2÷5/8)
- **Dentatura costante** - *regular tooth*
(z - tpi 2÷6)



SPOGLIA NEUTRA - *Standard straight rake*
- **Dentatura variabile** - *variable tooth*
(z - tpi 6/10÷14/18)
- **Dentatura costante** - *regular tooth*
(z - tpi 8÷18)

- Utilizzare su segatrici a ciclo di taglio (manuale o automatico), in tutti i generi di lavorazioni artigianali ed industriali, per il taglio di sezioni piene ed interrotte, singole o disposte a fascio, di acciai fino a 1200 N/mm², acciai strutturali, acciai automatici, acciai al carbonio, ghise lamellari e sferoidali, metalli non ferrosi (alluminio, rame,...) materie plastiche, materiali non metallici in genere.
- Use on cutting-cycle saws (manual or automatic), in all kinds of artisanal and industrial processes, for cutting solid and interrupted sections, single or arranged in bundles, of steels up to 1200 N/mm², structural steels, automatic steels, carbon steels, lamellar and spheroidal cast irons, non-ferrous metals (aluminum, copper,...) plastics, non-metallic materials in general.
- Utilisation sur scies à découper (manuelles ou automatiques), dans tous types de procédés artisanaux et industriels, pour la découpe de profilés pleins et discontinus, simples ou disposés en faisceaux, en aciers jusqu'à 1200 N/mm², aciers de construction, aciers automatiques, aciers au carbone, fontes lamellaires et sphéroïdales, métaux non ferreux (aluminium, cuivre,...), matières plastiques non métalliques en général.
- Uso en sierras de corte (manuales o automáticas), en todo tipo de procesos artesanales e industriales, para cortar secciones sólidas e interrumpidas, simples o dispuestas en haces, de aceros de hasta 1200 N/mm², aceros estructurales, aceros automáticos, aceros al carbono, fundición esferoidal y esferoidal, metales no ferrosos (aluminio, cobre,...) plásticos, materiales no metálicos en general.





Dimensioni (Altezza x Spessore) ***Dimensions*** *(Width x Thickness)*	**Passo dentatura** (Moduli a passo costante e variabile in Tpi) ***Toothing pitch*** *(Constant and variable pitches modules in Tpi)*																
mm	2	3	4	6	8	10	14	18	1,4/2	2/3	3/4	4/6	5/8	6/10	8/12	10/14	14/18
13 x 0,65		X	X	X		X	X	X					X	X	X	X	X
13 x 0,90		X	X	X		X	X						X	X	X	X	
20 x 0,90		X	X	X		X	X					X	X	X	X	X	
27 x 0,90	X	X	X	X	X		X			X	X	X	X	X	X	X	
34 x 1,10										X	X	X	X	X	X		
41 x 1,30									X	X	X	X	X				

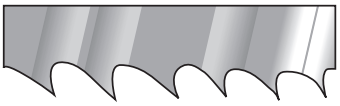
Dentatura a passo costante su richiesta / *Constant pitch modules on demand*

LAME A NASTRO BIMETALLICHE PER CARPENTERIA - HSS AISI M42

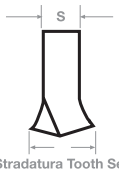
Bimetal band saw blades - HSS AISI M42 / Lames de scie à ruban bimetalliques - HSS AISI M42
Hojas de sierra de cinta bimetálicas - HSS AISI M42 / Bandsägeblätter HSS AISI M42

Dente rinforzato - *Reinforced tooth*
SPECIALE CARPENTERIA - *Carpentry special blade*

25016

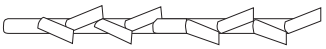


Dentatura / *Teeth*
AISI M42 - 8%Co
HRC: 67/69
Strip di supporto / *Body*
HRC: 44/46



Stradatura Tooth Set

Stradatura maggiorata - *Extra set*

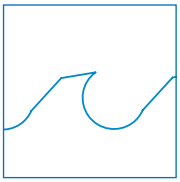


Moduli dentature a passo variabile
Variable pitch modules
Modules de dentures à pas variable
Módulos de dentaduras a paso variable

Variabile - *Variable*



Profilo a dente rinforzato / *Reinforced tooth*



Dente a profilo rinforzato, per una netta riduzione dei fenomeni di rottura dei denti ed una eccezionale resistenza agli impatti e alle vibrazioni.
Tooth with reinforced profile, for a clear reduction of the breaking phenomena of the teeth and an exceptional resistance to impacts and vibrations.
Dent à profil renforcé, pour une réduction nette des phénomènes de rupture des dents et une résistance exceptionnelle aux chocs et aux vibrations.
Diente con perfil reforzado, para una clara reducción de los fenómenos de rotura de los dientes y una excepcional resistencia a los impactos y vibraciones.



SPOGLIA POSITIVA 8° - *Positive rake 8°*
- **Dentatura variabile** - *variable tooth*
  (z - tpi 1,4/2÷5/8)
- **Dentatura costante** - *regular tooth*
  (z - tpi 2÷6)

- Utilizzare su segatrici a ciclo di taglio (manuale o automatico), nelle lavorazioni di carpenteria dove necessiti una lama estremamente resistente e versatile, atta a tagliare le più diverse forme e spessori di materiali. Dedicata prevalentemente al taglio di sezioni interrotte (tubi, profilati, ecc.) ma anche di sezioni piene, singole o disposte a fascio di acciai fino a 1200 N/mm², acciai strutturali, acciai automatici, acciai al carbonio.
- Use on cutting machines (manual or automatic), in carpentry work where you need an extremely resistant and versatile blade, able to cut the most different shapes and thicknesses of materials. Dedicated mainly to cutting interrupted sections (pipes, profiles, etc.) but also of solid, single or beam sections of steels up to 1200 N/mm², structural steels, automatic steels, carbon steels.
- Utiliser sur des machines à découper (manuelles ou automatiques), dans des travaux de menuiserie où vous avez besoin d'une lame extrêmement résistante et polyvalente, capable de couper les formes et les épaisseurs les plus différentes des matériaux. Dédiés principalement à la découpe de sections interrompues (tubes, profilés, etc.) mais aussi de sections pleines, simples ou en poutres d'aciers jusqu'à 1200 N/mm², d'aciers de construction, d'aciers automatiques, d'aciers au carbone.
- Se usa en máquinas de corte (manuales o automáticas), en trabajos de carpintería donde se necesita una cuchilla extremadamente resistente y versátil, capaz de cortar las formas y grosores de materiales más diferentes. Dedicado principalmente al corte de secciones interrumpidas (tuberías, perfiles, etc.) pero también de secciones sólidas, simples o de viga de aceros de hasta 1200 N/mm², aceros estructurales, aceros automáticos, aceros al carbono.





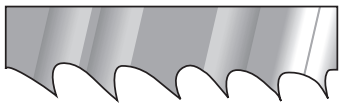
Dimensioni (Altezza x Spessore) ***Dimensions*** *(Width x Thickness)*	**Passo dentatura** (Moduli a passo costante e variabile in Tpi) ***Toothing pitch*** *(Constant and variable pitches modules in Tpi)*				
mm	2/3	3/4	4/6	5/7	8/11
13 x 0,65					X
13 x 0,90					X
20 x 0,90				X	X
27 x 0,90	X	X	X	X	X
34 x 1,10	X	X	X	X	
41 x 1,30	X	X	X		

LAME A NASTRO BIMETALLICHE AD ALTE PRESTAZIONI - HSS AISI M42

Bimetal band saw blades - HSS AISI M42 / Lames de scie à ruban bimetalliques - HSS AISI M42
Hojas de sierra de cinta bimetálicas - HSS AISI M42 / Bandsägeblätter HSS AISI M42

ALTE PRESTAZIONI - *High performance special blade*

25011



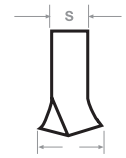
Dentatura / *Teeth*
AISI M42 - 8%Co
HRC: 68/69
Strip di supporto / *Body*
HRC: 48/50
(Alto contenuto di cromo / *High chrome*)



Moduli dentature a passo variabile
Variable pitch modules
Modules de dentures à pas variable
Módulos de dentaduras a paso variable

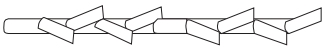
Variabile - *Variable*





Stradatura Tooth Set

Normale dritta - *Straight raker set*



la più utilizzata
most used

Moduli dentature a passo costante
Constant pitch modules
Modules de dentures à pas constante
Módulos de dentaduras a paso constante

Fissa - *Regular*



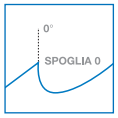
Profilo a dente curvilineo / *Curvilinear tooth*



Dente curvilineo che garantisce una esecuzione di taglio efficace e lineare, a beneficio di un migliore avanzamento.
Curvilinear tooth that guarantees an effective and linear cutting execution to fit a better feed.
Dent curviligne qui garantit une coupe efficace et linéaire pour une meilleure alimentation.
Diente curvilíneo que garantiza una ejecución de corte eficaz y lineal para adaptarse a una mejor alimentación.



SPOGLIA ESTREMAMENTE POSITIVA 12° - *EXTREMELY Positive rake 12°*
- **Dentatura variabile** - *variable tooth*
  (z - tpi 0,75/1,25÷5/8)
- **Dentatura costante** - *regular tooth*
  (z - tpi 2÷6)



SPOGLIA NEUTRA - *Standard straight rake*
- **Dentatura variabile** - *variable tooth*
  (z - tpi 6/10÷10/14)
- **Dentatura costante** - *regular tooth*
  (z - tpi 10÷18)

- Utilizzare su segatrici a ciclo di taglio (manuale o automatico), in tutti i generi di lavorazioni artigianali ed industriali dove necessiti una elevata resa prestazionale e vita operativa dell'utensile, per il taglio di sezioni piene ed interrotte, singole o disposte a fascio, in acciai fino a 1300 N/mm^2, acciai strutturali, acciai automatici, acciai al carbonio, acciai da bonifica, acciai per cuscinetti, acciai per stampi, acciai inossidabili, ghise lamellari e sferoidali, metalli non ferrosi come alluminio e rame, materie plastiche, materiali non metallici in genere.
- Use on cutting-cycle saws (manual or automatic), in all kinds of artisan and industrial processes where a high performance yield and working life of the tool is required, for cutting full and interrupted sections, single or bundled, in steels up to 1300 N/mm^2, structural steels, automatic steels, carbon steels, tempered steels, bearing steels, steels for molds, stainless steels, lamellar and spheroidal cast irons, non-ferrous metals such as aluminum and copper, plastics, non-metallic materials in general.
- Utilisation des commandes de sauvegarde des commandes manuelles ou automatiques, en règle générale, pour les fabricants et les fabricants, pour les besoins de l'industrie, pour la qualité de la vie, des conditions de vie, des déchets pour les personnes handicapées, pour les personnes ayant une déficience intellectuelle in acciai fino a 1300 N/mm^2, acciai strutturali, acciai automaticii, accioi al carbonio, acciai da bonifica, acciai pour cuscinetti, acciai pour stampi, acciai in carbonidabili, ghise lamellari e sferoidali, métalli non ferrosi come allame e rame, matricia materiali non metallici in genere.
- Se utiliza en sierras de ciclo de corte (manuales o automáticas), en todo tipo de procesos artesanales e industriales donde se requiere un alto rendimiento de rendimiento y vida útil de la herramienta, para cortar secciones completas e interrumpidas, simples o agrupadas, en aceros hasta 1300 N/mm^2, aceros estructurales, aceros automáticos, aceros al carbono, aceros templados, aceros para cojinetes, aceros para moldes, aceros inoxidables, hierros laminados y esferoidales, metales no ferrosos como aluminio y cobre, plásticos, Materiales no metálicos en general.





Dimensioni
(Altezza x Spessore)
Dimensions
(Width x Thickness)

Passo dentatura
(Moduli a passo costante e variabile in Tpi)
Toothing pitch
(Constant and variable pitches modules in Tpi)

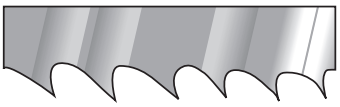
mm	2	3	4	6	10	14	18	0,75/1,25	1/1,4	1,4/2	2/3	3/4	4/6	5/8	6/10	8/12	10/14
6 x 0,65				X													X
6 x 0,90			X	X	X	X											X
10 x 0,65			X	X													X
10 x 0,90			X	X	X	X											X
13 x 0,65		X	X	X	X	X	X							X	X	X	X
13 x 0,90		X	X	X	X	X								X	X	X	X
20 x 0,90		X	X	X	X	X							X	X	X	X	X
27 x 0,90						X					X	X	X	X	X	X	X
34 x 1,10										X	X	X	X	X	X	X	
41 x 1,30										X	X	X	X	X	X		
54 x 1,30										X	X	X	X				
54 x 1,60								X	X	X	X	X	X				

LAME A NASTRO BIMETALLICHE AD ALTE PRESTAZIONI - METALLURGIA DELLE POLVERI

Bimetal band saw blades - HSS POWDER METAL / Lames de scie à ruban bimetalliques - HSS POWDER METAL
Hojas de sierra de cinta bimetálicas - Bandsägeblätter HSS POWDER METAL

ALTE PRESTAZIONI - *High performance special blade*

25018



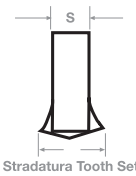
Dentatura / *Teeth*
ASP Metallurgia delle polveri
HRC: 70/71
Strip di supporto / *Body*
HRC: 48/50
(Alto contenuto di cromo / *High chrome*)



Immagine al microscopio
Microscope picture

227

Moduli dentature a passo variabile
Variable pitch modules
Modules de dentures à pas variable
Módulos de dentaduras a paso variable

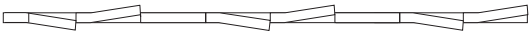


Stradatura Tooth Set

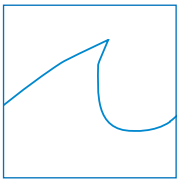
Variabile - *Variable*



Triplo truciolo - *Triple chip*



Profilo a dente di produzione / *Production tooth*



Speciale geometria del dente realizzato con acciaio superrapido e metallurgia delle polveri. Ha profilo PRODUCTION TOOTH e un'ampia gola di scarico XL.
Special tooth geometry made of high speed steel and powder metallurgy. It has PRODUCTION TOOTH profile and a wide XL discharge groove.
Géométrie spéciale des dents en acier ultrarapide et en métallurgie des poudres. Il a un profil PRODUCTION TOOTH et une large rainure de refoulement XL.
Geometría especial del diente hecha de acero súper rápido y metalurgia de polvos. Tiene un perfil de PRODUCCIÓN DENTAL y una ranura de descarga XL ancha.



SPOGLIA ESTREMAMENTE POSITIVA 12° - *EXTREMELY Positive rake 12°*
- **Dentatura variabile** - *variable tooth*
  (z - tpi 0,75/1,25÷5/8)

- Utilizzare su segatrici prevalentemente a ciclo di taglio automatico, in tutte le lavorazioni particolarmente gravose dove necessiti una lama che garantisca una elevata, costante e duratura resa prestazionale. Dedicata al taglio di sezioni piene ma anche interrotte (di medio o forte spessore), singole o eventualmente disposte affiancate in acciai con R < 1400 N/mm², acciai da bonifica, acciai per cuscinetti, acciai per stampi, acciai per lavorazioni a freddo e a caldo, acciai inossidabili, acciai inox resistenti al calore (Duplex®, Super Duplex®), titanio, leghe speciali.
- Use on sawing machines mainly with automatic cutting cycle, in all particularly demanding processes where you need a blade that guarantees a high, constant and long-lasting performance. Dedicated to the cutting of solid or interrupted sections (of medium or strong thickness), single or possibly placed side by side in steels with R < 1400 N/mm², tempered steels, bearing steels, steels for molds, steels for cold working and hot, stainless steels, heat resistant stainless steels (Duplex®, Super Duplex®), titanium, special alloys.
- Utilisez sur les scies principalement avec le cycle de coupe automatique, dans tous les processus particulièrement exigeants où vous avez besoin d'une lame garantissant des performances élevées, constantes et durables. Dédié à la coupe de sections pleines ou interrompues (d'épaisseur moyenne ou forte), simples ou éventuellement juxtaposées dans des aciers de R < 1400 N/mm², aciers trempés, aciers pour roulements, aciers de moules, aciers de travail à froid et aciers chauds et inoxydables, aciers inoxydables résistants à la chaleur (Duplex®, Super Duplex®), titane, alliages spéciaux.
- Se utiliza en máquinas de corte principalmente con ciclos de corte automático, en todos los procesos especialmente exigentes en los que necesita una cuchilla que garantice un rendimiento alto, constante y duradero. Dedicados al corte de secciones sólidas o interrumpidas (de espesor medio o fuerte), individuales o posiblemente colocadas lado a lado en aceros con R < 1400 N/mm², aceros templados, aceros para rodamientos, aceros para moldes, aceros para el trabajo en frío y Hot, aceros inoxidables, aceros inoxidables resistentes al calor (Duplex®, Super Duplex®), titanio, aleaciones especiales.

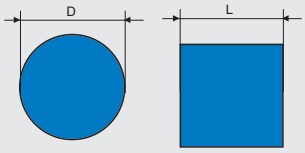




Dimensioni (Altezza x Spessore) ***Dimensions*** *(Width x Thickness)*	**Passo dentatura** (Moduli a passo costante e variabile in Tpi) ***Toothing pitch*** *(Constant and variable pitches modules in Tpi)*						
mm	0,75/1,25	1/1,4	1,4/2	2/3	3/4	4/6	5/8
27 x 0,90				X	X	X	X
34 x 1,10			X	X	X	X	X
41 x 1,30			X	X	X	X	
54 x 1,60		X	X	X	X	X	

Tabella per la scelta della dentatura (per ogni tipo di lama)

Tooth selection / comment pour choisir la denture / tabla para la elecciòn del paso del diente



Dentatura variabile - Variable tooth

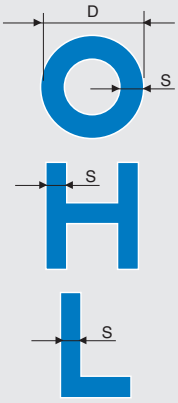
Sezioni piene - Solid cross section

D-L (mm)	20	30	50	80	100	200	300	500	800
Z-tpi	10/14	8/12	6/10	5/8	4/6	4/6	3/4	2/3	1,4/2	0,75/1,25

Dentatura costante - Regular tooth

Sezioni piene - Solid cross section

D-L (mm)	8	10	20	30	50	80	100	120	200	300	400	500	800
Z-tpi	24	18	14	10	8	6	4	3	2	1,25	0,75



	D (mm)										
	20	40	60	80	100	120	150	200	300	400	500
S (mm)	**Z-tpi**										
< 2	14	14	10/14	10/14	10/14	10/14	10/14	8/12	8/12	8/12	6/10
3	10/14	10/14	10/14	10/14	8/12	8/12	8/12	6/10	6/10	6/10	5/8
4	8/12	8/12	8/12	8/12	8/12	6/10	6/10	6/10	5/8	5/8	4/6
5	8/12	8/12	8/12	6/10	6/10	6/10	6/10	5/8	5/8	5/8	4/6
6	6/10	6/10	6/10	6/10	6/10	6/10	5/8	5/8	5/8	4/6	4/6
8	6/10	6/10	6/10	6/10	5/8	5/8	5/8	4/6	4/6	4/6	4/6
10		5/8	5/8	5/8	5/8	5/8	4/6	4/6	4/6	4/6	3/4
12		5/8	5/8	5/8	4/6	4/6	4/6	4/6	4/6	3/4	3/4
15		4/6	4/6	4/6	4/6	4/6	3/4	3/4	3/4	3/4	3/4
20			4/6	4/6	3/4	3/4	3/4	3/4	3/4	3/4	2/3
30				3/4	3/4	3/4	2/3	2/3	2/3	2/3	2/3
50						2/3	2/3	2/3	2/3	2/3	2/3

Parametri di taglio

Cutting parameters

Materiale da tagliare *Material to cut*	**Velocità di rotazione lama** *Band saw blade rotation speed m/min.*
Ferro comune, Acciai strutturali / *Iron, Structural steels*	**70 ÷ 90**
Acciai automatici, Acciai al carbonio / *Free-machining steels, Carbon steels*	**70 ÷ 80**
Acciai da bonifica / *Heat-treatable steels*	**60 ÷ 70**
Acciai per cuscinetti / *Ball bearing steels*	**55 ÷ 65**
Acciai per molle / *Spring steel*	**45 ÷ 60**
Acciai per stampi / *Mould steels*	**25 ÷ 40**
Acciai per lavorazioni a freddo / *Cold-working steels*	**25 ÷ 40**
Acciai per lavorazioni a caldo / *Hot-working steels*	**25 ÷ 40**
Acciai inossidabili e resistenti agli acidi / *Stainless and acid-resistant steels*	**30 ÷ 40**
Acciai inossidabili resistenti al calore / *Heat-resistant stainless steels (DUPLEX, SUPER DUPLEX…)*	**25 ÷ 35**
Leghe speciali a base di Nichel / *Nickel-base alloys (HASTELLOY, INCONEL…)*	**15 ÷ 25**
Titanio e leghe derivate / *Titanium and derivated alloys*	**25 ÷ 45**
Ghise lamellari e sferoidali / *Cast irons lamellar and spheroidal*	**35 ÷ 55**
Metalli non ferrosi quali Alluminio, Rame… / *Non ferrous metals as Aluminium, Copper…*	**60 ÷ 200**
Materie plastiche / *Plastics*	**80 ÷ 400**

LISTINO ANELLI SALDATI PER LE SEGATRICI PIÙ COMUNI

Price list for the most common welded bandsaw blades / List de prix des rubans soudes plus vendues
Tariffa de precios de sierra cinta soldadas a medida / Preis für geschweibt Metallbandsägen

Art. 25010 - AISI M42

Dimensioni *Size*
1138 x **13 x 0,65**
1140 x 13 x 0,65
1295 x 13 x 0,65
1300 x 13 x 0,65
1325 x 13 x 0,65
1330 x 13 x 0,65
1335 x 13 x 0,65
1440 x 13 x 0,65
1470 x 13 x 0,65
1638 x 13 x 0,65
1640 x 13 x 0,65
1735 x 13 x 0,65
1735 x **13 x 0,90**
1740 x 13 x 0,90
1745 x 13 x 0,90
1750 x 13 x 0,90
1900 x **20 x 0,90**
2000 x 20 x 0,90
2060 x 20 x 0,90
2080 x 20 x 0,90
2140 x 20 x 0,90
2160 x 20 x 0,90
2190 x 20 x 0,90
2360 x 20 x 0,90
2375 x 20 x 0,90
2465 x 20 x 0,90
2500 x 20 x 0,90

Dimensioni *Size*
2525 x 20 x 0,90
2530 x 20 x 0,90
2625 x 20 x 0,90
2650 x 20 x 0,90
2450 x **27 x 0,90**
2500 x 27 x 0,90
2520 x 27 x 0,90
2550 x 27 x 0,90
2560 x 27 x 0,90
2580 x 27 x 0,90
2590 x 27 x 0,90
2600 x 27 x 0,90
2650 x 27 x 0,90
2700 x 27 x 0,90
2710 x 27 x 0,90
2720 x 27 x 0,90
2750 x 27 x 0,90
2755 x 27 x 0,90
2760 x 27 x 0,90
2765 x 27 x 0,90
2770 x 27 x 0,90
2800 x 27 x 0,90
2825 x 27 x 0,90
2830 x 27 x 0,90
2835 x 27 x 0,90
2840 x 27 x 0,90
2845 x 27 x 0,90

Dimensioni *Size*
2850 x 27 x 0,90
2880 x 27 x 0,90
2925 x 27 x 0,90
2940 x 27 x 0,90
2945 x 27 x 0,90
2950 x 27 x 0,90
3000 x 27 x 0,90
3010 x 27 x 0,90
3025 x 27 x 0,90
3100 x 27 x 0,90
3120 x 27 x 0,90
3150 x 27 x 0,90
3180 x 27 x 0,90
3200 x 27 x 0,90
3225 x 27 x 0,90
3320 x 27 x 0,90
3370 x 27 x 0,90
3435 x 27 x 0,90
3505 x 27 x 0,90
3580 x 27 x 0,90
3660 x 27 x 0,90
3810 x 27 x 0,90
3850 x 27 x 0,90
3900 x 27 x 0,90
3505 x **34 x 1,10**
3634 x 34 x 1,10
3660 x 34 x 1,10

Dimensioni *Size*
4100 x 34 x 1,10
4115 x 34 x 1,10
4120 x 34 x 1,10
4250 x 34 x 1,10
4460 x 34 x 1,10
4500 x 34 x 1,10
4570 x 34 x 1,10
4600 x 34 x 1,10
4860 x 34 x 1,10
4970 x 34 x 1,10
5300 x 34 x 1,10
5400 x 34 x 1,10
5600 x 34 x 1,10
6150 x 34 x 1,10
4550 x **41 x 1,30**
4870 x 41 x 1,30
5100 x 41 x 1,30
5250 x 41 x 1,30
5300 x 41 x 1,30
5400 x 41 x 1,30
5450 x 41 x 1,30
5550 x 41 x 1,30
5620 x 41 x 1,30
5800 x 41 x 1,30
6150 x 41 x 1,30
6380 x 41 x 1,30
7400 x 41 x 1,30

INFORMAZIONE IMPORTANTE / *Main tip*

All'atto dell'ordine verificare il corretto senso di rotazione desiderato (Standard e/o inverso) in funzione del modello di segatrice

When ordering please verify the sense of rotation you need (STANDARD and/or REVERSE) depending on the machine type

28020005

Olio da taglio emulsionabile in tanica 5 Kg (5lt)

Cutting oil tank 5 lt



28020004

Olio da taglio minerale intero 0,5 lt

Cutting oil 0,5 lt



GUIDA ALLA RISOLUZIONE DEI PROBLEMI DI LAVORAZIONE DEI METALLI

Metalworking troubleshooting guide

Immagine del difetto / *Photo of the defect*



Sega bimetallica
Bimetal hole saw

Descrizione del difetto
Description of the defect

Arrotondamento dei denti della sega bimetallica. *Rounding of the teeth of a bimetal saw.*

Possibili soluzioni del problema
Possible solutions to the problem

L'usura prematura delle creste dei enti è giustificata dall'utilizzo della sega bimetallica nella lavorazione di materiali abrasivi per cui non è idonea. Preferire altre tipologie di utensili più adatti all'applicazione specifica. *Premature wear and tear of the points of the teeth are due to the saw being used on inappropriate, abrasive materials. Use a more suitable tool for the job in question.*

Immagine del difetto / *Photo of the defect*



Utensile a gradino
Step drill

Descrizione del difetto
Description of the defect

Incollaggio dei trucioli sui taglienti di un utensile a gradino. *Swarf sticks to the cutting edge of a graduated drill bit.*

Possibili soluzioni del problema
Possible solutions to the problem

Verificare la correttezza dei parametri di taglio in funziona del diametro dell'utensile e del materiale in lavorazione. *Check the cutting parameters are set to the correct tool diameter for the material being worked.*

Immagine del difetto / *Photo of the defect*



Utensile conico
Conical drill bit

Descrizione del difetto
Description of the defect

Incollaggio dei trucioli sui taglienti di un utensile conico. *Swarf sticks to the cutting edge of a conical drill bit.*

Possibili soluzioni del problema
Possible solutions to the problem

Verificare la correttezza dei parametri di taglio in funziona del diametro dell'utensile e del materiale in lavorazione. *Check the cutting parameters are set to the correct tool diameter for the material being worked.*

Immagine del difetto / *Photo of the defect*



Punta a centrare
Pilot drill

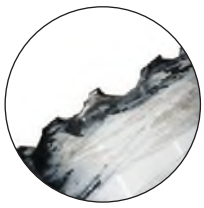
Descrizione del difetto
Description of the defect

Incollaggio dei trucioli sui taglienti di una punta a centrare per frese a tazza. *Swarf sticks to the cutting edge of the centring bit for a hole saw.*

Possibili soluzioni del problema
Possible solutions to the problem

Verificare la correttezza dei parametri di taglio in funziona del diametro dell'utensile e del materiale in lavorazione. *Check the cutting parameters are set to the correct tool diameter for the material being worked.*

Immagine del difetto / *Photo of the defect*



Sega bimetallica
Bimetal hole saw

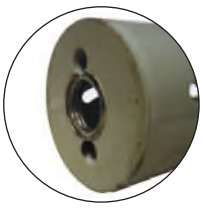
Descrizione del difetto
Description of the defect

Usura dei denti della sega bimetallica. *Wear-and-tear of the bimetal saw.*

Possibili soluzioni del problema
Possible solutions to the problem

La velocità di rotazione del prodotto è eccessiva. Attenersi scrupolosamente alle indicazioni fornite dalle tabelle tecniche. *Decrease the threading and/or advancement speed. The rotation speed of the product is too fast. Always refer to the instructions provided in the technical tables.*

Immagine del difetto / *Photo of the defect*



Sega bimetallica
Bimetal hole saw

Descrizione del difetto
Description of the defect

Striscimento dell'albero all'interno dell'attacco filettato della sega bimetallica. *Slipping of the shaft inside the threaded connector of the bimetal saw.*

Possibili soluzioni del problema
Possible solutions to the problem

Assicurarsi del corretto inserimento dei perni di fissaggio dell'albero nelle sedi apposite sul fondo della tazza bimetallica. *Make sure the fastening pins of the shaft are inserted into the bottom of the bimetal cutting disc correctly.*

Immagine del difetto / *Photo of the defect*



Albero
Arbor

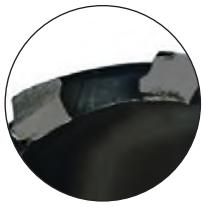
Descrizione del difetto
Description of the defect

Strisciamento del codolo di un albero per frese nel mandrino. *Slipping of the shaft of the drill bit in the chuck.*

Possibili soluzioni del problema
Possible solutions to the problem

Possibile problema di serraggio delle griffe del mandrino. Verificare inoltre lo stato di affilatura dell'utensile: nel caso di usura e conseguente scarsa capacità tagliente, l'utensile tende a bloccarsi nel pezzo in lavorazione e il codolo tende a strisciare nel madrino. In questo caso non insistere nel taglio ma passare alla riaffilatura dell'utensile. *The problem could be caused by clamping of the chuck jaws. Check the sharpness of the tools. In case they are worn and cut less efficiently, the tool can get stuck in the workpiece and the cutting tool may slip in the chuck. In this case do not proceed with cutting any further and sharpen the tool.*

Immagine del difetto / *Photo of the defect*



Fresa a carotare
Core bit

Descrizione del difetto
Description of the defect

Usura / bruciatura della parte esterna del tagliente di una fresa a carotare. *Wearing / burning of the external part of the cutting edge of a hollow hole cutter.*

Possibili soluzioni del problema
Possible solutions to the problem

Verificare la correttezza dei parametri di taglio in funziona del diametro dell'utensile e del materiale in lavorazione. Si tenga conto che la parte esterna dei taglienti è soggetta a usura precoce rispetto alla parte centrale. *Check the cutting parameters are set to the correct tool diameter for the material being worked. Bear in mind that the external part of the cutter wears out more quickly that the central part.*

Immagine del difetto / *Photo of the defect*



Tazza TCT
TCT hole saw

Descrizione del difetto
Description of the defect

Rottura di un dente in metallo duro saldabrasato al corpo dell'utensile. *Breakage of a hard metal tooth that has fused to the body of the tool.*

Possibili soluzioni del problema
Possible solutions to the problem

Il dente in metallo duro è estremamente sensibile agli urti: evitare qualsiasi colpo accidentale durante la foratura ed eviatre tagli discontinui. Eventualemnte preferire altre tipologie di utensili con denti in acciaio superrapido. *The hard metal tooth is extremely sensitive to sudden shocks. Avoid accidental shocks during drilling and discontinuous cuts. If necessary, use another type of tool with super-rapid steel teeth.*

GUIDE DÉPANNAGE POUR LE TRAVAIL DES MÉTAUX

Guía de solución de problemas de procesamiento de metales

Image du dèfaut / *Foto del defecto*



Scie trépan bimetal
Corona perforadora bimetalica

Description du dèfaut
Descripción del defecto

Arrondissement des dents de la scie bi-métal.
Redondeo de los dientes de la sierra bimetálica.

Solutions possibles au problème
Posibles soluciones del problema

L'usure prématurée des crêtes des dents se produit suite à l'utilisation de la scie bi-métal dans l'usinage de matériaux abrasifs pour lesquels elle n'est pas adaptée. *El desgaste precoz de las crestas de los dientes se justifica por el empleo de la sierra bimetálica en el tratamiento de materiales abrasivos para los que no es idónea. Preferir otros tipos de utensilios más aptos a la aplicación específica.*

Image du dèfaut / *Foto del defecto*



Foret étage
Broca escalonada

Description du dèfaut
Descripción del defecto

Collage des copeaux sur les arêtes d'un outil étagé.
Adhesión de las virutas en los bordes afilados de un utensilio escalonado.

Solutions possibles au problème
Posibles soluciones del problema

Vérifier la justesse des paramètres de coupe par rapport au diamètre de l'outil et au matériau à usiner. *Controlar que los parámetros de corte sean correctos según el diámetro del utensilio y del material que haya que tratar.*

Image du dèfaut / *Foto del defecto*



Foret conique
Broca conica

Description du dèfaut
Descripción del defecto

Collage des copeaux sur les arêtes d'un outil conique.
Adhesión de las virutas en los bordes afilados de un utensilio cónico.

Solutions possibles au problème
Posibles soluciones del problema

Vérifier la justesse des paramètres de coupe par rapport au diamètre de l'outil et au matériau à usiner. *Controlar que los parámetros de corte sean correctos según el diámetro del utensilio y del material que haya que tratar.*

Image du dèfaut / *Foto del defecto*



Foret de centrage
Punta para centrar

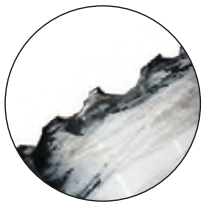
Description du dèfaut
Descripción del defecto

Collage des copeaux sur les arêtes de coupe d'un foret de centrage d'une fraise cloche.
Adhesión de las virutas en los bordes afilados de una punta para centrar para fresas a taza.

Solutions possibles au problème
Posibles soluciones del problema

Vérifier la justesse des paramètres de coupe par rapport au diamètre de l'outil et au matériau à usiner. *Controlar que los parámetros de corte sean correctos según el diámetro del utensilio y del material que haya que tratar.*

Image du dèfaut / *Foto del defecto*



Scie trépan bimetal
Corona perforadora bimetalica

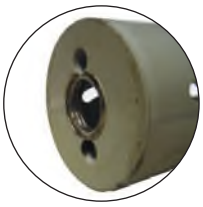
Description du dèfaut
Descripción del defecto

Usure des dents de la scie bi-métal.
Desgaste de los dientes de la sierra bimetálica.

Solutions possibles au problème
Posibles soluciones del problema

La vitesse de rotation du produit est trop élevée. Respecter scrupuleusement les instructions données dans les tableaux techniques. Decrease the threading and/or advancement speed.
La velocidad de rotación del producto es excesiva. Atenerse escrupulosamente a las indicaciones suministradas en las tablas técnicas.

Image du dèfaut / *Foto del defecto*



Scie trépan bimetal
Corona perforadora bimetalica

Description du dèfaut
Descripción del defecto

Frottement de l'arbre à l'intérieur du raccord fileté de la scie bi-métal. *Roce del eje dentro del empalme fileteado de la sierra bimetálica.*

Solutions possibles au problème
Posibles soluciones del problema

S'assurer que les goupilles de fixation de l'arbre sont insérées correctement dans les sièges appropriés au fond de la cloche bi-métal. *Asegurarse de que los pernos de fijación del eje estén bien introducidos en los adecuados alojamientos en el fondo de la taza bimetálica.*

Image du dèfaut / *Foto del defecto*



Arbre
Husillo

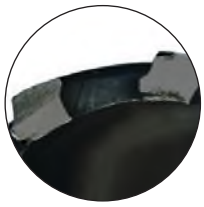
Description du dèfaut
Descripción del defecto

Frottement de la tige d'un arbre de fraisage dans le mandrin. *Roce de la extremidad de un eje para fresas en el mandril.*

Solutions possibles au problème
Posibles soluciones del problema

Problème possible avec le serrage des mâchoires du mandrin.Vérifier également l'état d'affûtage de l'outil : en cas d'usure et donc de faible capacité de coupe, l'outil a tendance à se bloquer dans la pièce à usiner et la tige a tendance à frotter dans le mandrin. Dans ce cas, ne pas insister avec la coupe mais affûter l'outil. *Posible problema de apriete de las mordazas del mandril. Controlar también el estado de afilado del utensilio: en el caso de desgaste y de escasa capacidad cortante, el utensilio tiende a bloquearse en la pieza que hay que tratar y la extremidad tiende a rozar contra el mandril. En este caso no insistir con el corte y afilar el utensilio.*

Image du dèfaut / *Foto del defecto*



Fraise à carotter
Fresa a taza

Description du dèfaut
Descripción del defecto

Usure/brûlure de l'extérieur de l'arête d'une fraise à carotter. *Desgaste / abrasión de la parte externa del borde cortante de una fresa a taza.*

Solutions possibles au problème
Posibles soluciones del problema

Vérifier la justesse des paramètres de coupe par rapport au diamètre de l'outil et au matériau à usiner. Tenir compte du fait que l'extérieur des arêtes est soumise à l'usure précoce par rapport à la partie centrale. *Controlar que los parámetros de corte sean correctos según el diámetro del utensilio y del material que haya que tratar. Hay que tener en cuenta que la parte externa de los bordes cortantes está sometida a un desgaste precoz con respecto a la parte central.*

Image du dèfaut / *Foto del defecto*



Scie TCT
Fresa TCT

Description du dèfaut
Descripción del defecto

Rupture d'une dent en métal dur soudée au corps de l'outil. *Rotura de un diente de metal duro soldado al cuerpo del utensilio.*

Solutions possibles au problème
Posibles soluciones del problema

La dent en métal dur est extrêmement sensible aux chocs: éviter tout choc accidentel pendant le forage et éviter les coupes discontinues. Choisir plutôt d'autres types d'outils avec des dents en acier super rapide. *El diente de metal duro es muy sensible a los golpes: evitar cualquier golpe accidental durante la perforación y evitar cortes discontinuos. Eventualmente preferir otros tipos de utensilios con dientes de acero súper rápido.*



UTENSILI PER FILETTARE

Threading tools
Outils a fileter
Utensilios a roscar
Gewindebohrer und Schneideisen

HSS-G HSS-CO THREADING

CUTTING TOOLS ENGINEERING

Tapping and threading operations play an important role in industrial works and all types of professional applications.The same general conditions as those for drilling holes in high-speed steel also apply to threading tools; due to the complex nature of threading, it is clear why the range of tappers and dies has been greatly expanded (the chapter has been implemented even further). Therefore, threading tools in HSS-G and HSS-CO are available in a much wider range of pitches for each article and with coatings in TiN and TiAlN for more complex processes. A wide range of special tappers with coloured ring guides the industrial user in the choice of the best use. An entire offer of non-metric threaded fittings was also developed, in particular American and English threaded fittings, while the chapter on metric threaded fittings is certainly all-encompassing. At the end of the chapter is an extensive range of products for repairing damaged or stripped threads. Useful sets are also available complete with all the threading systems in practical wooden or metal boxes for a safe use and easy replacement after use.

Les opérations de filetage et de taraudage ont une importance particulière dans les travaux industriels et dans toutes les applications professionnelles. On peut appliquer les mêmes considérations générales sur les outils de forage en acier super rapide aux outils à fileter ; car les travaux de filetage sont encore plus problématiques, c'est pour cela que l'offre de tarauds et de matrices a été bien élargie (le chapitre a été ultérieurement amélioré). Les outils à fileter en HSS-G et HSS-CO sont dès lors disponibles, avec une gamme de pas fortement élargie pour chaque article, et avec revêtements en TiN et TiAlN pour les travaux les plus difficiles. Une vaste gamme de tarauds spéciaux avec bague colorée qui guide l'utilisateur industriel à un choix d'utilisation correct. De plus, toute l'offre des filetages non métriques a été développée, en particulier les filetages américains et anglais, tandis que le chapitre des métriques est certainement plus que complet. Le chapitre se termine avec un programme détaillé de produits pour le rétablissement des filetages endommagés. Il y a également de précieux ensembles avec tous les systèmes de filetages dans des coffrets pratiques en bois ou en métal, pour une utilisation sure et un rangement facile après utilisation.

Las operaciones de aterrajadura y de roscado asumen una importancia relevante en los trabajos industriales y en todas las aplicaciones profesionales. Para los utensilios que hay que roscar valen las mismas consideraciones generales de los utensilios para perforar de acero super rápido; como las operaciones de roscado son aún más problemáticas, existe una gran motivación para ampliar la oferta de machos y terrajas (el capítulo se ha ampliado ulteriormente). Por lo tanto, se hallan disponibles utensilios para roscar de HSS-G y HSS-CO, con una gama de distancias muy ampliada para cada artículo y con revestimientos de TiN y TiAlN para operaciones más difíciles. Una vasta gama de machos especiales con un anillo pintado sirve de guía para que el usuario industrial los use correctamente. También se ha ampliado la oferta de los roscados no métricos, especialmente de los roscados americanos e ingleses, mientras que se halla completo el capítulo sobre las métricas. El capítulo se cierra con un programa detallado de productos para restaurar las roscas dañadas. También hay utilísimos juegos con todos los sistemas de roscado en cómodas cajas de madera o de metal, para usarlas con seguridad y guardarlas con facilidad después del uso.

Le operazioni di maschiatura e filettatura assumono un'importanza rilevante nelle lavorazioni industriali e in tutte le applicazioni professionali. Valgono, per gli utensili a filettare, le stesse considerazioni generali sugli utensili per forare in acciaio superrapido; poiché le lavorazioni di filettatura sono ancora più problematiche, è così chiara la motivazione del grande sviluppo nell'offerta dei maschi e filiere (il capitolo è stato ulteriormente implementato). Pertanto, sono disponibili utensili a filettare in HSS-G e HSS-CO, con una gamma di passi notevolmente ampliata per ciascun articolo e con rivestimenti al TiN e TiAlN per le lavorazioni più difficili. Una vasta gamma di maschi speciali con anello colorato guida l'utente industriale ad una corretta scelta di utilizzo. È stata inoltre sviluppata tutta l'offerta delle filettature non metriche, in modo particolare le filettature americane ed inglesi, mentre è sicuramente esauriente il capitolo delle metriche. Il capitolo si chiude con un programma dettagliato di prodotti per il ripristino delle filettature danneggiate. Sono presenti anche utilissimi set completi di tutti i sistemi di filettatura in comode cassette di legno o metallo, per un sicuro utilizzo ed un facile ricollocamento dopo l'uso.

MASCHI A MACCHINA, SCANALATURE DIRITTE, IMB. CORRETTO, FIL. METRICA ISO PASSO GROSSO

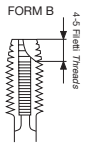
Machine taps, spiral point, metric thread / Tarauds machine, entrée gun, fil. métrique

Machos de maquina, entrada corregida, rosca metrica / Maschinen-Gewindebohrer für metrisches ISO-Regelgewinde

DIN 371/B ISO 2/6H

Gambo rinforzato / Reinforced shank / Queue renforcée / Mango reforzado / Verstärkten Schaft





HSS-G AISI M2
HV 750

HSS-CO AISI M35
HV 820÷850

Art. **10163** Self
Disponibile su richiesta
On demand

MICRO MACHINE TAPS HSS-CO

Ø	/	L	d	pcs	Art. 10162 HSS-G cod.	Art. 10250 HSS-CO cod.
M **1** x 0,25	5	40	2,5	1	-	1025001x025
1,1 x 0,25	5	40	2,5	1	-	10250011x025
1,2 x 0,25	5	40	2,5	1	-	10250012x025
1,4 x 0,3	7	40	2,5	1	-	10250014x030
1,6 x 0,35	8	40	2,5	1	-	10250016x035
1,7 x 0,35	8	40	2,5	1	-	10250017x035
1,8 x 0,35	8	40	2,5	1	-	10250018x035
2 x 0,4	8	45	2,8	1	1016202x04	1025002x04
2,5 x 0,45	9	50	2,8	1	10162025x045	10250025x045
3 x 0,5	11	56	3,5	1	1016203x05	1025003x05
3,5 x 0,6	13	56	4	1	10162035x06	10250035x06
4 x 0,7	13	63	4,5	1	1016204x07	1025004x07
5 x 0,8	16	70	6	1	1016205x08	1025005x08
6 x 1	19	80	6	1	1016206x1	1025006x1
7 x 1	19	80	7	1	1016207x1	1025007x1
8 x 1,25	22	90	8	1	1016208x125	1025008x125
9 x 1,25	22	90	9	1	-	1025009x125
10 x 1,5	24	100	10	1	1016210x15	1025010x15

Applicazioni / *Applications*

HSS-G
***R ≤ 700** N/mm²

Acciaio *Steel* — Metals

HSS-CO
***R ≤ 850** N/mm²

Inox — Acciaio *Steel*

≤ 3 Ø

- Per fori passanti in acciai con R≤*N/mm², ghisa, metalli non ferrosi a truciolo lungo.
- For through holes in steel with R≤*N/mm², cast iron, non ferrous metals with long chip
- Pour trous débouchants en acier avec R≤*N/mm², fonte, alliages légers.
- Para orificios pasantes en materiales de hasta R≤*N/mm².
- Für durchgangsloch in Stahl mit R≤*N/mm², Stahlguss, alu langspanend.



M 3÷12 7 pcs

10240300 HSS-G

10345300 HSS-CO

Abs



M 3÷12 14 pcs
2,5-3,3-4,2-5
6,8-8,5-10,2

10240306 HSS-G

10345306 HSS-CO

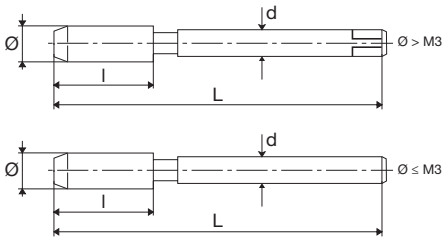
DIN 376/B ISO 2/6H





Confezione / *Packaging*

Art. **10166** Self
Disponibile su richiesta
On demand



Ø	/	L	d	pcs	Art. 10165 HSS-G cod.	Art. 10253 HSS-CO cod.
M **3** x 0,5	11	56	2,2	1	1016503X05	1025303X05
4 x 0,7	13	63	2,8	1	1016504X07	1025304X07
5 x 0,8	16	70	3,5	1	1016505X08	1025305X08
6 x 1	19	80	4,5	1	1016506X1	1025306X1
8 x 1,25	22	90	6	1	1016508X125	1025308X125
10 x 1,5	24	100	7	1	1016510X15	1025310X15
12 x 1,75	29	110	9	1	1016512X175	1025312X175
14 x 2	30	110	11	1	1016514X2	1025314X2
16 x 2	30	110	12	1	1016516X2	1025316X2
18 x 2,5	34	125	14	1	1016518X25	1025318X25
20 x 2,5	34	140	16	1	1016520X25	1025320X25
22 x 2,5	34	140	18	1	1016522X25	1025322X25
24 x 3	38	160	18	1	1016524X3	1025324X3
27 x 3	38	160	20	1	1016527X3	1025327X3
30 x 3,5	45	180	22	1	1016530X35	1025330X35
33 x 3,5	50	180	25	1	1016533X35	1025333X35
36 x 4	56	200	28	1	1016536X4	1025336X4
39 x 4	60	200	32	1	1016539X4	1025339X4
42 x 4,5	60	200	32	1	1016542X45	1025342X45
45 x 4,5	65	220	36	1	1016545X45	1025345X45
48 x 5	70	250	36	1	1016548X5	1025348X5
52 x 5	70	250	40	1	1016552X5	1025352X5
56 x 5,5	70	250	40	1	- - -	1025356X55
60 x 5,5	75	280	45	1	- - -	1025360X55
64 x 6	80	315	50	1	- - -	1025364X6
68 x 6	80	315	50	1	- - -	1025368X6

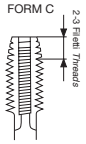
MASCHI A MACCHINA,SCANALATURE DIRITTE,IMB. “C”, FIL. ISO PASSO GROSSO

Machine taps, “C” chamfer form, metric thread / Tarauds machine, entrée “C”, filetage metrique

Machos de maquina, entrada “C”, rosca metrica /Maschinengewindebohrer für metrisches ISO-Regelgewinde

DIN 371/C ISO 2/6H





HSS-G AISI M2
HV 750

HSS-CO AISI M35
HV 820÷850

	Ø	/	L	d	pcs	Art. 10168 HSS-G cod.	Art. 10251 HSS-CO cod.
M	**2** x 0,4	8	45	2,8	1	1016802X04	1025102X04
	2,3 x 0,4	9	45	2,8	1	10168023X04	10251023X04
	2,5 x 0,45	9	50	2,8	1	10168025X045	10251025X045
	2,6 x 0,45	9	50	2,8	1	10168026X045	10251026X045
	3 x 0,5	11	56	3,5	1	1016803X05	1025103X05
	3,5 x 0,6	13	56	4	1	10168035X06	10251035X06
	4 x 0,7	13	63	4,5	1	1016804X07	1025104X07
	5 x 0,8	16	70	6	1	1016805X08	1025105X08
	6 x 1	19	80	6	1	1016806X1	1025106X1
	7 x 1	19	80	7	1	1016807X1	1025107X1
	8 x 1,25	22	90	8	1	1016808X125	1025108X125
	10 x 1,5	24	100	10	1	1016810X15	1025110X15

Applicazioni / Applications

HSS-G
***R ≤ 700** N/mm²

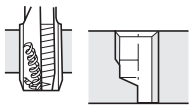
Acciaio
Steel

Metals

HSS-CO
***R ≤ 850** N/mm²

Inox

Acciaio
Steel



≤ **1,5 Ø**

- Per fori ciechi e passanti in acciai e ghisa con R≤*N/mm²
- For blind and trough holes in steel with R≤*N/mm²
- Pour trous débouchants et borgnes en acier avec R≤*N/mm²
- Para orificios pasantes y ciegos in acero de hasta R≤*N/mm²
- Für grund und durchgangsloch in Stahl, Stahlguss mit R≤*N/mm²

DIN 376/C ISO 2/6 H



Gambo cilindrico Ø ≤ M3
Round shank

	Ø	/	L	d	pcs	Art. 10171 HSS-G cod.	Art. 10254 HSS-CO cod.
M	**3** x 0,5	11	56	2,2	1	1017103X05	1025403X05
	4 x 0,7	13	63	2,8	1	1017104X07	1025404X07
	5 x 0,8	16	70	3,5	1	1017105X08	1025405X08
	6 x 1	19	80	4,5	1	1017106X1	1025406X1
	8 x 1,25	22	90	6	1	1017108X125	1025408X125
	10 x 1,5	24	100	7	1	1017110X15	1025410X15
	12 x 1,75	29	110	9	1	1017112X175	1025412X175
	14 x 2	30	110	11	1	1017114X2	1025414X2
	16 x 2	32	110	12	1	1017116X2	1025416X2
	18 x 2,5	34	125	14	1	1017118X25	1025418X25
	20 x 2,5	34	140	16	1	1017120X25	1025420X25
	22 x 2,5	34	140	18	1	1017122X25	1025422X25
	24 x 3	38	160	18	1	1017124X3	1025424X3
	27 x 3	38	160	20	1	1017127X3	1025427X3
	30 x 3,5	45	180	22	1	1017130X35	1025430X35
	33 x 3,5	50	180	25	1	1017133X35	1025433X35
	36 x 4	56	200	28	1	1017136X4	1025436X4
	39 x 4	60	200	32	1	1017139X4	1025439X4
	42 x 4,5	60	200	32	1	1017142X45	1025442X45
	45 x 4,5	65	220	36	1	1017145X45	1025445X45
	48 x 5	70	250	36	1	1017148X5	1025448X5
	52 x 5	70	250	40	1	1017152X5	1025452X5

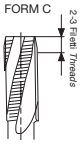
MASCHI A MACCHINA, SCANALATURE DESTRE 15°, IMB. “C”, FIL.METRICA ISO PASSO GROSSO

Machine taps, 15° spiral flute, metric thread / Tarauds machine, goujures 15°, filetage métrique

Machos de maquina, canal helicoidal a 15°, rosca metrica / Maschinen-gewindebohrer, 15° rechtsspirale, für metrisches ISO-Regelgewinde

DIN 371/C-15° ISO 2/6H





HSS-G AISI M2
HV 750

HSS-CO AISI M35
HV 820÷850

	Ø	/	L	d	pcs	Art. 10174 HSS-G cod.	Art. 10256 HSS-CO cod.
M	**3** x 0,5	11	56	3,5	1	1017403X05	1025603X05
	4 x 0,7	13	63	4,5	1	1017404X07	1025604X07
	5 x 0,8	16	70	6	1	1017405X08	1025605X08
	6 x 1	19	80	6	1	1017406X1	1025606X1
	8 x 1,25	22	90	8	1	1017408X125	1025608X125
	10 x 1,5	24	100	10	1	1017410X15	1025610X15



M 3÷12 7 pcs

10240311 HSS-G

10345311 HSS-CO



Abs

M 3÷12 14 pcs
2,5-3,3-4,2-5
6,8-8,5-10,2

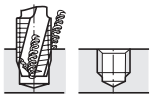
10240312 HSS-G

10345312 HSS-CO

Applicazioni / *Applications*

HSS-G ***R ≤ 700** N/mm²
Acciaio *Steel*
Metals

HSS-CO ***R ≤ 850** N/mm²
Inox
Acciaio *Steel*



≤ 1,5 Ø

- Per fori ciechi in acciai con R≤*N/mm², ghisa malleabile, metalli non ferrosi a truciolo lungo.
- For blind holes in steel with R≤*N/mm², malleable cast iron, non ferrous metals with long chip.
- Pour trous borgnes en acier avec R≤*N/mm², fonte, alliages légers.
- Para orificios ciegos en acero de hasta R≤*N/mm², aleaciones ligeras, fundiciones.
- Für Sackloch in Stahl mit R≤*N/mm², Stahlguss, alu langspanend.

DIN 376/C-15° ISO 2/6H





HSS-G AISI M2
HV 750

HSS-CO AISI M35
HV 820÷850

Gambo cilindrico Ø ≤ M3
Round shank

	Ø	/	L	d	pcs	Art. 10177 HSS-G cod.	Art. 10258 HSS-CO cod.
M	**3** x 0,5	11	56	2,2	1	1017703X05	1025803X05
	4 x 0,7	13	63	2,8	1	1017704X07	1025804X07
	5 x 0,8	16	70	3,5	1	1017705X08	1025805X08
	6 x 1	19	80	4,5	1	1017706X1	1025806X1
	8 x 1,25	22	90	6	1	1017708X125	1025808X125
	10 x 1,5	24	100	7	1	1017710X15	1025810X15
	12 x 1,75	29	110	9	1	1017712X175	1025812X175
	14 x 2	30	110	11	1	1017714X2	1025814X2
	16 x 2	30	110	12	1	1017716X2	1025816X2
	18 x 2,5	34	125	14	1	1017718X25	1025818X25
	20 x 2,5	34	140	16	1	1017720X25	1025820X25
	22 x 2,5	34	140	18	1	1017722X25	1025822X25
	24 x 3	38	160	18	1	1017724X3	1025824X3

Applicazioni / *Applications*

HSS-G ***R ≤ 700** N/mm²
Acciaio *Steel*
Metals

HSS-CO ***R ≤ 850** N/mm²
Inox
Acciaio *Steel*

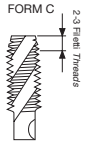
MASCHI A MACCHINA, SCANALATURE DESTRE 35°, IMB. “C”, FIL. METRICA ISO

Machine taps, 35° spiral flute, metric coarse thread / Tarauds machine, goujures 35°, filetage métrique gros

Machos de maquina, canal helicoidal 35°, rosca metrica vasta / Maschinen-Gewindebohrer, 35° rechtsspirale, für metrisches ISO-Regelgewinde

DIN 371/C-35° ISO 2/6H





HSS-G AISI M2
HV 750

HSS-CO AISI M35
HV 820÷850

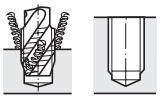
MICRO MACHINE TAPS HSS-CO

	Ø	/	L	d	pcs	Art. 10183 HSS-G cod.	Art. 10255 HSS-CO cod.
M	**1** x 0,25	4	40	2,5	1	- - -	1025501x025
	1,1 x 0,25	4	40	2,5	1	- - -	10255011x025
	1,2 x 0,25	4	40	2,5	1	- - -	10255012x025
	1,4 x 0,30	5	40	2,5	1	- - -	10255014x030
	1,6 x 0,35	6	40	2,5	1	- - -	10255016x035
	1,7 x 0,35	6	40	2,5	1	- - -	10255017x035
	1,8 x 0,35	6	40	2,5	1	- - -	10255018x035
	2 x 0,4	6	45	2,8	1	1018302X04	1025502X04
	2,5 x 0,45	6	50	2,8	1	10183025X045	10255025X045
	3 x 0,5	6	56	3,5	1	1018303X05	1025503X05
	3,5 x 0,6	13	56	4	1	10183035X06	10255035X06
	4 x 0,7	7	63	4,5	1	1018304X07	1025504X07
	5 x 0,8	8	70	6	1	1018305X08	1025505X08
	6 x 1	10	80	6	1	1018306X1	1025506X1
	7 x 1	19	80	7	1	1018307X1	1025507X1
	8 x 1,25	14	90	8	1	1018308X125	1025508X125
	9 x 1,25	14	90	9	1	- - -	1025509X125
	10 x 1,5	16	100	10	1	1018310X15	1025510X15

Gambo cilindrico Ø ≤ M3
Round shank

DIN 376/C-35° ISO 2/6H





≤ 3 Ø

- Per fori ciechi in acciai con R≤*N/mm² ghisa malleabile, metalli non ferrosi a truciolo lungo, acciai resistenti al calore, acciai inox.
- For blind holes in steel with R≤*N/mm² malleable cast iron, non ferrous metal with long chips, stainless steel, heat resistant steel.
- Pour trous borgnes en acier avec R≤*N/mm² fonte, alliages légers, acier inoxidable.
- Para orificios ciegos in acero de hasta R≤*N/mm² aleaciones ligeras, fundicion, acero aleado y acero inox.
- Für grundloch in Stahl mit R≤*N/mm², Stahlguss, alu langspanend, korrosions-beständige Stähle (V2A-V4A) etc.

Applicazioni / Applications

HSS-G
***R ≤ 700** N/mm²



Acciaio *Steel* — Metals

HSS-CO
***R ≤ 850** N/mm²



Inox — Acciaio *Steel*

	Ø	/	L	d	pcs	Art. 10180 HSS-G cod.	Art. 10257 HSS-CO cod.
M	**3** x 0,5	5	56	2,2	1	1018003X05	1025703X05
	4 x 0,7	7	63	2,8	1	1018004X07	1025704X07
	5 x 0,8	8	70	3,5	1	1018005X08	1025705X08
	6 x 1	10	80	4,5	1	1018006X1	1025706X1
	8 x 1,25	13	90	6	1	1018008X125	1025708X125
	10 x 1,5	15	100	7	1	1018010X15	1025710X15
	12 x 1,75	18	110	9	1	1018012X175	1025712X175
	14 x 2	20	110	11	1	1018014X2	1025714X2
	16 x 2	22	110	12	1	1018016X2	1025716X2
	18 x 2,5	25	125	14	1	1018018X25	1025718X25
	20 x 2,5	25	140	16	1	1018020X25	1025720X25
	22 x 2,5	25	140	18	1	1018022X25	1025722X25
	24 x 3	30	160	18	1	1018024X3	1025724X3
	27 x 3	30	160	20	1	1018027X3	1025727X3
	30 x 3,5	35	180	22	1	1018030X35	1025730X35
	33 x 3,5	35	180	25	1	1018033X35	1025733X35
	36 x 4	40	200	28	1	1018036X4	1025736X4
	39 x 4	40	200	32	1	1018039X4	1025739X4
	42 x 4,5	45	200	32	1	1018042X45	1025742X45
	45 x 4,5	45	220	36	1	1018045X45	1025745X45
	48 x 5	50	250	36	1	1018048X5	1025748X5
	52 x 5	50	250	40	1	1018052X5	1025752X5
	56 x 5,5	70	250	40	1	- - -	1025756X55
	60 x 5,5	70	280	45	1	- - -	1025760X55
	64 x 6	75	315	50	1	- - -	1025764X6
	68 x 6	75	315	50	1	- - -	1025768X6



M 3÷12 7 pcs

10240305 HSS-G

10345305 HSS-CO

Abs



M 3÷12 14 pcs
2,5-3,3-4,2-5
6,8-8,5-10,2

10240307 HSS-G

10345307 HSS-CO



M 3÷12 14 pcs
DIN 371/B+371/C 35°

10240310 HSS-G

10345310 HSS-CO

MASCHI A MACCHINA PER DADI, FILETTATURA METRICA ISO A PASSO GROSSO

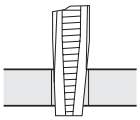
Machine nut taps, metric coarse thread / Tarauds machine à l'enfilade, filetage métrique
Machos de maquina, tipo tuercas, rosca metrica /Maschinen-muttergewindebohrer, metrisches Regel-Gewinde

10273





HSS-CO AISI M35
HV 820÷850



DIN 357
ISO 2/6H

Gambo cilindrico Ø ≤ M3
Round shank

Art. 10273
HSS-CO **M**

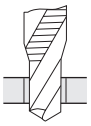
Ø	/	L	d	pcs	cod.
M **3** x 0,5	22	70	2,2	1	1027303X05
4 x 0,7	25	90	2,8	1	1027304X07
5 x 0,8	28	100	3,5	1	1027305X08
6 x 1	32	110	4,5	1	1027306X1
8 x 1,25	40	125	6	1	1027308X125
10 x 1,5	45	140	7	1	1027310X15
12 x 1,75	50	180	9	1	1027312X175
14 x 2	56	200	11	1	1027314X2
16 x 2	63	200	12	1	1027316X2
18 x 2,5	63	220	14	1	1027318X25
20 x 2,5	70	250	16	1	1027320X25
22 x 2,5	80	280	18	1	1027322X25
24 x 3	80	280	18	1	1027324X3

PUNTA-MASCHIO A MACCHINA PER FORATURE E FILETTATURE IN UNA SOLA OPERAZIONE

Combined machine drill-tap for drilling and threading in one operation / Foret taraudeur à machine, filetage métrique
Brocas-macho, rosca metrica normal / Maschinen-kombi-Gewindebohrer für metrisches ISO Regel-Gewinde

10290

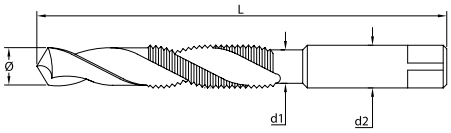




DIN 357
ISO 2/6H

Art. 10290
HSS-CO **M**

Ø	L	d1	d2	pcs	cod.
M **3** x 0,5	56	2,5	3	1	1029003X05
4 x 0,7	63	3,3	4	1	1029004X07
5 x 0,8	71	4,2	5	1	1029005X08
6 x 1	80	5	6	1	1029006X1
8 x 1,25	95	6,8	8	1	1029008X125
10 x 1,5	106	8,5	10	1	1029010X15
12 x 1,75	115	10,2	12	1	1029012X175

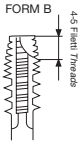


MASCHI A MACCHINA, CAVE DIRITTE E FILETTI ALTERNATI, IMB. CORRETTO, FIL.METRICA ISO

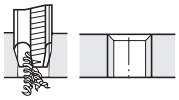
Machine taps, straight flutes, interrupted threads, spiral point / Tarauds machine, goujures droites, entrée B-gun, filets alternés
Machos de maquina, entrada tipo "B" y dientes alternados / Maschinen-gewindebohrer, schälanschnitt form "B", ausgesetzen Zahnen

10261





HSS-CO AISI M35
HV 820÷850



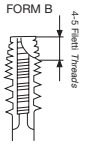
DIN 371/B
ISO 2/6H

Art. 10261
HSS-CO **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1026103X05
	4 x 0,7	13	63	4,5	1	1026104X07
	5 x 0,8	16	70	6	1	1026105X08
	6 x 1	19	80	6	1	1026106X1
	8 x 1,25	22	90	8	1	1026108X125
	10 x 1,5	24	100	10	1	1026110X15

10262





HSS-CO AISI M35
HV 820÷850



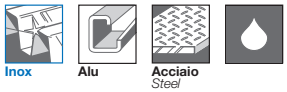
DIN 376/B
ISO 2/6H

Art. 10262
HSS-CO **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	2,2	1	1026203X05
	4 x 0,7	13	63	2,8	1	1026204X07
	5 x 0,8	16	70	3,5	1	1026205X08
	6 x 1	19	80	4,5	1	1026206X1
	8 x 1,25	22	90	6	1	1026208X125
	10 x 1,5	24	100	7	1	1026210X15
	12 x 1,75	29	110	9	1	1026212X175
	14 x 2	30	110	11	1	1026214X2
	16 x 2	30	110	12	1	1026216X2
	18 x 2,5	34	125	14	1	1026218X25
	20 x 2,5	34	140	16	1	1026220X25
	22 x 2,5	34	140	18	1	1026222X25
	24 x 3	38	160	18	1	1026224X3

Gambo cilindrico Ø ≤ M3
Round shank

Applicazioni / *Applications*



Inox **Alu** **Acciaio** *Steel*

- Per filettature in fori passanti in acciai con R≥900 N/mm², acciai da bonifica e cementazione, acciai inox, materiali di difficile truciolabilità, acciai da utensile, bronzi e leghe di rame, alluminio e leghe, materiali sintetici duri.
- For through holes in steel with R≥900 N/mm², high alloy steel, tool steel, stainless steel, bronze, hard sinterized materials.
- Pour trous debouchants en acier avec R≥900 N/mm², acier allié et acier construction, fonte, bronze, matériel synthétique.
- Para orificios pasantes en aceros con R≥900 N/mm², acero aleado, acero inox, bronze, aluminio y aleaciones ligeras.
- Für durchgangsloch in Stahl mit R≥900 N/mm2 ,werkzeuge Stähle, Bronze, rostfreie Stähle, alu langspanend und kurzpanend.

MASCHI A MACCHINA "CORTI" ISO 529

Short machine taps ISO 529 / Tarauds machine courte ISO 529
Machos de maquina cortos ISO 529 / Kurzmaschinen-Gewindebohrer

10172



ISO 529/B



Art. 10172
HSS-G **M**

	Ø	/	L	d	pcs	cod.
M	**2** x 0,4	8	41	2,5	1	1017202X04
	2,5 x 0,45	9,5	44,5	2,8	1	10172025X045
	2,6 x 0,45	9,5	44,5	2,9	1	10172026X045
	3 x 0,5	11	48	3,15	1	1017203X05
	3,5 x 0,6	13	50	3,55	1	10172035X06
	4 x 0,7	13	53	4	1	1017204X07
	5 x 0,8	16	58	5	1	1017205X08
	6 x 1	19	66	6,3	1	1017206X1
	8 x 1,25	22	72	8	1	1017208X125
	10 x 1,5	24	80	10	1	1017210X15
	12 x 1,75	29	89	9	1	1017212X175



M 3÷12 7 pcs
10240313 HSS

10173



ISO 529/C 35°



Art. 10173
HSS-G

	Ø	/	L	d	pcs	cod.
M	**2,5** x 0,45	9,5	44,5	2,8	1	10173025X045
	2,6 x 0,45	9,5	44,5	2,9	1	10173026X045
	3 x 0,5	11	48	3,15	1	1017303X05
	4 x 0,7	13	53	4	1	1017304X07
	5 x 0,8	16	58	5	1	1017305X08
	6 x 1	19	66	6,3	1	1017306X1
	8 x 1,25	22	72	8	1	1017308X125
	10 x 1,5	24	80	10	1	1017310X15
	12 x 1,75	29	89	9	1	1017312X175



M 3÷12 7 pcs
10240314 HSS

Applicazioni / *Applications*



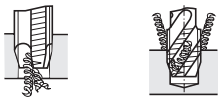
MASCHI A MACCHINA "SOVRADIMENSIONATI", FIL. DIN 13 A PASSO GROSSO

Machine taps oversize / Tarauds machine surdimensionné
Machos de maquina sobredimensionados / Gewindebohrer übergroβ

HSS-CO ISO 3



DIN 371/B **DIN 371/C-35°**
DIN 376/B **DIN 376/C-35°**



6G — Art. 10310

	Ø	/	L	pcs	cod.
					DIN 371/B
M	**3** x 0,5	11	56	1	1031003X05
	4 x 0,7	13	63	1	1031004X07
	5 x 0,8	16	70	1	1031005X08
	6 x 1	19	80	1	1031006X1
	8 x 1,25	22	90	1	1031008X125
	10 x 1,5	24	100	1	1031010X15
					DIN 376/B
M	**12** x 1,75	29	110	1	1031012X175

Art. 10313

/	L	pcs	cod.
			DIN 371/C-35°
6	56	1	1031303X05
7	63	1	1031304X07
8	70	1	1031305X08
10	80	1	1031306X1
14	90	1	1031308X125
16	100	1	1031310X15

7G — Art. 10311

	Ø	/	L	pcs	cod.
					DIN 371/B
M	**3** x 0,5	11	56	1	1031103X05
	4 x 0,7	13	63	1	1031104X07
	5 x 0,8	16	70	1	1031105X08
	6 x 1	19	80	1	1031106X1
	8 x 1,25	22	90	1	1031108X125
	10 x 1,5	24	100	1	1031110X15
					DIN 376/B
M	**12** x 1,75	29	110	1	1031112X175

Art. 10314

/	L	pcs	cod.
			DIN 371/C-35°
6	56	1	1031403X05
7	63	1	1031404X07
8	70	1	1031405X08
10	80	1	1031406X1
14	90	1	1031408X125
16	100	1	1031410X15
			DIN 376/C-35°
18	110	1	1031412X175

Applicazioni / *Applications*



- Per filettature in acciai con R≤850 N/mm², ghisa, metalli non errosi a truciolo lungo.
- For threading in steel with R≤850 N/mm², cast iron, non ferrous metals with long chip
- Pour taraudage en acier avec R≤850 N/mm², fonte, alliages légers.
- Para roscados en materiales de hasta R≤850 N/mm².
- Für Gewinde Stahl mit R≤850 N/mm², Stahlguss, alu Langspanend.

+ 0,1 mm — Art. 10312

	Ø	/	L	pcs	cod.
					DIN 371/B
M	**3** x 0,5	11	56	1	1031203X05
	4 x 0,7	13	63	1	1031204X07
	5 x 0,8	16	70	1	1031205X08
	6 x 1	19	80	1	1031206X1
	8 x 1,25	22	90	1	1031208X125
	10 x 1,5	24	100	1	1031210X15
					DIN 376/B
M	**12** x 1,75	29	110	1	1031212X175

Art. 10315

/	L	pcs	cod.
			DIN 371/C-35°
6	56	1	1031503X05
7	63	1	1031504X07
8	70	1	1031505X08
10	80	1	1031506X1
14	90	1	1031508X125
16	100	1	1031510X15
			DIN 376/C-35°
18	110	1	1031512X175

6G: filetto con tolleranza lasca / *thread with large clearance.*
7G: tolleranza necessaria per tenere conto delle distorsioni da trattamento termico / *allowance for distorsion caused by heat treatment.*
+0,1 mm: tolleranza che tiene conto di un eventuale spessore di rivestimento elettrodeposto (0,25 µm) / *electroplating allowance thickness.*

Tech 442

MASCHI A MACCHINA "LUNGHI", FILETTATURA METRICA ISO A PASSO GROSSO

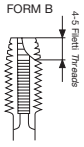
Long machine taps, ISO metric coarse threads / Tarauds machine long filetage metric ISO

Machos de máquina largos, rosca metrica larga / Lange maschinen-gewindebohrer, metrisches-Regelgewinde

10291

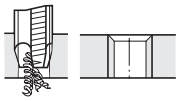


FORM B



HSS-CO AISI M35
HV 820÷850

≃ DIN 371/B
ISO 2/6H



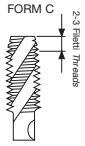
Art. 10291
HSS-CO **M**

	Ø	L	/	d	pcs	cod.
M	**3** x 0,5	**100**	11	3,5	1	1029103100
	4 x 0,7	**100**	13	4,5	1	1029104100
	4 x 0,7	**120**	13	4,5	1	1029104120
	5 x 0,8	**100**	16	6	1	1029105100
	5 x 0,8	**120**	16	6	1	1029105120
	5 x 0,8	**150**	16	6	1	1029105150
	6 x 1	**100**	19	6	1	1029106100
	6 x 1	**120**	19	6	1	1029106120
	6 x 1	**150**	19	6	1	1029106150
	8 x 1,25	**120**	22	8	1	1029108120
	8 x 1,25	**150**	22	8	1	1029108150
	10 x 1,5	**120**	24	10	1	1029110120
	10 x 1,5	**150**	24	10	1	1029110150
	12 x 1,75	**120**	29	12	1	1029112120
	12 x 1,75	**150**	29	12	1	1029112150

10292

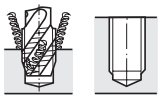


FORM C



HSS-CO AISI M35
HV 820÷850

≃ DIN 371/C-35°
ISO 2/6H



Art. 10292
HSS-CO **M**

	Ø	L	/	d	pcs	cod.
M	**3** x 0,5	**100**	6	3,5	1	1029203100
	4 x 0,7	**100**	7	4,5	1	1029204100
	4 x 0,7	**120**	7	4,5	1	1029204120
	5 x 0,8	**100**	8	6	1	1029205100
	5 x 0,8	**120**	8	6	1	1029205120
	5 x 0,8	**150**	8	6	1	1029205150
	6 x 1	**100**	10	6	1	1029206100
	6 x 1	**120**	10	6	1	1029206120
	6 x 1	**150**	10	6	1	1029206150
	8 x 1,25	**120**	14	8	1	1029208120
	8 x 1,25	**150**	14	8	1	1029208150
	10 x 1,5	**120**	16	10	1	1029210120
	10 x 1,5	**150**	16	10	1	1029210150
	12 x 1,75	**120**	18	12	1	1029212120
	12 x 1,75	**150**	18	12	1	1029212150

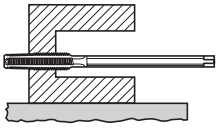
Applicazioni / Applications

R ≤ 850 N/mm²

Inox

Acciaio
Steel

- Per maschiature in acciai con R≤850 N/mm², ghisa malleabile, metalli non ferrosi a truciolo lungo, acciai resistenti al calore, acciai refrattari, acciai inox.
- For threading steel with R≤850 N/mm²,malleable cast iron, nonferrous metal with long chips, heat-resistant and refractory steel, stainless steel.
- Pour tarauder acier avec R≤850 N/mm², fonte malléable, alliages lègers, acier réfractaire et acier inoxydable.
- Para aterrajar acero con R≤850 N/mm², fundición, aleaciones ligeras, acero aleado y refractario, acero inoxidable.
- Um in Stahl mit R≤850 N/mm², Temperguss, Nichteisenmetalle, hitzbeständigem Stahl und rostfreierem Stahl Gewinde zu bohren.



MASCHI A MACCHINA CON TRATTAMENTO DI RIVESTIMENTO SUPERFICIALE

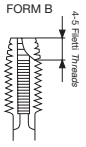
Machine taps with coating treatment / Tarauds machine avec traitement de revetement superficiel
Machos de maquina con tratamiento de recubrimiento superficial / Maschinengewindebohrer mit Beschichtung

10297 10298

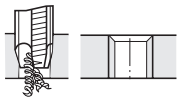




DIN 371/B **DIN 376/B**
HSS-CO VAPO



HSS-CO
HV 820÷850



Art. 10297
HSS-CO VAPO

M

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1029703X05
	4 x 0,7	13	63	4,5	1	1029704X07
	5 x 0,8	16	70	6	1	1029705X08
	6 x 1	19	80	6	1	1029706X1
	8 x 1,25	22	90	8	1	1029708X125
	10 x 1,5	24	100	10	1	1029710X15

Art. 10298
HSS-CO VAPO

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9	1	1029812X175
	14 x 2	30	110	11	1	1029814X2
	16 x 2	30	110	12	1	1029816X2
	18 x 2,5	34	125	14	1	1029818X25
	20 x 2,5	34	140	16	1	1029820X25

Finitura: Ossidazione in vapore di Fe_3O_4 che aumenta la durezza superficiale e la resistenza a usura riducendo la tendenza all'incollamento dei trucioli.
Finish: Steam Tempered of Fe_3O_4, increasing surface hardness and wear resistance.



M 3÷12 7 pcs

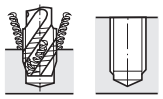
10345315
HSS-CO VAPO

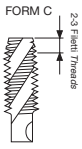
10299 10300





DIN 371/C - 35° **DIN 376/C - 35°**
HSS-CO VAPO





HSS-CO
HV 820÷850

Art. 10299
HSS-CO VAPO

M

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1029903X05
	4 x 0,7	7	63	4,5	1	1029904X07
	5 x 0,8	8	70	6	1	1029905X08
	6 x 1	10	80	6	1	1029906X1
	8 x 1,25	14	90	8	1	1029908X125
	10 x 1,5	16	100	10	1	1029910X15

Art. 10300
HSS-CO VAPO

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9	1	1030012X175
	14 x 2	20	110	11	1	1030014X2
	16 x 2	22	110	12	1	1030016X2
	18 x 2,5	25	125	14	1	1030018X25
	20 x 2,5	25	140	16	1	1030020X25



M 3÷12 7 pcs

10345316
HSS-CO VAPO

Applicazioni / *Applications*

R ≤ 900 N/mm²



Acciaio
Steel



Metals



- Per acciai con R ≤ 900 N/mm², materiali mediamente abrasivi, ghisa e metalli in genere.
- Suitable for steel with R≤ 900 N/mm², quite abrasive materials, cast iron, metals.
- Para los aceros con R ≤ 900 N/mm², materiales medianamente abrasivos, fundición y todos los metales.
- Pour les aciers avec R ≤ 900 N/mm², matériaux modérément abrasifs, de la fonte et tous les métaux.

MASCHI A MACCHINA IN HSS-CO RIVESTITI AL TiN, FIL. METRICA ISO A PASSO GROSSO

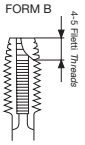
HSS-CO TiN coated machine taps, metric thread /Tarauds machine HSS-CO avec revêtement TiN, fil. métrique / Machos de maquina HSS-CO con recubrimiento de titanio, rosca metrica / Maschinengewindebohrer mit TiN beschichtung für metrisches ISO Regelgewinde

10350 10351



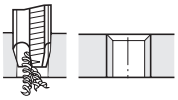


DIN 371/B DIN 376/B



HSS-CO+TiN
HV 0,05=2500





Art. 10350
HSS-CO+TiN

M

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1035003X05
	4 x 0,7	13	63	4,5	1	1035004X07
	5 x 0,8	16	70	6	1	1035005X08
	6 x 1	19	80	6	1	1035006X1
	8 x 1,25	22	90	8	1	1035008X125
	10 x 1,5	24	100	10	1	1035010X15

Art. 10351
HSS-CO+TiN

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9	1	1035112X175
	14 x 2	30	110	11	1	1035114X2
	16 x 2	30	110	12	1	1035116X2
	18 x 2,5	34	125	14	1	1035118X25
	20 x 2,5	34	140	16	1	1035120X25
	22 x 2,5	34	140	18	1	1035122X25
	23 x 3	38	160	18	1	1035124X3



M 3÷12 7 pcs

10390300
HSS-CO+TiN

10354 10355



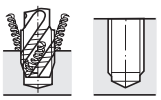


DIN 371/C-35° DIN 376/C-35°



HSS-CO+TiN





Art. 10354
HSS-CO+TiN

M

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1035403X05
	4 x 0,7	7	63	4,5	1	1035404X07
	5 x 0,8	8	70	6	1	1035405X08
	6 x 1	10	80	6	1	1035406X1
	8 x 1,25	14	90	8	1	1035408X125
	10 x 1,5	16	100	10	1	1035410X15

Art. 10355
HSS-CO+TiN

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9	1	1035512X175
	14 x 2	20	110	11	1	1035514X2
	16 x 2	22	110	12	1	1035516X2
	18 x 2,5	25	125	14	1	1035518X25
	20 x 2,5	25	140	16	1	1035520X25
	22 x 2,5	25	140	18	1	1035522X25
	24 x 3	30	160	18	1	1035524X3



M 3÷12 7 pcs

10390305
HSS-CO+TiN

Applicazioni / Applications

R ≤ 1200 N/mm²

Inox

Acciaio
Steel

- Alto rendimiento nella filettatura in acciai ad elevata resistenza sino a R≤1200 N/mm², quali acciai da bonifica alto legati, acciai inox, acciai resistenti agli acidi, acciai refrattari. Temperatura max. di lavoro 550°.
- High performances in high strength steel R≤1200 N/mm², stainless steel, acid resistant steel, high alloy construction steel.
- Haute rendement en taraudage des aciers alliés traités, acier inox, acier refractaire avec R≤1200 N/mm².
- Alto rendimiento en taladro de acero de alta resistencia de hasta R≤1200 N/mm², acero inox, acero tratado, etc.
- Breites anwendungsspektrum u.a. für gut Spanbare Stähle, rostfrei Stähle, Säurebeständigestähle und Vergütungsstähle bis 1200 N/mm².

MASCHI A MACCHINA UNIVERSALI, FILETTATURA METRICA ISO A PASSO GROSSO

Universal machine taps, metric thread / Tarauds machine, fil. Metrique
Machos de maquina, rosca metrica / Maschinen-Gewindebohrer für metrisches ISO-Regelgewinde

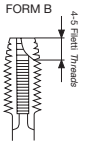
SUPER POWER TAPS
METALLURGIA DELLE POLVERI
POWDER METALLURGY

10362

HSS-CO (PM)+TiN DIN 371/B ISO 2/6H
Gambo rinforzato / *Reinforced shank / Queue renforcèe / Mango renforzado / Verstarkten Shaft* **M**



DIN 371/B DIN 376/B



HSS-CO+TiN
HV 0,05=2500



	Ø	/	L	d	pcs	cod.
M	**2** x 0,4	8	45	2,8	1	1036202X04
	3 x 0,5	11	56	3,5	1	1036203X05
	4 x 0,7	13	63	4,5	1	1036204X07
	5 x 0,8	16	70	6	1	1036205X08
	6 x 1	19	80	6	1	1036206X1
	8 x 1,25	22	90	8	1	1036208X125
	10 x 1,5	24	100	10	1	1036210X15

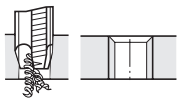


M 3÷12 7 pcs

10390320
HSS-CO+TiN

HSS-CO (PM)+TiN DIN 376/B ISO 2/6H

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9	1	1036212X175
	14 x 2	20	110	11	1	1036214X2
	16 x 2	22	110	12	1	1036216X2
	18 x 2,5	25	125	14	1	1036218X25
	20 x 2,5	25	140	16	1	1036220X25



≤ 3 Ø



M 3÷12 14 pcs

2,5-3,3-4,2-5
6,8-8,5-10,2

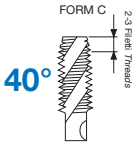
10390321
HSS-CO+TiN

10363

HSS-CO+TiN DIN 371/C-40° ISO 2/6H
Gambo rinforzato / *Reinforced shank / Queue renforcèe / Mango renforzado / Verstarkten Shaft* **M**

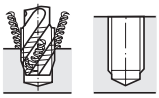


DIN 371/C-40°



HSS-CO+TiN





≤ 3 Ø

	Ø	/	L	d	pcs	cod.
M	**2** x 0,4	6	45	2,8	1	1036302X04
	3 x 0,5	6	56	3,5	1	1036303X05
	4 x 0,7	7	63	4,5	1	1036304X07
	5 x 0,8	8	70	6	1	1036305X08
	6 x 1	10	80	6	1	1036306X1
	8 x 1,25	14	90	8	1	1036308X125
	10 x 1,5	16	100	10	1	1036310X15

Metallurgia delle polveri / Powder metallurgy

L'acciaio superrapido, derivato dal processo di metallurgia delle polveri, offre prestazioni eccezionali: presenta una elevata durezza a caldo e una elevata tenacità, garantita dall'alto contenuto di elementi di lega e dalla microstruttura fortemente omogenea. Gli utensili prodotti con la metallurgia delle polveri (Powder Metallurgy) hanno una durata più elevata ed un rendimento più alto, oltre che una finitura superficiale ottima, che agevola lo scorrimento dei trucioli di lavorazione lontano dalla zona di taglio.
HSS made by powder metallurgy has excellent performances: its homogeneous structure assures high toughness and high resistance. The finishing of the tools are really smooth, so the chip can easily be evacuated far from the cutting zone, thus avoiding built-up edge growth. L'acier super rapide, issu du procédé de métallurgie des poudres, offre des performances exceptionnelles : il présente une dureté à chaud élevée et une haute ténacité, garantie par la forte teneur en éléments d'alliage et par la microstructure très homogène. Les outils fabriqués avec la métallurgie des poudres (Powder Metallurgy) ont une durée et un rendement plus élevés ainsi qu'une excellente finition de surface, ce qui facilite le glissement des copeaux d'usinage hors de la zone de découpe. El acero super-rápido derivado del proceso de metalurgia de los polvos ofrece unas prestaciones excepcionales; presenta una elevada dureza en caliente y una elevada tenacidad, garantizada por el alto contenido de elementos de aleación y por la micro-estructura altamente homogénea. Los utensilios producidos con la metalurgia de los polvos (Powder Metallurgy) tienen una duración más extensa y un rendimiento más elevado, además de un óptimo acabado superficial, que facilita el deslizamiento de las rebabas del trabajo lejos de la zona de corte. Der Hochleistungs-Schnellstahl aus dem Verfahren der Pulvermetallurgie bietet außergewöhnliche Leistungen: er verfügt über eine hohe Hitzebeständigkeit und eine hohe Zähigkeit, die durch den hohen Gehalt an Legierungselementen und die äußerst homogene Mikrostruktur garantiert ist. Die mit der Pulvermetallurgie (Powder Metallurgy) hergestellten Werkzeuge besitzen eine höhere Haltbarkeit und eine höhere Arbeitsleistung. Zudem bieten sie eine hervorragende Oberflächengüte, die das Gleiten der Späne aus dem Schneidbereich erleichtert.

MASCHI A MACCHINA UNIVERSALI, FILETTATURA METRICA ISO A PASSO GROSSO

Universal machine taps, metric thread / Tarauds machine, fil. Metrique

Machos de maquina, rosca metrica / Maschinen-Gewindebohrer für metrisches ISO-Regelgewinde

SUPER POWER TAPS

10515

HSS-CO DIN 371/B ISO 2/6H

Gambo rinforzato / *Reinforced shank / Queue renforcèe / Mango renforzado / Verstarkten Shaft*





HSS-CO
HV 820÷850

DIN 371/B **DIN 376/B**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1051503X05
	4 x 0,7	13	63	4,5	1	1051504X07
	5 x 0,8	16	70	6,0	1	1051505X08
	6 x 1	19	80	6,0	1	1051506X1
	8 x 1,25	22	90	8,0	1	1051508X125
	10 x 1,5	24	100	10,0	1	1051510X15

HSS-CO DIN 376/B ISO 2/6H

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9,0	1	1051512X175
	14 x 2	30	110	11,0	1	1051514X2
	16 x 2	30	110	12,0	1	1051516X2
	20 x 2,5	34	140	16,0	1	1051520X25

VAPO



M 3÷12 7 pcs

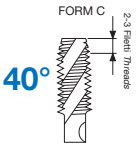
10520307
HSS-CO VAPO

10516

HSS-CO DIN 371/C-40° ISO 2/6H

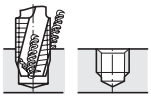
Gambo rinforzato / *Reinforced shank / Queue renforcèe / Mango renforzado / Verstarkten Shaft*





HSS-CO
HV 820÷850

DIN 371/C-40° **DIN 376/C-40°**



≤ 3 Ø

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1051603X05
	4 x 0,7	7	63	4,5	1	1051604X07
	5 x 0,8	8	70	6,0	1	1051605X08
	6 x 1	10	80	6,0	1	1051606X1
	8 x 1,25	14	90	8,0	1	1051608X125
	10 x 1,5	16	100	10,0	1	1051610X15

HSS-CO DIN 376/B ISO 2/6H

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18,5	110	9,0	1	1051612X175
	16 x 2	20	110	12,0	1	1051616X2
	20 x 2,5	25	140	16,0	1	1051620X25

VAPO

Applicazioni / *Applications*
R ≤ 900 N/mm²



Inox
Acciaio *Steel*

- I maschi con anello verde hanno un alto rendimento nella filettatura di acciai con resistenza R<900 N/mm², materiali mediamente abrasivi, alluminio e sue leghe, acciai in genere e ghise. Il trattamento superficiale di vaporizzazione aumenta la durezza superficiale e la resistenza a usura del maschio.
- Green ring machine taps are useful when threading steel with R<900 N/mm², light abrasive materials, aluminium and its alloys, general steels and cast iron. The steam tempering of the tap increases hardness and wear resistance.

MASCHI A MACCHINA CON CANALINA DI REFRIGERAZIONE INTERNA, FILETTATURA METRICA ISO A PASSO GROSSO

Machine taps with internal cooling system, ISO metric thread / Tarauds machine avec trous réfrigérants, filetage metric ISO

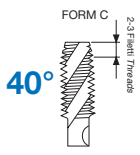
Machos de màquina con sistema de refrigeración interno, rosca metrica larga / Maschinen-gewindebohrer mit Schmierloch, metrisches-Regelgewinde

10330

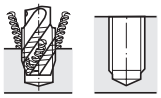
HSS-CO DIN 371/C-40° ISO 2/6H

Gambo rinforzato / *Reinforced shank / Queue renforcèe / Mango renforzado / Verstarkten Shaft*





HSS-CO



	Ø	/	L	d	pcs	cod.
M	**5** x 0,8	8,5	70	6	1	1033005X08
	6 x 1	11	80	6	1	1033006X1
	8 x 1,25	14	90	8	1	1033008X125
	10 x 1,5	16	100	10	1	1033010X15

MASCHI A MACCHINA IN HSS-CO RIVESTITI AL TiAlN, FIL. METRICA ISO A PASSO GROSSO

HSS-CO TiAlN coated machine taps / Tarauds machine HSS-CO avec revêtement TiAlN, fil. métrique / Machos de maquina HSS-CO con recubrimiento TiAlN, rosca metrica / Maschinengewindebohrer mit TiAlN beschichtung für metrisches ISO Regelgewinde

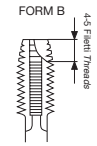
10400 10401

Art. 10400
HSS-CO+TiAlN **M**





DIN 371/B DIN 376/B



HSS-CO+TiAlN
HV 0,05=3000
T° Max.: 800°C





	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1040003X05
	4 x 0,7	13	63	4,5	1	1040004X07
	5 x 0,8	16	70	6	1	1040005X08
	6 x 1	19	80	6	1	1040006X1
	8 x 1,25	22	90	8	1	1040008X125
	10 x 1,5	24	100	10	1	1040010X15

Art. 10401 - HSS-CO+TiAlN

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9	1	1040112X175
	14 x 2	30	110	11	1	1040114X2
	16 x 2	30	110	12	1	1040116X2
	18 x 2,5	34	125	14	1	1040118X25
	20 x 2,5	34	140	16	1	1040120X25
	22 x 2,5	34	140	18	1	1040122X25
	24 x 3	38	160	18	1	1040124X3



M 3÷12 7 pcs

10450300
HSS-CO+TiAlN

10404 10405

Art. 10404
HSS-CO+TiAlN **M**



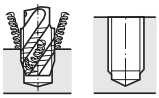


DIN 371/C-35° DIN 376/C-35°



HSS-CO+TiAlN
HV 0,05=3300
T° Max.: 800°C





	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1040403X05
	4 x 0,7	7	63	4,5	1	1040404X07
	5 x 0,8	8	70	6	1	1040405X08
	6 x 1	10	80	6	1	1040406X1
	8 x 1,25	14	90	8	1	1040408X125
	10 x 1,5	16	100	10	1	1040410X15

Art. 10405 - HSS-CO+TiAlN

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9	1	1040512X175
	14 x 2	20	110	11	1	1040514X2
	16 x 2	22	110	12	1	1040516X2
	18 x 2,5	25	125	14	1	1040518X25
	20 x 2,5	25	140	16	1	1040520X25
	22 x 2,5	25	140	18	1	1040522X25
	24 x 3	30	160	18	1	1040524X3



M 3÷12 7 pcs

10450305
HSS-CO+TiAlN

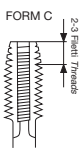
MASCHI A MACCHINA CON CANALINA DI REFRIGERAZIONE INTERNA, FILETTATURA METRICA ISO A PASSO GROSSO

Machine taps with internal cooling system, ISO metric thread / Tarauds machine avec trous réfrigérants, filetage metric ISO / Machos de màquina con sistema de refrigeración interno, rosca metrica larga / Maschinen-gewindebohrer mit Schmierloch, metrisches-Regelgewinde

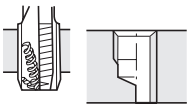
10340

HM DIN 371/C ISO 6HX **TOP PERFORMANCE**
Gambo rinforzato / *Reinforced shank / Queue renforcèe / Mango renforzado / Verstarkten Shaft*



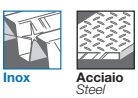


HM
SOLID CARBIDE



	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	8	56	3,5	1	1034003X05
	4 x 0,7	10	63	4,5	1	1034004X07
	5 x 0,8	10	70	6	1	1034005X08
	6 x 1	12	80	6	1	1034006X1
	8 x 1,25	16	90	8	1	1034008X125
	10 x 1,5	18	100	10	1	1034010X15

Applicazioni / *Applications*
R ≤ 1300 N/mm²



Inox — Acciaio *Steel*

- Altissimo rendimento nella maschiatura di acciai ad alta resistenza sino R≤1300 N/mm², quali acciai inox, acciai resistenti alla corrosione, acciai refrattari, acciai da bonifica alto legati trattati. Temperatura operativa sino a 800°
- High performances in high strength steel with R≤1300 N/mm², stainless steel, heat resistant steel, high alloy steel.

MASCHI A MACCHINA, SCAN. DIRITTE, IMB. CORRETTO, FILETTATURA METRICA ISO A PASSO FINE

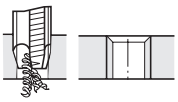
Machine taps, metric ISO fine thread /Tarauds machine, filetage métrique pas fin

Machos de maquina, rosca metrica fina / Maschinengewindebohrer für metrisches ISO fein-Gewinde

10259

HSS-CO DIN 374/B ISO 2/6H **MF**





Gambo cilindrico
Ø ≤ M3
Round shank

Applicazioni / *Applications*

R ≤ 850 N/mm²



Inox



Acciaio
Steel



Metals



Alu



- Per fori passanti in acciai con R≤850 N/mm², ghisa, metalli non ferrosi a truciolo lungo.
- For through holes in steel with R≤850 N/mm², cast iron, non ferrous metals with long chip.
- Pour trous débouchants en acier avec R≤850 N/mm², fonte, alliages légers.
- Para orificios pasantes en materiales de hasta R≤850 N/mm².
- Für durchgangsloch in Stahl mit R≤850 N/mm², Stahlguss, alu langspanend.

	Ø	/	L	d	pcs	cod.
M	**3** x 0,35	9	56	2,2	1	1025903X035
	4 x 0,35	10	63	2,8	1	1025904X035
	4 x 0,5	10	63	2,8	1	1025904X05
	5 x 0,5	12	70	3,5	1	1025905X05
	5 x 0,75	12	70	3,5	1	1025905X075
	6 x 0,5	14	80	4,5	1	1025906X05
	6 x 0,75	14	80	4,5	1	1025906X075
	7 x 0,75	14	80	5,5	1	1025907X075
	8 x 0,5	19	80	6	1	1025908X05
	8 x 0,75	19	80	6	1	1025908X075
	8 x 1	22	90	6	1	1025908X1
	9 x 0,75	19	80	7	1	1025909X075
	9 x 1	22	90	7	1	1025909X1
	10 x 0,75	20	90	7	1	1025910X075
	10 x 1	20	90	7	1	1025910X1
	10 x 1,25	24	100	7	1	1025910X125
	11 x 1	20	90	8	1	1025911X1
	11 x 1,25	22	90	8	1	1025911X125
	12 x 0,75	22	100	9	1	1025912X075
	12 x 1	22	100	9	1	1025912X1
	12 x 1,25	22	100	9	1	1025912X125
	12 x 1,5	22	100	9	1	1025912X15
	13 x 1	22	100	11	1	1025913X1
	13 x 1,5	22	100	11	1	1025913X15
	14 x 0,75	22	100	11	1	1025914X075
	14 x 1	22	100	11	1	1025914X1
	14 x 1,25	22	100	11	1	1025914X125
	14 x 1,5	22	100	11	1	1025914X15
	15 x 1	22	100	12	1	1025915X1
	15 x 1,5	22	100	12	1	1025915X15
	16 x 1	22	100	12	1	1025916X1
	16 x 1,25	22	100	12	1	1025916X125
	16 x 1,5	22	100	12	1	1025916X15
	18 x 1	25	110	14	1	1025918X1
	18 x 1,25	25	110	14	1	1025918X125
	18 x 1,5	25	110	14	1	1025918X15
	18 x 2	34	125	14	1	1025918X2
	20 x 1	25	125	16	1	1025920X1
	20 x 1,25	25	125	16	1	1025920X125
	20 x 1,5	25	125	16	1	1025920X15
	20 x 2	34	140	16	1	1025920X2
	21 x 1,5	25	125	16	1	1025921X15
	22 x 1	25	125	18	1	1025922X1
	22 x 1,25	25	125	18	1	1025922X125
	22 x 1,5	25	125	18	1	1025922X15
	22 x 2	34	140	18	1	1025922X2
	23 x 1,5	25	125	18	1	1025923X15
	24 x 1	28	140	18	1	1025924X1
	24 x 1,25	28	140	18	1	1025924X125
	24 x 1,5	28	140	18	1	1025924X15
	24 x 2	28	140	18	1	1025924X2
	25 x 1	28	140	18	1	1025925X1

	Ø	/	L	d	pcs	cod.
M	**25** x 1,5	28	140	18	1	1025925X15
	25 x 2	28	140	18	1	1025925X2
	26 x 1	28	140	18	1	1025926X1
	26 x 1,5	28	140	18	1	1025926X15
	26 x 2	28	140	18	1	1025926X2
	27 x 1	28	140	20	1	1025927X1
	27 x 1,5	28	140	20	1	1025927X15
	27 x 2	28	140	20	1	1025927X2
	28 x 1	28	140	20	1	1025928X1
	28 x 1,5	28	140	20	1	1025928X15
	28 x 2	28	140	20	1	1025928X2
	29 x 1,5	28	150	22	1	1025929X15
	30 x 1	28	150	22	1	1025930X1
	30 x 1,5	28	150	22	1	1025930X15
	30 x 2	28	150	22	1	1025930X2
	30 x 2,5	45	180	22	1	1025930X25
	30 x 3	45	180	22	1	1025930X3
	32 x 1,5	28	150	22	1	1025932X15
	32 x 2	28	150	22	1	1025932X2
	32 x 3	50	180	22	1	1025932X3
	33 x 1,5	30	160	25	1	1025933X15
	33 x 2	30	160	25	1	1025933X2
	33 x 3	50	180	25	1	1025933X3
	34 x 1,5	30	170	28	1	1025934X15
	34 x 2	30	170	28	1	1025934X2
	35 x 1,5	30	170	28	1	1025935X15
	36 x 1,5	30	170	28	1	1025936X15
	36 x 2	30	170	28	1	1025936X2
	36 x 3	56	200	28	1	1025936X3
	38 x 1,5	30	170	28	1	1025938X15
	39 x 1,5	30	170	32	1	1025939X15
	39 x 2	30	170	32	1	1025939X2
	39 x 3	60	200	32	1	1025939X3
	40 x 1,5	30	170	32	1	1025940X15
	40 x 2	30	170	32	1	1025940X2
	40 x 3	60	200	32	1	1025940X3
	42 x 1,5	30	170	32	1	1025942X15
	42 x 2	30	170	32	1	1025942X2
	42 x 3	60	200	32	1	1025942X3
	45 x 1,5	32	180	36	1	1025945X15
	45 x 2	32	180	36	1	1025945X2
	45 x 3	50	200	36	1	1025945X3
	48 x 1,5	32	190	36	1	1025948X15
	48 x 2	32	190	36	1	1025948X2
	48 x 3	50	225	36	1	1025948X3
	50 x 1,5	32	190	36	1	1025950X15
	50 x 2	32	190	36	1	1025950X2
	50 x 3	50	225	36	1	1025950X3
	52 x 1,5	32	190	40	1	1025952X15
	52 x 2	32	190	40	1	1025952X2
	52 x 3	50	225	40	1	1025952X3
	63 x 1,5	50	275	50	1	1025963X15

MASCHI A MACCHINA, SCAN. ELICOIDALI 35°, FIL. METRICA ISO A PASSO FINE

Machine taps, 35° spiral flute, metric fine thread - Tarauds machine, goujoures 35°, filetage métrique fin

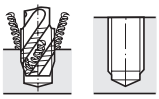
Machos de maquina , canal helicoidal 35°, rosca metrica fina / Maschinen-gewindebohrer, 35° rechtsspirale, für metrisches ISO Feingewinde

HSS-CO DIN 374/C-35° ISO 2/6H

MF

10260





Gambo cilindrico
Ø ≤ M3
Round shank

	Ø	/	L	d	pcs	cod.
M	**3** x 0,35	9	56	2,2	1	1026003X035
	4 x 0,35	10	63	2,8	1	1026004X035
	4 x 0,5	10	63	2,8	1	1026004X05
	5 x 0,5	12	70	3,5	1	1026005X05
	5 x 0,75	12	70	3,5	1	1026005X075
	6 x 0,5	14	80	4,5	1	1026006X05
	6 x 0,75	14	80	4,5	1	1026006X075
	7 x 0,75	14	80	5,5	1	1026007X075
	8 x 0,5	19	80	6	1	1026008X05
	8 x 0,75	19	80	6	1	1026008X075
	8 x 1	22	90	6	1	1026008X1
	9 x 0,75	19	80	7	1	1026009X075
	9 x 1	22	90	7	1	1026009X1
	10 x 0,75	20	90	7	1	1026010X075
	10 x 1	20	90	7	1	1026010X1
	10 x 1,25	24	100	7	1	1026010X125
	11 x 1	20	90	8	1	1026011X1
	11 x 1,25	22	90	8	1	1026011X125
	12 x 0,75	22	100	9	1	1026012X075
	12 x 1	22	100	9	1	1026012X1
	12 x 1,25	22	100	9	1	1026012X125
	12 x 1,5	22	100	9	1	1026012X15
	13 x 1	22	100	11	1	1026013X1
	13 x 1,5	22	100	11	1	1026013X15
	14 x 0,75	22	100	11	1	1026014X075
	14 x 1	22	100	11	1	1026014X1
	14 x 1,25	22	100	11	1	1026014X125
	14 x 1,5	22	100	11	1	1026014X15
	15 x 1	22	100	12	1	1026015X1
	15 x 1,5	22	100	12	1	1026015X15
	16 x 1	22	100	12	1	1026016X1
	16 x 1,25	22	100	12	1	1026016X125
	16 x 1,5	22	100	12	1	1026016X15
	18 x 1	25	110	14	1	1026018X1
	18 x 1,25	25	110	14	1	1026018X125
	18 x 1,5	25	110	14	1	1026018X15
	18 x 2	34	125	14	1	1026018X2
	20 x 1	25	125	16	1	1026020X1
	20 x 1,25	25	125	16	1	1026020X125
	20 x 1,5	25	125	16	1	1026020X15
	20 x 2	34	140	16	1	1026020X2
	21 x 1,5	25	125	16	1	1026021X15
	22 x 1	25	125	18	1	1026022X1
	22 x 1,25	25	125	18	1	1026022X125
	22 x 1,5	25	125	18	1	1026022X15
	22 x 2	34	140	18	1	1026022X2
	23 x 1,5	25	125	18	1	1026023X15
	24 x 1	28	140	18	1	1026024X1
	24 x 1,25	28	140	18	1	1026024X125
	24 x 1,5	28	140	18	1	1026024X15
	24 x 2	28	140	18	1	1026024X2
	25 x 1	28	140	18	1	1026025X1

	Ø	/	L	d	pcs	cod.
M	**25** x 1,5	28	140	18	1	1026025X15
	25 x 2	28	140	18	1	1026025X2
	26 x 1	28	140	18	1	1026026X1
	26 x 1,5	28	140	18	1	1026026X15
	26 x 2	28	140	18	1	1026026X2
	27 x 1	28	140	20	1	1026027X1
	27 x 1,5	28	140	20	1	1026027X15
	27 x 2	28	140	20	1	1026027X2
	28 x 1	28	140	20	1	1026028X1
	28 x 1,5	28	140	20	1	1026028X15
	28 x 2	28	140	20	1	1026028X2
	29 x 1,5	28	150	22	1	1026029X15
	30 x 1	28	150	22	1	1026030X1
	30 x 1,5	28	150	22	1	1026030X15
	30 x 2	28	150	22	1	1026030X2
	30 x 2,5	45	180	22	1	1026030X25
	30 x 3	45	180	22	1	1026030X3
	32 x 1,5	28	150	22	1	1026032X15
	32 x 2	28	150	22	1	1026032X2
	32 x 3	50	180	22	1	1026032X3
	33 x 1,5	30	160	25	1	1026033X15
	33 x 2	30	160	25	1	1026033X2
	33 x 3	50	180	25	1	1026033X3
	34 x 1,5	30	170	28	1	1026034X15
	34 x 2	30	170	28	1	1026034X2
	35 x 1,5	30	170	28	1	1026035X15
	36 x 1,5	30	170	28	1	1026036X15
	36 x 2	30	170	28	1	1026036X2
	36 x 3	56	200	28	1	1026036X3
	38 x 1,5	30	170	28	1	1026038X15
	39 x 1,5	30	170	32	1	1026039X15
	39 x 2	30	170	32	1	1026039X2
	39 x 3	60	200	32	1	1026039X3
	40 x 1,5	30	170	32	1	1026040X15
	40 x 2	30	170	32	1	1026040X2
	40 x 3	60	200	32	1	1026040X3
	42 x 1,5	30	170	32	1	1026042X15
	42 x 2	30	170	32	1	1026042X2
	42 x 3	60	200	32	1	1026042X3
	45 x 1,5	32	180	36	1	1026045X15
	45 x 2	32	180	36	1	1026045X2
	45 x 3	50	200	36	1	1026045X3
	48 x 1,5	32	190	36	1	1026048X15
	48 x 2	32	190	36	1	1026048X2
	48 x 3	50	225	36	1	1026048X3
	50 x 1,5	32	190	36	1	1026050X15
	50 x 2	32	190	36	1	1026050X2
	50 x 3	50	225	36	1	1026050X3
	52 x 1,5	32	190	40	1	1026052X15
	52 x 2	32	190	40	1	1026052X2
	52 x 3	50	225	40	1	1026052X3
	63 x 1,5	40	275	50	1	1026063X15

Applicazioni / Applications

R ≤ 850 N/mm²



Inox



Acciaio
Steel



Metals



Alu



- Per fori ciechi in acciai con R≤850 N/mm², ghisa malleabile, metalli non ferrosi a truciolo lungo, acciai resistenti al calore, acciai inox.
- For blind holes in steel with R≤850 N/mm², malleable cast iron, non ferrous metals with long chips, stainless steel, heat resistant steel.
- Pour trous borgnes en acier avec R≤850 N/mm², fonte, alliages légers, acier inoxidable.
- Para orificios ciegos en acero de hasta R≤850 N/mm², aleaciones ligeras, fundicion, acero aleado y acero inox.
- Für grundloch in Stähl mit R≤850 N/mm², Stahlguss, alu langspanend, korrosions beständige Stahle (V2A – V4A) etc.

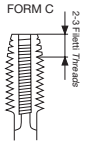
MASCHI A MACCHINA, SCANALATURE DIRITTE, IMBOCCO “C”, FIL. METRICA ISO A PASSO FINE

Machine taps, “C” chamfer form, metric fine thread /Tarauds machine, entrée “C”, filetage métrique fin

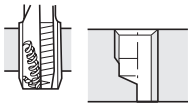
Machos de maquina, entrada “C”, rosca metrica fina /Maschinengewindebohrer für metrisches ISO-fein-Gewinde

10252





HSS-CO AISI M35
HV 820÷850



HSS-CO DIN 374/C ISO 2/6H — MF

	Ø	/	L	d	pcs	cod.
M	**4** x 0,35	10	63	2,8	1	1025204X035
	5 x 0,5	12	70	3,5	1	1025205X05
	6 x 0,75	14	80	4,5	1	1025206X075
	8 x 0,75	19	80	6,0	1	1025208X075
	8 x 1	22	90	6,0	1	1025208X1
	10 x 1	20	90	7,0	1	1025210X1
	10 x 1,25	24	100	7,0	1	1025210X125
	12 x 1	22	100	9,0	1	1025212X1
	12 x 1,25	22	100	9,0	1	1025212X125
	12 x 1,5	22	100	9,0	1	1025212X15
	14 x 1	22	100	11,0	1	1025214X1
	14 x 1,25	22	100	11,0	1	1025214X125
	14 x 1,5	22	100	11,0	1	1025214X15
	16 x 1	22	100	12,0	1	1025216X1
	16 x 1,5	22	100	12,0	1	1025216X15
	18 x 1	25	110	14,0	1	1025218X1
	18 x 1,5	25	110	14,0	1	1025218X15
	18 x 2	34	125	14,0	1	1025218X2
	20 x 1	25	125	16,0	1	1025220X1
	20 x 1,25	25	125	16,0	1	1025220X125
	20 x 1,5	25	125	16,0	1	1025220X15
	20 x 2	34	140	16,0	1	1025220X2
	22 x 1	25	125	18,0	1	1025222X1
	22 x 1,5	25	125	18,0	1	1025222X15
	22 x 2	34	140	18,0	1	1025222X2
	24 x 1	28	140	18,0	1	1025224X1
	24 x 1,5	28	140	18,0	1	1025224X15
	24 x 2	28	140	18,0	1	1025224X2
	25 x 1	28	140	18,0	1	1025225X1
	26 x 1,5	28	140	18,0	1	1025226X15
	27 x 1,5	28	140	20,0	1	1025227X15
	27 x 2	28	140	20,0	1	1025227X2
	28 x 1,5	28	140	20,0	1	1025228X15
	30 x 1,5	28	150	22,0	1	1025230X15
	30 x 2	28	150	22,0	1	1025230X2
	32 x 1,5	28	150	22,0	1	1025232X15
	32 x 2	28	150	22,0	1	1025232X2
	33 x 2	30	160	25,0	1	1025233X2
	35 x 1,5	30	170	28,0	1	1025235X15
	36 x 1,5	30	170	28,0	1	1025236X15
	36 x 2	30	170	28,0	1	1025236X2
	38 x 1,5	30	170	28,0	1	1025238X15
	40 x 1,5	30	170	32,0	1	1025240X15
	42 x 1,5	30	170	32,0	1	1025242X15
	45 x 1,5	32	180	36,0	1	1025245X15
	48 x 1,5	32	190	36,0	1	1025248X15
	50 x 1,5	32	190	36,0	1	1025250X15
	52 x 1,5	32	190	40,0	1	1025252X15

Applicazioni / *Applications*

R ≤ 850 N/mm²



Inox



Acciaio
Steel



Metals



Alu



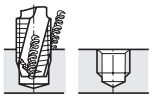
- Per fori ciechi e passanti in acciai e ghisa con R≤850 N/mm²
- For blind and through holes in steel with R≤850 N/mm²
- Pour trous débouchants et borgnes en acier avec R≤850 N/mm²
- Para orificios pasantes y ciegos en acero de hasta R≤850 N/mm²
- Für grund- und durchgangsloch in Stahl, Stahlguss mit R≤850 N/mm²

10198





HSS-G AISI M2
HV 750



≤ 1,5 Ø

HSS-G DIN 374/C-15° ISO 2/6H

	Ø	/	L	d	pcs	cod.
M	**4** x 0,5	10	63	2,8	1	1019804X05
	5 x 0,5	12	70	3,5	1	1019805X05
	6 x 0,75	14	80	4,5	1	1019806X075
	8 x 1	22	90	6,0	1	1019808X1
	10 x 1	20	90	7,0	1	1019810X1
	10 x 1,25	24	100	7,0	1	1019810X125
	12 x 1	22	100	9,0	1	1019812X1
	12 x 1,25	22	100	9,0	1	1019812X125
	14 x 1,25	22	100	11,0	1	1019814X125
	14 x 1,5	22	100	11,0	1	1019814X15
	16 x 1,5	22	100	12,0	1	1019816X15
	20 x 1,5	25	125	16,0	1	1019820X15
	22 x 1,5	25	125	18,0	1	1019822X15
	24 x 1,5	28	140	18,0	1	1019824X15
	24 x 2	28	140	18,0	1	1019824X2

HSS-G
***R ≤ 700** N/mm²



Acciaio
Steel



Metals



Applicazioni / *Applications*

- Per fori ciechi in acciai con R≤*N/mm², ghisa malleabile, metalli non ferrosi a truciolo lungo.
- For blind holes in steel with R≤*N/mm², malleable cast iron, non ferrous metals with long chip.

MASCHI A MACCHINA A RULLARE, FIL. METRICA ISO A PASSO GROSSO

Cold forming machine taps, ISO thread / Tarauds à refouler
Machos de maquina laminacion / Maschinengewindefurcher

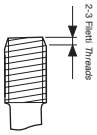
Speciali per lamiere / Special for metal sheets / Spécial pour tôles / Especial para chapas

10280 10360



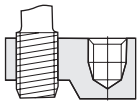
HSS-CO AISI M35
HV 820÷850

HSS-CO+TiN
HV 0,05=2500





ISO 2X/6HX



Art. 10280
HSS-CO ~ DIN 2174

M

	Ø DIN 371	/	L	d	preforo *drill*	pcs	cod.
M	**3** x 0,5	11	56	3,5	2,80	1	1028003X05
	4 x 0,7	13	63	4,5	3,70	1	1028004X07
	5 x 0,8	16	70	6,0	4,65	1	1028005X08
	6 x 1	19	80	6,0	5,55	1	1028006X1
	8 x 1,25	22	90	8,0	7,45	1	1028008X125
	10 x 1,5	24	100	10	9,30	1	1028010X15
	DIN 376						
M	**12** x 1,75	29	110	9,0	11,20	1	1028012X175
	14 x 2	30	110	11	13,00	1	1028014X2
	16 x 2	32	110	12	15,01	1	1028016X2

Art. 10360
HSS-CO+TiN ~ DIN 2174

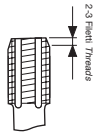
	Ø DIN 371	/	L	d	preforo *drill*	pcs	cod.
M	**3** x 0,5	11	56	3,5	2,80	1	1036003X05
	4 x 0,7	13	63	4,5	3,70	1	1036004X07
	5 x 0,8	16	70	6,0	4,65	1	1036005X08
	6 x 1	19	80	6,0	5,55	1	1036006X1
	8 x 1,25	22	90	8,0	7,45	1	1036008X125
	10 x 1,5	24	100	10	9,30	1	1036010X15
	DIN 376						
M	**12** x 1,75	29	110	9,0	11,20	1	1036012X175
	14 x 2	30	110	11	13,00	1	1036014X2
	16 x 2	32	110	12	15,01	1	1036016X2

10281 10361



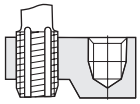
HSS-CO AISI M35
HV 820÷850

HSS-CO+TiN
HV 0,05=2500





ISO 2X/6HX



Con canalini di lubrificazione
With oil grooves

Lubrorefrigerazione con olio
o grafite raccomandata
Recommended oil or graphite cooling

Art. 10281
HSS-CO ~ DIN 2174

	Ø DIN 371	/	L	d	preforo *drill*	pcs	cod.
M	**3** x 0,5	11	56	3,5	2,80	1	1028103X05
	4 x 0,7	13	63	4,5	3,70	1	1028104X07
	5 x 0,8	16	70	6,0	4,65	1	1028105X08
	6 x 1	19	80	6,0	5,55	1	1028106X1
	8 x 1,25	22	90	8,0	7,45	1	1028108X125
	10 x 1,5	24	100	10	9,30	1	1028110X15
	DIN 376						
M	**12** x 1,75	29	110	9,0	11,20	1	1028112X175
	14 x 2	30	110	11	13,00	1	1028114X2
	16 x 2	32	110	12	15,01	1	1028116X2

Art. 10361
HSS-CO+TiN ~ DIN 2174

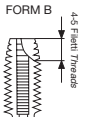
	Ø DIN 371	/	L	d	preforo *drill*	pcs	cod.
M	**3** x 0,5	11	56	3,5	2,80	1	1036103X05
	4 x 0,7	13	63	4,5	3,70	1	1036104X07
	5 x 0,8	16	70	6,0	4,65	1	1036105X08
	6 x 1	19	80	6,0	5,55	1	1036106X1
	8 x 1,25	22	90	8,0	7,45	1	1036108X125
	10 x 1,5	24	100	10	9,30	1	1036110X15
	DIN 376						
M	**12** x 1,75	29	110	9,0	11,20	1	1036112X175
	14 x 2	30	110	11	13,00	1	1036114X2
	16 x 2	32	110	12	15,01	1	1036116X2

MASCHI A MACCHINA, FILETTATURA GAS CILINDRICA BSP

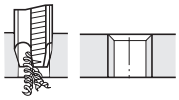
Machine taps, BSP pipe-thread / Tarauds machine, filetage gaz BSP
Machos de maquina, rosca gas BSP / Maschinengewindebohrer für Rohrgewinder

10268





HSS-CO AISI M35
HV 820÷850

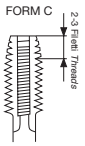


HSS-CO DIN 5156/B — BSP

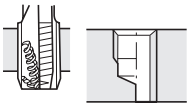
	Ø	/	L	d	pcs	cod.
G	**1/8** x 28	20	90	7	1	102681/8
	1/4 x 19	22	100	11	1	102681/4
	3/8 x 19	22	100	12	1	102683/8
	1/2 x 14	25	125	16	1	102681/2
	5/8 x 14	25	125	18	1	102685/8
	3/4 x 14	28	140	20	1	102683/4
	7/8 x 14	28	150	22	1	102687/8
	1” x 11	30	160	25	1	102681"
	1.1/8 x 11	30	170	28	1	102681.1/8
	1.1/4 x 11	30	170	32	1	102681.1/4
	1.3/8 x 11	32	180	36	1	102681.3/8
	1.1/2 x 11	32	190	36	1	102681.1/2
	1.3/4 x 11	32	190	40	1	102681.3/4
	2” x 11	40	220	45	1	102682"

10276





HSS-CO AISI M35
HV 820÷850



HSS-CO DIN 5156/C

	Ø	/	L	d	pcs	cod.
G	**1/8** x 28	20	90	7	1	102761/8
	1/4 x 19	22	100	11	1	102761/4
	3/8 x 19	22	100	12	1	102763/8
	1/2 x 14	25	125	16	1	102761/2
	5/8 x 14	25	125	18	1	102765/8
	3/4 x 14	28	140	20	1	102763/4
	7/8 x 14	28	150	22	1	102767/8
	1” x 11	30	160	25	1	102761"
	1.1/8 x 11	30	170	28	1	102761.1/8
	1.1/4 x 11	30	170	32	1	102761.1/4
	1.3/8 x 11	32	180	36	1	102761.3/8
	1.1/2 x 11	32	190	36	1	102761.1/2
	1.3/4 x 11	32	190	40	1	102761.3/4
	2” x 11	40	220	45	1	102762"

10204*



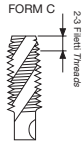
*In esaurimento
To be discontinued

HSS-G DIN 374/C-15°

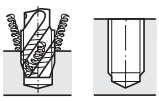
	Ø	/	L	d	pcs	cod.
G	**1/8** x 28	20	90	7	1	102041/8
	1/4 x 19	22	100	11	1	102041/4
	3/8 x 19	22	100	12	1	102043/8
	3/4 x 14	28	140	20	1	102043/4
	1” x 11	30	160	25	1	102041"

10267





HSS-CO AISI M35
HV 820÷850

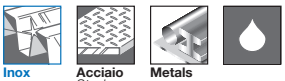


HSS-CO DIN 5156/C-35°

	Ø	/	L	d	pcs	cod.
G	**1/8** x 28	20	90	7	1	102671/8
	1/4 x 19	22	100	11	1	102671/4
	3/8 x 19	22	100	12	1	102673/8
	1/2 x 14	25	125	16	1	102671/2
	5/8 x 14	25	125	18	1	102675/8
	3/4 x 14	28	140	20	1	102673/4
	7/8 x 14	28	150	22	1	102677/8
	1” x 11	30	160	25	1	102671"
	1.1/8 x 11	30	170	28	1	102671.1/8
	1.1/4 x 11	30	170	32	1	102671.1/4
	1.3/8 x 11	32	180	36	1	102671.3/8
	1.1/2 x 11	32	190	36	1	102671.1/2
	1.3/4 x 11	32	190	40	1	102671.3/4
	2” x 11	40	220	45	1	102672"

Applicazioni
Applications

R ≤ 850 N/mm²



BSPT 10293
NPT 10294
259

MASCHI A MACCHINA, FILETTATURA INGLESE WHITWORTH A PASSO GROSSO

Machine taps, british standard thread / Tarauds machine, filetage BSW

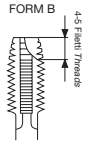
Machos de maquina, rosca inglesa BSW / Maschinengewindebohrer, Whitworth-gewinde BS 84

10265 10266



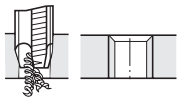


FORM B



HSS-CO AISI M35
HV 820÷850

≃ DIN 371/B **≃ DIN 376/B**



Art. 10265
HSS-CO ISO 2/6 H

BSW

	Ø	/	L	d	pcs	cod.
BSW	**1/8** x 40	5	56	3,5	1	102651/8
	5/32 x 32	6	63	4,5	1	102655/32
	3/16 x 24	9	70	5,5	1	102653/16
	1/4 x 20	10	90	7	1	102651/4
	5/16 x 18	12	90	8	1	102655/16
	3/8 x 16	14	100	10	1	102653/8

Art. 10266
HSS-CO

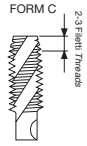
	Ø	/	L	d	pcs	cod.
BSW	**7/16** x 14	20	100	8	1	102667/16
	1/2 x 12	25	110	9	1	102661/2
	9/16 x 12	25	110	11	1	102669/16
	5/8 x 11	28	110	12	1	102665/8
	3/4 x 10	32	125	14	1	102663/4
	7/8 x 9	32	140	18	1	102667/8
	1” x 8	36	160	20	1	102661"
	1.1/4 x 7	40	180	22	1	102661.1/4
	1.1/2 x 6	50	200	32	1	102661.1/2

10274 10275



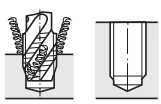


FORM C



HSS-CO AISI M35
HV 820÷850

≃ DIN 371/C-35° **≃ DIN 376/C-35°**



Art. 10274
HSS-CO

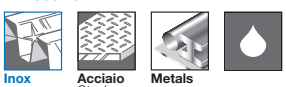
	Ø	/	L	d	pcs	cod.
BSW	**1/8** x 40	5	56	3,5	1	102741/8
	5/32 x 32	6	63	4,5	1	102745/32
	3/16 x 24	9	70	5,5	1	102743/16
	1/4 x 20	10	90	7	1	102741/4
	5/16 x 18	12	90	8	1	102745/16
	3/8 x 16	14	100	10	1	102743/8

Art. 10275
HSS-CO

	Ø	/	L	d	pcs	cod.
BSW	**7/16** x 14	20	100	8	1	102757/16
	1/2 x 12	25	110	9	1	102751/2
	9/16 x 12	25	110	11	1	102759/16
	5/8 x 11	28	110	12	1	102755/8
	3/4 x 10	32	125	14	1	102753/4
	7/8 x 9	32	140	18	1	102757/8
	1” x 8	36	160	20	1	102751"
	1.1/4 x 7	40	180	22	1	102751.1/4
	1.1/2 x 6	50	200	32	1	102751.1/2

Applicazioni *Applications*

R ≤ 850 N/mm²



Inox **Acciaio** *Steel* **Metals**

MASCHI A MACCHINA, FILETTATURA AMERICANA UNC A PASSO GROSSO

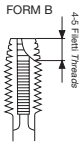
Machine taps, UNC american coarse thread / Tarauds machine, filetage americain UNC

Machos de maquina, rosca americana vasta UNC /Maschinengewindebohrer, amerikanisches großgewind

10269 10270

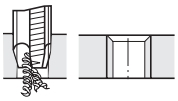






HSS-CO AISI M35
HV 820÷850

≃ DIN 371/B **≃ DIN 376/B**



Art. 10269
HSS-CO **ANSI B1.1** **UNC**

	Ø	/	L	d	pcs	cod.
UNC	**6** x 32	12	56	4	1	10269NR06
	8 x 32	13	63	4,5	1	10269NR08
	10 x 24	15	70	6	1	10269NR10
	12 x 24	16	70	6	1	10269NR12
	1/4 x 20	17	80	7	1	102691/4
	5/16 x 18	20	90	8	1	102695/16
	3/8 x 16	22	100	9	1	102693/8

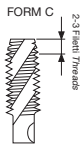
Art. 10270
HSS-CO

	Ø	/	L	d	pcs	cod.
UNC	**7/16** x 14	22	100	8	1	102707/16
	1/2 x 13	25	110	9	1	102701/2
	9/16 x 12	26	110	11	1	102709/16
	5/8 x 11	27	110	12	1	102705/8
	3/4 x 10	30	125	14	1	102703/4
	7/8 x 9	32	140	18	1	102707/8
	1” x 8	36	160	20	1	102701"
	1.1/4 x 7	40	180	22	1	102701.1/4
	1.1/2 x 6	50	200	32	1	102701.1/2

10271 10272

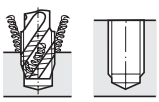






HSS-CO AISI M35
HV 820÷850

≃ DIN 371/C-35° **≃ DIN 376/C-35°**



Art. 10271
HSS-CO **ANSI B1.1**

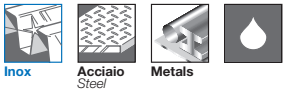
	Ø	/	L	d	pcs	cod.
UNC	**6** x 32	7	56	4	1	10271NR06
	8 x 32	8	63	4,5	1	10271NR08
	10 x 24	10	70	6	1	10271NR10
	12 x 24	10	70	6	1	10271NR12
	1/4 x 20	13	80	7	1	102711/4
	5/16 x 18	14	90	8	1	102715/16
	3/8 x 16	16	100	9	1	102713/8

Art. 10272
HSS-CO

	Ø	/	L	d	pcs	cod.
UNC	**7/16** x 14	17	100	8	1	102727/16
	1/2 x 13	20	110	9	1	102721/2
	9/16 x 12	20	110	11	1	102729/16
	5/8 x 11	22	110	12	1	102725/8
	3/4 x 10	25	125	14	1	102723/4
	7/8 x 9	27	140	18	1	102727/8
	1” x 8	30	160	20	1	102721"
	1.1/4 x 7	35	180	22	1	102721.1/4
	1.1/2 x 6	40	200	32	1	102721.1/2

Applicazioni *Applications*

R ≤ 850 N/mm²



Inox **Acciaio** *Steel* **Metals**

MASCHI A MACCHINA, FILETTATURA AMERICANA UNF A PASSO FINE

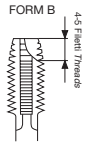
Machine taps, american UNF thread / Tarauds machine, filetage americain UNF

Machos de maquina, rosca americana fina UNF / Maschinengewindebohrer, amerikanisches feingewinde UNF

10282 10283

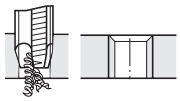






HSS-CO AISI M35
HV 820÷850

≃ DIN 371/B **≃ DIN 376/B**



Art. 10282
HSS-CO **ANSI B1.1** **UNF**

	Ø	/	L	d	pcs	cod.
UNF	**6** x 40	12	56	4	1	10282NR06
	8 x 36	13	63	4,5	1	10282NR08
	10 x 32	15	70	6	1	10282NR10
	12 x 28	16	70	6	1	10282NR12
	1/4 x 28	17	80	7	1	102821/4
	5/16 x 24	17	90	8	1	102825/16
	3/8 x 24	18	100	9	1	102823/8

Art. 10283
HSS-CO

	Ø	/	L	d	pcs	cod.
UNF	**7/16** x 20	22	100	8	1	102837/16
	1/2 x 20	22	100	9	1	102831/2
	9/16 x 18	22	100	11	1	102839/16
	5/8 x 18	22	100	12	1	102835/8
	3/4 x 16	25	110	14	1	102833/4
	7/8 x 14	26	140	18	1	102837/8
	1" x 14	28	150	20	1	102831"
	1.1/4 x 12	30	150	22	1	102831.1/4
	1.1/2 x 12	33	170	32	1	102831.1/2

10284 10285

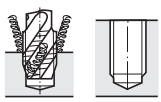






HSS-CO AISI M35
HV 820÷850

≃ DIN 371/C-35° **≃ DIN 376/C-35°**



Art. 10284
HSS-CO **ANSI B1.1**

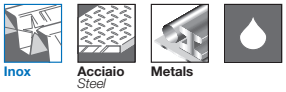
	Ø	/	L	d	pcs	cod.
UNF	**6** x 40	7	56	4	1	10284NR06
	8 x 36	8	63	4,5	1	10284NR08
	10 x 32	10	70	6	1	10284NR10
	12 x 28	10	70	6	1	10284NR12
	1/4 x 28	10	80	7	1	102841/4
	5/16 x 24	10	90	8	1	102845/16
	3/8 x 24	10	100	9	1	102843/8

Art. 10285
HSS-CO

	Ø	/	L	d	pcs	cod.
UNF	**7/16** x 20	13	100	8	1	102857/16
	1/2 x 20	13	100	9	1	102851/2
	9/16 x 18	15	100	11	1	102859/16
	5/8 x 18	15	100	12	1	102855/8
	3/4 x 16	17	110	14	1	102853/4
	7/8 x 14	17	140	18	1	102857/8
	1" x 14	20	150	20	1	102851"
	1.1/4 x 12	22	150	22	1	102851.1/4
	1.1/2 x 12	25	170	32	1	102851.1/2

Applicazioni *Applications*

R ≤ 850 N/mm²



Inox **Acciaio** *Steel* **Metals**

MASCHI A MACCHINA CORTI ISO 529 FILETTATURA AMERICANA UN

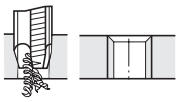
Short machine taps, American UN thread / Tarauds machine courte
Machos de maquina cortos / Kurzmaschinen-Gewindebohrer

ISO 529-2B HSS-CO **8-UN**

10301



FORM B



	Ø	/	L	d	pcs	cod.
UN	**1.1/8** x 8	48	138	20,0	1	103011.1/8
	1.1/4 x 8	51	151	22,4	1	103011.1/4
	1.1/2 x 8	60	170	28,0	1	103011.1/2
	2” x 8	70	200	35,5	1	103012"
	2.1/4 x 8	76	221	40,0	1	103012.1/4
	2.1/2 x 8	79	224	40,0	1	103012.1/2

MASCHI A MACCHINA CORTI ISO 529 FILETTATURA AMERICANA UNEF

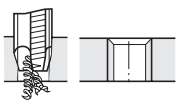
Short machine taps, American UNEF thread / Tarauds machine courte
Machos de maquina cortos / Kurzmaschinen-Gewindebohrer

ISO 529-2B HSS-CO **UNEF**

10305



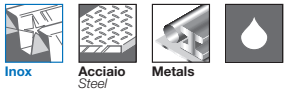
FORM B



	Ø	/	L	d	pcs	cod.
UNEF	**1/4** x 32	19	66	6,3	1	103051/4
	5/16 x 32	23	75	10,0	1	103055/16
	3/8 x 32	24	80	10,0	1	103053/8
	1/2 x 28	29	89	9,0	1	103051/2
	9/16 x 24	30	95	11,2	1	103059/16
	5/8 x 24	32	102	12,5	1	103055/8
	3/4 x 20	37	112	14,0	1	103053/4
	7/8 x 20	38	118	16,0	1	103057/8
	1” x 20	45	130	18,0	1	103051"
	1.1/16 x 18	48	138	20,0	1	103051.1/16
	1.1/8 x 18	48	138	20,0	1	103051.1/8
	1.1/4 x 18	51	151	22,4	1	103051.1/4
	1.1/2 x 18	60	170	28,0	1	103051.1/2
	1.3/4 x 18	67	187	31,5	1	103051.3/4
	2” x 18	70	200	35,5	1	103052”

Applicazioni *Applications*

R ≤ 850 N/mm²



Inox **Acciaio** *Steel* **Metals**

MASCHI A MACCHINA CORTI PER TUBI, FILETTATURA CONICA AMERICANA NPTF

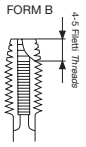
Short machine taps for pipes / Tarauds machine courte

Machos de maquina cortos para tubos / Kurzmaschinen-Gewindebohrer

HSS-CO **NPTF**

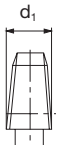
10306





HSS-CO AISI M35
HV 820÷850

FORM B



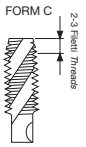
CONICITÀ 1:16
TAPER 1:16

	Ø	/	L	pcs	cod.
NPTF	**1/16** x 27	19	55	1	103061/16
	1/8 x 27	19	55	1	103061/8
	1/4 x 18	28	62	1	103061/4
	3/8 x 18	28	65	1	103063/8
	1/2 x 14	35	80	1	103061/2
	3/4 x 14	35	85	1	103063/4
	1” x 11,5	45	95	1	103061"

HSS-CO **NPTF**

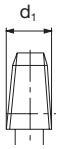
10307





HSS-CO AISI M35
HV 820÷850

FORM C 35°

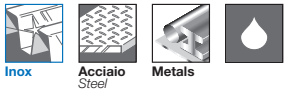


CONICITÀ 1:16
TAPER 1:16

	Ø	/	L	pcs	cod.
NPTF	**1/8** x 27	19	55	1	103071/8
	1/4 x 18	28	62	1	103071/4
	3/8 x 18	28	65	1	103073/8
	1/2 x 14	35	80	1	103071/2
	3/4 x 14	35	85	1	103073/4
	1” x 11,5	45	95	1	103071"

Applicazioni *Applications*

R ≤ 850 N/mm²



Inox **Acciaio** *Steel* **Metals**



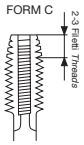
MASCHI A MACCHINA CORTI PER TUBI, FILETTATURA CILINDRICA AMERICANA NPS

Short machine taps for pipes / Tarauds machine courte
Machos de maquina cortos para tubos / Kurzmaschinen-Gewindebohrer

HSS-CO **NPS**

10308





HSS-CO AISI M35
HV 820÷850

FORM C

	Ø	/	L	pcs	cod.
NPS	**1/16** x 27	17,5	54	1	103081/16
	1/8 x 27	19	55	1	103081/8
	1/4 x 18	28	62	1	103081/4
	3/8 x 18	28	65	1	103083/8
	1/2 x 14	35	80	1	103081/2
	3/4 x 14	35	85	1	103083/4
	1" x 11,5	45	95	1	103081"

HSS-CO **NPS**

10309





HSS-CO AISI M35
HV 820÷850

FORM C 35°

	Ø	/	L	pcs	cod.
NPS	**1/16** x 27	17,5	54	1	103091/16
	1/8 x 27	19	55	1	103091/8
	1/4 x 18	28	62	1	103091/4
	3/8 x 18	28	65	1	103093/8
	1/2 x 14	35	80	1	103091/2
	3/4 x 14	35	85	1	103093/4
	1" x 11,5	45	95	1	103091"

Applicazioni *Applications*

R ≤ 850 N/mm²


Inox


Acciaio *Steel*


Metals



MASCHI A MACCHINA “SINISTRI”, FILETTATURA METRICA ISO A PASSO GROSSO

Machine taps, “left hand”, metric coarse thread / Tarauds machine, “gauche “, filetage métrique

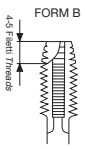
Machos de maquina, “izquierda”, rosca metrica normal / Maschinengewindebohrer, “linksgewinde”, für metrisches ISO Regelgewinde

Sinistri - Left hand - Gauche - Izquierda - Links

10277 10278

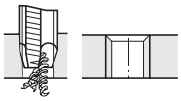






HSS-CO AISI M35
HV 820÷850

DIN 371/B **DIN 376/B**



Art. 10277
HSS-CO **DIN 371/B** **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1027703X05
	4 x 0,7	13	63	4,5	1	1027704X07
	5 x 0,8	16	70	6,0	1	1027705X08
	6 x 1	19	80	6,0	1	1027706X1
	8 x 1,25	22	90	8,0	1	1027708X125
	10 x 1,5	24	100	10,0	1	1027710X15

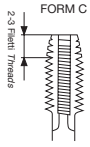
Art. 10278
HSS-CO **DIN 376/B**

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9,0	1	1027812X175
	14 x 2	30	110	11,0	1	1027814X2
	16 x 2	32	110	12,0	1	1027816X2
	18 x 2,5	34	125	14,0	1	1027818X25
	20 x 2,5	34	140	16,0	1	1027820X25
	22 x 2,5	34	140	18,0	1	1027822X25
	24 x 3	38	160	18,0	1	1027824X3
	27 x 3	38	160	20,0	1	1027827X3
	30 x 3,5	45	180	22,0	1	1027830X35

10263 10264

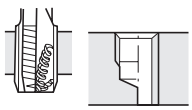






HSS-CO AISI M35
HV 820÷850

DIN 371/C **DIN 376/C**



Art. 10263
HSS-CO **DIN 371/C**

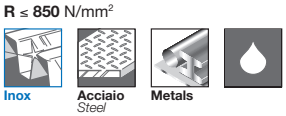
	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1026303X05
	4 x 0,7	13	63	4,5	1	1026304X07
	5 x 0,8	16	70	6,0	1	1026305X08
	6 x 1	19	80	6,0	1	1026306X1
	8 x 1,25	22	90	8,0	1	1026308X125
	10 x 1,5	24	100	10,0	1	1026310X15

Art. 10264
HSS-CO **DIN 376/C**

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9,0	1	1026412X175
	14 x 2	30	110	11,0	1	1026414X2
	16 x 2	30	110	12,0	1	1026416X2
	18 x 2,5	34	125	14,0	1	1026418X25
	20 x 2,5	34	140	16,0	1	1026420X25
	22 x 2,5	34	140	18,0	1	1026422X25
	24 x 3	38	160	18,0	1	1026424X3

Applicazioni Applications

R ≤ 850 N/mm²



Inox **Acciaio** *Steel* **Metals**

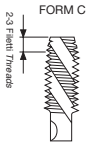
MASCHI A MACCHINA "SINISTRI", SCAN. DESTRE 35°, IMB. "C", FIL. METRICA ISO

Machine taps "left hand", 35° spiral flute, metric coarse thread / Tarauds machine "gauche", goujures 35°, filetage métrique gros
Machos de maquina "izquierda", canal helicoidal 35°, rosca metrica vasta
Maschinen-Gewindebohrer "Linksgewinde", 35° rechtsspirale, für metrisches ISO-Regelgewinde

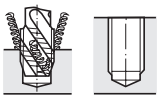
Sinistri - Left hand - Gauche - Izquierda - Links

DIN 371/C-35° - ISO 2/6H — **Art. 10279** — **HSS-CO** — **M**





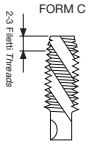
HSS-CO AISI M35
HV 820÷850



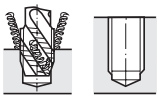
	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1027903X05
	4 x 0,7	7	63	4,5	1	1027904X07
	5 x 0,8	8	70	6,0	1	1027905X08
	6 x 1	10	80	6,0	1	1027906X1
	8 x 1,25	14	90	8,0	1	1027908X125
	10 x 1,5	16	100	10,0	1	1027910X15

DIN 376/C-35° - ISO 2/6H — **Art. 10288** — **HSS-CO** — **M**





HSS-CO AISI M35
HV 820÷850



	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9,0	1	1028812X175
	14 x 2	20	110	11,0	1	1028814X2
	16 x 2	22	110	12,0	1	1028816X2
	18 x 2,5	25	125	14,0	1	1028818X25
	20 x 2,5	25	140	16,0	1	1028820X25
	22 x 2,5	27	140	18,0	1	1028822X25
	24 x 3	30	160	18,0	1	1028824X3
	27 x 3	30	160	20,0	1	1028827X3
	30 x 3,5	35	180	22,0	1	1028830X35

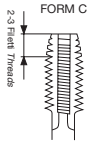
MASCHI A MACCHINA "SINISTRI", FILETTATURA GAS CILINDRICA BSP

Machine taps, "left hand", BSP pipe-thread / Tarauds machine, "gauche ", filetage gas BSP
Machos de maquina, "izquierda", rosca gas BSP / Maschinengewindebohrer, "linksgewinde", für Rohrgewinde

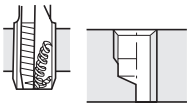
Sinistri - Left hand - Gauche - Izquierda - Links

DIN 5156/C — **Art. 10289** — **HSS-CO** — **BSP**





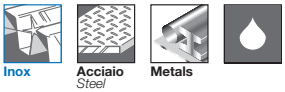
HSS-CO AISI M35
HV 820÷850



	Ø	/	L	d	pcs	cod.
G	**1/8** x 28	20	90	7,0	1	102891/8
	1/4 x 19	22	100	11,0	1	102891/4
	3/8 x 19	22	100	12,0	1	102893/8
	1/2 x 14	25	125	16,0	1	102891/2
	5/8 x 14	25	125	18,0	1	102895/8
	3/4 x 14	28	140	20,0	1	102893/4
	1" x 11	30	160	25,0	1	102891"

Applicazioni *Applications*

R ≤ 850 N/mm²



- Per fori ciechi e passanti in acciai con R≤850 N/mm² ghisa malleabile, metalli non ferrosi a truciolo lungo, acciai resistenti al calore, acciai inox.
- For blind and through holes in steel with R≤850 N/mm² malleable cast iron, non ferrous metal with long chips, stainless steel, heat resistant steel.
- Pour trous débouchants et borgnes en acier avec R≤850 N/mm² fonte, alliages légers, acier inoxidable.
- Para orificios pasantes y ciegos in acero de hasta R≤850 N/mm² aleaciones ligeras, fundicion, acero aleado y acero inox.
- Für grund- und durchgangsloch in Stahl mit R≤850 N/mm², Stahlguss, alu langspanend, korrosions-beständige Stähle (V2A-V4A) etc.

MASCHI A MACCHINA “SINISTRI”, FILETTATURA METRICA ISO A PASSO FINE

Machine taps, “left hand”, metric thread / Tarauds machine, “gauche “, filetage métrique

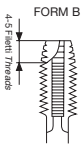
Machos de maquina, “izquierda”, rosca metrica / Maschinengewindebohrer, “linksgewinde”, für metrisches ISO

Sinistri - Left hand - Gauche - Izquierda - Links

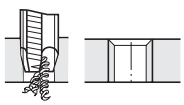
10286



DIN 374/B



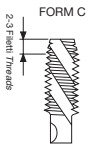
HSS-CO AISI M35
HV 820÷850



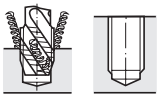
10287



DIN 374/C-35°



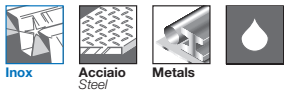
HSS-CO AISI M35
HV 820÷850



HSS-CO ISO 2/6H					Art. 10286 DIN 374/B	Art. 10287 DIN 374/C-35° MF
Ø	/	L	d	pcs	cod.	cod.
M **4** x 0,35	10	63	2,8	1	1028604X035	1028704x035
5 x 0,5	12	70	3,5	1	1028605X05	1028705x05
6 x 0,75	14	80	4,5	1	1028606X075	1028706x075
8 x 0,75	19	80	6,0	1	1028608X075	1028708x075
8 x 1	22	90	6,0	1	1028608X1	1028708x1
10 x 1	20	90	7,0	1	1028610X1	1028710x1
10 x 1,25	24	100	7,0	1	1028610X125	1028710x125
12 x 1	22	100	9,0	1	1028612X1	1028712x1
12 x 1,25	22	100	9,0	1	1028612X125	1028712x125
12 x 1,5	22	100	9,0	1	1028612X15	1028712x15
14 x 1	22	100	11,0	1	1028614X1	1028714x1
14 x 1,25	22	100	11,0	1	1028614X125	1028714x125
14 x 1,5	22	100	11,0	1	1028614X15	1028714x15
16 x 1	22	100	12,0	1	1028616X1	1028716x1
16 x 1,5	22	100	12,0	1	1028616X15	1028716x15
18 x 1	25	110	14,0	1	1028618X1	1028718x1
18 x 1,5	25	110	14,0	1	1028618X15	1028718x15
18 x 2	34	125	14,0	1	1028618X2	1028718x2
20 x 1	25	125	16,0	1	1028620X1	1028720x1
20 x 1,25	25	125	16,0	1	1028620X125	1028720x125
20 x 1,5	25	125	16,0	1	1028620X15	1028720x15
20 x 2	34	140	16,0	1	1028620X2	1028720x2
22 x 1	25	125	18,0	1	1028622X1	1028722x1
22 x 1,5	25	125	18,0	1	1028622X15	1028722x15
22 x 2	34	140	18,0	1	1028622X2	1028722x2
24 x 1	28	140	18,0	1	1028624X1	1028724x1
24 x 1,5	28	140	18,0	1	1028624X15	1028724x15
24 x 2	28	140	18,0	1	1028624X2	1028724x2
25 x 1	28	140	18,0	1	1028625X1	1028725x1
26 x 1,5	28	140	18,0	1	1028626X15	1028726x15
27 x 1,5	28	140	20,0	1	1028627X15	1028727x15
27 x 2	28	140	20,0	1	1028627X2	1028727x2
28 x 1,5	28	140	20,0	1	1028628X15	1028728x15
30 x 1,5	28	150	22,0	1	1028630X15	1028730x15
30 x 2	28	150	22,0	1	1028630X2	1028730x2
32 x 1,5	28	150	22,0	1	1028632X15	1028732x15
32 x 2	28	150	22,0	1	1028632X2	1028732x2
33 x 2	30	160	25,0	1	1028633X2	1028733x2
35 x 1,5	30	170	28,0	1	1028635X15	1028735x15
36 x 1,5	30	170	28,0	1	1028636X15	1028736x15
36 x 2	30	170	28,0	1	1028636X2	1028736x2
38 x 1,5	30	170	28,0	1	1028638X15	1028738x15
40 x 1,5	30	170	32,0	1	1028640X15	1028740x15
42 x 1,5	30	170	32,0	1	1028642X15	1028742x15
45 x 1,5	32	180	36,0	1	1028645X15	1028745x15
48 x 1,5	32	190	36,0	1	1028648X15	1028748x15
50 x 1,5	32	190	36,0	1	1028650X15	1028750x15
52 x 1,5	32	190	40,0	1	1028652X15	1028752x15

Applicazioni *Applications*

R ≤ 850 N/mm²



Inox | **Acciaio** *Steel* | **Metals**

- Per fori in acciai con R≤850 N/mm² ghisa malleabile, metalli non ferrosi a truciolo lungo, acciai resistenti al calore, acciai inox.
- For holes in steel with R≤850 N/mm² malleable cast iron, non ferrous metal with long chips, stainless steel, heat resistant steel.
- Pour trous en acier avec R≤850 N/mm² fonte, alliages légers, acier inoxidable.
- Para orificios in acero de hasta R≤850 N/mm² aleaciones ligeras, fundicion, acero aleado y acero inox.
- Für grundloch in Stahl mit R≤850 N/mm², Stahlguss, alu langspanend, korrosions-beständige Stähle (V2A-V4A) etc.

MASCHI A MACCHINA CON ANELLO BIANCO PER UTILIZZI SPECIALI

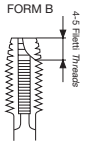
White ring machine taps / Tarauds machine avec anneau blanc
Machos de maquina con anillo blanco / Weissring-Maschinengewindebohrer

Speciale per acciaio INOX - Special for stainless steel - Pour acier inoxydable - Para acero inoxidable - Für rostfreieren Stahl

10504 **10505**



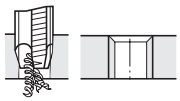
FORM B



HSS-CO AISI M35
HV 820÷850

Vaporizzati *Steam treated*

DIN 371/B **DIN 376/B**



Art. 10504
HSS-CO **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1050403X05
	4 x 0,7	13	63	4,5	1	1050404X07
	5 x 0,8	16	70	6,0	1	1050405X08
	6 x 1	19	80	6,0	1	1050406X1
	8 x 1,25	22	90	8,0	1	1050408X125
	10 x 1,5	24	100	10,0	1	1050410X15

Art. 10505
HSS-CO

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9,0	1	1050512X175
	14 x 2	30	110	11,0	1	1050514X2
	16 x 2	30	110	12,0	1	1050516X2
	18 x 2,5	34	125	14,0	1	1050518X25
	20 x 2,5	34	140	16,0	1	1050520X25



M 3÷12 7 pcs

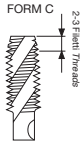
10520300
HSS-CO

Finitura: Ossidazione in vapore di Fe_3O_4 che aumenta la durezza superficiale e la resistenza a usura riducendo la tendenza all'incollamento dei trucioli.
Finish: Steam Tempered of Fe_3O_4, increasing surface hardness and wear resistance.

10506 **10507**

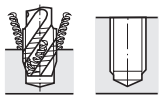


FORM C



HSS-CO AISI M35
HV 820÷850

DIN 371/C-40° **DIN 376/C-40°**



Art. 10506
HSS-CO **40°** **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1050603X05
	4 x 0,7	7	63	4,5	1	1050604X07
	5 x 0,8	8	70	6,0	1	1050605X08
	6 x 1	10	80	6,0	1	1050606X1
	8 x 1,25	14	90	8,0	1	1050608X125
	10 x 1,5	16	100	10,0	1	1050610X15



M 3÷12 7 pcs

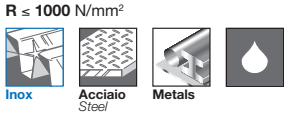
10520301
HSS-CO

Art. 10507
HSS-CO **40°**

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9,0	1	1050712X175
	14 x 2	20	110	11,0	1	1050714X2
	16 x 2	22	110	12,0	1	1050716X2
	18 x 2,5	25	125	14,0	1	1050718X25
	20 x 2,5	25	140	16,0	1	1050720X25

Applicazioni Applications

R ≤ 1000 N/mm²



- Per filettature in acciaio inox, acciai per utensili, acciai resistenti al calore, acciai legati in genere, bronzo a truciolo lungo, rame con R≤1000 N/mm²
- For making threads in stainless steel, heat resistant steel, structural steel, long chipping bronze, copper with R≤1000 N/mm²
- Pour taraudage en acier inoxidable, acier pour traitement thermique, acier allié avec R≤1000 N/mm²
- Para roscar acero inoxidable, acero aleado, bronze
- Für VA-Werkstoffe, hitzbeständige Stähle, Messing, Alu.

MASCHI A MACCHINA CON ANELLO BLU, FILETTATURA METRICA ISO

Blue ring machine taps / Tarauds machine avec anneau blue

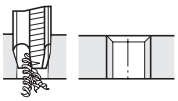
Machos de maquina con anillo azul / Blauring-Maschinen-Gewindebohrer

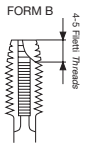
Speciali per acciai refrattari, acciai da tempra e cementazione - Special for wear and heat resistant steel

10500 **10501**



DIN 371/B **DIN 376/B**





HSS-CO AISI M35
HV 850÷880

Art. 10500
HSS-CO **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1050003X05
	4 x 0,7	13	63	4,5	1	1050004X07
	5 x 0,8	16	70	6,0	1	1050005X08
	6 x 1	19	80	6,0	1	1050006X1
	8 x 1,25	22	90	8,0	1	1050008X125
	10 x 1,5	24	100	10,0	1	1050010X15



M 3÷12 7 pcs

10520302
HSS-CO

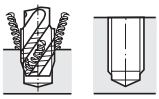
Art. 10501
HSS-CO

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9	1	1050112X175
	14 x 2	30	110	11	1	1050114X2
	16 x 2	30	110	12	1	1050116X2
	18 x 2,5	34	125	14	1	1050118X25
	20 x 2,5	34	140	16	1	1050120X25

10502 **10503**



DIN 371/C-40° **DIN 376/C-40°**





HSS-CO AISI M35
HV 850÷880

Art. 10502
HSS-CO **40°** **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1050203X05
	4 x 0,7	7	63	4,5	1	1050204X07
	5 x 0,8	8	70	6,0	1	1050205X08
	6 x 1	10	80	6,0	1	1050206X1
	8 x 1,25	14	90	8,0	1	1050208X125
	10 x 1,5	16	100	10,0	1	1050210X15



M 3÷12 7 pcs

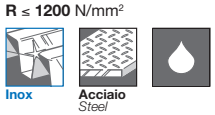
10520303
HSS-CO

Art. 10503
HSS-CO **40°**

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9	1	1050312X175
	14 x 2	20	110	11	1	1050314X2
	16 x 2	22	110	12	1	1050316X2
	18 x 2,5	25	125	14	1	1050318X25
	20 x 2,5	25	140	16	1	1050320X25

Applicazioni *Applications*

R ≤ 1200 N/mm²



Inox
Acciaio *Steel*

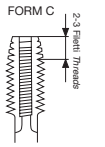
- Per filettatura in acciai resistenti all'usura quali gli acciai refrattari, acciai legati da tempra e cementazione, acciai per utensili con R≤1200 N/mm².
- For use in wear resistant steel, heat resistant steel, tool steel with R≤1200 N/mm².
- Pour taraudage en aciers refractaires, acier de outil, acier pour traitement thermique avec R≤1200 N/mm².
- Para rosca en acero resistente al calore, acero para trattamento termico, acero para utensilios hasta R≤1200 N/mm².
- Für Gewindebohrer in hochlegierte Stähle, zähe kurzspanende Werkstoffe, legierte Werkzeugstähle.

MASCHI A MACCHINA CON ANELLO NERO, FILETTATURA METRICA ISO

Black ring machine taps / Tarauds machine avec anneau noir
Machos de maquina con anillo negro / Schwarzring-Maschinengewindebohrer

10508 **10509**

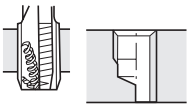




HSS-CO AISI M35
HV 820÷850

Nitrurato *Nitrited*
L'arricchimento della superficie con nitrato e carbonio diminuisce la tendenza all'incollamento dei trucioli e aumenta la durezza superficiale e la resistenza ad usura.
The surface enrichment with nitrate and carbon is aimed to avoiding chips sticking on the tool and to increasing surface hardness and wear resistance.

DIN 371/C **DIN 376/C**



Art. 10508
HSS-CO **M**

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1050803X05
	4 x 0,7	13	63	4,5	1	1050804X07
	5 x 0,8	16	70	6	1	1050805X08
	6 x 1	19	80	6	1	1050806X1
	8 x 1,25	22	90	8	1	1050808X125
	10 x 1,5	24	100	10	1	1050810X15



M 3÷12 7 pcs

10520304
HSS-CO

Art. 10509
HSS-CO

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9	1	1050912X175
	14 x 2	30	110	11	1	1050914X2
	16 x 2	30	110	12	1	1050916X2
	18 x 2,5	34	125	14	1	1050918X25
	20 x 2,5	34	140	16	1	1050920X25

Applicazioni *Applications*

G — **Ghisa** *Cast Iron*
Bronze Mg Alloys
Alu
Plastica Dura Hard Plastics

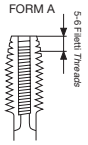
- Per filettatura in fori ciechi e passanti in ghisa grigia e sferoidale, leghe di magnesio, bronzo e alluminio a truciolo corto, plastica dura.
- For making threads into through and blind holes, cast iron, magnesium alloys, bronze and short chip aluminium, hard plastics.
- Pour taraudage en fontes à haute résistance, alliages de magnésium, bronze, plastique très dur.
- Para roscar fundiciones, aleaciones de magnesio, bronze, plastico duro.
- Für Grauguss und Sphäroguss, Magnesiumlegierungen, Bronze und Alu-Kurzspanend.

MASCHI A MACCHINA CON ANELLO ROSSO, FILETTATURA METRICA ISO

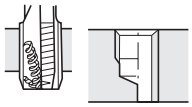
Red ring machine taps / Tarauds machine avec anneau rouge
Machos de maquina con anillo rojo / Rotring-Maschinengewindebohrer

10510





HSS-CO AISI M35
HV 820÷850



DIN 371/A

Art. 10510
HSS-CO **M**

	Ø	/	L	d	pcs	cod.
M	**4** x 0,7	9	63	4,5	1	1051004X07
	5 x 0,8	11	70	6	1	1051005X08
	6 x 1	12	80	6	1	1051006X1
	8 x 1,25	15	90	8	1	1051008X125
	10 x 1,5	16	100	10	1	1051010X15



M 4÷10 5 pcs

10520310
HSS-CO

Applicazioni *Applications*

R ≤ 1200 N/mm²
Inox
Acciaio *Steel*

- Per filettatura in acciai resistenti all'usura quali gli acciai refrattari, acciai legati da tempra e cementazione, acciai per utensili con R≥1200 N/mm².
- For use in wear resistant steel, heat resistant steel, tool steel with R≥1200 N/mm².
- Pour taraudage en aciers refractaires, acier de outil, acier pour traitement thermique avec R≥1200 N/mm².
- Para rosca en acero resistente al calore, acero para trattamento termico, acero para utensilios hasta R≥1200 N/mm².
- Für Gewindebohrer in hochlegierte Stähle, zähe kurzspanende Werkstoffe, legierte Werkzeugstähle.

MASCHI A MACCHINA CON ANELLO GIALLO, FILETTATURA METRICA ISO

Yellow ring machine taps, ISO metric thread / Tarauds machine avec anneau jaune, filetage métrique ISO
Machos de máquina con anillo amarillo, rosca métrica ISO / Gelbring-Maschinengewindebohrer, metrisches ISO-Gewinde

Speciale per alluminio - Special for aluminium - Spécial pour aluminium - Especial para aluminio - Speziell für Aluminium

10511 **10512**



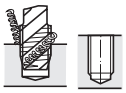




2 SPIRALI
2 FLUTES

HSS-CO AISI M35
HV 820÷850

DIN 371/C-40° **DIN 376/C-40°**



Art. 10511
HSS-CO 40°

M

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	6	56	3,5	1	1051103x05
	4 x 0,7	7	63	4,5	1	1051104x07
	5 x 0,8	8	70	6	1	1051105x08
	6 x 1	10	80	6	1	1051106x1
	8 x 1,25	14	90	8	1	1051108x125
	10 x 1,5	16	100	10	1	1051110x15



M 3÷12 7 pcs

10520305
HSS-CO

Art. 10512
HSS-CO

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	18	110	9	1	1051212X175
	14 x 2	20	110	11	1	1051214X2
	16 x 2	22	110	12	1	1051216X2

Applicazioni
Applications

R ≤ 850 N/mm²



MASCHI A MACCHINA CON ANELLO ARANCIO, FILETTATURA METRICA ISO

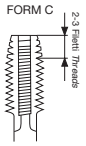
Orange ring machine taps, ISO metric thread / Tarauds machine avec anneau orangé, filetage métrique ISO
Machos de máquina con anillo anaranjado, rosca métrica ISO / Orangering-Maschinengewindebohrer, metrisches ISO-Gewinde

Speciale per ottone - Special for brass - Spécial pour laiton - Especial para laton - Speziell für Messing

10513 **10514**

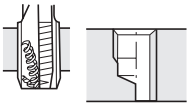






HSS-CO AISI M35
HV 820÷850

DIN 371/C **DIN 376/C**



Art. 10513
HSS-CO

M

	Ø	/	L	d	pcs	cod.
M	**3** x 0,5	11	56	3,5	1	1051303x05
	4 x 0,7	13	63	4,5	1	1051304x07
	5 x 0,8	16	70	6	1	1051305x08
	6 x 1	19	80	6	1	1051306x1
	8 x 1,25	22	90	8	1	1051308x125
	10 x 1,5	24	100	10	1	1051310x15



M 3÷12 7 pcs

10520306
HSS-CO

Art. 10514
HSS-CO

	Ø	/	L	d	pcs	cod.
M	**12** x 1,75	29	110	9	1	1051412X175
	14 x 2	30	110	11	1	1051414X2
	16 x 2	30	110	12	1	1051416X2

Applicazioni
Applications

R ≤ 850 N/mm²



MASCHI A MANO SERIE DI 3 PEZZI, FILETTATURA METRICA ISO A PASSO GROSSO

Hand taps, 3 pcs set, metric coarse ISO thread / Jeux de 3 tarauds à main, filetage metrique ISO
Juegos de machos a mano, rosca metrica ISO / Handgewindebohrer, dreiteiliger Satz für metrisches ISO-Gewinde DIN 13

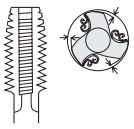
HSS-G DIN 352 ISO 2/6H Rettificati

Ground from the solid / Rectifiés / Rectificado / Geschliffen

M

10100





HRC ≃ 63÷63,5
AISI M2

Art. **10101** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



Acciaio
Steel



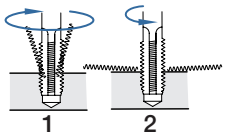
Metals



Alu



- Per filettature in fori ciechi e passanti in acciaio da costruzione, acciai da bonifica, materiali metallici in genere sino a R≤800 N/mm².
- For making threads in blind and through holes in structural steel, malleable cast iron, heat-treatable steel R≤800 N/mm².
- Taraudage pour trous borgnes et dèbouchant des acier de construction et aciers traitès R≤800 N/mm².
- Para orificios ciegos y pasantes en materiales de hasta 800 N/mm².
- Für allgemeinen Einsatz in Baustähle, Automatenstähle und Vergütungsstähle R≤ 800 N/mm².



É buona norma, ad ogni rotazione del maschio (1), effettuare mezzo giro indietro (2) per rompere il truciolo
Please rotate clockwise the tap (1) then rotate anticlockwise (2) to break the chip.



Maschio a mano finitore
Bottoming hand tap
Taraud à main finisseur
Macho a mano acabado
Handgewindebohrer

HSS-G
DIN 352 III



	Ø	/	L	pcs	cod.
M	**1** x 0,25	8	32	1	1010001X025
	1,1 x 0,25	8	32	1	10100011X025
	1,2 x 0,25	8	32	1	10100012X025
	1,4 x 0,3	10	32	1	10100014X03
	1,6 x 0,35	10	32	1	10100016X035
	1,7 x 0,35	10	32	1	10100017X035
	1,8 x 0,35	10	32	1	10100018X035
	2 x 0,4	10	36	1	1010002X04
	2,2 x 0,45	11	36	1	10100022X045
	2,3 x 0,4	11	36	1	10100023X04
	2,5 x 0,45	12	40	1	10100025X045
	2,6 x 0,45	12	40	1	10100026X045
	3 x 0,5	11	40	1	1010003X05
	3,5 x 0,6	14	45	1	10100035X06
	4 x 0,7	13	45	1	1010004X07
	4,5 x 0,75	16	50	1	10100045X075
	5 x 0,8	16	50	1	1010005X08
	5 x 1	16	56	1	1010005X1
	5,5 x 0,9	18	50	1	10100055x09
	6 x 1	19	56	1	1010006X1
	7 x 1	19	56	1	1010007X1
	8 x 1,25	22	63	1	1010008X125
	9 x 1,25	22	63	1	1010009X125
	10 x 1,5	24	70	1	1010010X15
	11 x 1,5	24	70	1	1010011X15
	12 x 1,75	28	75	1	1010012X175
	13 x 1,75	28	75	1	1010013X175
	14 x 2	30	80	1	1010014X2
	15 x 2	32	80	1	1010015x2
	16 x 2	32	80	1	1010016X2
	18 x 2,5	34	95	1	1010018X25
	20 x 2,5	34	95	1	1010020X25
	22 x 2,5	34	100	1	1010022X25
	24 x 3	38	110	1	1010024X3
	27 x 3	38	110	1	1010027X3
	28 x 3	38	110	1	1010028X3
	30 x 3,5	45	125	1	1010030X35
	33 x 3,5	50	132	1	1010033X35
	36 x 4	56	150	1	1010036X4
	39 x 4	56	150	1	1010039X4
	42 x 4,5	63	160	1	1010042X45
	45 x 4,5	63	160	1	1010045X45
	48 x 5	68	180	1	1010048X5
	52 x 5	68	180	1	1010052X5
	56 x 5,5	85	200	1	1010056X55
	60 x 5,5	85	200	1	1010060X55
	64 x 6	90	220	1	1010064X6
	68 x 6	90	220	1	1010068X6
	72 x 6	90	240	1	1010072X6

*** ≃ DIN 352**

	Ø	/	L	pcs	cod.
M	**3** x 0,5	12	40	1	1010003X053
	4 x 0,7	14	45	1	1010004X073
	5 x 0,8	14	50	1	1010005X083
	6 x 1	16	56	1	1010006X13
	8 x 1,25	18	63	1	1010008X1253
	10 x 1,5	25	70	1	1010010X153
	12 x 1,75	30	75	1	1010012X1753
	14 x 2	32	80	1	1010014X23
	16 x 2	32	80	1	1010016X23
	18 x 2,5	40	95	1	1010018X253
	20 x 2,5	40	95	1	1010020X253

MASCHI A MANO SERIE DI 3 PEZZI, FILETTATURA METRICA ISO A PASSO GROSSO

Hand taps, 3 pcs set, metric coarse ISO thread / Jeux de 3 tarauds à main, filetage metrique ISO

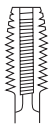
Juegos de machos a mano, rosca metrica ISO / Handgewindebohrer, dreiteiliger Satz für metrisches ISO – Gewinde DIN 13

COBALT HSS-CO DIN 352 ISO 2/6H

M

10144



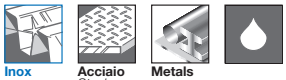


HRC ≃ 64÷65
AISI M35

	Ø	/	L	pcs	cod.
M	**3** x 0,5	11	40	1	1014403X05
	4 x 0,7	13	45	1	1014404X07
	5 x 0,8	14	50	1	1014405X08
	6 x 1	16	56	1	1014406X1
	8 x 1,25	18	63	1	1014408X125
	10 x 1,5	24	70	1	1014410X15
	12 x 1,75	29	75	1	1014412X175
	14 x 2	30	80	1	1014414X2
	16 x 2	32	80	1	1014416X2
	18 x 2,5	40	95	1	1014418X25
	20 x 2,5	40	95	1	1014420X25
	22 x 2,5	40	100	1	1014422X25
	24 x 3	50	110	1	1014424X3
	27 x 3	50	110	1	1014427X3
	30 x 3,5	56	125	1	1014430X35

Applicazioni / *Applications*

R ≤ 1200 N/mm²



Inox | **Acciaio** *Steel* | **Metals**

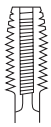
- Per filettature in acciai molto duri ed abrasivi, acciai inox, acciai resistenti al calore con R≤1200 N/mm².
- For thread in stainless steel, heat-resistant steel, high alloy steel R≤1200 N/mm².
- Taraudage en acier inox et acier allié avec R≤1200 N/mm².
- Para acero inox y acero aleado R≤1200 N/mm².
- Einsatz in legierte Stähle, korrosionebeständige Stähle, Grauguss und Stahlguss bis R≤1200 N/mm².

COBALT HSS-CO DIN 352 ISO 2/6H

M

10147



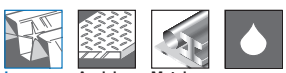


HRC ≃ 64÷65
AISI M35
R≤1400

	Ø	/	L	pcs	cod.
M	**3** x 0,5	11	40	1	1014703X05
	4 x 0,7	13	45	1	1014704X07
	5 x 0,8	16	50	1	1014705X08
	6 x 1	19	56	1	1014706X1
	8 x 1,25	22	63	1	1014708X125
	10 x 1,5	24	70	1	1014710X15
	12 x 1,75	29	75	1	1014712X175

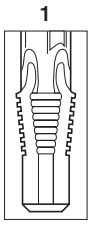
Applicazioni / *Applications*

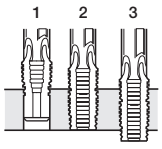
R ≤ 1400 N/mm²



Inox | **Acciaio** *Steel* | **Metals**

Finitura: Ossidazione in vapore di Fe_3O_4 che aumenta la durezza superficiale e la resistenza a usura riducendo la tendenza all'incollamento dei trucioli.
Finish: Steam Tempered of Fe_3O_4, increasing surface hardness and wear resistance.





Sbozzatore con guida
Taper with guide

MASCHI A MANO AL TITANIO SERIE DI 3 PEZZI, FILETTATURA METRICA ISO A PASSO GROSSO

Titan coated hand taps, metric coarse ISO thread / Tarauds Titan à main, filetage metrique ISO

Juegos de machos a mano de Titanio, rosca metrica ISO / Handgewindebohrer mit TiN beschichtung für metrisches ISO Regelgewinde

HSS-TiN DIN 352 ISO 2/6H **M**

10155

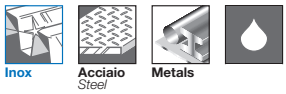




HV 0,05 ≃ 2500
AISI M2

	Ø	/	L	pcs	cod.
M	**3** x 0,5	12	40	1	1015503X05
	4 x 0,7	14	45	1	1015504X07
	4,5 x 0,75	16	50	1	10155045X075
	5 x 0,8	16	50	1	1015505X08
	6 x 1	18	56	1	1015506X1
	8 x 1,25	22	63	1	1015508X125
	10 x 1,5	25	70	1	1015510X15
	12 x 1,75	30	75	1	1015512X175
	14 x 2	32	80	1	1015514X2
	16 x 2	32	80	1	1015516X2
	18 x 2,5	40	95	1	1015518X25
	20 x 2,5	40	95	1	1015520X25

Applicazioni / *Applications*



Inox **Acciaio** *Steel* **Metals**

MASCHI A MANO SERIE DI 3 PEZZI, FILETTATURA METRICA ISO SINISTRA A PASSO GROSSO

Hand taps, 3 pcs set left hand / Jeux de 3 tarauds à main gauche

Juegos de machos a mano izquierda / Handgewindebohrer, linksgewinde dreitelliger Satz

HSS-G DIN 352 ISO 2/6H **Sinistra - *Left hand - Gauche - Izquierda - Links*** **M**

10102





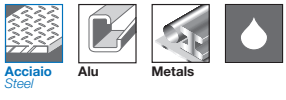
HRC ≃ 63÷63,5
AISI M2



LH

	Ø	/	L	pcs	cod.
M	**3** x 0,5	11	40	1	1010203x05
	4 x 0,7	13	45	1	1010204x07
	5 x 0,8	14	50	1	1010205x08
	6 x 1	19	56	1	1010206x1
	7 x 1	19	56	1	1010207x1
	8 x 1,25	22	63	1	1010208x125
	10 x 1,5	24	70	1	1010210x15
	12 x 1,75	28	75	1	1010212x175
	14 x 2	30	80	1	1010214x2
	16 x 2	32	80	1	1010216x2
	18 x 2,5	34	95	1	1010218x25
	20 x 2,5	34	95	1	1010220x25
	22 x 2,5	34	100	1	1010222x25
	24 x 3	38	110	1	1010224x3
	27 x 3	38	110	1	1010227x3
	30 x 3,5	45	125	1	1010230x35
	33 x 3,5	56	125	1	1010233x35
	36 x 4	63	150	1	1010236x4
	39 x 4	63	150	1	1010239x4
	42 x 4,5	63	150	1	1010242x45
	45 x 4,5	70	160	1	1010245x45
	48 x 5	75	180	1	1010248x5
	52 x 5	75	180	1	1010252x5

Applicazioni / *Applications*



Acciaio *Steel* **Alu** **Metals**

MASCHI A MANO SERIE DI 2 PEZZI PER TUBI DI CONDUZIONE ELETTRICA

2 pcs hand taps for cable connection / Tarauds à main pour tubes avec armature en acier

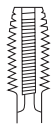
Juegos de machos a mano para tubos de conducción eléctrica / Handgewindebohrer, zweitelliger Satz Stahlpanzer für Kabelverschraumbungen

HSS-G DIN 2181 ISO 2/6H

MF

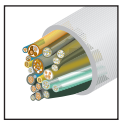
10105





HRC ≃ 63÷63,5
AISI M2

	Ø	/	L	pcs	cod.
M	**12** x 1,5	22	70	1	1010512x15
	16 x 1,5	22	70	1	1010516x15
	20 x 1,5	22	80	1	1010520x15
	25 x 1,5	22	90	1	1010525x15
	32 x 1,5	32	90	1	1010532x15
	40 x 1,5	25	110	1	1010540x15
	50 x 1,5	40	140	1	1010550x15
	63 x 1,5	32	160	1	1010563x15



Applicazioni / *Applications*



Acciaio
Steel



Metals

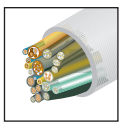
HSS-G DIN 40432

Pg

10136



	Ø	/	L	pcs	cod.
Pg	**7** x 20	22	70	1	1013607
	9 x 18	22	70	1	1013609
	11 x 18	22	80	1	1013611
	13,5 x 18	22	80	1	10136135
	16 x 18	22	80	1	1013616
	21 x 16	22	90	1	1013621
	29 x 16	25	100	1	1013629
	36 x 16	40	140	1	1013636
	42 x 16	40	140	1	1013642
	48 x 16	40	160	1	1013648



Applicazioni / *Applications*



Acciaio
Steel



Metals

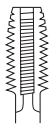
MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA METRICA ISO A PASSO FINE

Hand taps, 2 pcs set, metric fine ISO thread / Jeux de 2 tarauds à main, filetage metrique ISO à pas fin
Juegos de machos a mano, rosca metrica fina ISO / Handgewindebohrer, zweiteiliger Satz für metrisches ISO-Feingewinde

HSS-G DIN 2181 ISO 2/6H **MF**

10105





HV 0,05 ≃ 2500
AISI M2

Ø	/	L	pcs	cod.
M 2 x 0,25	8	36	1	1010502x025
2,2 x 0,25	9	36	1	10105022x025
2,5 x 0,35	9	40	1	10105025x035
2,6 x 0,35	9	40	1	10105026x035
3 x 0,35	9	40	1	1010503X035
3,5 x 0,35	10	45	1	10105035X035
4 x 0,35	10	45	1	1010504X035
4 x 0,5	10	45	1	1010504X05
4,5 x 0,5	12	50	1	10105045x05
5 x 0,5	12	50	1	1010505X05
5 x 0,75	12	50	1	1010505X075
5,5 x 0,5	12	50	1	10105055x05
6 x 0,5	14	50	1	1010506X05
6 x 0,75	14	50	1	1010506X075
7 x 0,5	14	50	1	1010507x05
7 x 0,75	14	50	1	1010507X075
8 x 0,5	19	50	1	1010508X05
8 x 0,75	19	50	1	1010508X075
8 x 1	22	56	1	1010508X1
9 x 0,5	19	56	1	1010509x05
9 x 0,75	19	56	1	1010509X075
9 x 1	20	63	1	1010509X1
10 x 0,5	20	63	1	1010510x05
10 x 0,75	20	63	1	1010510X075
10 x 1	20	63	1	1010510X1
10 x 1,25	24	70	1	1010510X125
11 x 0,75	20	63	1	1010511x075
11 x 1	20	63	1	1010511X1
11 x 1,25	22	63	1	1010511X125
12 x 0,5	22	70	1	1010512x05
12 x 0,75	22	70	1	1010512X075
12 x 1	22	70	1	1010512X1
12 x 1,25	22	70	1	1010512X125
12 x 1,5	22	70	1	1010512X15
13 x 0,5	22	70	1	1010513x05
13 x 0,75	22	70	1	1010513x075
13 x 1	22	70	1	1010513X1
13 x 1,5	22	70	1	1010513X15
14 x 0,5	22	70	1	1010514x05
14 x 0,75	22	70	1	1010514X075
14 x 1	22	70	1	1010514X1
14 x 1,25	22	70	1	1010514X125
14 x 1,5	22	70	1	1010514X15
15 x 0,75	22	70	1	1010515x075
15 x 1	22	70	1	1010515X1
15 x 1,5	22	70	1	1010515X15
16 x 0,5	22	70	1	1010516X05
16 x 0,75	22	70	1	1010516X075
16 x 1	22	70	1	1010516X1
16 x 1,25	22	70	1	1010516X125
16 x 1,5	22	70	1	1010516X15
17 x 1	22	70	1	1010517x1
17 x 1,5	22	70	1	1010517x15
18 x 0,5	22	80	1	1010518x05
18 x 0,75	22	80	1	1010518x075
18 x 1	22	80	1	1010518X1
18 x 1,25	22	80	1	1010518X125
18 x 1,5	22	80	1	1010518X15
18 x 2	22	80	1	1010518X2
19 x 1	22	80	1	1010519x1
19 x 1,5	22	80	1	1010519x15
20 x 0,5	22	80	1	1010520x05
20 x 0,75	22	80	1	1010520x075
20 x 1	22	80	1	1010520X1
20 x 1,25	22	80	1	1010520X125
20 x 1,5	22	80	1	1010520X15
20 x 2	22	80	1	1010520X2
21 x 1	22	80	1	1010521X1
21 x 1,5	22	80	1	1010521X15
22 x 0,5	22	80	1	1010522x05
22 x 0,75	22	80	1	1010522x075

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 800 N/mm²



Acciaio
Steel



Metals



Alu



- Per filettature in fori ciechi e passanti in acciaio da costruzione, acciai da bonifica, materiali metallici in genere sino a R≤800 N/mm².
- For making threads in blind and through holes in structural steel, malleable cast iron, heat-treatable steel R≤800 N/mm².
- Taraudage pour trous borgnes et dèbouchant des acier de construction et aciers traitès R≤800 N/mm².
- Para orificios ciegos y pasantes en materiales de hasta R≤800 N/mm².
- Für allgemeinen Einsatz in Baustähle, Automatenstähle und Vergütungsstähle R≤800 N/mm².

MF

	Ø		/	L	pcs	cod.
M	22	x 1	22	80	1	1010522x1
	22	x 1,25	22	80	1	1010522x125
	22	x 1,5	22	80	1	1010522X15
	22	x 2	22	80	1	1010522X2
	23	x 1	22	80	1	1010523x1
	23	x 1,5	22	80	1	1010523X15
	24	x 0,5	22	90	1	1010524x05
	24	x 0,75	22	90	1	1010524x075
	24	x 1	22	90	1	1010524X1
	24	x 1,25	22	90	1	1010524X125
	24	x 1,5	22	90	1	1010524X15
	24	x 2	22	90	1	1010524X2
	25	x 1	22	90	1	1010525X1
	25	x 1,5	22	90	1	1010525X15
	26	x 1	22	90	1	1010526X1
	26	x 1,5	22	90	1	1010526X15
	26	x 2	22	90	1	1010526X2
	27	x 1	22	90	1	1010527X1
	27	x 1,5	22	90	1	1010527X15
	27	x 2	22	90	1	1010527X2
	28	x 1	22	90	1	1010528X1
	28	x 1,5	22	90	1	1010528X15
	28	x 2	22	90	1	1010528X2
	29	x 1,5	22	90	1	1010529X15
	30	x 1	22	90	1	1010530X1
	30	x 1,5	22	90	1	1010530X15
	30	x 2	22	90	1	1010530X2
	30	x 2,5	56	125	1	1010530X25
	30	x 3	56	125	1	1010530X3
	32	x 1	22	90	1	1010532x1
	32	x 1,5	22	90	1	1010532X15
	32	x 2	22	90	1	1010532x2
	32	x 3	56	125	1	1010532X3
	33	x 1,5	25	100	1	1010533X15
	33	x 2	25	100	1	1010533X2
	33	x 3	56	125	1	1010533X3
	34	x 1	25	100	1	1010534x1
	34	x 1,5	25	100	1	1010534X15
	34	x 2	40	125	1	1010534X2
	35	x 1	25	100	1	1010535x1
	35	x 1,5	25	100	1	1010535X15
	35	x 2	40	125	1	1010535x2
	36	x 1	25	100	1	1010536x1
	36	x 1,5	25	100	1	1010536X15
	36	x 2	40	125	1	1010536X2
	36	x 3	40	125	1	1010536X3
	37	x 1,5	25	100	1	1010537x15
	38	x 1	25	100	1	1010538x1
	38	x 1,5	25	100	1	1010538X15
	38	x 2	40	125	1	1010538X2
	38	x 3	40	125	1	1010538x3
	39	x 1,5	25	110	1	1010539X15
	39	x 2	40	125	1	1010539X2
	39	x 3	40	125	1	1010539X3
	40	x 1	25	110	1	1010540x1
	40	x 1,5	25	110	1	1010540X15
	40	x 2	40	125	1	1010540X2
	40	x 3	40	125	1	1010540X3
	42	x 1	25	110	1	1010542x1
	42	x 1,5	25	110	1	1010542X15
	42	x 2	40	125	1	1010542X2
	42	x 3	40	125	1	1010542X3
	44	x 1,5	25	110	1	1010544x15
	44	x 2	40	125	1	1010544x2
	45	x 1	25	110	1	1010545x1
	45	x 1,5	25	110	1	1010545X15
	45	x 2	40	125	1	1010545X2
	45	x 3	40	125	1	1010545X3
	46	x 1,5	40	140	1	1010546x15
	48	x 1	40	140	1	1010548x1
	48	x 1,5	25	140	1	1010548X15
	48	x 2	40	140	1	1010548X2
	48	x 3	40	140	1	1010548X3
	50	x 1,5	40	140	1	1010550X15
	50	x 2	40	140	1	1010550X2
	50	x 3	40	140	1	1010550X3

MF

	Ø		/	L	pcs	cod.
	52	x 1,5	40	140	1	1010552X15
	52	x 2	40	140	1	1010552X2
	52	x 3	40	140	1	1010552X3
	54	x 1,5	32	140	1	1010554X15
	54	x 2	36	140	1	1010554X2
	54	x 3	40	140	1	1010554X3
	54	x 4	50	180	1	1010554X4
	55	x 1,5	32	140	1	1010555X15
	55	x 2	36	140	1	1010555X2
	55	x 3	40	140	1	1010555X3
	55	x 4	50	180	1	1010555X4
	56	x 1,5	32	140	1	1010556X15
	56	x 2	36	140	1	1010556X2
	56	x 3	40	140	1	1010556X3
	56	x 4	50	180	1	1010556X4
	58	x 1,5	32	160	1	1010558X15
	58	x 2	36	160	1	1010558X2
	58	x 3	40	160	1	1010558X3
	58	x 4	55	200	1	1010558X4
	60	x 1,5	34	160	1	1010560X15
	60	x 2	36	160	1	1010560X2
	60	x 3	40	160	1	1010560X3
	60	x 4	55	200	1	1010560X4
	62	x 1,5	34	160	1	1010562X15
	62	x 2	36	160	1	1010562X2
	62	x 3	45	180	1	1010562X3
	62	x 4	55	220	1	1010562X4
	63	x 1,5	32	160	1	1010563X15
	64	x 1,5	34	160	1	1010564X15
	64	x 2	36	160	1	1010564X2
	64	x 3	45	180	1	1010564X3
	64	x 4	60	220	1	1010564X4
	65	x 1,5	34	160	1	1010565X15
	65	x 2	36	160	1	1010565X2
	65	x 3	45	180	1	1010565X3
	65	x 4	60	220	1	1010565X4
	68	x 1,5	36	160	1	1010568X15
	68	x 2	40	160	1	1010568X2
	68	x 3	50	180	1	1010568X3
	68	x 4	60	220	1	1010568X4
	70	x 1,5	36	160	1	1010570X15
	70	x 2	40	160	1	1010570X2
	70	x 3	50	200	1	1010570X3
	70	x 4	60	240	1	1010570X4
	72	x 1,5	36	160	1	1010572X15
	72	x 2	40	160	1	1010572X2
	72	x 3	50	200	1	1010572X3
	72	x 4	60	240	1	1010572X4
	74	x 1,5	36	160	1	1010574X15
	74	x 2	40	160	1	1010574X2
	74	x 3	50	200	1	1010574X3
	74	x 4	60	240	1	1010574X4
	75	x 1,5	36	160	1	1010575X15
	75	x 2	40	160	1	1010575X2
	75	x 3	50	200	1	1010575X3
	75	x 4	60	240	1	1010575X4
	76	x 1,5	36	160	1	1010576X15
	76	x 2	40	160	1	1010576X2
	76	x 3	50	220	1	1010576X3
	76	x 4	60	260	1	1010576X4
	78	x 1,5	36	160	1	1010578X15
	78	x 2	40	160	1	1010578X2
	78	x 3	55	220	1	1010578X3
	78	x 4	65	260	1	1010578X4
	80	x 1,5	36	160	1	1010580X15
	80	x 2	40	160	1	1010580X2
	80	x 3	55	220	1	1010580X3
	80	x 4	65	260	1	1010580X4
	82	x 1,5	36	160	1	1010582X15
	82	x 2	40	160	1	1010582X2
	82	x 3	55	220	1	1010582X3
	82	x 4	65	260	1	1010582X4

Ø M84x1,5÷110x4: a richiesta
on demand

MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA METRICA ISO A PASSO FINE

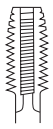
Hand taps, 2 pcs set, metric fine ISO thread / Jeux de 2 tarauds à main, filetage metrique ISO à pas fin
Juego de machos a mano, rosca metrica fina ISO / Handgewindebohrer, zweiteiliger Satz für metrisches ISO-Feingewinde

HSS-CO DIN 2181 ISO 2/6H COBALT

MF

10146

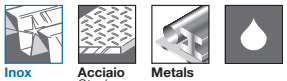




HRC ≃ 64÷65
AISI M35

Applicazioni / *Applications*

R ≤ 1200 N/mm²



Inox | **Acciaio** *Steel* | **Metals**

- Per filettature in acciai molto duri ed abrasivi, acciai inox, acciai resistenti al calore con R≤1200 N/mm².
- For thread in stainless steel, heat-resistant steel, high alloy steel R≤1200 N/mm².
- Taraudage en acier inox et acier allié avec R≤1200 N/mm².
- Para acero inox y acero aleado R≤1200 N/mm².
- Einsatz in legierte Stähle, korrosionebeständige Stähle, Grauguss und Stahlguss bis R≤1200 N/mm².

	Ø	/	L	pcs	cod.
M	**6** x 0,75	14	50	1	1014606x075
	8 x 0,75	19	50	1	1014608x075
	8 x 1	22	56	1	1014608x1
	10 x 1	20	63	1	1014610x1
	10 x 1,25	24	70	1	1014610x125
	12 x 1	22	70	1	1014612x1
	12 x 1,25	22	70	1	1014612x125
	12 x 1,5	22	70	1	1014612x15
	14 x 1,25	22	70	1	1014614x125
	14 x 1,5	22	70	1	1014614x15
	16 x 1,5	22	70	1	1014616x15
	18 x 1,5	22	80	1	1014618x15
	18 x 2	22	80	1	1014618x2
	20 x 1,5	22	80	1	1014620x15
	20 x 2	22	80	1	1014620x2
	22 x 1,5	22	80	1	1014622x15
	22 x 2	22	80	1	1014622x2
	24 x 1,5	22	90	1	1014624x15

MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA METRICA SINISTRA A PASSO FINE

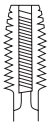
Hand taps, metric fine ISO thread, left hand / Tarauds à main, filetage metrique ISO, gauche
Juego de machos a mano, rosca fina izquierda / Handgewindebohrer, linksgewinde, metrisches ISO-Feingewinde

HSS-G DIN 2181 ISO 2/6H Sinistra - *Left hand - Gauche - Izquierda - Links*

MF

10107





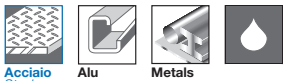
HRC ≃ 63÷63,5
AISI M2



LH

Applicazioni / *Applications*

R ≤ 900 N/mm²



Acciaio *Steel* | **Alu** | **Metals**

- Per filettature in fori ciechi e passanti in acciaio da costruzione, acciai da bonifica, materiali metallici in genere sino a R≤800 N/mm².
- For making threads in blind and through holes in structural steel, malleable cast iron, heat-treatable steel R≤800 N/mm².

	Ø	/	L	pcs	cod.
M	**6** x 0,75	14	50	1	1010706x075
	8 x 0,75	19	50	1	1010708x075
	8 x 1	22	56	1	1010708x1
	10 x 1	20	63	1	1010710x1
	10 x 1,25	24	70	1	1010710x125
	12 x 1	22	70	1	1010712x1
	12 x 1,25	22	70	1	1010712x125
	12 x 1,5	22	70	1	1010712x15
	14 x 1,25	22	70	1	1010714x125
	14 x 1,5	22	70	1	1010714x15
	16 x 1	22	70	1	1010716x1
	16 x 1,5	22	70	1	1010716x15
	18 x 1,5	22	80	1	1010718x15
	20 x 1,5	22	80	1	1010720x15
	22 x 1,5	22	80	1	1010722x15
	24 x 1,5	22	90	1	1010724x15
	24 x 2	22	90	1	1010724x2
	30 x 1,5	22	90	1	1010730x15
	30 x 2	22	90	1	1010730x2
	38 x 1,5	25	100	1	1010738x15

MASCHI A MANO SERIE DI 2 PEZZI, FIL. GAS CILINDRICA ISO 228 PER TUBI

Hand taps, 2 pcs set, Wh pipe thread ISO 228 / Jeux de 2 tarauds à main, filetages gaz de tuyauterie ISO 228

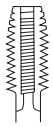
Juegos de utensilios a roscar, rosca gas cilindrica ISO 228 / Handgewindebohrer, zweiteiliger Satz für Rohrgewinde DIN ISO 228

HSS-G DIN 5157

BSP (GAS)

10115





HRC ≃ 63÷63,5
AISI M2

Applicazioni *Applications*

R ≤ 800 N/mm²

Acciaio *Steel* | **Alu** | **Metals**

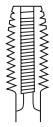
	Ø	/	L	pcs	cod.
G	**1/8** x 28	20	63	1	101151/8
	1/4 x 19	22	70	1	101151/4
	3/8 x 19	22	70	1	101153/8
	1/2 x 14	22	80	1	101151/2
	5/8 x 14	22	80	1	101155/8
	3/4 x 14	22	90	1	101153/4
	7/8 x 14	22	90	1	101157/8
	1” x 11	25	100	1	101151"
	1.1/8 x 11	40	125	1	101151.1/8
	1.1/4 x 11	40	125	1	101151.1/4
	1.3/8 x 11	40	140	1	101151.3/8
	1.1/2 x 11	40	140	1	101151.1/2
	1.5/8 x 11	40	140	1	101151.5/8
	1.3/4 x 11	40	140	1	101151.3/4
	2” x 11	40	160	1	101152"
	2.1/4 x 11	40	160	1	101152.1/4
	2.1/2 x 11	40	160	1	101152.1/2
	2.3/4 x 11	40	160	1	101152.3/4
	3” x 11	40	160	1	101153"
	3.1/2 x 11	45	180	1	101153.1/2
	4” x 11	45	180	1	101154"

HSS-CO DIN 5157 COBALT

BSP (GAS)

10148





HRC ≃ 64÷65
AISI M35

Applicazioni *Applications*

R ≤ 1200 N/mm²

Inox | **Acciaio** *Steel* | **Metals**

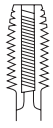
	Ø	/	L	pcs	cod.
G	**1/8** x 28	20	63	1	101481/8
	1/4 x 19	22	70	1	101481/4
	3/8 x 19	22	70	1	101483/8
	1/2 x 14	22	80	1	101481/2
	3/4 x 14	22	90	1	101483/4
	1” x 11	25	100	1	101481"

HSS-G DIN 5157 Sinistra - *Left hand - Gauche - Izquierda - Links*

BSP (GAS)

10117





HRC ≃ 63÷63,5
AISI M2



LH

Applicazioni *Applications*

R ≤ 800 N/mm²

Acciaio *Steel* | **Alu** | **Metals**

	Ø	/	L	pcs	cod.
G	**1/8** x 28	20	63	1	101171/8
	1/4 x 19	22	70	1	101171/4
	3/8 x 19	22	70	1	101173/8
	1/2 x 14	22	80	1	101171/2
	5/8 x 14	22	80	1	101175/8
	3/4 x 14	22	90	1	101173/4
	1” x 11	25	100	1	101171"
	1.1/8 x 11	40	125	1	101171.1/8
	1.1/4 x 11	40	125	1	101171.1/4
	1.3/8 x 11	40	140	1	101171.3/8
	1.1/2 x 11	40	140	1	101171.1/2
	1.3/4 x 11	40	140	1	101171.3/4
	2” x 11	40	160	1	101172"

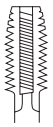
MASCHI A MANO SERIE DI 3 PEZZI, FILETTATURA WHITWORTH A PASSO GROSSO BS 84

Hand taps, 3 pcs sets, Whitworth BSW thread / Jeux de tarauds à main, filetage Whitworth
Juegos de machos a mano, rosca Whitworth / Handgewindebohrer, dreiteiliger Satz, Whitworth-Gewinde

HSS-G ≃ DIN 352 **BSW**

10110

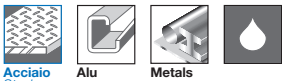




HRC ≃ 63÷63,5
AISI M2

Applicazioni *Applications*

R ≤ 800 N/mm²



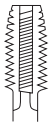
Acciaio *Steel* **Alu** **Metals**

	Ø	/	L	pcs	cod.
BSW	**1/16** x 60	10	36	1	101101/16
	3/32 x 48	10	36	1	101103/32
	1/8 x 40	12	40	1	101101/8
	5/32 x 32	14	45	1	101105/32
	3/16 x 24	18	50	1	101103/16
	7/32 x 24	18	50	1	101107/32
	1/4 x 20	19	50	1	101101/4
	5/16 x 18	22	63	1	101105/16
	3/8 x 16	24	70	1	101103/8
	7/16 x 14	24	70	1	101107/16
	1/2 x 12	29	75	1	101101/2
	9/16 x 12	30	80	1	101109/16
	5/8 x 11	32	80	1	101105/8
	11/16 x 11	32	80	1	1011011/16
	3/4 x 10	40	95	1	101103/4
	7/8 x 9	40	100	1	101107/8
	1” x 8	50	110	1	101101"
	1.1/8 x 7	56	132	1	101101.1/8
	1.1/4 x 7	56	132	1	101101.1/4
	1.3/8 x 6	63	150	1	101101.3/8
	1.1/2 x 6	63	150	1	101101.1/2
	1.5/8 x 5	70	160	1	101101.5/8
	1.3/4 x 5	70	160	1	101101.3/4
	1.7/8 x 4.1/2	80	190	1	101101.7/8
	2” x 4.1/2	80	190	1	101102"

HSS-G ≃ DIN 352 **Sinistra - *Left hand - Gauche - Izquierda - Links*** **BSW**

10111





HRC ≃ 63÷63,5
AISI M2



LH

	Ø	/	L	pcs	cod.
BSW	**1/8** x 40	12	40	1	101111/8
	5/32 x 32	14	45	1	101115/32
	3/16 x 24	18	50	1	101113/16
	1/4 x 20	22	56	1	101111/4
	5/16 x 18	25	63	1	101115/16
	3/8 x 16	28	70	1	101113/8
	7/16 x 14	30	75	1	101117/16
	1/2 x 12	32	80	1	101111/2
	9/16 x 12	32	80	1	101119/16
	5/8 x 11	36	90	1	101115/8
	3/4 x 10	40	105	1	101113/4
	7/8 x 9	45	110	1	101117/8
	1” x 8	50	110	1	101111”

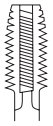
MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA WHITWORTH A PASSO FINE BS 84

Hand taps, 2 pcs set, british standard fine thread - Jeux de 2 tarauds à main, filetage Whitworth pas fin
Juego de machos a mano, rosca fina Whitworth - Handgewindebohrer, zweiteiliger Satz, britisch-standard Feingewinde

HSS-G ≃ DIN 2181 **BSF**

10112





HRC ≃ 63÷63,5
AISI M2

	Ø	/	L	pcs	cod.
BSF	**3/16** x 32	14	50	1	101123/16
	1/4 x 26	18	50	1	101121/4
	5/16 x 22	22	56	1	101125/16
	3/8 x 20	22	63	1	101123/8
	7/16 x 18	22	63	1	101127/16
	1/2 x 16	24	75	1	101121/2
	9/16 x 16	28	80	1	101129/16
	5/8 x 14	28	80	1	101125/8
	3/4 x 12	32	95	1	101123/4
	7/8 x 11	36	100	1	101127/8
	1” x 10	40	110	1	101121”

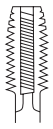
MASCHI A MANO SERIE DI 3 PEZZI, FIL. AMERICANA UNC A PASSO GROSSO

Hand taps, 3 pcs set, Unified Coarse Thread (UNC) / Jeux de 3 tarauds à main, filetage americain à pas gros UNC
Juegos de machos a mano, rosca unificada vasta UNC / Handgewindebohrer, dreiteiliger Satz, amerikanisches gewinde UNC

HSS-G DIN 352 **UNC**

10120





HRC ≃ 63÷63,5
AISI M2

Applicazioni *Applications*

R ≤ 800 N/mm²



Acciaio *Steel*



Alu



Metals



	Ø	/	L	pcs	cod.
N°	**1** x 64	10	32	1	10120N01
	2 x 56	11	36	1	10120N02
	3 x 48	11	36	1	10120N03
	4 x 40	12	40	1	10120N04
	5 x 40	12	40	1	10120N05
	6 x 32	14	45	1	10120N06
	8 x 32	14	45	1	10120N08
	10 x 24	16	50	1	10120N10
	12 x 24	18	50	1	10120N12
UNC	**1/4** x 20	19	50	1	101201/4
	5/16 x 18	22	63	1	101205/16
	3/8 x 16	24	70	1	101203/8
	7/16 x 14	24	70	1	101207/16
	1/2 x 13	29	75	1	101201/2
	9/16 x 12	30	80	1	101209/16
	5/8 x 11	32	80	1	101205/8
	3/4 x 10	40	95	1	101203/4
	7/8 x 12	40	100	1	101207/8
	1” x 8	50	110	1	101201”
	1.1/8 x 7	56	132	1	101201.1/8
	1.1/4 x 7	56	132	1	101201.1/4
	1.3/8 x 6	63	150	1	101201.3/8
	1.1/2 x 6	63	150	1	101201.1/2
	1.5/8 x 5	70	160	1	101201.5/8
	1.3/4 x 5	70	160	1	101201.3/4
	1.7/8 x 4,5	80	190	1	101201.7/8
	2” x 4,5	80	190	1	101202”

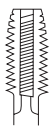
MASCHI A MANO SERIE DI 3 PEZZI, FILETTATURA AMERICANA UNC SINISTRA

Hand taps, 3 pcs set left hand / Jeux de 3 tarauds à main gauche
Juegos de machos a mano izquierda / Handgewindebohrer, linksgewinde dreitelliger Satz

HSS-G DIN 352 **Sinistra - *Left hand - Gauche - Izquierda - Links*** **UNC**

10122





HRC ≃ 63÷63,5
AISI M2



LH

	Ø	/	L	pcs	cod.
N°	**6** x 32	14	45	1	10122NR06
	8 x 32	14	45	1	10122NR08
	10 x 24	16	50	1	10122NR10
	12 x 24	18	50	1	10122NR12
UNC	**1/4** x 20	19	50	1	101221/4
	5/16 x 18	22	63	1	101225/16
	3/8 x 16	24	70	1	101223/8
	7/16 x 14	24	70	1	101227/16
	1/2 x 13	29	75	1	101221/2
	9/16 x 12	30	80	1	101229/16
	5/8 x 11	32	80	1	101225/8
	3/4 x 10	40	95	1	101223/4
	7/8 x 9	40	100	1	101227/8
	1” x 8	50	110	1	101221”

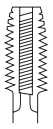
MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA AMERICANA UNF A PASSO FINE

Hand taps, 2 pcs set, unified fine thread UNF / Jeux de 2 tarauds à main, filetage americain à pas fin UNF
Juego de 2 machos a mano, rosca unificada fina UNF / Handgewindebohrer, zweiteiliger Satz, amerikanisches Feingewinde

HSS-G ≃ DIN 2181 **UNF**

10125

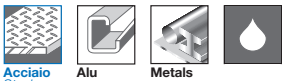




HRC ≃ 63÷63,5
AISI M2

Applicazioni *Applications*

R ≤ 800 N/mm²



Acciaio *Steel* **Alu** **Metals**

	Ø	/	L	pcs	cod.
N°	**0** x 80	9	32	1	10125N00
	1 x 72	9	32	1	10125N01
	2 x 64	10	32	1	10125N02
	3 x 56	10	32	1	10125N03
	4 x 48	11	36	1	10125N04
	5 x 44	11	36	1	10125N05
	6 x 40	12	40	1	10125N06
	8 x 36	12	40	1	10125N08
	10 x 32	14	45	1	10125N10
UNF	**12** x 28	14	50	1	10125N12
	1/4 x 28	18	50	1	101251/4
	5/16 x 24	22	56	1	101255/16
	3/8 x 24	22	63	1	101253/8
	7/16 x 20	22	63	1	101257/16
	1/2 x 20	24	75	1	101251/2
	9/16 x 18	28	80	1	101259/16
	5/8 x 18	28	80	1	101255/8
	3/4 x 16	32	95	1	101253/4
	7/8 x 14	36	100	1	101257/8
	1” x 12	40	110	1	101251”12
*	**1”** x 14	40	110	1	101251”14
	1.1/8 x 12	50	110	1	101251.1/8
	1.1/4 x 12	56	132	1	101251.1/4
	1.3/8 x 12	56	132	1	101251.3/8
	1.1/2 x 12	63	150	1	101251.1/2

*** Filettatura UNS**
UNS thread

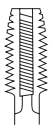
MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA AMERICANA UNF SINISTRA

Hand taps, 2 pcs set left hand / Jeux de 2 tarauds à main gauche
Juegos de machos a mano izquierda / Handgewindebohrer, linksgewinde zweitelliger Satz

HSS-G ≃ DIN 2181 **Sinistra - *Left hand - Gauche - Izquierda - Links*** **UNF**

10127





HRC ≃ 63÷63,5
AISI M2



LH

	Ø	/	L	pcs	cod.
N°	**10** x 32	14	45	1	10127NR10
UNC	**1/4** x 28	18	50	1	101271/4
	5/16 x 24	22	56	1	101275/16
	3/8 x 24	22	63	1	101273/8
	7/16 x 20	22	63	1	101277/16
	1/2 x 20	24	75	1	101271/2
	9/16 x 18	28	80	1	101279/16
	5/8 x 18	28	80	1	101275/8
	3/4 x 16	32	95	1	101273/4
	7/8 x 14	36	100	1	101277/8
	1” x 12	40	110	1	101271”

MASCHI A MANO / MACCHINA CONICI PER TUBI, FILETTATURA AMERICANA NPT - BSPT

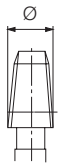
NPT taper thread taps / Tarauds conique NPT / Machos rosca conica americana NPT
Gewindebohrer, amerikanisches kegeliges Rohrgewinde

HSS-G ANSI B 2.1

NPT



FORM C

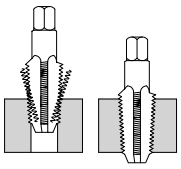


CONICITÀ 1:16
TAPER 1:16



	Ø	/	L	pcs	cod.
NPT	**1/16** x 27	19	54	1	101341/16
	1/8 x 27	19	54	1	101341/8
	1/4 x 18	27	62	1	101341/4
	3/8 x 18	27	65	1	101343/8
	1/2 x 14	35	79	1	101341/2
	3/4 x 14	35	83	1	101343/4
	1” x 11,5	44	95	1	101341”
	1.1/4 x 11,5	44	102	1	101341.1/4
	1.1/2 x 11,5	44	108	1	101341.1/2
	2” x 11,5	44	114	1	101342”

10134



CONICITÀ 1:16
TAPER 1:16

MASCHI A MANO / MACCHINA CONICI PER TUBI, FILETTATURA GAS CONICA BSPT

BSPT taped thread taps / Tarauds filetage gaz conique BSPT / Machos rosca conica BSPT

HSS-G

BSPT



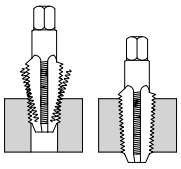
FORM C



CONICITÀ 1:16
TAPER 1:16

	Ø	/	L	pcs	cod.
Rc	**1/8** x 28	15	59	1	101391/8
	1/4 x 19	19	67	1	101391/4
	3/8 x 19	21	75	1	101393/8
	1/2 x 14	26	87	1	101391/2
	3/4 x 14	28	96	1	101393/4
	1” x 11	33	109	1	101391”
	1.1/4 x 11	36	119	1	101391.1/4
	1.1/2 x 11	37	125	1	101391.1/2
	2” x 11	41	140	1	101392”

10139



CONICITÀ 1:16
TAPER 1:16

MASCHI A MACCHINA CONICI PER TUBI, FILETTATURA AMERICANA NPT

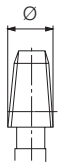
NPT machine taps / Tarauds machine NPT / Machos de maquina NPT / Machinengewindebohrer NPT

HSS-CO

NPT



FORM C



CONICITÀ 1:16
TAPER 1:16



	Ø	/	L	d	pcs	cod.
NPT	**1/8** x 27	20	90	7	1	102931/8
	1/4 x 18	22	100	11	1	102931/4
	3/8 x 18	22	100	12	1	102933/8
	1/2 x 14	28	125	16	1	102931/2
	3/4 x 14	28	140	20	1	102933/4
	1” x 11,5	38	160	25	1	102931”

10293

MASCHI A MACCHINA CONICI PER TUBI, FILETTATURA GAS CONICA BSPT

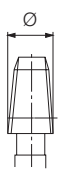
BSPT machine taps / Tarauds machine BSPT / Machos de maquina BSPT / Machinengewindebohrer BSPT

HSS-CO

BSPT



FORM C



CONICITÀ 1:16
TAPER 1:16

	Ø	/	L	d	pcs	cod.
Rc	**1/8** x 28	20	90	7	1	102941/8
	1/4 x 19	22	100	11	1	102941/4
	3/8 x 19	22	100	12	1	102943/8
	1/2 x 14	28	125	16	1	102941/2
	3/4 x 14	28	140	20	1	102943/4
	1” x 11	38	160	25	1	102941”

10294

FILIERE TONDE AD IMBOCCO CORRETTO, FILETTATURA METRICA ISO A PASSO GROSSO

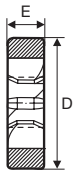
Spiral point round dies, metric coarse thread / Filières rondes entrée gun, filetage métrique à pas gros

Cojinetes redondos entrada corregida, rosca metrica vasta / Runde Schneideisen mit schälanschnitt metrisches ISO-Gewinde

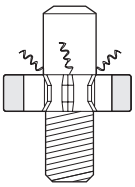
HSS DIN 223 - EN 22568 6g **M**

12060

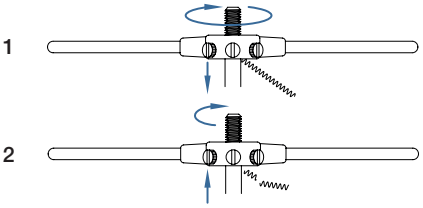




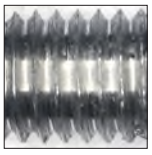
HRC ≃ 62÷63
AISI M2
FORM B



Imbocco corretto
Spiral Point



É buona norma, ad ogni rotazione della filiera(1), effettuare mezzo giro indietro per rompere il truciolo(2)
Please rotate clockwise the round die(1) then anticlockwise to break the chip(2)



Risultato: Ottima finitura del filetto
Result: good thread finishing

Art. **12068** Self
Disponibile su richiesta / *On demand*

	Ø	DxE	pcs	cod.
M	**1** x 0,25	16 x 5	1	1206001X025
	1,1 x 0,25	16 x 5	1	12060011X025
	1,2 x 0,25	16 x 5	1	12060012X025
	1,4 x 0,3	16 x 5	1	12060014X03
	1,6 x 0,35	16 x 5	1	12060016X035
	1,7 x 0,35	16 x 5	1	12060017X035
	1,8 x 0,35	16 x 5	1	12060018X035
	2 x 0,4	16 x 5	1	1206002X04
	2,2 x 0,45	16 x 5	1	12060022X045
	2,3 x 0,4	16 x 5	1	12060023X04
	2,5 x 0,45	16 x 5	1	12060025X045
	2,6 x 0,45	16 x 5	1	12060026X045
	3 x 0,5	20 x 5	1	1206003X05
	3,5 x 0,6	20 x 5	1	12060035X06
	4 x 0,7	20 x 5	1	1206004X07
	4,5 x 0,75	20 x 7	1	12060045X075
	5 x 0,8	20 x 7	1	1206005X08
	5 x 1	20 x 7	1	1206005X1
	5,5 x 0,9	20 x 7	1	12060055x09
	6 x 1	20 x 7	1	1206006X1
	7 x 1	25 x 9	1	1206007X1
	8 x 1,25	25 x 9	1	1206008X125
	9 x 1,25	25 x 9	1	1206009X125
	10 x 1,5	30 x 11	1	1206010X15
	11 x 1,5	30 x 11	1	1206011X15
	12 x 1,75	38 x 14	1	1206012X175
	14 x 2	38 x 14	1	1206014X2
	15 x 2	38 x 14	1	1206015X2
	16 x 2	45 x 18	1	1206016X2
	18 x 2,5	45 x 18	1	1206018X25
	19 x 2,5	45 x 18	1	1206019X25
	20 x 2,5	45 x 18	1	1206020X25
	22 x 2,5	55 x 22	1	1206022X25
	24 x 3	55 x 22	1	1206024X3
	27 x 3	65 x 25	1	1206027X3
	30 x 3,5	65 x 25	1	1206030X35
	33 x 3,5	65 x 25	1	1206033X35
	36 x 4	65 x 25	1	1206036X4
	39 x 4	75 x 30	1	1206039X4
	42 x 4,5	75 x 30	1	1206042X45
	45 x 4,5	90 x 36	1	1206045X45
	48 x 5	90 x 36	1	1206048X5
	52 x 5	90 x 36	1	1206052X5
	56 x 5,5	105 x 36	1	1206056X55
	60 x 5,5	105 x 36	1	1206060X55
	64 x 6	120 x 36	1	1206064X6
	68 x 6	120 x 36	1	1206068X6
	72 x 6	130 x 36	1	1206072X6

Confezione / *Packaging*



1 pc

Applicazioni / *Applications*



15035 15037 311

FILIERE TONDE NON A NORMA DIN, FILETTATURA METRICA ISO A PASSO GROSSO

Round dies with special outside diameter / Filières rondes avec diamètre exterieur spécial
Cojinetes redondos con diametro exterior special / Runde Schneideisen mit sonderen ausserendurchmesser

HSS 6g

	Ø	DxE	pcs	Art. 12066 HSS cod.	Art. 12067 HSS+TiN cod.
M	2 x 0,4	25 x 9	1	12066202X04	-
	3 x 0,5	25 x 9	1	12066203X05	12067203X05
	4 x 0,7	25 x 9	1	12066204X07	12067204X07
	5 x 0,8	25 x 9	1	12066205X08	12067205X08
	6 x 1	25 x 9	1	12066206X1	12067206X1
	7 x 1	25 x 9	1	12066207X1	-
	8 x 1,25	25 x 9	1	12066208X125	12067208X125
	10 x 1,5	25 x 9	1	12066210X15	12067210X15
	12 x 1,75	25 x 9	1	12066212X175	12067212X175
	10 x 1,5	38 x 14	1	12066310X15	
	12 x 1,75	38 x 14	1	12066312X175	
	14 x 2	38 x 14	1	12066314X2	
	16 x 2	38 x 14	1	12066316X2	
	18 x 2,5	38 x 14	1	12066318X25	
	20 x 2,5	38 x 14	1	12066320X25	

12066
12067

12066 **12067**



443

Filiere con Ø esterno speciale
Round dies with special outside diameter

FILIERE TONDE NON A NORMA DIN, FILETTATURA METRICA ISO A PASSO FINE

NPRound dies with special outside diameter / Filières rondes avec diamètre exterieur spécial
Cojinetes redondos con diametro exterior special / Runde Schneideisen für nicht DIN Norme, mit sonderen äusseren durchmesser

HSS 6g **MF**

	Ø	DxE	pcs	cod.
M	8 x 1	25 x 9	1	12066208X1
	10 x 1	38 x 14	1	12066310X1
	10 x 1,25	38 x 14	1	12066310X125
	12 x 1,25	38 x 14	1	12066312X125
	12 x 1,5	38 x 14	1	12066312X15
	14 x 1,25	38 x 14	1	12066314X125
	14 x 1,5	38 x 14	1	12066314X15
	16 x 1,5	38 x 14	1	12066316X15
	18 x 1,5	38 x 14	1	12066318X15

12066



Filiere con Ø esterno speciale
Round dies with special outside diameter

Confezione / *Packaging*



1 pc

Applicazioni / *Applications*

Acciaio
Steel

Metals

Alu

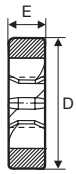
FILIERE TONDE AD IMBOCCO CORRETTO, FILETTATURA METRICA ISO A PASSO GROSSO

Round dies, spiral point, metric coarse thread / Filieres rondes, entrée gun, filetage métrique à pas gros
Cojinetes redondos, entrada corregida, rosca metrica vasta / Runde Schneideisen mit schälanschnitt

HSS-CO DIN 223 EN 22568 6g COBALT — M

12144



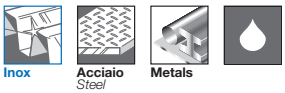


HRC ≃ 63÷64
AISI M35
FORM B

Imbocco corretto
Spiral Point

	Ø	DxE	pcs	cod.
M	3 x 0,5	20 x 5	1	1214403X05
	4 x 0,7	20 x 5	1	1214404X07
	5 x 0,8	20 x 7	1	1214405X08
	6 x 1	20 x 7	1	1214406X1
	8 x 1,25	25 x 9	1	1214408X125
	10 x 1,5	30 x 11	1	1214410X15
	12 x 1,75	38 x 14	1	1214412X175
	14 x 2	38 x 14	1	1214414X2
	16 x 2	45 x 18	1	1214416X2
	18 x 2,5	45 x 18	1	1214418X25
	20 x 2,5	45 x 18	1	1214420X25
	22 x 2,5	55 x 22	1	1214422X25
	24 x 3	55 x 22	1	1214424X3
	27 x 3	65 x 25	1	1214427X3
	30 x 3,5	65 x 25	1	1214430X35

Applicazioni / *Applications*



FILIERE TONDE SINISTRE, FILETTATURA METRICA A PASSO GROSSO

Round dies, metric coarse thread, left hand / Filières rondes, filetage métrique à pas gros, gauche
Cojinetes redondos, rosca metrica vasta izquierda /Runde Schneideisen, metrisches ISO-Gewinde, linksgewinde

HSS DIN 223 - EN 22568 6g Sinistra - *Left hand - Gauche - Izquierda - Links* — M

12062





	Ø	DxE	pcs	cod.
M	2 x 0,4	16 x 5	1	1206202X04
	3 x 0,5	20 x 5	1	1206203X05
	4 x 0,7	20 x 5	1	1206204X07
	5 x 0,8	20 x 7	1	1206205X08
	6 x 1	20 x 7	1	1206206X1
	7 x 1	25 x 9	1	1206207X1
	8 x 1,25	25 x 9	1	1206208X125
	10 x 1,5	30 x 11	1	1206210X15
	12 x 1,75	38 x 14	1	1206212X175
	14 x 2	38 x 14	1	1206214X2
	16 x 2	45 x 18	1	1206216X2
	18 x 2,5	45 x 18	1	1206218X25
	20 x 2,5	45 x 18	1	1206220X25
	22 x 2,5	55 x 22	1	1206222X25
	24 x 3	55 x 22	1	1206224X3
	27 x 3	65 x 25	1	1206227X3
	30 x 3,5	65 x 25	1	1206230X35
	33 x 3,5	65 x 25	1	1206233X35
	36 x 4	65 x 25	1	1206236X4
	39 x 4	75 x 30	1	1206239X4
	42 x 4,5	75 x 30	1	1206242X45
	45 x 4,5	90 x 36	1	1206245X45
	48 x 5	90 x 36	1	1206248X5
	52 x 5	90 x 36	1	1206252X5

Confezione / *Packaging*



1 pc

Applicazioni / *Applications*



FILIERE TONDE AD IMBOCCO CORRETTO RIV. AL TiN, FIL. METRICA ISO A PASSO GROSSO

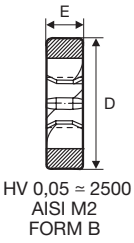
TiN round dies, metric coarse thread / Filières rondes revetue au titan, filetage métrique à pas gros
Cojinetes redondos con recubrimiento de titanio / Runde Schneideisen TiN beschichtet

HSS+TiN DIN 223 - EN 22568 6g

M

12165





HV 0,05 ≃ 2500
AISI M2
FORM B



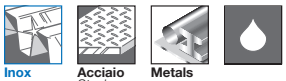
Imbocco corretto
Spiral Point

	Ø	DxE	pcs	cod.
M	**3** x 0,5	20 x 5	1	1216503X05
	4 x 0,7	20 x 5	1	1216504X07
	5 x 0,8	20 x 7	1	1216505X08
	6 x 1	20 x 7	1	1216506X1
	8 x 1,25	25 x 9	1	1216508X125
	10 x 1,5	30 x 11	1	1216510X15
	12 x 1,75	38 x 14	1	1216512X175
	14 x 2	38 x 14	1	1216514X2
	16 x 2	45 x 18	1	1216516X2
	18 x 2,5	45 x 18	1	1216518X25
	20 x 2,5	45 x 18	1	1216520X25

MF

MF	**14** x 1,5	38 x 14	1	1216514x15
	16 x 1,5	45 x 18	1	1216516x15
	18 x 1,5	45 x 18	1	1216518x15
	22 x 1,5	45 x 18	1	1216522x15

Applicazioni *Applications*



FILIERE TONDE, FILETTATURA METRICA A PASSO FINE PER TUBI DI CONDUZIONE ELETTRICA

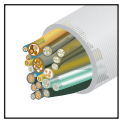
Round dies, metric fine thread for cables connections/ Filières rondes métrique à pas fin pour tubes avec armature en acier / Cojinetes redondos rosca metrica fina para tubos de conducción eléctrica/ Runde Schneideisen, Stahlpanzer ISO-Feingewinde für Kabelverschraubungen

HSS DIN 223 - EN 22568 6g

MF

12069





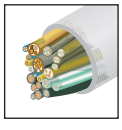
	Ø	DxE	pcs	cod.
MF	**12** x 1,5	38 x 10	1	1206912X15
	16 x 1,5	45 x 14	1	1206916X15
	20 x 1,5	45 x 14	1	1206920X15
	25 x 1,5	55 x 16	1	1206925X15
	32 x 1,5	65 x 18	1	1206932X15
	40 x 1,5	75 x 20	1	1206940X15
	50 x 1,5	90 x 22	1	1206950X15
	63 x 1,5	105 x 22	1	1206963X15

HSS DIN 40434*

Pg

12093





	Ø	DxE	pcs	cod.
Pg	**13,5** x 18	45 x 14	1	12093135
	21 x 16	65 x 18	1	1209321
	29 x 16	65 x 18	1	1209329
	36 x 16	90 x 22	1	1209336
	42 x 16	105 x 22	1	1209342
	48 x 16	105 x 22	1	1209348

*In esaurimento
To be discontinued

FILIERE TONDE AD IMBOCCO CORRETTO, FILETTATURA METRICA A PASSO FINE

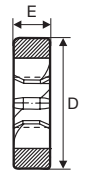
Round dies, spiral point, metric fine thread / Filieres rondes, entrée gun, filetage métrique à pas fin

Cojinetes redondos, entrada corregida, rosca metrica fina / Runde Schneideisen mit schälanschnitt, metrisches ISO-Feingewinde

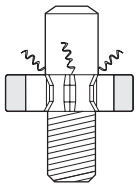
HSS DIN 223 - EN 22568 - 6g **MF**

12065

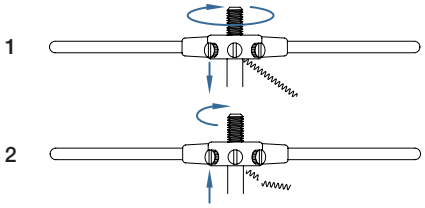




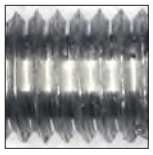
HRC ≃ 62÷63
AISI M2
FORM B



Imbocco corretto
Spiral Point



É buona norma, ad ogni rotazione della filiera(1), effettuare mezzo giro indietro per rompere il truciolo(2)
Please rotate clockwise the round die(1) then anticlockwise to break the chip(2)



Risultato: Ottima finitura del filetto
Result: good thread finishing

	Ø	DxE	pcs	cod.
M	2,5 x 0,35	16 x 5	1	12065025X035
	2,6 x 0,35	16 x 5	1	12065026X035
	3 x 0,35	20 x 5	1	1206503X035
	3,5 x 0,35	20 x 5	1	12065035X035
	4 x 0,35	20 x 5	1	1206504X035
	4 x 0,5	20 x 5	1	1206504X05
	4,5 x 0,5	20 x 5	1	12065045X05
	5 x 0,5	20 x 5	1	1206505X05
	5 x 0,75	20 x 7	1	1206505X075
	5,5 x 0,5	20 x 5	1	12065055X05
	6 x 0,5	20 x 5	1	1206506X05
	6 x 0,75	20 x 7	1	1206506X075
	7 x 0,5	25 x 9	1	1206507X05
	7 x 0,75	25 x 9	1	1206507X075
	8 x 0,5	25 x 9	1	1206508X05
	8 x 0,75	25 x 9	1	1206508X075
	8 x 1	25 x 9	1	1206508X1
	9 x 0,5	25 x 9	1	1206509X05
	9 x 0,75	25 x 9	1	1206509X075
	9 x 1	25 x 9	1	1206509X1
	10 x 0,5	30 x 11	1	1206510X05
	10 x 0,75	30 x 11	1	1206510X075
	10 x 1	30 x 11	1	1206510X1
	10 x 1,25	30 x 11	1	1206510X125
	11 x 1	30 x 11	1	1206511X1
	11 x 1,25	30 x 11	1	1206511X125
	12 x 0,5	38 x 10	1	1206512X05
	12 x 0,75	38 x 10	1	1206512X075
	12 x 1	38 x 10	1	1206512X1
	12 x 1,25	38 x 10	1	1206512X125
	12 x 1,5	38 x 10	1	1206512X15
	13 x 0,5	38 x 10	1	1206513X05
	13 x 0,75	38 x 10	1	1206513X075
	13 x 1	38 x 10	1	1206513X1
	13 x 1,5	38 x 10	1	1206513X15
	14 x 0,5	38 x 10	1	1206514X05
	14 x 0,75	38 x 10	1	1206514X075
	14 x 1	38 x 10	1	1206514X1
	14 x 1,25	38 x 10	1	1206514X125
	14 x 1,5	38 x 10	1	1206514X15
	15 x 0,75	38 x 10	1	1206515X075
	15 x 1	38 x 10	1	1206515X1
	15 x 1,5	38 x 10	1	1206515X15
	16 x 0,5	45 x 14	1	1206516X05
	16 x 0,75	45 x 14	1	1206516X075
	16 x 1	45 x 14	1	1206516X1
	16 x 1,25	45 x 14	1	1206516X125
	16 x 1,5	45 x 14	1	1206516X15
	17 x 1	45 x 14	1	1206517X1
	17 x 1,5	45 x 14	1	1206517X15
	18 x 0,5	45 x 14	1	1206518X05
	18 x 0,75	45 x 14	1	1206518X075
	18 x 1	45 x 14	1	1206518X1
	18 x 1,25	45 x 14	1	1206518X125
	18 x 1,5	45 x 14	1	1206518X15
	18 x 2	45 x 14	1	1206518X2
	19 x 1	45 x 14	1	1206519X1
	19 x 1,5	45 x 14	1	1206519X15
	20 x 0,5	45 x 14	1	1206520X05
	20 x 0,75	45 x 14	1	1206520X075
	20 x 1	45 x 14	1	1206520X1
	20 x 1,25	45 x 14	1	1206520X125
	20 x 1,5	45 x 14	1	1206520X15
	20 x 2	45 x 14	1	1206520X2
	21 x 1	45 x 14	1	1206521X1
	21 x 1,5	45 x 14	1	1206521X15
	22 x 0,5	55 x 16	1	1206522X05
	22 x 0,75	55 x 16	1	1206522X075
	22 x 1	55 x 16	1	1206522X1
	22 x 1,25	55 x 16	1	1206522X125
	22 x 1,5	55 x 16	1	1206522X15
	22 x 2	55 x 16	1	1206522X2

Confezione / *Packaging*



1 pc

Applicazioni / *Applications*



Acciaio
Steel



Metals



Alu



	Ø	DxE	pcs	cod.
M	23 x 1	55 x 16	1	1206523X1
	23 x 1,5	55 x 16	1	1206523X15
	24 x 0,5	55 x 16	1	1206524X05
	24 x 0,75	55 x 16	1	1206524X075
	24 x 1	55 x 16	1	1206524X1
	24 x 1,25	55 x 16	1	1206524X125
	24 x 1,5	55 x 16	1	1206524X15
	24 x 2	55 x 16	1	1206524X2
	25 x 1	55 x 16	1	1206525X1
	25 x 1,5	55 x 16	1	1206525X15
	25 x 2	55 x 16	1	1206525X2
	26 x 1	55 x 16	1	1206526X1
	26 x 1,5	55 x 16	1	1206526X15
	26 x 2	55 x 16	1	1206526X2
	27 x 1	65 x 18	1	1206527X1
	27 x 1,5	65 x 18	1	1206527X15
	27 x 2	65 x 18	1	1206527X2
	28 x 1	65 x 18	1	1206528X1
	28 x 1,5	65 x 18	1	1206528X15
	28 x 2	65 x 18	1	1206528X2
	29 x 1,5	65 x 18	1	1206529X15
	30 x 1	65 x 18	1	1206530X1
	30 x 1,5	65 x 18	1	1206530X15
	30 x 2	65 x 18	1	1206530X2
	30 x 2,5	65 x 18	1	1206530X25
	30 x 3	65 x 25	1	1206530X3
	32 x 1	65 x 18	1	1206532X1
	32 x 1,5	65 x 18	1	1206532X15
	32 x 2	65 x 18	1	1206532X2
	32 x 3	65 x 25	1	1206532X3
	33 x 1,5	65 x 18	1	1206533X15
	33 x 2	65 x 18	1	1206533X2
	33 x 3	65 x 25	1	1206533X3
	34 x 1	65 x 18	1	1206534X1
	34 x 1,5	65 x 18	1	1206534X15
	34 x 2	65 x 18	1	1206534X2
	35 x 1	65 x 18	1	1206535X1
	35 x 1,5	65 x 18	1	1206535X15
	35 x 2	65 x 18	1	1206535X2
	36 x 1	65 x 18	1	1206536X1
	36 x 1,5	65 x 18	1	1206536X15
	36 x 2	65 x 18	1	1206536X2
	36 x 3	65 x 25	1	1206536X3
	37 x 1,5	65 x 18	1	1206537X15
	38 x 1	75 x 20	1	1206538X1
	38 x 1,5	75 x 20	1	1206538X15
	38 x 2	75 x 20	1	1206538X2
	38 x 3	75 x 30	1	1206538X3
	39 x 1,5	75 x 20	1	1206539X15
	39 x 2	75 x 20	1	1206539X2
	39 x 3	75 x 30	1	1206539X3
	40 x 1	75 x 20	1	1206540X1
	40 x 1,5	75 x 20	1	1206540X15
	40 x 2	75 x 20	1	1206540X2
	40 x 3	75 x 30	1	1206540X3
	42 x 1	75 x 20	1	1206542X1
	42 x 1,5	75 x 20	1	1206542X15
	42 x 2	75 x 20	1	1206542X2
	42 x 3	75 x 30	1	1206542X3
	44 x 1,5	90 x 22	1	1206544X15
	44 x 2	90 x 22	1	1206544X2
	45 x 1	90 x 22	1	1206545X1
	45 x 1,5	90 x 22	1	1206545X15
	45 x 2	90 x 22	1	1206545X2
	45 x 3	90 x 36	1	1206545X3
	46 x 1,5	90 x 22	1	1206546X15
	48 x 1	90 x 22	1	1206548X1
	48 x 1,5	90 x 22	1	1206548X15
	48 x 2	90 x 22	1	1206548X2
	48 x 3	90 x 36	1	1206548X3
	50 x 1,5	90 x 22	1	1206550X15
	50 x 2	90 x 22	1	1206550X2
	50 x 3	90 x 36	1	1206550X3
	52 x 1,5	90 x 22	1	1206552X15
	52 x 2	90 x 22	1	1206552X2
	52 x 3	90 x 36	1	1206552X3

MF

Ø	DxE	pcs	cod.
54 x 1	105 x 22	1	1206554X1
54 x 1,5	105 x 22		1206554X15
54 x 2	105 x 22	1	1206554X2
54 x 3	105 x 36	1	1206554X3
54 x 4	105 x 36	1	1206554X4
55 x 1,5	105 x 22	1	1206555X15
55 x 2	105 x 22	1	1206555X2
55 x 3	105 x 36	1	1206555X3
55 x 4	105 x 36	1	1206555X4
56 x 1	105 x 22	1	1206556X1
56 x 1,5	105 x 22	1	1206556X15
56 x 2	105 x 22	1	1206556X2
56 x 3	105 x 36	1	1206556X3
56 x 4	105 x 36	1	1206556X4
58 x 1	105 x 22	1	1206558X1
58 x 1,5	105 x 22	1	1206558X15
58 x 2	105 x 22	1	1206558X2
58 x 3	105 x 36	1	1206558X3
58 x 4	105 x 36	1	1206558X4
60 x 1,5	105 x 22	1	1206560X15
60 x 2	105 x 22	1	1206560X2
60 x 3	105 x 36	1	1206560X3
60 x 4	105 x 36	1	1206560X4
62 x 1,5	105 x 22	1	1206562X15
62 x 2	105 x 22	1	1206562X2
62 x 3	105 x 36	1	1206562X3
62 x 4	105 x 36	1	1206562X4
63 x 1,5	105 x 22	1	1206563X15
64 x 1,5	120 x 22	1	1206564X15
64 x 2	120 x 22	1	1206564X2
64 x 3	120 x 36	1	1206564X3
64 x 4	120 x 36	1	1206564X4
65 x 1,5	120 x 22	1	1206565X15
65 x 2	120 x 22	1	1206565X2
65 x 3	120 x 36	1	1206565X3
65 x 4	120 x 36	1	1206565X4
68 x 1,5	120 x 22	1	1206568X15
68 x 2	120 x 22	1	1206568X2
68 x 3	120 x 36	1	1206568X3
68 x 4	120 x 36	1	1206568X4
70 x 1,5	120 x 22	1	1206570X15
70 x 2	120 x 22	1	1206570X2
70 x 3	120 x 36	1	1206570X3
70 x 4	120 x 36	1	1206570X4
72 x 1,5	120 x 22	1	1206572X15
72 x 2	120 x 22	1	1206572X2
72 x 3	120 x 36	1	1206572X3
72 x 4	120 x 36	1	1206572X4
74 x 1,5	120 x 22	1	1206574X15
74 x 2	120 x 22	1	1206574X2
74 x 3	120 x 36	1	1206574X3
74 x 4	120 x 36	1	1206574X4
75 x 1,5	120 x 22	1	1206575X15
75 x 2	120 x 22	1	1206575X2
75 x 3	120 x 36	1	1206575X3
75 x 4	120 x 36	1	1206575X4
76 x 1,5	120 x 22	1	1206576X15
76 x 2	120 x 22	1	1206576X2
76 x 3	120 x 36	1	1206576X3
76 x 4	120 x 36	1	1206576X4
78 x 1,5	120 x 22	1	1206578X15
78 x 2	120 x 22	1	1206578X2
78 x 3	120 x 36	1	1206578X3
78 x 4	120 x 36	1	1206578X4
80 x 1,5	120 x 22	1	1206580X15
80 x 2	120 x 22	1	1206580X2
80 x 3	120 x 36	1	1206580X3
80 x 4	120 x 36	1	1206580X4
82 x 1,5	130 x 25	1	1206582X15
82 x 2	130 x 25	1	1206582X2
82 x 3	130 x 36	1	1206582X3
82 x 4	130 x 36	1	1206582X4

Ø M84x1,5÷105x4: a richiesta
on demand

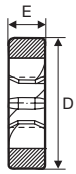
FILIERE TONDE AD IMBOCCO CORRETTO, FILETTATURA METRICA ISO A PASSO FINE

Spiral point round dies, metric fine thread / Filières rondes, entrée gun, filetage métrique à pas fin
Cojinetes redondos, entrada corregida, rosca metrica fina /Runde Schneideisen mit schälanschnitt, metrisches DIN-ISO-Feingewinde

HSS-CO DIN 223 - EN 22568 6g COBALT — MF

12146

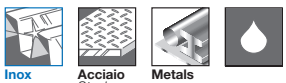




HRC ≃ 63÷64
AISI M35
FORM B

Imbocco corretto
Spiral Point

Applicazioni *Applications*



Ø		DxE	pcs	cod.
M 6	x 0,75	20 x 7	1	1214606X075
8	x 0,75	25 x 9	1	1214608X075
8	x 1	25 x 9	1	1214608X1
10	x 1	30 x 11	1	1214610X1
10	x 1,25	30 x 11	1	1214610X125
12	x 1	38 x 10	1	1214612X1
12	x 1,25	38 x 10	1	1214612X125
12	x 1,5	38 x 10	1	1214612X15
14	x 1,25	38 x 10	1	1214614X125
14	x 1,5	38 x 10	1	1214614X15
16	x 1,5	45 x 14	1	1214616X15
18	x 1,5	45 x 14	1	1214618X15
18	x 2	45 x 14	1	1214618X2
20	x 1,5	45 x 14	1	1214620X15
20	x 2	45 x 14	1	1214620X2
22	x 1,5	55 x 16	1	1214622X15
24	x 1,5	55 x 16	1	1214624X15

HSS DIN 223 - EN 22568 6g Sinistra - *Left hand - Gauche - Izquierda - Links* — MF

12072





LH

Applicazioni *Applications*



Ø		DxE	pcs	cod.
M 3	x 0,35	20 x 5	1	1207203X035
4	x 0,5	20 x 5	1	1207204X05
4,5	x 0,5	20 x 5	1	12072045X05
5	x 0,75	20 x 7	1	1207205X075
5,5	x 0,5	20 x 5	1	12072055X05
6	x 0,5	20 x 5	1	1207206X05
6	x 0,75	20 x 7	1	1207206X075
7	x 0,5	25 x 9	1	1207207X05
7	x 0,75	25 x 9	1	1207207X075
8	x 0,75	25 x 9	1	1207208X075
8	x 1	25 x 9	1	1207208X1
9	x 0,5	25 x 9	1	1207209X05
10	x 1	30 x 11	1	1207210X1
10	x 1,25	30 x 11	1	1207210X125
12	x 1	38 x 10	1	1207212X1
12	x 1,25	38 x 10	1	1207212X125
12	x 1,5	38 x 10	1	1207212X15
13	x 1,5	38 x 10	1	1207213X15
14	x 1	38 x 10	1	1207214X1
14	x 1,25	38 x 10	1	1207214X125
14	x 1,5	38 x 10	1	1207214X15
15	x 1,5	38 x 10	1	1207215X15
16	x 1	45 x 14	1	1207216X1
16	x 1,25	45 x 14	1	1207216X125
16	x 1,5	45 x 14	1	1207216X15
18	x 1	45 x 14	1	1207218X1
18	x 1,25	45 x 14	1	1207218X125
18	x 1,5	45 x 14	1	1207218X15
18	x 2	45 x 14	1	1207218X2
20	x 1,25	45 x 14	1	1207220X125
20	x 1,5	45 x 14	1	1207220X15
20	x 2	45 x 14	1	1207220X2

Ø		DxE	pcs	cod.
22	x 1,25	55 x 16	1	1207222X125
22	x 1,5	55 x 16	1	1207222X15
22	x 2	55 x 16	1	1207222X2
23	x 1,5	55 x 16	1	1207223X15
24	x 1,25	55 x 16	1	1207224X125
24	x 1,5	55 x 16	1	1207224X15
24	x 2	55 x 16	1	1207224X2
25	x 1,5	55 x 16	1	1207225X15
25	x 2	55 x 16	1	1207225X2
26	x 1,5	55 x 16	1	1207226X15
26	x 2	55 x 16	1	1207226X2
27	x 1,5	65 x 18	1	1207227X15
27	x 2	65 x 18	1	1207227X2
28	x 1,5	65 x 18	1	1207228X15
28	x 2	65 x 18	1	1207228X2
30	x 1,5	65 x 18	1	1207230X15
30	x 2	65 x 18	1	1207230X2
30	x 2,5	65 x 18	1	1207230X25
30	x 3	65 x 25	1	1207230X3
32	x 1,5	65 x 18	1	1207232X15
32	x 2	65 x 18	1	1207232X2
32	x 3	65 x 25	1	1207232X3
33	x 1,5	65 x 18	1	1207233X15
33	x 2	65 x 18	1	1207233X2
33	x 3	65 x 18	1	1207233X3
34	x 1,5	65 x 18	1	1207234X15
34	x 2	65 x 18	1	1207234X2
35	x 1,5	65 x 25	1	1207235X15
35	x 2	65 x 18	1	1207235X2
36	x 1,5	65 x 18	1	1207236X15
36	x 2	65 x 18	1	1207236X2
36	x 3	65 x 18	1	1207236X3

Ø M37x1,5÷48x3: a richiesta
on demand

FILIERE TONDE AD IMBOCCO CORRETTO, FILETTATURA GAS CILINDRICA ISO 228

Spiral point round dies, spiral point, Whitworth pipe thread ISO 228 / Filières rondes, entrée gun, pour filetage gaz de tuyauterie ISO 228
Cojinetes redondos, entrada corregida, rosca gas cilindrica ISO 228 / Runde Schneideisen mit schälanschnitt für Rohrgewinde DIN-ISO 228

HSS DIN 5158 - EN 24231

BSP (GAS)

12075



Applicazioni *Applications*

Acciaio *Steel* | Metals | Alu

	Ø	DxE	pcs	cod.
G	1/8 x 28	30 x 11	1	120751/8
	1/4 x 19	38 x 10	1	120751/4
	3/8 x 19	45 x 14	1	120753/8
	1/2 x 14	45 x 14	1	120751/2
	5/8 x 14	55 x 16	1	120755/8
	3/4 x 14	55 x 16	1	120753/4
	7/8 x 14	65 x 18	1	120757/8
	1" x 11	65 x 18	1	120751"
	1.1/8 x 11	75 x 20	1	120751.1/8
	1.1/4 x 11	75 x 20	1	120751.1/4
	1.3/8 x 11	90 x 22	1	120751.3/8
	1.1/2 x 11	90 x 22	1	120751.1/2
	1.5/8 x 11	90 x 22	1	120751.5/8
	1.3/4 x 11	90 x 22	1	120751.3/4
	1.3/4 x 11	105 x 22	1	120751.3/4105
	2" x 11	90 x 22	1	1207592"
	2" x 11	105 x 22	1	1207512"
	2.1/4 x 11	105 x 22	1	120752.1/4
	2.1/2 x 11	120 x 22	1	120752.1/2
	2.3/4 x 11	120 x 22	1	120752.3/4
	3" x 11	130 x 25	1	120753"
	3.1/2 x 11	150 x 25	1	120753.1/2
	4" x 11	160 x 25	1	120754"

HSS-CO DIN 5158 - EN 24231 COBALT

BSP (GAS)

12148



Applicazioni *Applications*

Inox | Acciaio *Steel* | Metals

	Ø	DxE	pcs	cod.
G	1/8 x 28	30 x 11	1	121481/8
	1/4 x 19	38 x 10	1	121481/4
	3/8 x 19	45 x 14	1	121483/8
	1/2 x 14	45 x 14	1	121481/2
	3/4 x 14	55 x 16	1	121483/4
	1" x 11	65 x 18	1	121481"

HSS DIN 5158 - EN 24231 Sinistra - *Left hand - Gauche - Izquierda - Links*

BSP (GAS)

12077



LH

Applicazioni *Applications*

Acciaio *Steel* | Metals | Alu

	Ø	DxE	pcs	cod.
G	1/8 x 28	30 x 11	1	120771/8
	1/4 x 19	38 x 10	1	120771/4
	3/8 x 19	45 x 14	1	120773/8
	1/2 x 14	45 x 14	1	120771/2
	5/8 x 14	55 x 16	1	120775/8
	3/4 x 14	55 x 16	1	120773/4
	7/8 x 14	65 x 18	1	120777/8
	1" x 11	65 x 18	1	120771"
	1.1/8 x 11	75 x 20	1	120771.1/8
	1.1/4 x 11	75 x 20	1	120771.1/4
	1.1/2 x 11	90 x 22	1	120771.1/2
	1.3/4 x 11	105 x 22	1	120771.3/4
	2" x 11	105 x 22	1	120772"

FILIERE TONDE AD IMBOCCO CORRETTO, FILETTATURA WHITWORTH BS-84

Round dies, spiral point, Whitworth BSW thread BS-84 / Filières rondes, entrée gun, filetage Whitworth
Cojinetes redondos, entrada corregida, rosca Whitworth / Runde Schneideisen mit schälanschnitt, Whitworth –Gewinde BS-84

HSS DIN 223 - EN 22568 — BSW

12070



Applicazioni *Applications*



	Ø		DxE	pcs	cod.
BSW	1/16	x 60	16 x 5	1	120701/16
	3/32	x 48	16 x 5	1	120703/32
	1/8	x 40	20 x 5	1	120701/8
	5/32	x 32	20 x 5	1	120705/32
	3/16	x 24	20 x 7	1	120703/16
	7/32	x 24	20 x 7	1	120707/32
	1/4	x 20	25 x 9	1	120701/4
	5/16	x 18	25 x 9	1	120705/16
	3/8	x 16	30 x 11	1	120703/8
	7/16	x 14	30 x 11	1	120707/16
	1/2	x 12	38 x 14	1	120701/2
	9/16	x 12	38 x 14	1	120709/16
	5/8	x 11	45 x 18	1	120705/8
	3/4	x 10	45 x 18	1	120703/4
	7/8	x 9	55 x 22	1	120707/8
	1”	x 9	55 x 22	1	120701"
	1.1/8	x 7	65 x 25	1	120701.1/8
	1.1/4	x 7	65 x 25	1	120701.1/4
	1.3/8	x 6	65 x 25	1	120701.3/8
	1.1/2	x 6	65 x 22	1	1207061.1/2
	1.1/2	x 6	75 x 30	1	1207071.1/2
	1.5/8	x 5	75 x 30	1	120701.5/8
	1.3/4	x 5	90 x 36	1	120701.3/4
	1.7/8	x 4,5	90 x 36	1	120701.7/8
	2”	x 4,5	90 x 36	1	120702"

HSS DIN 223 - EN 22568 Sinistra - *Left hand - Gauche - Izquierda - Links* — BSW

12088





	Ø		DxE	pcs	cod.
BSW	1/8	x 40	20 x 5	1	120881/8
	5/32	x 32	20 x 5	1	120885/32
	3/16	x 24	20 x 7	1	120883/16
	1/4	x 20	20 x 7	1	120881/4
	5/16	x 18	25 x 9	1	120885/16
	3/8	x 16	30 x 11	1	120883/8
	7/16	x 14	30 x 11	1	120887/16
	1/2	x 12	38 x 14	1	120881/2
	9/16	x 12	38 x 14	1	120889/16
	5/8	x 11	45 x 18	1	120885/8
	3/4	x 10	45 x 18	1	120883/4
	7/8	x 9	55 x 22	1	120887/8
	1”	x 8	55 x 22	1	120881"

HSS DIN 223 - EN 22568 — BSF

12087



	Ø		DxE	pcs	cod.
BSF	3/16	x 32	20 x 7	1	120873/16
	1/4	x 26	25 x 9	1	120871/4
	5/16	x 22	25 x 9	1	120875/16
	3/8	x 20	30 x 11	1	120873/8
	7/16	x 18	30 x 11	1	120877/16
	1/2	x 16	38 x 10	1	120871/2
	9/16	x 16	38 x 10	1	120879/16
	5/8	x 14	45 x 14	1	120875/8
	3/4	x 12	45 x 14	1	120873/4
	7/8	x 11	55 x 22	1	120877/8
	1”	x 10	55 x 22	1	120871"

FILIERE TONDE AD IMBOCCO CORRETTO, FIL. AMERICANA UNC PASSO GROSSO ANSI B1.1

Round dies, spiral point, unified coarse thread UNC / Filières rondes, filetage americain à pas gros UNC
Cojinetes redondos, rosca unificada vasta UNC /Runde Schneideisen, amerikanisches grossgewinde UNC

HSS DIN 223 - EN 22568 **UNC**

12080



	Ø	DxE	pcs	cod.
N°	**4** x 40	20 x 5	1	12080N04
	5 x 40	20 x 5	1	12080N05
	6 x 32	20 x 7	1	12080N06
	8 x 32	20 x 7	1	12080N08
	10 x 24	20 x 7	1	12080N10
	12 x 24	20 x 7	1	12080N12
UNC	**1/4** x 20	20 x 7	1	120801/4
	5/16 x 18	25 x 9	1	120805/16
	3/8 x 16	30 x 11	1	120803/8
	7/16 x 14	30 x 11	1	120807/16
	1/2 x 13	38 x 14	1	120801/2
	9/16 x 12	38 x 14	1	120809/16
	5/8 x 11	45 x 18	1	120805/8
	3/4 x 10	45 x 18	1	120803/4
	7/8 x 9	55 x 22	1	120807/8
	1” x 8	55 x 22	1	120801"
	1.1/8 x 7	65 x 25	1	120801.1/8
	1.1/4 x 7	65 x 25	1	120801.1/4
	1.3/8 x 6	65 x 25	1	120801.3/8
	1.1/2 x 6	65 x 25	1	1208061.1/2
	1.1/2 x 6	75 x 30	1	1208071.1/2
	1.5/8 x 5	75 x 30	1	120801.5/8
	1.3/4 x 5	90 x 36	1	120801.3/4
	1.7/8 x 4,5	90 x 36	1	120801.7/8
	2” x 4,5	90 x 36	1	120802"

Applicazioni *Applications*



FILIERE TONDE A IMBOCCO CORRETTO, FILETTATURA AMERICANA UNC **SINISTRA**

Round dies, spiral point, left hand / Filières rondes, entrée gun, gauche
Cojinetes ridondo, entrada corregida, izquierda / Runde Schneideisen, linksgewinde

HSS DIN 223 – EN 22568 **Sinistra - *Left hand - Gauche - Izquierda - Links*** **UNC**

12082





	Ø	DxE	pcs	cod.
N°	**6** x 32	20 x 7	1	12082NR06
	8 x 32	20 x 7	1	12082NR08
	10 x 24	20 x 7	1	12082NR10
UNC	**1/4** x 20	20 x 7	1	120821/4
	5/16 x 18	25 x 9	1	120825/16
	3/8 x 16	30 x 11	1	120823/8
	7/16 x 14	38 x 14	1	120827/16
	1/2 x 13	38 x 14	1	120821/2
	9/16 x 12	38 x 14	1	120829/16
	5/8 x 11	45 x 18	1	120825/8
	3/4 x 10	45 x 18	1	120823/4
	7/8 x 9	55 x 22	1	120827/8
	1” x 8	55 x 22	1	120821”

FILIERE TONDE, FILETTATURA AMERICANA UNF A PASSO FINE ANSI B1.1

Round dies, unified fine thread UNF / Filières rondes, filetage americain à pas fin
Cojinetes redondos, rosca unificada fina UNF / Runde Schneideisen, amerikanisches fein-Gewinde

HSS DIN 223 - EN 22568 **UNF**

12085



Applicazioni *Applications*



	Ø	DxE	pcs	cod.
N°	2 x 64	16 x 5	1	12085N02
	3 x 56	16 x 5	1	12085N03
	4 x 48	20 x 5	1	12085N04
	5 x 44	20 x 5	1	12085N05
	6 x 40	20 x 5	1	12085N06
	8 x 36	20 x 7	1	12085N08
	10 x 32	20 x 7	1	12085N10
	12 x 28	20 x 7	1	12085N12
UNF	1/4 x 28	20 x 7	1	120851/4
	5/16 x 24	25 x 9	1	120855/16
	3/8 x 24	30 x 11	1	120853/8
	7/16 x 20	30 x 11	1	120857/16
	1/2 x 20	38 x 10	1	120851/2
	9/16 x 18	38 x 10	1	120859/16
	5/8 x 18	45 x 14	1	120855/8
	3/4 x 16	45 x 14	1	120853/4
	7/8 x 14	55 x 16	1	120857/8
	1" x 12	55 x 16	1	120851"X12
	*1" x 14	55 x 16	1	120851"X14
	1.1/8 x 12	65 x 18	1	120851.1/8
	1.1/4 x 12	65 x 18	1	120851.1/4
	1.3/8 x 12	65 x 18	1	120851.3/8
	1.1/2 x 12	65 x 18	1	1208561.1/2
	1.1/2 x 12	75 x 20	1	1208571.1/2

* **Filettartura UNS /** *UNS Thread*

HSS DIN 223 - EN 22568 **Sinistra - *Left hand - Gauche - Izquierda - Links*** **UNF**

12086





	Ø	DxE	pcs	cod.
N°	10 x 32	20 x 7	1	12086NR10
UNF	1/4 x 28	20 x 7	1	120861/4
	5/16 x 24	25 x 9	1	120865/16
	3/8 x 24	30 x 11	1	120863/8
	7/16 x 20	30 x 11	1	120867/16
	1/2 x 20	38 x 10	1	120861/2
	9/16 x 18	38 x 10	1	120869/16
	5/8 x 18	45 x 14	1	120865/8
	3/4 x 16	45 x 14	1	120863/4
	7/8 x 14	55 x 16	1	120867/8
	1" x 12	55 x 16	1	120861"

FILIERE TONDE, FILETTATURA AMERICANA UNEF A PASSO EXTRAFINE ANSI B1.1

Round dies, unified extrafine thread UNEF / Filières rondes, filetage americain à pas extrafin
Cojinetes redondos, rosca unificada extrafina UNEF / Runde Schneideisen, amerikanisches fein-Gewinde

HSS DIN 223 - EN 22568 **UNEF**

12079



	Ø	DxE	pcs	cod.
UNEF	1/4 x 32	20 x 7	1	120791/4
	3/8 x 32	30 x 11	1	120793/8
	1/2 x 28	38 x 10	1	120791/2
	9/16 x 24	38 x 10	1	120799/16
	5/8 x 24	45 x 14	1	120795/8
	3/4 x 20	45 x 14	1	120793/4
	7/8 x 20	55 x 16	1	120797/8
	1" x 20	55 x 16	1	120791"
	1.1/8 x 18	65 x 18	1	120791.1/8

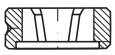
FILIERE TONDE, FILETTATURA CONICA AMERICANA PER TUBI 1:16 NPT

Round dies, taper pipe thread NPT / Filieres rondes, filetage conique pour tubes NPT
Cojinetes redondos, rosca conica americana NPT / Runde Schneideisen, amerikanisches kegeliges Rohrgewinde NPT

HSS **NPT**

12091





Conicità **1:16**
Taper *1:16*

Ø	DxE	pcs	cod.
1/16 x 27	25 x 9	1	120911/16
1/8 x 27	30 x 11	1	120911/8
1/4 x 18	38 x 14	1	120911/4
3/8 x 18	45 x 18	1	120913/8
1/2 x 14	45 x 18	1	120911/2
3/4 x 14	55 x 22	1	120913/4
1” x 11,5	65 x 25	1	120911"
1.1/4 x 11,5	75 x 26	1	120911.1/4
1.1/2 x 11,5	90 x 27	1	120911.1/2
2” x 11,5	105 x 28	1	120912"

Applicazioni *Applications*



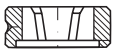
FILIERE TONDE, FILETTATURA CONICA PER TUBI 1:16 BSPT

Round dies, Whitworth taper thread 1:16 BSPT / Filières rondes, filetage gaz de tuyauterie BSPT
Cojinetes redondos, rosca gas conica BSPT / Runde Schneideisen, britisches kegeliges Rohrgewinde BSPT

HSS **BSPT**

12089





Conicità **1:16**
Taper *1:16*

Ø	DxE	pcs	cod.
Rc **1/8** x 28	30 x 11	1	120891/8
1/4 x 19	38 x 14	1	120891/4
3/8 x 19	45 x 18	1	120893/8
1/2 x 14	45 x 18	1	120891/2
3/4 x 14	55 x 22	1	120893/4
1” x 11	65 x 25	1	120891"
1.1/4 x 11	75 x 26	1	120891.1/4
1.1/2 x 11	90 x 27	1	120891.1/2
2” x 11	105 x 28	1	120892"

Applicazioni *Applications*



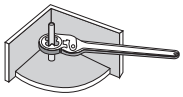
FILIERE ESAGONALI

Exagonal round dies / Filières hexagonales
Cojinetes hexagonales / Sechseckschneideisen

HSS DIN 382 6g **M**

12094





	Ø	DxE	pcs	cod.
M	**3** x 0,5	19 x 5	1	1209403x05
	4 x 0,7	19 x 5	1	1209404x07
	5 x 0,8	19 x 7	1	1209405x08
	6 x 1	19 x 7	1	1209406x1
	7 x 1	22 x 9	1	1209407x1
	8 x 1,25	22 x 9	1	1209408x125
	9 x 1,25	22 x 9	1	1209409x125
	10 x 1,5	27 x 11	1	1209410x15
	11 x 1,5	27 x 11	1	1209411x15
	12 x 1,75	36 x 14	1	1209412x175
	14 x 2	36 x 14	1	1209414x2
	16 x 2	41 x 18	1	1209416x2
	18 x 2,5	41 x 18	1	1209418x25
	20 x 2,5	41 x 18	1	1209420x25
	22 x 2,5	50 x 22	1	1209422x25
	24 x 3	50 x 22	1	1209424x3
	27 x 3	60 x 25	1	1209427x3
	30 x 3,5	60 x 25	1	1209430x35
	33 x 3,5	60 x 25	1	1209433x35
	36 x 4	60 x 25	1	1209436x4
	39 x 4	70 x 30	1	1209439x4
	42 x 4,5	70 x 30	1	1209442x45
	45 x 4,5	85 x 36	1	1209445x45
	48 x 5	85 x 36	1	1209448x5
	52 x 5	85 x 36	1	1209452x5
	56 x 5,5	100 x 36	1	1209456x55
	60 x 5,5	100 x 36	1	1209460x55
	64 x 6	100 x 36	1	1209464x6
	68 x 6	115 x 36	1	1209468x6

Applicazioni *Applications*



- Per generare nuovi filetti e ripassare filettature danneggiate in punti di difficile accesso.
- To generate new threads and overhaul the damaged ones.

FILIERE ESAGONALI

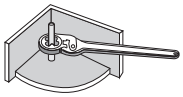
Exagonal round dies / Filières hexagonales
Cojinetes hexagonales / Sechseckschneideisen

HSS DIN 382 6g

MF

12096





	Ø	DxE	pcs	cod.
M	3 x 0,35	19 x 5	1	1209603x035
	4 x 0,35	19 x 5	1	1209604x035
	4 x 0,5	19 x 5	1	1209604x05
	5 x 0,5	19 x 5	1	1209605x05
	5 x 0,75	19 x 7	1	1209605x075
	6 x 0,5	19 x 5	1	1209606x05
	6 x 0,75	19 x 7	1	1209606x075
	7 x 0,75	22 x 9	1	1209607x075
	8 x 0,5	22 x 9	1	1209608x05
	8 x 0,75	22 x 9	1	1209608x075
	8 x 1	22 x 9	1	1209608x1
	9 x 0,75	22 x 9	1	1209609x075
	9 x 1	22 x 9	1	1209609x1
	10 x 0,75	27 x 11	1	1209610x075
	10 x 1	27 x 11	1	1209610x1
	10 x 1,25	27 x 11	1	1209610x125
	11 x 1	27 x 11	1	1209611x1
	11 x 1,25	27 x 11	1	1209611x125
	12 x 0,75	36 x 10	1	1209612x075
	12 x 1	36 x 10	1	1209612x1
	12 x 1,25	36 x 10	1	1209612x125
	12 x 1,5	36 x 10	1	1209612x15
	13 x 1	36 x 10	1	1209613x1
	13 x 1,5	36 x 10	1	1209613x15
	14 x 0,75	36 x 10	1	1209614x075
	14 x 1	36 x 10	1	1209614x1
	14 x 1,25	36 x 10	1	1209614x125
	14 x 1,5	36 x 10	1	1209614x15
	15 x 1	36 x 10	1	1209615x1
	15 x 1,5	36 x 10	1	1209615x15
	16 x 1	41 x 14	1	1209616x1
	16 x 1,25	41 x 14	1	1209616x125
	16 x 1,5	41 x 14	1	1209616x15
	18 x 1	41 x 14	1	1209618x1
	18 x 1,25	41 x 14	1	1209618x125
	18 x 1,5	41 x 14	1	1209618x15
	18 x 2	41 x 14	1	1209618x2
	20 x 1	41 x 14	1	1209620x1
	20 x 1,25	41 x 14	1	1209620x125
	20 x 1,5	41 x 14	1	1209620x15
	20 x 2	41 x 14	1	1209620x2

Applicazioni *Applications*



HSS DIN 382

BSP

12098





it per idraulici e installatori
For plumbers and journeymen
Pour plombiers et installateurs
Para fontaneros e instaladores
Für Rohrleger und installateurs

	Ø	DxE	pcs	cod.
G	1/8 x 28	27 x 11	1	120981/8
	1/4 x 19	36 x 10	1	120981/4
	3/8 x 19	41 x 14	1	120983/8
	1/2 x 14	41 x 14	1	120981/2
	5/8 x 14	50 x 16	1	120985/8
	3/4 x 14	50 x 16	1	120983/4
	7/8 x 14	60 x 18	1	120987/8
	1" x 11	60 x 18	1	120981"
	1.1/8 x 11	70 x 20	1	120981.1/8
	1,1/2 x 11	85 x 22	1	120981.1/2
	2" x 11	100 x 22	1	120982"

- Per generare nuovi filetti e ripassare filettature danneggiate in punti di difficile accesso.
- To generate new threads and overhaul the damaged ones.

*In esaurimento
To be discontinued

cod.		1 pc
* 12100500 BSP 1/8÷1"		G 1/8-1/4-3/8 1/2-3/4-1"

UTENSILE COMBINATO CON ATTACCO ESAGONALE 1/4" PER AVVITATORI E TRAPANI REVERSIBILI

Combined bits for drilling-threading-deburring in one operation with 1/4" hexagon drive / Outil combiné pour percage-taraudage-ebavurage en unique operation / Utensilio combinado para taladrar – roscar y avellanar en una sola operacion / Kombi-bits zum kerlochbohren, gewindeschneiden und entgraten in einen Arbeitsgang

10212 **10230**



HSS-G



HSS-G+TiN



Art. **10213** Self
Disponibile su richiesta / *On demand*

Applicazioni *Applications*



- Per forare, filettare e svasare in acciaio, alluminio, metalli non ferrosi in genere, plastica sino a R≤600 N/mm² e profondità 1xD.
- Drilling, threading and deburring in steel, aluminium, plastics with R≤600 N/mm² and depth 1xD.
- Percage – taraudage, ebavurage en unique operation en acier, aluminium, plastic avec R≤ 600N/mm² et spesseur de travaille1xD.
- Para taladrar, roscar y avellanar acero, aluminio, plastico con R≤600 N/mm² y profundidad de corte 1xD.
- Kernochbohren, gewindeschneiden und entgraten in einem arbeitsgang in Stahl-ne-Metalle-Kunstoffe-bis 600 N/mm² zugfestigkeit bis 1xD Materialstärke.

10212

	Ø	/	L	⬡	pcs	cod.
M	3 x 0,5	2,5	36	1/4	1	1021203x05
	4 x 0,7	3,3	39	1/4	1	1021204x07
	5 x 0,8	4,2	41	1/4	1	1021205x08
	6 x 1	5	44	1/4	1	1021206x1
	8 x 1,25	6,8	50	1/4	1	1021208x125
	10 x 1,5	8,5	59	1/4	1	1021210x15

10230

	Ø	/	L	⬡	pcs	cod.
M	3 x 0,5	2,5	36	1/4	1	1023003x05
	4 x 0,7	3,3	39	1/4	1	1023004x07
	5 x 0,8	4,2	41	1/4	1	1023005x08
	6 x 1	5	44	1/4	1	1023006x1
	8 x 1,25	6,8	50	1/4	1	1023008x125
	10 x 1,5	8,5	59	1/4	1	1023010x15

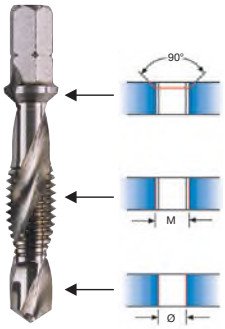


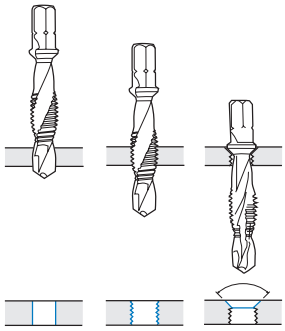
Attacco esagonale 1/4" per avvitatori, trapani a batteria, trapani portatili e stazionari reversibili
1/4 hex shank for battery powered screwdriver, reversible hand powered drills and stationary power drills

Svasatore
Deburrer

Maschio filettatore
Threading tap

Punta per preforo con affilatura auto-centrante
Split point self-centering twist drill





MASCHI CON ATTACCO ESAGONALE 1/4" PER FILETTARE CON AVVITATORI E TRAPANI REVERSIBILI

Threading bits with 1/4" hex drive /Tarauds avec 6 pans de 1/4"
Machos a roscar con mango esagonal 1/4" / Einschnittgewindebohrer-bits

HSS-G

10210



	Ø	/	L	⬡	pcs	cod.
M	3 x 0,5	11	33	1/4	1	1021003x05
	4 x 0,7	12	35	1/4	1	1021004x07
	5 x 0,8	15	36	1/4	1	1021005x08
	6 x 1	18	39	1/4	1	1021006x1
	8 x 1,25	19	40	1/4	1	1021008x125
	10 x 1,5	21	41	1/4	1	1021010x15



PUNTA CON ATTACCO ESAGONALE 1/4" PER AVVITATORI E TRAPANI REVERSIBILI

Drill bits with 1/4 hexagon drive for power screwdrivers and cordless drills / Foret à queue 6 pans (1/4") adaptable sur perceuse-visseuse Broca con mango esagonal 1/4" para taladros y atornilladores portatiles / Spiralbohrer-Bits mit 1/4" sechskant-Aufnahme für akku-Bohrmaschinen und Handbohrermaschinen

HSS-G

10211



Ø	L	/	⬡	pcs	cod.
1	32	7	1/4	1	102110100
1,5	32	10	1/4	1	102110150
2	34	12	1/4	1	102110200
2,5 (M3)	36	14	1/4	1	102110250
3	38	16	1/4	1	102110300
3,3 (M4)	40	18	1/4	1	102110330
3,5	40	18	1/4	1	102110350
4	44	20	1/4	1	102110400
4,2 (M5)	45	20	1/4	1	102110420
4,5	46	24	1/4	1	102110450
5 (M6)	50	26	1/4	1	102110500
5,5	50	26	1/4	1	102110550
6	50	26	1/4	1	102110600
6,5	50	30	1/4	1	102110650
6,8 (M8)	50	30	1/4	1	102110680
7	50	30	1/4	1	102110700
7,5	51	32	1/4	1	102110750
8	51	32	1/4	1	102110800
8,5 (M10)	53	33	1/4	1	102110850
9	53	33	1/4	1	102110900
9,5	54	38	1/4	1	102110950
10	54	38	1/4	1	102111000
10,2 (M12)	54	38	1/4	1	102111020

SVASATORI A 90° CON ATTACCO ESAGONALE 1/4"

90° countersink with 1/4" hexagon shank / Fraise conique a 90° avec 6 pans de 1/4"
Avellanador a 90° con mango esagonal 1/4" / Kegelsenker-bits 90°, mit 1/4" sechskant-Aufnahme

HSS-G 90°

19001



Ø	L	⬡	pcs	cod.
6,3	31	1/4	1	19001063
8,3	31	1/4	1	19001083
10,4	34	1/4	1	19001104
12,4	35	1/4	1	19001124
16,5	40	1/4	1	19001165
20,5	41	1/4	1	19001205

Art. **19002** Self
Disponibile su richiesta / *On demand*

Applicazioni / *Applications*

- Per forare e svasare acciaio R≤600 N/mm² leghe leggere, plastica.
- For cutting and countersink steel R≤600 N/mm², light alloys, plastics.
- Pour percer et évaser acier R≤600 N/mm² alliage léger, plastique.
- Para cortar y limpiar acero R≤600 N/mm², aleaciones ligeras, plastico
- Für Stahl mit R≤600 N/mm², Ne-Metalle, Kunststoffe

	ØxL	cod.
 **Magnetico** ***Magnetic***	33x120	19001000

19003 1/4" HEX — 133

SET DI UTENSILI CON ATTACCO ESAGONALE PER AVVITATORI E TRAPANI REVERSIBILI

1/4 hex bits sets for power screwdrivers and cordless drills / Outils coupants à queue 6 pans pour perceuse-visseuse
Juegos de utensilios de corte con mango esagonal para taladros y atornilladores portatiles / Birs mit 1/4" sechs kant
Aufnahme Satz für akku-Bohrmaschinen

19020213



Cod.	Composizione *Description*
19020213 HSS-G	10212 M 3-4-5-6-8-10 Magnetic 1/4 41245100N 1 pc

Disponibile anche la versione con utensile rivestito **TiN cod. 19020209** 101,507 €
On demand TiN coated tools cod. 19020209 *101,507 €*

19020210



Cod.	Composizione *Description*
19020210 HSS-G	10210 M 3-4-5-6-8-10

19020212

Cod.	Composizione *Description*
19020212 HSS-G	10211 Ø 2,5-3,3-4,2 5-6,8-8,5 10210 M 3-4-5-6-8-10

19020211



Cod.	Composizione *Description*
19020211 HSS-G	10211 Ø 1÷10x0,5 19 pcs

19020214

Cod.	Composizione *Description*
19020214 HSS-G 90°	19001 Ø 6,3-8,3-10,4 12,4-16,5-20,5

SET DI UTENSILI CON ATTACCO ESAGONALE PER AVVITATORI E TRAPANI REVERSIBILI

1/4 hex bits sets for power screwdrivers and cordless drills / Outils coupants à queue 6 pans pour perceuse-visseuse
Juegos de utensilios de corte con mango esagonal para taladros y atornilladores portatiles / Birs mit 1/4" sechs kant Aufnahme Satz für akku-Bohrmaschinen

*19020218

*In esaurimento
To be discontinued



Cod.	Composizione *Description*			
19020218 HSS-G Ø 3÷10 19 pcs	3-4-5 6-8-10	6 Bits: 2xPH1 3xPH2 1xPH3	6 Torx Bits: T10 - T15 T20 - T25 T30 - T40	Non Magnetic Quick change 1/4

Metals Plastics

*19020219



Cod.	Composizione *Description*			
19020219 HSS-G Ø 3÷10 19 pcs	3-4-5 6-8-10	6 Bits: 2xPZ1 3xPZ2 1xPZ3	6 Torx Bits: T10 - T15 T20 - T25 T30 - T40	Non Magnetic Quick change 1/4

Plastics

*19020216



Cod.	Composizione *Description*		
19020216 HSS-G M 3÷10 8 pcs	M 3-4-5 6-8-10	Non Magnetic Quick change 1/4	Non Magnetic Quick change 1/4

ASSORTIMENTI A FILETTARE IN HSS-G IN ASTUCCI DI METALLO E ABS

HSS-G threading sets in metal and plastics cases / Assortiments à fileter HSS-G en coffret métallique et plastique
Juegos de utensilios de roscar HSS-G en caja metalica y plastico / Gewindebohrersätze HSS-G in Metallkassette

HSS-G

M

17020401



Abs

17020402



Metal

17020404



Abs

Cod.	Composizione *Description*	
17020401 HSS-G	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	
17020402 HSS-G	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	1.1/2 HSS-G 2,5-3,3-4,2-5-6,8 8,5-10,25
17020404 HSS-G	DIN 352 - 1 pc M 3-4-5-6-8-10-12	1.1/2 HSS-G 2,5-3,3-4,2-5-6,8 8,5-10,25

COBALT

17020408



Abs

17020407



Metal

Cod.	Composizione *Description*	
17020408 HSS-CO	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	
17020407 HSS-CO	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	1.1/2 HSS-CO 2,5-3,3-4,2-5-6,8 8,5-10,25

HSS-G+TiN

17020414



Abs

17020415



Metal

443

Cod.	Composizione *Description*	
17020414 HSS-G+TiN	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	
17020415 HSS-G+TiN	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	1.1/2 HSS-G+Tin 2,5-3,3-4,2-5-6,8 8,5-10,25

ASSORTIMENTI A FILETTARE IN HSS-G IN ASTUCCI DI PLASTICA RIGIDA

HSS-G threading sets / Assortiments à fileter HSS-G

Juegos de utensilios de roscar HSS-G / Gewindebohrersätze HSS-G

HSS-G Sinistri - *Left hand - Gauche - Izquierda - Links*

17020409



Abs

17020410



Metal

Cod.	Composizione *Description*	
17020409 HSS-G	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	
17020410 HSS-G	DIN 352 - 3 pcs M 3-4-5-6-8-10-12	1.1/2 HSS-G 2,5-3,3-4,2-5-6,8 8,5-10,25

ASSORTIMENTI A FILETTARE IN HSS-G PER L'INDUSTRIA IN CASSETTA METALLICA

HSS-G threading sets in metal case / Assortiments à fileter HSS-G en coffret métallique
Juegos de utensilios a roscar HSS-G en caja metalica / Gewindebohrersätze HSS-G in Metalkassette

17020501 HSS-G



17020513 HSS-G+TiN



443

Cod.	Composizione *Description*	
17020501 M 3÷12 HSS-G *30 pcs*	DIN 352 3 pcs Ø 25 M 3-4-5-6-8-10-12	N° 1.1/2 25x9
17020513 M 3÷12 HSS-G+TiN *30 pcs*		

17020500 HSS-G



17020514 HSS-G+TiN



443

Cod.	Composizione *Description*	
17020500 M 3÷12 HSS-G *43 pcs*	DIN 352 3 pcs DIN 223 M 3-4-5-6-8-10-12	N° 1-2 20x5-20x7-25x9 30x11-38x14 Ø 2,5-3,3-4,2-5 6,8-8,5-10,25 N° 1
17020514 M 3÷12 HSS-G+TiN *43 pcs*		

17020506 HSS-CO



17020507 HSS-G

Sinistri - *Left hand*
Gauche - Izquierda - Links



Cod.	Composizione *Description*	
17020506 M 3÷12 HSS-CO *43 pcs*	DIN 352 3 pcs DIN 223 M 3-4-5-6-8-10-12	N° 1-2 20x5-20x7-25x9 30x11-38x14 Ø 2,5-3,3-4,2-5 6,8-8,5-10,25 N° 1
17020507 SIN. M 3÷12 HSS-G *43 pcs*		

ASSORTIMENTI A FILETTARE IN HSS-G PER L'INDUSTRIA

HSS-G threading sets / Assortiments à fileter HSS-G

Juegos de utensilios a roscar HSS-G / Gewindebohrersätze HSS-G



Sinistri - *Left hand*
Gauche - Izquierda
Links

Cod.	Composizione *Description*	
17020503 M 3÷20 HSS-G	DIN 352 3 pcs DIN 223 M 3-4-5-6-8 10-12-14-16-18-20	N° 1-3 20x5-20x7-25x9 30x11-38x14-45x18 N° 1 - N° 2
17020508 M 3÷20 HSS-CO		
17020509 SIN. M 3÷20 HSS-G		



443

Cod.	Composizione *Description*	
17020518 M 3÷20 HSS-G-TIN	DIN 352 3 pcs DIN 223 M 3-4-5-6-8 10-12-14-16-18-20	N° 1-3 20x5-20x7-25x9 30x11-38x14-45x18 N° 1 - N° 2



Cod.	Composizione *Description*	
17020504 M 3÷24 HSS-G	DIN 352 3 pcs DIN 223 M 3-4-5-6-8-10-12 14-16-18-20-22-24	N° 1-4 20x5-20x7-25x9 30x11-38x14 45x18-55x22
17020544 M 3÷24 HSS-CO		
17020505 M 5÷30 HSS-G	DIN 352 3 pcs DIN 223 M 5-6-8-10-12-14 16-18-20-22-24 27-30	N° 1-3-5 20x7-25x9 30x11-38x14 45x18-55x22-65x25

ASSORTIMENTI A FILETTARE IN HSS-G PER L'INDUSTRIA

HSS-G threading sets / Assortiments à fileter HSS-G
Juegos de utensilios de roscar HSS-G / Gewindebohrersätze HSS-G

M+MF



Legno / *Wood*

Cod.	Composizione *Description*	
17025513 M + MF 4÷14 HSS-G	M 3 pcs MF 2 pcs M 4x0,7-5x0,8-6x1 8x1-8x1,25-10x1,25 10x1,5-12x1,25-12x1,5 12x1,75-14x1,5 14x2	N° 1-3 25x9-38x14 N° 1
17025512 M + MF 3÷16 HSS-G	M 3 pcs MF 2 pcs M 3x0,5-4x0,7-5x0,8-6x1 7x1-8x1-8x1,25-10x1,25 10x1,5-12x1,25-12x1,5 12x1,75-14x1,25-14x1,5 14x2-16x1,5-16x2	N° 1-3 20x5-20x7-25x9- 30x1-38x10-38x14- 45x14-45x18 N° 1
17025511 M + MF 2÷18 HSS-G FIAT HSS-G *special for automotive* 20 passi *Thread*	M 3 pcs MF 2 pcs M 2x0,4-3x0,5-4x0,7 5x0,8-6x1-7x1-8x1 8x1,25-10x1-10x1,25 10x1,5-12x1,25-12x1,5 12x1,75-14x1,25 14x1,5-14x2-16x1,5 16x2-18x1,5	N° 1-3 25x9-38x14 N° 1



17012600

FIAT HSS — 35 passi *Thread* — 319

MF



Metallo / *Metal*

Cod.	Composizione *Description*	
17020524 MF 3÷20 HSS-G	2 pcs MF 3x0,35-4x0,5-5x0,75 6x0,75-8x1-10x1,25 12x1,5-14x1,5-16x1,5 18x1,5-20x1,5	N° 1-3 20x5-20x7 25x9-30x11 38x10-45x14
17020510 MF 6÷20 HSS-G	2 pcs MF 6x0,75-8x0,75-8x1 10x1-12x1-12x1,5 14x1,25-14x1,5-16x1,5 18x1,5-20x1,5	N° 1-3 20x7-25x9 30x11-38x10-45x14
17020511 MF 6÷24 HSS-G	2 pcs MF 6x0,75-8x0,75-8x1 10x1-12x1-12x1,5 14x1,25-14x1,5-16x1,5 18x1,5-20x1,5-22x1,5 24x1,5	N° 1-4 20x7-25x9 30x11-38x10-45x14 55x16

ASSORTIMENTI A FILETTARE IN HSS-G PER L'INDUSTRIA

HSS-G threading sets / Assortiments à fileter HSS-G

Juegos de utensilios a roscar HSS-G / Gewindebohrersätze HSS-G

BSP



Legno / *Wood*

*Metallo / *Metal*

Cod.	Composizione *Description*	
17025615 G 1/8÷1" HSS-G	2 pcs 1/8-1/4-3/8 1/2-3/4-1"	N° 1-3-5 30x11-38x10-45x14 55x16-65x18
***17025614** G 1/8÷1" HSS-G	2 pcs 1/8-1/4-3/8 1/2-5/8-3/4-7/8-1"	N° 1-3-5 30x11-38x10-45x14 55x16-65x18
17025616 G 1/4÷1.1/2 HSS-G	2 pcs 1/4-3/8-1/2 3/4-1"-1.1/4-1.1/2	N° 2-4-7 38x10-45x14-55x16 65x18-75x20-90x22
17025617 G 1/8÷1" HSS-CO	2 pcs 1/8-1/4-3/8 1/2-3/4-1"	N° 1-3-5 30x11-38x10-45x14 55x16-65x18
17025618 SIN. G 1/8÷1" HSS-G	2 pcs 1/8-1/4-3/8 1/2-3/4-1"	N° 1-3-5 30x11-38x10-45x14 55x16-65x18

Sinistri - *Left hand*
Gauche - Izquierda
Links

BSPT



Legno / *Wood*

Cod.	Composizione *Description*	
17025628 Rc 1/8÷1" HSS-G	1 pc 1/8-1/4-3/8 1/2-3/4-1"	N° 1-3-5 30x11-38x14-45x18 55x22-65x25
17025629 Rc 1/4÷1.1/2 HSS-G	1 pc 1/4-3/8-1/2 3/4-1"-1.1/4-1.1/2	N° 2-4-7 38x14-45x18-55x22 65x25-75x30-90x36

NPT



Legno / *Wood*

Cod.	Composizione *Description*	
17025635 NPT 1/8÷1" HSS-G	1 pc 1/8-1/4-3/8 1/2-3/4-1"	N° 1-3-5 30x11-38x14-45x18 55x22-65x25
17020636 NPT 1/8÷2" HSS-G	1 pc 1/8-1/4-3/8-1/2 3/4-1"-1.1/4-1.1/2-2"	N° 2-4-7 30x11-38x14-45x14 45x18-55x22-65x25 75x30-90x36-105x36

ASSORTIMENTI A FILETTARE IN HSS-G PER L'INDUSTRIA

HSS-G threading sets / Assortiments à fileter HSS-G

Juegos de utensilios de roscar HSS-G / Gewindebohrersätze HSS-G

M+MF



Legno / *Wood*

*Metallo / *Metal*

Cod.	Composizione *Description*	
***17025619** BSW 1/8÷1/2 HSS-G	3 pcs 1/8-3/16-1/4-5/16 3/8-7/16-1/2	N° 1-2 20x5-20x7-25x9 30x11-38x14 N° 1
17025620 BSW 1/4÷3/4 HSS-G	3 pcs 1/4-5/16-3/8-7/16-1/2 9/16-5/8-3/4	N° 1-3 20x7-25x9-30x11 38x14-45x18
17025621 BSW 1/4÷1" HSS-G	3 pcs 1/4-5/16-3/8-7/16 1/2-5/8-3/4-7/8-1"	N° 1-4 20x7-25x9-30x11 38x14-45x18-55x22
17025622 BSW 1/4÷1.1/2 HSS-G	3 pcs 1/4-5/16-3/8-7/16-1/2 5/8-3/4-7/8-1"-1.1/8 1.1/4-1.3/8-1.1/2	N° 1-3-6 20x7-25x9-30x11 38x14-45x18 55x22-65x25

BSF



Legno / *Wood*

Cod.	Composizione *Description*	
17025630 BSF 1/4÷3/4 HSS-G	2 pcs 1/4-5/16-3/8 7/16-1/2-5/8-3/4	N° 1-3 20x7-25x9-30x11 38x10-45x14
17025631 BSF 1/4÷1" HSS-G	2 pcs 1/4-5/16-3/8-7/16 1/2-5/8-3/4-7/8-1"	N° 1-4 20x7-25x9-30x11 38x10-45x14-55x22

COMBI BSW+BSF

*Metallo / *Metal

Cod.	Composizione *Description*	
***17020523** BSW+BSF 1/4÷3/4 HSS-G	BSW 3 pcs BSF 2 pcs 1/4-5/16-3/8-7/16 1/2-5/8-3/4	N° 1-3 20x7-25x9-30x11 38x14-45x18

ASSORTIMENTI A FILETTARE IN HSS-G PER L'INDUSTRIA

HSS-G threading sets / Assortiments à fileter HSS-G

Juegos de utensilios de roscar HSS-G / Gewindebohrersätze HSS-G

UNC



Legno / *Wood*

*Metallo / *Metal*

Cod.	Composizione *Description*	
***17020528** UNC 1/4÷1/2 HSS-G	3 pcs 1/4-5/16-3/8-7/16-1/2	N° 1-2 20x7-25x9 30x11-38x14
17020525 UNC 1/4÷3/4 HSS-G	3 pcs 1/4-5/16-3/8-7/16 1/2-5/8-3/4	N° 1-3 20x7-25x9 30x11-38x14-45x18
17020526 UNC 1/4÷1" HSS-G	3 pcs 1/4-5/16-3/8-7/16- 1/2-5/8-3/4-7/8-1"	N° 1-4 20x7-25x9-30x11 38x14-45x18-55x22
17020527 UNC 1/4÷1.1/2 HSS-G	3 pcs 1/4-5/16-3/8-7/16-1/2 5/8-3/4-7/8-1"-1.1/8 1.1/4-1.3/8-1.1/2	N° 1-3-6 20x7-25x9-30x11 38x14-45x18 55x22-65x25

UNF



Cod.	Composizione *Description*	
17020530 UNF 1/4÷3/4 HSS-G	2 pcs 1/4-5/16-3/8 7/16-1/2-5/8-3/4	N° 1-3 20x7-25x9-30x11 38x10-45x14
17020531 UNF 1/4÷1" HSS-G	2 pcs 1/4-5/16-3/8-7/16 1/2-5/8-3/4-7/8-1"	N° 1-4 20x7-25x9-30x11 38x10-45x14-55x16
17020532 UNF 1/4÷1.1/2 HSS-G	2 pcs 1/4-5/16-3/8-7/16-1/2 5/8-3/4-7/8-1"-1.1/8 1.1/4-1.3/8-1.1/2	N° 1-3-6 20x7-25x9-30x11 38x14-45x14 55x16-65x18

COMBI UNC+UNF

Cod.	Composizione *Description*	
17020533 UNC+UNF 1/4÷3/4 HSS-G	UNC 3 pcs UNF 2 pcs 1/4-5/16-3/8 7/16-1/2-5/8-3/4	N° 1-3 20x7-25x9-30x11 38x14-45x18

KIT PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE

Thread repair kit - Trousse pour rétablir taraudages endommagées
Juego para reparar rosca dañada - Gewinde-reparatur-Sätze

10600




01070

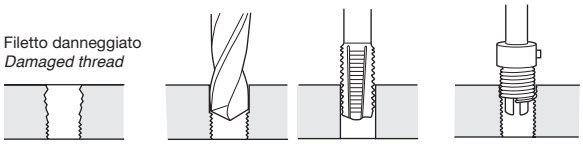

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Metric **M**

	Ø				1,5 d pcs	cod.
M	**2** x 0,4	2,1 mm	N° 2	N° 2	20	10600098
	2,5 x 0,45	2,6 mm	3	3	20	10600099
	3 x 0,5	3,2 mm	4	4	20	10600100
	3,5 x 0,6	3,7 mm	5	5	20	10600101
	4 x 0,7	4,2 mm	6	6	20	10600102
	5 x 0,8	5,2 mm	8	8	20	10600103
	6 x 1	6,3 mm	9	9	20	10600104
	7 x 1	7,3 mm	10	11	20	10600105
	8 x 1,25	8,3 mm	11	11	20	10600106
	8 x 1	8,3 mm	11	11	20	10600107
	9 x 1,25	9,3 mm	12	12	15	10600108
	10 x 1,5	10,4 mm	13	13	15	10600109
	10 x 1,25	10,3 mm	13	13	15	10600110
	10 x 1	10,3 mm	13	13	15	10600111
	11 x 1,5	11,4 mm	14	14	10	10600112
	12 x 1,75	12,4 mm	15	15	10	10600113
	12 x 1,5	12,4 mm	15	15	10	10600114
	12 x 1,25	12,3 mm	15	15	10	10600115
	12 x 1	12,3 mm	15	15	10	10600116
	14 x 2		16		10	10600117
	14 x 1,5		16		10	10600118
	14 x 1,25		17		10	10600119
	14 x 1		17		10	10600120
	16 x 2		18		10	10600121
	16 x 1,5		18		10	10600122
	18 x 2,5		20		5	10600123
	18 x 2		20		5	10600124
	18 x 1,5		20		5	10600125
	20 x 2,5		21		5	10600126
	20 x 2		21		5	10600127
	20 x 1,5		21		5	10600128
	22 x 2,5		22		5	10600129
	22 x 2		22		5	10600130
	22 x 1,5		22		5	10600131
	24 x 3		23		5	10600132
	24 x 2		23		5	10600133
	24 x 1,5		23		5	10600134



		pcs	1,5 d pcs	cod.
M	**26** x 1,5	1	10	10600135
	27 x 3	1	10	10600136
	27 x 2	1	10	10600137
	27 x 1,5	1	10	10600138
	28 x 1,5	1	10	10600139
	30 x 3,5	1	10	10600140
	30 x 2	1	10	10600141
	30 x 1,5	1	10	10600142
	33 x 3,5	1	10	10600143
	33 x 2	1	10	10600144
	36 x 4	1	10	10600145
	36 x 3	1	10	10600146
	36 x 2	1	10	10600147
	36 x 1,5	1	10	10600148



KIT PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE, SPECIALE PER CANDELE

Thread repair kit, special for spark plugs - Trousse pour rétablir les taraudages endommagées, spécial pour bougies
Juego para reparar roscas dañadas, especial para las roscas de las bujías - Gewindereparatur-Sätz für Kerzen

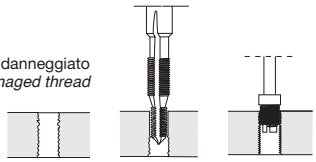
10631



Metric

Cod.	Composizione *Description*				
	 STI		 8,40 pcs	 12,40 pcs	 16,40 pcs
10631100	M 14 x 1,25	N° 17	5	5	5

Filetto danneggiato
Damaged thread



Ricambi - *Spare parts*

Filetto *Thread*	 L	pcs	cod.
M 14 x 1,25	8,4	50	1060614x12508
14 x 1,25	12,4	50	1060614x12512
14 x 1,25	16,4	50	1060614x12516



Cod.	Composizione *Description*		
	 STI		 1,5 d pcs
10631115	M 12 x 1,25	N° 15	10
10631114	10 x 1,5	N° 13	10
10631113	10 x 1,25	N° 13	10
10631112	10 x 1	N° 13	10
10631111	8 x 1,25	N° 11	10
10631110	6 x 1	N° 9	10


10606
292

KIT PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE

Thread repair kit - Trousse pour rétablir taraudages endommagées
Juego para reparar rosca dañada - Gewinde-reparatur-Sätze

10600



BSW

Ø			1,5 d pcs	cod.
1/8 x 40	3,4 mm	N° 4	N° 4	20	10600168
3/16 x 24	5,0 mm	8	8	20	10600169
1/4 x 20	6,7 mm	9	9	20	10600170
5/16 x 18	8,3 mm	10	11	20	10600171
3/8 x 16	9,9 mm	12	12	15	10600172
7/16 x 14	11,5 mm	14	14	10	10600173
1/2 x 12	13,0 mm	15	15	10	10600174
9/16 x 12		16		10	10600175
5/8 x 11		18		10	10600176
3/4 x 10		20		5	10600177
7/8 x 9		22		5	10600178
1” x 8		23		4	10600179

BSF

Ø			1,5 d pcs	cod.
3/16 x 32	5,0 mm	N° 7	N° 6	20	10600185
1/4 x 26	6,6 mm	9	9	20	10600180
5/16 x 22	8,3 mm	11	11	20	10600181
3/8 x 20	9,9 mm	13	13	15	10600182
7/16 x 18	11,5 mm	14	14	10	10600183
1/2 x 16	13,0 mm	15	15	10	10600184
9/16 x 16		16		10	10600186
5/8 x 14		18		10	10600187
3/4 x 12		20		5	10600188
7/8 x 11		22		5	10600189
1” x 10		23		4	10600190

BSP

Ø	pcs	1,5 d pcs	cod.
G **1/8** x 28	1	10	10600191
1/4 x 19	1	10	10600192
3/8 x 19	1	10	10600193
1/2 x 14	1	10	10600194
5/8 x 14	1	10	10600195
3/4 x 14	1	10	10600196
7/8 x 14	1	10	10600197
1” x 11	1	10	10600198


01070

82

10605



Assortimenti - *Sets* **BSW-BSF**

BSW 1/4-1/2

1/4 x 20	6,7 mm	N° 9	9	25	**10605105**
5/16 x 18	8,3 mm	10	11	25	
3/8 x 16	9,9 mm	12	12	25	
7/16 x 14	11,5 mm	14	14	10	
1/2 x 12	13,0 mm	15	15	10	

BSF 1/4-1/2

1/4 x 26	6,6 mm	N° 9	9	25	**10605106**
5/16 x 22	8,3 mm	11	11	25	
3/8 x 20	9,9 mm	12	12	25	
7/16 x 18	11,5 mm	14	14	10	
1/2 x 16	13,0 mm	15	15	10	

KIT PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE

Thread repair kit - Trousse pour rétablir taraudages endommagées
Juego para reparar rosca dañada - Gewinde-reparatur-Sätze

10600



UNC

	Ø				pcs	cod.
No.	**6** x 32	3,8 mm	N° 5	N° 5	20	106001481
	8 x 32	4,4 mm	6	6	20	10600149
	10 x 24	5,2 mm	7	6	20	106001490
	12 x 24	5,8 mm	8	8	20	106001491
UNC	**1/4** x 20	6,7 mm	9	9	20	10600150
	5/16 x 18	8,3 mm	10	10	20	10600151
	3/8 x 16	9,9 mm	12	12	15	10600152
	7/16 x 14	11,6 mm	14	14	10	10600153
	1/2 x 13	13,0 mm	15	15	10	10600154
	9/16 x 12		16		10	10600155
	5/8 x 11		18		10	10600156
	3/4 x 10		20		5	10600157
	7/8 x 9		22		5	10600158
	1” x 8		23		4	10600159

		pcs	pcs	cod.
UNC	**1.1/8** x 7	1	10	106001590
	1.1/4 x 7	1	10	106001591
	1.1/2 x 6	1	10	106001592

UNF

	Ø				pcs	cod.
No.	**6** x 40	3,8 mm	N° 5	N° 5	20	106001597
	8 x 36	4,4 mm	6	6	20	106001598
	10 x 32	5,1 mm	8	8	20	106001599
UNF	**1/4** x 28	6,7 mm	9	9	20	10600160
	5/16 x 24	8,3 mm	11	11	20	10600161
	3/8 x 24	9,8 mm	13	13	15	10600162
	7/16 x 20	11,5 mm	14	14	10	10600163
	1/2 x 20	13,0 mm	15	15	10	10600164
	9/16 x 18		16		10	10600165
	5/8 x 18		18		10	10600166
	3/4 x 16		21		5	10600167
	7/8 x 14		22		5	106001670
	1” x 12		23		4	106001671

		pcs	pcs	cod.
UNF	**1.1/8** x 12	1	10	106001672
	1.1/4 x 12	1	10	106001673
	1.1/2 x 12	1	10	106001674



82

10605



Assortimenti - *Sets* **UNC-UNF**

UNC 1/4-1/2					
1/4 x 20	6,7 mm	N° 9	9	25	**10605103**
5/16 x 18	8,3 mm	10	11	25	
3/8 x 16	9,9 mm	12	12	25	
7/16 x 14	11,5 mm	14	14	10	
1/2 x 13	13,0 mm	15	15	10	
UNF 1/4-1/2					
1/4 x 28	6,7 mm	N° 9	9	25	**10605104**
5/16 x 24	8,3 mm	11	11	25	
3/8 x 24	9,8 mm	13	13	25	
7/16 x 20	11,5 mm	14	14	10	
1/2 x 20	13,0 mm	15	15	10	

ASSORTIMENTO PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE

Thread repair workshops kit - Trousse pour rétablir taraudages endommagée
Juego para reparar rosca dañada - Gewinde-reparatur-Sortimente

Metric

10605



01070 — 82



Ø				1,5 d pcs	cod.
M5-M12					
5 x 0,8	5,2 mm	N° 8	N° 8	25	**10605100**
6 x 1	6,3 mm	9	9	25	
8 x 1,25	8,3 mm	11	11	25	
10 x 1,5	10,4 mm	13	13	25	
12 x 1,75	12,4 mm	15	15	10	
M6-M14x1,25					
6 x 1	6,3 mm	9	9	25	**10605101**
8 x 1,25	8,3 mm	11	11	25	
10 x 1,5	10,4 mm	13	13	25	
12 x 1,75	12,4 mm	15	15	10	
14 x 1,25		17		10	
M6-M14x1,25					
6 x 1	6,3 mm	9	9	25	**10605102**
8 x 1,25	8,3 mm	11	11	25	
10 x 1,5	10,4 mm	13	13	25	
12 x 1,75	12,4 mm	15	15	10	
***14** x 1,25		17		10	



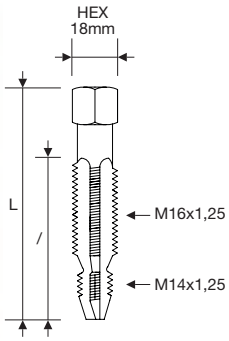
Ø				1,5 d pcs	cod.
M6-M10					
6 x 1	6,3 mm	9	9	25	**10605099**
8 x 1,25	8,3 mm	11	11	25	
10 x 1,5	10,4 mm	13	13	25	

KIT PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE, SPECIALE PER CANDELE E CANDELETTE

Thread repair kit, special for spark plugs and glow plugs - Trousse pour rétablir les taraudages endommagées, spécial pour bougies
Juego para reparar roscas dañadas, especial para las roscas de las bujías - Gewindereparatur-Sätz für Kerzen

10631130

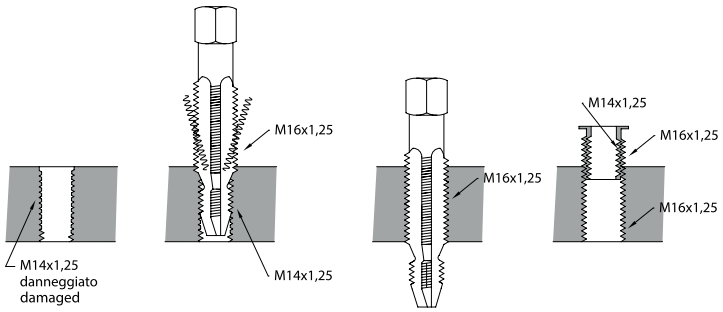




Inserto solido
Solid thread insert

Speciale per candele M14X1,25 - *Special for spark plugs M14x1,25*

Ø	9,5 mm pcs	11,2 mm pcs	12,7 mm pcs	17,5 mm pcs	cod.
M 16x1,25	4	4	4	4	**10631130**



Ricambi - *Spare parts*

Maschio combinato - *Combined tap*

Ø	L	/	pcs	cod.
M 16x1,25	70	41	1	1062616x125

Inserto solido - *Solid insert*

Ø	mm	pcs	cod.
M 14x1,25	9,5	50	1062714x12509
M 14x1,25	11,2	50	1062714x12511
M 14x1,25	12,7	50	1062714x12512
M 14x1,25	17,5	50	1062714x12517

10631205



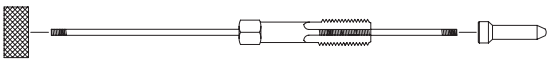
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Inserto solido
Solid thread insert

Speciale per candelette 8-10-12 mm - *Special for glow plugs 8-10-12 mm* **Metric**

	12 mm pcs	cod.
M 8x1 - M 10x1 - M 10x1,25 M 12x1 - M 12x1,25 - M 14x1,25	M 8x1 - M 10x1 M 10x1,25 - M 12x1	**10631205**

Il set contiene un'asta di montaggio, con relativa impugnatura, 3 tappi e 2 utensili inseritori.
This set contains 1 insert fitting rod, its grip handle, 3 plug end blanks and 2 insert fitting tools.



INSERTI FILETTATI IN ACCIAIO INOX PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE

Wire-thread insert in stainless steel / Ressorts filetées en acier inoxidable pour le retablissement des filets endommages
Inserto roscado para sustituir rosca danãda / Gewinde Einsätze aus rostfreiem Stahl



K-COIL
DIN 8140 - ISO 2/6H
Acciaio inox austenitico 18/8 (A2 - AISI304)- *Austenitic stainless steel*

M

10606

	Filetto *Thread*	pcs	1xd cod.	1,5xd cod.	2xd cod.	2,5xd cod.	3xd cod.
M	**2** x 0,4	100	10606102x04	1060602x04	10606202x04	106062502X04	10606302x04
	2,2 x 0,45	100	106061022x045	10606022x045	106062022x045	1060625022X04	106063022x045
	2,5 x 0,45	100	106061025x045	10606025x045	106062025x045	1060625025X04	106063025x045
	3 x 0,5	100	10606103x05	1060603x05	10606203x05	106062503X05	10606303x05
	3,5 x 0,6	100	106061035x06	10606035x06	106062035x06	1060625035X06	106063035x06
	4 x 0,7	100	10606104x07	1060604x07	10606204x07	106062504X07	10606304x07
	5 x 0,8	100	10606105x08	1060605x08	10606205x08	106062505X08	10606305x08
	6 x 1	100	10606106x1	1060606x1	10606206x1	106062506X1	10606306x1
	7 x 1	100	10606107x1	1060607x1	10606207x1	106062507X1	10606307x1
	8 x 1,25	100	10606108x125	1060608x125	10606208x125	106062508X125	10606308x125
	8 x 1	100	10606108x1	1060608x1	10606208x1	106062508X1	10606308x1
	9 x 1,25	100	10606109x125	1060609x125	10606209x125	106062509X125	10606309x125
	10 x 1,5	100	10606110x15	1060610x15	10606210x15	106062510X15	10606310x15
	10 x 1,25	100	10606110x125	1060610x125	10606210x125	106062510X125	10606310x125
	10 x 1	100	10606110x1	1060610x1	10606210x1	106062510X1	10606310x1
	11 x 1,5	100	10606111x15	1060611x15	10606211x15	-	-
	12 x 1,75	100	10606112x175	1060612x175	10606212x175	106062512X175	10606312x175
	12 x 1,5	100	10606112x15	1060612x15	10606212x15	106062512X15	10606312x15
	12 x 1,25	100	10606112x125	1060612x125	10606212x125	106062512X125	10606312x125
	12 x 1	100	10606112x1	1060612x1	10606212x1	106062512X1	10606312x1
	14 x 2	50	10606114x2	1060614x2	10606214x2	106062514X2	10606314x2
	14 x 1,5	50	10606114x15	1060614x15	10606214x15	106062514X15	10606314x15
	14 x 1,25	50	10606114x125	1060614x125	10606214x125	106062514X125	10606314x125
	14 x 1	50	10606114x1	1060614x1	10606214x1	106062514X1	10606314x1
	16 x 2	50	10606116x2	1060616x2	10606216x2	106062516X2	10606316x2
	16 x 1,5	50	10606116x15	1060616x15	10606216x15	106062516X15	10606316x15
	18 x 2,5	25	10606118x25	1060618x25	10606218x25	106062518X25	10606318x25
	18 x 2	25	10606118x2	1060618x2	10606218x2	106062518X2	10606318x2
	18 x 1,5	25	10606118x15	1060618x15	10606218x15	106062518X15	10606318x15
	20 x 2,5	25	10606120x25	1060620x25	10606220x25	106062520X25	10606320x25
	20 x 2	25	10606120x2	1060620x2	10606220x2	106062520X2	10606320x2
	20 x 1,5	25	10606120x15	1060620x15	10606220x15	106062520X15	10606320x15
	22 x 2,5	10	10606122x25	1060622x25	10606222x25	106062522X25	10606322x25
	22 x 2	10	10606122x2	1060622x2	10606222x2	106062522X2	10606322x2
	22 x 1,5	10	10606122x15	1060622x15	10606222x15	106062522X15	10606322x15
	24 x 3	10	10606124x3	1060624x3	10606224x3	106062524X3	10606324x3
	24 x 2	10	10606124x2	1060624x2	10606224x2	106062524X2	10606324x2
	24 x 1,5	10	10606124x15	1060624x15	10606224x15	106062524X15	10606324x15
	26 x 1,5	5	-	1060626x15	-		
	27 x 3	5	-	1060627x3	-		
	27 x 2	5	-	1060627x2	-		
	27 x 1,5	5	-	1060627x15	-		
	28 x 1,5	5	-	1060628x15	-		
	30 x 3,5	5	-	1060630x35	-		
	30 x 2	5	-	1060630x2	-		
	30 x 1,5	5	-	1060630x15	-		
	33 x 3,5	5	-	1060633x35	-		
	33 x 2	5	-	1060633x2	-		
	36 x 4	5	-	1060636x4	-		
	36 x 3	5	-	1060636x3	-		
	36 x 2	5	-	1060636x2	-		
	36 x 1,5	5	-	1060636x15	-		

Nota: la misura è riferita all'inserto posizionato nella sua sede
Note: *the coil length refers to the tool mounted inside its site*



1xd 1,5xd

INSERTI FILETTATI AUTOBLOCCANTI IN ACCIAIO INOX PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE

Stainless steel wire thread inserts, screw self-locking to renew damaged threads / Ressorts filetées en acier inoxidable autobloquants pour le retablir filets endommages / Inserto roscado, autoblocante in acero inoxidable para sustituir rosca danãda / Selbstsperrend Gewinde Einsätze aus rostfreiem Stahl

DIN 8140 - ISO 2/6H

Acciaio inox austenitico 18/8 (A2 - AISI304)- *Austenitic stainless steel*

M

10625



	Filetto *Thread*	pcs	1xd cod.	1,5xd cod.	2xd cod.
M	**3** x 0,5	100	10625103x05	1062503x05	10625203x05
	4 x 0,7	100	10625104x07	1062504x07	10625204x07
	5 x 0,8	100	10625105x08	1062505x08	10625205x08
	6 x 1	100	10625106x1	1062506x1	10625206x1
	8 x 1,25	100	10625108x125	1062508x125	10625208x125
	10 x 1,5	100	10625110x15	1062510x15	10625210x15
	12 x 1,75	100	10625112x175	1062512x175	10625212x175
	14 x 2	50	10625114x2	1062514x2	10625214x2
	16 x 2	50	10625116x2	1062516x2	10625216x2

Consigli d'uso / *Use tips*

Si consiglia l'utilizzo di inserti autobloccanti nel caso di sollecitazioni cicliche del filetto o della necessità di una particolare resistenza agli impatti. Si consiglia inoltre l'uso con viti nichelate o ben lubrificate. L'inserto autobloccante è dotato di alcune spire poligonali inserite tra le spire circolari per tutta la sua lunghezza: tali spire poligonali esercitano una pressione radiale maggiore sulla vite inserita nell'inserto funzionando da bloccaggio. Rimuovendo la vite, le spire poligonali tornano nella loro forma originale garantendo un ottimo livello di pressione radiale per una serie di avvitature/ svitature successive.

Screw locking inserts are of particular value in applications subject to the effects of cyclic vibration or impact. The prevailing locking torque they assure is achieved by the action of one or more polygonal grip coils positioned within the insert's length, which exert radial pressure on the male thread. As the male thread passes through these grip coils, the locking flats are displaced thus exerting radial pressure or prevailing torque on the male thread. When removing the male thread, the locking coils relax to their original form permitting repeated assembly while retaining a measurable level of prevailing torque. Please use only close fit plated or lubricated bolts or screws with the screw locking inserts.

Les filets rapportés à frein de vis sont extrêmement utiles pour les applications sujettes aux effets provoqués par les vibrations cycliques ou les chocs. Ils offrent une sécurité supplémentaire avec le couple de freinage permanent. Ceci est accompli par la pression radiale exercée sur le filetage extérieur par une ou plusieurs spires à déformation polygonale positionnées sur la longueur du filet rapporté. Tandis que le filetage extérieur passe à travers ces spires déformées, les vis à tête plate sont déplacées, exerçant ainsi une pression radiale ou couple permanent sur le filetage extérieur. Lorsque le filetage extérieur est retiré, les spires de freinage débandent pour atteindre leur forme originale, permettant des assemblages répétés tout en conservant un niveau mesurable de couple permanent. Il est recommandé que seuls des boulons ou vis lubrifiés ou à tête plate à ajustement serré soient utilisés avec les filets rapportés à frein de vis.

El inserto autoblocante está especialmente indicado en aplicationes sujetas a vibración cíclica o impactos. Los insertos autoblocantes ofrecen una seguridad adicional por su auto freno interno que lo hace más efectivo. Esto se consigue gracias a la acción de uno a varios hilos poligonales de la rosca del inserto posicionados a lo largo mismo, que ejercen presión radial o freno efectivo en la rosca del tornillo. En la medida en que la rosca pasa a través de estos hilos de seguridad, los dispositivos se expanden aplicando gradualmente presión radial o freno efectivo en la rosca del tornillo. Al retirar el tornillo roscado, los hilos de seguridad ralajan su expansión a su forma original permitiendo repetir el roscado del tornillo y manteniendo su nivel de presión radial de seguridad. Se recomienda que solamente se utilicen tornillos niquelados o bien lubricados, con los insertos de seguridad.

INSERTI FILETTATI IN ACCIAIO INOX PER IL RIPRISTINO DELLE FILETTATURE DANNEGGIATE

Wire-thread insert in stainless steel / Ressorts filetées en acier inoxidable pour le retablissement des filets endommages
Inserto roscado para sustituir rosca danãda / Gewinde Einsätze aus rostfreiem Stahl



K-COIL
Acciaio inox austenitico 18/8
Austenitic stainless steel 18/8

DIN 8140 - ISO 2/6H

10607 — UNC

	Ø	pcs	cod.
No.	8 x 32	100	10607N08
	10 x 24	100	10607N10
	12 x 24	100	10607N12
UNC	1/4 x 20	100	106071/4
	5/16 x 18	100	106075/16
	3/8 x 16	100	106073/8
	7/16 x 14	100	106077/16
	1/2 x 13	100	106071/2
	9/16 x 12	50	106079/16
	5/8 x 11	50	106075/8
	3/4 x 10	25	106073/4
	7/8 x 9	10	106077/8
	1" x 8	10	106071"
	1.1/8 x 7	5	106071.1/8
	1.1/4 x 7	5	106071.1/4
	1.1/2 x 6	5	106071.1/2

10608 — UNF

	Ø	pcs	cod.
No.	8 x 36	100	10608N08
	10 x 32	100	10608N10
UNF	1/4 x 28	100	106081/4
	5/16 x 24	100	106085/16
	3/8 x 24	100	106083/8
	7/16 x 20	100	106087/16
	1/2 x 20	100	106081/2
	9/16 x 18	50	106089/16
	5/8 x 18	50	106085/8
	3/4 x 16	25	106083/4
	7/8 x 14	10	106087/8
	1" x 12	10	106081"
	1.1/8 x 12	5	106081.1/8
	1.1/4 x 12	5	106081.1/4
	1.1/2 x 12	5	106081.1/2

10609 — BSW

Ø	pcs	cod.
1/8 x 40	100	106091/8
3/16 x 24	100	106093/16
1/4 x 20	100	106091/4
5/16 x 18	100	106095/16
3/8 x 16	100	106093/8
7/16 x 14	100	106097/16
1/2 x 12	100	106091/2
9/16 x 12	50	106099/16
5/8 x 11	50	106095/8
3/4 x 10	25	106093/4
7/8 x 9	10	106097/8
1" x 8	10	106091"

10610 — BSF

Ø	pcs	cod.
3/16 x 32	100	106103/16
1/4 x 26	100	106101/4
5/16 x 22	100	106105/16
3/8 x 20	100	106103/8
7/16 x 18	100	106107/16
1/2 x 16	100	106101/2
9/16 x 16	50	106109/16
5/8 x 14	50	106105/8
3/4 x 12	25	106103/4
7/8 x 11	10	106107/8
1" x 10	10	106101"

10604 — BSP

Ø	pcs	cod.
G 1/8 x 28	50	106041/8
1/4 x 19	50	106041/4
3/8 x 19	50	106043/8
1/2 x 14	50	106041/2
5/8 x 14	5	106045/8
3/4 x 14	5	106043/4
7/8 x 14	5	106047/8
1" x 11	5	106041"

MASCHI STI PER L'INSERIMENTO DI INSERTI FILETTATI K-COIL ISO 2

STI taps for wire thread inserts ISO 2 / Tarauds STI pour l'insertion des ressorts filetées ISO 2
Machos STI para la inserciòn de filetes ISO 2 / Gewindebohrer STI für gewinde Einsätze ISO 2

10612
HSS-G **M**



FORM D ISO 1/4H

Ø	cod.
M 2 x 0,4	1061202X04
2,5 x 0,45	10612025X045
3 x 0,5	1061203X05
3,5 x 0,6	10612035X06
4 x 0,7	1061204X07
5 x 0,8	1061205X08
6 x 1	1061206X1
7 x 1	1061207X1
8 x 1,25	1061208X125
8 x 1	1061208X1
9 x 1,25	1061209X125
10 x 1,5	1061210X15
10 x 1,25	1061210X125
10 x 1	1061210X1
11 x 1,5	1061211X15
12 x 1,75	1061212X175
12 x 1,5	1061212X15
12 x 1,25	1061212X125
12 x 1	1061212X1
14 x 2	1061214X2
14 x 1,5	1061214X15
14 x 1,25	1061214X125
14 x 1	1061214X1
16 x 2	1061216X2
16 x 1,5	1061216X15
18 x 2,5	1061218X25
18 x 2	1061218X2
18 x 1,5	1061218X15
20 x 2,5	1061220X25
20 x 2	1061220X2
20 x 1,5	1061220X15
22 x 2,5	1061222X25
22 x 2	1061222X2
22 x 1,5	1061222X15
24 x 3	1061224X3
24 x 2	1061224X2
24 x 1,5	1061224X15

10612
HSS-G **M**

2 pcs set



ISO 1/4H

Ø	cod.
M 26 x 1,5	1061226X15
27 x 3	1061227X3
27 x 2	1061227X2
27 x 1,5	1061227X15
28 x 1,5	1061228X15
30 x 3,5	1061230X35
30 x 2	1061230X2
30 x 1,5	1061230X15
33 x 3,5	1061233X35
33 x 2	1061233X2
36 x 4	1061236X4
36 x 3	1061236X3
36 x 2	1061236X2
36 x 1,5	1061236X15

MASCHIO COMBI PER L'INSERIMENTO DI INSERTI FILETTATI ISO 2 - SPECIALE PER CANDELE

Spark plug taps with pilot nose for wire thread insert ISO 2 / Tarauds indique pour bugies ISO 2
Machos indicado para bujias ISO 2 / Kombi-gewindebohrer für gewinde Einsätze ISO 2

10620
HSS-G **M**



ISO 1/4H

Ø	cod.
M 6 x 1	1062006X1
8 x 1,25	1062008X125
10 x 1,5	1062010X15
10 x 1,25	1062010X125
10 x 1	1062010X1
12 x 1,25	1062012X125
14 x 1,25	1062014X125
18 x 1,5	1062018X15

MASCHI STI PER L'INSERIMENTO DI INSERTI FILETTATI K-COIL ISO 2

STI taps for wire thread inserts ISO 2 / Tarauds STI pour l'insertion des ressorts filetées ISO 2
Machos STI para la inserciòn de filetes ISO 2 / Gewindebohrer STI für gewinde Einsätze ISO 2

10613 HSS-G — UNC



FORM D

	Ø	cod.
No.	8 x 32	10613NR08
	10 x 24	10613NR10
	12 x 24	10613NR12
UNC	1/4 x 20	106131/4
	5/16 x 18	106135/16
	3/8 x 16	106133/8
	7/16 x 14	106137/16
	1/2 x 13	106131/2
	9/16 x 12	106139/16
	5/8 x 11	106135/8
	3/4 x 10	106133/4
	7/8 x 9	106137/8
	1" x 8	106131"

10614 HSS-G — UNF



FORM D

	Ø	cod.
No.	8 x 36	10614NR08
	10 x 32	10614NR10
UNF	1/4 x 28	106141/4
	5/16 x 24	106145/16
	3/8 x 24	106143/8
	7/16 x 20	106147/16
	1/2 x 20	106141/2
	9/16 x 18	106149/16
	5/8 x 18	106145/8
	3/4 x 16	106143/4
	7/8 x 14	106147/8
	1" x 12	106141"12
	1" x 14	106141"14

10615 HSS-G — BSW



FORM D

	Ø	cod.
BSW	1/8 x 40	106151/8
	3/16 x 24	106153/16
	1/4 x 20	106151/4
	5/16 x 18	106155/16
	3/8 x 16	106153/8
	7/16 x 14	106157/16
	1/2 x 12	106151/2
	9/16 x 12	106159/16
	5/8 x 11	106155/8
	3/4 x 10	106153/4
	7/8 x 9	106157/8
	1" x 8	106151"

10616 HSS-G — BSF



FORM D

	Ø	cod.
BSF	3/16 x 32	106163/16
	1/4 x 26	106161/4
	5/16 x 22	106165/16
	3/8 x 20	106163/8
	7/16 x 18	106167/16
	1/2 x 16	106161/2
	9/16 x 16	106169/16
	5/8 x 14	106165/8
	3/4 x 12	106163/4
	7/8 x 11	106167/8
	1" x 10	106161"

10617 HSS-G — BSP

2 pcs set



	Ø	cod.
BSP	1/8 x 28	106171/8
	1/4 x 19	106171/4
	3/8 x 19	106173/8
	1/2 x 14	106171/2
	5/8 x 14	106175/8
	3/4 x 14	106173/4
	7/8 x 14	106177/8
	1" x 11	106171"

ACCESSORI PER L'UTILIZZO DEGLI INSERTI FILETTATI K-COIL

Inserting tools for K-coil / Outils pour l'utilisation des K-coil
Herramientas para insertar K-coil - Werkzeuge für K-coil

10618



Punta elicoidale per prefori fil. danneggiate

Twist drill for damaged threads
Foret hélicoïdal pour taraudages endommagées
Broca helicoidal para roscas dañadas

Ø	l	L	Per filetto *For thread*	cod.
2,1	24	49	**M 2** x 0,4	106180210
2,6	30	57	**2,5** x 0,45	106180260
3,2	36	65	**3** x 0,5	106180320
3,7	39	70	**3,5** x 0,6	106180370
4,2	43	75	**4** x 0,7	106180420
5,2	52	86	**5** x 0,8	106180520
6,3	63	101	**6** x 1	106180630
7,3	69	109	**7** x 1	106180730
8,3	75	117	**8** x 1,25 - 8x1	106180830
9,3	81	125	**9** x 1,25	106180930
10,3	87	133	**10** x 1,25 - 10x1	106181030
10,4	87	133	**10** x 1,5	106181040
11,4	94	133	**11** x 1,5	106181140
12,3	101	133	**12** x 1,25 - 12x1	106181230
12,4	101	133	**12** x 1,75 - 12x1,5	106181240
14,3	115	165	**14** x 1	106181430
14,4	115	165	**14** x 1,5 - 1,4x1,25	106181440
16,4	115	170	**16** x 1,5	106181640

10611



Utensile per la rottura del perno di trascinamento K-coil

Tang break tool / Outil pour rompre le goujion
Herramienta rompe arrastre / Werkzeug für den bruch des Bolzen

	N°	cod.
M 2 x 0,4	2	1061102
2,5 x 0,45	3	1061103
3 x 0,5	4	1061104
3,5 x 0,6	5	1061105
4 x 0,7	6	1061106
5 x 0,8	8	1061108
6 x 1	9	1061109
7 x 1 - 8x1,25 - 8x1	11	1061111
9 x 1,25	12	1061112
10 x 1,5 - 10x1,25 - 10x1	13	1061113
11 x 1,5	14	1061114
12 x 1,75 - 12x1,5 - 12x1,25 - 12x1	15	1061115

10622



Estrattore K-coil

Extracting tool / Outil pour enlever le K-coil
Herramienta extractora / K-coil Auszieher

N°		cod.
2	**M 3÷10** 3/16÷3/8	1062202
3	**M 11÷24** 3/8÷1"	1062203

ACCESSORI PER L'UTILIZZO DEGLI INSERTI FILETTATI K-COIL

Inserting tools for K-coil / Outils pour l'utilisation des K-coil
Herramientas para insertar K-coil - Werkzeuge für K-coil

10621



Utensile manuale per inserire i K-coil

Inserting tool for K-coil
Outil pour l'insertion des K-coil
Utensilio para insertar K-coil
Werkzeug für K-coil

	N°	cod.
M 2 x 0,4	2	1062102
2,5 x 0,45	3	1062103
3 x 0,5	4	1062104
3,5 x 0,6	5	1062105
4 x 0,7	6	1062106
5 x 0,8	8	1062108
6 x 1	9	1062109
7 x 1	10	1062110
8 x 1,25 - 8x1	11	1062111
9 x 1,25	12	1062112
10 x 1,5 - 10x1,25 - 10x1	13	1062113
11 x 1,5	14	1062114
12 x 1,75 - 12x1,5 - 12x1,25 - 12x1	15	1062115
14 x 2 - 14x1,5	16	1062116
14 x 1,25 - 14x1	17	1062117
16 x 2 - 16x1,5	18	1062118
18 x 2,5 - 18x2 - 18x1,5	20	1062120
20 x 2,5 - 20x2 - 20x1,5	21	1062121
22 x 2,5 - 22x2 - 22x1,5	22	1062122
24 x 2,5 - 24x2 - 24x1,5	23	1062123

10628



Inseritore con attacco ¼" QC

Inserting tool with ¼" QC hex shank
Outil pour l'insertion avec attelage hex ¼" QC
Herramienta para insertar con ataque hex ¼" QC

Per coil *For coil*	cod.
M3	1062803X05
M4	1062804X07
M5	1062805X08
M6	1062806X1
M8	1062808X125
M10	1062810X15
M12	1062812X175

10623



Inseritore con attacco esagonale da 1/2"

Inserting tool with 1/2" hexagonal drive
Outil pour l'insertion avec attelage hexagonal 1/2"
Herramienta para insertar con ataque hexagonal 1/2"
Werkzeug für K-coil Eisezten mit hexagonalem Ansatz 1/2"

	cod.
M 26 x 1,5	1062326X15
27 x 3	1062327X3
27 x 2	1062327X2
27 x 1,5	1062327X15
28 x 1,5	1062328X15
30 x 3,5	1062330X35
30 x 2	1062330X2
30 x 1,5	1062330X15
33 x 3,5	1062333X35
33 x 2	1062333X2
36 x 4	1062336X4
36 x 3	1062336X3
36 x 2	1062336X2
36 x 1,5	1062336X15

N°	cod.
G *1/8 x 28	10623G1/8
***1/4** x 19	10623G1/4
***3/8** x 19	10623G3/8
***1/2** x 14	10623G1/2
5/8 x 14	10623G5/8
3/4 x 14	10623G3/4
7/8 x 14	10623G7/8
1" x 11	10623G1"

*** Attacco da 1/4"** / 1/4" hexagonal drive
Queue 1/4" / Mango hexagonal 1/4"

CUTTING TOOLS **ENGINEERING**

In questa sezione, abbiamo dedicato un vasto capitolo ai maschi e filiere in acciaio rapido ed in acciaio da utensile, particolarmente adatti e convenienti nella filettatura manuale su ferro, leghe leggere, acciai non trattati e trattati termicamente a bassa durezza. Sono largamente utilizzati nella pulizia e ripristino di filettature danneggiate, sia nel campo automotive, che in tutti i lavori professionali.

This section contains a large chapter on HSS threading taps and dies, which are particularly suitable and practical for manually creating threads in iron, light alloys, untreated and heat-treated steel with low hardness. They are also widely used toclean and repair damaged threads in the automotive industry and other professional applications.

Dans cette section, nous avons consacré un vaste chapitre aux tarauds et filières en acier rapide et en acier pour outil, particulièrement appropriés et intéressants dans le filetage manuel sur fer, sur alliages légers, sur aciers non traités et traités thermiquement à basse dureté. De plus, ils sont largement utilisés dans le nettoyage et le rétablissement des filetages endommagés, tant dans le secteur de l'automobile que dans tous les secteurs professionnels.

En esta sección hemos dedicado un vasto apartado a las terrajas y a los machos de acero rápido y de acero para utensilios, especialmente aptos y convenientes en el roscado manual sobre hierro, aleaciones ligeras, aceros no tratados y tratados térmicamente de baja dureza. También se utilizan mucho en la limpieza y en la recuperación de roscas dañadas,ya sea en el campo de la automoción, que en todos los trabajos profesionales.



UTENSILI A FILETTARE PER USI PROFESSIONALI

Tool steel taps and dies
for professional use

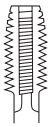
MASCHI A MANO SERIE DI 3 PEZZI, FILETTATURA METRICA ISO A PASSO GROSSO

Standard 3 pcs hand taps, metric coarse pitch / Tarauds à main, jeux de 3 pieces, métrique, pas gros
Juego de machos a mano, rosca metrica normal / Dreiteiliger Handgewindebohrer für metrisches ISO-Gewinde

C.V. UNI 4535 ≃ DIN 352 **M**

10001





HRC ≃ 62÷63

Art. **10002** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*

R ≤ 600 N/mm²



Metals



Alu



Cu Zn Ni Ms



	Ø		/	L	pcs	cod.
M	2	x 0,4	11	36	1	1000102X04
	2,5	x 0,45	12	40	1	10001025X045
	3	x 0,5	12	40	1	1000103X05
	3	x 0,6	12	43	1	1000103X06
	3,5	x 0,6	14	45	1	10001035X06
	4	x 0,7	14	45	1	1000104X07
	4	x 0,75	14	48	1	1000104X075
	4,5	x 0,75	16	48	1	10001045X075
	5	x 0,8	16	48	1	1000105X08
	5	x 0,9	16	50	1	1000105X09
	6	x 1	18	50	1	1000106X1
	7	x 1	18	50	1	1000107X1
	8	x 1,25	22	56	1	1000108X125
	9	x 1,25	22	63	1	1000109X125
	10	x 1,5	25	70	1	1000110X15
	11	x 1,5	25	70	1	1000111X15
	12	x 1,75	30	75	1	1000112X175
	14	x 2	32	80	1	1000114X2
	16	x 2	32	80	1	1000116X2
	18	x 2,5	40	95	1	1000118X25
	20	x 2,5	40	95	1	1000120X25
	22	x 2,5	40	100	1	1000122X25
	24	x 3	50	110	1	1000124X3
	27	x 3	50	110	1	1000127X3
	30	x 3,5	56	132	1	1000130X35
	33	x 3,5	60	132	1	1000133X35
	36	x 4	60	132	1	1000136X4

Filettatura Speciale / Special thread / Filetage spécial / Rosca especial / Sonderegewinde

	Ø		/	L	pcs	cod.
M	3	x 0,6	12	40	1	1000103X06
	4	x 0,75	14	45	1	1000104X075
	5	x 0,9	16	48	1	1000105X09



Maschio a mano finitore
Hand bottoming tap
Tarauds à main finisseur
Macho a mano acabado
Fertig Schneider Hand-gewindebohrer

	Ø		/	L	pcs	cod.
M	2	x 0,4	11	36	1	1000102X043
	3	x 0,5	12	40	1	1000103X053
	4	x 0,7	14	45	1	1000104X073
	5	x 0,8	16	48	1	1000105X083
	6	x 1	18	50	1	1000106X13
	8	x 1,25	22	56	1	1000108X1253
	10	x 1,5	25	70	1	1000110X153
	12	x 1,75	30	75	1	1000112X1753
	14	x 2	32	80	1	1000114X23
	16	x 2	32	80	1	1000116X23

- Per filettare fori passanti e ciechi in ferro, acciaio dolce ed a bassa resistenza sino R≤600 N/mm²
- *For making thread in iron, steel up to R≤600 N/mm²*
- *Taraudage courant des aciers R≤600 N/mm²*
- *Para orificios ciegos y pasantes en materiales de hasta 600 N/mm²*
- *Für allgemeinen Einsatz in unlegierter und niederlegierter Stahl R≤600 N/mm²*



15001 15003

309

MASCHI A MANO IN SERIE DI 2 PEZZI, FILETTATURA METRICA PASSO GROSSO E FINE

Two pieces hand taps, coarse and fine pitch / Tarauds à main, jeux de 2 pieces métrique, pas gros et fin

Juego machos a mano de dos piezos, rosca metrica fina y normal / Zweiteiliger Handgewindebohrer für ISO Regel und Feingewinde

C.V. UNI 4535 ≈ DIN 2181

M-MF

10003



	Ø		l	L	pcs	cod.
M	2	x 0,4	11	36	1	1000302X04
	3	x 0,5	12	40	1	1000303X05
	4	x 0,7	14	45	1	1000304X07
	5	x 0,8	16	48	1	1000305X08
	6	x 0,75	18	50	1	1000306X075
	6	x 1	18	50	1	1000306X1
	7	x 0,75	18	50	1	1000307X075
	7	x 1	18	50	1	1000307X1
	8	x 0,75	22	56	1	1000308X075
	8	x 1	22	56	1	1000308X1
	8	x 1,25	22	56	1	1000308X125
	9	x 0,75	22	63	1	1000309X075
	9	x 1	22	63	1	1000309X1
	9	x 1,25	22	63	1	1000309X125
	10	x 0,75	25	70	1	1000310X075
	10	x 1	25	70	1	1000310X1
	10	x 1,25	25	70	1	1000310X125
	10	x 1,5	25	70	1	1000310X15
	11	x 0,75	25	70	1	1000311X075
	11	x 1	25	70	1	1000311X1
	11	x 1,25	25	70	1	1000311X125
	11	x 1,5	25	70	1	1000311X15
	12	x 0,75	30	75	1	1000312X075
	12	x 1	30	75	1	1000312X1
	12	x 1,25	30	75	1	1000312X125
	12	x 1,5	30	75	1	1000312X15
	12	x 1,75	30	75	1	1000312X175
	14	x 1	32	80	1	1000314X1
	14	x 1,25	32	80	1	1000314X125
	14	x 1,5	32	80	1	1000314X15
	14	x 2	32	80	1	1000314X2
	16	x 1	32	80	1	1000316X1
	16	x 1,5	32	80	1	1000316X15
	16	x 2	32	80	1	1000316X2
	18	x 1,5	40	95	1	1000318X15
	18	x 2	40	95	1	1000318X2
	18	x 2,5	40	95	1	1000318X25
	20	x 1,5	40	95	1	1000320X15
	20	x 2	40	95	1	1000320X2
	20	x 2,5	40	95	1	1000320X25
	22	x 1,5	40	100	1	1000322X15
	22	x 2	40	100	1	1000322X2
	22	x 2,5	40	100	1	1000322X25
	24	x 1,5	50	110	1	1000324X15
	24	x 2	50	110	1	1000324X2
	24	x 3	50	110	1	1000324X3
	27	x 1,5	50	110	1	1000327X15
	27	x 2	50	110	1	1000327X2
	27	x 3	50	110	1	1000327X3
	30	x 1,5	56	132	1	1000330X15
	30	x 2	56	132	1	1000330X2

MF



Maschio a mano finitore passo fine
Bottoming tap, fine thread
Taraud finisseur, pas fin
Macho acabado, rosca fina
Fertig Schneider Hand-gewindebohrer, Feingewinde

	Ø		l	L	pcs	cod.
M	6	x 0,75	18	50	1	1000306X0753
	7	x 0,75	18	50	1	1000307X0753
	8	x 0,75	22	56	1	1000308X0753
	8	x 1	22	56	1	1000308X13
	9	x 0,75	22	63	1	1000309X0753
	9	x 1	22	63	1	1000309X13
	10	x 0,75	25	70	1	1000310X0753
	10	x 1	25	70	1	1000310X13
	10	x 1,25	25	70	1	1000310X1253
	11	x 0,75	25	70	1	1000311X0753
	11	x 1	25	70	1	1000311X13
	11	x 1,25	25	70	1	1000311X1253
	12	x 0,75	30	75	1	1000312X0753
	12	x 1	30	75	1	1000312X13
	12	x 1,25	30	75	1	1000312X1253
	12	x 1,5	30	75	1	1000312X153
	14	x 1	32	80	1	1000314X13
	14	x 1,25	32	80	1	1000314X1253
	14	x 1,5	32	80	1	1000314X153
	16	x 1	32	80	1	1000316X13
	16	x 1,5	32	80	1	1000316X153
	18	x 1,5	40	95	1	1000318X153

MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA GAS CILINDRICA PER TUBI

Two pieces hand taps for cylindrical pipe-threads / Tarauds à main, filetage gaz cylindrique
Juegos de machos a mano, rosca gas cilindrica / Satzgewindebohrer für Rohrgewinde

C.V. UNI 338 ≃ DIN 5157 — **GAS (BSP)**

10015



	Ø	l	L	pcs	cod.
G	1/8 x 28	18	65	1	100151/8
	1/4 x 19	24	70	1	100151/4
	3/8 x 19	25	75	1	100153/8
	1/2 x 14	31	80	1	100151/2
	3/4 x 14	33	90	1	100153/4
	1" x 11	39	100	1	100151"
	1.1/4 x 11	32	125	1	100151.1/4
	1.1/2 x 11	32	140	1	100151.1/2
	2" x 11	32	140	1	100152"

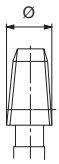
MASCHI CONICI PER TUBI, FILETTATURA GAS CONICA BSPT (CON. 1:16)

BSPT taper thread (1:16 taper) / Tarauds filetage gaz conique (1:16) / Machos rosca conica BSPT (1:16)

C.V. UNI 6125 — **BSPT**

10017





BSPT
Conicità 1:16
Taper 1:16

	Ø	l	L	pcs	cod.
Rc	1/8 x 28	15	59	1	100171/8
	1/4 x 19	19	67	1	100171/4
	3/8 x 19	21	75	1	100173/8
	1/2 x 14	26	87	1	100171/2
	3/4 x 14	28	96	1	100173/4
	1" x 11	33	109	1	100171"
	1.1/4 x 11	36	119	1	100171.1/4
	1.1/2 x 11	37	125	1	100171.1/2
	2" x 11	41	140	1	100172"

MASCHI A MACCHINA E A MANO PER FORI PASSANTI, SPECIALI PER DADI, FIL. METRICA

Hand and machine nut taps, metric coarse / Taraud à main et machine pour ecrous / Machos de mano y maquina tipo tuercas

C.V. ≃ DIN 357 — **M**

10030



	Ø	l	L	pcs	cod.
M	3 x 0,5	18	75	10	1003003X05
	4 x 0,7	23	90	10	1003004X07
	5 x 0,8	32	100	10	1003005X08
	6 x 1	40	110	10	1003006X1
	8 x 1,25	45	132	5	1003008X125
	10 x 1,5	55	150	5	1003010X15
	12 x 1,75	55	180	5	1003012X175

MASCHI A MANO SERIE DI 3 PEZZI, FILETTATURA WHITWORTH PASSO GROSSO

3 pcs hand taps, Whitworth coarse thread / Tarauds à main, jeux de 3 pieces , filetage Whitworth
Juegos machos de mano, rosca inglesa Whitworth / Dreiteiliger Handgewindebohrer für Whitworth Gewinde

C.V. UNI 2709 ≃ DIN 352 **BSW**

10010



	Ø		l	L	pcs	cod.
BSW	**1/8**	x 40	12	40	1	100101/8
	5/32	x 32	12	45	1	100105/32
	3/16	x 24	16	48	1	100103/16
	1/4	x 20	18	50	1	100101/4
	5/16	x 18	22	56	1	100105/16
	3/8	x 16	25	70	1	100103/8
	7/16	x 14	25	70	1	100107/16
	1/2	x 12	30	75	1	100101/2
	9/16	x 12	32	80	1	100109/16
	5/8	x 11	32	80	1	100105/8
	3/4	x 10	40	95	1	100103/4
	7/8	x 9	40	100	1	100107/8
	1”	x 8	50	110	1	100101"
	1.1/8	x 7	56	125	1	100101.1/8
	1.1/4	x 7	56	125	1	100101.1/4
	1.3/8	x 6	63	150	1	100101.3/8
	1.1/2	x 6	63	150	1	100101.1/2
	1.3/4	x 5	70	160	1	100101.3/4
	2”	x 4.5	80	190	1	100102"

Applicazioni *Applications*

R ≤ 600 N/mm²



MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA WHITWORTH A PASSO FINE

2 pcs hand taps, british standard fine / Tarauds à main, jeux de 2 pcs, filetage Whitworth fin
Juegos machos de mano, rosca inglesa Whitworth fina / Zweiteiliger Handgewindebohrer für britisch Standard Feingewinde

C.V. UNI 2709 ≃ DIN 2181 **BSF**

10012



	Ø		l	L	pcs	cod.
BSF	**3/16**	x 32	16	48	1	100123/16
	1/4	x 26	18	50	1	100121/4
	5/16	x 22	22	56	1	100125/16
	3/8	x 20	25	70	1	100123/8
	7/16	x 18	25	70	1	100127/16
	1/2	x 16	30	75	1	100121/2
	9/16	x 16	32	80	1	100129/16
	5/8	x 14	32	80	1	100125/8
	3/4	x 12	40	95	1	100123/4
	7/8	x 11	40	100	1	100127/8
	1”	x 10	50	110	1	100121"

MASCHI A MANO SERIE 3 PEZZI, FILETTATURA AMERICANA A PASSO GROSSO UNC

3 pcs hand taps, UNC coarse pitch /Tarauds à main, jeux de 3 pieces, filetage UNC

Juego machos de mano, rosca americana UNC / Handgewindebohrer, amerikanisches Grossgewinde

C.V. ANSI B1.1 **UNC**

10020



	Ø		l	L	pcs	cod.
N°	5	x 40	18	50	1	10020N05
	6	x 32	18	50	1	10020N06
	8	x 32	18	50	1	10020N08
	10	x 24	30	70	1	10020N10
	12	x 24	30	70	1	10020N12
UNC	1/4	x 20	30	70	1	100201/4
	5/16	x 18	30	70	1	100205/16
	3/8	x 16	35	75	1	100203/8
	7/16	x 14	40	80	1	100207/16
	1/2	x 13	45	85	1	100201/2
	9/16	x 12	45	90	1	100209/16
	5/8	x 11	47	100	1	100205/8
	3/4	x 10	50	110	1	100203/4
	7/8	x 9	60	120	1	100207/8
	1”	x 8	60	130	1	100201"
	1.1/8	x 7	60	130	1	100201.1/8
	1.1/4	x 7	60	130	1	100201.1/4
	1.3/8	x 6	65	150	1	100201.3/8
	1.1/2	x 6	65	150	1	100201.1/2

MASCHI A MANO SERIE DI 2 PEZZI, FILETTATURA AMERICANA A PASSO FINE UNF

2 pcs hand taps, UNF fine pitch / Tarauds à main, jeux de 2 pieces UNF

Juego machos de mano, rosca americana UNF / Handgewindebohrer, amerikanisches Feingewinde

C.V. ANSI B1.1 **UNF**

10025



	Ø		l	L	pcs	cod.
N°	5	x 44	11	36	1	10025N05
	6	x 40	12	40	1	10025N06
	8	x 36	12	40	1	10025N08
	10	x 32	14	45	1	10025N10
	12	x 28	14	50	1	10025N12
UNF	1/4	x 28	30	70	1	100251/4
	5/16	x 24	30	70	1	100255/16
	3/8	x 24	35	75	1	100253/8
	7/16	x 20	40	80	1	100257/16
	1/2	x 20	45	85	1	100251/2
	9/16	x 18	45	90	1	100259/16
	5/8	x 18	47	100	1	100255/8
	3/4	x 16	50	110	1	100253/4
	7/8	x 14	60	120	1	100257/8
	1”	x 12	60	130	1	100251"
	1.1/8	x 12	60	130	1	100251.1/8
	1.1/4	x 12	60	130	1	100251.1/4
	1.3/8	x 12	65	150	1	100251.3/8
	1.1/2	x 12	65	150	1	100251.1/2

MASCHI CONICI PER TUBI, FILETTATURA CONICA AMERICANA NPT

NPT taper thread /Tarauds conique NPT / Tarauds conique NPT

Macho rosca conica americana NPT / Einschnittgewindebohrer, amerikanisches kegeliges Rohrgewinde

C.V. ANSI B2.1 **NPT**

10032





Conicità 1:16
Taper 1:16

	Ø		l	L	pcs	cod.
NPT	1/8	x 27	19	54	1	100321/8
	1/4	x 18	27	62	1	100321/4
	3/8	x 18	27	65	1	100323/8
	1/2	x 14	35	79	1	100321/2
	3/4	x 14	35	83	1	100323/4
	1”	x 11,5	44	95	1	100321"
	1.1/4	x 11,5	44	102	1	100321.1/4
	1.1/2	x 11,5	44	108	1	100321.1/2
	2”	x 11,5	44	114	1	100322"

FILIERE TONDE AL CROMO, FILETTATURA METRICA ISO

C.V. round dies, metric thread / Filière ronde, filetage metrique
Cojinetes redondos C.V., rosca metrica / Runde Schneideisen C.V., metrisches ISO Gewinde

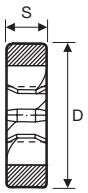
C.V. UNI 4535 ≃ DIN 223

Metrica passo grosso - *Metric coarse pitch*
Pas gros metrique - Rosca metrica larga - Metrisches grossgewinde

M

12001





HRC ≃ 60÷61

	Ø	DxS	pcs	cod.
M	**2** x 0,4	25,4 x 9	5	12001202X04
	3 x 0,5	25,4 x 9	5	12001203X05
	4 x 0,7	25,4 x 9	5	12001204X07
	5 x 0,8	25,4 x 9	5	12001205X08
	6 x 1	25,4 x 9	5	12001206X1
	6 x 1	**38,1** x 14	5	12001306X1
	7 x 1	25,4 x 9	5	12001207X1
	8 x 1,25	25,4 x 9	5	12001208X125
	8 x 1,25	**38,1** x 14	5	12001308X125
	9 x 1,25	25,4 x 9	5	12001209X125
	10 x 1,5	25,4 x 9	5	12001210X15
	10 x 1,5	**38,1** x 14	5	12001310X15
	11 x 1,5	**38,1** x 14	5	12001311X15
	12 x 1,75	25,4 x 9	5	12001212X175
	12 x 1,75	**38,1** x 14	5	12001312X175
	14 x 2	**38,1** x 14	5	12001314X2
	16 x 2	**38,1** x 14	5	12001316X2
	16 x 2	50,8 x 16	3	12001516X2
	18 x 2,5	38,1 x 14	5	12001318X25
	18 x 2,5	50,8 x 16	3	12001518X25
	20 x 2,5	**38,1** x 14	5	12001320X25
	20 x 2,5	50,8 x 16	3	12001520X25
	22 x 2,5	50,8 x 16	3	12001522X25
	24 x 3	50,8 x 16	3	12001524X3
	27 x 3	63,5 x 19	1	12001627X3
	30 x 3,5	63,5 x 19	1	12001630X35
	33 x 3,5	63,5 x 19	1	12001633X35
	36 x 4	63,5 x 19	1	12001636X4

Art. **12002** Self
Disponibile su richiesta / *On demand*

Applicazioni / *Applications*

R ≤ 600 N/mm²





C.V. UNI 4535 ≃ DIN 223

Metrica passo fine - *Metric fine*
Metrique fin - Metrica fina - ISO Feingewinde

MF

12005



	Ø	DxS	pcs	cod.
M	**6** x 0,75	**25,4** x 9	5	12005206X075
	7 x 0,75	25,4 x 9	5	12005207X075
	8 x 0,75	25,4 x 9	5	12005208X075
	8 x 1	25,4 x 9	5	12005208X1
	9 x 0,75	25,4 x 9	5	12005209X075
	9 x 1	25,4 x 9	5	12005209X1
	10 x 1,25	25,4 x 9	5	12005210X125
	12 x 1,5	25,4 x 9	5	12005212X15
	10 x 0,75	**38,1** x 14	5	12005310X075
	10 x 1	38,1 x 14	5	12005310X1
	10 x 1,25	38,1 x 14	5	12005310X125
	11 x 0,75	38,1 x 14	5	12005311X075
	11 x 1	38,1 x 14	5	12005311X1
	11 x 1,25	38,1 x 14	5	12005311X125
	12 x 0,75	38,1 x 14	5	12005312X075
	12 x 1	38,1 x 14	5	12005312X1
	12 x 1,25	38,1 x 14	5	12005312X125
	12 x 1,5	38,1 x 14	5	12005312X15
	14 x 1	38,1 x 14	5	12005314X1
	14 x 1,25	38,1 x 14	5	12005314X125
	14 x 1,5	38,1 x 14	5	12005314X15
	16 x 1	38,1 x 14	5	12005316X1
	16 x 1,5	38,1 x 14	5	12005316X15
	18 x 1,5	38,1 x 14	5	12005318X15
	18 x 2	38,1 x 14	5	12005318X2
	18 x 1,5	**50,8** x 16	3	12005518X15
	18 x 2	50,8 x 16	3	12005518X2
	20 x 1,5	50,8 x 16	3	12005520X15
	20 x 2	50,8 x 16	3	12005520X2
	22 x 1,5	50,8 x 16	3	12005522X15
	22 x 2	50,8 x 16	3	12005522X2
	24 x 1,5	50,8 x 16	3	12005524X15
	24 x 2	50,8 x 16	3	12005524X2
	27 x 1,5	**63,5** x 19	1	12005627X15
	27 x 2	63,5 x 19	1	12005627X2
	30 x 1,5	63,5 x 19	1	12005630X15
	30 x 2	63,5 x 19	1	12005630X2
	30 x 3	63,5 x 19	1	12005630X3

Confezione / *Packaging*



FILIERE TONDE, FILETTATURA GAS CILINDRICA PER TUBI BSP

Round dies, cylindrical BSP thread / Filières rondes, filetage gaz cylindrique
Cojinetes redondos, rosca gas BSP / Runde handschneideisen für zylindrisches Rohrgewinde

C.V. ≃ DIN 223 (EN 24231) **GAS (BSP)**

12015



	Ø	DxS	pcs	cod.
G	**1/8** x 28	38,1 x 14	5	1201531/8
	1/4 x 19	38,1 x 14	5	1201531/4
	3/8 x 19	38,1 x 14	5	1201533/8
	3/8 x 19	50,8 x 16	3	1201553/8
	1/2 x 14	50,8 x 16	3	1201551/2
	3/4 x 14	50,8 x 16	3	1201553/4
	1” x 11	63,5 x 19	1	1201561”
	1.1/4 x 11	75 x 20	1	1201571.1/4
	1.1/2 x 11	75 x 20	1	1201571.1/2
	2” x 11	90 x 36	1	1201592”

Applicazioni *Applications*

R ≤ 600 N/mm²



FILIERE TONDE, FILETTATURA GAS CONICA PER TUBI BSPT (CON 1:16)

Round dies, BSPT taper thread (taper 1:16) /Filières rondes, filetage gaz conique BSPT (cône 1:16)
Cojinetes redondos, rosca conica gas BSPT / Runde Hand-und Maschinen-Schneideisen für Kegeliges Rohrgewinde; Reihe R

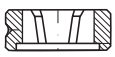
C.V. ≃ DIN 223 (EN 24230) **BSPT**

12017



	Ø	DxS	pcs	cod.
Rc	**1/8** x 28	30 x 11	1	1201731/8
	1/4 x 19	38 x 14	1	1201731/4
	3/8 x 19	45 x 18	1	1201743/8
	1/2 x 14	45 x 18	1	1201741/2
	3/4 x 14	55 x 22	1	1201753/4
	1” x 11	65 x 25	1	1201761”
	1.1/4 x 11	75 x 30	1	1201771.1/4
	1.1/2 x 11	90 x 27	1	1201791.1/2
	2” x 11	105 x 28	1	1201712”

BSPT
Conicità 1:16
Taper 1:16



FILIERE TONDE, FILETTATURA INGLESE WHITWORTH BSW

Round dies, Whitworth thread / Filières rondes, filetage Whitworth
Cojinetes redondos, rosca Whitworth / Runde Schneideisen für britisch standard Whitworth B.1

C.V. ≃ DIN 223 (EN 22568) **BSW**

12010



	Ø	DxS	pcs	cod.
BSW	**1/8** x 40	25,4 x 9	5	1201021/8
	5/32 x 32	25,4 x 9	5	1201025/32
	3/16 x 24	25,4 x 9	5	1201023/16
	1/4 x 20	25,4 x 9	5	1201021/4
	5/16 x 18	25,4 x 9	5	1201025/16
	3/8 x 16	38,1 x 14	5	1201033/8
	7/16 x 14	38,1 x 14	5	1201037/16
	1/2 x 12	38,1 x 14	5	1201031/2
	9/16 x 12	38,1 x 14	5	1201039/16
	5/8 x 11	50,8 x 16	3	1201055/8
	3/4 x 10	50,8 x 16	3	1201053/4
	7/8 x 9	50,8 x 16	3	1201057/8
	1” x 8	50,8 x 16	3	1201051"
	1.1/8 x 7	63,5 x 19	1	1201061.1/8
	1.1/4 x 7	63,5 x 19	1	1201061.1/4
	1.3/8 x 6	63,5 x 19	1	1201061.3/8
	1.1/2 x 6	63,5 x 19	1	1201061.1/2
	1.3/4 x 5	90 x 36	1	1201091.3/4
	2” x 4,5	90 x 36	1	1201092"

Applicazioni *Applications*

R ≤ 600 N/mm²



FILIERE TONDE, FILETTATURA INGLESE WHITWORTH A PASSO FINE BSF

2 pcs hand taps, british standard fine / Tarauds à main, jeux de 2 pcs, filetage Whitworth fin
Juegos machos de mano, rosca inglesa Whitworth fina / Zweiteiliger Handgewindebohrer für britisch Standard Feingewinde

C.V. ≃ DIN 223 (EN 22568) **BSF**

12012



	Ø	DxS	pcs	cod.
BSW	**3/16** x 32	25,4 x 9	5	1201223/16
	1/4 x 26	25,4 x 9	5	1201221/4
	5/16 x 22	25,4 x 9	5	1201225/16
	3/8 x 20	38,1 x 14	5	1201233/8
	7/16 x 18	38,1 x 14	5	1201237/16
	1/2 x 16	38,1 x 14	5	1201231/2
	9/16 x 16	38,1 x 14	5	1201239/16
	5/8 x 14	50,8 x 16	3	1201255/8
	3/4 x 12	50,8 x 16	3	1201253/4
	7/8 x 11	50,8 x 16	3	1201257/8
	1” x 10	50,8 x 16	3	1201251"

FILIERE TONDE, FILETTATURA AMERICANA A PASSO GROSSO UNC

Round dies, UNC coarse thread / Filières rondes, filetage UNC
Cojinetes redondos, rosca UNC / Runde Schneideisen, amerikanisches grosse Gewinde

C.V. ≃ DIN 223 (EN 22568) **UNC**

12020



Applicazioni *Applications*

R ≤ 600 N/mm²



	Ø	DxS	pcs	cod.
N°	5 x 40	25,4 x 9	5	12020N05
	6 x 32	25,4 x 9	5	12020N06
	8 x 32	25,4 x 9	5	12020N08
	10 x 24	25,4 x 9	5	12020N10
	12 x 24	25,4 x 9	5	12020N12
UNC	1/4 x 20	25,4 x 9	5	1202021/4
	5/16 x 18	25,4 x 9	5	1202025/16
	3/8 x 16	38,1 x 14	5	1202033/8
	7/16 x 14	38,1 x 14	5	1202037/16
	1/2 x 13	38,1 x 14	5	1202031/2
	9/16 x 12	38,1 x 14	5	1202039/16
	5/8 x 11	50,8 x 16	3	1202055/8
	3/4 x 10	50,8 x 16	3	1202053/4
	7/8 x 9	50,8 x 16	3	1202057/8
	1" x 8	50,8 x 16	3	1202051"
	1.1/8 x 7	63,5 x 19	1	1202061.1/8
	1.1/4 x 7	63,5 x 19	1	1202061.1/4
	1.3/8 x 6	63,5 x 19	1	1202061.3/8
	1.1/2 x 6	63,5 x 19	1	1202061.1/2

FILIERE TONDE, FILETTATURA AMERICANA A PASSO FINE UNF

Round dies, UNF fine thread / Filières rondes, filetage UNF
Cojinetes redondos, rosca UNF / Runde Schneideisen, americanisches Feingewinde

C.V. ≃ DIN 223 (EN 22568) **UNF**

12025



	Ø	DxS	pcs	cod.
N°	5 x 44	25,4 x 9	5	12025N05
	6 x 40	25,4 x 9	5	12025N06
	8 x 36	25,4 x 9	5	12025N08
	10 x 32	25,4 x 9	5	12025N10
	12 x 28	25,4 x 9	5	12025N12
UNF	1/4 x 28	25,4 x 9	5	1202521/4
	5/16 x 24	25,4 x 9	5	1202525/16
	3/8 x 24	38,1 x 14	5	1202533/8
	7/16 x 20	38,1 x 14	5	1202537/16
	1/2 x 20	38,1 x 14	5	1202531/2
	9/16 x 18	38,1 x 14	5	1202539/16
	5/8 x 18	50,8 x 16	3	1202555/8
	3/4 x 16	50,8 x 16	3	1202553/4
	7/8 x 14	50,8 x 16	3	1202557/8
	1" x 12	50,8 x 16	3	1202551"
	1.1/8 x 12	63,5 x 19	1	1202561.1/8
	1.1/4 x 12	63,5 x 19	1	1202561.1/4
	1.3/8 x 12	63,5 x 19	1	1202561.3/8
	1.1/2 x 12	63,5 x 19	1	1202561.1/2

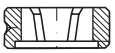
FILIERE TONDE, FILETTATURA CONICA AMERICANA PER TUBI NPT ANSI B 2.1

Round dies, NPT taper thread / Filières rondes, filetage conique NPT
Cojinetes redondos, rosca conica NPT / Runde handschneideisen, amerikanisches kegeliges Rohrgewinde NPT

C.V. ≃ DIN 223 (EN 22568) **NPT**

12032





NPT
Conicità 1:16
Taper 1:16

	Ø	DxS	pcs	cod.
	1/8 x 27	30 x 11	1	1203231/8
	1/4 x 18	38 x 14	1	1203231/4
	3/8 x 18	45 x 18	1	1203243/8
	1/2 x 14	45 x 18	1	1203241/2
	3/4 x 14	55 x 22	1	1203253/4
	1" x 11-1/2	65 x 25	1	1203261"
	1.1/4 x 11-1/2	75 x 26	1	1203271.1/4
	1.1/2 x 11-1/2	90 x 27	1	1203291.1/2
	2" x 11-1/2	105 x 28	1	1203212"

GIRAMASCHI ESTENSIBILI, MODELLO AMERICANO

Adjustable tap wrenches / Tourne à gauche extensible
Giramachos ayustables /Verstellbare Windeisen

DIN 1814 Lega Leggera / *Zinc die-cast / Alliage de zinc / Aleacione ligera / Körper aus Zinkdruckguss*

15001



Gr. N.	M	Per maschi *For taps* BSW-UNC-UNF	BSP-NPT	L	cod.
0	1 ÷ 8	1/16 ÷ 1/4		130	1500100
1	1 ÷ 10	1/16 ÷ 3/8	1/8	180	1500101
1.1/2	1 ÷ 12	1/16 ÷ 1/2	1/8	180	1500101.1/2
2	4 ÷ 12	5/32 ÷ 1/2	1/8	280	1500102
3	5 ÷ 20	7/32 ÷ 3/4	1/8 ÷ 1/2	380	1500103
4	11 ÷ 27	7/16 ÷ 1"	1/4 ÷ 3/4	500	1500104
5	13 ÷ 32	1/2 ÷ 1.1/4	1/4 ÷ 1"	700	1500105
***6**	18 ÷ 42	3/4 ÷ 1.1/2	1/2 ÷ 1.1/4	780	1500106
***7**	25 ÷ 52	1" ÷ 2.1/8	3/4 ÷ 2.1/4	800	1500107
***8**	25 ÷ 64	1" ÷ 2:1/2	3/4 ÷ 3"	1200	1500108

* corpo in acciaio / *steel*

Art. **15002** Self
Disponibile su richiesta / *On demand*

DIN 1814 Acciaio / *Steel / Acier / Acero / Stahl-Ausführung*

15003



Gr. N.	M	Per maschi *For taps* BSW-UNC-UNF	BSP-NPT	L	cod.
0	1 ÷ 8	1/16 ÷ 1/4		170	1500300
1	1 ÷ 10	1/16 ÷ 3/8	1/8	200	1500301
1.1/2	1 ÷ 12	1/16 ÷ 1/2	1/8	200	1500301.1/2
2	4 ÷ 12	5/32 ÷ 1/2	1/8	260	1500302
3	5 ÷ 20	7/32 ÷ 3/4	1/8 ÷ 1/2	345	1500303
4	11 ÷ 27	7/16 ÷ 1"	1/4 ÷ 3/4	430	1500304
5	13 ÷ 32	1/2 ÷ 1.1/4	1/4 ÷ 1"	770	1500305
6	18 ÷ 42	3/4 ÷ 1.1/2	1/2 ÷ 1.1/4	870	1500306
7	25 ÷ 52	1" ÷ 2.1/8	3/4 ÷ 2.1/4	1000	1500307
8	25 ÷ 64	1" ÷ 2:1/2	3/4 ÷ 3"	1200	1500308

GIRAMASCHI FISSI A SFERA

Ball tap wrenches / Porte-tarauds / Giramacho fixo / Kugelwindeisen



15013

Gr. N.	Per maschi *For taps* M	L	cod.
0	1 ÷ 4	200	1501300
1	3,5 ÷ 8	200	1501301
3	5 ÷ 12	200	1501303
4	10 ÷ 16	200	1501304
5	12 ÷ 20	200	1501305
6	18 ÷ 27	200	1501306

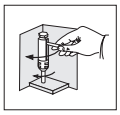
GIRAMASCHI A CRICCHETTO REVERSIBILE

Tap holder with ratchet / Porte-tarauds à cliquet / Giramachos de carraca / Werkzeugehalter mit knarre

15010
15011



Acciaio / *Steel*



Art. **15002** Self
Disponibile su richiesta
On demand

Art. 15010 Serie corta - *Short serie*

Gr. N.	Per maschi *For taps* M	BSW	L	pcs	cod.
1	3 ÷ 10	1/8 ÷ 3/8	85	1	1501001
2	5 ÷ 12	7/32 ÷ 1/2	100	1	1501002

Art. 15011 Serie lunga - *Long serie*

Gr. N.	Per maschi *For taps* M	BSW	L	pcs	cod.
1	3 ÷ 10	1/8 ÷ 3/8	250	1	1501101
2	5 ÷ 12	7/32 ÷ 1/2	300	1	1501102

		cod.
Griffe per / *Jaws for*	1501001 - 1501101	1501110
Griffe per / *Jaws for*	1501002 - 1501102	1501112

GIRAMASCHI A MANDRINO TIPO GOODEL

Goodel tap holder without ratchet / Porte-tarauds goodel sans cliquet / Giramachos goodel sin carraca / Werkzeugehalter ohne knarre

15005
15006



Art. **15007** Self
Disponibile su richiesta
On demand

Art. 15005 Serie corta - *Short serie*

Gr. N.	Per maschi *For taps* M	BSW	L	pcs	cod.
1	3 ÷ 5	1/8 ÷ 3/16	62	1	1500501
2	6 ÷ 8	1/4 ÷ 3/8	78	1	1500502
3	9 ÷ 10	3/8	102	1	1500503
4	10 ÷ 12	3/8 ÷ 1/2	102	1	1500504

Art. 15006 Serie lunga - *Long serie*

Gr. N.	Per maschi *For taps* M	BSW	L	pcs	cod.
1	3 ÷ 5	1/8 ÷ 3/16	150	1	1500601
2	6 ÷ 8	1/4 ÷ 3/8	150	1	1500602
3	9 ÷ 10	3/8	150	1	1500603
4	10 ÷ 12	3/8 ÷ 1/2	150	1	1500604

PROLUNGA PER MASCHI

Tap extension / Rallong pour tarauds / Prolungador para machos / Verlängerung für Gewindebohrer

DIN 377

10098



Quadro *Square* (mm)	L	Per maschi *For taps* DIN 352	cod.	€ cad/each	Quadro *Square* (mm)	L	Per maschi *For taps* DIN 352	cod.
2.1	60	M 1-2.6	10098021	6,926	**10.0**	140		10098100
2.4	70		10098024	6,926	**11.0**	150	M 18	10098110
2.7	80	M 3	10098027	6,926	**12.0**	155	M 20	10098120
3.0	90	M 3.5	10098030	6,926	**13.0**	165		10098130
3.4	95	M 4	10098034	6,926	**14.5**	175	M 22-24	10098145
3.8	100		10098038	8,300	**16.0**	180	M 27	10098160
4.3	105		10098043	9,977	**18.0**	200	M 30	10098180
4.9	110	M 4.5-8	10098049	7,764	**20.0**	220	M 33	10098200
5.5	115	M 9-10	10098055	8,870	**22.0**	220	M 36	10098220
6.2	120	M 11	10098062	9,708	**24.0**	235	M39-42	10098240
7.0	125	M 12	10098070	11,921	**26.0**	250		10098260
8.0	125		10098080	14,970	**29.0**	265	M45-48	10098290
9.0	130	M 14-16	10098090	16,343	**32.0**	285	M52	10098320

PORTAFILIERE PER FILIERE TONDE

Round-die stock / Porte filières à main / Manerales para cojinetes / Schneideisenhalter

DIN 225 (EN 22568) Lega Leggera / *Zinc die-cast / Alliage de zinc / Aleacione ligera / Körper aus Zinkdruckguss*

15030
15035



Art. **15031** Inches Self
Art. **15036** Metric Self
Disponibile su richiesta
On demand

Art. 15030 In pollici - *Inch*

Gr. N.	Ø mm	Ø pollici/inch	L mm	pcs	cod.
0	20,6 x 6,35	13/16 x 1/4	185	1	1503000
1	25,4 x 9,5	1" x 3/8	215	1	1503001
2/A	33,4 x 11,1	1.5/16 x 7/16	265	1	1503002/A
2	38,1 x 12,7	1.1/2 x 1/2	310	1	1503002
3	50,8 x 15,9	2" x 5/8	485	1	1503003
4	63,5 x 19	2.1/2 x 3/4	630	1	1503004
***5**	76,2 x 22	3" x 7/8	700	1	1503005
***6**	88,9 x 25,4	3.1/2 x 1"	940	1	1503006
***7**	101,6 x 25,4	4" x 1"	980	1	1503007

* acciaio / *steel*

Art. 15035 Per filiere DIN 223 - *For dies DIN 223*

Gr.	M	BSW-BSP	L	pcs	cod.
16 x 5	M 1 ÷ 2,6	W 1/16 ÷ 3/32	160	1	1503516X5
20 x 5	M 3 ÷ 4	W 1/8 ÷ 5/32	185	1	1503520X5
20 x 7	M 4,5 ÷ 6	W 3/16 ÷ 1/4	185	1	1503520X7
25 x 9	M 7 ÷ 9	W 5/16 ÷	215	1	1503525X9
30 x 11	M 10 ÷ 11	W 3/8 ÷ 7/16	265	1	1503530X11
38 x 10	MF 12 ÷ 14	G 1/8 ÷ 1/4	315	1	1503538X10
38 x 14	M 12 ÷ 14	W 1/2 ÷ 9/16	315	1	1503538X14
45 x 14	MF 16 ÷ 20	G 3/8 ÷ 1/2	450	1	1503545X14
45 x 18	M 16 ÷ 20	W 5/8 ÷ 13/16	450	1	1503545X18
55 x 16	MF 22 ÷ 26	G 5/8 ÷ 3/4	560	1	1503555X16
55 x 22	M 22 ÷ 24	W 7/8 ÷ 1"	560	1	1503555X22
65 x 18	MF 27 ÷ 35	G 7/8 ÷ 1"	630	1	1503565X18
65 x 25	M 27 ÷ 36	W 1"1/8 ÷ 1"3/8	630	1	1503565X25
***75 x 20**	MF 38 ÷ 42	G 1"1/8 ÷ 1"1/4	710	1	1503575X20
***75 x 30**	M 39 ÷ 42	W 1"1/2 ÷ 1"5/8	710	1	1503575X30
***90 x 22**	MF 45 ÷ 52	G 1"3/8 ÷ 1"3/4	920	1	1503590X22
***90 x 36**	M 45 ÷ 52	W 1"3/4 ÷ 2"	920	1	1503590X36

* acciaio / *steel*

DIN 225 (EN 22568) Acciaio / *Steel / Acier / Acero / Stahl-Ausführung*

15032
15037



Art. 15032 In pollici - *Inch*

Gr. N.	Ø mm	Ø pollici/inch	L mm	pcs	cod.
1	25,4 x 9,5	1" x 3/8	210	1	1503201
2	38,1 x 12,7	1"1/2 x 1/2	300	1	1503202
3	50,8 x 15,9	2" x 5/8	490	1	1503203
4	63,5 x 19	2.1/2 x 3/4	520	1	1503204
5	76,2 x 22	3" x 7/8	700	1	1503205
6	88,9 x 25,4	3.1/2 x 1"	950	1	1503206
7	101,6 x 25,4	4" x 1"	890	1	1503207

Art. 15037 Per filiere DIN 223 - *For dies DIN 223*

Gr.	M	BSW-BSP	L	pcs	cod.
16 x 5	M 1 ÷ 2,6	W 1/16 ÷ 3/32	160	1	1503716X5
20 x 5	M 3 ÷ 4	W 1/8 ÷ 5/32	190	1	1503720X5
20 x 7	M 4,5 ÷ 6	W 3/16 ÷ 1/4	190	1	1503720X7
25 x 9	M 7 ÷ 9	W 5/16 ÷	215	1	1503725X9
30 x 11	M 10 ÷ 11	W 3/8 ÷ 7/16	250	1	1503730X11
38 x 10	MF 12 ÷ 14	G 1/8 ÷ 1/4	310	1	1503738X10
38 x 14	M 12 ÷ 14	W 1/2 ÷ 9/16	310	1	1503738X14
45 x 14	MF 16 ÷ 20	G 3/8 ÷ 1/2	445	1	1503745X14
45 x 18	M 16 ÷ 20	W 5/8 ÷ 13/16	445	1	1503745X18
55 x 16	MF 22 ÷ 26	G 5/8 ÷ 3/4	495	1	1503755X16
55 x 22	M 22 ÷ 24	W 7/8 ÷ 1"	495	1	1503755X22
65 x 18	MF 27 ÷ 35	G 7/8 ÷ 1"	550	1	1503765X18
65 x 25	M 27 ÷ 36	W 1.1/8 ÷ 1"3/8	550	1	1503765X25
75 x 20	MF 38 ÷ 42	G 1.1/8 ÷ 1"1/4	735	1	1503775X20
75 x 30	M 39 ÷ 42	W 1.1/2 ÷ 1"5/8	735	1	1503775X30
90 x 22	MF 45 ÷ 52	G 1.3/8 ÷ 1"3/4	900	1	1503790X22
90 x 36	M 45 ÷ 52	W 1.3/4 ÷ 2"	900	1	1503790X36
105 x 22	MF 54 ÷ 65	G 2" ÷ 2"1/4	980	1	15037105X22
105 x 36	M 56 ÷ 64	W 2" ÷ 2"1/4	980	1	15037105X36
120 x 22	MF 64 ÷ 71	G 2.1/4 ÷ 2.3/4	960	1	15037120X22
120 x 36	M 64 ÷ 71	BSW 2.1/2 ÷ 2.3/4	960	1	15037120X36
130 x 25		G 3"	960	1	15037130X25
130 x 36			960	1	15037130X36
140 x 22			980	1	15037140X22
150 x 25		G 3.1/2	1000	1	15037150X25
160 x 25		G 4"	1000	1	15037160X25

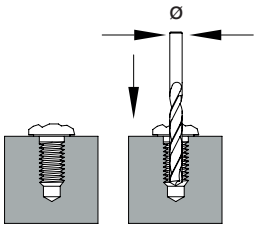
ESTRATTORI DI VITI E PRIGIONIERI IN ACCIAIO LEGATO

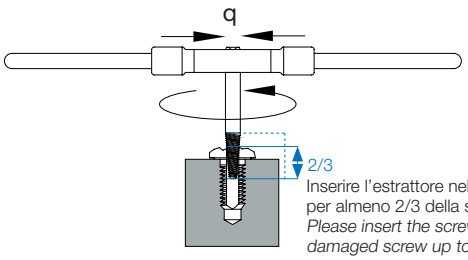
Screw extractors / Extracteur de vis
Extractores de tornillos / Schraubenausdreher

10065

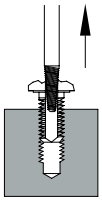


Gr N.	Viti *Screws*	ø	q	Giramaschi n. *Tap wrench n.*	pcs	cod.
1	M 3 ÷ 6	3 ÷ 4	3	0-1-1.1/2	1	1006501
2	M 6 ÷ 8	4 ÷ 4,5	3,6	0-1-1.1/2	1	1006502
3	M 8 ÷ 11	5,5 ÷ 6	5,5	1-1.1/2	1	1006503
4	M 11 ÷ 14	6 ÷ 6,5	6,3	2-3-4	1	1006504
5	M 14 ÷ 18	9 ÷ 10	8,6	3-4-5	1	1006505
6	M 18 ÷ 24	12 ÷ 13	12	3-4-5-6	1	1006506
7	M 24 ÷ 33	14 ÷ 16	15	4-5-6	1	1006507
8	M 33 ÷ 50	20 ÷ 22	19	4-5-6	1	1006508





Inserire l'estrattore nella vite danneggiata per almeno 2/3 della sua parte utile
Please insert the screw extractor inside the damaged screw up to 2/3 of the working part



SERIE DI ESTRATTORI IN ASTUCCIO DI PLASTICA

Screw extractors sets in plastic cases / Jeux de extracteurs de vis
Juego de extractores de tornillos en estucho plastico / Schraubenausdreher – sätze in Kunststoffkassette

10067



cod.	Composizione Description	pcs
10067101	5 pcs Ø 1÷5	1
10067102	6 pcs Ø 1÷6	1
10067103	8 pcs Ø 1÷8	1

CONTAFILETTI PER FILETTI METRICI ISO 60°-WH 55°

Screw pitch gauge ISO 60°-Wh 55° /Jeux de filetage - ISO 60°-Wh 55°
Cuentahilos - ISO 60°-Wh 55° / Gewindeschablonen ISO 60°-Wh 55°

41003



cod.	Composizione Description	pcs
410031251	52 pcs M 0,25 ÷ 6 Wh 62 ÷ 4	1
410031261	12 pcs M 0,5 ÷ 1,75	1

ESPOSITORE MAGAZZENO GIRAUTENSILI

Tool holders display / Assortiment de porte outils
Expositor de giramachos y manerales / Haltewerkzeuge Satz



DIN 1814
DIN 225

Lega leggera
zinc die-cast

17001100 40 pcs

15001		15005		15006		15010		15030	
GR. 1	6 pcs	GR. 1	3 pcs	GR. 1	2 pcs	GR. 1	2 pcs	Ø 25,4	6 pcs
GR. 2	6 pcs	GR. 2	2 pcs	GR. 2	2 pcs	GR. 2	2 pcs	Ø 38,1	4 pcs
GR. 3	3 pcs							Ø 50,8	2 pcs



DIN 1814
DIN 225

Lega leggera
zinc die-cast

17001104 51 pcs

15001		15010		15011		15035			
GR. 1	6 pcs	GR. 1	2 pcs	GR. 1	2 pcs	16 x 5	2 pcs	38 x 14	4 pcs
GR. 2	5 pcs	GR. 2	2 pcs	GR. 2	2 pcs	20 x 5	2 pcs	45 x 14	2 pcs
GR. 3	2 pcs					20 x 7	2 pcs	45 x 18	1 pc
GR. 4	1 pc					25 x 9	6 pcs	55 x 16	1 pc
						30 x 11	6 pcs	55 x 22	1 pc
						38 x 10	2 pcs		



DIN 1814
DIN 225

In acciaio
forged steel

17001108 51 pcs

15003		15010		15011		15037			
GR. 1	6 pcs	GR. 1	2 pcs	GR. 1	2 pcs	16 x 5	2 pcs	38 x 14	4 pcs
GR. 2	5 pcs	GR. 2	2 pcs	GR. 2	2 pcs	20 x 5	2 pcs	45 x 14	2 pcs
GR. 3	2 pcs					20 x 7	2 pcs	45 x 18	1 pc
GR. 4	1 pc					25 x 9	6 pcs	55 x 16	1 pc
						30 x 11	6 pcs	55 x 22	1 pc
						38 x 10	2 pcs		

ASSORTIMENTI A FILETTARE IN VALIGETTA DI PLASTICA RIGIDA

C.V. threading sets in blow-mould cases / Assortiments à fileter en acier au chrome en coffret plastique
Juego de utensilios a roscar en caja de plastico / Gewindeschneidwerkzeugesätze in Kunststoffkassette

C.V.

Coperchio trasparente
Transparent lid



17008203

Cod.		1 pc	25.4	N°1.1/2
17008203 M+MF 3÷12 30 pcs 11 passi *threads*		M 3x0,5-4x0,7 5x0,8-6x1-7x1 8x1-8x1,25 10x1,25-10x1,5 12x1,5-12x1,75		25,4 1 contafiletti *pitch gauge* 2,5-3,3-4,2-5-6,8

Astucci metallo / *metal case*



17005401



17005402

Cod.		3 pcs
17005401 M 3÷12 21 pcs		M 3-4-5-6 8-10-12

Cod.		3 pcs	N°1.1/2
17005402 M 3÷12 29 pcs		M 3-4-5-6 8-10-12	2,5-3,3-4,2-5 6,8-8,5-10,25

Abs



17005404

Cod.		1 pc	N°1.1/2
17005404 M 3÷12		M3-4-5-6-8 10-12	

ASSORTIMENTI A FILETTARE IN CASSETTE DI LEGNO

C.V. threading sets in wooden cases / Assortiments à fileter en acier au chrome en coffrets de bois
Juegos de utensilios a roscar en caja de madera / Gewindeschneideisenwerkzeugesätze in Holzkassette

C.V.

METRIC



Cod.		3 pcs	25.4	N°1
17012530 M3÷10 6 passi *threads*		M 3-4-5 6-8-10		25,4

Cod.		3 pcs	25.4	N°1
17012531 M3÷10 8 passi *threads*		M 3-4-5-6 7-8-9-10		25,4



Cod.		3 pcs	25.4	N°1.1/2
17012532 M3÷12 7 passi *threads*		M 3-4-5 6-8-10-12		25,4

Cod.		3 pcs	25,4(7) 38,1(3)	N°1-2
17012533 M3÷12 10 passi *threads*		M 3-4-5-6 7-8-9-10 11-12		25,4 - 38,1

Cod.		2 pcs	25,4(7) 38,1(3)	N°0-2
17012543 M+MF 3÷12 12 passi *threads*		3x0.5-4x0,7-5x0,8 6x1-7x1-8x1 8x1,25-10x1,25 10x1,5-12x1,25 12x1,5-12x1,75		25,4 - 38,1 N°1



Cod.		3 pcs	25,4(5) 38,1(5)	N°1-3
17012534 M3÷18 10 passi *threads*		M 3-4-5 6-8-10-12 14-16-18		25,4 - 38,1

Cod.		3 pcs	25,4(5) 38,1(6)	N°1-3
17012535 M3÷20 11 passi *threads*		M 3-4-5 6-8-10-12 14-16-18-20		25,4 - 38,1

ASSORTIMENTI A FILETTARE IN CASSETTE DI LEGNO

C.V. threading sets in wooden cases / Assortiments à fileter en acier au chrome en coffrets de bois
Juegos de utensilios a roscar en caja de madera / Gewindeschneideisenwerkzeugesätze in Holzkassette

C.V.

METRIC



Cod.		3 pcs — 38,1(5) 50,8(5)	N°2-4
17012536 M6÷24 10 passi *threads*		M 6-8-10-12 14-16-18 20-22-24	38,1-50,8

Cod.		3 pcs — 25,4(5) 38,1(4) 50,8(4)	N°1-2-4
17012537 M3÷24 13 passi *threads*		M 3-4-5-6-8 10-12-14 16-18-20 22-24	25,4-38,1-50,8



Cod.		3 pcs — 25,4(5) 38,1(4) 50,8(4) 63,5(2)	N°1-3-5
17012538 M3÷30 15 passi *threads*		M 3-4-5-6 8-10-12-14 16-18-20-22 24-27-30	25,4-38,1 50,8-63,5

Cod.		3 pcs — 25,4(7) 38,1(4) 50,8(5) 63,5(4)	N°1-3-6
17012539 M3÷33 19 passi *threads*		M 3-4-5-6-7-8 9-10-11-12-14 16-18-20-22 24-27-30-33	25,4-38,1 50,8-63,5



Cod.		3 pcs	COMBI M+BSW M+UNC
17012541 **M+BSW** M3÷24 + BSW **1/8÷1”**		M 3-4-5-6-8 10-12-14-16 18-20-22-24 BSW 1/8-5/32- 3/16-1/4-5/16 3/8-7/16-1/2 9/16-5/8-3/4- 7/8-1”	N°1-2-4 25,4-38,1-50,8
17012542 **M+UNC** M3÷24 + UNC **1/4÷1”**		M 3-4-5-6-8 10-12-14-16 18-20-22-24 UNC 1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4-7/8-1”	N°1-2-4 25,4-38,1-50,8

ASSORTIMENTI A FILETTARE PER GARAGE TIPO “FIAT RIDOTTO” IN CASSETTA DI LEGNO

Threading set in wooden case for automotive / Assortiment à fileter pour garage en coffret de bois
Juego de utensilios a roscar para garages en caja de madera / Gewindeschneidwerkzeugesätze für Garage

C.V.

Speciale per garage
Special for automotive

METRIC



M+MF 2÷18 65 pcs
635x335x48mm
Kg 5,8

Cod.		2 pcs	25,4(8) 38,1(12)	N°1-3	25,4-38,1
17012510 M+MF 2÷18 65 pcs 20 passi *threads*		M 2x0,4-3x0,5 4x0,7-5x0,8-6x1 7x1-8x1-8x1,25 10x1-10x1,25-10x1,5 12x1,25-12x1,5 12x1,75-14x1,25 14x1,5-14x2-16x1,5 16x2-18x1,5		N. 1	

ASSORTIMENTI A FILETTARE PER GARAGE TIPO “FIAT GRANDE” IN CASSETTA DI LEGNO

Threading set in wooden case for trucks / Assortiment à fileter pour garage en coffret de bois
Juego de utensilios a roscar para garages en caja de madera / Gewindeschneidwerkzeugesätze für Garage

C.V.

Speciale per camion
Special for trucks

METRIC



M+MF 3÷24
600x430x65mm
Kg 13,8

Cod.		3 pcs		N°1-2-3-4	25,4-38,1-50,8
17012512 M+MF 3÷24 111 pcs 26 passi *pitch*		3 x 0,5 4 x 0,7 5 x 0,8 6 x 1 7 x 1 8 x 0,75 8 x 1 8 x 1,25 10 x 1 10 x 1,5 11 x 0,75 12 x 1 12 x 1,5 12 x 1,75	14 x 1 14 x 1,5 14 x 2 16 x 1 16 x 1,5 16 x 2 18 x 1,5 20 x 1,5 20 x 2,5 22 x 1,5 24 x 1,5 24 x 2		

Cod.		3 pcs		N°1-3-4	25,4-38,1-50,8
17012513 M+MF 3÷24 108 pcs 30 passi *pitch*		3 x 0,5 4 x 0,7 5 x 0,8 6 x 1 7 x 1 8 x 1 8 x 1,25 9 x 1 9 x 1,25 10 x 1 10 x 1,25 10 x 1,5 12 x 1 12 x 1,25 12 x 1,5 12 x 1,75	14 x 1 14 x 1,25 14 x 1,5 14 x 2 16 x 1 16 x 1,5 16 x 2 18 x 1,5 20 x 1,5 20 x 2,5 22 x 1,5 22 x 2 24 x 1,5 24 x 2		

ASSORTIMENTI A FILETTARE PER GARAGE TIPO FIAT IN CASSETTA DI LEGNO

Threading set in wooden case for automotive / Assortiment à fileter pour garages en coffret de bois
Juego de utensilios a roscar para garages en caja de madera / Gewindeschneidwerkzeugesätze für Garage in Holzkassette

C.V.

Speciale per garage
Special for automotive

CLASSIC



FIAT

M+MF 2÷18 110 pcs
500x340x60mm
Kg 7,9

M-MF

Cod.	2 pcs	25,4(14) 38,1(21)	N°1-3
17012500 M+MF 2÷18 110 pcs 35 passi *pitch*	2 x 0,4 3 x 0,5 4 x 0,7 5 x 0,8 6 x 0,75 6 x 1 7 x 0,75 7 x 1 8 x 0,75 8 x 1 8 x 1,25 9 x 0,75 9 x 1 9 x 1,25 10 x 0,75 10 x 1 10 x 1,25 10 x 1,5	11 x 0,75 11 x 1 11 x 1,25 11 x 1,5 12 x 0,75 12 x 1 12 x 1,25 12 x 1,5 12 x 1,75 14 x 1 14 x 1,25 14 x 1,5 14 x 2 16 x 1 16 x 1,5 16 x 2 18 x 1,5	25,4-38,1 N. 1

Per ravvivare i filetti di:
to renew threads of:
FIAT, ALFA ROMEO, LANCIA, VOLKSWAGEN, BMW, MERCEDES, FORD, OPEL G.M., PEUGEOT, RENAULT, VOLVO, CITROEN, TOYOTA, NISSAN, HONDA, ETC.

PLUS



FIAT

M+MF 2÷18 111 pcs
500x340x60mm
Kg 8,0

M-MF

Cod.	2 pcs	25,4(14) 38,1(21)	N°1-3
17012505 M+MF 2÷18 111 pcs 35 passi *pitch*	2 x 0,4 3 x 0,5 4 x 0,7 5 x 0,8 6 x 0,75 6 x 1 7 x 0,75 7 x 1 8 x 0,75 8 x 1 8 x 1,25 9 x 0,75 9 x 1 9 x 1,25 10 x 0,75 10 x 1 10 x 1,25 10 x 1,5	11 x 0,75 11 x 1 11 x 1,25 11 x 1,5 12 x 0,75 12 x 1 12 x 1,25 12 x 1,5 12 x 1,75 14 x 1 14 x 1,25 14 x 1,5 14 x 2 16 x 1 16 x 1,5 16 x 2 18 x 1,5	25,4-38,1 N. 1 0÷150 mm 0,01 *Digital*



ASSORTIMENTI A FILETTARE PER GARAGE TIPO FIAT IN CASSETTA DI LEGNO

Threading set in wooden case for automotive / Assortiment à fileter pour garages en coffret de bois
Juego de utensilios a roscar para garages en caja de madera / Gewindeschneidwerkzeugesätze für Garage in Holzkassette

Per tutti gli utilizzi professionali ed industriali
For professional and industrial use

HSS

Speciale per garage
Special for automotive



FIAT HSS

M+MF 2÷18 110 pcs
500x340x60mm
Kg 7,9

M-MF

Cod.		2 pcs	25,4(14) 38,1(21)	N°1-3
17012600 M+MF 2÷18 110 pcs 35 passi *pitch*		2 x 0,4 3 x 0,5 4 x 0,7 5 x 0,8 6 x 0,75 6 x 1 7 x 0,75 7 x 1 8 x 0,75 8 x 1 8 x 1,25 9 x 0,75 9 x 1 9 x 1,25 10 x 0,75 10 x 1 10 x 1,25 10 x 1,5	11 x 0,75 11 x 1 11 x 1,25 11 x 1,5 12 x 0,75 12 x 1 12 x 1,25 12 x 1,5 12 x 1,75 14 x 1 14 x 1,25 14 x 1,5 14 x 2 16 x 1 16 x 1,5 16 x 2 18 x 1,5	25,4-38,1 N. 1

Per generare e ravvivare i filetti di:
To make and renew threads of:
FIAT, ALFA ROMEO, LANCIA, VOLKSWAGEN,BMW, MERCEDES, FORD, OPEL G.M., PEUGEOT, RENAULT, VOLVO, CITROEN, TOYOTA, NISSAN, HONDA, ETC.



Ricambi / *Spare parts*

10097	(2 pcs) HSS
	Cod.
M 2 x 0,4	1009702X04
3 x 0,5	1009703X05
4 x 0,7	1009704X07
5 x 0,8	1009705X08
6 x 0,75	1009706X075
6 x 1	1009706X1
7 x 0,75	1009707X075
7 x 1	1009707X1
8 x 0,75	1009708X075
8 x 1	1009708X1
8 x 1,25	1009708X125
9 x 0,75	1009709X075
9 x 1	1009709X1
9 x 1,25	1009709X125
10 x 0,75	1009710X075
10 x 1	1009710X1
10 x 1,25	1009710X125
10 x 1,5	1009710X15
11 x 0,75	1009711X075
11 x 1	1009711X1
11 x 1,25	1009711X125
11 x 1,5	1009711X15
12 x 0,75	1009712X075
12 x 1	1009712X1
12 x 1,25	1009712X125
12 x 1,5	1009712X15
12 x 1,75	1009712X175
14 x 1	1009714X1
14 x 1,25	1009714X125
14 x 1,5	1009714X15
14 x 2	1009714X2
16 x 1	1009716X1
16 x 1,5	1009716X15
16 x 2	1009716X2
18 x 1,5	1009718X15

12057		HSS
		Cod.
M 2 x 0,4	25,4x9	1205702X04
3 x 0,5		1205703X05
4 x 0,7		1205704X07
5 x 0,8		1205705X08
6 x 0,75		1205706X075
6 x 1		1205706X1
7 x 0,75		1205707X075
7 x 1		1205707X1
8 x 0,75		1205708X075
8 x 1		1205708X1
8 x 1,25		1205708X125
9 x 0,75		1205709X075
9 x 1		1205709X1
9 x 1,25		1205709X125
10 x 0,75	38,1x14	1205710X075
10 x 1		1205710X1
10 x 1,25		1205710X125
10 x 1,5		1205710X15
11 x 0,75		1205711X075
11 x 1		1205711X1
11 x 1,25		1205711X125
11 x 1,5		1205711X15
12 x 0,75		1205712X075
12 x 1		1205712X1
12 x 1,25		1205712X125
12 x 1,5		1205712X15
12 x 1,75		1205712X175
14 x 1		1205714X1
14 x 1,25		1205714X125
14 x 1,5		1205714X15
14 x 2		1205714X2
16 x 1		1205716X1
16 x 1,5		1205716X15
16 x 2		1205716X2
18 x 1,5		1205718X15

ASSORTIMENTI A FILETTARE WHITWORTH PER GARAGE ED INDUSTRIA

BSW-BSF threading set for garages and industries in wooden case / Assortiments à fileter pour usines et garages, filetage Whitworth
Juego de utensilios a roscar para garages y industria, rosca Whitworth / Gewindeschneidewerkzeugesätze für Garage und Industrie in Holzkassette

C.V.



BSW

Cod.		3 pcs	N°1-2
17012520 BSW 1/8÷1/2		1/8-5/32-3/16 1/4-5/16-3/8 7/16-1/2	25,4-38,1

Cod.		3 pcs	N°1-2-4
17012521 BSW 1/8÷1”		1/8-5/32-3/16 1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4-7/8-1”	25,4-38,1-50,8

Cod.		3 pcs	N°1-3-6
17012522 BSW 1/8÷1.1/2		1/8-5/32-3/16-1/4 5/16-3/8-7/16-1/2 9/16-5/8-3/4 7/8-1”-1.1/8 1.1/4-1.3/8-1.1/2	25,4-38,1 50,8-63,5

BSF

Cod.		2 pcs	N°1-4
17012525 BSF 1/4÷1”		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4-7/8-1”	25,4-38,1-50,8



BSW+BSF

Cod.		BSW 3 pcs BSF 2 pcs	N°1-3
17012528 BSW+BSF 1/4÷3/4		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4	25,4-38,1-50,8

Cod.		BSW 3 pcs BSF 2 pcs	N°1-4
17012529 BSW+BSF 1/4÷1”		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4-7/8-1”	25,4-38,1-50,8

ASSORTIMENTI A FILETTARE, FILETTATURA GAS CILINDRICA PER TUBI, IN CASSETTA DI LEGNO

BSP threading set in wooden case / Assortiments à fileter, filetage gaz cylindrique

Juego de utensilios a roscar en caja de madera, rosca BSP/ Gewindeschneidwerkzeugesätze, Rohrgewinde BSP

C.V.



BSP

Cod.		2 pcs	N°3-5
17012515 BSP 1/8÷1”		1/8-1/4-3/8 1/2-3/4-1”	38,1-50,8-63,5

Cod.		2 pcs	N°4-7
17012516 BSP 1/4÷1.1/2		1/4-3/8-1/2 3/4-1”-1.1/4 1.1/2	38,1-50,8 63,5-76,2

ASSORTIMENTI A FILETTARE, FILETTATURA GAS CONICA PER TUBI

Taper threading set in wooden case / Assortiments à fileter pour usines, filetage gaz conique

Juego de utensilios a roscar en caja de madera, rosca conica gas / Gewindeschneidwerkzeugesätze, kegeliges Rohrgewinde



BSPT

Cod.		1 pc	N°1-3-5
17012540 BSPT 1/8÷1”		1/8-1/4-3/8 1/2-3/4-1”	30x11-38x14 45x18-55x22-65x25



NPT

Cod.		1 pc	N°1-3-5
17012545 NPT 1/8÷1”		1/8-1/4-3/8 1/2-3/4-1”	30x11-38x14-45x18 55x22-65x25

ASSORTIMENTI A FILETTARE UNC E UNF PER GARAGES ED INDUSTRIA

UNC threading set for garages and industries / Assortiments à fileter pour usines et garages, filetage Americain UNC-UNF

Juego de utensilios a roscar para garages y industria, rosca Americana UNC-UNF / Gewindeschneidewerkzeugesätze, amerikanischer gewinde UNC-UNF

C.V.



UNC

Cod.		3 pcs	N°1-3
17012560 UNC 1/4÷3/4		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4	25,4-38,1-50,8

Cod.		3 pcs	N°1-4
17012561 UNF 1/4÷1"		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4-7/8-1"	25,4-38,1-50,8

Cod.		3 pcs	N°1-3-6
17012562 UNC 1/4÷1.1/2		1/4-5/16-3/8-7/16 1/2-9/16-5/8-3/4 7/8-1"-1.1/8-1.1/4 1.3/8-1.1/2	25,4-38,1 50,8-63,5



UNF

Cod.		2 pcs	N°1-3
17012565 UNF 1/4÷3/4		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4	25,4-38,1-50,8

Cod.		2 pcs	N°1-4
17012566 UNF 1/4÷1"		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4-7/8-1"	25,4-38,1-50,8

Cod.		2 pcs	N°1-3-6
17012567 UNF 1/4÷1.1/2		1/4-5/16-3/8-7/16 1/2-9/16-5/8-3/4 7/8-1"-1.1/8-1.1/4 1.3/8-1.1/2	25,4-38,1 50,8-63,5



UNC+UNF

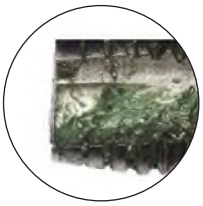
Cod.		UNC 3 pcs UNF 2 pcs	N°1-3
17012570 UNC+UNF 1/4÷3/4		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4	25,4-38,1-50,8

Cod.		UNC 3 pcs UNF 2 pcs	N°1-4
17012571 UNC+UNF 1/4÷1"		1/4-5/16-3/8 7/16-1/2-9/16 5/8-3/4-7/8-1"	25,4-38,1-50,8

GUIDA ALLA RISOLUZIONE DEI PROBLEMI DI FILETTATURA

Threading troubleshooting guide

Immagine del difetto / *Photo of the defect*



Maschio
Tap

Descrizione del difetto
Description of the defect

Intasamento dei residui di lavorazione di maschiatura nelle scanalature.
Clogging of grooves with residues from the tapping process.

Possibili soluzioni del problema
Possible solutions to the problem

Utilizzare un lubrorefrigerante più fluido (meno viscoso) oppure aumentarne il flusso.
Use more fluid coolant (less viscous) or increase the flow.

Immagine del difetto / *Photo of the defect*



Maschio
Tap

Descrizione del difetto
Description of the defect

Craterizzazione del maschio (distacco di una porzione di tagliente).
Pitting of the tap (detachment of a portion of the cutting edge).

Possibili soluzioni del problema
Possible solutions to the problem

Diminuire la velocità di maschiatura.
Reduce the tapping speed.

Immagine del difetto / *Photo of the defect*



Particolare filettato
Threaded part

Descrizione del difetto
Description of the defect

Difficoltà di inserimento di coil o di vite nell'area filettata (filetto sovra o sotto dimensionato).
Difficulty in inserting coils or screws in the threaded area (thread too small or too big).

Possibili soluzioni del problema
Possible solutions to the problem

Sostituire il maschio usurato e/o controllare la dimensione effettiva del preforo.
Replace the worn tap and/or check the actual size of the pilot-hole.

Immagine del difetto / *Photo of the defect*



Maschio
Tap

Descrizione del difetto
Description of the defect

Rottura del maschio in prossimità della punta.
Breaking of the tap near the tip.

Possibili soluzioni del problema
Possible solutions to the problem

Praticare un preforo di diametro idoneo o leggermente sovradimensionato nel caso di filettature di materiali con elevata componente elastica (es. inox).
Drill a pilot-hole with a suitable diameter or slightly larger if threading materials with high elastic component (e.g. stainless steel).

Immagine del difetto / *Photo of the defect*



Filiera
Round die

Descrizione del difetto
Description of the defect

Craterizzazione della filiera (distacco di una porzione di tagliente.
Pitting of threading die (detachment of a portion of the cutting edge).

Possibili soluzioni del problema
Possible solutions to the problem

Controllare la dimensione nominale della barra in filettatura. Utilizzare un girafiliere manuale.
Check the nominal size of the thread in the bar. Use a manual die stock.

Immagine del difetto / *Photo of the defect*



Maschio a macchina
Machine tap

Descrizione del difetto
Description of the defect

Imbocco del maschio scheggiato.
Entrance of the tap is chipped.

Possibili soluzioni del problema
Possible solutions to the problem

Controllare la dimensione del preforo e/o diminuire la velocità di filettatura e/o avanzamento.
Check the size of the pilot hole and/or decrease the threading and/or advancement speed.

Immagine del difetto / *Photo of the defect*



Maschio a macchina
Machine tap

Descrizione del difetto
Description of the defect

Rottura multipla del maschio.
Multiple breaks in the tap.

Possibili soluzioni del problema
Possible solutions to the problem

Diminuire la velocità di filettatura e/o avanzamento. Filettare spessori non superiori a 1.5 volte il diametro nominale del maschio. Utilizzare teste a maschiare con frizione (specialmente nella maschiatura di fori ciechi). Mantenere pulito il fondo del foro cieco per evitare intasamento dei trucioli e conseguente danneggiamento del maschio. Verificare il corretto allineamento assiale maschio-preforo.
Decrease the threading and/or advancement speed. Thread thicknesses should not exceed 1.5 times the nominal diameter of the tap. Use tapping heads with friction (especially when tapping blind holes). Keep the bottom of the blind hole clean in order to prevent clogging with chips and consequent damage to the tap. Check the correct alignment of the tap-pilot hole axis.

Immagine del difetto / *Photo of the defect*



Maschio a macchina
Machine tap

Descrizione del difetto
Description of the defect

Rottura del maschio in prossimità del termine dell'area filettata.
Breaking of the tap near the end of the threaded area.

Possibili soluzioni del problema
Possible solutions to the problem

Filettare spessori non superiori a 1.5 volte il diametro nominale del maschio. Utilizzare teste a maschiare con frizione (specialmente nella maschiatura di fori ciechi). Mantenere pulito il fondo del foro cieco per evitare intasamento dei trucioli e conseguente danneggiamento del maschio.
Thread thicknesses should not exceed 1.5 times the nominal diameter of the tap. Use tapping heads with friction (especially when tapping blind holes). Keep the bottom of the blind hole clean in order to prevent clogging with chips and consequent damage to the tap.

Immagine del difetto / *Photo of the defect*



Particolare filettato
Threaded part

Descrizione del difetto
Description of the defect

Filettatura realizzata con finitura scadente.
Threading made with poor finishing.

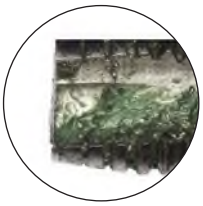
Possibili soluzioni del problema
Possible solutions to the problem

Sostituire la filiera con una non usurata. Verificare la corretta ortogonalità filiera-barra in filettatura. Effettuare mezzo giro in senso anti-orario ad ogni rotazione oraria della filiera, per rompere il truciolo prodotto.
Replace the threading die with a new one. Check the correct orthogonality of the threading die-bar. At every clockwise rotation of the die, make a half-turn in a counter-clockwise direction to break the chip produced.

GUIDE DÉPANNAGE POUR LES PROBLÈMES DE FILETAGE

Guía para la resolución de problemas de roscado

Image du dèfaut / *Foto del defecto*



Taraud
Macho

Description du dèfaut
Descripción del defecto

Obstruction suite aux résidus de taraudage dans les rainures.
Atasco de restos de material trabajado procedente del roscado en las acanaladuras.

Solutions possibles au problème
Posibles soluciones del problema

Utiliser un liquide de refroidissement plus fluide (moins visqueux) ou augmenter le débit.
Usar un lubricante-refrigerante más fluido (de menor viscosidad) o aumentar el flujo.

Image du dèfaut / *Foto del defecto*



Taraud
Macho

Description du dèfaut
Descripción del defecto

Cratérisation de l'élément mâle (détachement d'une partie de l'arête de coupe).
Formación de cráteres en el machuelo (separación de una parte del borde cortante).

Solutions possibles au problème
Posibles soluciones del problema

Diminuire la velocità di maschiatura.
Disminuir la velocidad de roscado.

Image du dèfaut / *Foto del defecto*



Détail fileté
Detalle roscado

Description du dèfaut
Descripción del defecto

Difficultés d'insertion de la bobine ou des vis dans le filetage (filet sur ou sous dimensionné).
Dificultad a introducir el inserto o el tornillo en la zona roscada (rosca demasiado grande o demasiado pequeña).

Solutions possibles au problème
Posibles soluciones del problema

Remplacer l'élément mâle usé et/ou contrôler la taille réelle du pré-percement.
Sustituir el machuelo gastado y/o controlar el tamaño real del orificio piloto.

Image du dèfaut / *Foto del defecto*



Taraud
Macho

Description du dèfaut
Descripción del defecto

Rupture de l'élément mâle près de la pointe.
Ruptura del machuelo cerca de la punta.

Solutions possibles au problème
Posibles soluciones del problema

Effectuer le pré-percement au diamètre approprié ou légèrement surdimensionné dans le cas de filetage des matériaux avec un composant élastique élevé (par exemple en acier inoxydable).
Realizar un orificio piloto de diámetro idóneo o ligeramente mayor en el caso de roscados sobre materiales con características elásticas (por ejemplo el acero).

Image du dèfaut / *Foto del defecto*



Filiere ronde
Cojinete redondo

Description du dèfaut
Descripción del defecto

Cratérisation de la filière (détachement d'une partie de l'arête de coupe).
Formación de cráteres en la terraja de roscar (separación de una parte del borde cortante).

Solutions possibles au problème
Posibles soluciones del problema

Contrôler la taille nominale de la barre en filetage. Utiliser un porte-filière manuel.
Controlar el tamaño nominal de la barra de roscado. Usar una terraja para roscar manual.

Image du dèfaut / *Foto del defecto*



Taraud machine
Macho de maquina

Description du dèfaut
Descripción del defecto

Bouche de de l'élément mâle ébréché.
Entrada del machuelo desportillada.

Solutions possibles au problème
Posibles soluciones del problema

Contrôler la taille du pré-percement et/ou diminuer la vitesse du filetage et/ou de l'avancement.
Controlar el tamaño del orificio piloto y/o disminuir la velocidad de roscado y/ avance.

Image du dèfaut / *Foto del defecto*



Taraud machine
Macho de maquina

Description du dèfaut
Descripción del defecto

Rupture multiple de l'élément mâle.
Ruptura múltiple del machuelo.

Solutions possibles au problème
Posibles soluciones del problema

Diminuer la vitesse de filetage et/ou d'avancement. Fileter des épaisseurs ne dépassant pas 1,5 fois le diamètre nominal de l'élément mâle. Utiliser des têtes de taraudage avec embrayage (spécialement dans le taraudage des trous borgnes). Conserver le fond du trou borgne propre pour éviter l'obstruction par le biais de copeaux et dommages consécutifs de l'élément mâle. Vérifier l'alignement correct axial élément mâle-pré-percement.
Disminuir la velocidad de roscado y/o de avance. Roscar espesores que no sean superiores a 1,5 veces el diámetro nominal del machuelo. Usar cabezas para el roscado con embrague (especialmente en los roscados de orificios ciegos). Mantener limpio el fondo del orificio ciego para evitar el atasco de las virutas y el consiguiente deterioro del machuelo. Controlar la correcta alineación axial machuelo-orificio piloto.

Image du dèfaut / *Foto del defecto*



Taraud machine
Macho de maquina

Description du dèfaut
Descripción del defecto

Rupture de l'élément mâle près de l'extrémité du filetage.
Ruptura del machuelo casi al final del área roscada.

Solutions possibles au problème
Posibles soluciones del problema

Fileter des épaisseurs ne dépassant pas 1,5 fois le diamètre nominal de l'élément mâle. Utiliser des têtes de taraudage avec embrayage (spécialement dans le taraudage des trous borgnes). Conserver le fond du trou borgne propre pour éviter 'obstruction par le biais de copeaux et dommages consécutifs de l'élément mâle.
Roscar espesores que no sean superiores a 1,5 veces el diámetro nominal del machuelo. Usar siempre cabezas para roscar con embrague (especialmente en los roscados de orificios ciegos). Mantener limpio el fondo del orificio ciego para evitar el atasco de virutas y el consiguiente deterioro del machuelo.

Image du dèfaut / *Foto del defecto*



Détail fileté
Detalle roscado

Description du dèfaut
Descripción del defecto

Filetage réalisé avec une finition médiocre.
Roscado realizado con acabado de baja calidad.

Solutions possibles au problème
Posibles soluciones del problema

Remplacer la filière avec une filière non usée. Vérifier l'orthogonalité correcte filière-barre en filetage. Effectuer un demi-tour vers la gauche à chaque rotation vers la droite de la filière, pour briser le copeau du produit.
Sustituir la terraja para roscar con una que no esté gastada. Controlar la correcta ortogonalidad terraja-barra de roscado. Dar media vuelta en el sentido contrario a las agujas del reloj por cada rotación en sentido horario de la terraja, para romper la viruta que se haya producido.

CUTTING TOOLS **ENGINEERING**

Con questo capitolo di utensili per alesare e fresare è compiuta la gamma più importante degli utensili da taglio per asportazione di truciolo. Una particolare attenzione è stata dedicata alle frese frontali, nelle versioni in acciaio superrapido HSS-CO8% ed in metallo duro integrale di grande qualità, con e senza rivestimento, per operazioni di sgrossatura, finitura e superfinitura.

This chapter of boring and milling tools completes the wide range of chip removal tools presented in this new catalogue. Special attention was given to the section relating to frontal burrs in HSS-CO8% steel, also with TiAlN surface coating, and in high-quality carbide for the roughing, finishing and super-finishing operations.

Ce chapitre, qui comprend les outils pour aléser et fraiser différentes classes d'acier, nous permet de compléter l'importante gamme d'outils de découpe pour l'enlèvement des copeaux présentée dans ce nouveau catalogue. Une attention particulière a été dédiée à la section des fraises frontales dans les versions en acier super rapide HSS-CO8%, présentées aussi avec le revêtement de surface TiAlN, et en métal dur intégral de grande qualité pour les opérations de dégrossissage, finition et superfinition.

Con este apartado, que incluye los utensilios para escariar y fresar en diferentes tipos de acero, completamos ulteriormente la importante gama de utensilios de corte para eliminar virutas, ilustrada en este nuevo catálogo. Se ha dedicado una atención especial a la sección de fresas frontales, en las versiones de acero super rápido HSS-CO8%, presentadas también con revestimiento superficial TiAlN, y de metal duro integral de gran calidad para operaciones de desbaste, acabado y superacabado.



ALESATORI E FRESE FRONTALI

Hand reamers & end mills
Alésoirs et fraises à rainurer
Escariadores y fresas frontales
Reibahlen und langlochfräser

ALESATORI A MACCHINA HSS-CO A CODOLO CILINDRICO

HSS-CO machine reamers / Alésoirs machine HSS-CO
Escariadores a maquina HSS-CO / Maschinenreibahlen HSS-CO

HSS-CO

29020 **29021**





10°



DIN 212/2B

45°



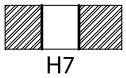
DIN 212/2C
Per centri a controllo numerico CNC

Confezione / *Packaging*



Applicazioni / *Applications*





H7

- Per operazioni di finitura di fori passanti in tolleranza H7 di materiali ferrosi e non ferrosi.
- *Suitable for finishing operations, inside through holes with H7 tolerance.*

Ø g6	d h9	l mm	L mm	pcs	Art. 29020 z	Art. 29020 cod.	Art. 29021 z	Art. 29021 cod.
3	3,0	15	61	1	6	290200300	3	290210300
4	4,0	19	75	1	6	290200400	3	290210400
5	5,0	23	86	1	6	290200500	3	290210500
6	6,0	26	93	1	6	290200600	3	290210600
7	7,0	30	109	1	6	290200700	3	290210700
8	8,0	32	117	1	6	290200800	3	290210800
9	9,0	36	125	1	6	290200900	3	290210900
10	10,0	38	133	1	6	290201000	3	290211000
10,5	10,0	38	133	1	6	290201050	3	-
11	10,0	41	142	1	8	290201100	3	290211100
12	10,0	44	151	1	8	290201200	3	290211200
13	10,0	44	151	1	8	290201300	3	290211300
14	12,5	47	160	1	8	290201400	3	290211400
15	12,5	50	162	1	8	290201500	3	-
16	12,5	52	170	1	8	290201600	3	290211600
17	14,0	54	175	1	8	290201700	3	-
18	14,0	56	182	1	8	290201800	3	290211800
19	16,0	58	189	1	10	290201900	3	-
20	16,0	60	195	1	10	290202000	3	290212000

Art. 29020: decimali e centesimali su richiesta
Decimal reamers and centesimal ones on demand

Art. 29021: Il numero dispari di taglienti genera fori con minori errori di circolarità ed evita imperfezioni dovute a vibrazioni.
The odd number of cutting edges generates holes with less circular errors and prevents imperfections due to vibrations.

Consigli d'uso / *Use tips*

Per evitare un'usura precoce dell'utensile, è buona norma fare ruotare l'alesatore sempre e solo nel verso corretto di rotazione e lavorare con uno spessore corretto di sovrametallo da asportare.
Di seguito si riporta lo spessore di sovrametallo consigliato:
Please always rotate the reamer according to the correct sense of rotation to prevent early tool wear.
Please refer to the previous table to learn the right removable stock thickness to be used.

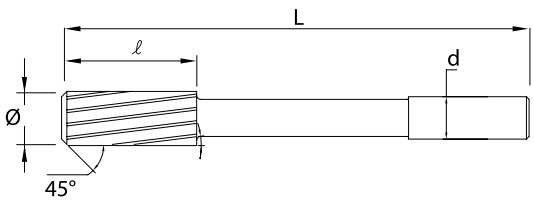
Diametro foro (mm) *Hole diameter*	Spessore consigliato di sovrametallo (mm) *Removable stock thichness*
ø≤4	0,1
4<ø≤11	0,2
11<ø≤38	0,3
40<ø≤50	0,4

Lo spessore di sovrametallo non deve essere troppo limitato, perché in tal modo l'alesatore comprime il materiale invece di tagliarlo. D'altro canto lo spessore non deve essere troppo elevato, perché l'utensile rischia di incollarsi e/o il foro generato risulta sottodimensionato.

Fori sottodimensionati si ottengono anche con velocità e avanzamenti troppo bassi o con apporti troppo limitati di lubrorefrigerante, mentre fori sovradimensionati si ottengono con parametri di taglio troppo elevati. Parametri di lavoro scorretti generano tra l'altro anche fori con una cattiva finitura.

If the removable stock thickness is too little, the reamer compresses the work-piece material instead of cutting it; on the other hand, if the removable stock thickness is too high, the tool tries to stick and/or the hole you produce is too little.

You'll produce little holes also with low cutting parameters (low cutting speed, low feed, low lubricant content), whereas you'll drill bigger holes than expected if you use high cutting parameters. Please use the recommended cutting parameters to avoid any bad finishing.



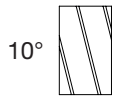
ALESATORI A MACCHINA A CODOLO CONICO MORSE

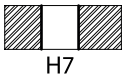
Morse taper shank machine reamers / Alésoirs machine queue conique
Escariadores a maquina mango conico Morse / Morsekegelmaschinenreibahlen

HSS-CO DIN 208 B

29026



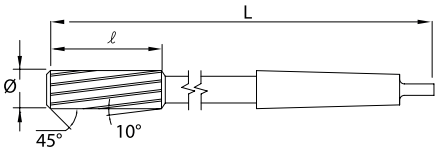




- Per operazioni di finitura di fori passanti in tolleranza H7 di materiali ferrosi e non ferrosi.
- *Suitable for finishing operations, inside through holes with H7 tolerance.*

Ø g6	M.K.	l mm	L mm	z	pcs	cod.
5	1	23	133	6	1	290260500
6	1	26	138	6	1	290260600
7	1	31	150	6	1	290260700
8	1	33	156	6	1	290260800
9	1	36	162	6	1	290260900
10	1	38	168	6	1	290261000
11	1	41	175	8	1	290261100
12	1	44	182	8	1	290261200
13	1	44	182	8	1	290261300
14	1	47	189	8	1	290261400
15	2	50	204	8	1	290261500
16	2	52	210	8	1	290261600
17	2	54	214	8	1	290261700
18	2	56	219	8	1	290261800
19	2	58	223	10	1	290261900
20	2	60	228	10	1	290262000
21	2	62	232	10	1	290262100

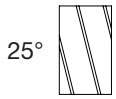
Ø g6	M.K.	l mm	L mm	z	pcs	cod.
22	2	64	237	10	1	290262200
23	2	66	241	10	1	290262300
24	3	68	268	10	1	290262400
25	3	68	268	10	1	290262500
26	3	70	273	10	1	290262600
27	3	71	277	10	1	290262700
28	3	71	277	10	1	290262800
30	3	73	281	10	1	290263000
31	3	75	285	12	1	290263100
32	4	77	317	12	1	290263200
34	4	78	321	12	1	290263400
35	4	78	321	12	1	290263500
36	4	79	325	12	1	290263600
38	4	81	329	12	1	290263800
40	4	81	329	12	1	290264000
45	4	83	336	12	1	290264500
50	4	86	344	12	1	290265000



HSS DIN 311

29039







- Per alesare fori disallineati che devono essere rivettati o imbullonati insieme
- *Suitable for finishing operations, throught misaligned holes*

Ø g6	M.K.	l mm	L mm	z	pcs	cod.
10	1	95	171	4	1	290391000
11	1	100	176	4	1	290391100
12	2	105	199	5	1	290391200
13	2	105	199	5	1	290391300
14	2	115	209	5	1	290391400
15	2	125	209	5	1	290391500
16	2	135	219	5	1	290391600
17	3	135	229	5	1	290391700
18	3	145	251	5	1	290391800
19	3	145	261	5	1	290391900
20	3	155	261	5	1	290392000
21	3	155	271	5	1	290392100
22	3	165	271	5	1	290392200
23	3	165	281	5	1	290392300
24	3	180	281	5	1	290392400
25	3	180	296	5	1	290392500
26	3	180	296	5	1	290392600
27	3	195	311	5	1	290392700
28	3	195	311	5	1	290392800
30	3	195	311	5	1	290393000
31	3	210	326	5	1	290393100
32	4	210	354	5	1	290393200
34	4	220	364	5	1	290393400
36	4	220	364	5	1	290393600

ALESATORI A MANICOTTO IN HSS CON TAGLIENTI ELICOIDALI E FORO CONICO 1:30

HSS shell reamers with taper bore 1:30 / Alésoirs creux à alesage conique 1:30
Escariadores huecos a maquina HSS conicidad 1:30 / Aufsteckreibahlen mit kegeliger Borhung 1:30

HSS DIN 219 B

29040





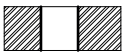
Ø g6	Ø foro/*hole* mm	*l* mm	L mm	z	pcs	cod.
30	13,0	32	45	10	1	290403000
32	16,0	36	50	12	1	290403200
34	16,0	36	50	12	1	290403400
35	16,0	36	50	12	1	290403500
36	19,0	40	56	12	1	290403600
38	19,0	40	56	12	1	290403800
40	19,0	40	56	12	1	290404000
42	19,0	40	56	12	1	290404200
45	22,0	45	63	12	1	290404500
46	22,0	45	63	12	1	290404600
48	22,0	45	63	12	1	290404800
50	22,0	45	63	12	1	290405000
52	27,0	50	71	12	1	290405200
55	27,0	50	71	12	1	290405500
58	27,0	50	71	12	1	290405800
60	27,0	50	71	12	1	290406000

Confezione / *Packaging*



Applicazioni / *Applications*





- Per operazioni di finitura di fori passanti in tolleranza H7 di materiali ferrosi e non ferrosi. Da utilizzare con apposito mandrino porta alesatore.
- *Suitable for finishing operations, inside through holes with H7 tolerance. Use with proper drill chuck.*

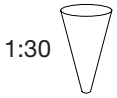
MANDRINO PORTA ALESATORE A MANICOTTO CON ESTRATTORE

Drill chuck for shell reamers with ejecting tool / Mandrin porte-alésoir creux avec extracteur
Mandrino para corona de escariador a maquina / Bohrfutter für Aufsteckreibahlen mit Abzieher

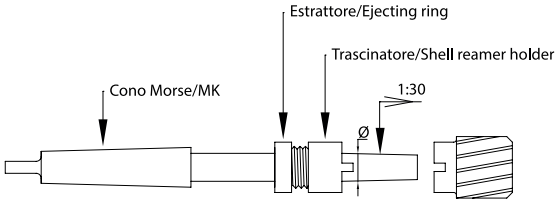
DIN 217

29041





M.K.	Ø foro/*hole* mm	L mm	cod.
3	13	250	290410313
3	16	261	290410316
4	19	298	290410419
4	22	312	290410422
5	27	359	290410527



ALESATORI A MANO IN HSS A CODOLO CILINDRICO

HSS hand reamers / Alésoirs à main HSS
Escariadores a mano HSS / Handreibahlen HSS

HSS DIN 206 B

29001





Confezione / *Packaging*



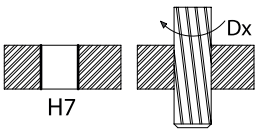
Applicazioni / *Applications*



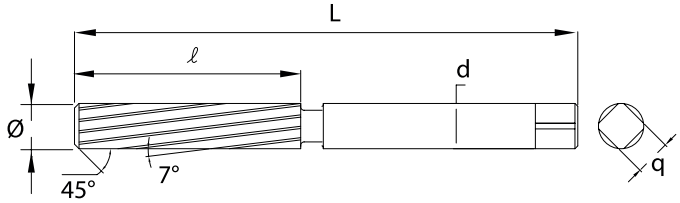
Ø g6	d e9	q mm	l mm	L mm	z	pcs	cod.
4	4	3,0	38	76	6	1	290010400
5	5	3,8	44	87	6	1	290010500
6	6	4,9	47	93	6	1	290010600
7	7	5,5	54	107	6	1	290010700
8	8	6,2	58	115	6	1	290010800
9	9	7,0	62	124	6	1	290010900
10	10	8,0	66	133	6	1	290011000
11	11	9,0	71	142	8	1	290011100
12	12	9,0	76	152	8	1	290011200
13	13	10,0	76	152	8	1	290011300
14	14	11,0	81	163	8	1	290011400
15	15	12,0	81	163	8	1	290011500
16	16	12,0	87	175	8	1	290011600
17	17	13,0	87	175	8	1	290011700
18	18	14,5	93	188	8	1	290011800
19	19	14,5	93	188	10	1	290011900
20	20	16,0	100	201	10	1	290012000
21	21	16,0	100	201	10	1	290012100
22	22	18,0	107	215	10	1	290012200
23	23	18,0	107	215	10	1	290012300
24	24	18,0	115	231	10	1	290012400
25	25	20,0	115	231	10	1	290012500
26	26	20,0	115	231	10	1	290012600
27	27	22,0	124	247	10	1	290012700
28	28	22,0	124	247	10	1	290012800
30	30	24,0	124	247	10	1	290013000
32	32	24,0	133	265	12	1	290013200
34	34	26,0	142	284	12	1	290013400
35	35	29,0	142	284	12	1	290013500
36	36	29,0	142	284	12	1	290013600
38	38	29,0	152	305	12	1	290013800
40	40	32,0	152	305	12	1	290014000

Sovrametallo consigliato
Recommended removable stock

Diametro foro (mm) *Hole diameter*	Spessore consigliato di sovrametallo (mm) *Removable stock thichness*
ø≤11	0,2
11<ø≤38	0,3
ø=40	0,4



- Per operazioni di calibratura, lavori di manutenzione o riparazione di fori passanti in tolleranza H7.
- *Suitable for gauging operations, maintenance and recovery of through holes with H7 tolerance.*



ALESATORI REGOLABILI A MANO A ESPANSIONE IN HSS A CODOLO CILINDRICO

HSS adjustable hand reamers / Alésoirs à main réglables HSS

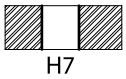
Escariadores extensibles en HSS con guia / Handreibahlen mit verschiebbaren Messen

HSS DIN 859/B

29006



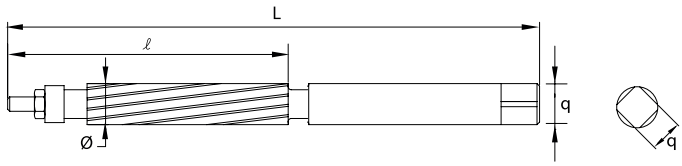




Piccola espansione 1/100 del diametro nominale

Adjustable hand reamer 1/100 nominal diameter

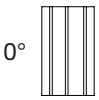
Ø mm	d e9	q mm	l mm	L mm	z	pcs	cod.
4	4	3,0	24	76	6	1	29006001
5	5	3,8	30	87	6	1	29006002
6	6	4,9	33	93	6	1	29006003
7	7	5,5	38	107	9	1	29006004
8	8	6,2	42	115	9	1	29006005
9	9	7,0	46	124	9	1	29006006
10	10	8,0	50	133	9	1	29006007
11	11	9,0	51	142	9	1	29006008
12	12	9,0	56	152	9	1	29006009
13	13	10,0	56	152	9	1	29006010
14	14	11,0	61	163	9	1	29006011
15	15	12,0	61	163	9	1	29006012
16	16	12,0	67	175	9	1	29006013
19	19	14,5	68	188	9	1	29006014
20	20	16,0	75	201	9	1	29006015
22	22	18,0	82	215	12	1	29006016
24	24	18,0	85	231	12	1	29006017
25	25	20,0	85	231	12	1	29006018
30	30	24,0	94	247	12	1	29006019
33	33	26,0	99	265	12	1	29006020
38	38	29,0	111	305	12	1	29006021

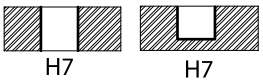


HSS

29005





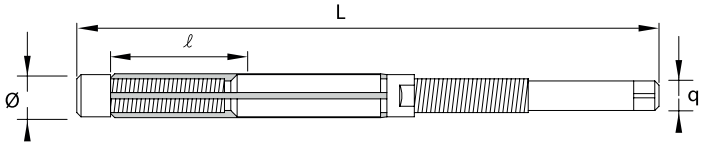


- Per eseguire riparazioni e lavorazioni leggere in fori ciechi e/o passanti in tolleranza H7.
- *Suitable for recovery and light works inside blind and/or through holes with H7 tolerance.*

Grande espansione, lame corte

Expanding hand reamer short type

Ø capacità *range*	q mm	l mm	L mm	z	pcs	cod.
6,4-7,2	3,0	32	110	4	1	29005001
7,2-8	3,4	32	110	4	1	29005002
8-9	3,8	34	115	5	1	29005003
9-10	4,3	34	115	5	1	29005004
10-11	4,9	34	115	5	1	29005005
11-12	4,9	35	125	5	1	29005006
12-13,5	6,2	41	135	5	1	29005007
13,5-15,5	7,0	50	146	5	1	29005008
15,5-18	8,0	60	166	5	1	29005009
18-21	9,0	65	178	5	1	29005010
21-24	11,0	76	195	5	1	29005011
24-27,5	12,0	82	218	5	1	29005012
27,5-31,5	14,5	86	245	5	1	29005013
31,5-37	18,0	98	280	6	1	29005014
37-45	20,0	108	325	6	1	29005015
45-55	26,0	118	370	6	1	29005016
55-65	32,0	125	400	6	1	29005017
67-80	39,0	140	435	8	1	29005018



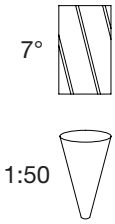
ALESATORI A MANO IN HSS A CODOLO CILINDRICO, CONICITÀ 1:50, PER FORI DI SPINE CONICHE

Taper pin hand reamers, taper 1:50 / Alésoirs à main pour trous de goupilles coniques, conicité 1:50 / Escariadores a mano HSS, conicidad 1:50 / Handreibahlen für Kegelstiftbohrungen, Kegel 1:50

HSS DIN 9 B

29010





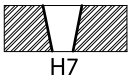
Ø mm	Ø min mm	Ø max mm	q mm	l mm	L mm	z	pcs	cod.
4	3,90	5,25	4,00	68	93	5	1	290100400
5	4,90	6,36	5,00	73	100	5	1	290100500
6	5,90	8,00	6,30	105	135	6	1	290100600
8	7,90	10,80	8,00	145	180	7	1	290100800
10	9,90	13,40	10,00	175	215	7	1	290101000
12	11,80	16,00	11,20	210	255	7	1	290101200
16	15,80	20,40	14,00	230	280	9	1	290101600
20	19,80	24,80	18,00	250	310	9	1	290102000

Confezione / *Packaging*

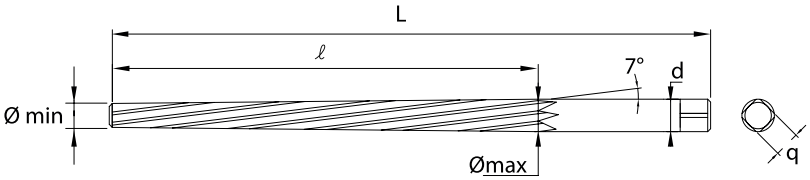


Applicazioni / *Applications*





- Per operazioni di alesatura in fori di spine coniche con tolleranza H7. Scaricare ripetutamente i trucioli durante la lavorazione.
- *Suitable for reaming in taper pin holes with H7 tolerance. Please remove the chips while reaming.*



FRESE FRONTALI CILINDRICHE A 4 TAGLIENTI IN HSS-CO8% CON ATTACCO WELDON

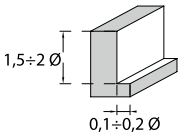
HSS-CO8% four flutes end mills, Weldon shank / Fraises à rainurer HSS-CO8%, quatre dents, queue Weldon
Fresas frontales HSS-CO8%, mango Weldon /Vierschneider Langlochfräser

Universal

DIN 844 K

24013 24015





Finitura
Finishing

Serie corta / Short serie / Sèrie courte
Serie corta / Kurze Ausführung

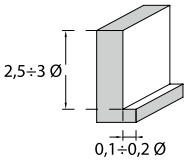
Ø k10	d mm	L mm	l mm	z	pcs	Art. 24013 HSS-Co8% cod.	Art. 24015 HSS-Co8%+TiAlN cod.
3	6	52	8	4	1	240130300	240150300
4	6	55	11	4	1	240130400	240150400
5	6	57	13	4	1	240130500	240150500
6	6	57	13	4	1	240130600	240150600
7	10	66	16	4	1	240130700	240150700
8	10	69	19	4	1	240130800	240150800
9	10	69	19	4	1	240130900	240150900
10	10	72	22	4	1	240131000	240151000
12	12	83	26	4	1	240131200	240151200
14	12	83	26	4	1	240131400	240151400
16	16	92	32	4	1	240131600	240151600
18	16	92	32	4	1	240131800	240151800
20	20	104	38	4	1	240132000	240152000
22	20	104	38	6	1	240132200	240152200

Universal

DIN 844 L

24014 24016





Finitura
Finishing

Serie lunga / Long serie / Sèrie longue
Serie larga / Lange Ausführung

Ø k10	d mm	L mm	l mm	z	pcs	Art. 24014 HSS-Co8% cod.	Art. 24016 HSS-Co8%+TiAlN cod.
4	6	63	19	4	1	240140400	240160400
5	6	68	24	4	1	240140500	240160500
6	6	68	24	4	1	240140600	240160600
8	10	88	38	4	1	240140800	240160800
10	10	95	45	4	1	240141000	240161000
12	12	110	53	4	1	240141200	240161200
14	12	110	53	4	1	240141400	240161400
16	16	123	63	4	1	240141600	240161600
18	16	123	63	4	1	240141800	240161800
20	20	141	75	4	1	240142000	240162000

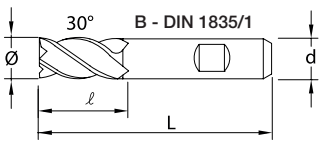
Confezione / *Packaging*



Applicazioni / *Applications*



- Acciai e metalli con R<850 N/mm², alluminio con Si 3÷12%, ghisa con durezza HB30<200
- *Steel and metals with R<850 N/mm², aluminium with Si 3÷12%, cast iron with HB30<200.*



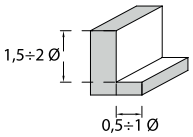
FRESE FRONTALI CILINDRICHE A 4 TAGLIENTI A SGROSSARE IN HSS-CO8% CON ATTACCO WELDON

HSS-CO8% four flutes end mills, Weldon shank for roughing purpose / Fraises à rainurer HSS-CO8% pour dégrossissage, quatre dents, queue Weldon
Fresas frontales HSS-CO8%, mango Weldon / Vierischneider Langlochfräser

DIN 844 K

24017 24019





Sgrossatura
Roughing

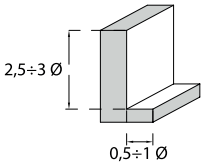
Serie corta / Short serie / Sèrie courte
Serie corta / Kurze Ausführung

Ø k12	d mm	L mm	l mm	z	pcs	Art. 24017 HSS-Co8% cod.	Art. 24019 HSS-Co8%+TiAlN cod.
6	6	57	13	4	1	240170600	240190600
8	10	69	19	4	1	240170800	240190800
10	10	72	22	4	1	240171000	240191000
12	12	79	22	4	1	240171200	240191200
14	12	83	26	4	1	240171400	240191400
16	16	92	32	4	1	240171600	240191600
18	16	92	32	4	1	240171800	240191800
20	20	104	38	4	1	240172000	240192000

DIN 844 L

24018 24020





Sgrossatura
Roughing

Serie lunga / Long serie / Sèrie longue
Serie larga / Lange Ausführung

Ø k12	d mm	L mm	l mm	z	pcs	Art. 24018 HSS-Co8% cod.	Art. 24020 HSS-Co8%+TiAlN cod.
6	6	68	24	4	1	240180600	240200600
8	10	88	38	4	1	240180800	240200800
10	10	95	45	4	1	240181000	240201000
12	12	110	53	4	1	240181200	240201200
14	12	110	53	4	1	240181400	240201400
16	16	123	63	4	1	240181600	240201600
18	16	123	63	4	1	240181800	240201800
20	20	141	75	4	1	240182000	240202000
22	20	141	75	4	1	240182200	240202200
25	25	166	90	4	1	240182500	240202500
28	25	166	90	4	1	240182800	240202800

Confezione / *Packaging*

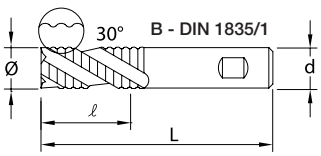


Applicazioni / *Applications*



- Acciai e metalli con R<850 N/mm², ghisa con durezza HB30<200, acciai molto duri con R<1000 N/mm².
- Steel and metals with R<850 N/mm2, cast iron with HB30<200, hard steel with R<1000 N/mm².

Rompitruciolo tipo NR
Chip-breaker NR type



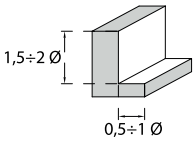
FRESE FRONTALI CIL. A 4 TAGLIENTI PER SEMIFINITURA IN HSS-CO8% CON ATTACCO WELDON

HSS-CO8% four flutes end mills, Weldon shank for finishing purpose / Fraises à rainurer HSS-CO8% pour semi-finissage, quatre dents, queue Weldon
Fresas frontales HSS-CO8%, mango Weldon /Vierschneider Langlochfräser

DIN 844 K

24021 24023





Semifinitura
Semifinishing

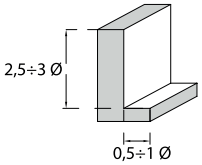
Serie corta / Short serie / Sèrie courte
Serie corta / Kurze Ausführung

Ø k12	d mm	L mm	l mm	z	pcs	Art. 24021 HSS-Co8% cod.	Art. 24023 HSS-Co8%+TiAlN cod.
6	6	57	13	4	1	240210600	240230600
8	10	69	19	4	1	240210800	240230800
10	10	72	22	4	1	240211000	240231000
12	12	83	26	4	1	240211200	240231200
14	12	83	26	4	1	240211400	240231400
16	16	92	32	4	1	240211600	240231600
18	16	92	32	4	1	240211800	240231800
20	20	104	38	4	1	240212000	240232000

DIN 844 L

24022 24024





Semifinitura
Semifinishing

Serie lunga / Long serie / Sèrie longue
Serie larga / Lange Ausführung

Ø k12	d mm	L mm	l mm	z	pcs	Art. 24022 HSS-Co8% cod.	Art. 24024 HSS-Co8%+TiAlN cod.
6	6	68	24	4	1	240220600	240240600
8	10	88	38	4	1	240220800	240240800
10	10	95	45	4	1	240221000	240241000
12	12	110	53	4	1	240221200	240241200
14	12	110	53	4	1	240221400	240241400
16	16	123	63	4	1	240221600	240241600
18	16	123	63	4	1	240221800	240241800
20	20	141	75	4	1	240222000	240242000
22	20	141	75	4	1	240222200	240242200
25	25	166	90	4	1	240222500	240242500
28	25	166	90	4	1	240222800	240242800

Confezione / *Packaging*



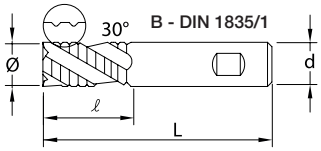
Applicazioni / *Applications*



Acciaio *Steel* — Metals

- Acciai e metalli con R<850 N/mm², ghisa con durezza HB30<200, acciai molto duri con R<1000 N/mm².
- Steel and metals with R<850 N/mm², cast iron with HB30<200, hard steel with R<1000 N/mm².

Rompitruciolo tipo NF
Chip-breaker NF type



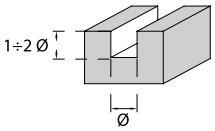
FRESE FRONTALI CILINDRICHE A 3 TAGLIENTI IN HSS-CO8% CON ATTACCO WELDON

HSS-CO8% three flutes end mills, Weldon shank / Fraises à rainurer HSS-CO8%, trois dents, queue Weldon /
Fresas frontales HSS-CO8%, mango Weldon /Dreischneider Langlochfräser

DIN 844 K

24009 24011





Fresa per cave
Slot end mills

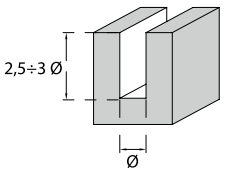
Serie corta / Short serie / Sèrie courte
Serie corta / Kurze Ausführung

Ø e8	d mm	L mm	l mm	z	pcs	Art. 24009 HSS-Co8% cod.	Art. 24011 HSS-Co8%+TiAlN cod.
3	6	52	13	3	1	240090300	240110300
4	6	55	13	3	1	240090400	240110400
5	6	57	13	3	1	240090500	240110500
6	6	57	13	3	1	240090600	240110600
8	10	69	19	3	1	240090800	240110800
10	10	72	22	3	1	240091000	240111000
12	12	79	22	3	1	240091200	240111200
14	12	83	26	3	1	240091400	240111400
16	16	92	32	3	1	240091600	240111600
18	16	92	32	3	1	240091800	240111800
20	20	104	38	3	1	240092000	240112000

DIN 844 L

24010 24012





Fresa per cave
Slot end mills

Serie lunga / Long serie / Sèrie longue
Serie larga / Lange Ausführung

Ø h10	d mm	L mm	l mm	z	pcs	Art. 24010 HSS-Co8% cod.	Art. 24012 HSS-Co8%+TiAlN cod.
3	6	56	12	3	1	240100300	240120300
4	6	63	19	3	1	240100400	240120400
5	6	68	24	3	1	240100500	240120500
6	6	68	24	3	1	240100600	240120600
8	10	88	38	3	1	240100800	240120800
10	10	95	45	3	1	240101000	240121000
12	12	110	53	3	1	240101200	240121200
14	12	110	53	3	1	240101400	240121400
16	16	123	63	3	1	240101600	240121600
18	16	123	63	3	1	240101800	240121800
20	20	141	75	3	1	240102000	240122000

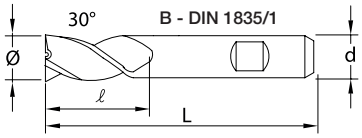
Confezione / *Packaging*



Applicazioni / *Applications*



- Acciai e metalli con R<850 N/mm².
- Steel and metals with R<850 N/mm².



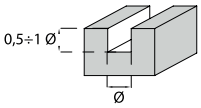
FRESE FRONTALI CILINDRICHE A 2 TAGLIENTI IN HSS-CO8% CON ATTACCO WELDON

HSS-CO8% two flutes end mills, Weldon shank / Fraises à rainurer HSS-CO8%, deux dents, queue Weldon
Fresas frontales HSS-CO8%, mango Weldon /Zweischneider Langlochfräser

DIN 327 D

24001 24003





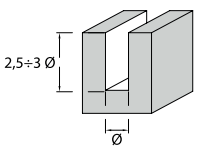
Fresa per cave
Slot end mills

Serie corta / Short serie / Sèrie courte Serie corta / Kurze Ausführung							Art. 24001 HSS-Co8%	Art. 24003 HSS-Co8%+TiAlN
Ø	tol.	d mm	L mm	l mm	z	pcs	cod.	cod.
2	e8	6	48	4	2	1	240010200	240030200
2,5	e8	6	49	5	2	1	240010250	240030250
3	e8	6	49	5	2	1	240010300	240030300
3,5	h10	6	51	7	2	1	240010350	240030350
4	e8	6	51	7	2	1	240010400	240030400
4,5	h10	6	52	8	2	1	240010450	240030450
5	e8	6	52	8	2	1	240010500	240030500
5,5	h10	6	52	8	2	1	240010550	240030550
6	e8	6	52	8	2	1	240010600	240030600
6,5	h10	10	60	10	2	1	240010650	240030650
7	e8	10	60	10	2	1	240010700	240030700
7,5	h10	10	61	11	2	1	240010750	240030750
8	e8	10	61	11	2	1	240010800	240030800
8,5	h10	10	61	11	2	1	240010850	240030850
9	h10	10	61	11	2	1	240010900	240030900
9,5	h10	10	63	13	2	1	240010950	240030950
10	e8	10	63	13	2	1	240011000	240031000
11	h10	12	73	16	2	1	240011100	240031100
12	e8	12	73	16	2	1	240011200	240031200
13	h10	12	73	16	2	1	240011300	240031300
14	e8	12	73	16	2	1	240011400	240031400
15	h10	12	79	19	2	1	240011500	240031500
16	e8	16	79	19	2	1	240011600	240031600
18	e8	16	79	19	2	1	240011800	240031800
20	e8	20	88	22	2	1	240012000	240032000

DIN 844 L

24002 24004





Fresa per cave
Slot end mills

Serie lunga / Long serie / Sèrie longue Serie larga / Lange Ausführung						Art. 24002 HSS-Co8%	Art. 24004 HSS-Co8%+TiAlN
Ø h10	d mm	L mm	l mm	z	pcs	cod.	cod.
3	6	56	12	2	1	240020300	240040300
4	6	63	19	2	1	240020400	240040400
5	6	68	24	2	1	240020500	240040500
6	6	68	24	2	1	240020600	240040600
8	10	88	38	2	1	240020800	240040800
10	10	95	45	2	1	240021000	240041000
12	12	110	53	2	1	240021200	240041200
14	12	110	53	2	1	240021400	240041400
16	16	123	63	2	1	240021600	240041600
18	16	123	63	2	1	240021800	240041800
20	20	141	75	2	1	240022000	240042000

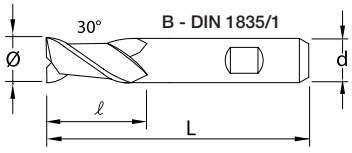
Confezione / Packaging



Applicazioni / *Applications*



- Acciai e metalli con R<850 N/mm², ghisa con durezza HB30<200.
- *Steel and metals with R<850 N/mm², cast iron with HB30<200.*

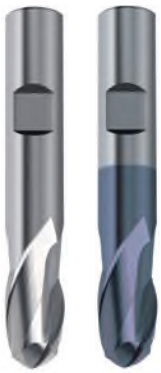


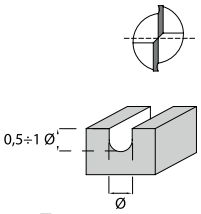
FRESE FRONTALI CILINDRICHE A RAGGIO IN HSS-CO8% CON ATTACCO WELDON

HSS-CO8% round edges end mills, Weldon shank / Fraises à rainurer à bout hémisphérique HSS-CO8%, queue Weldon
Fresas frontales HSS-CO8%, mango Weldon /Zweischneider Langlochfräser

DIN 327 D

24005 24007





Fresa per cave
Slot end mills

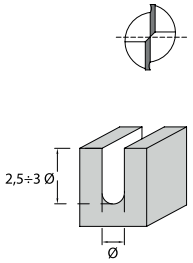
443

Serie corta / Short serie / Sèrie courte Serie corta / Kurze Ausführung						Art. 24005 HSS-Co8%	Art. 24007 HSS-Co8%+TiAlN
Ø e8/h10	d mm	L mm	l mm	z	pcs	cod.	cod.
2	6	48	4	2	1	240050200	240070200
3	6	49	5	2	1	240050300	240070300
4	6	51	7	2	1	240050400	240070400
5	6	52	8	2	1	240050500	240070500
6	6	52	8	2	1	240050600	240070600
7	10	60	10	2	1	240050700	240070700
8	10	61	11	2	1	240050800	240070800
9	10	61	11	2	1	240050900	240070900
10	10	63	13	2	1	240051000	240071000
12	12	73	16	2	1	240051200	240071200
14	12	73	16	2	1	240051400	240071400
16	16	79	19	2	1	240051600	240071600
18	16	79	19	2	1	240051800	240071800
20	20	88	22	2	1	240052000	240072000

Norma Krino

24006 24008





Fresa per cave
Slot end mills

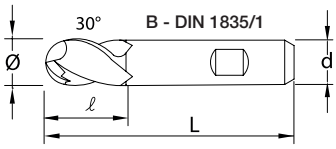
443

Serie lunga / Long serie / Sèrie longue Serie larga / Lange Ausführung						Art. 24006 HSS-Co8%	Art. 24008 HSS-Co8%+TiAlN
Ø h10	d mm	L mm	l mm	z	pcs	cod.	cod.
3	6	56	8	2	1	240060300	240080300
4	6	63	11	2	1	240060400	240080400
5	6	68	13	2	1	240060500	240080500
6	6	68	13	2	1	240060600	240080600
8	10	88	19	2	1	240060800	240080800
10	10	95	22	2	1	240061000	240081000
12	12	110	26	2	1	240061200	240081200
14	12	110	26	2	1	240061400	240081400
16	16	123	32	2	1	240061600	240081600
18	16	123	32	2	1	240061800	240081800
20	20	141	38	2	1	240062000	240082000

Applicazioni / *Applications*



- Acciai e metalli con R<850 N/mm², ghisa con durezza HB30<200.
- *Steel and metals with R<850 N/mm², cast iron with HB30<200.*



FRESA FRONTALE PER PANTOGRAFI A UN DENTE PER ALLUMINIO

One flute end mills for aluminium

Alu

26100



1 Dente
1 Cutting edge

HSS-G

Ø mm	d mm	L mm	l mm	z	cod.
3	8	60	12	1	2610003060
4	8	60	12	1	2610004060
4	8	80	16	1	2610004080
5	8	60	12	1	2610005060
5	8	80	16	1	2610005080
6	8	60	14	1	2610006060
6	8	90	16	1	2610006090
8	8	80	15	1	2610008080
8	8	100	28	1	2610008100
10	10	80	15	1	2610010080

Confezione / *Packaging*



Applicazioni / *Applications*

Alu

FRESE FRONTALI CILINDRICHE A 4 TAGLIENTI IN HSS-CO5% CON ATTACCO CONICO MORSE

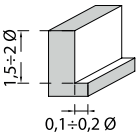
HSS-CO5% Morse taper end mills / Fraises à rainurer HSS-CO5%, queue Morse
Fresas frontales HSS-CO5%, mango Morse / Vierschneider Langlochfräser

24025

Art. 24025
Serie corta / Short serie / Sèrie courte / Serie corta / Kurze Ausführung **HSS-CO5%**



DIN 845K



Finitura
Finishing

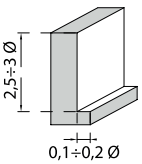
Ø k10	MK	M	FORM	L mm	l mm	z	pcs	cod.
16	2	M10	A	117	32	4	1	240251600
18	2	M10	A	117	32	4	1	240251800
20	2	M10	A	123	38	4	1	240252000
25	3	M12	A	147	45	6	1	240252500
28	3	M12	A	147	45	6	1	240252800
30	3	M12	A	147	45	6	1	240253000
32	4	M16	A	178	53	6	1	240253200
40	4	M16	A	178	63	6	1	240254000

24026

Art. 24026
Serie lunga / Long serie / Sèrie longue / Serie larga / Lange Ausführung



DIN 845L



Finitura
Finishing

Ø k10	MK	M	FORM	L mm	l mm	z	pcs	cod.
16	2	M10	A	148	63	4	1	240261600
20	2	M10	A	160	75	4	1	240262000
25	3	M12	A	192	90	6	1	240262500
28	3	M12	A	192	90	6	1	240262800
32	4	M16	A	231	106	6	1	240263200
40	4	M16	A	250	125	6	1	240264000

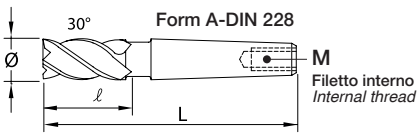
Confezione / *Packaging*



Applicazioni / *Applications*



- Acciai e metalli con R<850 N/mm², ghisa con durezza HB30<200.
- *Steel and metals with R<850 N/mm², cast iron with HB30<200.*



FRESE FRONTALI CILINDRICHE A 4 TAGLIENTI A SGROSSARE IN HSS-CO5% CON ATTACCO CONICO MORSE

HSS-CO5% Morse taper end mills for roughing purpose / Fraises à rainurer HSS-CO5%, queue Morse, pour dégrossissage
Fresas frontales HSS-CO5%, mango Morse / Vierschneider Langlochfräser

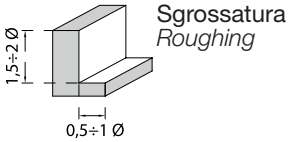
24029

Art. 24029
Serie corta / Short serie / Sèrie courte / Serie corta / Kurze Ausführung

HSS-CO5%



DIN 845K



Sgrossatura
Roughing

Ø k12	MK	M	FORM	L mm	l mm	z	pcs	cod.
16	2	M10	A	117	32	4	1	240291600
18	2	M10	A	117	32	4	1	240291800
20	2	M10	A	123	38	4	1	240292000
25	3	M12	A	147	45	6	1	240292500
28	3	M12	A	147	45	6	1	240292800
30	3	M12	A	147	45	6	1	240293000
40	4	M12	A	147	45	6	1	240294000

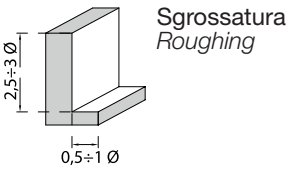
24030

Art. 24030
Serie lunga / Long serie / Sèrie longue / Serie larga / Lange Ausführung

Ø k12	MK	M	FORM	L mm	l mm	z	pcs	cod.
16	2	M10	A	148	63	4	1	240301600
20	2	M10	A	160	75	4	1	240302000
25	3	M12	A	192	90	6	1	240302500
28	3	M12	A	192	90	6	1	240302800



DIN 845L



Sgrossatura
Roughing

Confezione / *Packaging*

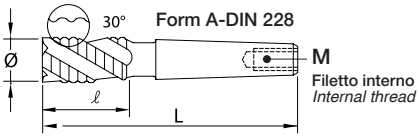


Applicazioni / *Applications*



- Acciai e metalli con R<850 N/mm², ghisa con durezza HB30<200.
- *Steel and metals with R<850 N/mm², cast iron with HB30<200.*

Rompitruciolo tipo NR
Chip-breaker NR type



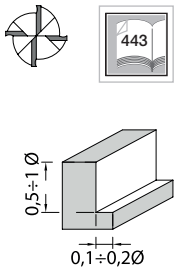
FRESE FRONTALI A 4 TAGLIENTI IN METALLO DURO INTEGRALE

*Four flutes **carbide** end mills / Fraise carbure quatre dents*
Fresas frontales de metal duro cuatro dientes / Hartmetall Vierschneider Langlochfräser

DIN 6527 K

24165 24167





Finitura
Finishing

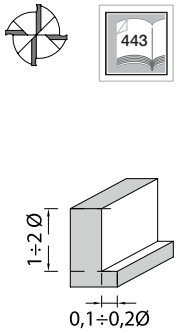
Serie corta / *Short serie*

Ø h10	d mm	L mm	l mm	z	pcs	Art. 24165 VHM Carbide cod.	Art. 24167 VHM+TiAlN Carbide + TiAlN cod.
2	6	50	4	4	1	241650200	241670200
3	6	50	5	4	1	241650300	241670300
4	6	54	8	4	1	241650400	241670400
5	6	54	9	4	1	241650500	241670500
6	6	54	10	4	1	241650600	241670600
8	8	58	12	4	1	241650800	241670800
10	10	66	14	4	1	241651000	241671000
12	12	73	16	4	1	241651200	241671200
14	14	75	18	4	1	241651400	241671400
16	16	82	22	4	1	241651600	241671600
18	18	84	24	4	1	241651800	241671800
20	20	92	26	4	1	241652000	241672000

DIN 6527 L

24166 24168





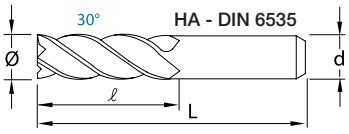
Finitura
Finishing

Serie lunga / *Long serie*

Ø h10	d mm	L mm	l mm	z	pcs	Art. 24166 VHM Carbide cod.	Art. 24168 VHM+TiAlN Carbide + TiAlN cod.
2	6	57	7	4	1	241660200	241680200
3	6	57	8	4	1	241660300	241680300
4	6	57	11	4	1	241660400	241680400
5	6	57	13	4	1	241660500	241680500
6	6	57	13	4	1	241660600	241680600
8	8	63	19	4	1	241660800	241680800
9	10	72	19	4	1	241660900	241680900
10	10	72	22	4	1	241661000	241681000
12	12	83	26	4	1	241661200	241681200
14	14	83	26	4	1	241661400	241681400
16	16	92	32	4	1	241661600	241681600
18	18	92	32	4	1	241661800	241681800
20	20	104	38	4	1	241662000	241682000

R < 850 N/mm²
Acciaio *Steel* | Metals | Alu Si 3÷12%

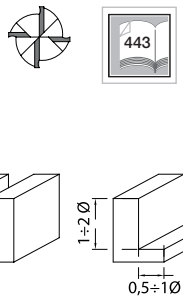
HB30<200
Ghisa *Cast iron*



DIN 6527 L

24182





Fresa per cave
Slot end mills

Sgrossatura
Roughing

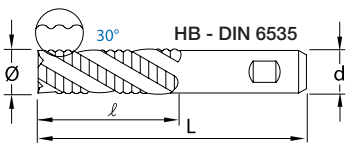
Serie lunga / *Long serie*

Ø h10	d mm	L mm	l mm	z	pcs	VHM +TiAlN Carbide + TiAlN cod.
6	6	57	13	4	1	241820600
8	8	63	19	4	1	241820800
10	10	72	22	4	1	241821000
12	12	83	26	4	1	241821200
14	14	83	26	4	1	241821400
16	16	92	32	4	1	241821600
18	18	92	32	4	1	241821800
20	20	104	38	4	1	241822000

R < 1200 N/mm² | R < 750 N/mm²
Acciaio *Steel* | Inox | Alu Si > 5%

HB30<200
Ghisa *Cast iron*

Rompitruciolo tipo NRF
Chip-breaker NRF type



FRESE FRONTALI A 4 TAGLIENTI AD ELICA VARIABILE IN METALLO DURO INTEGRALE

*Four flutes **carbide** end mills with variable helix / Fraise carbure quatre dents avec helice variable*

Fresas frontales de metal duro cuatro dientes con helica variable / Hartmetall Vierschneider Langlochfräser

DIN 6527 L

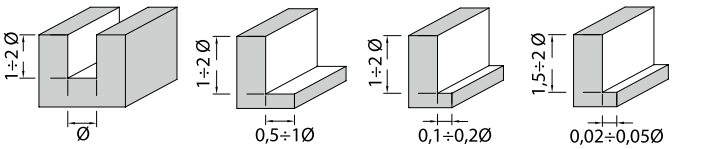
24169 24171





Serie lunga / *Long serie*

Ø h10	d mm	d_1 mm	L mm	l mm	z	pcs	Art. 24169 VHM Carbide cod.	Art. 24171 VHM+TiAlN Carbide + TiAlN cod.
4	6	3,7	57	11	4	1	241690400	241710400
5	6	4,7	57	13	4	1	241690500	241710500
6	6	5,5	57	13	4	1	241690600	241710600
8	8	7,5	63	19	4	1	241690800	241710800
10	10	9,2	72	22	4	1	241691000	241711000
12	12	11,2	83	26	4	1	241691200	241711200
14	14	13,2	83	26	4	1	241691400	241711400
16	16	15,0	92	32	4	1	241691600	241711600
18	18	17,0	92	32	4	1	241691800	241711800
20	20	19,0	104	38	4	1	241692000	241712000



Fresa per cave *Slot end mills* | Sgrossatura *Roughing* | Finitura *Finishing* | Superfinitura *Superfinishing*

Norma Krino
Krino norm

24170 24172

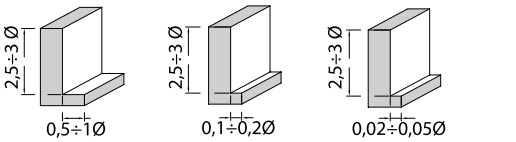






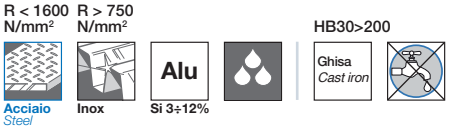
Serie extra lunga / *Extra long serie*

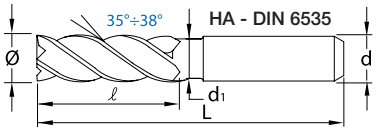
Ø mm	d mm	d_1 mm	L mm	l mm	z	pcs	Art. 24170 VHM Carbide cod.	Art. 24172 VHM+TiAlN Carbide + TiAlN cod.
10	10	9,2	100	40	4	1	241701000	241721000
12	12	11,2	150	45	4	1	241701200	241721200
14	14	13,2	150	45	4	1	241701400	241721400
16	16	15,0	150	65	4	1	241701600	241721600
18	18	17,0	150	65	4	1	241701800	241721800
20	20	19,0	150	65	4	1	241702000	241722000



Sgrossatura *Roughing* | Finitura *Finishing* | Superfinitura *Superfinishing*

Le eliche variabili garantiscono minori vibrazioni, migliore finitura, maggiore rendimento.
The variable helix ensures less vibration, better finishing, higher efficiency.





Eliche variabili 35°-38°
Variable helix 35°-38°

FRESE FRONTALI A 4 E 3 TAGLIENTI IN METALLO DURO INTEGRALE RIV. TIALN

*Four and three flutes **carbide** end mills TiAlN coated / Fraise carbure quatre et trois dents TiAlN*
Fresas frontales de metal duro cuatro y tres dientes, TiAlN

DIN 6527 L

24183

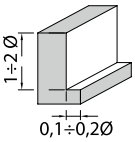




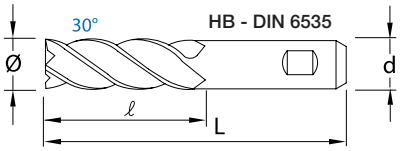


Serie lunga / *Long serie*

Ø h10	d mm	L mm	l mm	z	pcs	cod.
2	2	57	7	4	1	241830200
3	3	57	8	4	1	241830300
4	4	57	11	4	1	241830400
5	5	57	13	4	1	241830500
6	6	57	13	4	1	241830600
8	8	63	19	4	1	241830800
9	9	72	19	4	1	241830900
10	10	72	22	4	1	241831000
12	12	83	26	4	1	241831200
14	14	83	26	4	1	241831400
16	16	92	32	4	1	241831600
18	18	92	32	4	1	241831800
20	20	104	38	4	1	241832000



Finitura
Finishing



DIN 6527 L

24184

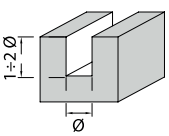






Serie lunga / *Long serie*

Ø h10	d mm	L mm	l mm	z	pcs	cod.
2	6	57	6	3	1	241840200
3	6	57	7	3	1	241840300
4	6	57	8	3	1	241840400
5	6	57	10	3	1	241840500
6	6	57	10	3	1	241840600
8	8	63	16	3	1	241840800
9	10	72	16	3	1	241840900
10	10	72	19	3	1	241841000
12	12	83	22	3	1	241841200
14	14	83	22	3	1	241841400
16	16	92	26	3	1	241841600
18	18	92	26	3	1	241841800
20	20	104	32	3	1	241842000



Fresa per cave
Slot end mills

R < 850 N/mm²



Metals

Alu

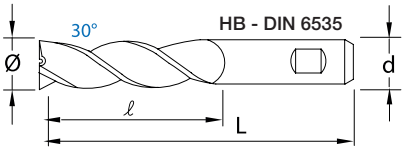
Si 3÷12%



HB30<200

Ghisa
Cast iron





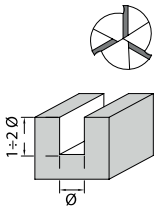
FRESE FRONTALI A 3 TAGLIENTI IN METALLO DURO INTEGRALE

*Three flutes **carbide** end mills / Fraise carbure trois dents*
Fresas frontales de metal duro tres dientes / Hartmetall Dreischneider Langlochfräser

DIN 6527 L

24161 24163





Fresa per cave
Slot end mills

443

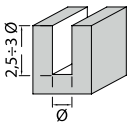
Serie lunga / Long serie

Ø h10	d mm	L mm	l mm	z	pcs	Art. 24161 VHM Carbide cod.	Art. 24163 VHM+TiAlN Carbide + TiAlN cod.
3	6	57	7	3	1	241610300	241630300
4	6	57	8	3	1	241610400	241630400
5	6	57	10	3	1	241610500	241630500
6	6	57	10	3	1	241610600	241630600
8	8	63	16	3	1	241610800	241630800
9	10	72	16	3	1	241610900	241630900
10	10	72	19	3	1	241611000	241631000
12	12	83	22	3	1	241611200	241631200
14	14	83	22	3	1	241611400	241631400
16	16	92	26	3	1	241611600	241631600
18	18	92	26	3	1	241611800	241631800
20	20	104	32	3	1	241612000	241632000

Norma Krino / Krino norm

24162 24164





Fresa per cave
Slot end mills

443

Serie extra lunga / Extra long serie

Ø h10	d mm	L mm	l mm	z	pcs	Art. 24162 VHM Carbide cod.	Art. 24164 VHM+TiAlN Carbide + TiAlN cod.
3	3	75	20	3	1	241620300	241640300
4	4	75	25	3	1	241620400	241640400
5	5	75	30	3	1	241620500	241640500
6	6	75	30	3	1	241620600	241640600
8	8	100	40	3	1	241620800	241640800
10	10	100	40	3	1	241621000	241641000
12	12	150	45	3	1	241621200	241641200
16	16	150	65	3	1	241621600	241641600
20	20	150	65	3	1	241622000	241642000

R < 850 N/mm²


Acciaio *Steel*


Metals

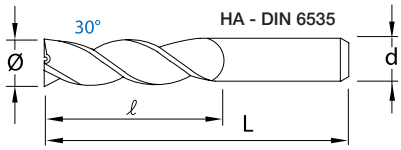


Si 3÷12%



HB30<200

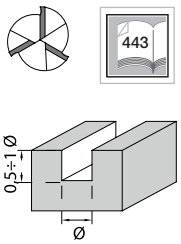




Norma Krino / Krino norm

24181





Mini fresa per cave
Mini slot end mills

443

Minifresa / Mini end mills

Ø e8	d mm	L mm	l mm	z	pcs	VHM +TiAlN Carbide + TiAlN cod.
0,5	3	38	1,5	3	1	241810050
1	3	38	2	3	1	241810100
1,5	3	38	2	3	1	241810150
2	6	38	4	3	1	241810200
2,5	6	38	5	3	1	241810250
3	6	38	5	3	1	241810300
3,5	6	38	6	3	1	241810350
4	6	38	7	3	1	241810400
4,5	6	38	8	3	1	241810450
5	6	38	8	3	1	241810500
6	6	38	8	3	1	241810600
8	8	43	11	3	1	241810800
10	10	50	13	3	1	241811000
12	12	55	15	3	1	241811200

R < 850 N/mm²


Acciaio *Steel*


Metals

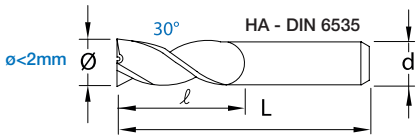
R > 750 N/mm²


Inox



Si<12%







FRESE FRONTALI IN METALLO DURO INTEGRALE PER ALLUMINIO

Carbide *end mills for aluminium / Fraise carbure pour aluminium / Fresas frontales de metal duro para aluminium / Hartmetall Langlochfräser für Aluminium*

~ DIN 6527 L

Serie lunga / Long serie

Canalina di lubrorefrigerazione
Cooling System

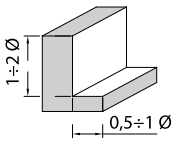
24156



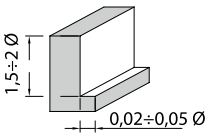
Taglienti raggiati
Corner radius



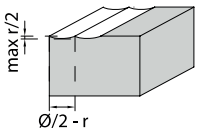
Ø h10	d mm	d_1 mm	L mm	l mm	r mm	z	pcs	cod.
6	6	5,7	57	10	1	3	1	241560600
8	8	7,7	63	16	1	3	1	241560800
10	10	9,5	72	19	1,5	3	1	241561000
12	12	11,5	83	22	1,5	3	1	241561200
16	16	15,5	92	26	2	3	1	241561600
20	20	19,5	104	32	2,5	3	1	241562000



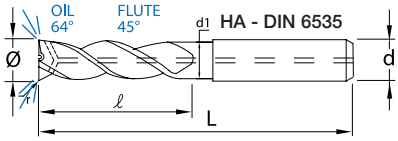
Sgrossatura
Roughing



Superfinitura
Superfinishing



Fresa per copiatori
Ball nose end mills



Alu
Si<12%

DIN 6527 K

Serie corta / Short serie

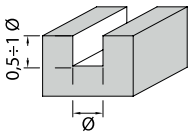
Alu

24154

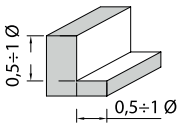




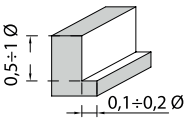
Ø e8	d mm	L mm	l mm	z	pcs	cod.
3	6	50	4	2	1	241540300
4	6	54	5	2	1	241540400
5	6	54	6	2	1	241540500
6	6	54	7	2	1	241540600
8	8	58	9	2	1	241540800
10	10	66	11	2	1	241541000
12	12	73	12	2	1	241541200
14	14	75	14	2	1	241541400
16	16	82	16	2	1	241541600
18	18	84	18	2	1	241541800
20	20	92	20	2	1	241542000



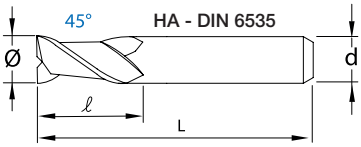
Frese per cave
Slot end mills



Sgrossatura
Roughing



Finitura
Finishing



Alu
Si<3%

Norma Krino / Krino norm

Serie extra lunga / Extra long serie

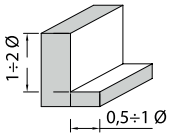
Alu

24155

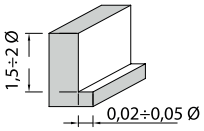




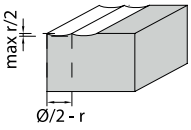
Ø h10	d mm	L mm	l mm	z	pcs	cod.
5	5	75	30	2	1	241550500
6	6	75	30	2	1	241550600
8	8	100	40	2	1	241550800
10	10	100	40	2	1	241551000
12	12	150	45	2	1	241551200
16	16	150	65	2	1	241551600



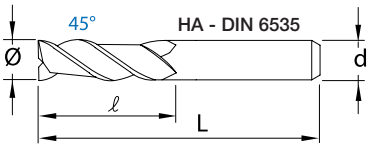
Frese per cave
Slot end mills



Sgrossatura
Roughing



Finitura
Finishing



Alu
Si<3%

Nella lavorazione di alluminio, superleghe di titanio e quando ci sia pericolo di incollaggio trucioli si consiglia l'uso di fresatura concorde, che è anche indicata nel caso di lavorazioni di spessori sottili, perché le forze di taglio aiutano a tenere saldo il pezzo in lavorazione.
When machining aluminum, titanium superalloys and whenever there is a risk of chip bonding, we recommend the use of concordant milling, which is also suitable for thin-wall machining, because the cutting forces help to keep the workpiece firmly in place.

FRESE FRONTALI A 2 TAGLIENTI IN METALLO DURO INTEGRALE

*Two-flutes **carbide** end mills / Fraise carbure deux dents*

Fresas frontales de metal duro dos dientes / Hartmetall Zweischneider Langlochfräser

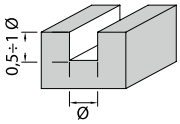
DIN 6527 K

24150 24152









Frese per cave
Slot end mills

Serie corta / *Short serie*

Ø mm	d mm	L mm	l mm	z	pcs	Art. 24150 VHM Carbide cod.	Art. 24152 VHM +TiAlN Carbide + TiAlN cod.
2	6	50	3	2	1	241500200	241520200
3	6	50	4	2	1	241500300	241520300
4	6	54	5	2	1	241500400	241520400
5	6	54	6	2	1	241500500	241520500
6	6	54	7	2	1	241500600	241520600
8	8	58	9	2	1	241500800	241520800
10	10	66	11	2	1	241501000	241521000
12	12	73	12	2	1	241501200	241521200
14	14	75	14	2	1	241501400	241521400
16	16	82	16	2	1	241501600	241521600
18	18	84	18	2	1	241501800	241521800
20	20	92	20	2	1	241502000	241522000

R < 850 N/mm²



Acciaio
Steel



Si 3÷12%



HB30<200





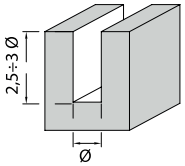
Norma Krino / Krino norm

24151 24153









Frese per cave
Slot end mills

Serie extra lunga / *Extra long serie*

Ø mm	d mm	L mm	l mm	z	pcs	Art. 24151 VHM Carbide cod.	Art. 24153 VHM +TiAlN Carbide + TiAlN cod.
3	3	75	20	2	1	241510300	241530300
4	4	75	25	2	1	241510400	241530400
5	5	75	30	2	1	241510500	241530500
6	6	75	30	2	1	241510600	241530600
8	8	100	40	2	1	241510800	241530800
10	10	100	40	2	1	241511000	241531000
12	12	150	45	2	1	241511200	241531200
14	14	150	45	2	1	241511400	241531400
16	16	150	65	2	1	241511600	241531600
18	18	150	65	2	1	241511800	241531800
20	20	150	65	2	1	241512000	241532000

R < 850 N/mm²



Acciaio
Steel

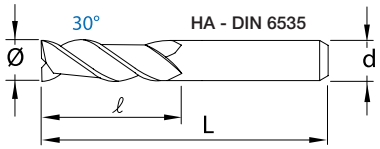


Metals



Si<3%





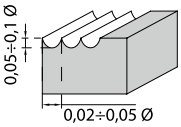
FRESE FRONTALI A RAGGIO IN METALLO DURO INTEGRALE

Carbide *end mills with ball end / Fraise carbure à bout hémisphérique*
Fresas frontales radiales de metal duro / Hartmetall Langlochfräser

DIN 6527 L

24157 24159





Frese per copiatori
Ball nose end mills

Serie lunga / Long serie

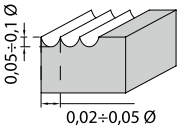
Ø h10	d mm	L mm	l mm	z	pcs	Art. 24157 VHM Carbide cod.	Art. 24159 VHM +TiAlN Carbide + TiAlN cod.
2	6	57	6	2	1	241570200	241590200
3	6	57	7	2	1	241570300	241590300
4	6	57	8	2	1	241570400	241590400
5	6	57	10	2	1	241570500	241590500
6	6	57	10	2	1	241570600	241590600
8	8	63	16	2	1	241570800	241590800
10	10	72	19	2	1	241571000	241591000
12	12	83	22	2	1	241571200	241591200
14	14	83	22	2	1	241571400	241591400
16	16	92	26	2	1	241571600	241591600
18	18	92	26	2	1	241571800	241591800
20	20	104	32	2	1	241572000	241592000

R < 1200 N/mm²
Acciaio *Steel*
Metals
R < 750 N/mm²
Inox
443

Norma Krino / Krino norm

24158 24160



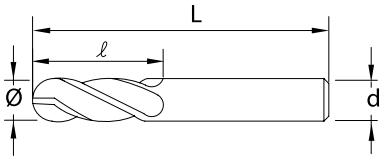


Frese per copiatori
Ball nose end mills

Serie extra lunga / Extra long serie

Ø h10	d mm	L mm	l mm	z	pcs	Art. 24158 VHM Carbide cod.	Art. 24160 VHM +TiAlN Carbide + TiAlN cod.
3	3	75	20	2	1	241580300	241600300
4	4	75	25	2	1	241580400	241600400
5	5	75	30	2	1	241580500	241600500
6	6	75	30	2	1	241580600	241600600
8	8	100	40	2	1	241580800	241600800
10	10	100	40	2	1	241581000	241601000
12	12	150	45	2	1	241581200	241601200

R < 850 N/mm²
Acciaio *Steel*
Metals
Alu
Si 3÷12%
443

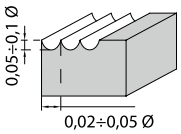


DIN 6528

24179



443

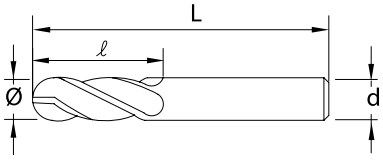


Frese per copiatori
Ball nose end mills

Serie lunga / Long serie

Ø h10	d mm	L mm	l mm	z	pcs	VHM +TiAlN Carbide + TiAlN cod.
4	4	50	11	4	1	241790400
5	5	50	13	4	1	241790500
6	6	57	13	4	1	241790600
8	8	63	19	4	1	241790800
10	10	72	22	4	1	241791000
12	12	83	26	4	1	241791200
14	14	83	26	4	1	241791400
16	16	92	32	4	1	241791600
18	18	92	32	4	1	241791800
20	20	104	38	4	1	241792000

R < 1200 N/mm²
Acciaio *Steel*
Metals
Alu
Si 3÷12%
HB30<200
Ghisa *Cast iron*



FRESE FRONTALI A 6 E PIÙ TAGLIENTI PER SUPERFINITURA IN METALLO DURO INTEGRALE RIV. TIALN

*Two-flutes **carbide** end mills / Fraise carbure deux dents*
Fresas frontales de metal duro dos dientes / Hartmetall Zweischneider Langlochfräser

Per materiali con HRC < 50
Suitable for materials with HRC < 50

≈DIN 6527 L

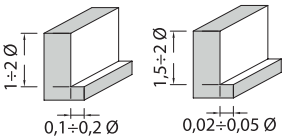
24177 24185

Serie lunga / Long serie

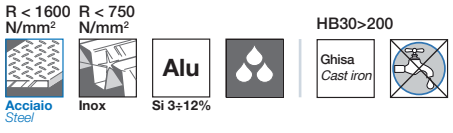
Ø h10	d mm	L mm	l mm	z	pcs	24177 cod.	24185 cod.
3	6	57	8	6	1	241770300	-
4	6	57	11	6	1	241770400	-
5	6	57	13	6	1	241770500	-
6	6	57	13	6	1	241770600	241850600
8	8	63	19	6	1	241770800	241850800
10	10	72	22	6	1	241771000	241851000
12	12	83	26	6	1	241771200	241851200
14	14	83	26	6	1	241771400	241851400
16	16	92	32	6	1	241771600	241851600
18	18	92	32	8	1	241771800	241851800
20	20	104	38	8	1	241772000	241852000
25	25	121	45	10	1	241772500	241852500

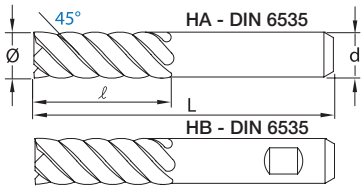






Finitura *Finishing* — Superfinitura *Superfinishing*





Norma Krino / Krino norm

24178

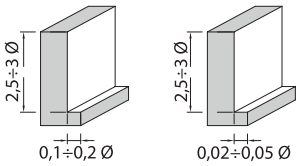
Serie extra lunga / Extra long serie

Per materiali con HRC < 50
Suitable for materials with HRC < 50

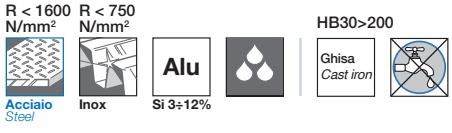
Ø h10	d mm	L mm	l mm	z	pcs	cod.
6	6	75	30	6	1	241780600
8	8	100	40	6	1	241780800
10	10	100	40	6	1	241781000
12	12	150	45	6	1	241781200
16	16	150	65	6	1	241781600
20	20	150	65	8	1	241782000
25	25	150	75	10	1	241782500

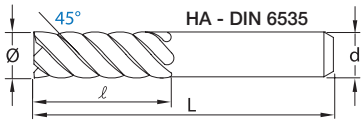






Finitura *Finishing* — Superfinitura *Superfinishing*





≈DIN 6527 L

24186

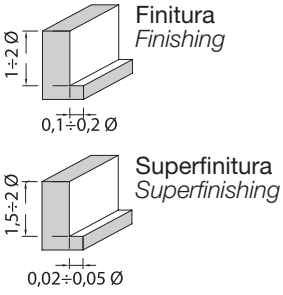
Serie lunga / Long serie

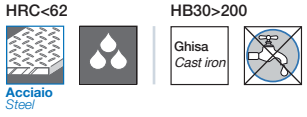
Per materiali con HRC < 62
Suitable for materials with HRC < 62

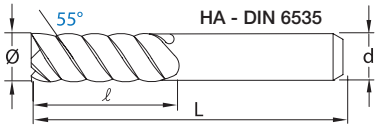
Ø h10	d mm	L mm	l mm	z	pcs	cod.
3	6	57	8	6	1	241860300
4	6	57	11	6	1	241860400
5	6	57	13	6	1	241860500
6	6	57	13	6	1	241860600
8	8	63	19	6	1	241860800
10	10	72	22	6	1	241861000
12	12	83	26	6	1	241861200
14	14	83	26	6	1	241861400
16	16	92	32	6	1	241861600
18	18	92	32	8	1	241861800
20	20	104	38	8	1	241862000











FRESE FRONTALI A ELICA VARIABILE IN METALLO DURO INTEGRALE RIV. TIALN

Carbide *end mills with variable helix, TiAlN coated / Fraises carbure avec helice variable*
Fresas frontales de metal duro con helica variable

≈DIN 6527 L

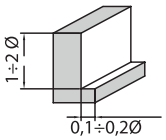
Serie lunga / *Long serie* — **Universale** / *Universal*

24176

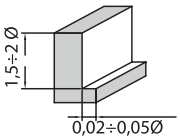




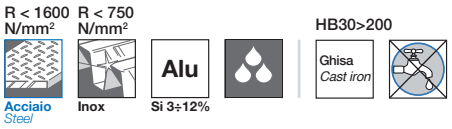
Ø h10	d mm	d_1 mm	L mm	l mm	z	pcs	cod.
8	8	7,5	63	19	6	1	241760800
10	10	9,2	72	22	6	1	241761000
12	12	11,2	83	26	6	1	241761200
16	16	15,0	92	32	6	1	241761600
20	20	19,0	104	38	6	1	241762000
25	25	23,5	121	45	6	1	241762500

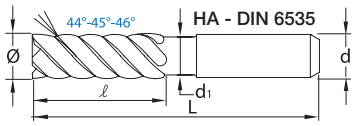


Finitura
Finishing



Superfinitura
Superfinishing





DIN 6527 L

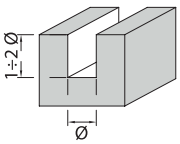
Serie lunga / *Long serie* — **Speciale inox** / *Stainless steel*

24174 24175

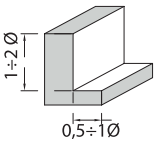




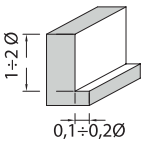
Ø h10	d mm	d_1 mm	L mm	l mm	z	pcs	cod.	cod.
4	6	3,7	57	11	4	1	241740400	241750400
5	6	4,7	57	13	4	1	241740500	241750500
6	6	5,5	57	13	4	1	241740600	241750600
8	8	7,5	63	19	4	1	241740800	241750800
10	10	9,2	72	22	4	1	241741000	241751000
12	12	11,2	83	26	4	1	241741200	241751200
16	16	15,0	92	32	4	1	241741600	241751600
20	20	19,0	104	38	4	1	241742000	241752000



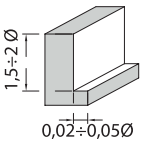
Fresa per cave
Slot end mills



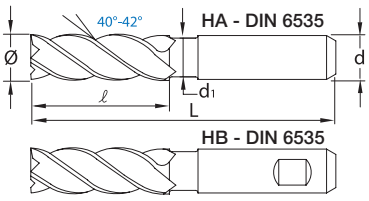
Sgrossatura
Roughing

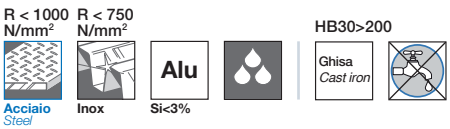


Finitura
Finishing



Superfinitura
Superfinishing





Norma Krino / Krino norm

Serie lunga / *Long serie* — **Speciale alluminio** / *Aluminium*

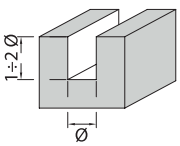
24180



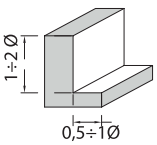
Metallo duro
Carbide



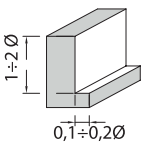
Ø h10	d mm	d_1 mm	L mm	l mm	z	pcs	cod.
3	6	2,7	57	8	3	1	241800300
4	6	3,7	57	11	3	1	241800400
5	6	4,7	57	13	3	1	241800500
6	6	5,5	57	13	3	1	241800600
8	8	7,5	63	16	3	1	241800800
10	10	9,2	72	19	3	1	241801000
12	12	11,2	83	22	3	1	241801200
16	16	11,2	92	32	3	1	241801600
20	20	19,0	104	38	3	1	241802000



Fresa per cave
Slot end mills

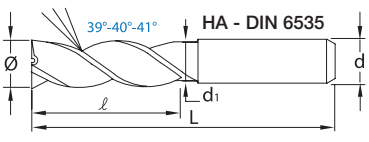


Sgrossatura
Roughing



Finitura
Finishing





Le eliche variabili garantiscono minori vibrazioni, migliore finitura, maggiore rendimento.
The variable helix ensures less vibration, better finishing, higher efficiency.

CUTTING TOOLS **ENGINEERING**

Le operazioni di taglio nei materiali per edilizia richiedono utensili speciali per le varie e molteplici esigenze che incontrano gli utilizzatori del settore. Nelle applicazioni altamente professionali sui martelli leggeri e pesanti, le offerte di punte con attacchi speciali, resistenti alle sollecitazioni torsionali, risolvono tutte le esigenze di alte prestazioni nell'utilizzo intensivo. I fori di grandi dimensioni nel muro, per il passaggio di tubi, per l'aerazione ed altri usi, così come le forature in materiali duri e fragili, quali ceramica, gres, gres porcellanato, sono ora possibili grazie all'offerta di nuove frese a tazza.

Drilling operations into building and construction materials require special tools for the needs of professional hand users for intensive applications. The range of drills with special shanks capable of withstanding a high degree of torsional stress for ultra-professional light and heavy duty hammers are suited to all intensive performance requirements. The wide holes on wall for pipes, ventilation and other applications, as well as the cutting into sandware and special hard ceramics are possible thanks to the offer of new hole saws series.



UTENSILI DA TAGLIO PER EDILIZIA

Building and construction tools
Outils pour bâtiment
Utensilios para construcción
Werkzeuge für Baumaterialien

High Quality professional

PUNTE "**SUPERIOR**" A ROTOPERCUSSIONE PER EDILIZIA AD ELEVATO RENDIMENTO

Professional quality masonry drills "Superior" / Forets à béton professionnel, qualité "Superior"
Broca professional "Superior" para hormigon / Superior Betonschlagbohrer

DIN 8039 - ISO 5468





HVA ≃ 1650

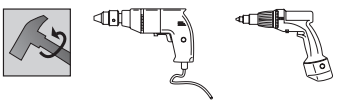
Corpo fresato con scanalatura ad "L" ad alta evacuazione. Placchetta M.D. resistente alla forte percussione, brasatura con lega saldante a 1100° C.
Brazing temperature at 1100° C. Large milled flute type "L" for a faster dust removal.

Confezione / *Packaging*



Applicazioni / *Applications*





- Per forare a forte percussione il muro, il cemento, il calcestruzzo, marmo, pietre. Uso intensivo ed alto rendimento.
- *For use, with rotary percussion, in masonry, concrete, natural stones.* ***High performances in intensive uses.***
- *Pour percér à fort percussion, béton, ciment, carrelage, pierre.* ***Haute rendement en emploi intensif.***
- *Para cortes professionales en muro, hormigon, cemento, marmol, piedra, suelos.* ***Elevado rendimiento en empleo intensivo.***
- *Um Beton und Mauerwerk in Schlagbohrmaschinen zu bohren.*

Art. 03060 Serie Corta - *Short serie*

Art. **03061** Self
Disponibile su richiesta / *On demand*

Ø mm	inch	d	l	L	pcs	cod.
3	1/8	2,8	40	70	10	030600300
4	5/32	3,8	40	75	10	030600400
5	3/16	4,5	40	85	10	030600500
5,5	7/32	4,8	57	100	10	030600550
6	15/64	5,5	57	100	10	030600600
6,5	1/4	6	57	100	10	030600650
7	9/32	6,5	55	100	10	030600700
8x107	5/16	7,5	55	107	10	030600800C
8	5/16	7,5	70	120	10	030600800
9	11/32	8	70	120	6	030600900
10	3/8	9	70	120	6	030601000
11	7/16	10	90	150	6	030601100
12x120	15/32	10	90	120	6	030601200C
12	15/32	10	90	150	6	030601200
13	1/2	10	90	150	6	030601300
14	9/16	10	90	150	6	030601400
15	19/32	10	90	150	6	030601500
16	5/8	10	90	150	6	030601600
18	23/32	13	100	160	1	030601800
20	25/32	13	100	160	1	030602000

Art. 03063 L=150-200 mm

Ø mm	inch	d	l	L	pcs	cod.
5	3/16	4,7	90	150	1	030630500
6	15/64	5,5	90	150	1	030630600
8	5/16	7,5	150	200	1	030630800
10	3/8	9	150	200	1	030631000
12	15/32	10	150	200	1	030631200
14	9/16	10	150	200	1	030631400
16	5/8	10	150	200	1	030631600
18	23/32	10	150	200	1	030631800
20	25/32	13	150	200	1	030632000

Art. 03065 L=400 mm

Ø mm	inch	d	l	L	pcs	cod.
8	5/16	7,5	320	400	1	030650800
10	3/8	9,5	320	400	1	030651000
12	15/32	10	320	400	1	030651200
14	9/16	10	320	400	1	030651400
16	5/8	10	320	400	1	030651600
18	23/32	10	320	400	1	030651800
20	25/32	13	320	400	1	030652000
22	7/8	13	320	400	1	030652200
24	15/16	13	320	400	1	030652400

Art. 03067 L=600 mm

Ø mm	inch	d	l	L	pcs	cod.
8	5/16	7,5	500	600	1	030670800
10	3/8	9,5	500	600	1	030671000
12	15/32	10	500	600	1	030671200
14	9/16	10	500	600	1	030671400
16	5/8	10	500	600	1	030671600
18	23/32	10	500	600	1	030671800
20	25/32	13	500	600	1	030672000
22	7/8	13	500	600	1	030672200
24	15/16	13	500	600	1	030672400

ASSORTIMENTI PUNTE “**SUPERIOR**” PER EDILIZIA

“Superior” masonry drills sets / Assortiments forets à béton professionnel “Superior”
Juego brocas “Superior” para hormigon / “Superior” Spiralbohrersätze



4 pcs
Ø 5-6-8-10 mm

03070201



7 pcs
Ø 3-4-5-6-8-9-10 mm

03070202



8 pcs
Ø 3-4-5-6-8-9-10-12 mm

03070203



12 pcs
Ø 3-4-4-5-5-6-6-7-8-8-9-10

03070101



390x150x225

03070504

141 pcs
Ø 3÷16 mm

Ø	pcs
3	7
4	7
5	14
6	28
7	7
8	28
9	10
10	15
12	10
13	5
14	5
16	5

03070503

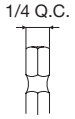
142 pcs
Ø 3÷18 mm

Ø	pcs
3	9
4	9
5	9
6	27
7	9
8	18
9	6
10	12
12	6
13	6
14	6
16	6
8x400	6
10x400	3
12x400	3
14x400	3
16x400	2
18x400	2

PUNTE “**SUPERIOR**” A ROTOPERCUSSIONE PER EDILIZIA CON ATTACCO HEX 1/4”

Professional quality masonry drills “Superior” 1/4” q.c. shank / Forets à béton professionnel avec 1/4” q.c. queue, qualité “Superior”
Broca professional “Superior” con mango 1/4” q.c. para hormigon / Superior Betonschlagbohrer







Confezione / *Packaging*

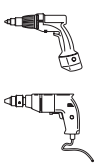


Ø 4-5-6-8-10 mm

03057700

Ø mm	d ⬡	l	L	pcs	cod.
3	1/4	33	75	1	030590300
4	1/4	35	83	1	030590400
5	1/4	46	93	1	030590500
6	1/4	56	97	1	030590600
7	1/4	48	97	1	030590700
8	1/4	70	120	1	030590800
9	1/4	70	120	1	030590900
10	1/4	70	120	1	030591000

03059



High Quality professional

PUNTE ROTOBATTENTI "**MAX 4**" A 4 TAGLIENTI E 4 ELICHE PER FORARE AD ALTO RENDIMENTO TUTTI I MATERIALI EDILI

Rotary percussion drill bits "max 4" with 4 cutting edges and 4 flutes for cutting concrete and building materials / Foret rotation percussion "max 4" avec 4 tranchantes et 4 spirales pour percer concret e tous le matériaux de bâtiment / Broca rotacion, percucion "max 4" con 4 cortadores y 4 espirales para trabajar en el concreto y todol los materiales de construcion /Betonschlagbohrer "max 4" mit 4 schneiden und 4 schrauben für Mauerwerk

K-MAX4®

03072





4 taglienti-*cutting edges*
HVA 1650
Placchetta integrale a 4 taglienti in metallo duro resistente alla forte percussione, brasatura con lega saldante a 1100°C.
One-piece 4 cutting edges carbide tip resisting to percussion. Brazing temperature at 1000°C.



4 eliche-*flutes*
Corpo fresato con **scanalatura a "L" ad alta evacuazione**.
Large milled flute type "L" for a faster dust removal.

Ø mm	d mm	l mm	L mm	pcs	cod.
4	3,8	40	75	1	030720400
5	4,8	40	85	1	030720500
6	5,4	57	100	1	030720600
7	6,3	55	100	1	030720700
8	7	70	120	1	030720800
9	8	70	120	1	030720900
10	8,5	70	120	1	030721000
11	10	90	150	1	030721100
12	10	90	150	1	030721200
13	10	90	150	1	030721300
14	10	90	150	1	030721400
15	10	90	150	1	030721500
16	10	90	150	1	030721600

Confezione / Packaging



Applicazioni / Applications



Muro
Masonry

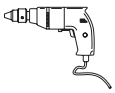


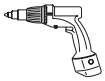
Calcestruzzo
Concrete



Pietra
Natural stones









+30%PRESTAZIONI */ +30% performances*
FORO PERFETTAMENTE CIRCOLARE
rispetto a una comune punta a 2 taglienti
circular hole compared to a 2 cutting edges drill

- La placchetta in metallo duro monoblocco a 4 taglienti garantisce una grande capacità di taglio e un'ottima precisione di foratura. L'asportazione dei detriti è assicurata dalla combinazione delle 4 eliche e della geometria a "L" dello scarico. Grande rendimento di taglio in tutti i materiali edili, cemento, granito, pietre in genere, mattoni.
- One-piece 4 cutting edges carbide tip assures great drilling performances and perfect circular holes. Faster dust removal due to the 4 "L" type flutes. Drilling in every building material, concrete, granite, stones.



4 pcs
Ø 5-6-8-10 mm
03073201



6 pcs
Ø 4-5-6-8-9-10 mm
03073202



7 pcs
Ø 4-5-6-8-9-10-12 mm
03073203



390x150x225

134 pcs
Ø 4÷16 mm

Ø	pcs
4	7
5	14
6	28
7	7
8	28
9	10
10	15
12	10
13	5
14	5
16	5

03073504

PUNTE A ROTOPERCUSSIONE “**SUPERSPEED**” PER LA FORATURA VELOCE AD ALTO RENDIMENTO NEL GRANITO, CEMENTO ARMATO, MATTONI, PIETRE NATURALI ED ARTIFICIALI

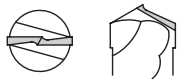
“Superspeed” rotary percussion twist drills for fast drilling into granite, cement, brics, natural and artificial stones / Brocas a roto-percucion “Superspeed” para taladrar con alto rendimento granito, cemento, ladrillo , piedra artificial y natural / Forets a rotopercusion “Superspeed” pour perçage haute rendement en granit, ciment, carrelage, pierre artificielle et naturelle

DIN 8039 – ISO 5468

SuperSpeed

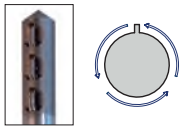
03075





HVA ≃ 1650

Punta autocentrante
Self centering point

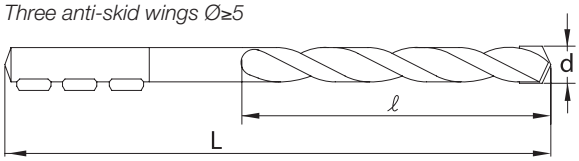


100% trasmissione della potenza grazie alle 3 alette antisdrucciolo
100% power transmission thanks to 3 anti-skid wings

Ø mm	d	l	L	pcs	cod.
3	2,8	50	90	1	030750900300
4	3,8	50	90	1	030750900400
5	4,5	50	100	1	030751000500
6	5,5	50	100	1	030751000600
6	5,5	100	150	1	030751500600
6,5	6	100	150	1	030751500650
7	6,5	50	100	1	030751000700
8	7,5	50	100	1	030751000800
8	7,5	200	250	1	030752500800
9	8	50	100	1	030751000900
10	9	100	150	1	030751501000
10	9	200	250	1	030752501000
12	10	90	150	1	030751501200
14	10	90	150	1	030751501400



Tre alette antiscivolo Ø≥5
Three anti-skid wings Ø≥5



Confezione / *Packaging*



Applicazioni / *Applications*



Muro
Masonry



Calcestruzzo
Concrete



Pietra
Natural stones



390x150x225

131 pcs
Ø 3÷14 mm

Ø	pcs
3x90	7
4x90	7
5x100	14
6x100	28
7x100	7
8x100	28
9x100	10
10x150	15
12x150	10
14x150	5

03070510

High Quality professional

PUNTE ROTOBATTENTI “**SUPER GRANIT**” PER FORARE LE PIETRE PIÙ DURE E I MATERIALI EDILI DURISSIMI

Rotary percussion drill bits “Super Granit” for extreme hard stones and building materials / Forets à béton “Super Granit” pour percer granit, la pierre naturelle, concrete, etc. / Brocas a percusion “Super Granit” para taladrar granito y la piedra natural, hormigon / Betonschlagbohrer “Super Granit” für Granit, Naturstein, Mauerwerk

DIN 8039 - ISO 5468

03110





HVA ≃ 1650

Placchetta affilata con diamante. Corpo rettificato con scarico ad “U”, in acciaio legato HRC 40÷50. Saldobrasatura a 1100° C.
Large milled flute type “U” for an efficient dust removal. Diamond sharpened. Body in alloy steel with HRC 40÷50. Brazing temperature at 1100° C

Confezione / *Packaging*



Applicazioni / *Applications*



Granito
Granite



Calcestruzzo
Concrete



Pietra
Natural stones

Art. 03110

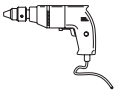
Art. **03111** Self
Disponibile su richiesta / *On demand*

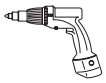
Ø mm	*inch*	d	*l*	L	pcs	cod.
3	1/8	2,8	30	60	1	031100300
4	5/32	3,8	40	75	1	031100400
5	3/16	4,5	50	75	1	031100500
5,5	7/32	4,5	50	85	1	031100550
6	15/64	5,5	60	100	1	031100600
7	9/32	6,5	60	100	1	031100700
8	5/16	7,5	80	120	1	031100800
9	23/64	8	80	120	1	031100900
10	25/64	9	80	120	1	031101000
11	7/16	10	90	150	1	031101100
12	15/32	10	90	150	1	031101200
13	1/2	10	90	150	1	031101300
14	9/16	10	90	150	1	031101400
15	19/32	10	100	160	1	031101500
16	5/8	12	100	160	1	031101600
18	23/32	12	100	160	1	031101800
20	25/32	12	100	160	1	031102000

Art. 03112 L=150-250 mm

Ø mm	*inch*	d	*l*	L	pcs	cod.
5	3/16	4,5	90	150	1	031121500500
5,5	7/32	4,5	90	150	1	031121500550
6	15/64	5,5	90	150	1	031121500600
6,5	1/4	5,5	90	150	1	031121500650
8	5/16	7,5	90	150	1	031121500800
8	5/16	7,5	200	250	1	031122500800
10	3/8	9	200	250	1	031122501000
12	15/32	10	200	250	1	031122501200
14	9/16	12	200	250	1	031122501400







- Taglio del granito a rotopercussione con grandi rendimenti, taglio delle pietre naturali e artificiali, calcestruzzo e materiali da edilizia vari, fino al 7° scala MOHS.
- *Rotary percussion cuts in granit, natural stone, concrete, masonry, up to 7° MOHS.*
- *Pour percage à fort percussion in granit, pierre naturelle et artificielle, ciment, carrelage (7° MOHS).*
- *Corte professional a percussion de grande rendimiento en granito, piedra, materiales de construccion muy duros (7° MOHS).*
- *Extrem robuster Schlagbohrer für höchste Beansruchung, für Granit, Beton, Mauerwerk, Naturstein.*



4 pcs
Ø 5-6-8-10 mm

03116202



7 pcs
Ø 3-4-5-6-8-9-10 mm

03116204



8 pcs
Ø 3-4-5-6-8-9-10-12 mm

03116205



390x150x225

112 pcs
Ø 3÷16 mm

Ø	pcs
3	10
4	10
5	10
6	20
7	5
8	15
9	4
10	8
12	6
14	2
16	2
5x150	4
6x150	6
8x250	3
10x250	3
12x250	2
14x250	2

03116503

PUNTE “**EXTREME HARD CUT**” ALTAMENTE PROFESSIONALI PER FORARE A SOLA ROTAZIONE TUTTI I MATERIALI EDILI DURISSIMI

Professional masonry drills “Extreme Hard Cut” for rotary cutting of hard building materials / Foréts béton professionelles “Extreme Hard Cut” pour percage rotation / Brocas “Extreme Hard Cut” altamente profesionales para cortar a sola rotaciòn todos los materiales de construcciòn muy duros Drehbohrer “Extreme Hard Cut” für drehenden Einsatz in Bohr- und Schlagbohrmaschinen

DIN 8039 - ISO 5468



Affilatura positiva
Positive Rake



HVA ≃ 1650

Corpo fresato con scanalatura ad “U”. Saldobrasatura a 1120° C. Placchetta in metallo duro ISO Euronorm resistente a forti abrasioni, affilata con diamante ed autocentrante.
Large milled flute type “U”, with self-centering positive clearance. Brazing temperature over 1120° C. Special carbide grain tip.

Ø mm	*inch*	d	*l*	L	pcs	cod.
3	1/8	2,8	30	70	1	031000300
4	5/32	3,8	40	75	1	031000400
5	3/16	4,5	50	85	1	031000500
6	15/64	5,5	60	100	1	031000600
7	9/32	6,5	60	100	1	031000700
8	5/16	7,5	80	120	1	031000800
10	3/8	9	80	120	1	031001000
12	15/32	10	90	150	1	031001200
14	9/16	10	200	250	1	031001400

03100

Art. **03101** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*



Pietre naturali e artificiali
Natural and artificial stones



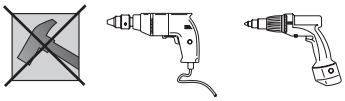
Ceramica
Ceramics



Piastrelle, mattoni durissimi
Tiles, hard burnt brick



Pietra - Granito
Natural stones granit



- Taglio preciso e senza sbavature a rotazione nel marmo, pietre, granito, ceramica, tutti i materiali da edilizia durissimi (sino a 7 gradi scala MOHS).
- *Precise rotary cut in hard building materials (marble, natural stones, ceramic, granit) up to 7° MOHS.*
- *Pour percage à rotation granit, pierre, ceramic 7° grado MOHS.*
- *Corte preciso y rapido a rotacion en materiales de construccion muy duros y abrasivos (7°MOHS).*
- *Drehenden Einsatz in harten Baumaterialen wie Dachziegel, Dachpfannen, Klinker, Keramik.*



4 pcs
Ø 5-6-8-10 mm

03105202



390x150x225

117 pcs
Ø 3÷14 mm

Ø	pcs
3	10
4	10
5	10
6	28
7	10
8	20
10	15
12	8
14	6

03105503

High Quality professional

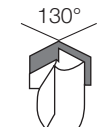
PUNTA UNIVERSALE SDD PER IL TAGLIO DI TUTTI I MATERIALI

Univeral SDD drill / Forets universels SDD
Broca universal SDD / SDD Mehrzweckbohrer

DIN 8039 - ISO 5468 **SDD**

03069





Ø mm	d	l	L	pcs	cod.
3	2,8	20	60	10	030690600300
4	3,8	35	75	10	030690750400
5	4,5	45	85	10	030690850500
6	5,5	60	100	10	030691000600
6	5,5	210	250	1	030692500600
6	5,5	360	400	1	030694000600
7	6,4	60	100	10	030691000700
8	7,2	80	120	10	030691200800
8	7,2	210	250	1	030692500800
8	7,2	360	400	1	030694000800
9	8,3	80	120	10	030691200900
10	9,2	80	120	10	030691201000
10	9,2	210	250	1	030692501000
10	9,2	360	400	1	030694001000
10	9,2	560	600	1	030696001000
11	9,9	110	150	6	030691501100

Ø mm	d	l	L	pcs	cod.
12	10	110	150	6	030691501200
12	10	210	250	1	030692501200
12	10	360	400	1	030694001200
12	10	560	600	1	030696001200
13	12	110	150	6	030691501300
14	12,7	110	150	6	030691501400
14	12,7	210	250	1	030692501400
14	12,7	360	400	1	030694001400
15	13	110	150	6	030691501500
16	13	110	150	6	030691501600
16	13	210	250	1	030692501600
16	13	360	400	1	030694001600
16	13	560	600	1	030696001600
18	13	120	160	1	030691601800
20	13	120	160	1	030691602000

Confezione / *Packaging*



Applicazioni / *Applications*


Pietre naturali e artificiali
Natural and artificial stones


Ceramica
Ceramics


Metals


Piastrelle, mattoni durissimi
Tiles, hard burnt brick


Pietra - Granito
Natural stones granit



4 pcs
Ø 4x75-5x85
6x100-8x120 mm
03068201

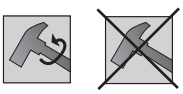
5 pcs
Ø 4x75-5x85-6x100
8x120-10x120 mm
03068203

7 pcs
Ø 3x70-4x75-5x85-6x100
8x120-9x120-10x120 mm
03068204



Ø	pcs
3x60	5 pcs
4x75	5 pcs
5x85	10 pcs
6x100	20 pcs
8x120	20 pcs
10x120	14 pcs
12x150	14 pcs

03068505



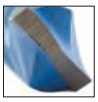
- Taglio preciso a rotazione in metalli, ceramica e in tutti i materiali da edilizia fragili e a rotopercussione in marmo, granito, pietre.
- *Precise cut, rotation only, into metals, ceramic and fragile building materials. Rotary percussion cut into marble, granit, stones.*
- *Pour percer à rotation acier dur, ceramic, bâtiment (8° Mohs) et à percussion in granit, pierre.*
- *Corte preciso en materiales de construccion. Corte a percussion en granito, piedra.*

PUNTA“**FORATUTTO**” UNIVERSALE MULTIK AD ALTE PRESTAZIONI PER IL TAGLIO DI TUTTI I MATERIALI

High performance multi-purpose drill bit / Forets universels pour materiaux
Broca universal para todos los materiales / Mehrzweckbohrer

DIN 8039 - ISO 5468





HVA ≃ 1650

Placchetta affilata con diamante con geometria innovativa. Corpo rettificato con scarico ad “U”, in acciaio legato HRC 40÷50. Saldobrasatura a 1100° C.
Large milled flute type “U” for an efficient dust removal. Diamond sharpened. Body in alloy steel with HRC 40÷50. Brazing temperature at 1100° C.

Ø mm	d	*l*	L	pcs	cod.
3	2,8	40	70	1	030760300070
4	3,8	40	75	1	030760400075
5	4,5	50	85	1	030760500085
5	4,5	90	150	1	030760500150
5,5	4,5	50	85	1	030760550085
6	5,5	60	100	1	030760600100
6	5,5	90	150	1	030760600150
6	5,5	200	250	1	030760600250
6,5	5,5	60	100	1	030760650100
7	6,5	60	100	1	030760700100
8	7,2	80	120	1	030760800120
8	7,2	90	150	1	030760800150
8	7,2	200	250	1	030760800250
8	7,2	350	400	1	030760800400
9	8	80	120	1	030760900120
10	9	80	120	1	030761000120
10	9	90	150	1	030761000150
10	9	200	250	1	030761000250
10	9	350	400	1	030761000400
11	10	90	150	1	030761100150
12	10	90	150	1	030761200150
12	10	200	250	1	030761200250
12	10	350	400	1	030761200400
14	12,3	150	200	1	030761400200
14	12,3	200	250	1	030761400250
16	14	150	200	1	030761600200

03076



4 pcs
Ø 4x75-5x85
6x100-8x120 mm
03078201

5 pcs
Ø 4x75-5x85-6x100
8x120-10x120 mm
03078203

7 pcs
Ø 3x70-4x75-5x85-6x100
8x120-9x120-10x120 mm
03078204

DIN 8039 - ISO 5468



1/4 Q.C.



130°



HVA ≃ 1650

Ø mm	*inch*	d	*l*	L	pcs	cod.
3	1/8	1/4	45	90	1	030770300090
4	5/32	1/4	45	90	1	030770400090
5	3/16	1/4	50	100	1	030770500100
5,5	7/32	1/4	60	100	1	030770550100
6	15/64	1/4	60	100	1	030770600100
6	15/64	1/4	200	250	1	030770600250
6,5	1/4	1/4	200	250	1	030770650250
7	9/32	1/4	50	100	1	030770700100
8	5/16	1/4	50	100	1	030770800100
10	3/8	1/4	90	150	1	030771000150

Confezione / Packaging



Applicazioni / Applications



Pietre naturali e artificiali
Natural and artificial stones



Ceramica
Ceramics



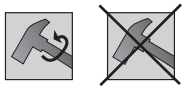
Metals



Piastrelle, mattoni durissimi
Tiles, hard burnt brick



Pietra - Granito
Natural stones granit



03077



4 pcs
Ø 4-5-6-8 mm
03078301



6 pcs
Ø 3-4-5-6-8-10 mm
03078302

- Taglio preciso e senza sbavature a rotazione in metalli, ceramica e in tutti i materiali da edilizia durissimi (sino 8° Mohs) e a rotopercussione in marmo, granito, pietre.
- *Precise cut, rotation only, into hardened steel, metals, ceramic and hard building materials (up to 8° Mohs). Rotary percussion cut into marble, granit, stones.*
- *Pour percer à rotation acier dur, ceramic, bâtiment (8° Mohs) et à fort percussion in granit, pierre.*
- *Corte preciso y rapido en materiales de construccion muy duros (8° Mohs). Corte a percussion en granito, piedra.*



PUNTA UNIVERSALE "**FORATUTTO®**"

Multi-purpose drill bits / Forets universels pour materiaux
Broca universal para todos los materiales / Mehrzweckbohrer

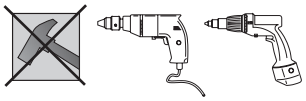
DIN 8039 - ISO 5468





HVA ≃ 1750

Affilatura positiva
Positive relief



Art. 03080 **Universale** - *Multipurpose*

Art. **03081** Self
Disponibile su richiesta / *On demand*

Ø mm	inch	d	l	L	pcs	cod.
3	1/8	2,8	40	70	10	030800300
4	5/32	3,8	40	75	10	030800400
5	3/16	4,5	40	85	10	030800500
6	15/64	5,5	55	100	10	030800600
7	9/32	6,5	55	100	10	030800700
8x107	5/16	7,5	70	107	10	030800800C
8	5/16	7,5	70	120	10	030800800
9	11/32	8	70	120	10	030800900
10	3/8	9	70	120	10	030801000
11	7/16	10	90	150	6	030801100
12x120	15/32	10	90	120	6	030801200C
12	15/32	10	90	150	6	030801200
13	1/2	10	90	150	6	030801300
14	9/16	10	90	150	6	030801400
15	19/32	10	90	150	6	030801500
16	5/8	10	90	150	6	030801600

Art. 03082 **Serie lunga** / *Long serie* **L = 250 mm**

ØxL mm	d	l	L	pcs	cod.
6x150	5,5	125	150	10	030820600
8x250	7,5	130	250	10	030820800
10x250	9	130	250	10	030821000
12x250	10	130	250	6	030821200
14x250	10	130	250	6	030821400

Confezione / *Packaging*



Applicazioni / *Applications*







391

- Per forare **a sola rotazione**: acciaio duro, acciai in genere, ghisa, tutti i metalli, muro, calcestruzzo, ceramica, pavimenti in genere, legno e derivati, plastica, laminati.
- *For rotary cutting in hardened steel, metals, cement, brick, tiles, ceramic, wood, plastics.*
- *Pour percer à rotation: acier dur, béton, ceramic, bois, plastique.*
- *Para cortar a rotation: acero tratado, hormigon, ceramica, madera, plastica.*
- *Für drehenden Einsatz in Mauerwerk, Fliesen, Holz, hart Stahl, Kunststoffe.*



4 pcs
Ø 5-6-8-10 mm
03085201



7 pcs
Ø 3-4-5-6-8-9-10 mm
03085202



8 pcs
Ø 3-4-5-6-8-9-10-12 mm
03085203



12 pcs
Ø 3-4-4-5-5-6-6-7-8-8-9-10
03085101



390x150x225

156 pcs
Ø 3÷16 mm

Ø	pcs
3	9
4	9
5	18
6	27
7	9
8	18
9	6
10	18
11	6
12	12
13	6
14	6
15	6
16	6

03085503

PUNTA UNIVERSALE “**FORATUTTO**®” CON ATTACCO HEX 1/4”

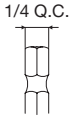
Multi-purpose drill bits / Forets universels pour materiaux
Broca universal para todos los materiales / Mehrzweckbohrer





HVA ≃ 1750

Affilatura positiva
Positive relief



Confezione / *Packaging*



Ø mm	d ⬡	l	L	pcs	cod.
3	1/4	33	75	1	030890300
4	1/4	40	83	1	030890400
5	1/4	46	93	1	030890500
6	1/4	56	97	1	030890600
7	1/4	48	97	1	030890700
8	1/4	70	120	1	030890800
9	1/4	70	120	1	030890900
10	1/4	70	120	1	030891000





03089



Ø 4-5-6-8-10 mm
03085700

PUNTE PER **VETRO E CERAMICA**

Glass drill bits / Forets verre / Broca para vidrio / Glasbohrer





HRA 90

Art. **03143** Self
Disponibile su richiesta
On demand

Ø mm	d	L	pcs	cod.
3	3	58	1	031400300
4	3	58	1	031400400
5	4	58	1	031400500
6	5	58	1	031400600
7	5	78	1	031400700
8	6	78	1	031400800
9	6	98	1	031400900
10	7	98	1	031401000
12	8	98	1	031401200

03140



Ø 4-5-6-8-10 mm
03146700

Confezione / *Packaging*



Applicazioni / *Applications*





- Taglio a sola rotazione nel vetro, selezionando la velocità di taglio più bassa possibile e refrigerando con acqua o trementina. Riaffilare frequentemente nel taglio di vetri duri.
- Rotary cut in glass, with water cooling, at low speed.
- Pour percer le verre, à bas rotation, avec lubrification à l’eau.
- Para taladrar a rotation vidrio, refrigeracion por agua.
- Spezialbohrer zum Bohren von Glass, Wasser Schmierung.

PUNTE PER TRACCIARE CON RIPORTO IN METALLO DURO

Carbide scribers / Pointe carbure à tracer / Punta para trazar / Hartmetall Reißspitze

0314201



0314202



cod.	L
0314201	200
0314202	150



03142

147

Professional

PUNTE CILINDRICHE PER MURO **STANDARD PLUS**

Quality rotary percussion masonry drills / Forets à béton de qualitè
Broca de qualidad para hormigon / Profi Steinbohrer

DIN 8039 - ISO 5468





HVA ≃ 1650

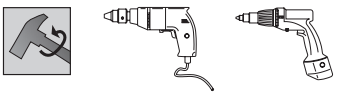
Corpo con placchetta di alta qualità.
Flute with high resistant carbide tips.

Confezione / *Packaging*



Applicazioni / *Applications*





Art. 03052 Serie Corta - *Short serie*

Ø mm	*inch*	d	*l*	L	pcs	cod.
3	1/8	2,8	40	70	10	030520300
4	5/32	3,8	40	75	10	030520400
5	3/16	4,5	40	85	10	030520500
5,5	7/32	4,8	55	100	10	030520550
6	15/64	5,5	55	100	10	030520600
6,5	1/4	6	70	120	10	030520650
7	9/32	6,5	70	120	10	030520700
8x107	5/16	7,5	70	107	10	030520800C
8	5/16	7,5	70	120	10	030520800
9	11/32	8	90	120	10	030520900
10	3/8	9	90	120	10	030521000
11	7/16	10	90	150	5	030521100
12x120	15/32	10	90	120	5	030521200C
12	15/32	10	90	150	5	030521200
13	1/2	10	90	150	5	030521300
14	9/16	10	90	150	5	030521400
15	19/32	10	90	150	5	030521500
16	5/8	10	90	150	5	030521600
18	23/32	10	100	160	5	030521800
20	25/32	13	100	160	5	030522000

Art. 03053 L=150-200 mm

Ø mm	*inch*	d	*l*	L	pcs	cod.
5	3/16	4,7	90	150	5	030530500
5,5	7/32	4,8	90	150	5	030530550
6	15/64	5,5	90	150	5	030530600
8	5/16	7,5	150	200	5	030530800
10	3/8	9	150	200	5	030531000
12	15/32	10	150	200	5	030531200
14	9/16	10	150	200	5	030531400
16	5/8	10	150	200	5	030531600
18	23/32	10	150	200	5	030531800
20	25/32	13	150	200	5	030532000

Art. 03054 L=400 mm

Ø mm	*inch*	d	*l*	L	pcs	cod.
8	5/16	7,5	320	400	1	030540800
10	3/8	9	320	400	1	030541000
12	15/32	10	320	400	1	030541200
14	9/16	10	320	400	1	030541400
16	5/8	10	320	400	1	030541600
18	23/32	10	320	400	1	030541800
20	25/32	13	320	400	1	030542000
22	7/8	13	320	400	1	030542200
24	15/16	13	320	400	1	030542400

Art. 03051 L=600 mm

NEW

Ø mm	*inch*	d	*l*	L	pcs	cod.
8	5/16	7,5	500	600	1	030510800
10	3/8	9	500	600	1	030511000
12	15/32	10	500	600	1	030511200
14	9/16	10	500	600	1	030511400
16	5/8	10	500	600	1	030511600
18	23/32	10	500	600	1	030511800
20	25/32	13	500	600	1	030512000
22	7/8	13	500	600	1	030512200
24	15/16	13	500	600	1	030512400

ASSORTIMENTI PUNTE CILINDRICHE PER MURO **STANDARD PLUS**

Quality rotary percussion masonry drills sets / Jeux forets à béton de qualitè
Juego brocas de qualidad para hormigon / Betonschlag bohrersätze



4 pcs
Ø 5-6-8-10 mm

03057202



7 pcs
Ø 3-4-5-6-8-9-10 mm

03057204



8 pcs
Ø 3-4-5-6-8-9-10-12 mm

03057205



390x150x225

177 pcs
Ø 3÷16 mm

Ø	pcs
3	10
4	10
5	10
6	45
7	10
8	20
9	10
10	20
12	10
14	5
16	5
8x400	5
10x400	6
12x400	6
14x400	5

03057503

PUNTE CILINDRICHE PER MURO, QUALITÀ STANDARD

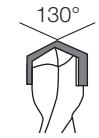
Carbide tipped masonry drills / Forets à béton au carbure de tungstene
Brocas para hormigon / Steinbohrer

DIN 8039-ISO 5468 Serie Corta

Short serie / Série courte / Serie corta / Kurz Serie

03001





HVA ≃ 1600

Art. **03002** Self
Disponibile su richiesta / *On demand*

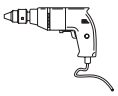
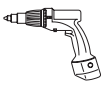
Confezione / *Packaging*



Applicazioni / *Applications*



Ø mm	*inch*	d	*l*	L	pcs	cod.
3	1/8	2,8	40	70	10	030010300
3,5	9/64	3,2	40	75	10	030010350
4	5/32	3,2	40	75	10	030010400
4,5	11/64	3,8	40	85	10	030010450
5	3/16	3,8	40	85	10	030010500
5,5	7/32	4,7	50	85	10	030010550
6	15/64	4,7	55	100	10	030010600
6,5	1/4	5,4	55	100	10	030010650
7	9/32	5,4	55	100	10	030010700
7,5	19/64	5,8	70	100	10	030010750
8X107	5/16	7,5	70	107	10	030010800C
8	5/16	6	70	120	10	030010800
8,5	21/64	7,1	70	120	10	030010850
9	11/32	7,1	70	120	10	030010900
9,5	3/8	8	70	120	10	030010950
10	3/8	8	70	120	10	030011000
11	7/16	10	90	150	5	030011100
12X120	15/32	10	90	120	5	030011200C
12	15/32	10	90	150	5	030011200
13	1/2	10	90	150	5	030011300
14	9/16	10	90	150	5	030011400
15	19/32	10	90	150	5	030011500
16	5/8	10	90	150	5	030011600
18	23/32	10	100	160	5	030011800
20	25/32	13	100	160	5	030012000
22	7/8	13	100	160	1	030012200
24	15/16	13	100	160	1	030012400
25	1"	13	100	160	1	030012500
26	1. 1/32	13	100	160	1	030012600
28	1. 1/8	13	100	160	1	030012800
30	1. 3/16	13	100	160	1	030013000
32	1. 1/4	13	100	160	1	030013200

- Per forare a rotopercussione muro, cemento, marmo e pietre. Utilizzo non intensivo.
- *Rotary percussion in masonry, concrete, cement, marble, stone. Non intensive use.*
- *Pour percer à rotation percussion en pierre, béton, ciment, carrelage, marbre. Emploi non intensif.*
- *Para taladrar a roto-percussion muro, hormigon, cemento, marmol, piedra, suelos. Empleo non intensivo.*
- *Um Mauerwerk und Beton in Schlagbohrermaschinen zu bohren*

PUNTE CILINDRICHE PER MURO, SERIE LUNGA 200-300MM, QUALITÀ STANDARD

Carbide tipped masonry drills, 200-300mm. length / Forets à béton au carbure de tungstene, série longue 200-300m.
Brocas para hormigon, serie larga 200-300mm. / Steinbohrer, 200-300 mm Ausführung

DIN 8039 - ISO 5468



Art. 03005 L=200 mm

03005

Ø mm	*inch*	d	*l*	L	pcs	cod.
6	15/64	4,7	115	200	5	030050600
8	5/16	6	115	200	5	030050800
9	11/32	7,1	115	200	5	030050900
10	3/8	8	115	200	5	030051000
12	15/32	10	120	200	5	030051200
13	1/2	10	120	200	5	030051300
14	9/16	10	120	200	5	030051400
16	5/8	10	120	200	5	030051600
18	23/32	10	120	200	5	030051800
20	25/32	13	120	200	5	030052000

Art. **03021** Self
Disponibile su richiesta / *On demand*

Art. 03009 L=300 mm

03009

Ø mm	*inch*	d	*l*	L	pcs	cod.
6	15/64	4,7	180	300	5	030090600
8	5/16	6	180	300	5	030090800
9	11/32	7,1	180	300	5	030090900
10	3/8	8	180	300	5	030091000
12	15/32	10	180	300	5	030091200
13	1/2	10	180	300	5	030091300
14	9/16	10	180	300	5	030091400
16	5/8	10	180	300	5	030091600
18	23/32	10	180	300	5	030091800
20	25/32	13	180	300	5	030092000

PUNTE CILINDRICHE PER MURO, SERIE LUNGA 400-600MM, QUALITÀ STANDARD

Carbide tipped masonry drills, 400-600mm. length / Forets à béton au carbure de tungstene, série longue 400-600m
Brocas para hormigon, serie larga 400-600mm /Steinbohrer, 400-600 mm Ausführung

DIN 8039 - ISO 5468



Art. 03011 L=400 mm

Art. **03022** Self
Disponibile su richiesta / *On demand*

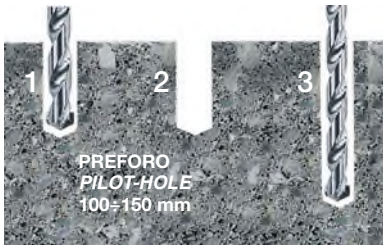
Ø mm	*inch*	d	*l*	L	pcs	cod.
6	15/64	5	240	400	5	030110600
8	5/16	7	240	400	5	030110800
9	11/32	8	240	400	5	030110900
10	3/8	9	240	400	5	030111000
11	7/16	10	240	400	5	030111100
12	15/32	10	240	400	5	030111200
13	1/2	10	240	400	5	030111300
14	9/16	10	240	400	5	030111400
15	19/32	10	240	400	5	030111500
16	5/8	10	240	400	5	030111600
18	23/32	10	240	400	5	030111800
20	25/32	13	240	400	5	030112000
22	7/8	13	240	400	1	030112200
24	15/16	13	250	400	1	030112400
25	1"	13	250	400	1	030112500
26	1/32	13	250	400	1	030112600
28	1/8	13	250	400	1	030112800
30	3/16	13	250	400	1	030113000
32	1/4	13	250	400	1	030113200

Art. 03015 L=600 mm

Art. **03023** Self
Disponibile su richiesta / *On demand*

Ø mm	*inch*	d	*l*	L	pcs	cod.
6	15/64	5	370	600	5	030150600
8	5/16	7	370	600	5	030150800
9	11/32	8	370	600	5	030150900
10	3/8	9	370	600	5	030151000
11	7/16	10	370	600	5	030151100
12	15/32	10	370	600	5	030151200
13	1/2	10	370	600	5	030151300
14	9/16	10	370	600	5	030151400
15	19/32	10	370	600	5	030151500
16	5/8	10	370	600	5	030151600
18	23/32	10	370	600	5	030151800
20	25/32	13	370	600	5	030152000
22	7/8	13	370	600	1	030152200
24	15/16	13	370	600	1	030152400
25	1"	13	370	600	1	030152500
26	1/32	13	370	600	1	030152600
28	1/8	13	370	600	1	030152800
30	3/16	13	370	600	1	030153000
35	3/8	13	370	600	1	030153500

Applicazioni / *Applications*



Si consiglia di eseguire un preforo di 100÷150 mm dello stesso diametro.
Use same size pilot drill for 100÷150 mm depth.

ASSORTIMENTI PUNTE PER MURO, QUALITÀ STANDARD

Masonry drills in plastic cases / Assortiments forets à béton
Juego brocas para hormigon / Steinbohrersätze



15 pcs
Ø 3÷10 x 0,5 mm

03050101



13 pcs
Ø 3-4-4-5-5-5,5-6-6-7-8-8-9-10 mm

03050102



7 pcs
Ø 3-4-5-6-8-9-10 mm

03050204



8 pcs
Ø 3-4-5-6-8-9-10-12 mm

03050205



4 pcs
Ø 4-5-6-8

03050201



4 pcs
Ø 5-6-8-10 mm

03050202



4 pcs
Ø 4-5-6-8-10 mm

03050203



390x150x225

281 pcs
Ø 3÷20

03050503

Ø	pcs
3	20
4	20
5	20
6	60
7	20
8	30
9	10
10	20
12	10
14	10
16	5
18	3
8x400	10
10x400	10
12x400	10
14x400	10
16x400	5
18x400	5
20x400	3

High Quality professional

PUNTE PER TRAPANI A MARTELLO SDS-PLUS, QUALITÀ SUPER PROFESSIONALE “K 4”

SDS-PLUS hammer drills “K 4” / Forets à marteau SDS-PLUS “K 4”
Brocas para martillo SDS-PLUS “K 4” / Hammerbohrer SDS-PLUS “K 4”

03160



K4
“SUPERPRO”



2 taglienti
cutting edges

4 spirali
4 spirals

HVA ≃ 1650

Corpo a 4 spirali indipendenti per un avanzamento più veloce (+35%) ed un maggior scarico dei detriti. Corpo in acciaio legato con HRC 50÷55. Geometria della testa più snella e più aggressiva, per un’ottima trasmissione della potenza. Saldobrasatura a 1100°C in atmosfera di gas protettivo. *Higher speed and durability due to the unique 4-fold spirals (more dust removal, more feeding speed); unique and aggressive head geometry for a smooth power transmission. Body in alloy steel with HRC 50÷55. Brazing temperature at 1100°C.*



Placchetta “attiva” con gole di scarico
ø ≤ 10 mm



Placchetta con puntina di centraggio
10 < ø ≤ 16 mm

Confezione / *Packaging*



Applicazioni / *Applications*



Calcestruzzo
Concrete

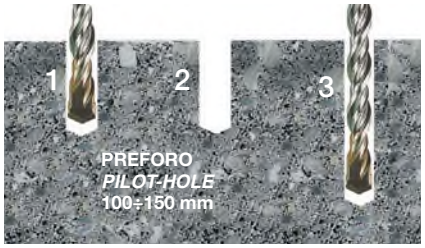


Muro
Masonry

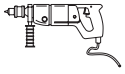


Pietra
Natural stones

L ≥ 300 mm







** 2 eliche - 2 Flutes*

Ø mm	L	l	pcs	cod.
*3,5	110	50	1	031601100350
*3,5	135	75	1	031601350350
*4	110	50	1	031601100400
*4	160	100	1	031601600400
5	110	50	1	031601100500
5	160	100	1	031601600500
5	210	150	1	031602100500
5	310	250	1	031603100500
5,5	110	50	1	031601100550
5,5	160	100	1	031601600550
5,5	210	150	1	031602100550
5,5	260	200	1	031602600550
5,5	310	250	1	031603100550
5,5	460	400	1	031604600550
6	110	50	1	031601100600
6	160	100	1	031601600600
6	210	150	1	031602100600
6	260	200	1	031602600600
6	460	400	1	031604600600
6,5	110	50	1	031601100650
6,5	160	100	1	031601600650
6,5	210	150	1	031602100650
6,5	260	200	1	031602600650
6,5	310	250	1	031603100650
7	110	50	1	031601100700
7	160	100	1	031601600700
7	210	150	1	031602100700
8	110	50	1	031601100800
8	160	100	1	031601600800
8	210	150	1	031602100800
8	260	200	1	031602600800
8	310	250	1	031603100800
8	460	400	1	031604600800
8	610	550	1	031606100800
9	160	100	1	031601600900
9	210	150	1	031602100900
10	110	50	1	031601101000
10	160	100	1	031601601000
10	210	150	1	031602101000
10	260	200	1	031602601000
10	310	250	1	031603101000
10	360	300	1	031603601000
10	460	400	1	031604601000
10	610	550	1	031606101000
10	1000	950	1	0316010001000
11	160	100	1	031601601100
11	210	150	1	031602101100
11	260	200	1	031602601100
12	160	100	1	031601601200
12	210	150	1	031602101200
12	260	200	1	031602601200

Ø mm	L	l	pcs	cod.
12	310	250	1	031603101200
12	460	400	1	031604601200
12	610	550	1	031606101200
12	1000	950	1	0316010001200
13	160	100	1	031601601300
13	210	150	1	031602101300
13	260	200	1	031602601300
13	460	400	1	031604601300
14	160	100	1	031601601400
14	210	150	1	031602101400
14	260	200	1	031602601400
14	310	250	1	031603101400
14	460	400	1	031604601400
14	610	550	1	031606101400
14	1000	950	1	0316010001400
15	160	100	1	031601601500
15	260	200	1	031602601500
15	460	400	1	031604601500
16	210	150	1	031602101600
16	260	200	1	031602601600
16	310	250	1	031603101600
16	460	400	1	031604601600
16	610	550	1	031606101600
16	1000	950	1	0316010001600
17	210	150	1	031602101700
18	200	150	1	031602001800
18	300	250	1	031603001800
18	450	400	1	031604501800
18	600	550	1	031606001800
18	1000	950	1	0316010001800
19	200	150	1	031602001900
19	450	400	1	031604501900
20	200	150	1	031602002000
20	300	250	1	031603002000
20	450	400	1	031604502000
20	600	550	1	031606002000
20	1000	950	1	0316010002000
22	250	200	1	031602502200
22	450	400	1	031604502200
22	600	550	1	031606002200
22	1000	950	1	0316010002200
24	250	200	1	031602502400
24	450	400	1	031604502400
25	250	200	1	031602502500
25	300	250	1	031603002500
25	450	400	1	031604502500
25	1000	950	1	0316010002500
26	250	200	1	031602502600
26	450	400	1	031604502600

Corpo a doppia spirale per ø ≤ 4 mm e ø > 16 mm

- Taglio ad **altissimo rendimento** a rotopercussione, su martelli SDS-plus, nel muro, cemento, calcestruzzo, pietre. **Taglia anche il tondino di acciaio** del cemento armato incontrato nella foratura.
- *Superprofessional hammer drills for intensive usage in concrete, masonry, bricks, natural stone, etc..*
- *Forets à marteau Superprofessionel pour percage in ciment, carrelage, pierre naturelle et artificielle, etc..*
- *Brocas para martillo Superprofesionales para cortar hormigon, cemento, marmo, piedra, suelos.*
- *Superprofi Einsatz in Bohrhammer mit SDS-PLUS aufnahme für Beton, Mauerwerk, Naturstein.*

ASSORTIMENTI PUNTE SDS-PLUS, QUALITÀ SUPER PROFESSIONALE “K 4”

“K 4” Hammer drills sets / Assortiments forets à marteau “K 4”
Juegos brocas martillo “K 4 “ / “K 4” Hammerbohrersätze

Abs



7 pcs
Ø 5 - 6 - 8 x 110 mm
Ø 6 - 8 - 10 - 12 x 160 mm

03163403

Plastic



6 pcs
Ø 5 - 6 - 8 x 110 mm
Ø 6 - 8 - 10 x 160 mm

03163202



5 pcs
Ø 5 - 6 x 110 mm
Ø 8 - 10 - 12 x 160 mm

03163203



30 pcs
Ø 6÷14 mm

Ø	pcs
6x160	5
8x160	5
10x160	5
12x160	5
10x210	5
12x210	3
14x210	2

03163460



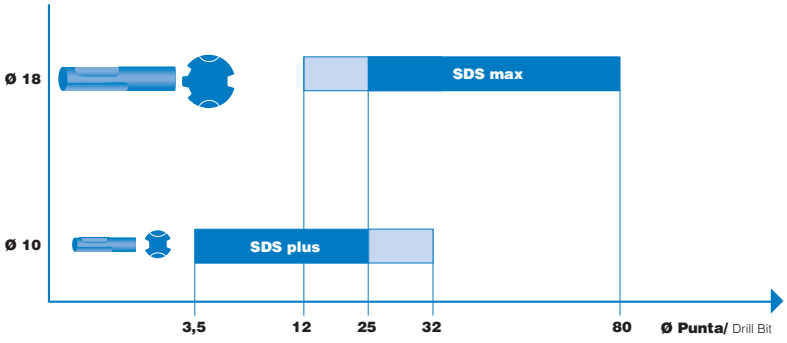
390x150x225

71 pcs
Ø 5÷16 mm

Ø	pcs
5x110	3
6x110	8
5x160	3
6x160	8
8x160	8
9x160	3
10x160	5
12x160	5
6x210	4
8x210	4
10x210	3
12x210	3
14x210	2
16x210	2
8x260	2
10x260	2
12x260	2
14x260	2
16x260	2

03163503

Campo di applicazione raccomandato per gli attacchi SDS per martelli
Range of applications for the SDS shanks



SDS-MAX
03170
376

High Quality professional

PUNTE PER TRAPANI A MARTELLO SDS-PLUS CON 4 ELICHE E 4 TAGLIENTI

SDS-PLUS hammer drills, 4 flutes, 4 cutting edges / Forets á marteau SDS-PLUS avec 4 tranchantes et 4 spirales
Brocas para martillo SDS-PLUS con 4 cortadores y 4 espirales / Hammerbohrer SDS-PLUS mit 4 Schneiden und 4 Schrauben

HAMMER

03169





ø 3,5÷4 mm



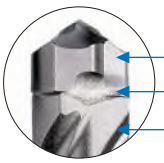
ø 3,5÷4 mm



ø 3,5÷4 mm

4 taglienti-*cutting edges*
HVA 1650
Placchetta integrale a 4 taglienti in metallo duro resistente alla forte percussione, è saldato al corpo per diffusione elettronica.
One-piece 4 cutting edges carbide tip resisting to percussion. Welded to the body by electronic diffusion bond.

4 eliche-*flutes*
Corpo fresato con scanalatura a "L" ad alta evacuazione.
Large milled flute type "L" for a faster dust removal.



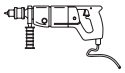
Confezione / *Packaging*



Applicazioni / *Applications*









Saldatura per diffusione elettronica, 3 volte più resistente della saldobrasatura
Electronic diffusion bond, 3 times more resistant than brazing

SDS plus

Ø mm	L	l	pcs	cod.
3,5	115	50	1	031691150350
3,5	165	100	1	031691650350
4	115	50	1	031691150400
4	165	100	1	031691650400
5	115	50	1	031691150500
5	165	100	1	031691650500
5	215	150	1	031692150500
5	265	200	1	031692650500
5	315	250	1	031693150500
5	465	400	1	031694650500
5,5	115	50	1	031691150550
5,5	165	100	1	031691650550
5,5	215	150	1	031692150550
5,5	265	200	1	031692650550
5,5	315	250	1	031693150550
5,5	465	400	1	031694650550
6	115	50	1	031691150600
6	165	100	1	031691650600
6	215	150	1	031692150600
6	265	200	1	031692650600
6	315	250	1	031693150600
6	465	400	1	031694650600
6,5	115	50	1	031691150650
6,5	165	100	1	031691650650
6,5	215	150	1	031692150650
6,5	265	200	1	031692650650
6,5	315	250	1	031693150650
7	115	50	1	031691150700
7	165	100	1	031691650700
7	215	150	1	031692150700
7	265	215	1	031692650700
8	115	50	1	031691150800
8	165	100	1	031691650800
8	215	150	1	031692150800
8	265	200	1	031692650800
8	315	250	1	031693150800
8	365	300	1	031693650800
8	465	400	1	031694650800
9	165	100	1	031691650900
9	215	150	1	031692150900
10	115	50	1	031691151000
10	165	100	1	031691651000
10	215	150	1	031692151000
10	265	200	1	031692651000
10	315	250	1	031693151000
10	365	300	1	031693651000
10	465	400	1	031694651000
10	600	550	1	031696001000
10	1000	950	1	0316910001000
11	165	100	1	031691651100

Ø mm	L	l	pcs	cod.
11	215	150	1	031692151100
11	265	200	1	031692651100
12	165	100	1	031691651200
12	215	150	1	031692151200
12	265	200	1	031692651200
12	315	250	1	031693151200
12	365	300	1	031693651200
12	465	400	1	031694651200
12	600	550	1	031696001200
12	1000	950	1	0316910001200
13	165	100	1	031691651300
13	215	150	1	031692151300
13	265	200	1	031692651300
14	165	100	1	031691651400
14	215	150	1	031692151400
14	265	200	1	031692651400
14	315	250	1	031693151400
14	365	300	1	031693651400
14	465	400	1	031694651400
14	600	550	1	031696001400
14	1000	950	1	0316910001400
15	165	100	1	031691651500
15	265	200	1	031692651500
15	465	400	1	031694651500
16	215	150	1	031692151600
16	265	200	1	031692651600
16	315	250	1	031693151600
16	465	400	1	031694651600
16	600	550	1	031696001600
16	1000	950	1	0316910001600
17	215	150	1	031692151700
17	315	250	1	031693151700
18	250	200	1	031692501800
18	450	400	1	031694501800
18	600	550	1	031696001800
18	1000	950	1	0316910001800
20	250	200	1	031692502000
20	450	400	1	031694502000
20	600	550	1	031696002000
20	1000	950	1	0316910002000
22	250	200	1	031692502200
22	450	400	1	031694502200
22	600	550	1	031696002200
22	1000	950	1	0316910002200
24	450	400	1	031694502400
25	450	400	1	031694502500
25	600	550	1	031696002500
25	1000	950	1	0316910002500
28	450	400	1	031694502800
30	450	400	1	031694503000

ø 18÷30 mm: 4 taglienti – 2 eliche
ø 18÷30 mm: 2 flutes – 4 cutting edges

ASSORTIMENTI PUNTE SDS-PLUS CON 4 ELICHE E 4 TAGLIENTI

SDS/PLUS hammer drills sets, 4 flutes, 4 cutting edges
Assortiments forets à marteau SDS-PLUS / Juegos brocas martillo SDS-PLUS

HAMMER



6 pcs
Ø 5 - 6 - 8 x 115 mm
Ø 6 - 8 - 10 x 165 mm

03174202



5 pcs
Ø 5 - 6 x 115 mm
Ø 8 - 10 - 12 x 165 mm

03174203



7 pcs
Ø 5 - 6 - 8 x 115 mm
Ø 6 - 8 - 10 - 12 x 165 mm

03174403



390x150x225

68 pcs
Ø 5÷16 mm

Ø	pcs
5x115	3
6x115	8
5x165	3
6x165	8
8x165	8
10x165	5
12x165	5
6x215	4
8x215	4
10x215	3
12x215	3
14x215	2
16x215	2
8x265	2
10x265	2
12x265	2
14x265	2
16x265	2

03174503

La speciale testa dell'utensile è **saldata al corpo per diffusione**: questa nuova tecnologia garantisce un legame estremamente stabile tra placchetta in metallo duro e corpo della punta, perché la giunzione avviene allo stato solido per diffusione degli atomi del reticolo cristallino all'interfaccia tra i due pezzi.
La placchetta in metallo duro **monoblocco a 4 taglienti** garantisce una grande capacità di taglio, una perfetta trasmissione della potenza e un'ottima asportazione dei detriti grazie alla combinazione dei 4 taglienti, della placchetta integrale e delle 4 eliche. La punta a 4 taglienti e 4 spirali taglia sempre e senza problemi il tondino nel cemento armato. Garantisce un grande rendimento di taglio in tutti i materiali edili, cemento, granito, cemento armato, pietre in genere, mattoni. Grande precisione di foratura, grande durata della vita dell'utensile, massima limitazione delle vibrazioni del martello.
One-piece carbide tip is welded to the body by electronic diffusion bonding: this new technology assures a very stable link between the carbide tip and the drill body, because the bonding is made between solid phases through the atoms diffusion. *The solid carbide tip assures high performances, a good power transmission and a great debris removal thanks to 4 flutes and 4 cutting edges one-piece solid carbide. The hammer drill 4x4 Speedmaster always cuts the steel bar into reinforced concrete. You can drill into all the building materials, concrete, masonry, reinforced concrete, stones, bricks. It assures thorough holes, long tool life cycle, low hammer vibrations*

PUNTE PER TRAPANI A MARTELLO SDS-PLUS CON 4 ELICHE E 4 TAGLIENTI

SDS-PLUS hammer drills, 4 flutes, 4 cutting edges / Forets á marteau SDS-PLUS avec 4 tranchantes et 4 spirales
Brocas para martillo SDS-PLUS con 4 cortadores y 4 espirales / Hammerbohrer SDS-PLUS mit 4 Schneiden und 4 Schrauben

4x4

Speedmaster

03167





Solid
carbide head
ø 5-10 mm



Single
carbide tip
ø 12-16 mm



Multi-part
carbide tip
ø 18-32 mm

HVA ≃ 1650

4 taglienti-*cutting edges*
HVA 1650
Placchetta integrale a 4 taglienti in metallo duro resistente alla forte percussione, brasatura con lega saldante a 1100°C.
One-piece 4 cutting edges carbide tip resisting to percussion. Brazing temperature at 1000°C

4 eliche-*flutes*
Corpo fresato con scanalatura a "L" ad alta evacuazione.
Large milled flute type "L" for a faster dust removal.

Ø mm	L	l	pcs	cod.
5	110	50	1	031671100500
5	160	100	1	031671600500
5,5	110	50	1	031671100550
5,5	160	100	1	031671600550
6	110	50	1	031671100600
6	160	100	1	031671600600
6	210	150	1	031672100600
6	260	200	1	031672600600
6	310	250	1	031673100600
6,5	160	100	1	031671600650
6,5	210	150	1	031672100650
6,5	260	200	1	031672600650
6,5	310	250	1	031673100650
7	110	50	1	031671100700
7	160	100	1	031671600700
8	110	50	1	031671100800
8	160	100	1	031671600800
8	210	150	1	031672100800
8	260	200	1	031672600800
8	310	250	1	031673100800
8	460	400	1	031674600800
9	160	100	1	031671600900
10	110	50	1	031671101000
10	160	100	1	031671601000
10	210	150	1	031672101000
10	260	200	1	031672601000
10	310	250	1	031673101000
10	450	400	1	031674501000
10	600	550	1	031676001000
10	1000	950	1	0316710001000
11	160	100	1	031671601100
11	210	150	1	031672101100
12	160	100	1	031671601200
12	210	150	1	031672101200
12	260	200	1	031672601200
12	310	250	1	031673101200
12	450	400	1	031674501200
12	600	550	1	031676001200

Ø mm	L	l	pcs	cod.
12	1000	950	1	0316710001200
13	160	100	1	031671601300
13	210	150	1	031672101300
13	260	200	1	031672601300
13	310	250	1	031673101300
14	160	100	1	031671601400
14	210	150	1	031672101400
14	260	200	1	031672601400
14	310	250	1	031673101400
14	450	400	1	031674501400
14	600	550	1	031676001400
14	1000	950	1	0316710001400
15	160	100	1	031671601500
15	210	150	1	031672101500
15	260	200	1	031672601500
15	450	400	1	031674501500
16	160	100	1	031671601600
16	210	150	1	031672101600
16	260	200	1	031672601600
16	310	250	1	031673101600
16	450	400	1	031674501600
16	600	550	1	031676001600
16	1000	950	1	0316710001600
18	250	200	1	031672501800
18	450	400	1	031674501800
20	250	200	1	031672502000
20	450	400	1	031674502000
22	250	200	1	031672502200
22	450	400	1	031674502200
24	250	200	1	031672502400
24	450	400	1	031674502400
25	250	200	1	031672502500
25	450	400	1	031674502500
28	250	200	1	031672502800
28	450	400	1	031674502800
30	250	200	1	031672503000
30	450	400	1	031674503000
32	450	400	1	031674503200

Confezione / *Packaging*



Applicazioni / *Applications*



Calcestruzzo
Concrete

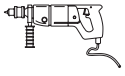


Muro
Masonry



Pietra
Natural stones





- La placchetta in metallo duro **monoblocco a 4 taglienti** garantisce una grande capacità di taglio, una perfetta trasmissione della potenza e un'ottima asportazione dei detriti grazie alla combinazione dei 4 taglienti, della placchetta integrale e delle 4 eliche. La punta a 4 taglienti e 4 spirali taglia sempre e senza problemi il tondino nel cemento armato. Garantisce un grande rendimento di taglio in tutti i materiali edili, cemento, granito, cemento armato, pietre in genere, mattoni. Grande precisione di foratura, grande durata della vita dell'utensile, massima limitazione delle vibrazioni del martello.
- *The solid carbide tip assures high performances, a good power transmission and a great debris removal thanks to 4 flutes and 4 cutting edges one-piece solid carbide. The hammer drill 4x4 Speedmaster always cuts the steel bar into reinforced concrete. You can drill into all the building materials, concrete, masonry, reinforced concrete, stones, bricks. It assures thorough holes, long tool life cycle, low hammer vibrations.*

ASSORTIMENTI PUNTE SDS-PLUS CON 4 ELICHE E 4 TAGLIENTI

SDS/PLUS hammer drills sets, 4 flutes, 4 cutting edges

Assortiments forets à marteau SDS-PLUS / Juegos brocas martillo SDS-PLUS

4x4

Speedmaster

Metal



7 pcs
Ø 5 - 6 - 8 x 110 mm
Ø 6 - 8 - 10 - 12 x 160 mm

03168401

Plastic



6 pcs
Ø 5 - 6 - 8 x 110 mm
Ø 6 - 8 - 10 x 160 mm

03168202



5 pcs
Ø 5 - 6 x 110 mm
Ø 8 - 10 - 12 x 160 mm

03168203



30 pcs
Ø 6÷14 mm

Ø	pcs
6x160	5
8x160	5
10x160	5
12x160	5
10x210	5
12x210	3
14x210	2

03168460



390x150x225

68 pcs
Ø 5÷16 mm

Ø	pcs
5x110	3
6x110	8
5x160	3
6x160	8
8x160	8
10x160	5
12x160	5
6x210	4
8x210	4
10x210	3
12x210	3
14x210	2
16x210	2
8x260	2
10x260	2
12x260	2
14x260	2
16x260	2

03168503

46 pcs
Ø 5÷16 mm

Ø	pcs
5x110	4
6x110	6
6x160	6
8x160	6
10x160	4
12x160	4
8x210	4
10x210	2
12x210	2
14x210	2
16x210	2
14x260	2
16x260	2

03168500

Professional

PUNTE PER TRAPANI A MARTELLO SDS-PLUS, QUALITÀ STANDARD

Hammer drills / Forets à marteau
Brocas para martillo / Hammerbohrer

Standard quality **SDS-PLUS**

03155





2 taglienti
cutting edges

4 spirali
4 spirals

HVA ≃ 1650

Ø mm	L	l	pcs	cod.
4	110	50	1	031551100400
4	160	50	1	031551600400
5	110	50	1	031551100500
5	160	100	1	031551600500
5	210	150	1	031552100500
5,5	110	50	1	031551100550
5,5	160	100	1	031551600550
5,5	210	150	1	031552100550
6	110	50	1	031551100600
6	160	100	1	031551600600
6	210	150	1	031552100600
6	260	200	1	031552600600
6,5	160	100	1	031551600650
6,5	210	150	1	031552100650
6,5	260	200	1	031552600650
7	110	50	1	031551100700
7	160	100	1	031551600700
8	110	50	1	031551100800
8	160	100	1	031551600800
8	210	150	1	031552100800
8	260	200	1	031552600800
8	310	250	1	031553100800
8	460	400	1	031554600800
9	160	100	1	031551600900
9	210	150	1	031552100900
10	110	50	1	031551101000
10	160	100	1	031551601000
10	210	150	1	031552101000
10	260	200	1	031552601000
10	310	250	1	031553101000
10	360	300	1	031553601000
10	460	400	1	031554601000
10	610	550	1	031556101000
10	1000	950	1	0315510001000
11	160	100	1	031551601100
11	210	150	1	031552101100
11	260	200	1	031552601100
12	160	100	1	031551601200
12	210	150	1	031552101200
12	260	200	1	031552601200
12	310	250	1	031553101200
12	460	400	1	031554601200
12	600	550	1	031556001200
12	1000	950	1	0315510001200

Ø mm	L	l	pcs	cod.
13	160	100	1	031551601300
13	210	150	1	031552101300
13	260	200	1	031552601300
13	460	400	1	031554601300
14	160	100	1	031551601400
14	210	150	1	031552101400
14	260	200	1	031552601400
14	310	250	1	031553101400
14	460	400	1	031554601400
14	600	550	1	031556001400
14	1000	950	1	0315510001400
15	160	100	1	031551601500
15	260	200	1	031552601500
16	160	100	1	031551601600
16	210	150	1	031552101600
16	260	200	1	031552601600
16	310	250	1	031553101600
16	460	400	1	031554601600
16	600	550	1	031556001600
16	1000	950	1	0315510001600
18	210	150	1	031552101800
18	260	200	1	031552601800
18	310	250	1	031553101800
18	460	400	1	031554601800
18	600	550	1	031556001800
18	1000	950	1	0315510001800
20	200	150	1	031552002000
20	310	250	1	031553102000
20	460	400	1	031554602000
20	600	550	1	031556002000
20	1000	950	1	0315510002000
22	250	200	1	031552502200
22	460	400	1	031554602200
22	600	550	1	031556002200
22	1000	950	1	0315510002200
24	260	200	1	031552602400
24	460	400	1	031554602400
25	260	200	1	031552602500
25	460	400	1	031554602500
25	1000	950	1	0315510002500
26	460	400	1	031554602600
28	460	400	1	031554602800
30	460	400	1	031554603000

Confezione / *Packaging*



Applicazioni / *Applications*



Calcestruzzo
Concrete

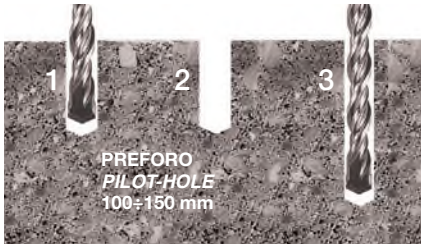


Muro
Masonry

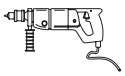


Pietra
Natural stones

L ≥ 300 mm







- Taglio a rotopercussione, su martelli con attacco SDS-PLUS, nel muro, cemento, calcestruzzo, pietre.
- *Rotary percussion cut, with SDS plus hammers, in masonry, cement, reinforced concrete, natural and artificial stone.*
- *Forets à marteau SDS pour percer béton, ciment, pierre.*
- *Brocas para martillo SDS-plus para cortar hormigon, cemento, marmo, piedra.*
- *Einsatz in Bohrhammer mit SDS-plus aufnahme für Beton, Mauerwerk, Naturstein.*

ASSORTIMENTI PUNTE PER TRAPANI A MARTELLO SDS-PLUS

Hammer drills sets / Assortiments forets à marteau
Juegos brocas para martillo / Hammerbohrersätze

Metal



7 pcs
Ø 5 - 6 - 8 x 110 mm
Ø 6 - 8 - 10 - 12 x 160 mm

03165401

Plastic



6 pcs
Ø 5 - 6 - 8 x 110 mm
Ø 6 - 8 - 10 x 160 mm

03165202



5 pcs
Ø 5 - 6 x 110 mm
Ø 8 - 10 - 12 x 160 mm

03165203



30 pcs
Ø 6÷14 mm

Ø	pcs
6x165	5
8x165	5
10x165	5
12x165	5
10x215	5
12x215	3
14x215	2

03165460



390x150x225

71 pcs
Ø 5÷16 mm

Ø	pcs
5x110	3
6x110	8
5x160	3
6x160	8
8x160	8
9x160	3
10x160	5
12x160	5
6x210	4
8x210	4
10x210	3
12x210	3
14x210	2
16x210	2
8x260	2
10x260	2
12x260	2
14x260	2
16x260	2

03165503

PUNTE PER TRAPANI A MARTELLO SDS-PLUS CON 4 ELICHE E 4 TAGLIENTI K8

SDS-PLUS hammer drills, 4 flutes, 4 cutting edges K8 / Forets marteau SDS-PLUS avec 4 tranchantes et 4 spirales K8
Brocas para martillo SDS-PLUS con 4 cortadores y 4 espirales K8 / Hammerbohrer SDS-PLUS mit 4 Schneiden und 4 Schrauben K8

K8

Standard quality **SDS-PLUS**

03156





HVA ≃ 1650



4 taglienti
cutting edges

4 spirali
4 spirals

Ø mm	L	l	pcs	cod.
5	110	50	1	031561100500
5	160	100	1	031561600500
5,5	160	100	1	031561600550
6	110	50	1	031561100600
6	160	100	1	031561600600
6	210	150	1	031562100600
6	260	200	1	031562600600
6,5	160	100	1	031561600650
6,5	210	150	1	031562100650
6,5	260	200	1	031562600650
7	110	50	1	031561100700
7	160	100	1	031561600700
8	110	50	1	031561100800
8	160	100	1	031561600800
8	210	150	1	031562100800
8	260	200	1	031562600800
8	310	250	1	031563100800
8	460	400	1	031564600800
9	160	100	1	031561600900
9	210	150	1	031562100900
10	110	50	1	031561101000
10	160	100	1	031561601000
10	210	150	1	031562101000
10	260	200	1	031562601000
10	310	250	1	031563101000
10	360	300	1	031563601000
10	460	400	1	031564601000
10	610	550	1	031566101000
11	160	100	1	031561601100
11	210	150	1	031562101100
11	260	200	1	031562601100
12	160	100	1	031561601200
12	210	150	1	031562101200
12	260	200	1	031562601200
12	310	250	1	031563101200
12	460	400	1	031564601200
12	600	550	1	031566001200

Ø mm	L	l	pcs	cod.
13	160	100	1	031561601300
13	210	150	1	031562101300
13	260	200	1	031562601300
13	460	400	1	031564601300
14	160	100	1	031561601400
14	210	150	1	031562101400
14	260	200	1	031562601400
14	310	250	1	031563101400
14	460	400	1	031564601400
14	600	550	1	031566001400
15	160	100	1	031561601500
15	260	200	1	031562601500
16	160	100	1	031561601600
16	210	150	1	031562101600
16	260	200	1	031562601600
16	310	250	1	031563101600
16	460	400	1	031564601600
16	600	550	1	031566001600
18	210	150	1	031562101800
18	260	200	1	031562601800
18	310	250	1	031563101800
18	460	400	1	031564601800
18	600	550	1	031566001800
20	200	150	1	031562002000
20	310	250	1	031563102000
20	460	400	1	031564602000
20	600	550	1	031566002000
22	250	200	1	031562502200
22	460	400	1	031564602200
22	600	550	1	031566002200
24	260	200	1	031562602400
24	460	400	1	031564602400
25	260	200	1	031562602500
25	460	400	1	031564602500
26	460	400	1	031564602600
28	460	400	1	031564602800
30	460	400	1	031564603000

Confezione / *Packaging*



Applicazioni / *Applications*



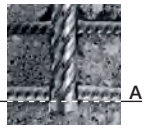
Calcestruzzo
Concrete



Muro
Masonry



Pietra
Natural stones



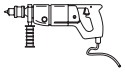




Sez. AA

Immagine ottenuta al microscopio sezionando la testa dell'utensile
Picture of the carbide tip





- Placchetta in metallo duro integrale con 4 taglienti, 4 eliche rapide, corpo in acciaio ad alta resistenza. La punta a 4 taglienti e 4 spirali **taglia sempre il tondino in cemento armato e non si blocca mai**.
- Grande durata dell'utensile, precisione e circolarità del foro.
- *One-piece solid carbide with 4 cutting edges, 4 flutes, steel body with high resistance.*
- *One-piece solid carbide tip always cuts the steel bar into reinforced concrete and it never stops.*
- *Long life cycle, thoroughness and roundness of the hole.*

ASSORTIMENTI PUNTE SDS-PLUS CON 4 ELICHE E 4 TAGLIENTI K8®

SDS-PLUS hammer drills sets, 4 flutes, 4 cutting edges K8
Assortiments forets à marteau SDS-PLUS / Juegos brocas martillo SDS-PLUS

Metal



7 pcs
Ø 5 - 6 - 8 x 110 mm
Ø 6 - 8 - 10 - 12 x 160 mm

03166401



30 pcs
Ø 6÷14 mm

Ø	pcs
6x160	5
8x160	5
10x160	5
12x160	5
10x210	5
12x210	3
14x210	2

03166460



13 pcs



Ø	pcs
6x160	1
8x160	1
10x160	1
8x210	1
10x210	1
12x210	1
10x260	1
12x260	1
14x260	1
L=250	1
L=250	1
L=250	1
L=250	1

03165310

ESPOSITORE PUNTE SDS-PLUS CON 4 ELICHE E 4 TAGLIENTI K8

SDS-PLUS hammer drills display, 4 flutes, 4 cutting edges K8
Display avec forets à marteau SDS-PLUS / Expositor brocas para martillo SDS-PLUS



390x150x225

107 pcs
Ø 5÷16 mm

Ø	pcs
5x110	5
6x110	10
5x160	5
6x160	10
8x160	10
10x160	10
12x160	10
6x210	5
8x210	5
10x210	5
12x210	5
14x210	5
16x210	3
8x260	5
10x260	5
12x260	3
14x260	3
16x260	3

03166503

High Quality professional

PUNTE PER MARTELLI SDS-MAX SUPERPROFESSIONALI

Super professional hammer drills bits SDS-MAX / Forets à marteau superprofessionelles SDS-MAX
Brocas para martillo super professionales SDS-MAX / Berufshammerbohrer SDS-MAX

Super Pro

03170





HVA ≃ 1650



Caratteristiche/*Features*
Speciali placchette in M.D. per resistere all'urto sulla nuova generazione dei martelli pesanti da 5 Kg ed oltre. Testa più snella ma compatta per la geometria dei taglienti, facile penetrazione nel cemento. Elica "vario flute", per una più rapida evacuazione dei materiali.
Risultati: + 30% di efficienza nella foratura, maggiore durata dell'utensile, più resistenza agli impatti, minori vibrazioni, fori più profondi e precisi.

Special cutting edges for a quick penetration into the hardest concrete. Large flute for a fast removal, strong reinforced web for a smooth cutting (no breakage, no vibrations).

Ø mm	L	l	pcs	cod.
*12	340	200	1	031703401200
*12	540	400	1	031705401200
*12	740	600	1	031707401200
**13	540	400	1	031705401300
*14	340	200	1	031703401400
*14	540	400	1	031705401400
*14	740	600	1	031707401400
*14	940	800	1	031709401400
*15	340	200	1	031703401500
*15	540	400	1	031705401500
16	340	200	1	031703401600
16	540	400	1	031705401600
16	740	600	1	031707401600
16	940	800	1	031709401600
16	1340	1200	1	0317013401600
18	340	200	1	031703401800
18	540	400	1	031705401800
18	740	600	1	031707401800
18	940	800	1	031709401800
18	1340	1200	1	0317013401800
19	520	400	1	031705201900
20	320	200	1	031703202000
20	520	400	1	031705202000
20	720	600	1	031707202000
20	920	800	1	031709202000
20	1320	1200	1	0317013202000
22	320	200	1	031703202200
22	520	400	1	031705202200
22	720	600	1	031707202200
22	920	800	1	031709202200
22	1320	1200	1	0317013202200
24	320	200	1	031703202400
24	520	400	1	031705202400
25	320	200	1	031703202500

Ø mm	L	l	pcs	cod.
25	520	400	1	031705202500
25	720	600	1	031707202500
25	920	800	1	031709202500
25	1320	1200	1	0317013202500
26	520	400	1	031705202600
28	320	200	1	031703202800
28	520	400	1	031705202800
28	720	600	1	031707202800
28	920	800	1	031709202800
28	1320	1200	1	0317013202800
30	320	200	1	031703203000
30	520	400	1	031705203000
32	320	200	1	031703203200
32	520	400	1	031705203200
32	720	600	1	031707203200
32	920	800	1	031709203200
32	1320	1200	1	0317013203200
35	370	250	1	031703703500
35	520	400	1	031705203500
35	720	600	1	031707203500
35	920	800	1	031709203500
35	1320	1200	1	0317013203500
37	570	450	1	031705703700
37	920	800	1	031709203700
38	370	250	1	031703703800
38	520	400	1	031705203800
38	720	600	1	031707203800
40	520	400	1	031705204000
40	720	600	1	031707204000
40	920	800	1	031709204000
40	1320	1200	1	0317013204000
45	520	400	1	031705204500
50	570	450	1	031705705000
52	570	450	1	031705705200

* 2 taglienti - *2 cutting edges*
** Ad esaurimento - *To be discontinued*

Confezione / *Packaging*



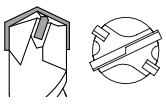
Applicazioni / *Applications*


Calcestruzzo
Concrete


Muro
Masonry


Pietre naturali e artificiali
Natural and artificial stones

Super PRO



HVA ≃ 1650

- 4 taglienti – 2 eliche ampie nuovo disegno dei denti
- *4 cutting edges – 2 wide flutes new teeth design*

- Taglio ad **altissimo rendimento**, su martelli SDS-MAX, nel muro, cemento, calcestruzzo, pietre, grazie alla placchetta estremamente aggressiva. L'accurata geometria della testa favorisce il centraggio e la perfetta circolarità del foro. La placchetta snella, con taglienti laterali inclinati e gli ampi canali di rimozione dei detriti consentono una velocità di foratura elevatissima, mantenendo un basso tenore di vibrazioni sul martello. Per fori superiori a 400 mm, utilizzare un preforo di 150÷200 mm dello stesso diametro.
- *Superprofessional cut for hammer drills with SDS-MAX chucking in concrete, masonry and natural stone. Smooth running, accurate hole, reduced vibrations due to its high quality.*
- *Forets à marteau SDS-MAX superprofessionnel pour perçage in carrelage, ciment, pierre naturelle et artificielle.*
- *Brocas para martillo SDS-MAX siperprofessionales para corta hormigon, cemento, piedra, suelos.*

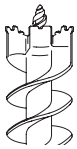




PUNTA DI GRANDE DIAMETRO PER MARTELLI SDS-MAX

Breakthrough drill bit SDS-MAX / Forets à défoncer SDS-MAX
Broca para hendiduras SDS-MAX / Durchbruchbohrer SDS-MAX





Integrale
One piece

SDS max

Ø mm	L	/	pcs	cod.
45	550	100	1	031715504500
45	990	100	1	031719904500
55	550	100	1	031715505500
55	990	100	1	031719905500
65	550	100	1	031715506500
65	990	100	1	031719906500
80	550	100	1	031715508000
80	990	100	1	031719908000

03171

Applicazioni / *Applications*



Calcestruzzo
Concrete

Muro
Masonry



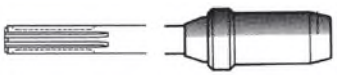


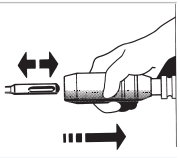
- Adatta per la foratura di grandi dimensioni (ø 45÷80 mm) con martelli SDS-MAX in cemento, muratura, arenaria. Speciale per forature passanti per il passaggio di cavi e tubature.
- *Useful for drilling into large diameters (ø 45÷80 mm) with SDS-MAX hammer tools into concrete, masonry, sandstone. Special for breakthrough cuts for cables and pipes.*
- *Adapte au perçage des grandes dimensions (ø 45÷80 mm) avec machines à marteaux SDS-MAX dans le cément, béton, pierre. Spécial pour trous passants pour les passages des câbles et tuyaux.*
- *Adecuado para agujeros de grandes dimensiones (ø 45÷80 mm) con taladros de martillos SDS-MAX en concreto, hormigon, arenisca. Especial para agujeros para los pasajes des cables y tubos.*

ADATTATORE A CAMBIO RAPIDO SDS-MAX / SDS-PLUS

SDS-MAX / SDS-PLUS adapter / Adaptateurs pour meches SDS-MAX / SDS-PLUS / Adaptatores con salida SDS-MAX / SDS-PLUS



SDS-MAX		SDS-PLUS	cod.	L
			**03184101**	220



Millerighe 19,3 mm *Large spline shank*		SDS-PLUS	***03184102**	220
			* Ad esaurimento - *To be discontinued*	
Attacco esagonale SW 13 (corto) *Hexagonal shank SW 13 (short)*		SDS-PLUS	***03184103**	208
			* Ad esaurimento - *To be discontinued*	

High Quality professional

PUNTE “DUST FREE” CON SISTEMA DI ASPIRAZIONE DELLA POLVERE

Professional drills bits with dust removal technology / Forets avec technologie de dépoussiérage
Brocas con tecnologia de eliminacion de polvo / Spitzen mit Staubabsaugsystem

03172 NEW

SDS PLUS

Ø mm	L	/	pcs	cod.
12	330	200	1	031723301200
14	360	240	1	031723601400
16	360	240	1	031723601600
18	360	240	1	031723601800

SDS MAX

Ø mm	L	/	pcs	cod.
16	600	400	1	031726001600
18	600	400	1	031726001800
20	600	400	1	031726002000
22	600	400	1	031726002200
24	600	400	1	031726002400
25	600	400	1	031726002500
28	900	700	1	031729002800
30	900	700	1	031729003000
32	900	700	1	031729003200
35	900	700	1	031729003500

SDS PLUS SDS MAX



Confezione / *Packaging*



Applicazioni / *Applications*



Calcestruzzo
Concrete



Muro
Masonry



Pietre naturali e artificiali
Natural and artificial stones





Caratteristiche/*Features*

- Ideale per effettuare fori nel cemento armato per i quali sia previsto l’inserimento di ancorante chimico, evita la lunga e laboriosa procedura di pulizia del foro garantendo un risultato ottimale (Avvertenza: per la sistemazione di tasselli, attenersi comunque sempre alle indicazioni del produttore dei tasselli stessi)
- Riduce la dispersione di polveri nell’ambiente di lavoro
- Permette una foratura più veloce ed efficiente grazie all’immediata rimozione del materiale di scarto che nelle punte tradizionali si interpone tra i taglienti e la superficie da forare
- Compatibile con qualsiasi aspiratore reperibile sul mercato (si raccomanda l’utilizzo di aspiratori in classe M per una più efficace riduzione delle polveri nell’ambiente di lavoro)
- La speciale forma della testa a quattro taglienti (per diametri ≤ 28mm) o a 2 taglienti con grandi fori di aspirazione (per diametri ≥ 28mm) evita l’inceppamento della punta anche nei lavori più gravosi di foratura del cemento armato.
- La speciale forma del gambo delle punte con diametro > 28 agevola la centratura del foro e ne migliora la maneggevolezza

- *Ideal to work in to reinforced concrete for which the insertion of a chemical anchor is foreseen, this technology avoids the long and laborious cleaning procedure of the hole guaranteeing an optimal and faster result. (Warning: for the installation of dowels, always follow the manufacturer’s instructions dowels themselves).*
- *It reduces the dispersion of dust in the working environment.*
- *It allows a faster and more efficient drilling due to the immediate removal of the debris which normally interposes between the cutting edges of the drill and the surface to be worked.*
- *Compatible with any vacuum cleaner available on the market (the use of class M vacuum cleaners is recommended for a more effective reduction of dust in the workplace)*
- *The head with 4 cutting edges (2 cutting edges for measures ≤ 28mm) avoids the jamming of the tip even in the most difficult jobs of drilling reinforced concrete.*
- *The special shape of the shank of the drills with a diameter> 28 facilitates the centering of the hole and improves its handling.*

ADATTATORE PER PUNTE

Connector to the dust aspirator / Connecteur pour le systeme d’aspiration
Conector para sistema de aspiración / Steckverbindungen für Saugsysteme

SDS PLUS SDS MAX



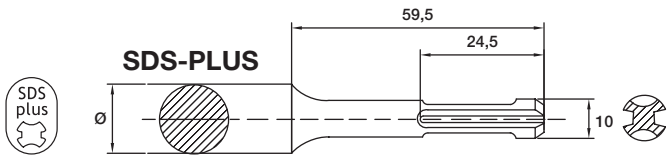


Cod.	Attacco *Attachment*
03172ADATTSDS	SDS PLUS
03172ADATTMAX	SDS MAX

High Quality professional

SCALPELLI DI QUALITÀ PREMIUM PER MARTELLI ELETTRICI PERFORATORI

Premium quality chisels for electric hammers / Burins et pics pour marteaux perforateurs
Cincels para martillos / Einsteckwerkzeuge für Elektrohämmer



Qualità Premium - *Premium performance*

Auto affilante
Self-Sharpening

03221

Scalpelli a punta
Pointed chisels / Pics
Punteros / Spitzmeißel

L mm	ø	cod.	
250	14	0322102250	

Scalpelli piatti
Flat cold chisels / Burins
Cinceles / Flachmeißel

mm	L mm	ø	cod.	
20	**250**	14	0322106020250	

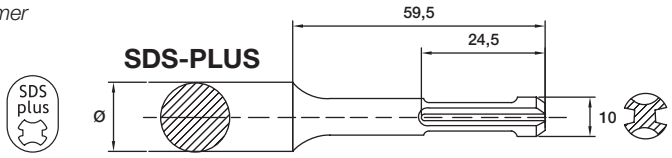




High Quality professional

SCALPELLI DI QUALITÀ PER MARTELLI ELETTRICI PERFORATORI

High quality chisels for electric hammers / Burins et pics pour marteaux perforateurs
Cincels para martillos / Einsteckwerkzeuge für Elektrohämmer



Alta Qualità - *High performance*

03220



Scalpelli a punta
Pointed chisels / Pics
Punteros / Spitzmeißel

L mm	ø	cod.	
250	14	0322002250	

Scalpelli piatti
Flat cold chisels / Burins
Cinceles / Flachmeißel

mm	L mm	ø	cod.	
20	**250**	14	0322001020250	
20	**250**	14	0322006020250	

Scalpelli piatti larghi
Spade chisels / Burins larges
Cinceles anchos / Spatmeißel

mm	L mm	ø	cod.	
40	**250**	14	0322003040250	

mm	L mm	ø	cod.	
40	**260**	14	0322003040260	25°

mm	L mm	ø	cod.	
22	**250**	14	0322004022250	
22	**250**	16	0322005022250	



3 pcs

250
20x250
40x250

03281100

Qualità Standard - *Standard quality*

NEW

03222



Scalpelli a punta
Pointed chisels / Pics
Punteros / Spitzmeißel

L mm	ø	cod.	
250	14	0322202250	

Scalpelli piatti
Flat cold chisels / Burins
Cinceles / Flachmeißel

mm	L mm	ø	cod.	
20	**250**	14	0322201020250	

Scalpelli piatti larghi
Spade chisels / Burins larges
Cinceles anchos / Spatmeißel

mm	L mm	ø	cod.	
40	**250**	14	0322203040250	
75	**160**	14	032220775160	25°
40	**250**	14	032220740250	25°



3 pcs

250
20x250
40x250

03281120

High Quality professional

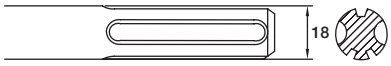
SCALPELLI DI QUALITÀ PER MARTELLI ELETTRICI PERFORATORI

High quality chisels for electric hammers / Burins et pics pour marteaux perforateurs
Cincels para martillos / Einsteckwerkzeuge für Elektrohämmer

Alta Qualità - *High performance*

SDS max

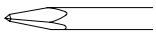
SDS-MAX



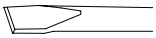
03210



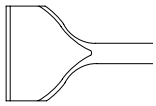
Scalpelli a punta
Pointed chisels / Pics
Punteros / Spitzmeißel

L mm	ø	cod.	
280	18	0321002280	
400	18	0321002400	
600	18	0321002600	

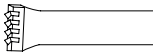
Scalpelli piatti
Flat cold chisels / Burins
Cinceles / Flachmeißel

mm	L mm	ø	cod.	
27	**280**	18	0321001027280	
27	**400**	18	0321001027400	
27	**600**	18	0321001027600	

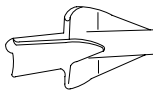
Scalpelli piatti larghi
Spade chisels / Burins larges
Cinceles anchos / Spatmeißel

mm	L mm	ø	cod.	
50	**400**	18	0321003050400	
80	**300**	18	0321003080300	
115	**350**	22	0321003115350	



50	**300**	18	0321003050300	10° 
38	**280**	18	0321005038280	
38	**280**	18	0321006038280	

Scalpelli a sgorbia
Grooving chisels / Gouges
Rozadores / Hohlmeißel

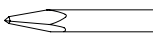
mm	L mm	ø	cod.	
26	**300**	18	0321004026300	
32	**300**	18	0321004032300	
35	**380**	23	0321007035380	

Qualità Standard - *Standard quality*

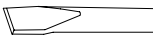
03212 NEW



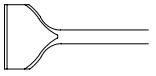
Scalpelli a punta
Pointed chisels / Pics
Punteros / Spitzmeißel

L mm	ø	cod.	
280	18	0321002280	
400	18	0321202400	
600	18	0321202600	

Scalpelli piatti
Flat cold chisels / Burins
Cinceles / Flachmeißel

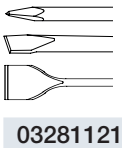
mm	L mm	ø	cod.	
25	**280**	18	0321201025280	
25	**400**	18	0321201025400	
25	**600**	18	0321201025600	

Scalpelli piatti larghi
Spade chisels / Burins larges
Cinceles anchos / Spatmeißel

mm	L mm	ø	cod.	
50	**400**	18	0321203050400	
75	**300**	18	0321203075300	



3 pc



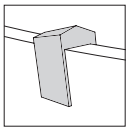
03281121

FRESE PERFORATRICI A TAZZA "IMPACT" PER EDILIZIA PER MARTELLI LEGGERI

Masonry impact core bits for light hammers / Trépans pour marteau légér
Broca corona para martillo / Schlagbohrkronen

21110 21111

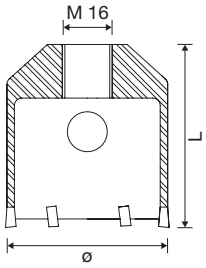


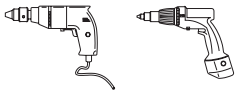


Uso rotopercussione su trapani e piccoli martelli sino 40 N
Rotary percussion use

Art. 21110

Ø fresa *hole cutter*	L	Z n. denti *tips*	pcs	cod.
25	75	4	1	2111002500
30	75	4	1	2111003000
35	75	4	1	2111003500
40	75	4	1	2111004000
45	75	4	1	2111004500
50	75	6	1	2111005000
65	75	6	1	2111006500
80	75	6	1	2111008000
90	75	6	1	2111009000
100	75	8	1	2111010000
112	75	8	1	2111011200
125	80	10	1	2111012500
150	80	12	1	2111015000





Ø ≤ 50 mm 600W
Ø > 50 mm 800W (3J)
F ≤ 40 N

Confezione / *Packaging*



Applicazioni / *Applications*



Muro
Masonry



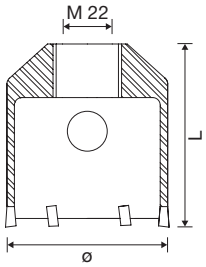
Calcestruzzo
Concrete



Pietre naturali e artificiali
Natural and artificial stones

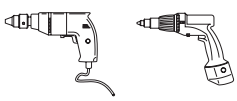
Art. 21111

Ø fresa *hole cutter*	L	Z n. denti *tips*	pcs	cod.
50	75	6	1	2111105000
55	75	6	1	2111105500
60	75	6	1	2111106000
65	75	6	1	2111106500
68	75	6	1	2111106800
80	75	6	1	2111108000
90	75	6	1	2111109000
100	75	8	1	2111110000
112	75	8	1	2111111200
125	80	10	1	2111112500
150	80	12	1	2111115000





- Foratura a rotopercussione su trapani e piccoli martelli nel calcestruzzo, cemento, pietre. Massima profondità di foratura 60 mm.
- *Use with hammer drills up to 40 N in masonry and concrete (60 mm drill depth).*
- *Pour percage béton avec marteau léger (40 N Max).*
- *Coronas para construccion, hormigon-piedra con martillo 40 N max.*
- *Für Beton und Mauerwerk mit Bohrhammer bis max 40 N.*



Ø ≥ 50 mm 800W (3J)
F ≤ 40 N

GAMBI PER FRESE PERFORATRICI A TAZZA "IMPACT"

Chucking shanks for "Impact" core bits / Arbres de montage pour trépans "Impact"
Husillos para coronas perforadoras "Impact" / "Impact" Fräserschäfte

Gambo esagonale - *Hex. shank*

		Cod.	Attacco filettato *Thread attachment*	Lunghezza tot. *Overall length*
M 16 x 2	 HEX 12	21115501	M 16 x 2	100 mm
		21115502	M 16 x 2	220 mm
		21115503	M 16 x 2	370 mm
M 22 x 2,5	 HEX 12	21115521	M 22 x 2,5	100 mm
		21115522	M 22 x 2,5	220 mm
		21115523	M 22 x 2,5	370 mm

Gambo SDS PLUS - *SDS PLUS shank*

M 16 x 2	 SDS PLUS	21115504	M 16 x 2	100 mm
		21115505	M 16 x 2	220 mm
		21115507	M 16 x 2	370 mm
		21115509	M 16 x 2	460 mm
M 22 x 2,5	 SDS PLUS	21115524	M 22 x 2,5	100 mm
		21115525	M 22 x 2,5	220 mm
		21115527	M 22 x 2,5	370 mm
		21115529	M 22 x 2,5	460 mm

Gambo SDS MAX* - *SDS MAX shank**

M 16 x 2	 SDS MAX*	21115510	M 16 x 2	370 mm
M 16 x 2	 SDS MAX*	21115520	M 22 x 2,5	370 mm

*** Usare solo per materiali da costruzione leggeri come arenaria, mattoni forati. Non usare per cemento armato, calcestruzzo e pietre.**
Use with light building materials only.

Punta pilota - *Pilot drill*

 7,25 mm	21115506		Ø 8 x 120

ESPOSITORE FRESE "IMPACT" PER EDILIZIA

Masonry core bits set / Assortiments trépans pour marteau lèger
Surtido brocas coronas para martillo / Schlagbohrkronen Sortimente



Cod.	Attacco filettato *Thread attachment*		
21116112	**Ø 30 ÷ 100 mm**	**24 pcs**	
21110	M 16		Ø 30 35 40 pcs 1 1 1
21111	M 22		Ø 50 65 80 90 100 pcs 1 1 1 1 1
21115501	(M 16)	 HEX 12	L = 100 mm N° 1 pc
21115502	(M 16)		L = 220 mm N° 1 pc
21115521	(M 22)		L = 100 mm N° 1 pc
21115522	(M 22)		L = 220 mm N° 1 pc
21115504	(M 16)	 SDS PLUS	L = 100 mm N° 1 pc
21115505	(M 16)		L = 220 mm N° 1 pc
21115524	(M 22)		L = 100 mm N° 1 pc
21115525	(M 22)		L = 220 mm N° 1 pc
21115506			Ø = 8 mm N° 8 pcs

High Quality professional

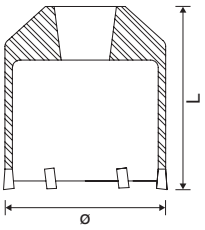
CORONE PERFORATRICI PER EDILIZIA CON ATTACCO CONICO PER MARTELLI PESANTI

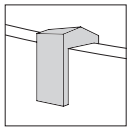
Hammer core bits with taper chucking - Trépans marteau pour béton cône 1/8
Brocas coronas para martillo potente, mango conico - Hammerbohrkronen mit Konus-Verbindung 1:8

21120



Ø corona *core bit*	L	Z n. denti *tips*	pcs	cod.
35	100	4	1	2112003500
40	100	5	1	2112004000
45	100	5	1	2112004500
50	100	6	1	2112005000
60	100	6	1	2112006000
66	100	7	1	2112006600
70	100	8	1	2112007000
80	100	8	1	2112008000
90	100	8	1	2112009000
100	100	10	1	2112010000
110	100	12	1	2112011000
125	100	12	1	2112012500
130	100	12	1	2112013000
150	100	14	1	2112015000





Attacco conico 1:8
1:8 taper attachment

Confezione / *Packaging*



Applicazioni / *Applications*



Muro
Masonry



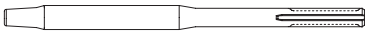
Calcestruzzo
Concrete



Pietre naturali e artificiali
Natural and artificial stones

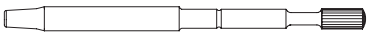
Asta porta corona senza asola - *Shank without slot*

SDS Max



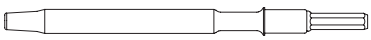
Cod.	L (mm)
21130211	250
21130220	450
21130225	600

Millerighe Ø 19,3 mm *Large spline shank*



Cod.	L (mm)
21130235	250
21130245	600

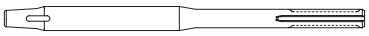
HEX SW 13



Cod.	L (mm)
21130255	250
21130260	450
21130265	600

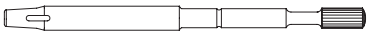
Asta porta corona con asola - *Shank with slot*

SDS Max



Cod.	L (mm)
21130011	250
21130020	450
21130025	600

Millerighe Ø 19,3 mm *Large spline shank*



Cod.	L (mm)
21130035	250
21130040	450
21130045	600

HEX SW 13



Cod.	L (mm)
21130055	250
21130060	450
21130065	600

Punta pilota - *Pilot drill*



Cod.	Ø (mm)
21130110	12x135

Estrattore per punte pilota - *Drill drift*



Cod.
281580102

- Grandi rendimenti nel calcestruzzo, muro, pietre calcaree.
- *High performances in masonry- concrete, sand-lime brick, natural stone.*
- *Haute rendement en béton-carrelage.*
- *Elevado rendimiento in hormigon, piedra.*
- *Einsatz in Bohrhammer für Beton, Mauerwerk, Naturstein.*

Uso rotopercussione su trapani pesanti > 45 N e con potenza > 900W (fino a 1500W)
Hammer drill use > 45 N and electrical power > 900W





CORONE PERFORATRICI PER EDILIZIA CON ATTACCO FILETTATO LARGO PER MARTELLI PESANTI

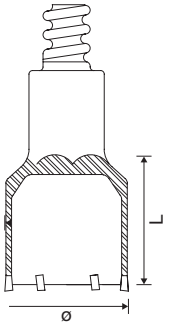
Hammer core bits with special threaded shank / Trépans marteaux pour béton avec queue filetée
Brocas coronas para martillo potente, mango roscado / Hammerbohrkronen mit gewindeaufnahme

21131



Robusti, potenti, facili da montare e smontare
Strong and powerful, easy to fit and remove

Ø corona *core bit*	L	pcs	cod.
45	80	1	2113104500
50	80	1	2113105000
55	80	1	2113105500
82	80	1	2113108200
150	80	1	2113115000




21122



Asta porta corona - *Shank*

SDS Max



Cod.	L (mm)
2113220	460

Punta pilota Ø 11,5 - *Pilot drill*



Cod.	Ø x L
2113270	11,5x136

Confezione / *Packaging*



Applicazioni / *Applications*


Muro
Masonry


Calcestruzzo
Concrete


Pietre naturali e artificiali
Natural and artificial stones

- L'attacco filettato molto robusto permette una versatilità d'uso sui diversi martelli. Grandi rendimenti nel calcestruzzo, muro, pietre calcaree. Speciale per passaggio tubi.
- *High performances with hammer drills for cutting masonry, concrete, natural stone.*
- *Haute rendement et versatilité en percage béton avec marteau.*
- *Coronas potente en cortar a forte percussion hormignon, cemento.*
- *Einsatz in Bohrhammer für Beton, Mauerwerk, Naturstein.*





Uso rotopercussione su martelli pesanti.
Hammer drill use.

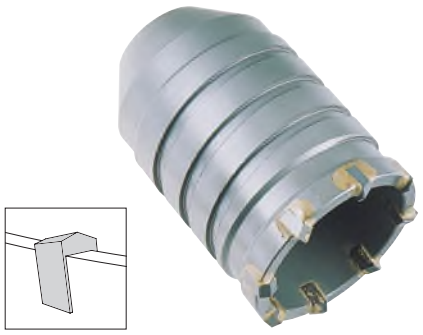
High Quality professional

CORONE PERFORATRICI PER EDILIZIA CON FILETTO A MOLLA PER MARTELLI PESANTI SDS-MAX

Hammer core bits with spring thread for hammer SDS-MAX / Trépans marteau pour béton avec filet à ressort pour marteaux SDS MAX/
Coronas perforadoras para martillo SDS-MAX con rosca e resorte de acoplamiento

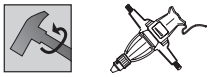
SDS max

21122



Ø mm	L mm	Z n. denti *tips*	pcs	cod.
40	100	5	1	2112204000
50	100	6	1	2112205000
60	100	6	1	2112206000
66	100	7	1	2112206600
70	100	8	1	2112207000
80	100	8	1	2112208000
90	100	8	1	2112209000
100	100	10	1	2112210000
110	100	12	1	2112211000
125	100	12	1	2112212500
150	100	14	1	2112215000





Uso rotopercussione su trapani pesanti > 45 N e con potenza > 900W
Hammer drill use > 45 N and electrical power > 900W

Asta porta corona - *Shank*

SDS Max Con molla - *With spring*



Cod.	L (mm)
21130300	250
21130305	450
21130310	600

Molla di accoppiamento - *Coupling spring*



Cod.
21130316

Punta pilota - *Pilot drill*



Cod.	Ø (mm)
21130315	12x135

Estrattore per punte pilota - *Drill drift*



Cod.	Ø x L (mm)
21130317	9,5x100

Confezione / *Packaging*



Applicazioni / *Applications*



Muro
Masonry



Calcestruzzo
Concrete



Pietre naturali e artificiali
Natural and artificial stones

Espositore corone perforatrici per edilizia con filetto a molla - *Hammer core bits with spring thread set*



Cod.	Composizione *Description*
21116117 29 pcs Ø 40÷100	 Ø 40-50-60-66 80-90-100 (1x)
	 21130300 (3x) 21130305 (3x)
	 21130315 (6x)
	 21130316 (10x)

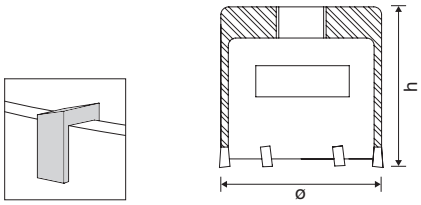
- Grandi rendimenti nel calcestruzzo, muro, pietre calcaree. Corona sempre smontabile grazie alla molla di accoppiamento.
- *High performances in masonry- concrete, sand-lime brick, natural stone. Easy removable core bits thanks to the coupling spring.*
- *Haute rendement en béton-carrelage. Trepans marteaux toujours dèmontable par le ressort.*
- *Elevado rendimiento in hormigon, piedra. Corona perforadora siempre desmontable por el resorte de acopliamento.*

FRESE PERFORATRICI A TAZZA CON TAGLIENTI IN METALLO DURO PER EDILIZIA

Carbide tipped hole cutters for masonry, rotation only / Scies trepans pour beton à rotation uniquement
Coronas para construccion, dientes de metal duro / H.M. Lochsäge für Fliesen, Mauerwerk, Leichtbaustoffe

21015





Ø Fresa Hole cutter	h Altezza tazza Cup	Z N. denti *Tips*	d Gambo Shank	pcs	cod.
16	40	2	10	1	2101501600
22	40	3	10	1	2101502200
25	40	3	10	1	2101502500
27	40	3	10	1	2101502700
30	40	4	10	1	2101503000
35	40	4	10	1	2101503500
38	40	5	10	1	2101503800
40	40	5	10	1	2101504000
45	40	5	10	1	2101504500
50	40	6	10	1	2101505000
55	40	6	12	1	2101505500
60	40	7	12	1	2101506000
65	40	7	12	1	2101506500
70	40	8	12	1	2101507000
80	40	9	12	1	2101508000
85	40	10	12	1	2101508500
100	40	11	12	1	2101510000
125	40	12	12	1	2101512500
150	40	15	12	1	2101515000

Confezione / *Packaging*



Applicazioni / *Applications*



Muro
Masonry

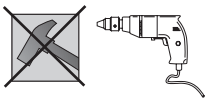


Calcestruzzo
Concrete



Ceramica
Ceramics

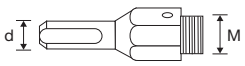
- Forano a sola rotazione calcestruzzo leggero, muro, piastrelle, ceramica, laminati plastici. Adatti per fori precisi a pavimento di porte blindate, fori per condotte, scatole di derivazione, etc…
- *Rotary use in masonry, tiles, light construction materials.*
- *Trépans à utiliser en rotation, pour couper le sol pour les portes blindés, boîtes de déviation, etc.*
- *Para cortar a rotacion muro, ladrillos, ceramica, cemento.*
- *Drehend Einsatz für Mauerwerk, Leichtbaustoffe, Fliesen.*



Utilizzo a rotazione
Rotary use only

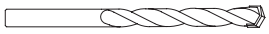
Gambo - *Arbor*

3 Pianetti / *3 Flats*



Cod.	Per frese *Fit hole cutters*	d	M
21020100	Ø 16 ÷ 35	10	12x1,25
21020101	Ø 38 ÷ 150	12	16x1,5

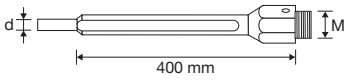
Punta pilota - *Pilot drill*



Cod.	Per frese *Fit hole cutters*	d	Ø mm
21020110	Ø 16 ÷ 50	5,85	6
21020111	Ø 55 ÷ 150	7,25	8

Prolunga 400 mm - *Extension*

3 Pianetti / *3 Flats*



Cod.	Per frese *Fit hole cutters*	d	M
21020120	Ø 16 ÷ 50	12	12x1,25
21020121	Ø 55 ÷ 150	12	16x1,5



Cod.

21030110
12 pcs
Ø 22 25 27 30 35 38 40 45 50 55 60 65



Set frese a tazza per impiantisti, idraulici, etc.
Hole cutters set for journeymen and plumbers. Jeu de scie trépans pour ouvriers spécialistes et plombiers. / Juego de coronas perforadoras para obreros especialistas y fontaneros. Lochsägensortiment für Facharbeiter und Installateurs.

Cod.

21030300
8 pcs
Ø 16 22 25 27 30 35 40 50

Cod.

21030301
6 pcs
Ø 16 22 25 27 30 35

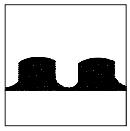
High Quality professional

FRESE A TAZZA CON DENTI RIVESTITI IN CARBURO DI TUNGSTENO IN GRANI

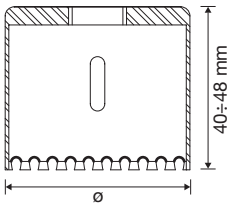
Carbide grit hole saws, high quality / Scies trépans au carbure de tungstene
Coronas de carburo de tungsteno / H.M. Lochsäge

21105





Carbide grit



Art. **21135** Self
Disponibile su richiesta / *On demand*

Ø mm	Pollici *inch*	d Filetto Thread	pcs	cod.
16	5/8	UNF 1/2 x 20	1	2110501600
19	3/4		1	2110501900
20	-		1	2110502000
22	7/8		1	2110502200
25	1"		1	2110502500
29	1-1/8		1	2110502900
32	1-1/4	UNF 5/8 x 18	1	2110503200
35	1-3/8		1	2110503500
38	1-1/2		1	2110503800
44	1-3/4		1	2110504400
48	1-7/8		1	2110504800
51	2"		1	2110505100
54	2-1/8		1	2110505400
57	2-1/4		1	2110505700
60	2-3/8		1	2110506000
64	2-1/2		1	2110506400
70	2-3/4		1	2110507000
76	3"		1	2110507600
83	3-1/4		1	2110508300
86	3-3/8		1	2110508600
95	3-3/4		1	2110509500
102	4"		1	2110510200
114	4-1/2		1	2110511400







Confezione / *Packaging*



Applicazioni / *Applications*



Ceramica
Ceramics



Pietre naturali Marmo
Stones Marble



Piastrelle Mattoni durissimi
Tiles Hard burnt brick



Fibra di vetro Laminati plastici
Fiberglass

Per frese - *Fit hole saws*





Ø	cod.
16 ÷ 29	210706519
32 ÷ 114	210706546

Punta pilota - *Pilot drill*



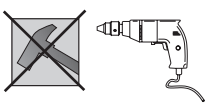
Ø	cod.
Ø 7x80	21020112



03121002

393

- Per tagliare: Ceramica, gres, granito, marmo, ardesia, fibre di vetro, ghisa, laminati e tutti i materiali abrasivi. Max profondità di foratura: 40 mm.
- *Cuts: Ceramic tile, laminates, composition board, marble, fiberglass, cast iron, and other abrasive materials. Maximum cutting depth: 40 mm.*
- *Pour percer: Ceramic, marbre, fonte, tous les materiales abrasifs. Profondeur de coupe: 40 mm.*
- *Aplicaciones: gres, marmol, ladrillo, fibra cemento, aglomerados, fibra de vidrio, todos los materiales abrasivos. Profondidad de corte: 40 mm.*
- *Allgemeinen Einsatz in Beton leicht armierten Beton, Klinker, Fliesen, Mauerwerk, Kalksandstein. Maximale Bohrtiefe: 40 mm.*



Utilizzo a rotazione
Rotary use only

ASSORTIMENTI FRESE A TAZZA CON DENTI RIVESTITI IN CARBURO DI TUNGSTENO IN GRANI

Carbide grit hole saws, high quality / Scies trépans au carbure de tungstene
Coronas de carburo de tungsteno / H.M. Lochsäg

HSS-G DIN 338



cod. 21107301

Composizione:
6 pcs Art. 21105: Ø 16, 20, 22, 25, 32, 35 mm (1x)
Art. 210706519: (Ø 16÷29 N. 1 pc)
Art. 210706546: (Ø 32÷114 N. 1 pc)

cod. 21107300

Composizione:
8 pcs Art. 21105: Ø 16, 20, 22, 25, 32, 35, 38, 51 mm (1x)
Art. 210706519: (Ø 16÷29 N. 1 pc)
Art. 210706546: (Ø 32÷114 N. 1 pc),



cod. 21107600

Composizione:
10 pcs Ø 33, 53, 67, 73, 83 mm (1x)



FRESA A TAZZA MULTIPLA PER EDILIZIA IN CARBURO DI TUNGSTENO IN GRANI

Multiple sizes carbide grit hole saw

21108



Standard quality

Ø mm	d ⬡	pcs	cod.
33-43-53-67-83	10	1	21108100

Confezione / *Packaging*



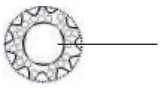
High Quality professional

FRESA A TAZZA A CORONA CONTINUA PER IL TAGLIO DEL GRES PORCELLANATO E DEI MATERIALI EDILI DURISSIMI

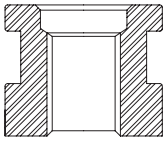
Diamond drill bit and core drills with continuous edge for sandware and very strong building materials / Forets diamantées et scies trépans avec couronne continue pour grès céram et matériaux de construction très durs / Brocas diamantadas y coronas perforadoras con corona continua para gres porcelanico y materiales de construccion durisimos / Diamantbesetzter Spiralbohrer und Lochsägen mit endloser Kranz für Feinsteinzeug und sehr harte Baumaterialen

21106





Matrice metallica altofondente brasata che trattiene i diamanti a grana medio-fine
The high-melting brazed bond keeps medium-fine grain diamonds



Attacco M14 speciale per smerigliatrici angolari M14 shank
M14 shank to fit angular grinding machine

Ø mm	Pollici *inch*	L	pcs	cod.
***6**	15/64	62	1	211060600
***8**	5/16	62	1	211060800
***10**	25/64	62	1	211061000
***12**	15/32	62	1	211061200
***14**	35/64	62	1	211061400
***16**	5/8	62	1	211061600
***18**	23/32	62	1	211061800
20	25/32	60	1	211062000
22	7/8	60	1	211062200
25	1"	60	1	211062500
28	1-1/16	60	1	211062800
30	1-3/16	60	1	211063000
32	1-1/4	60	1	211063200
35	1-3/8	60	1	211063500
40	1-9/16	60	1	211064000
45	1-49/64	60	1	211064500
50	2"	60	1	211065100
55	2-11/64	60	1	211065500
60	2-3/8	60	1	211066000
65	2-9/16	60	1	211066500
67	2-5/8	60	1	211066700
70	2-3/4	60	1	211067000
80	3-5/32	60	1	211068000
90	3-9/16	60	1	211069000
100	4"	60	1	2110610000

***Con cera vegetale all'interno -** *With internal coolant*



cod. 21103315

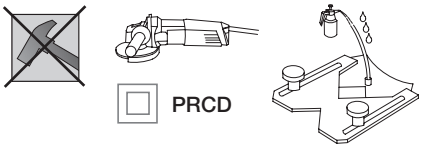
Composizione:
5 pcs Ø 6, 8, 10, 12, 14 mm



cod. 21103310

Composizione:
6 pcs Ø 22, 35, 40, 45, 50, 67 mm

Massima profondità di foratura 10 mm.
Velocità di rotazione consigliata 10.000-13.000 giri/min.

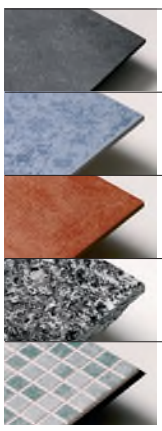


PRCD

Confezione *Packaging*



Applicazioni / *Applications*



Gres porcellanato
Sandware/Grès céram/Gres porcelanico

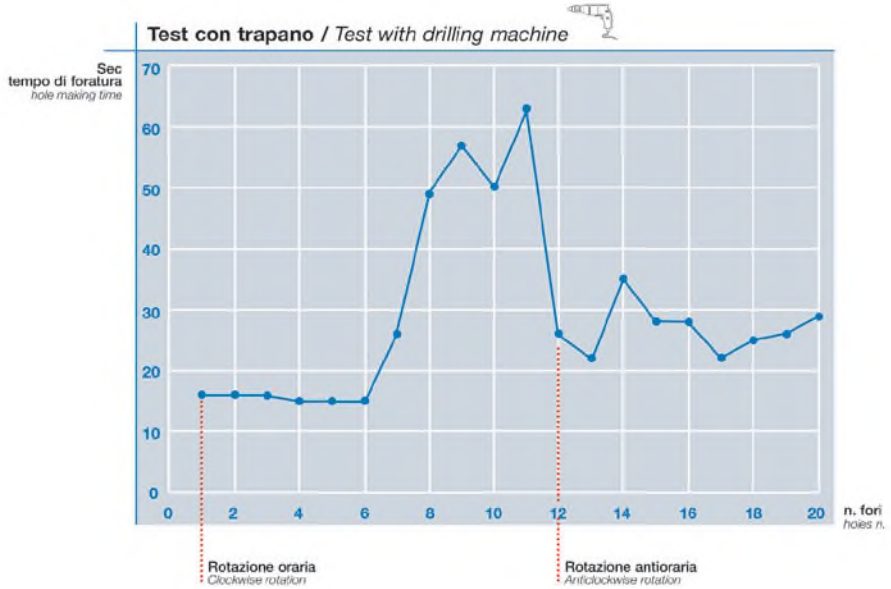
Gres smaltato
Glazed sandstone/Grès emaillé/Gres esmaltado

Gres
Sandstone/Grès/Gres Fragranite®/Clinker

Marmo
Marble/Marbre Mármol

Piastrella standard
Standard ceramics/Carrelage standard/Azulejo estándar

Prestazioni di una fresa diamantata di ø 6 mm a corona continua nella foratura di una piastrella in gres porcellanato con raffreddamento ad acqua: invertendo periodicamente il senso di rotazione della fresa da orario ad antiorario si ravvivano i diamanti e la fresa continua a lavorare per un ciclo di vita utile più lungo.
Nel grafico si mostra come, all'inversione del senso di rotazione, la fresa completa il foro con un tempo comparabile ai primi fori effettuati quando l'utensile era nuovo.
Performances of ø 6 mm diamond core bit with continuous edge when water cooled cutting into sandware: if you cyclically change from clockwise to anti-clockwise rotation you can revive the diamonds thus assuring a longer tool life. Here below the graphics that shows you that, starting the anti-clockwise rotation, the tool can complete the hole briefly, just as it were new.



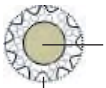
PUNTA DIAMANTATA A CORONA CONTINUA PER IL TAGLIO A SECCO E UMIDO DEL GRES PORCELLANATO E DI TUTTE LE PIASTRELLE

Diamond drill bit with continuous edge for dry cutting of sandware and very hard building materials / Forets diamantées avec couronne continue pour percer à sec grès céram et matériaux de construction très durs / Brocas diamantadas con corona continua para taladrar en seco gres porcelanico y materiales de construccion durisimos / Diamantbesetzter Spiralbohrer mit endloser kranz für Feinsteinzeug und sehr harte Baumaterialen.

Keramaster® Plus

03122

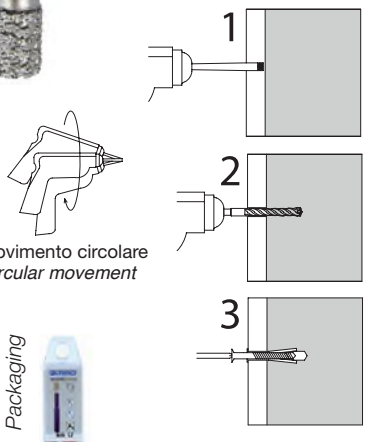




Refrigerante vegetale
Internal cooling system

Matrice metallica altofondente brasata che trattiene i diamanti a grana medio-fine
The high-melting brazed bond keeps medium-fine grain diamonds

Ø mm	d ⬡	L	pcs	cod.
5	9,5	70	1	031220500
6	9,5	70	1	031220600
8	9,5	80	1	031220800
10	9,5	80	1	031221000
12	9,5	80	1	031221200
14	12,5	80	1	031221400
16	12,5	80	1	031221600
18	12,5	80	1	031221800
20	12,5	80	1	031222000
22	12,5	80	1	031222200
25	12,5	80	1	031222500



Movimento circolare
Circular movement

Confezione
Packaging



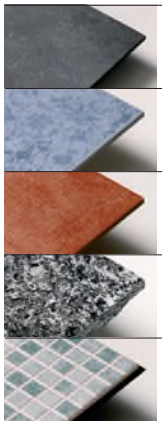
Foratura a secco a sola rotazione. Funzionamento ottimale su pareti verticali (ottimizzato il sistema di refrigerazione interna). Si consiglia di non asportare la carota, che funge da tappo-dosatore per il refrigerante. **L'utilizzo con refrigerazione ad acqua allunga la vita utile dell'utensile.**
Dry cutting, rotation use only. *Best performances on walls to better fit the internal cooling system. Do not remove the deposits: they work as a plug to stop the lubricant.* ***Water cooling extends the tool life cycle.***

Istruzioni d'uso: Iniziare il taglio inclinando la fresa di 30° per agevolare la centratura (oppure utilizzare l'apposita guida). Portarsi gradualmente in posizione verticale. Usare una velocità di taglio di 1000÷3000 giri/min in funzione del diametro decrescente della fresa. Durante il taglio applicare un lieve movimento circolare per agevolare l'evacuazione dei detriti. Invertendo periodicamente il senso di rotazione della fresa, si ravvivano i diamanti e si allunga la vita utile dell'utensile. Utilizzando trapani elettrici e raffreddando ad acqua, dotarsi di dispositivo PRCD.
Nel caso si voglia inserire un tassello[3], terminato il taglio nel gres[1], continuare con una punta per muro tradizionale a rotopercussione[2].
Use tips: *To achieve an easy centering, please start the cut at 30° (or use the proper guide) and then go on vertically. Use 1000÷3000 rpm as cutting speed, depending on the decreasing tool diameter. Please use a circular movement during cutting to better evacuate the deposits. For longer tool life, please use alternatively right and left hand rotation. When water cooling, always use PRCD safety system.*



03121001 03121002 03121005

Applicazioni / *Applications*



Gres porcellanato
Sandware/Grès céram/Gres porcelanico

Gres smaltato
Glazed sandstone/Grès emaillé/Gres esmaltado

Gres
Sandstone/Grès/Gres Fragranite®/Clinker

Marmo
Marble/Marbre Mármol

Piastrella standard
Standard ceramics/Carrelage standard/Azulejo estándar



cod. 03120300

Composizione:
15 pcs Ø 5÷25 mm

Ø	5	6	8	10	12	14	16	18	20	22	25
pcs	2	2	2	2	1	1	1	1	1	1	1

cod. 03120301

Composizione:
15 pcs Ø 5÷25 mm

Ø	5	6	8	10	12	14	16	20
pcs	1	2	2	2	1	1	1	1

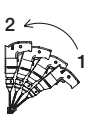


cod. 03120210

Composizione:
3 pcs Ø 6, 8, 10 mm

Utilizzando trapani elettrici adottare il sistema di sicurezza PRCD
PRCD safety system
Système de sécurité PRCD
Despositivo de seguridad PRCD









A SECCO
DRY CUTTING
(REFRIGERANTE VEGETALE)

High Quality professional

PUNTA DIAMANTATA E FRESE A TAZZA A CORONA CONTINUA PER IL TAGLIO DEL GRES PORCELLANATO E DEI MATERIALI EDILI DURISSIMI

Diamond drill bit and core drills with continuous edge for sandware and very strong building materials / Forets diamantées et scies trépans avec couronne continue pour grès céram et matériaux de construction très durs / Brocas diamantadas y coronas perforadoras con corona continua para gres porcelanico y materiales de construccion durisimos / Diamantbesetzter Spiralbohrer und Lochsägen mit endloser Kranz für Feinsteinzeug und sehr harte Baumaterialen

Keramaster®

03117



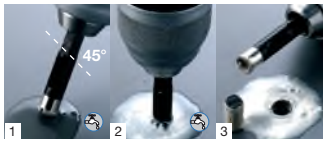


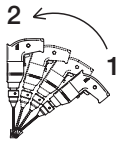
Matrice metallica altofondente brasata che trattiene i diamanti a grana medio-fine
The high-melting brazed bond keeps medium-fine grain diamonds

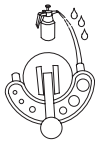
Ø mm	d ⬡	L	pcs	cod.
5	9,5	56	1	031170500
6	9,5	56	1	031170600
7	9,5	56	1	031170700
8	9,5	56	1	031170800
10	9,5	56	1	031171000
12	9,5	56	1	031171200
14	9,5	56	1	031171400

Confezione *Packaging*



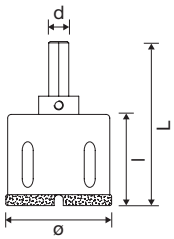






21104

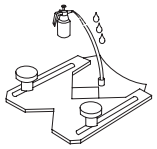


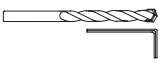


Ø mm	d ⬡	L	l	pcs	cod.
16	12,5	90	50	1	211041600
18	12,5	90	50	1	211041800
20	12,5	90	50	1	211042000
22	12,5	90	50	1	211042200
25	12,5	90	50	1	211042500
28	12,5	90	50	1	211042800
30	12,5	90	50	1	211043000
32	12,5	90	50	1	211043200
35	12,5	90	50	1	211043500
40	12,5	90	50	1	211044000
45	12,5	90	50	1	211044500
50	12,5	90	50	1	211045000
60	12,5	90	50	1	211046000
65	12,5	90	50	1	211046500
67	12,5	90	50	1	211046700
70	12,5	90	50	1	211047000
80	12,5	90	50	1	211048000

Confezione *Packaging*

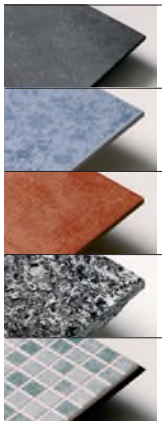




5 mm  **Punta pilota** *Pilot drill* ø 6x100 21020113

Si sconsiglia l'uso della punta pilota come centraggio nel gres porcellanato; la dima a ventosa consente un'agevole centratura e sicurezza di taglio.
We dissuade to use the pilot drill as centering into sandware; the suction guide allows an easy centering with a safe cut.
Nous déconseillons l'utilisation du foret pilote pour le centrage pendant grés cèram; la guide a ventouse permet une facile centrage et une perçage en sécurité.
Disuadimos de utilizar la broca pilota come centradora en gres porcelanico; la guia permite una facil centradura con un corte en seguridad.

Applicazioni / *Applications*



Gres porcellanato
Sandware/Grès céram/
Gres porcelanico

Gres smaltato
Glazed sandstone/Grès emaillé/Gres esmaltado

Gres
Sandstone/Grès/Gres
Fragranite®/Clinker

Marmo
Marble/Marbre
Mármol

Piastrella standard
Standard ceramics/Carrelage standard/Azulejo estándar

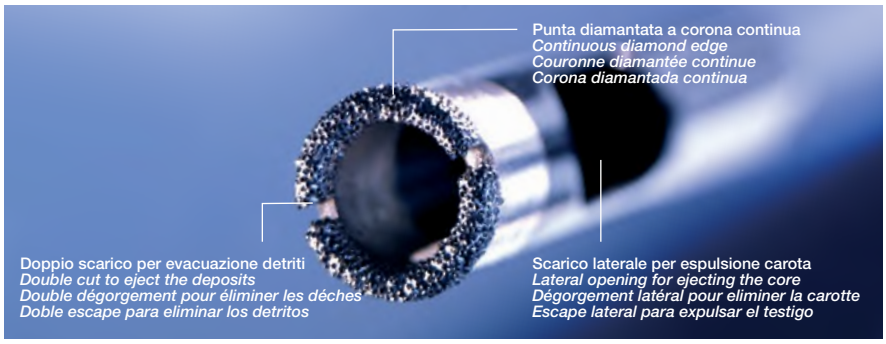




FORATURA AD ACQUA
WET DRILLING
PERÇAGE À EAU
PERFORACIÓN CON AGUA



Utilizzando trapani elettrici adottare il sistema di sicurezza PRCD
PRCD safety system
Système de sécurité PRCD
Despositivo de seguridad PRCD



Diametro fresa *Core drill diameter*	5÷7	8÷10	12÷14	16÷25	28÷35	40÷50	60÷80
Velocità giri/min. *Speed r.p.m.*	3000	2000	1500	1000	600	400	300

ASSORTIMENTI FRESE A TAZZA DIAMANTATE Keramaster®

"Keramaster®" diamond core drills sets / Jeux de fraises diamants "Keramaster®"
Juegos de coronas diamantadas "Keramaster®"



3 pcs
Ø 6-8-10 mm
03120199

4 pcs
Ø 5-6-8-10 mm
03120200

5 pcs
Ø 5-6-8-10-12 mm
03120201



6 pcs
Ø 16-22-25-28-30-35
21103300



230x510x170



Retrodidattica
Back side

03120101
Ø 5÷14 **36 pcs**
Ø/pcs 5/8 - 6/8 - 7/3 - 8/6
10/5 - 12/3 - 14/3

03120100
Ø 5÷14 **30 pcs**
Ø/pcs 5/6 - 6/6 - 7/2 - 8/6
10/5 - 12/3 - 14/2



400x650x320

21103100
Ø 5÷35 **21 pcs**
Ø 5-6-7-8-10-12-14 (2x)
Ø 16-20-25-28-30-32-35 (1x)

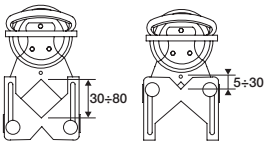
21103101
Ø 5÷80 **29 pcs**
Ø 5-6-7-8-10-12-14
16-18-20-25-30 (2x)
Ø 35-50-60-65-80 (1x)

Dima a ventosa per forare
Drilling suction cup / Guide ventouse à percer
Guia ventosa para taladrar



7 fori/*holes*
Ø 4-5-6-7-8-10-12 mm
03121001

Dima a ventosa regolabile per forare
Drilling suction cup / Guide ventouse à percer
Guia ventosa para taladrar



03121002

Bottiglia per refrigerazione
Cooling bottle / Bouteille à réfrigèrer
Contenidor para refrigeración



03121005

Taglio preciso e pulito con trapani e con raffreddamento ad acqua in tutti i materiali edili difficili da lavorare: gres porcellanato, gres smaltato, marmo, granito, ceramica, ardesia, materiali compositi quali poliestere, fibre di vetro, ecc. Nel caso si voglia inserire un tassello, terminato il taglio nel gres, continuare con una punta per muro tradizionale a rotopercussione. Per idraulici, installatori, elettricisti, ecc. / *For an accurate and sharp cut with drilling machines of all hard materials: sandware, glazed sandstone, marble, granite, ceramics, slate, composites such as polyester, fiber glass, etc. Ideal for plumbers, journeymen, electricians, etc. Water cooling. / Pour une coupe soignée et nette avec perceuses de tous les matériaux durs: grès céram, grès émaillée, marbre, granit, céramique, ardoise, matériaux composites comme polyester, fibre de verre, etc. Pour plombiers, installateurs et électriciens. Refroidissement à eau. / Para un corte exacto y limpio con taladros de todos los materiales duros: gres porcelanico, gres esmaltado, mármol, ceramica, pizarra, materiales compuestos como poliéster, hebra de vidrio, etc. Ideal para hidráulicos, instaladores, electricistas. Refrigeración por agua.*

High Quality professional

PUNTA DIAMANTATA A CORONA CONTINUA PER IL TAGLIO DI PIASTRELLE, GRES E DEI MATERIALI DURI

Diamond drill bit with continuous edge for sandware and strong building materials / Forets diamantées avec couronne continue pour grès et matériaux de construction durs / Broca diamantada con corona continua para gres y materiales de construccion duros / Diamantbesetzter Spiralbohrer mit endloser Kranz für Feinsteinzeug und sehr harte Baumaterialen

Standard quality

03125



Matrice metallica elettrodepositata che trattiene diamanti a grana fine.
The electroplated bond keeps fine grain diamonds.

Ø mm	d mm	L	pcs	cod.
5	6	65	1	031250500
6	6	65	1	031250600
8	6	65	1	031250800
10	6	65	1	031251000
12	6	65	1	031251200
14	6	65	1	031251400

FORATURA AD ACQUA
WET DRILLING
PERÇAGE À EAU
PERFORACIÓN CON AGUA

Utilizzando trapani elettrici adottare il sistema di sicurezza PRCD
PRCD safety system
Système de sécurité PRCD
Despositivo de seguridad PRCD
PRCD

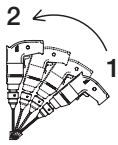
- La corona diamantata a spessore sottile garantisce tagli senza sbavature. Questa caratteristica agevola i lavori di foratura su piastrelle dure in posa, dove sia necessario realizzare un foro pulito, senza scheggiare la piastrella.
- *The thin diamond continuous edge guarantees cuts without smudging. This feature facilitates the drilling work on hard tiles in laying, where it is necessary to make a clean hole, without splintering the tile.*
- *La couronne en diamant mince garantit des coupes sans bavures. Cette caractéristique facilite le travail de perçage sur des dalles dures en pose, où il est nécessaire de faire un trou propre, sans fendre la dalle.*
- *La corona de diamante de calibre delgado garantiza cortes sin manchas. Esta característica facilita el trabajo de perforación en las baldosas duras en el tendido, donde es necesario hacer un agujero limpio, sin astillar la baldosa.*

Confezione / *Packaging*

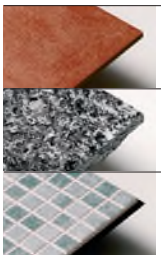


Diametro fresa *Core drill diameter*	5÷7	8÷10	12÷14
Velocità giri/min. *Speed r.p.m.*	3000	2000	1500





Applicazioni / *Applications*



Gres
Sandstone/Grès/Gres Fragranite®/Clinker

Marmo
Marble/Marbre/Mármol

Piastrella standard
Standard ceramics/Carrelage standard/Azulejo estándar

DISCHI DIAMANTATI PER GRES PORCELLANATO, CERAMICA E PIASTRELLE IN GENERE

Diamond discs for sandware, tiles and ceramics / Disques diamant pour grés, carrelage et céramiques
Discos diamantados para gres porcelanico, azulejos y ceramicas / Diamanttrennscheiben für das emailliert Steingut, Fliesen und Ton

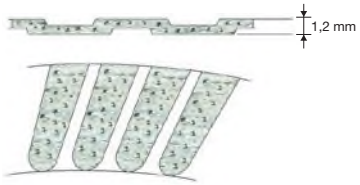
PROFESSIONAL SUPER | **SPECIALE GRES PORCELLANATO SPECIAL GRES**

Corona Turbo - Turbo continuous rim - Couronne continue Turbo - Corona continua Turbo

03515

Ø mm	d	cod.
115	22.2	03515115





Confezione *Packaging*



Applicazioni / *Applications*

Gres porcellanato
Sandware/Grès céram/Gres porcelanico

Gres smaltato
Glazed sandstone/Grès emaillé/Gres esmaltado

Gres
Sandstone/Grès/Gres Fragranite®/Clinker

Marmo
Marble/Marbre/Mármol

Piastrella standard
Standard ceramics/Carrelage standard/Azulejo estándar

- Taglio preciso e pulito in tutti i materiali edili difficili da lavorare: gres porcellanato, gres smaltato, marmo, granito, ceramica, ardesia etc.
- *For an accurate and sharp cut of all hard materials: sandware, glazed sanstone, marble, granite, ceramics, slate etc.*
- *Puor une coupe soignée et nette de tous les matériaux durs: grès porcellanato, grès émaillé, marbre, granit, céramique, ardoise etc.*
- *Para un corte exacto y limpio de todos los materiales duros: gres porcelanico, gres esmaltado, mármol, ceramica, pizarra etc.*
- *Für einen sauberen undgenauren Schnitt von allen harten Materialen: Feinsteinzeug, glasiertem Steinzeug, Marmor, Granit, Keramik, Schiefer.*

DISCHI DIAMANTATI PER MATERIALI EDILI

Diamond discs for building materials / Disc diamantes pour batimant
Discos diamantados para construciones / Diamanttrennscheiben für Baumaterialen

PROFESSIONAL | **PROFESSIONAL SUPER**

PRCD

Corona Turbo - Turbo continuous rim - Couronne continue Turbo - Corona continua Turbo

Muro - Cemento - Piastrelle - Pietre naturali /Masonry - Concrete - Tiles - Natural stones
Béton - Ciment - Carellage - Pierres naturelles / Hormigon - Concreto - Azulejos - Piedras naturales

03405



03505



Ø mm	d	cod.	cod.
115	22.2	03405115	03505115
230	22.2	03405230	03505230



Corona continua - Continuous rim - Couronne continue - Corona continua

Ceramica - Marmo - Pietre naturali / Ceramics - Marble - Natural stones
Céramique - Marbre - Pierres naturelles / Ceramica - Marbol - Piedras naturales

03400



03500



Ø mm	d	cod.	cod.
115	22.2	03400115	03500115
230	22.2	03400230	03500230



Corona segmentata - Segmented rim - Couronne segmentée - Corona segmentada

Muro - Cemento - Marmo - Pietre naturali / Masonry - Concrete - Marble - Natural stones
Béton - Ciment - Marbre - Pierres naturelles / Hormigon - Concreto - Marbol - Piedras naturales

03410



03510



Ø mm	d	cod.	cod.
115	22.2	03410115	03510115
230	22.2	03410230	03510230





N. 1 cod. 03405115 TURBO
N. 1 cod. 03400115 CONTINUE
N. 1 cod. 03410115 SEGMENTED

cod. 03412100

GUIDA ALLA RISOLUZIONE DEI PROBLEMI DI FORATURA DEI MATERIALI EDILI

Troubleshooting guide for drilling of building materials

Immagine del difetto / *Photo of the defect*



Fresa a tazza
Hole saw

Descrizione del difetto
Description of the defect

Si rompe o si scheggia un dente in metallo duro a causa di urti (es. cadute accidentali, urto contro tondino del ceemnto armato o pezzi duri inglobati nel materiale in lavorazione).
A tooth in hard metal breaks or chips due to impacts (e.g. accidental falls, knock against reinforced cement or hard pieces incorporated into work materials).

Possibili soluzioni del problema
Possible solutions to the problem

Procedere con cautela durante la foratura, evitando il più possibile urti accidentali:
-quando si maneggia l'utensile,
-in fase di inizio foratura,
-durante la foratura, soprattutto nel caso di lavorazioni di materiali stratificati o compositi.
Proceed carefully during the drilling, and avoid accidental knocks as much as possible:
- when handling the tool,
- at the start of drilling
- during the drilling in particular of laminated or composite materials.

Immagine del difetto / *Photo of the defect*



Denti con carburo in grani
Carbide gritted teeth

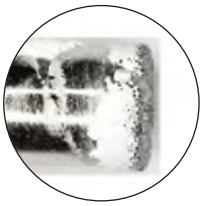
Descrizione del difetto
Description of the defect

Si impasta il materiale in lavorazione sui grani di carburo di tungsteno. Il materiale lavorato è tenero e pastoso.
The material being drilled blends with the tungsten carbide grains. The material being drilled is soft and mushy.

Possibili soluzioni del problema
Possible solutions to the problem

Scegliere un altro utensile maggiormente idoneo allo scopo. Aumentare la refrigerazione dell'area in lavorazione. Aumentare la velocità di foratura.
Choose another tool which is more suitable for the purpose. Increase the refrigeration of the area being drilled. Increase the drilling speed.

Immagine del difetto / *Photo of the defect*



Fresa diamantata
Diamond core bit

Descrizione del difetto
Description of the defect

Si impasta il materiale in lavorazione sui diamanti. Il materiale lavorato è tenero e pastoso.
The material being drilled blends with the diamonds. The material being drilled is soft and mushy.

Possibili soluzioni del problema
Possible solutions to the problem

Scegliere un altro utensile maggiormente idoneo allo scopo. Aumentare la refrigerazione dell'area in lavorazione. Aumentare la velocità di foratura.
Choose another tool which is more suitable for the purpose. Increase the refrigeration of the area being drilled. Increase the drilling speed.

PUNTE PER LA FORATURA DI MATERIALI EDILI

Drill bits for drilling building materials

Immagine del difetto / *Photo of the defect*



Fresa diamantata
Diamond core bit

Descrizione del difetto
Description of the defect

Si usura precocemente la corona diamantata a causa di un uso intensivo dell'utensile in assenza di una corretta refrigerazione.
The diamond crown wears prematurely due to intensive use of the tool without proper refrigeration.

Possibili soluzioni del problema
Possible solutions to the problem

Aumentare la refrgerazione della zona in lavorazione, per evitare il surriscaldamento della lega che trattiene i diamanti sul corpo dell'utensile.
Increase refrigeration in the drilling area to prevent overheating of the alloy that holds the diamonds on the body of the tool.

Immagine del difetto / *Photo of the defect*



Punta per muro
Masonry drill

Descrizione del difetto
Description of the defect

Si usura la testa dell'utensile.
The head of the tool wears away.

Possibili soluzioni del problema
Possible solutions to the problem

Evitare qualsiasi urto durante la foratura. Scegliere il martello con potenza idonea al tipo di punta che si utilizza (attacco SDS-PLUS, attacco SDS-MAX, codolo cilindrico).
Avoid any kind of impact during the drilling process. Choose a hammer strong enough for the type of bit used (SDS-PLUS connection, SDS-MAX connection, cylindrical shank).

Immagine del difetto / *Photo of the defect*



Punta per muro
Masonry drill

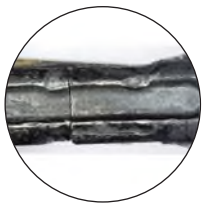
Descrizione del difetto
Description of the defect

Si rompe la punta all'inizio dell'elica, a causa dell'applicazione di un momento flettente eccessivo.
The tip at the start of the screw snaps due to excessive bending.

Possibili soluzioni del problema
Possible solutions to the problem

Evitare movimenti oscillatori al fine di allargare il diametro del foro che si sta realizzando. Non eccedere con la profondità del foro che si intende realizzare: utilizzare allo scopo un utensile con lunghezza totale più elevata.
Avoid swinging movements to widen the diameter of the hole that is being made.
Do not go beyond the depth of the hole that needs to be made: for this purpose, use a tool with a longer overall length.

Immagine del difetto / *Photo of the defect*



Attacco SDS-PLUS
SDS-PLUS shank

Descrizione del difetto
Description of the defect

Si rompe/deforma l'attacco dell'utensile.
The connection of the tool breaks/deforms.

Possibili soluzioni del problema
Possible solutions to the problem

Sostituire il mandrino usurato, che inevitabilmente danneggia l'attacco dell'utensile.
Replace the worn spindle, which inevitably damages the tool connection.

GUIDE DE DÉPANNAGE POUR LES PROBLÈMES DE PERÇAGE DES MATÉRIAUX DE CONSTRUCTION

Guía para la resolución de problema de perforación de los materiales de edilicia

Image du dèfaut / *Foto del defecto*



Description du dèfaut
Descripción del defecto

Une dent en métal dur se brise ou se fend à cause des chocs (par exemple chutes accidentelles, impact de la tige contre le rond en béton armé ou pièces dures incorporées dans les matériaux usinés).
Se rompe o se desportilla un diente de metal duro debido a golpes (por ejemplo en caso de caídas accidentales, golpe contra redondos de hormigón o piezas duras que se encuentran dentro de los materiales que se están trabajando).

Solutions possibles au problème
Posibles soluciones del problema

Procéder avec prudence lors du perçage, en évitant autant que possible les chocs accidentels :
- lors de la manipulation de l'outil,
- au début du perçage,
- pendant le perçage, notamment dans le cas d'usinages de matériaux stratifiés ou composites.

Actuar con cuidado durante la perforación, evitando lo máximo posible golpes accidentales:
-cuando se usa el utensilio,
-en la fase de inicio perforación,
-durante la perforación, sobre todo en caso de trabajos sobre materiales estratificados o compuestos.

Image du dèfaut / *Foto del defecto*



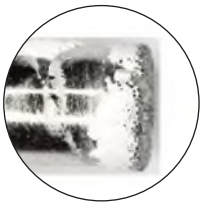
Description du dèfaut
Descripción del defecto

Le matériau usiné doit être pétri sur des grains de carbure de tungstène. Le matériau usiné est tendre et pâteux.
Se amasa el material que se tiene que trabajar sobre granos de carburo de tungsteno. El material trabajado es tierno y pastoso.

Solutions possibles au problème
Posibles soluciones del problema

Choisir un autre outil plus approprié au but.
Augmenter le refroidissement de la zone d'usinage.
Augmenter la vitesse de perçage.
Escoger otro utensilio que sea más idóneo para el trabajo. Aumentar la refrigeración del área trabajada. Aumentar la velocidad de perforación.

Image du dèfaut / *Foto del defecto*



Description du dèfaut
Descripción del defecto

Le matériau usiné doit être pétri sur des diamants. Le matériau usiné est tendre et pâteux.
Se amasa el material que se tiene que trabajar sobre diamantes. El material trabajado es tierno y pastoso.

Solutions possibles au problème
Posibles soluciones del problema

Choisir un autre outil plus approprié au but.
Augmenter le refroidissement de la zone d'usinage. Augmenter la vitesse de perçage.
Escoger otro utensilio que sea más idóneo para el trabajo. Aumentar la refrigeración del área trabajada. Aumentar la velocidad de perforación.

FORETS POUR LE PERÇAGE DES MATÉRIAUX DE CONSTRUCTION

Brocas para la perforación de materiales de edilicia

Image du dèfaut / *Foto del defecto*



Description du dèfaut
Descripción del defecto

La couronne diamant s'use prématurément en raison d'une utilisation intensive de l'outil en l'absence de réfrigération appropriée.
Se gasta de forma precoz la corona de diamante debido a un uso intenso del utensilio sin adecuada refrigeración.

Solutions possibles au problème
Posibles soluciones del problema

Augmenter le refroidissement dans la zone d'usinage, afin d'éviter une surchauffe de l'alliage qui contient les diamants sur le corps de l'outil.
Aumentar la refrigeración de la zona trabajada para evitar el recalentamiento de la aleación que atrapa a los diamantes sobre el cuerpo del utensilio.

Image du dèfaut / *Foto del defecto*



Description du dèfaut
Descripción del defecto

La tête de l'outil s'use.
Se gasta la cabeza del utensilio.

Solutions possibles au problème
Posibles soluciones del problema

Éviter tout impact pendant le perçage.
Choisir le marteau avec une puissance adaptée au type de foret utilisé (raccord SDS-PLUS, raccord SDS-MAX attaque, cône cylindrique).
Evitar cualquier tipo de golpe durante la perforación.
Escoger el martillo de potencia adecuada al tipo de broca que se usa (empalme SDS-PLUS, empalme SDS-MAX, mango cilíndrico).

Image du dèfaut / *Foto del defecto*

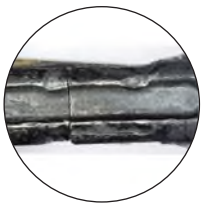


Image du dèfaut / *Foto del defecto*



Description du dèfaut
Descripción del defecto

Le foret au début de de l'hélice se brise, en raison de l'application d'une flexion excessive.
Se rompe la punta del principio del hélice, debido a la aplicación de un momento de flexión excesivo.

Solutions possibles au problème
Posibles soluciones del problema

Éviter les mouvements oscillatoires afin d'agrandir le diamètre du trou en cours de réalisation. Ne pas exagérer avec la profondeur du trou à réaliser: utiliser un outil dans ce but avec une longueur totale plus élevée.
Evitar oscilaciones con el fin de anchar el diámetro del orificio que se está realizando.
No exagerar con la profundidad del orificio que se quiere realizar: usar para ello un utensilio con una longitud total mayor.

Description du dèfaut
Descripción del defecto

Le raccord de l'outil se brise ou se déforme.
Se rompe/deforma el empalme del utensilio.

Solutions possibles au problème
Posibles soluciones del problema

Remplacer le mandrin usé qui endommage inévitablement le raccord de l'outil.
Sustituir el mandril gastado que inevitablemente daña al empalme del utensilio.



UTENSILI PER TAGLIO LEGNO

Woodworking tools
Outils à bois
Utensilios para madera
Holzwerkzeuge

WOOD

CUTTING TOOLS ENGINEERING

The wood drilling is more important than what you can imagine and often is undervalued. The Krino wood working tools are undeformable steel made, they have the appropriate heat treatment and geometries for a precise and safe cut. For extreme uses, we developed new lines of tools made with High speed steel, allied steel and carbide tips for high temperatures resistance and special profiles with smooth surface for an easy and fast chips evacuation. Almost all wood working tools have an hexagonal shank for more grip and a safer work. A special care has been dedicated for final users sets and displays for retail shops in order to offer a stock and a useful selection for the customers. The range enlargement has been developed with a wide offer of new sets contained into convenient and attractive wooden boxes, for professional use. There are now available, new wall and bench displays for retailers.

La coupe du bois est une opération plus importante de ce qu'il peut paraître qui est sous-évaluée la plupart du temps. Les outils de coupe Krino sont en acier indéformable ayant subi un traitement thermique adéquat, dans les formes géométriques les plus adaptées pour un travail sûr et précis. Pour les utilisations plus ardues et intenses, des versions avec tranchant en métal dur, acier super rapide et profils spéciaux pour l'évacuation rapide des copeaux sont également disponibles. La plus part des outils sont équipés avec queue hexagonale. Les jeux pour les utilisateurs finals ont été étudiés attentivement comme aussi les présentoires pour les magasins au détail afin d'offrir un stock et une exposition utile pour la clientèle. L'élargissement de la gamme a été développé avec une offre de nouveaux assortiments dans des pratiques et attractives confections en bois pour toutes les utilisations professionnelles. Pour la vente ou détails sont aussi disponibles des nouveaux présentoirs étudiés pour chaque classe de produit.

El corte de la madera es más importante de lo que parece, en la mayoria de los casos está subestimado. Las herramientas de corte Krino están fabricadas en acero indeformable, con apropriado tratamiento térmico, en las geometrias más adecuadas para un trabajo seguro y preciso. Para las utilizaciones más laboriosas y intensivas, también están disponibles ejecuciones con filo de metal duro, acero super rapido y perfil para la evacuación rapida de las virutas. La mayoria de los utensilios para madera son con mango hexagonal. La realización de los juegos para utilizatores finales y expositores para tiendas al detalle offrecen un stock completo y una exposición para los clientes.

Il taglio del legno è più importante di quanto possa sembrare e spesso è sottovalutato. Gli utensili da taglio Krino sono costruiti in acciaio indeformabile, con appropriato trattamento termico, nelle geometrie più adatte per un lavoro sicuro e preciso. Per gli usi più impegnativi ed intensivi sono state sviluppate nuove linee di utensili con caratteristiche adatte a resistere alle alte temperature, quali gli acciai superrapidi, acciai legati, placchette in metallo duro, e con speciali profili ad alto scarico con superfici altamente levigate al fine di permettere una facile evacuazione dei trucioli. Gran parte degli utensili da taglio per legno sono costruiti con attacco esagonale antisdrucciolo, per un lavoro più sicuro. L'ampliamento della gamma dei prodotti si è sviluppato anche nella vasta offerta di nuovi assortimenti in pratiche ed attrattive confezioni di legno, per tutti gli utilizzi professionali. Sono pure disponibili, per le vendite al dettaglio, nuovi espositori self-service ed espositori da banco per classe di prodotto.

PUNTE ELICOIDALI PER LEGNO A 2 TAGLIENTI CON PUNTA GUIDA A CENTRARE

Wood working drills, brad point / Forets à bois
Broca para madera / Holzspiralbohrer

W.S. ~ DIN 7487

05001





HRC ≅ 50

Confezione / *Packaging*



Applicazioni / *Applications*



- Per forare legno e i suoi derivati.
- *For drilling wood.*
- *Pour percer tous les bois.*
- *Para maderas y sus derivaciones.*
- *Zum Bohren in Holz.*

Ø mm	Ø *inch*	d	*l*	L	pcs	cod.
3	1/8	3	33	61	10	050010300
4	5/32	4	43	75	10	050010400
5	3/16	5	52	86	10	050010500
6	15/64	6	57	93	10	050010600
7	9/32	7	69	109	10	050010700
8	5/16	8	75	117	10	050010800
9	11/32	9	81	125	10	050010900
10	3/8	10	87	133	10	050011000
11	7/16	10	94	142	5	050011100
12	15/32	10	101	151	5	050011200
13	1/2	10	101	151	5	050011300
14	9/16	10	108	160	5	050011400
15	19/32	10	114	169	5	050011500
16	5/8	10	120	178	5	050011600
18	23/32	10	130	191	5	050011800
20	3/4	10	140	205	5	050012000
22	7/8	10	140	210	1	050012200
24	15/16	10	140	215	1	050012400
26	1.1/32	10	140	215	1	050012600
28	1.1/8	10	140	220	1	050012800
30	1.3/16	12	140	220	1	050013000

Art. **05002** Self
Disponibile su richiesta / *On demand*



5 pcs W.S.
Ø 4-5-6-8-10 mm
05010201



8 pcs W.S.
Ø 3-4-5-6-7-8-9-10 mm
05010202



390x150x225

137 pcs
Ø 3÷16 mm
05010503

05001		05020		05025	
Ø	pcs	Ø	pcs	Ø	pcs
3	10	6x245	5	6x400	5
4	10	8x245	5	8x400	5
5	10	10x245	5	10x400	5
6	10	12x245	5	12x400	3
7	10	14x245	3	14x400	3
8	10				
9	10				
10	10				
12	5				
14	5				
16	3				

PUNTE ELICOIDALI PER LEGNO A 2 TAGLIENTI CON PUNTA GUIDA A CENTRARE, SERIE LUNGA

Wood working drills, long serie / Forets à bois, série longue
Brocas para madera, serie larga / Holzspiralbohrer, extralang

W.S.

05020 **05025**





HRC ≅ 50

L=245 mm

Art. **05021** Self
Disponibile su richiesta / *On demand*

05020

Ø mm	d	/	L	pcs	cod.
6	6	160	245	1	050200600
7	7	160	245	1	050200700
8	8	160	245	1	050200800
9	9	160	245	1	050200900
10	10	160	245	1	050201000
11	10	160	245	1	050201100
12	10	160	245	1	050201200
13	10	160	245	1	050201300
14	10	160	245	1	050201400
15	10	160	245	1	050201500
16	10	160	245	1	050201600
18	10	160	245	1	050201800
20	10	160	245	1	050202000
22	13	160	245	1	050202200
24	13	160	245	1	050202400

L=400 mm

Art. **05026** Self
Disponibile su richiesta / *On demand*

05025

Ø mm	d	/	L	pcs	cod.
6	6	230	400	1	050250600
8	8	230	400	1	050250800
10	10	230	400	1	050251000
12	10	230	400	1	050251200
13	10	230	400	1	050251300
14	10	230	400	1	050251400
15	10	230	400	1	050251500
16	10	230	400	1	050251600
18	10	230	400	1	050251800
20	10	230	400	1	050252000
22	13	230	400	1	050252200
24	13	230	400	1	050252400
26	13	230	400	1	050252600
28	13	230	400	1	050252800
30	13	230	400	1	050253000

Confezione / *Packaging*



Applicazioni / *Applications*



- Forano legno dolce, stratificati, tutti i suoi derivati. Speciali per mensole a scomparsa e travi in legno.
- *For soft wood, plywood, non coated chipboards. Special for wood beams.*
- *Pour tous les bois, contreplaques. Special pour poutres de bois.*
- *Para taladrar viga de madera y sus derivaciones.*
- *Einsatz in Weichholz, Tischlerplatten und unbeschichteten Spanplatten.*

High Quality professional

PUNTE ELICOIDALI PER LEGNO A 2 TAGLIENTI CON ATTACCO HEX 1/4”

Wood working drills, 1/4 Q.C. shank / Forets à bois avec 1/4 Q.C. queue
Broca para madera con mango 1/4 Q.C. / Holzspiralbohrer

W.S.

05009





Confezione / *Packaging*



Applicazioni / *Applications*



Ø mm	d ⬡	l	L	pcs	cod.
3	1/4	31	80	1	050090300
4	1/4	42	92	1	050090400
5	1/4	53	106	1	050090500
6	1/4	57	113	1	050090600
8	1/4	75	137	1	050090800
10	1/4	87	153	1	050091000

- Per forare legno e i suoi derivati.
- *For drilling wood.*
- *Pour percer tous les bois.*
- *Para maderas y sus derivaciones.*
- *Zum Bohren in Holz.*



5 pcs
Ø 4-5-6-8-10 mm
05010700

PUNTE ELICOIDALI PER LEGNO A 2 TAGLIENTI, ALTA QUALITÀ HSS

HSS wood working drills / Forets à bois HSS
Broca HSS para madera / HSS Holzspiralbohrer

HSS ~DIN 7487

05200





Confezione / *Packaging*



Applicazioni / *Applications*



Art. **05201** Self
Disponibile su richiesta / *On demand*

Ø mm	d	l	L	pcs	cod.
3	3	33	61	1	052000300
4	4	43	75	1	052000400
5	5	52	86	1	052000500
6	6	57	93	1	052000600
7	7	69	109	1	052000700
8	8	75	117	1	052000800
9	9	81	125	1	052000900
10	10	87	133	1	052001000
11	10	94	142	1	052001100
12	10	101	151	1	052001200
13	10	101	151	1	052001300
14	10	108	160	1	052001400
15	10	114	169	1	052001500
16	10	120	178	1	052001600

- Per forare legno, derivati, kevlar, fibre aramidiche senza sbavature.
- *For drilling wood, derivatives, kevlar, aramidic fibers without smudging.*
- *Pour le perçage du bois, des dérivés, du kevlar, des fibres d’aramide sans bavures.*
- *Para perforar madera, derivados, kevlar, fibras de aramida sin manchas.*



5 pcs HSS
Ø 4-5-6-8-10 mm
05010206



8 pcs HSS
Ø 3-4-5-6-7-8-9-10 mm
05010207

PUNTE ELICOIDALI PER LEGNO A 4 TAGLIENTI CON ATTACCO HEX ¼”

Hex ¼” shank drill bits for wood with 4 cutting edges / Forets hélicoïdaux pour bois avec 4 tranchants avec connexion hex ¼”
Brocas helicoidales para madera con 4 filos de corte con conexión hex ¼”

W.S.





Ø mm	d	l	L	pcs	cod.
10	1/4	65	165	1	050541000
12	1/4	65	165	1	050541200
14	1/4	65	165	1	050541400
16	1/4	65	165	1	050541600
18	1/4	65	165	1	050541800
20	1/4	65	165	1	050542000
22	1/4	65	165	1	050542200
24	1/4	65	165	1	050542400
25	1/4	65	165	1	050542500
26	1/4	65	165	1	050542600
28	1/4	65	165	1	050542800
30	1/4	65	165	1	050543000
32	1/4	65	165	1	050543200

05054

Confezione / *Packaging*



Applicazioni / *Applications*



- Per forare a grande rendimento il legno e i suoi derivati.
- *For drilling wood and its derivatives with high efficiency.*
- *Pour percer le bois et ses dérivés avec une grande efficacité.*
- *Para la perforación de madera y sus derivados con alta eficiencia.*



6 pcs
Ø 16-18-20-22-25-32 mm
05055300

High Quality professional

PUNTE ELICOIDALI PER LEGNO CON PUNTA GUIDA A CENTRARE ED ELICHE AD ALTO SCARICO DEI TRUCIOLI. QUALITÀ SUPERPROFESSIONALE, SERIE LUNGA

High performing wood working drills / Forets à bois superprofessionnel / Brocas para madera de alta calidad / profi Holzspiralbohrer

W.S.

05210 05212







W.S.
HRC ≃ 55

L=245 mm

Ø mm	d	l	L	pcs	cod.
6	6	160	245	1	052100600
8	8	160	245	1	052100800
10	10	160	245	1	052101000
12	10	160	245	1	052101200
14	10	160	245	1	052101400
16	10	160	245	1	052101600
18	10	160	245	1	052101800
20	10	160	245	1	052102000
22	13	160	245	1	052102200
24	13	160	245	1	052102400

L=400 mm

Ø mm	d	l	L	pcs	cod.
6	6	160	400	1	052120600
8	8	160	400	1	052120800
10	10	160	400	1	052121000
12	10	250	400	1	052121200
14	10	250	400	1	052121400
16	10	250	400	1	052121600
18	10	250	400	1	052121800
20	10	250	400	1	052122000
22	13	250	400	1	052122200
24	13	250	400	1	052122400

Confezione / *Packaging*



Applicazioni / *Applications*



- Forano legno duro e dolce, stratificati, tutti i suoi derivati. Speciali per mensole a scomparsa e travi in legno.
- *For soft and tough wood, plywood, non coated chipboards. Special for wood beams.*
- *Pour tous les bois, contreplaques. Special pour poutres de bois.*
- *Para taladrar viga de madera y sus derivaciones.*
- *Einsatz in Weichholz und Hartholz, Tischlerplatten und unbeschichteten Spanplatten.*

PUNTE ELICOIDALI PER LEGNO, SERIE LUNGA

Wood working drills for plankings / Forets pour coffrages
Broca para madera / Schalungsbohrer

W.S.





Art. 05030 - L=400 mm

Art. **05031** Self
Disponibile su richiesta / *On demand*

05030

Ø mm	d	l	L	pcs	cod.
6	5	100	400	1	050300600
8	7	100	400	1	050300800
10	9	100	400	1	050301000
12	10	100	400	1	050301200
14	10	100	400	1	050301400
16	10	100	400	1	050301600
18	13	100	400	1	050301800
20	13	100	400	1	050302000
22	13	100	400	1	050302200
24	13	100	400	1	050302400
26	13	100	400	1	050302600
28	13	100	400	1	050302800
30	13	100	400	1	050303000

Art. 05033 - L=600 mm

Art. **05034** Self
Disponibile su richiesta / *On demand*

05033

Ø mm	d	l	L	pcs	cod.
6	5	100	600	1	050330600
8	7	100	600	1	050330800
10	9	100	600	1	050331000
12	10	100	600	1	050331200
14	10	100	600	1	050331400
16	10	100	600	1	050331600
18	13	100	600	1	050331800
20	13	100	600	1	050332000
22	13	100	600	1	050332200
24	13	100	600	1	050332400
26	13	100	600	1	050332600
28	13	100	600	1	050332800
30	13	100	600	1	050333000

Confezione / *Packaging*



Applicazioni / *Applications*



- Per forare legno e i suoi derivati, pannelli in gesso, pannelli isolanti.
  Speciali per casseformi, installazioni, carpenteria.
- *For holes in beams, boards, soft metal sheets, special for journeyman's.*
- *Pour percer tous les bois, métals légers. Special pour coffrages.*
- *Para maderas y sus derivaciones, planchas de hierro no duros.*
- *Zum Bohren in Schlungen, Brettern, Dielen, Leichtmetall.*

PUNTE PER LEGNO PROFESSIONALI A SPIRALE SINGOLA TIPO LEWIS, GAMBO ESAGONALE

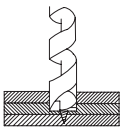
Hexagonal shank auger bits, Lewis type, for professional use / Mèche à bois à spirale unique pour percage professionnel
Broca para madera tipo Lewis para cortes professionales / Profi-Schlangenbohrer

W.S.





HRC ≅ 50



Art. 05035 L=155 mm

Ø mm	d ⬡	l	L	pcs	cod.
6	6	90	155	1	050350600
8	8	90	155	1	050350800
10	10	90	155	1	050351000
12	10	90	155	1	050351200
14	10	90	155	1	050351400
16	10	90	155	1	050351600
18	13	90	155	1	050351800
20	13	90	155	1	050352000
22	13	90	155	1	050352200
24	13	90	155	1	050352400

Art. 05036 L=235 mm

Ø mm	d ⬡	l	L	pcs	cod.
6	6	160	235	1	050360600
8	8	160	235	1	050360800
10	10	160	235	1	050361000
12	10	160	235	1	050361200
14	10	160	235	1	050361400
16	10	160	235	1	050361600
18	13	160	235	1	050361800
20	13	160	235	1	050362000
22	13	160	235	1	050362200
24	13	160	235	1	050362400

Art. 05040 - L=300 mm

Ø mm	d ⬡	l	L	pcs	cod.
6	6	220	300	1	050400600
8	8	220	300	1	050400800
9	9	220	300	1	050400900
10	10	220	300	1	050401000
11	10	220	300	1	050401100
12	10	220	300	1	050401200
13	10	220	300	1	050401300
14	10	220	300	1	050401400
15	10	220	300	1	050401500
16	10	220	300	1	050401600
18	13	220	300	1	050401800
20	13	220	300	1	050402000
22	13	220	300	1	050402200
24	13	220	300	1	050402400
25	13	220	300	1	050402500
26	13	220	300	1	050402600
28	13	220	300	1	050402800
30	13	220	300	1	050403000
32	13	220	300	1	050403200

Art. 05042 - L=460 mm

Ø mm	d ⬡	l	L	pcs	cod.
6	6	360	460	1	050420600
8	8	360	460	1	050420800
10	10	360	460	1	050421000
12	10	360	460	1	050421200
13	10	360	460	1	050421300
14	10	360	460	1	050421400
16	10	360	460	1	050421600
18	13	360	460	1	050421800
20	13	360	460	1	050422000
22	13	360	460	1	050422200
24	13	360	460	1	050422400
25	13	360	460	1	050422500
26	13	360	460	1	050422600
28	13	360	460	1	050422800
30	13	360	460	1	050423000
32	13	360	460	1	050423200
35	13	360	460	1	050423500
40	13	360	460	1	050424000

Art. 05044 - L=600 mm

Ø mm	d ⬡	l	L	pcs	cod.
8	8	400	600	1	050440800
10	10	400	600	1	050441000
12	10	400	600	1	050441200
13	10	400	600	1	050441300
14	10	400	600	1	050441400
16	10	400	600	1	050441600
18	13	400	600	1	050441800
20	13	400	600	1	050442000
22	13	400	600	1	050442200
24	13	400	600	1	050442400
25	13	400	600	1	050442500
26	13	400	600	1	050442600
28	13	400	600	1	050442800
30	13	400	600	1	050443000
32	13	400	600	1	050443200

Confezione / *Packaging*



Applicazioni / *Applications*



- Per forature di travi in legno. Foratura precisa e veloce grazie al centrino autoavvitante ed alla grande capacità di evacuazione dei trucioli.
- *For drilling wood beams and plankings.*
- *Percage en tous les bois, poutre de bois.*
- *Para taladrar vigas de madera.*
- *Für präzise Bohren in Weich und Hartholz, Leimbinder sowie für Stir-Holz.*



05240300

Cassetta in legno o in metallo
Metal or wooden case

7 pcs ⬡
L = 300 mm
Ø 8-10-12-14-16-18-20

05240300



05240301

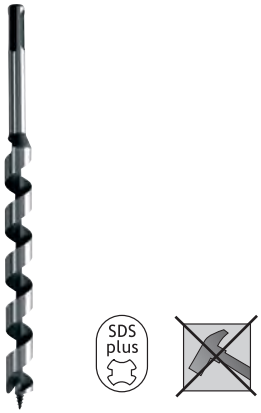
Cassetta in legno o in metallo
Metal or wooden case

6 pcs ⬡
L = 460 mm
Ø 10-12-14-16-18-20

05240301

PUNTE PER LEGNO PROFESSIONALI A SPIRALE SINGOLA TIPO LEWIS CON GAMBO SDS-PLUS

SDS-PLUS shank auger bits, Lewis type / Mèche à bois Lewis à spirale unique avec queue SDS-PLUS
Broca para madera tipo Lewis con mango SDS-PLUS / Schlangenbohrer Lewis für Holz mit SDS-PLUS Kegel



Art. 05037 L=235 mm

Ø mm	l	L	pcs	cod.
8	160	235	1	050370800
10	160	235	1	050371000
12	160	235	1	050371200
14	160	235	1	050371400
16	160	235	1	050371600
18	160	235	1	050371800
20	160	235	1	050372000
22	160	235	1	050372200
24	160	235	1	050372400

Art. 05038 L=460 mm

Ø mm	l	L	pcs	cod.
8	360	460	1	050380800
10	360	460	1	050381000
12	360	460	1	050381200
14	360	460	1	050381400
16	360	460	1	050381600
18	360	460	1	050381800
20	360	460	1	050382000
22	360	460	1	050382200
24	360	460	1	050382400



05240307

Cassetta in metallo
Metal case

7 pcs SDS-PLUS
L = 235 mm
Ø 8-10-12-14-16-18-20 mm

05240307



05240308

Cassetta in metallo
Metal case

6 pcs SDS-PLUS
L = 460 mm
Ø 10-12-14-16-18-20 mm

05240308

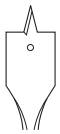
MECCHIE PIATTE PER LEGNO, CODOLO ESAGONALE

Hexagonal shank wood spade bits / Mèche à bois plate
Broca plana para madera / Flach Zentrums Bohrer

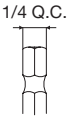
W.S.

05045





HRC ≅ 48÷50



Art. **05047** Self
Disponibile su richiesta / *On demand*

Confezione / *Packaging*



Applicazioni / *Applications*



Serie corta - Short serie

Ø mm	d ⬡	L	pcs	cod.
6	6,35	150	5	050450600
8	6,35	150	5	050450800
9	6,35	150	5	050450900
10	6,35	150	5	050451000
11	6,35	150	5	050451100
12	6,35	150	5	050451200
13	6,35	150	5	050451300
14	6,35	150	5	050451400
15	6,35	150	5	050451500
16	6,35	150	5	050451600
18	6,35	150	5	050451800
19	6,35	150	5	050451900
20	6,35	150	5	050452000
22	6,35	150	5	050452200
24	6,35	150	5	050452400
25	6,35	150	5	050452500
26	6,35	160	5	050452600
28	6,35	160	5	050452800
30	6,35	160	5	050453000
32	6,35	160	5	050453200
34	6,35	160	5	050453400
35	6,35	160	5	050453500
36	6,35	160	5	050453600
38	6,35	160	5	050453800
40	6,35	160	5	050454000



6 pcs
Ø 10-12-16 -18-20-25 mm
05055100

PROLUNGA PER MECCHIE L = 300 MM

Spade bit extension

05046



Ø mm	d ⬡	L	pcs	cod.
13	6,35	300	1	05046

Confezione / *Packaging*



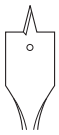
MECCHIE PIATTE PER LEGNO, CODOLO ESAGONALE

Hexagonal shank wood spade bits / Mèche à bois plate
Broca plana para madera / Flach Zentrums Bohrer

Serie lunga - L=400 mm Long serie

05048





HRC ≅ 48÷50

1/4 Q.C.



Ø mm	d ⬡	L	pcs	cod.
***6**	4,50	400	5	050480600
8	6,35	400	5	050480800
10	6,35	400	5	050481000
12	6,35	400	5	050481200
14	6,35	400	5	050481400
16	6,35	400	5	050481600
18	6,35	400	5	050481800
20	6,35	400	5	050482000
22	6,35	400	5	050482200
24	6,35	400	5	050482400
25	6,35	400	5	050482500
26	6,35	400	5	050482600
28	6,35	400	5	050482800
30	6,35	400	5	050483000
32	6,35	400	5	050483200
34	6,35	400	5	050483400
35	6,35	400	5	050483500
36	6,35	400	5	050483600
38	6,35	400	5	050483800
40	6,35	400	5	050484000

*Attacco esagonale / *Hexagonal shank*

Confezione / *Packaging*



Applicazioni / *Applications*



- Foratura nel legno dolce e legno duro, nei suoi derivati e nel cartongesso.
- *For drilling wood.*
- *Pour percer les bois.*
- *Para taladrar madera.*
- *Zum Bohren in Holz.*

MECCHIE PIATTE PER LEGNO, CODOLO ESAGONALE

Hexagonal shank wood spade bits / Mèche à bois plate
Broca plana para madera / Flach Zentrums Bohrer

W.S.

05050



Art. **05051** Self
Disponibile su richiesta
On demand

Ø min-max mm	d ⬡	pcs	cod.
Ø 14,5 ÷ 45	10	1	0505001
Ø 22 ÷ 75	10	1	0505002

Ricambi / *Spare parts*



Ø 14,5 ÷ 45	(2pcs)	1	0505011
Ø 22 ÷ 75	(2pcs)	1	0505012

Confezione / *Packaging*



Applicazioni / *Applications*



- Foratura nel legno dolce e legno duro, nei suoi derivati e nel cartongesso.
- *For drilling wood*
- *Pour percer les bois*
- *Para taladrar madera*
- Zum Bohren in Holz

FRESE TIPO FORSTNER A DUE TAGLIENTI CON PUNTA DA CENTRO ED INCISORI PER FORI NEL LEGNO

Wood center bits, Forstner type / Mèche à faconner
Broca Forstner / Forstnerbohrer

~ DIN 7483



HRC ≅ 48÷50

Confezione / *Packaging*



Applicazioni / *Applications*



- Legno dolce e derivati
- *Mild wood*
- *Bois*
- *Madera*
- *Leichtholz*

Art. 05063

Ø mm	d	L	pcs	cod.
10	8	90	1	050631000
12	8	90	1	050631200
14	8	90	1	050631400
15	8	90	1	050631500
16	8	90	1	050631600
17	8	90	1	050631700
18	8	90	1	050631800
20	8	90	1	050632000
22	8	90	1	050632200
24	8	90	1	050632400
25	8	90	1	050632500
26	8	90	1	050632600
28	8	90	1	050632800
30	8	90	1	050633000
32	10	90	1	050633200
34	10	90	1	050633400
35	10	90	1	050633500
36	10	90	1	050633600
38	10	90	1	050633800
40	10	100	1	050634000
45	10	100	1	050634500
50	10	100	1	050635000



5 pcs
Ø 15-20-25-30-35 mm
05100600

~ DIN 7483

05067



W.S.
HRC ≅ 55

Confezione / *Packaging*



Art. 05067

Ø mm	d	L	pcs	cod.
15	8	90	1	050671500
18	8	90	1	050671800
20	8	90	1	050672000
22	8	90	1	050672200
24	8	90	1	050672400
25	8	90	1	050672500
26	8	90	1	050672600
28	8	90	1	050672800
30	8	90	1	050673000
35	10	90	1	050673500
40	10	90	1	050674000
45	10	90	1	050674500
48	10	90	1	050674800
50	10	90	1	050675000



5 pcs
Ø 15-20-25-30-35 mm
05100605

H.M. ~ DIN 7483

05065



Metallo duro
Carbide tip

Confezione / *Packaging*



Art. 05065 - Metallo duro - *carbide*

Ø mm	d	L	pcs	cod.
15	8	90	1	050651500
20	8	90	1	050652000
25	8	90	1	050652500
26	8	90	1	050652600
30	8	90	1	050653000
35	10	90	1	050653500

Applicazioni / *Applications*



- Legno dolce e derivati
- *Mild wood*
- *Bois*
- *Madera*
- *Leichtholz*

FRESE PER CERNIERE INVISIBILI

Wood center bits / Mèche pour charnière invisible
Barrena para madera / Scharnier Lochbohrer



Art. 05058 - Acciaio W.S. - *WS Steel*

Ø mm	d	L	pcs	cod.
26	8	55	1	050582600
30	8	55	1	050583000
35	10	60	1	050583500

Art. 05060 - Metallo duro H.M. - *Carbide edges*

Ø mm	d	L	pcs	cod.
26	8	55	1	050602600
30	8	55	1	050603000
35	10	60	1	050603500

05058
05060



FRESE PER TASSELLI

Tenon dowel plug cutters / Fraises pour goujions
Fresas para cuñas / Scheibenschneider-zapfenfräser

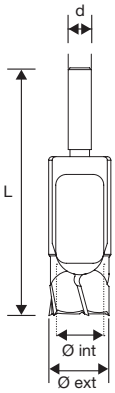
DIN 7489 W.S.



Ø int mm	Ø ext mm	n. taglienti	d	L	pcs	cod.
8	**17,5**	4	11	140	1	050770800
10	**20,5**	4	11	140	1	050771000
12	**23,5**	4	13	140	1	050771200
15	**26,5**	4	13	140	1	050771500
16	**28**	4	13	140	1	050771600
20	**32**	4	13	140	1	050772000
22	**34**	5	13	140	1	050772200
25	**37**	5	13	140	1	050772500
26	**38**	5	13	140	1	050772600
30	**42**	5	13	140	1	050773000
35	**47**	6	16	160	1	050773500
40	**52**	6	16	160	1	050774000

05077





TRIVELLINO PROFESSIONALE PER LEGNO

Two flute gimlet / Vrille professionnel



Ø mm	L	pcs	cod.
2	110	1	050760200
3	115	1	050760300
4	135	1	050760400

Ø mm	L	pcs	cod.
5	140	1	050760500
6	160	1	050760600
7	170	1	050760700

05076

SVASATORE 90° PER LEGNO

90°Wood countersink / Fraise à ébavurer pour bois
Avellanadores para madera / Senker für Holz

05440



90°



Z=5

Confezione *Packaging*



Art. 05440 - *W.S.*

Ø mm	d	L	pcs	cod.
8	8	50	1	05440500800
10	6	50	1	05440501000
12	8	50	1	05440501200
16	8	50	1	05440501600
20	8	50	1	05440502000

Applicazioni / *Applications*



- Foratura nel legno dolce e legno duro, nei suoi derivati e nel cartongesso.

- *For drilling wood - Pour percer les bois*
- *Para taladrar madera - Zum Bohren in Holz*

Art. **05442** Self
Disponibile su richiesta / *On demand*

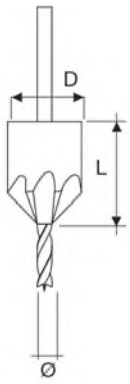
FRESA A 90° PER LEGNO

90° milling cutters / Fraise a 90° pour bois / Fresas de avellanar para madera / Aufstecksenker

05070
05072

05072 **05070**





Confezione *Packaging*



Art. 05072

Ø mm	D	L	pcs	cod.
3	16	25	1	050720300
4	16	25	1	050720400
5	16	25	1	050720500
6	16	25	1	050720600
7	16	25	1	050720700
8	20	25	1	050720800
10	20	25	1	050721000
12	20	25	1	050721200

Art. 05070

Ø mm	D	L	pcs	cod.
3	16	25	1	050700300
4	16	25	1	050700400
5	16	25	1	050700500
6	16	25	1	050700600
7	16	25	1	050700700
8	20	25	1	050700800
9	20	25	1	050700900
10	20	25	1	050701000
11	20	25	1	050701100
12	20	25	1	050701200



4 pcs
Ø 4-5-6-8 mm
05010200

5 pcs
Ø 4-5-6-8-10 mm
05010205

PUNTA FRESA UNIVERSALE PER FORATURA O FRESATURA DI LEGNO SOTTILE

Universal milling drill for cutting and milling thin wooden materials

05432

CV



ØxL mm	pcs	cod.
6 x 90	1	05432120

Applicazioni / *Applications*



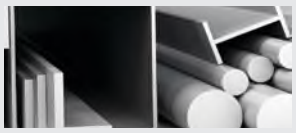
- Foratura nel legno dolce e legno duro, nei suoi derivati e nel cartongesso.

- *For drilling wood - Pour percer les bois*
- *Para taladrar madera - Zum Bohren in Holz*

UTENSILI PER MACCHINE AD OSCILLAZIONE

Tools for oscillating machines

Di seguito una breve guida alla scelta dell'utensile in funzione della tipologia di lavoro da effettuare
Below is a brief guide to the choice of tool depending on the type of work to be carried out

	Pavimento *Floor*	Costruzioni *Buildings*	Automotive	Superfici piastrellate *Tiled surfaces*
Rif. Bosch				
ASZ32SC	Materiali flessibili *Flexible materials*	Materiali isolanti *Insulating materials*		
ATZ52SC	Residui di moquette e colla *Residues of carpet and glue*			Malta per piastrelle *Tile mortar*
AVZ93G	Legno dolce, legno duro, parquet, vernici e pitture. *Softwood, hardwood, parquet, paints* Compensato, truciolato, laminato, pannelli rivestiti in plastica, materiali plastici teneri. *Plywood, chipboard, laminate, plastic coated panels, soft plastics*		Compositi *Composites* Profili in metalli non ferrosi, lamiere fino a 1 mm *Profiles in non-ferrous metals, sheets up to 1 mm*	
AIZ32BSPB	Legno duro, compensato, truciolato, parquet, laminato, pannelli rivestiti in plastica. *Hardwood, plywood, chipboard, parquet, laminate, plastic coated panels* Legno dolce, materiali plastici teneri *Soft wood, soft plastic materials*	Cartongesso, materiali stratificati *Drywall, laminated materials*	Compositi *Composites*	
AIZ32BSPC	Legno dolce. *Softwood* Legno duro, compensato, parquet, pannelli rivestiti in plastica, materiali plastici teneri *Hardwood, plywood, parquet, plastic coated panels, soft plastics*			
AII65BSPC	Legno dolce. *Softwood* Legno duro, compensato, parquet, pannelli rivestiti in plastica, materiali plastici teneri *Hardwood, plywood, parquet, plastic coated panels, soft plastics*			
AIZ32EPC	Legno dolce. *Softwood* Legno duro, compensato, parquet, pannelli rivestiti in plastica, materiali plastici teneri *Hardwood, plywood, parquet, plastic coated panels, soft plastics*			
ACZ85EB	Legno dolce. *Softwood* Legno duro, compensato, truciolato, parquet, laminato, pannelli rivestiti in plastica, materiali plastici teneri *Hardwood, plywood, chipboard, parquet, laminate, plastic coated panels, soft plastics*	Materiali stratificati *Multilayer materials* Cartongesso, pannelli in fibra e cemento *Drywall, fiber and cement panels*	Profili in metallo non ferrosi, chiodi e viti non temprati *Non-ferrous metal profiles, nails and screws not hardened* Compositi, Lamiere fino a 1 mm *Composites, sheets up to 1 mm*	Materiale sigillante *Sealing material*
AIZ20AB	Legno duro, compensato, truciolato, laminato, pannelli rivestiti in plastica *Hardwood, plywood, chipboard, laminate, plastic coated panels* Parquet, materiali teneri *Parquet, soft materials*	Cartongesso *Drywall* Materiali stratificati, pannelli in fibra e cemento *Laminated materials, fiber and cement panels*	Profili in metalli non ferrosi, lamiere fino a 1 mm, chiodi e viti non temprati *Profiles in non-ferrous metals, sheets up to 1 mm, nails and screws not* hardened Compositi. *Composites*	
AIZ32APB	Legno duro, compensato, truciolato, laminato, pannelli rivestiti in plastica *Hardwood, plywood, chipboard, laminate, plastic coated panels* Parquet, materiali teneri *Parquet, soft materials*	Materiali stratificati *Multilayer materials* Cartongesso, pannelli in fibra e cemento *Drywall, fiber and cement panels*	Lamiere fino a 1 mm, chiodi e viti non temprati. *Plates up to 1 mm, nails and screws not hardened* Compositi, profili in metalli non ferrosi *Composites, profiles in non-ferrous metals*	
AII65APB	Legno dolce. *Softwood* Legno duro, compensato, truciolato, parquet, pannelli rivestiti in plastica, materiali plastici teneri *Hardwood, plywood, chipboard, parquet, plastic-coated panels, soft plastics*			
AIZ32AB	Legno dolce, legno duro, compensato, truciolato, parquet, pannelli rivestiti in plastica, materiali plastici teneri *Softwood, hardwood, plywood, chipboard, parquet, plastic-coated panels, soft plastics*	Cartongesso. *Drywall* Materiali stratificati, pannelli in fibra e cemento *Laminated materials, fiber and cement panels*	Profili in metalli non ferrosi, lamiere fino a 1 mm, chiodi e viti non temprati *Profiles in non-ferrous metals, sheets up to 1 mm, nails and screws not* hardened Compositi. *Composites*	
AIZ20AT	Legno dolce, legno duro, compensato, truciolato, parquet, pannelli rivestiti in plastica, materiali plastici teneri *Softwood, hardwood, plywood, chipboard, parquet, plastic-coated panels, soft plastics*	Cartongesso, pannelli in fibra e cemento *Drywall, fiber and cement panels* Materiali stratificati *Mulitlayers*	Compositi, profili in metalli non ferrosi, lamiere fino a 1 mm, chiodi e viti temprati e non. *Composites, profiles in non-ferrous metals, sheets up to 1 mm, hardened and nails and screws*	Calcestruzzo poroso *Porous concrete*
ACZ85RT3		Pannelli in fibra e cemento *Fiber and cement panels* Cartongesso *Drywall*	Compositi *Composites*	Malta per fughe (2-3 mm), malta per piastrelle. *Mortar for joints (2-3 mm), grout for tiles* Piastrelle da parete tenere. *Wall tiles*
AVZ70RT4	Residui di moquette e colla *Residues of carpet and glue*	Pannelli in fibra e cemento *Fiber and cement panels* Cartongesso *Drywall*	Compositi *Composites*	Malta per fughe (2-3 mm), malta per piastrelle. *Mortar for joints (2-3 mm), grout for tiles* Piastrelle da parete tenere. *Wall tiles*
AVZ78RT2		Pannelli in legno *Wood panels*		Malta per fughe (2-3 mm), malta per piastrelle. *Mortar for joints (2-3 mm), grout for tiles* Piastrelle da parete tenere. *Wall tiles*

In nero le applicazioni ottimali, in blu le applicazioni adatte
The recommended applications in black, the basic applications in blue color.

High Quality professional

ACCESSORI PER UTENSILI MULTIFUNZIONE AD OSCILLAZIONE

Accessories for multi-function oscillating tools / Accessoires pour outils oscillants multifonctions
Accesorios para herramientas oscilantes multifunción

23405

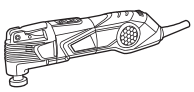
Attacco Starlock®
Starlock® tools

LEGNO - *Wood*

Cod.	Rif. Bosch	Materiale *Material*	Dimensioni *Dimensions*	Caratteristiche *Features*	Impieghi *Applications*
23405100 	AIZ32BSPB	Bimetal Curved TECH	32 mm, 50 mm; 1,8mm; 14 tpi	long LIFE, clean CUT, Precise	Plastics Legno duro, multistrato, plastica *Hard wood, plywood, plastic.* *Bois franc, multicouche, plastique* *Madera dura, multicapa, plástico.*
23405105 	AIZ32BSPC	HCS Curved TECH	32 mm, 50 mm; 1,8mm; 14 tpi	clean CUT, Precise	Plastics Legno dolce, multistrato, plastica (es. taglio dal centro in legno massivo per montaggio di una griglia di aerazione). *Soft wood, plywood, plastic (eg center cut in massive wood for mounting an aeration grid).* *Bois résineux, contreplaqué, plastique (par exemple coupe en bois massif pour le montage d'une grille d'aération).* *Madera blanda, madera contrachapada, plástico (por ejemplo, corte central en madera maciza para montar una rejilla de aireación).*
23405110 	AII65BSPC Flat Konvex	HCS Curved TECH	40mm, 65mm; 1,8mm; 14 tpi	clean CUT, Precise	Plastics Legno dolce, multistrato, plastica (es. taglio dal centro in legno massivo per montaggio di una griglia di aerazione). *Soft wood, plywood, plastic (eg center cut in massive wood for mounting an aeration grid).* *Bois résineux, contreplaqué, plastique (par exemple coupe en bois massif pour le montage d'une grille d'aération).* *Madera blanda, madera contrachapada, plástico (por ejemplo, corte central en madera maciza para montar una rejilla de aireación).*
23405115 	AIZ32EPC	HCS Curved TECH	32 mm, 50 mm; 1,4 mm; 18 tpi	Precise	Plastics Legno dolce, plastica (es. taglio dal centro in legno massivo per montaggio di una griglia di aerazione). *Soft wood, plastic (eg center cut in massive wood for mounting an aeration grid).* *Bois résineux, plastique (par exemple coupe en bois massif pour le montage d'une grille d'aération).* *Madera blanda, plástico (por ejemplo, corte central en madera maciza para montar una rejilla de aireación).*

Confezione / *Packaging*





Per macchine multifunzione
To fit multipurpose machines
Starlock, Starlock Plus, Starlock Max, Milwaukee, Fein, Craftsman, Ridgid, Einhell, Westfalia, Chicago Electric, (®)... Dremel, Dewalt, B&D, Porter Cable, Rockwell, Worx, Multi2pro, Mastercraft (®) con adattatore/*with adapter*...

Tabella di comparazione / *Choosing chart*

Codice Bosch *Bosch code*	Codice Krino *Krino code*	Codice Bosch *Bosch code*	Codice Krino *Krino code*
ACZ85EB	23410100	**AIZ32BSPB**	23405100
ACZ85RT3	23415100	**AIZ32BSPC**	23405105
AII65APB	23410115	**AIZ32EPC**	23405115
AII65BSPC	23405110	**ASZ32SC**	23400100
AIZ20AB	23410105	**ATZ52SC**	23400105
AIZ20AT	23410125	**AVZ70RT4**	23415105
AIZ32AB	23410120	**AVZ78RT2**	23415115
AIZ32APB	23410110	**AVZ93G**	23400110

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LEGNO, METALLO, PLASTICHE - *Wood, metal, plastics*

Cod.	Rif. Bosch	Materiale *Material*	Dimensioni *Dimensions*	Caratteristiche *Features*	Impieghi *Applications*
23410100  	ACZ85EB	BIM		long LIFE	   Parquet, multistrato s<20 mm, plastica epossidica. Tagli troncati e tagli dal centro, anche per tagli vicino ai bordi, negli angoli e in settori difficilmente accessibili (es. tagli di zoccolini già montati oppure telai delle porte). *Parquet, plywood s <20 mm, epoxy plastic. Truncated cuts and cuts from the center, also for cuts near the edges, in the corners and in sectors that are difficult to access (eg cuts of assembled skirting boards or door frames).*
23410105  	AIZ20AB	Bimetal	  19 tpi	long LIFE	    Legno con chiodi, legno duro, cartongesso, plastica epossidica, sandwich isolanti (es. tagli di telai di porte, tagli in pannelli rivestiti, tagli di tubi in materiale non ferroso e profili di piccole dimensioni). *Wood with nails, hardwood, plasterboard, epoxy plastic, insulating sandwiches (eg door frame cuts, paneled cuts, non-ferrous pipe cuts and small profiles).*
23410110  	AIZ32APB	Bimetal Curved TECH	  19 tpi	long LIFE 	   Legno con chiodi, legno duro, sandwich isolanti, alluminio, plastica epossidica (es. tagli di telai di porte, tagli in pannelli rivestiti, tagli di tubi in materiale non ferroso e profili di piccole dimensioni). *Wood with nails, hardwood, insulating sandwich, aluminum, epoxy plastic (eg cuts of door frames, cuts in coated panels, pipe cuts in non-ferrous material and small profiles). Bois avec clous, bois dur, sandwich isolant, aluminium, plastique époxy (par ex. coupes de cadres de portes, découpes de panneaux revêtus, coupes de tuyaux en matériaux non ferreux et petits profilés). Madera con clavos, madera dura, sándwich aislante, aluminio, plástico epoxi (por ejemplo, cortes de marcos de puertas, cortes en paneles revestidos, cortes de tuberías en materiales no ferrosos y perfiles pequeños).*
23410115  	AII65APB Flat	Bimetal Curved TECH	  14 tpi	long LIFE 	   Legno con chiodi, legno duro, sandwich isolanti, plastica epossidica (es. tagli di telai di porte, aperture per un ripiano). *Wood with nails, hardwood, insulating sandwiches, epoxy plastic (eg cuts of door frames, openings for a shelf). Bois avec clous, bois franc, sandwichs isolants, plastique époxy (par exemple coupes de cadres de portes, ouvertures pour une étagère). Madera con clavos, madera dura, sándwiches aislantes, plástico epoxi (por ejemplo, cortes de marcos de puertas, aberturas para un estante).*
23410120  	AIZ32AB	BIM	  19 tpi	long LIFE	    Legno con chiodi, alluminio, plastica epossidica, sandwich isolanti (es. tagli di telai di porte, tagli in pannelli rivestiti, tagli di tubi in materiale non ferroso e profili di piccole dimensioni). *Wood with nails, aluminum, epoxy plastic, insulating sandwiches (eg cuts of door frames, cuts in coated panels, pipe cuts in non-ferrous material and small profiles). Bois avec clous, aluminium, plastique époxy, sandwichs isolants (par exemple coupes de cadres de portes, coupes de panneaux revêtus, coupes de tuyaux en matériaux non ferreux et petits profilés). Madera con clavos, aluminio, plástico epoxi, sándwiches aislantes (por ejemplo, cortes de marcos de puertas, cortes en paneles revestidos, cortes de tuberías en materiales no ferrosos y perfiles pequeños).*
23410125  	AIZ20AT	TC/HM	  23 tpi	extra long LIFE	   Legno con chiodi, metallo con HRC 40÷50, acciaio inox, polimeri rinforzati con fibre. *Wood with nails, metal with HRC 40÷50, stainless steel, polymers reinforced with fibers. Bois avec clous, métal avec HRC 40÷50, acier inoxydable, polymères renforcés avec des fibres. Madera con clavos, metal con HRC 40÷50, acero inoxidable, polímeros reforzados con fibras.*

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23415

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MATERIALI ABRASIVI - *Abrasives*

Cod.	Rif. Bosch	Materiale *Material*	Dimensioni *Dimensions*	Caratteristiche *Features*	Impieghi *Applications*
23415100  	ACZ85RT3	TC/HM	Ø 85 mm  Carbide 30 	extra long LIFE  ≤ 2,5 mm 	  Plastics    Mattoni e cemento, piastrelle, plastica epossidica (es. rimuovere fughe tra piastrelle, tagliare cavità in piastrelle, pannelli di gesso o plastiche rinforzate). *Bricks and cement, tiles, epoxy plastics (eg removing joints between tiles, cutting tile cavities, gypsum boards or reinforced plastics). Briques et ciment, carreaux, plastiques époxydes (par ex. Enlever les joints entre les carreaux, découper les cavités des carreaux, les panneaux de gypse ou les plastiques renforcés). Ladrillos y cemento, baldosas, plásticos epoxídicos (por ejemplo, eliminación de juntas entre baldosas, corte de cavidades de baldosas, paneles de yeso o plásticos reforzados.*
23415105  	AVZ70RT4	TC/HM	Ø 70 mm  Carbide 40 	extra long LIFE  ≤ 2,5 mm 	  Plastics    Mattoni e cemento, piastrelle, plastica epossidica (es. rimozione di colla per piastrelle e malta per fughe, raspatura e levigatura di superfici dure). *Bricks and cement, tiles, epoxy plastic (eg tile glue and grout removal, buffing and sanding of hard surfaces). Briques et ciment, tuiles, plastique époxy (p. Ex. Enlèvement de la colle à carrelage et du coulis, polissage et ponçage des surfaces dures). Ladrillos y cemento, baldosas, plástico epoxi (por ejemplo, eliminación de pegamento y lechada, pulido y lijado de superficies duras).*
23415115  	AVZ78RT2	TC/HM	78 mm  Carbide 20 	extra long LIFE 	    Malta, residui di calcestruzzo, legno, materiali abrasivi (es. rimozione di malta o colla per piastrelle, rimozione di residui di colla per moquette). *Mortar, residues of concrete, wood, abrasive materials (eg removal of mortar or tile adhesive, removal of residues of glue for carpet). Mortier, résidus de béton, bois, matériaux abrasifs (par ex. Enlèvement de mortier ou colle à carrelage, enlèvement de résidus de colle pour tapis). Mortero, residuos de hormigón, madera, materiales abrasivos (por ejemplo, eliminación de adhesivo de mortero o baldosas, eliminación de residuos de pegamento para alfombras).*

Kit per piastrelle
Tile set



23430100

4 pcs

Art. 23415100
Art. 23400105
Art. 23415115
Art. 23410105

Kit per pavimenti e installazioni
Flooring set



23430101

4 pcs

Art. 23410100
Art. 23400105
Art. 23405115
Art. 23405100

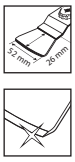
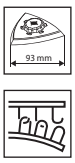
ACCESSORI PER UTENSILI MULTIFUNZIONE AD OSCILLAZIONE

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Accesorios para herramientas oscilantes multifunción

23400

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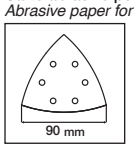
MULTIMATERIALE - *Multitasking*

Cod.	Rif. Bosch	Materiale *Material*	Dimensioni *Dimensions*	Caratteristiche *Features*	Impieghi *Applications*
23400100  	ASZ32SC	HCS Lama *(Multi knife)*		long LIFE	  Moquette, tappeti, carta catramata, prato sintetico, cartone, tutti i materiali teneri e abrasivi flessibili. *Carpet, tar paper, synthetic grass, cardboard, all soft materials and flexible abrasives. Tapis, papier goudronné, gazon synthétique, carton, tous matériaux mous et abrasifs flexibles. Alfombras, papel alquitranado, hierba sintética, cartón, todos los materiales blandos y abrasivos flexibles.*
23400105  	ATZ52SC	HCS Raschietto *(Rigid scraper)*			    Moquette, malta, calcestruzzo, colla per piastrelle. *Carpet, mortar, concrete, tile adhesive. Tapis, mortier, béton, colle à carrelage. Alfombra, mortero, hormigón, adhesivo para azulejos.*
23400110  	AVZ93G	Platorello per carte abrasive *(Sanding Plate for delta sanding paper)*			   Levigatura di superfici piane sui bordi, negli angoli o in settori difficilmente accessibili (es. levigare legno, pittura, vernice, pietra, disossidare metalli, asportare vernici). *Sanding flat surfaces on edges, corners or in sectors that are difficult to access (eg sanding wood, painting, varnish, stone, deoxidising metals, removing varnishes). Ponçage des surfaces planes sur les bords, les coins ou dans des secteurs difficiles d'accès (par ex. Ponçage du bois, peinture, vernis, pierre, désoxydation des métaux, enlèvement des vernis). Lijado de superficies planas en bordes, esquinas o en sectores de difícil acceso (por ejemplo, lijado de madera, pintura, barniz, piedra, metales desoxidantes, eliminación de barnices).*

23529026 **20 pcs**



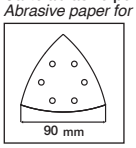
Carte abrasive per legno/vernici
Abrasive paper for wood/paint



23529027 **20 pcs**



Carte abrasive per legno/metallo
Abrasive paper for wood/metal



GUIDA ALL'USO DEGLI UTENSILI PER MACCHINE AD OSCILLAZIONE

Guide to the use of tools for oscillating machines / Guide d'utilisation des outils pour machines oscillantes
Guía de uso de herramientas para máquinas oscilantes



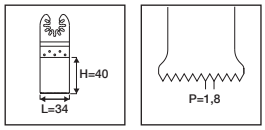
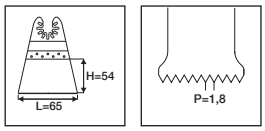
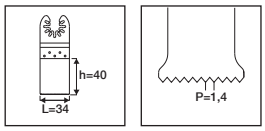
Si raccomanda l'uso delle lame per utensili multifunzione con una lieve pressione. La dentatura è appositamente studiata per fornire un'operazione di taglio senza sforzo e con ottima finitura. Nel caso si esercitasse una pressione eccessiva il prodotto potrebbe perdere prematuramente il filo tagliente oppure potrebbe surriscaldarsi eccessivamente, perdendo di conseguenza capacità tagliente.
The use of oscillating tools with light pressure is recommended. The tooth set is specially designed to provide a cutting operation effortlessly and with excellent finish. If excessive pressure is exerted, the product may prematurely lose the cutting edge or it may overheat excessively, thus losing its cutting capacity.

ACCESSORI PER UTENSILI MULTIFUNZIONE AD OSCILLAZIONE UNIVERSAL QUICK CHANGE

Universal Quick Change accessories for multi-function oscillating tools / Accessoires pour outils oscillants multifonctions Universal Quick Change
Accesorios para herramientas oscilantes multifunción Universal Quick Change

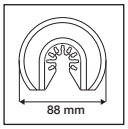
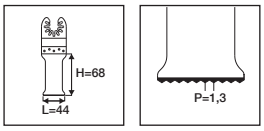
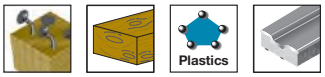
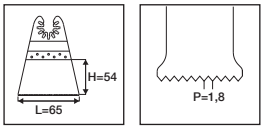
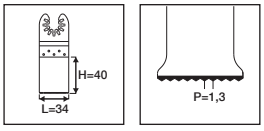
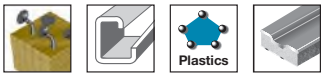
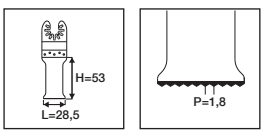
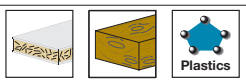
23505

LEGNO - *Wood*

Cod.	Rif. Bosch	Materiale *Material*	Dimensioni (mm) *Dimensions*	Impieghi *Applications*
23505105 	≈AIZ32BSPC	HCS	 14 tpi	 Legno dolce, multistrato, plastica (es. taglio dal centro in legno massivo per montaggio di una griglia di aerazione). *Softwood, plywood, plastic (eg center cut in massive wood for mounting an aeration grid).*
23505110 	≈AII65BSPC	HCS	 14 tpi	 Legno dolce, multistrato, plastica (es. taglio dal centro in legno massivo per montaggio di una griglia di aerazione). *Softwood, multilayer, plastic (eg center-cut in massive wood for mounting an aeration grid).*
23505115 	≈AIZ32EPC	HCS	 18 tpi	 Legno dolce, plastica (es. taglio dal centro in legno massivo per montaggio di una griglia di aerazione). *Softwood, plastic (eg cut from the center in massive wood to fit an aeration grid).*

23510

LEGNO, METALLO, PLASTICHE - *Wood, metal, plastics*

Cod.	Rif. Bosch	Materiale *Material*	Dimensioni (mm) *Dimensions*	Impieghi *Applications*
23510100 	≈ACZ85EB	BIM		 Parquet, multistrato s<20 mm, plastica epossidica. Tagli troncati e tagli dal centro, anche per tagli vicino ai bordi, negli angoli e in settori difficilmente accessibili (es. tagli di zoccolini già montati oppure telai delle porte). *Parquet, multilayer s <20 mm, epoxy plastic. Truncated cuts and cuts from the center, also for cuts near the edges, in the corners and in sectors that are difficult to access (eg cuts of assembled skirting boards or door frames).*
23510105 	≈AIZ20AB	BIM	 19 tpi	 Legno con chiodi, legno duro, cartongesso, plastica epossidica, sandwich isolanti (es. tagli di telai di porte, tagli in pannelli rivestiti, tagli di tubi in materiale non ferroso e profili di piccole dimensioni). *Wood with nails, hardwood, plasterboard, epoxy plastics, insulating sandwiches (eg cuts of door frames, cuts in coated panels, pipe cuts in non-ferrous material and small profiles).*
 23510115	≈AII65APB	HCS	 14 tpi	 Legno dolce, plastica. *Soft wood, plastics.*
23510120 	≈AIZ32AB	BIM	 19 tpi	 Legno con chiodi, alluminio, plastica epossidica, sandwich isolanti (es. tagli di telai di porte, tagli in pannelli rivestiti, tagli di tubi in materiale non ferroso e profili di piccole dimensioni). *Wood with nails, aluminum, epoxy plastic, insulating sandwiches (eg cuts of door frames, cuts in coated panels, pipe cuts in non-ferrous material and small profiles).*
23510125 	≈AIZ32BSPB	BIM	 14 tpi	 Legno duro, multistrato, plastica. *Hardwood, multilayer, plastic.*

Confezione / *Packaging*

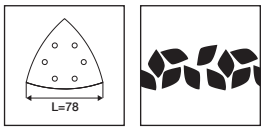


ACCESSORI PER UTENSILI MULTIFUNZIONE AD OSCILLAZIONE UNIVERSAL QUICK CHANGE

Universal Quick Change accessories for multi-function oscillating tools / Accessoires pour outils oscillants multifonctions Universal Quick Change
Accesorios para herramientas oscilantes multifunción Universal Quick Change

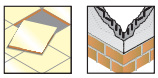
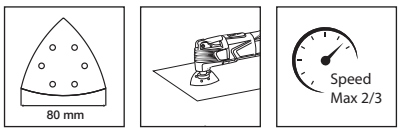
23515

MATERIALI ABRASIVI - *Abrasives*

Cod.	Rif. Bosch	Materiale *Material*	Dimensioni (mm) *Dimensions*	Impieghi *Applications*
23515100 	≈ACZ85RT3	TC/HM		 Mattoni e cemento, piastrelle, plastica epossidica (es. rimuovere fughe tra piastrelle, tagliare cavità in piastrelle, pannelli di gesso o plastiche rinforzate). *Bricks and cement, tiles, epoxy plastics (eg to remove joints between tiles, cut tile cavities, gypsum boards or reinforced plastics).*
23515105 	≈AVZ70RT4	TC/HM		 Mattoni e cemento, piastrelle, plastica epossidica (es. rimozione di colla per piastrelle e malta per fughe, raspatura e levigatura di superfici dure). *Bricks and cement, tiles, epoxy plastics (eg tile glue and grout removal, buffing and sanding of hard surfaces).*

23500

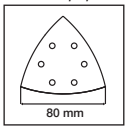
MULTIMATERIALE - *Multitasking*

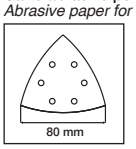
Cod.	Rif. Bosch	Materiale *Material*	Dimensioni (mm) *Dimensions*	Impieghi *Applications*
23500105 	≈ATZ52SC	HCS Raschietto *(Rigid scraper)*		 Moquette, malta, calcestruzzo, colla per piastrelle. *Carpet, mortar, concrete, tile adhesive.*
23500110 	≈AVZ93G	Platorello per carte abrasive (Sanding Plate for delta sanding paper)		Levigatura di superfici piane sui bordi, negli angoli o in settori difficilmente accessibili (es. levigare legno, pittura, vernice, pietra, disossidare metalli, asportare vernici). *Smoothing flat surfaces on edges, in corners or in sectors that are difficult to access (eg sanding wood, painting, varnish, stone, deoxidising metals, removing painting).*

23529

23529010 
Adattatore per macchine Dremel®
Adapter to fit Dremel® machine

23529015 
Adattatore per macchine Bosch® (non Starlock®)
Adapter to fit Bosch® (non Starlock®) machine

23529020 **20 pcs** 
Carte abrasive per legno/vernici
Abrasive paper for wood/paint


23529025 **20 pcs** 
Carte abrasive per legno/metallo
Abrasive paper for wood/metal




23530100

4 pcs

Art. 23505115
Art. 23500105
Art. 23510100
Art. 23500110



23530101

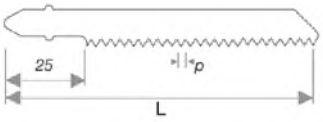
7 pcs

Art. 23510115
Art. 23505115
Art. 23510120
Art. 23500105 Inox
Art. 23515105
Art. 23510100 HCS
Art. 23500110

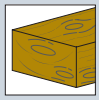
Professional

LAME PER SEGHETTI ALTERNATIVI CON ATTACCO BOSCH® PER LEGNO

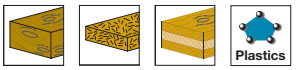
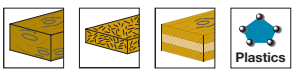
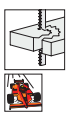
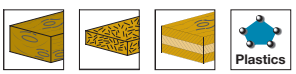
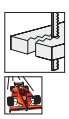
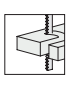
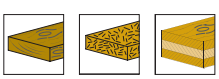
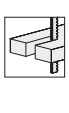
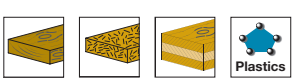
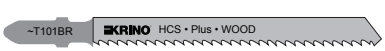
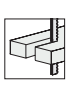
Jig saw blades BOSCH® type for wood and plywood / Lame de scies sauteuses modèle BOSCH® pour bois et dérivés
Hojas de sierra de calar tipo BOSCH® para madera y derivados / Sägeblatt für abwechselnden Metallsägen mit BOSCH®
Verbindungsstück für Holz und Nebenprodukten



Legno dolce
Mild wood



23600

Cod. € 3 pcs	Simile a *Similar to*		L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
						
23600100	≃ T119B	**Basic**	76x2 *3x12*			<15 <15 <15
						
23600105	≃ T119BO	**Basic**	76x2 *3x12*			<15 <15 <15
						
23600110	≃ T111C	**Basic**	100x3 *4x8*			<50 <50 <50 <5 Ø<30
						
23600130	≃ T144D	**Fast**	100x4 *4x6*			<50 <50 <50 <5 Ø<50
						
23600135	≃ T244D	**Fast**	100x4 *4x6*			<50 <50 <50 <5 Ø<50
						
23600140	≃ T344D	**Fast**	132x4 *5x6*			<100 <100
						
23600150	≃ T101AO	**Plus**	76x1,4 *3x18*			<15 <15 <15
						
23600155	≃ T101B	**Plus**	100x2,5 *4x10*			<30 <30 <30 <5 Ø<30
						
23600160	≃ T101BR	**Reverse**	100x2,5 *4x10*			<30 <30 <30 <30 <5 Ø<30

Esempio di interpretazione della colonna "Impieghi (mm)":
How to read the "Application (mm)" column:


<50

Idoneo al taglio di legno stratificato dello spessore massimo di 50 mm
Suitable for cutting stratified wood – max thickness 50 mm

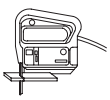


<5
Ø<50

Idoneo al taglio di plastica in lastre con spessori fino a 5 mm e profili con dimensione massima 50 mm
Suitable for cutting plastics sheet (max thickness 5 mm) and plastics pipes / structural (max dimension 50 mm)

Confezione / *Packaging*



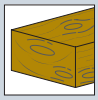


AEG, ATLAS COPCO, BOSCH, DE WALT, ELU, FESTOOL, HITACHI, MAKITA, METABO, HILTI, MAFELL, MILWAUKEE, RYOBI, SKIL,...(®)

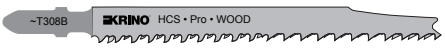
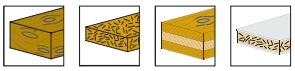
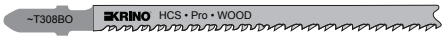
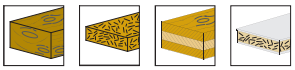
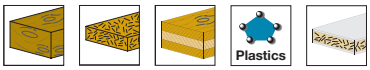
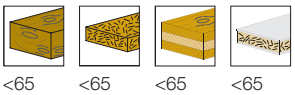
LAME PER SEGHETTI ALTERNATIVI CON ATTACCO BOSCH® PER LEGNO

Jig saw blades BOSCH® type for wood and plywood / Lame de scies sauteuses modèle BOSCH® pour bois et dérivés
Hojas de sierra de calar tipo BOSCH® para madera y derivados / Sägeblatt für abwechselnden Metallsägen mit BOSCH® Verbindungsstück für Holz und Nebenprodukten

23600



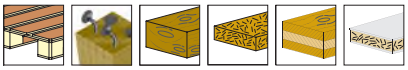
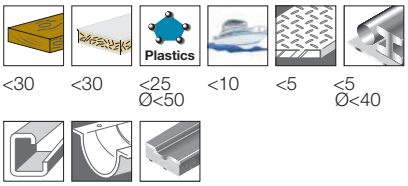
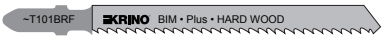
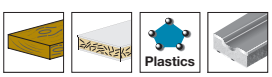
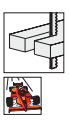
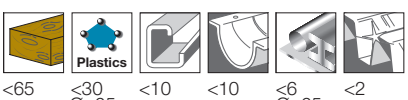
Legno dolce
Mild wood

Cod. € 3 pcs	Simile a *Similar to*		L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
						
23600170	≃ T308B	**Pro**	116x2,2 *4½x11*	HCS Rettificata *Ground*		 <65 <65 <65 <65
						
23600175	≃ T308B0	**Pro**	116x2,2 *4½x11*	HCS Rettificata *Ground*		 <65 <65 <65 <65
						
23600180	≃ T144DP	**Ultra**	100x4 *4x6*	HCS Rettificata *Ground*		 <50 <50 <50 <5 Ø<30 <50
						
23600190	≃ T234X	**Variable**	116x2÷3 *4½x8÷12*	HCS Rettificata *Ground*		 <65 <65 <65 <65

23610

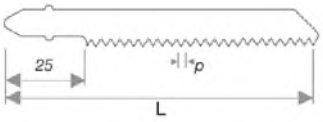


Legno duro
Hard wood

Cod.	Simile a *Similar to*		L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
						
23610105	≃ T344DF	**Fast**	116x2,2 *6x6*	BM HSS Rettificata *Ground*		 <65 <100 <100 <100 <65
						
23610120	≃ T101BF	**Plus**	116x2,2 *4x10*	BM HSS Rettificata *Ground*		 <30 <30 <25 Ø<50 <10 <5 <5 Ø<40 <10 Ø<50 <10 Ø<50 <45
						
23610125	≃ T101BRF	**Reverse**	100x4 *4x10*	BM HSS Rettificata *Ground*		 <30 <30 <25 Ø<50 <45
						
23610140	≃ T101BIF	**Laminate**	116x2÷3 *3x15*	BM HSS Rettificata *Ground*		 <15 <15 <15
						
23610150	≃ T345XF	**Variable**	116x2÷3 *5x5÷10*	BM HSS Fresata *Milled*		 <65 <30 Ø<65 <10 <10 <6 Ø<65 <2

LAME PER SEGHETTI ALTERNATIVI CON ATTACCO BOSCH® PER METALLI

Jig saw blades BOSCH® type for metals /Lame de scies sauteuses modèle BOSCH® pour métaux
Hojas de sierra de calar tipo BOSCH® para metales / Sägeblatt für abwechselnden Metallsägen mit BOSCH®
Verbindungsstück für Metalls



Metalli
Metals



23620

Cod.	Simile a *Similar to*		L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
23620100	≃ T118G	Basic	76x0,8 *3x32*	HSS Fresata *Milled*		<1,5 <1,5 <1,5
23620110	≃ T218A	Basic	76x1,2 *3x21*	HSS Fresata *Milled*		<3 <3 <3
23620115	≃ T318A	Basic	132x1,2 *5x21*	HSS Fresata *Milled*		<65 <3 <3 Ø<65 <3 Ø<65 <3 Ø<65 <10 Ø<65 Plastics
23620125	≃ T318B	Basic	132x2 *5x12*	HSS Fresata *Milled*		<6 Ø<65 <6 <6 Ø<65 <10 Ø<50 <25 Ø<65 Plastics <10
23620130	≃ T318AF	Multi	132x1,2 *5x21*	BIM HSS Fresata *Milled*		<65 <6 <6 Ø<65 <6 Ø<65 <6 Ø<65 Plex <6
23620150	≃ T118BF	Multi	76x2 *5x12*	BIM HSS Fresata *Milled*		<6 <6 <6 <6 Plastics <6 Plex <6
23620155	≃ T318BF	Multi	132x2 *5x12*	BIM HSS Fresata *Milled*		<65 <6 <6 Ø<65 <6 Ø<65 <6 Ø<65 <15 Ø<65 Plastics <10 Plex
23620170	≃ T123XF	Variable	100x1,2÷2,6 *4x10÷21*	HSS Fresata *Milled*		<10 <10 <10 <10 <10
23620175	≃ T118GFS	Inox	82x0,8 *3x32*	BIM HSS Fresata *Milled*		<1,5
23620180	≃ T127D	Alu	100x3 *4x8*	HSS Fresata *Milled*		<15 <15 <15 <15 Ø<30
23620185	≃ T227D	Alu	100x3 *4x8*	HSS Fresata *Milled*		<15 <15 <15 <15 Ø<30

LAME PER SEGHETTI ALTERNATIVI CON ATTACCO BOSCH® **PER APPLICAZIONI SPECIALI**

Cobalt twist drills ground from the solid / Forets cylindriques au cobalt entièrement rectifiés
Broca helicoidale rectificada de cobalto / Kobalt Spiralbohrer

23630

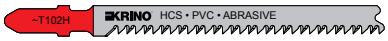
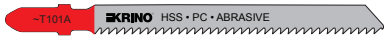
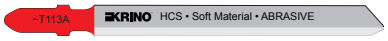
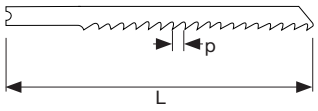
Cod.	Simile a *Similar to*		L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
						
23630090	≃ T102H	**PVC**	100x2,3 *4x11*	HCS  Rettificata *Ground*		 <15 Ø<30
						
23630100	≃ T101A	**PC**	76x1,4 *3x18*	HSS  Rettificata *Ground*		 <15  <15  <15
						
23630130	≃ T341HM	**Hard plastics**	132x4 *5x6*	 Con inserti in MD *Carbide tip*		 <50  <80  <20
						
23630150	≃ T150RIFF	**Grit 50**	76 grana 50 *3*	 Con grani in MD *Carbide grit*		 <10  <10  <10  <4
						
23630160	≃ T113A	**Soft**	100 *4*	HCS  Rettificata *Ground*		 <50  <10

Tabella di comparazione */ Choosing chart*

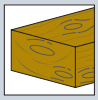
Codice Bosch *Bosch code*	Codice Krino *Krino code*	Codice Bosch *Bosch code*	Codice Krino *Krino code*
≈T101A	23630100	**≈T144D**	23600130
≈T101AO	23600150	**≈T144DP**	23600180
≈T101B	23600155	**≈T150RIFF**	23630150
≈T101BF	23610120	**≈T218A**	23620110
≈T101BIF	23610140	**≈T227D**	23620185
≈T101BR	23600160	**≈T234X**	23600190
≈T101BRF	23610125	**≈T244D**	23600135
≈T102H	23630090	**≈T308B**	23600170
≈T111C	23600110	**≈T308BO**	23600175
≈T113A	23630160	**≈T318A**	23620115
≈T118BF	23620150	**≈T318AF**	23620130
≈T118G	23620100	**≈T318B**	23620125
≈T118GFS	23620175	**≈T318BF**	23620155
≈T119B	23600100	**≈T341HM**	23630130
≈T119BO	23600105	**≈T344D**	23600140
≈T123XF	23620170	**≈T344DF**	23610105
≈T127D	23620180	**≈T345XF**	23610150

LAME PER SEGHETTI ALTERNATIVI CON ATTACCO BLACK&DECKER® PER LEGNO

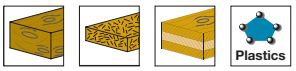
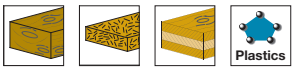
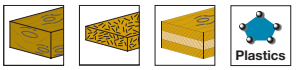
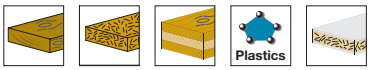
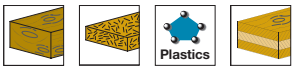
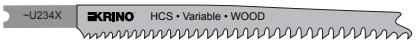
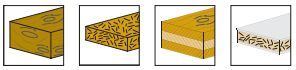
Jig saw blades BOSCH® type for wood and plywood / Lame de scies sauteuses modèle BOSCH® pour bois et dérivés
Hojas de sierra de calar tipo BOSCH® para madera y derivados / Sägeblatt für abwechselnden Metallsägen mit BOSCH®
Verbindungsstück für Holz und Nebenprodukten



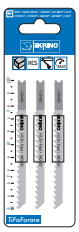
Legno dolce
Mild wood

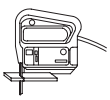


23700

Cod.	Simile a *Similar to*		L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
						
23700100	≃ U111C	**Basic**	100x3 *4x8*	HCS Fresata *Milled*		 <50 <50 <50 <5 Ø<30
						
23700105	≃ U111D	**Basic**	100x4 *4x6*	HCS Fresata *Milled*		 <65 <65 <65 <5 Ø<50
						
23700110	≃ U144D	**Fast**	100x4 *4x6*	HCS Rettificata *Ground*		 <50 <50 <50 <5 Ø<30
						
23700115	≃ U1AO	**Plus**	76x1,4 *3x18*	HCS Rettificata *Ground*		 <15 <15 <15 <15
						
23700120	≃ U101B	**Plus**	100x2,5 *4x10*	HCS Rettificata *Ground*		 <30 <30 <30 <3 Ø<30 <30
						
23700125	≃ U101D	**Plus**	100x4 *4x6*	HCS Rettificata *Ground*		 <45 <45 <5 <45
						
23700130	≃ U234X	**Variable**	106x2÷3 *4x8÷12*	HCS Rettificata *Ground*		 <65 <65 <65 <65

Confezione / *Packaging*





BLACK&DECKER, KRESS, RYOBI, SKIL,...(®)

Tabella di comparazione / *Choosing chart*

Codice Bosch *Bosch code*	Codice Krino *Krino code*	Codice Bosch *Bosch code*	Codice Krino *Krino code*
≈U101B	23700120	**≈U118B**	23710105
≈U101D	23700125	**≈U127D**	23710115
≈U111C	23700100	**≈U144D**	23700110
≈U111D	23700105	**≈U1AO**	23700115
≈U118A	23710100	**≈U234X**	23700130

LAME PER SEGHETTI ALTERNATIVI CON ATTACCO BLACK&DECKER® PER METALLO

Jig saw blades BLACK & DECKER® type for metals /Lame de scies sauteuses modèle BLACK & DECKER® pour métaux
Hojas de sierra de calar tipo BLACK & DECKER® para metales / Sägeblatt für abwechselnden Metallsägen mit BLACK & DECKER® Verbindungsstück für Metalls



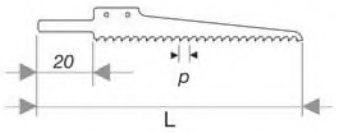
Metalli
Metals

23710

Cod.	Simile a *Similar to*		L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
						
23710100	≃ U118A	**Basic**	76x1,2 *3x21*	HSS Fresata *Milled*		 <3 <3 <3
						
23710105	≃ U118B	**Basic**	76x2 *3x12*	HSS Fresata *Milled*		 <6 <6 <6
						
23710115	≃ U127D	**Alu**	100x3 *4x8*	HSS Fresata *Milled*		 <15 <15 <15 <15 <30 <30

SEGHETTI BIMETAL CON ATTACCO SPECIALE SIG PER MACCHINE PNEUMATICHE ED ELETTRICHE, SPECIALI PER CARROZZERIA

Compressed-air saw blades / Lame de scies a air comprimé
Hojas de sierra de calar para maquinas pneumaticas/ Druckluftsägeblatter





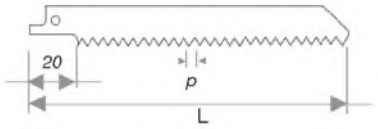
Metalli
Metals

23720

Cod.	Simile a *Similar to*	L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
					
23720100	≃ SIG1150	95x1,8 *3¾x14*	BIM HSS Fresata *Milled*		
					
23720105	≃ SIG1152	95x1 *3¾x25*	BIM HSS Fresata *Milled*		
					
23720110	≃ SIG1153	95x0,7 *3¾x36*	BIM HSS Fresata *Milled*		

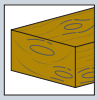
LAME PER SEGHETTI A GATTUCCIO CON ATTACCO UNIVERSALE SABRE® PER LEGNO

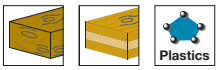
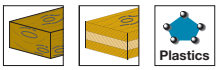
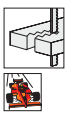
Reciprocating blades SABRE® universal type for wood and plywood / Lame de scies sauteuses modèle universelle SABRE® pour bois et dérivés
Hojas de sierra de calar tipo universale SABRE® para madera y derivados / Sägeblatt für abwechselnden Metallsägen mit SABRE Universalverbindungsstück für Holz und Nebenprodukten



23800

Legno dolce
Mild wood



Cod.	Simile a *Similar to*	L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
					
23800100	≃ S1617K	300x8,5 *12x3*	HCS  Fresata *Milled*		 <250 <250
					
23800105	≃ S2345X	200x2,5÷4,3 *8x6÷10*	HCS  Rettificata *Ground*		 <150 <60 <150
					
23800110	≃ S644D	150x4,3 *6x6*	HCS  Rettificata *Ground*		 <100 <60 <100
					
23800115	≃ S1531L	240x5 *10x5*	HCS  Fresata *Milled*		 <190 <190

Confezione / *Packaging*



Codolo universale 1/2"
Universal shank 1/2"



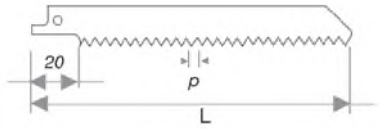
AEG, ATLAS COPCO, BOSCH, DE WALT, ELU, FESTOOL, HITACHI, MAKITA, METABO, FEIN, FLEX, HILTI, MILWAUKEE, PORTER CABLE, RIDGID, ROTHEN BERGER, RYOBI SKIL,...(®)

Tabella di comparazione / *Choosing chart*

Codice Bosch *Bosch code*	Codice Krino *Krino code*	Codice Bosch *Bosch code*	Codice Krino *Krino code*
≈S1120CF	23810170	**≈S2243HM**	23820130
≈S1122BF	23810110	**≈S2345X**	23800105
≈S1122HF	23815100	**≈S511DF**	23815150
≈S1122VFR	23815130	**≈S522BF**	23810190
≈S1126CHF	23810150	**≈S528DF**	23820160
≈S1136BEF	23810180	**≈S628DF**	23820100
≈S123XF	23810120	**≈S644D**	23800110
≈S1411DF	23815115	**≈S711DF**	23815110
≈S1531L	23800115	**≈S922EF**	23810100
≈S1617K	23800100	**≈S925VF**	23810160
≈S2041HM	23820120	**≈S936BEF**	23810175

LAME PER SEGHETTI A GATTUCCIO CON ATTACCO UNIVERSALE SABRE® PER METALLO

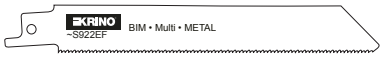
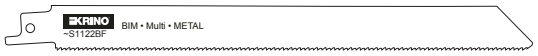
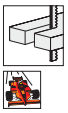
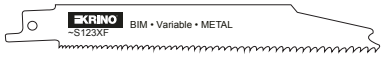
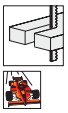
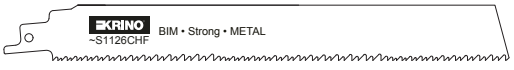
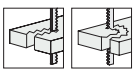
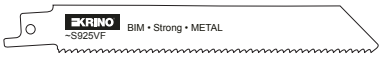
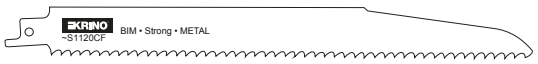
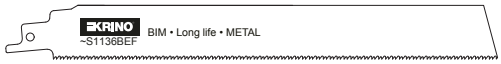
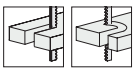
Reciprocating blades SABRE® universal type for metals / Lame de scies sauteuses modèle universelle SABRE® pour métaux
Hojas de sierra de calar tipo universale SABRE® para metales / Sägeblatt für abwechselnden Metallsägen mit SABRE®
Universalverbindungsstück für Metalls



23810

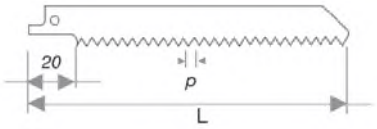
Metalli
Metals

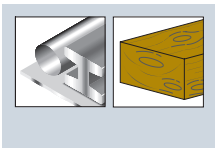


Cod.	Simile a *Similar to*	L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
					
23810100	≃ S922EF	150x1,4 *6x18*	BIM HSS  Fresata *Milled*		 <4 <4 Ø<100 Ø<100
					
23810110	≃ S1122BF	230x1,8 *9x14*	BIM HSS  Fresata *Milled*		 <8 <8 Ø<175 Ø<175
					
23810120	≃ S123XF	150x1,8÷3,2 *6x8÷14*	BIM HSS  Fresata *Milled*		 <8 <8 Ø<100 Ø<100
					
23810150	≃ S1126CHF	230x2,5÷3,2 *9x8÷10*	BIM HSS  Fresata *Milled*		 <12 <12 Ø<250 Ø<250
					
23810160	≃ S925VF **Extreme**	150x1,8÷2,6 *6x10÷14*	BIM HSS  Fresata *Milled*		 <10 <10 Ø<150 Ø<150
					
23810170	≃ S1120CF **Extreme**	230x2,5÷3,2 *9x8÷10*	BIM HSS  Fresata *Milled*		 <12 <12 Ø<175 Ø<175
					
23810175	≃ S936BEF	150x1,4÷1,8 *6x14÷18*	BIM HSS  Fresata *Milled*		 <8 <8 Ø<100 Ø<100
					
23810180	≃ S1136BEF	230x1,4÷1,8 *9x14÷18*	BIM HSS  Fresata *Milled*		 <8 <8 Ø<175 Ø<175
					
23810190	≃ S522BF **Ideale con macchine compatte cordless** *Suitable for compact cordless machines*	100x1,8 *4x14*	BIM HSS  Fresata *Milled*		 <8

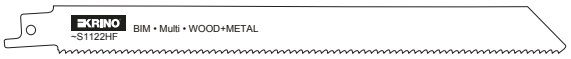
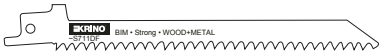
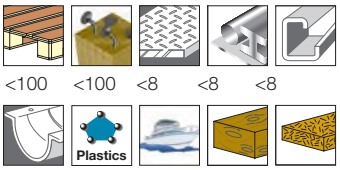
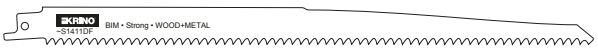
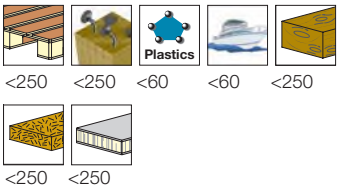
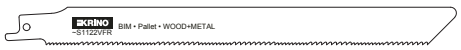
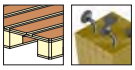
LAME PER SEGHETTI A GATTUCCIO CON ATTACCO UNIVERSALE SABRE® PER LEGNO E METALLO

Reciprocating blades SABRE® universal type for wood and metals / Lame de scies sauteuses modèle universelle SABRE® pour bois et metaux
Hojas de sierra de calar tipo universale SABRE® para madera y metales / Sägeblatt für abwechselnden Metallsägen mit SABRE®
Universalverbindungsstück für Holz und Metalls



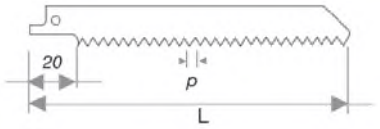


23815

Cod.	Simile a *Similar to*	L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
					
23815100	≃ S1122HF	230x2,5 *9x10*	BIM HSS  Fresata *Milled*		 <175 <175 <12 <12 <12
					
23815110	≃ S711DF	150x4,3 *6x6*	BIM HSS  Fresata *Milled*		 <100 <100 <8 <8 <8 <8 Plastics <8 <50 <100 <100 <100
					
23815115	≃ S1411DF	300x4,3 *12x6*	BIM HSS  Fresata *Milled*		 <250 <250 <60 Plastics <60 <250 <250 <250
					
23815130	≃ S1122VFR **No vibrations**	230x1,8÷2,6 *9x10÷14*	BIM HSS  Fresata *Milled*		 <175 <175
					
23815150	≃ S511DF **Ideale con macchine compatte cordless** *Suitable for compact cordless machines*	100x4,3 *4x6*	BIM HSS  Fresata *Milled*		 <50 <50 <50 <50 <50

LAME PER SEGHETTI A GATTUCCIO CON ATTACCO UNIVERSALE SABRE® **PER APPLICAZIONI SPECIALI**

Reciprocating blades SABRE® universal type for abrasive materials / Lame de scies sauteuses modèle universelle SABRE® pour matériaux abrasif
Hojas de sierra de calar tipo universale SABRE® para materiales abrasivos / Sägeblatt für abwechselnden Metallsägen mit SABRE® Universalverbindungsstück für abrasiven Materialien



23820

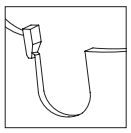
Cod.	Simile a *Similar to*	L x p (mm) *(inches x tpi)*	Acciaio *Steel*	Tipo di taglio Finitura *Type of cut-Finish*	Impieghi *Applications* mm
 **23820100**	≃ S628DF	150x4,3 *6x6*	BIM HSS  Fresata *Milled*		 <100
 **23820120**	≃ S2041HM	Carbide 400x8,5 *16x3*	 Con inserti in MD *Carbide tip*		   <350 <350 <150
 **23820125**	≃ S1543HM	Carbide 240x12,7 *10x2*	 Con inserti in MD *Carbide tip*		 <150
 **23820130** ≃ S2243HM **Extreme**		Carbide 455x12,7 *18x2*	 Con inserti in MD *Carbide tip*		 <365
 **23820160** ≃ S528DF	**Ideale con macchine compatte cordless** *Suitable for compact cordless machines*	100x4,3 *4x6*	BIM HSS  Fresata *Milled*		 <50

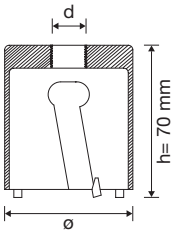
FRESE A TAZZA CON DENTI IN METALLO DURO PER LEGNO, TRUCIOLATI, AGGLOMERATI, ETC.

Carbide tipped hole saws for wood / Scies cloches avec dents en metal dur pour le bois
Corona con diente de metal duro para madera / Hartmetallochsägen für Holz

05078







Inserti in metallo duro
Carbide tips

Art. **05081** Self
Disponibile su richiesta / *On demand*

Ø mm	Ø Pollici *Inch*	d Filetto *Thread*	z	cod.
19	3/4"	**UNF** 1/2 x 20	1	0507801900
22	7/8"		1	0507802200
25	1"		1	0507802500
29	1.1/8"		1	0507802900
32	1.1/4"	**UNF** 5/8 x 18	2	0507803200
35	1.3/8"		2	0507803500
38	1.1/2"		2	0507803800
41	1.5/8"		2	0507804100
44	1.3/4"		2	0507804400
48	1.7/8"		3	0507804800
51	2"		3	0507805100
54	2.1/8"		3	0507805400
57	2.1/4"		3	0507805700
60	2.3/8"		3	0507806000
64	2.1/2"		3	0507806400
67	2.5/8"		3	0507806700
68	2.23/32"		3	0507806800
70	2.3/4"		3	0507807000
73	2.7/8"		4	0507807300
76	3"		4	0507807600
79	3.1/8"		4	0507807900
83	3.1/4"		4	0507808300
89	3.1/2"		4	0507808900
95	3.3/4"		4	0507809500
102	4"		5	0507810200
114	4.1/2"		5	0507811400
127	5"		5	0507812700
140	5.1/2"		5	0507814000
152	6"		5	0507815200



Confezione / *Packaging*



Per frese - *Fit hole saws*	ø	d mm	cod.
	**Ø 19 ÷ 29**	HEX 8,5	210705580
	**Ø 32 ÷ 152**	HEX 8,5	210705581
		6,35x100	21070204



400x650x320

Cod.
05079504
Ø 19÷102 mm 32 pcs
Ø 19-22-25-29-32
35-38-41-44-48-51
57-60-70-83-102 (2x)

14÷29 **4 pcs** 5580
32÷152 **6 pcs** 5581

5 pcs 21070204



Cod.
05079300
Ø 19÷64 mm 9 pcs
Ø 19-22-29-35
38-44-51-57-64

5580 - 5581

Cod.
05079301
Ø 19÷64 mm 9 pcs
Ø 19-22-29-35
38-44-51-57-64

5580 - 5581

Applicazioni
Applications



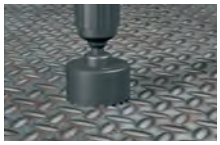
- Per forare con grande rendimento legno duro e dolce, stratificati, truciolati, agglomerati, laminati, materiali sandwich. Taglia anche plastica dura, mattoni forati e porosi, lamiera sottile dolce. max profondità di foratura 50 mm.
- *High performance on drilling into tough and soft wood, plywood, chipboards, agglomerates, laminated, porous bricks and thin metal sheet. Maximum cutting depth 50mm.*
- *Grande performance pour percer bois doux et bois dures, bois stratifiés, copeaux, agglomérés, laminés, briques et dans la tôle légère. Profondeur de coupe 50 mm.*
- *Grande rendimiento para cortar madera dura y douce, estratificados, aglomerados, laminados, ladrillos furados y chapa douce y delgada. Profondidad de corte 50 mm.*

High Quality professional

FRESE A TAZZA MULTIUSO PROFESSIONALI, CON TAGLIENTI CON PLACCHETTE IN METALLO DURO

Carbide tipped professional multi-purpose hole saws / Scies trépan universel, qualité professionnelle
Coronas de metal duro professionales multiuso / Profi Mehrzweck-Lochsäge

Universale - *Multipurpose*

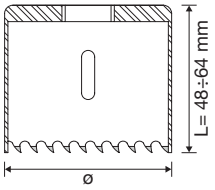


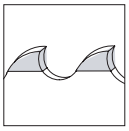


Ø mm	Ø Pollici *Inch*	d Filetto *Thread*	cod.
19	3/4	**UNF** 1/2 x 20	2110001900
22	7/8		2110002200
25	1"		2110002500
29	1-1/8		2110002900
32	1-1/4	**UNF** 5/8 x 18	2110003200
35	1-3/8		2110003500
38	1-1/2		2110003800
44	1-3/4		2110004400
51	2"		2110005100
57	2-1/4		2110005700
64	2-1/2		2110006400
68	2-23/32		2110006800
76	3"		2110007600
89	3-1/2		2110008900
108	4-1/4		2110010800

21100







Inserti in metallo duro
Carbide tips

Art. **21101** Self
Disponibile su richiesta / *On demand*

Per frese - *Fit hole saws*	ø	d mm	cod.
	**Ø 19 ÷ 29**	HEX 8,5	210707519
	**Ø 32 ÷ 108**	HEX 8,5	210707546
		6,35x90	21070202



Confezione / *Packaging*



Cod.	Cod.
21109300 **Ø 19÷64 mm 9 pcs** Ø 19-22-29-35 38-44-51-57-64	**21109301** **Ø 19÷57 mm 6 pcs** Ø 19-22-29-38 44-57
7519 - 7546	5519 - 5546
	2 pcs Ø 7X100

- Taglio professionale nel legno, plastica, fibre di vetro, ceramica, piastrelle, materiali edili leggeri, acciaio inox. Max profondità di foratura: 40 mm.
- Multi purpose hole saws for wood, plastics, tiles, light construction materials, stainless steel. Maximum cutting depth: 40 mm.
- Scies trépans professionnels universels pour ceramiques, briques, plastiques, bois, acier inox. Profondeur de coupe: 40 mm.
- Coronas universales para cortar ceramica, suelos, plastica, madera, acero inox. Profondidad de corte: 40 mm.
- Nur drehend Einsatz für Massivholz, Spanplatten, Kunststoffe, Fliesen, Gasbeton, Acrylglass, V2A-V4A Stahl. Maximale Bohrtiefe: 40 mm.



Applicazioni
Applications

SEGHE A TAZZA PER LEGNO CON LAME INTERCAMBIABILI IN ACCIAIO W.S.

Tool steel hole-saw kit for wood / Scies trépans pour bois en acier outil
Coronas perforadoras para madera / W.S. Lochsägen für Holz

05080



Composizione *Sizes*	H mm	pcs	cod.
7 pcs Ø 26-32-38-45-50-56-63	25	1	05080100
7 pcs Ø 26-32-38-45-50-56-63	50	1	05080101
5 pcs Ø 60-67-74-81-95	40	1	05080102

Confezione *Packaging*



Applicazioni *Applications*



- Foratura nel legno, nei suoi derivati e nel cartongesso.
- *For drilling wood*
- *Pour percer les bois*
- *Para taladrar madera*
- *Zum Bohren in Holz*

KIT PER LEGNO E CARTONGESSO

Tool steel hole-saw kit for wood / Scies trépans pour bois en acier outil / Coronas perforadoras para madera / W.S. Lochsägen für Holz



Ø 40÷200 mm

05079600

n.1 sega regolabile a compasso con punta a centrare, due incisori e attacco hex per uso su trapani con mandrino a cremagliera
adjustable compass saw with centering tip, two engravers and hex attachment to fit drill chuck with key
velocità massima consigliata di utilizzo 300 giri/min
recommended max speed 300 rpm

ø 4-5-6-8-10 mm

ø 4-5-6-8-10 mm

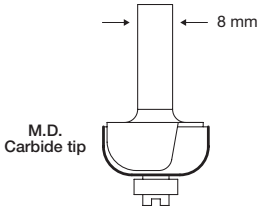
n.1 campana protettiva antipolvere trasparente ø 280 mm
transparent dustproof protective bell ø 280 mm
n.1 matita / *pencil*
n.1 flessometro / *measuring tape*

FRESE IN METALLO DURO PER LEGNO

Carbide router bits / Fraise carbure pour bois / Fresas de metal duro para madera / Hartmetall Profilfräser

In esaurimento / *To be discontinued*





4 pcs

05450210

Applicazioni / *Applications*



- Foratura nel legno dolce e legno duro, nei suoi derivati e nel cartongesso
- *For drilling wood* - *Pour percer les bois*
- *Para taladrar madera* - *Zum Bohren in Holz*

FRESE A PROFILO IN ACCIAIO DA UTENSILE PER TRAPANI E FRESATRICI

Tool bits for power drills / Fraise pour bois
Fresas para madera / Profilfräser für Holz

WS

05400

		cod.	d	ø mm	pcs
	**Fresa a mortasare** *Straight bit*	05400100	8	6	1
	**Sega circolare** *Slotting saw*	05400170	8	50	1
	**Frese per incastri** *Tongue cutter*	05400110	8	30	1
	**Fresa conica 45°** *45° Chamfering bit*	05400180	8	35	1
	**Fresa cilindrica per spianare e levigare** *Cylindrical cutter*	05400120	8	25	1
	**Frese a raggio convesso** *Round cutter*	05400190	8	35	1
	**Fresa per profili tondi** *Rounding off cutter*	05400130	8	25	1
	**Frese a raggio concavo** *Round cutter*	05400200	8	35	1
	**Fresa per scanalature** *Flute cutter*	05400140	8	35	1
	**Frese a raggio convesso esterno** *Beading cutter*	05400210	8	35	1
	**Frese per intagli** *Slotting cutter*	05400150 05400160	8	35 S.2,5 35 S.1,5	1
	**Frese a raggio concavo interno** *Beading cut*	05400220	8	35	1

- Profilatura nel legno dolce e duro su trapani montati su supporto o su fresatrici.
- *Tool steel end mills for use in power drills with drill stand or with milling machines, for soft and medium hard wood.*
- *Utilisation avec perceuse à table et fraiseuse.*
- *Utilizo por taladros y fresadoras.*
- *Amwendung in stationär Bohrmaschinen und Fräsmaschinen.*

05430
05432

		cod.	d	ø mm	pcs
	**Raspa cilindrica** *Cylindrical rasp*	05430100	6	15	1
	**Raspa cilindrica a testa semisferica** *Cylindrical rasp*	05430110	6	13	1
	**Raspa conica** *Conical rasp*	05430120	6	6/15	1
	**Raspa cilindrica** *Cylindrical rasp*	05432100	6	15	1
	**Raspa conica** *Conical rasp*	05432110	6	6/15	1
	**Punta raspa** *Deburring drill bit*	05432120	6	6	1

SET



5 pcs
05450201



MANDRINI E ACCESSORI

Accessories
Accessories
Accessorios
Zubehürteilen

ACCESSORI

CUTTING TOOLS ENGINEERING

BUSSOLA DI RIDUZIONE PER CONI MORSE, TEMPRATA E RETTIFICATA INTERNAMENTE ED ESTERNAMENTE

Hardened and ground morse taper sleeve / Douilles de reduction trempé et rectifié pour cône morse
Cono de reducción tratado y rectificado / Reduzierhülsen, ganz gehärtet und geschliffen

DIN 2185

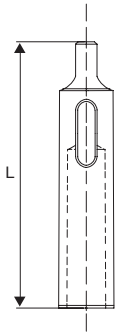
28150





Cono Morse *Morse taper* DIN 228 Esterno *External*	Interno *Internal*	L	cod.
1	0	80	281500100
2	1	92	281500201
3	1	99	281500301
3	2	112	281500302
4	1	124	281500401
4	2	124	281500402
4	3	140	281500403
5	1	156	281500501
5	2	156	281500502
5	3	156	281500503
5	4	171	281500504
6	4	219	281500604
6	5	219	281500605

Cono esterno-*External* Morse DIN 228



Cono interno-*Internal* Morse DIN 228

PROLUNGHE PER UTENSILI CONO MORSE, TEMPRATE E RETTIFICATE INTERNAMENTE ED ESTERNAMENTE

Morse taper sleeve extension, hardened and ground / Douilles de reductions rallongué, trempé et rectifié
Cono de reducciòn prolongado, tratado y rectificado / Verlängerungshülsen, ganz gehärtet und geschliffen

DIN 2187

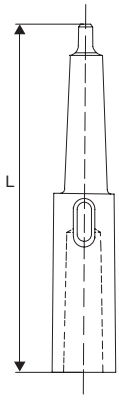
28154





Cono Morse *Morse taper* DIN 228 Esterno *External*	Interno *Internal*	L	cod.
1	1	145	281540101
1	2	160	281540102
2	1	160	281540201
2	2	175	281540202
2	3	196	281540203
3	1	175	281540301
3	2	194	281540302
3	3	215	281540303
3	4	240	281540304
4	1	200	281540401
4	2	215	281540402
4	3	240	281540403
4	4	265	281540404
4	5	300	281540405
5	1	232	281540501
5	2	247	281540502
5	3	268	281540503
5	4	300	281540504
5	5	335	281540505
6	1	294	281540601
6	2	309	281540602
6	3	330	281540603
6	4	355	281540604
6	5	390	281540605

Cono esterno-*External* Morse DIN 228



Cono interno-*Internal* Morse DIN 228

ATTACCHI CONICI MORSE PER MANDRINI, TEMPRATI E RETTIFICATI

Taper drill chuck arbors / Cône de montage pour mandrins
Mango conico para portabrocas / Kegeldorne für Bohrfutter

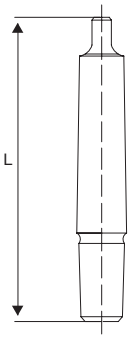
28160





Cono Morse *Morse taper*	Attacco conico mandrino *Drill chuck taper*	L	cod.
DIN 228	DIN 238		
1	**B10**	86	281600110
1	**B12**	89	281600112
1	**B16**	99	281600116
1	**B18**	99	281600118
2	**B10**	105	281600210
2	**B12**	105	281600212
2	**B16**	112	281600216
2	**B18**	119	281600218
2	**B22**	130	281600222
3	**B12**	127	281600312
3	**B16**	134	281600316
3	**B18**	140	281600318
3	**B22**	147	281600322
3	**B24**	157	281600324
4	**B16**	157	281600416
4	**B18**	164	281600418
4	**B22**	176	281600422
4	**B24**	186	281600424
5	**B16**	198	281600516
5	**B18**	198	281600518
5	**B22**	207	281600522
5	**B24**	217	281600524

Cono esterno-*External* Morse DIN 228



Cono DIN 238 per mandrino-*For chuck*

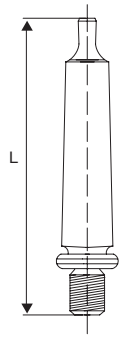
28165





Cono Morse *Morse taper*	Attacco conico mandrino *Drill chuck taper*	L	cod.
DIN 228			
2	**3/8x24 UNF**	95	28165023/8
2	**1/2x20 UNF**	110	28165021/2
2	**5/8x16 UNF**	135	28165025/8
3	**3/8x24 UNF**	115	28165033/8
3	**1/2x20 UNF**	125	28165031/2
3	**5/8x16 UNF**	150	28165035/8

Cono esterno-*External* Morse DIN 228



Per mandrino-*For chuck*

ESTRATTORI PER UTENSILI CON CONO MORSE DIN 228 IN ACCIAIO TRATTATO

Ejector drifts / Chass-cône/Extractores para utensilios cono morse / Austreiber für Kegelschäfte

DIN 317

28158



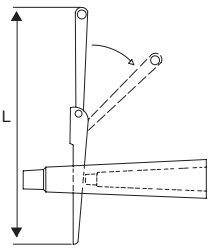
Cono Morse *Morse taper*	L	cod.
1-2	140	281580102
3	190	281580300
4	225	281580400
5-6	265	281580506

DIN 318 Semiautomatic



Cono Morse *Morse taper*	L	cod.
1-2-3	320	28158A0103
4-5-6	380	28158A0406





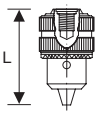
Professional

MANDRINI A CREMAGLIERA DI QUALITÀ COMPLETI DI CHIAVE PER ELETTROUTENSILI PORTATILI E PER MACCHINE UTENSILI

Quality drill chucks with key / Mandrins à crémaillère avec clé
Portabrocas con llave / Zahnkranz Bohrfutter

DIN 6349 **Professional**

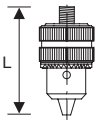




cod.	Capacità *Size* mm	Attacco *Attachment*	L	Chiave *Key*	pcs
Art. 28001					
2800110	**1÷10 R.**	3/8x24 UNF	62	S 1	5
2800120	**1÷10 R.**	1/2x20 UNF	62	S 1	5
2800130	**1,5÷13 R.**	3/8x24 UNF	78	S 2	5
2800140	**1,5÷13 R.**	1/2x20 UNF	78	S 2	5
2800160	**3÷16 R.**	1/2x20 UNF	87	S 3	5
2800150	**3÷16 R.**	5/8x16 UNF	87	S 3	5

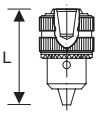


R. Con foro interno passante per l'inserimento della vite sinistra di bloccaggio per rotazione destra e sinistra con trapani reversibili
R. With through hole for left screw for use with reversible drilling machines

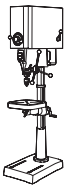


Art. 28002					
2800210	**1÷10**	3/8x24 UNF	74	S 1	5
2800220	**1÷10**	1/2x20 UNF	74	S 1	5
2800230	**1,5÷13**	3/8x24 UNF	89	S 2	5
2800240	**1,5÷13**	1/2x20 UNF	89	S 2	5
2800250	**3÷16**	5/8x16 UNF	99	S 3	5





Art. 28003					
2800310	**1÷10**	B 12	62	S 1	5
2800320	**1,5÷13**	B 16	78	S 2	5
2800325	**3÷16**	B 16	87	S 3	5
2800330	**3÷16**	B 18	87	S 3	5





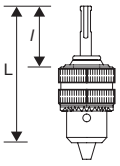
Solo rotazione
No percussion

2800910 **2800930**

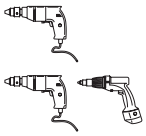




Autoserrante
Self tighten

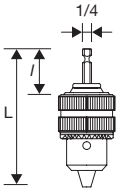


cod.	Capacità *Size* mm	Attacco *Attachment*	*l*	L	Chiave *Key*	pcs
Art. 28009						
2800910	**1,5÷13**	SDS	52	107	S2	5
2800930	**1÷13**	SDS	52	115	-	5



2800920





2800920	**1÷10**	1/4 Q.C.	28	84	S1	5



Confezione *Packaging*



5 pcs



cod.	Tipo/*Size* DIN	pcs
Art. 28010		
2801009	**S1**	1
2801010	**S2**	1
2801020	**S3**	1

Confezione *Packaging*



MANDRINI A CREMAGLIERA PROFESSIONALI PER USO INTENSIVO

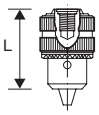
Intensive use professional drill chuck with key / Mandrin a cremaillere professional usage intensif
Portabrocas com llave calidad professional uso intensivo

DIN 6349

28004

NEW

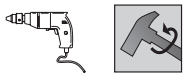




cod.	Capacità *Size* mm	Attacco *Attachment*	L	Chiave *Key*	pcs
2800440	**2-13**	1/2x20 UNF	57	S2	1

Confezione *Packaging*

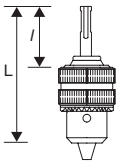




28007

NEW

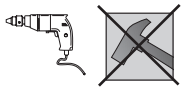




cod.	Capacità *Size* mm	Attacco *Attachment*	*l*	L	Chiave *Key*	pcs
2800710	**2-13**	SDS PLUS	50	107	S2	1

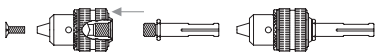
Confezione *Packaging*





RACCORDO DI ADATTAMENTO PER MANDRINO SDS PLUS-1/2 UNF

Mandrel adapter SDS PLUS-1/2 UNF / Adaptateur pour mandrin SDS PLUS-1/2 UNF
Adaptadores de portabrocas SDS PLUS-1/2 UNF - Adapter SDS PLUS-1/2 für Bohrfutter

Attacco *Attachment*		Attacco *Attachment*	cod.	pcs	
SDS PLUS		1/2 x 20 UNF	**28186100**	10	
Ricambio / *Spare part*	 M6		**28186101**		

Confezione / *Packaging*



RACCORDI DI ADATTAMENTO PER MANDRINI

Mandrel adapter 3/8 UNF / Adaptateur pour mandrin 3/8 UNF
Adaptadores de portabrocas 3/8 UNF / Adapter für Bohrfutter 3/8 UNF

Attacco *Attachment*		Attacco *Attachment*	cod.	
1/4 Q.C.		3/8 x 24 UNF	**28186200**	
1/4 Q.C.		1/2 x 20 UNF	**28186201**	
1/2 x 20 UNF		3/8 x 24 UNF	**28186204**	
1/2 x 20 UNF		3/8 x 24 UNF	**28186203**	
3/8 x 24 UNF		3/8 x 24 UNF	**28186205**	

Confezione / *Packaging*

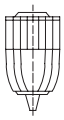


MANDRINI SENZA CHIAVE SENZA SISTEMA DI BLOCCAGGIO PER ELETTROUTENSILI REVERSIBILI

Keyless drill chucks without locking system for reversible power drills / Mandrins sans clé sans système de verrouillage pour perceuses portatives Portabroca sin llave sin sistema de cierre convencional para taladros portatiles / Schlüsselloses Bohrfutter für Handbohrmaschinen

28058





Camicia plastica
Plastic sleeve

cod.	Capacità *Sizes* mm	Attacco *Attachment*	L	pcs
2805810	0,5÷10	3/8x24 UNF	61	1
2805820	0,5÷10	1/2x20 UNF	61	1
2805830	2÷13	3/8x24 UNF	72	1
2805840	2÷13	1/2x20 UNF	72	1



Confezione *Packaging*

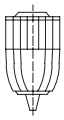


MANDRINI SENZA CHIAVE CON SISTEMA DI BLOCCAGGIO PER ELETTROUTENSILI PORTATILI REVERSIBILI ED A PERCUSSIONE

Keyless drill chucks with locking system for portable power drills with percussion / Mandrins sans clé avec système de verrouillage pour embout et perceuse portatives /Portabroca sin llave con sistema de cierre de seguridad para atornilladores y taladro portatiles / Schlüsselloses Bohrfutter für Handbohrmaschinen

28054





Camicia plastica
Plastic sleeve

cod.	Capacità *Sizes* mm	Attacco *Attachment*	L	pcs
2805410	1 ÷ 10	3/8x24 UNF	64	1
2805420	1 ÷ 10	1/2x20 UNF	64	1
2805430	1,5 ÷ 13	3/8x24 UNF	75	1
2805440	1,5 ÷ 13	1/2x20 UNF	75	1

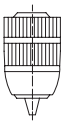


Confezione *Packaging*



28053 28055





Camicia metallica
Metal sleeve

cod.	Capacità *Sizes* mm	Attacco *Attachment*	L	pcs
Art. 28053				
2805330	1,5÷13	3/8x24 UNF	75	1
2805340	1,5÷13	1/2x20 UNF	75	1
Art. 28055				
2805540	1,5÷13	1/2x20 UNF	75	1





Griffe in metallo duro
Carbide jaws

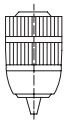
Confezione *Packaging*



28051 28007 NEW







Camicia metallica
Metal sleeve



Griffe in metallo duro
Carbide jaws

cod.	Capacità *Sizes* mm	Attacco *Attachment*	/	L	pcs
Art. 28051					
2805140	1,5-13	1/2x20 UNF	-	65	1
Art. 28007					
2800730	1,5-13	SDS PLUS	50	115	1





Confezione *Packaging*



USO INTENSIVO

MANDRINI AUTO-SERRANTI CON GHIERA DI BLOCCAGGIO PER TRAPANI PORTATILI

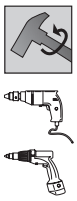
Self tighten keyless drill chucks with lock system for percussion power drills / Mandrins auto-serrant avec système de verrouillage pour perceuses portatives à percussion / Portabroca sin llave con sistema de seguridad para taladros portatiles a percusión

28031





cod.	Capacità *Sizes* mm	Attacco *Attachment*	L	pcs
2803140	1÷13	1/2x20 UNF	100	1

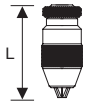


MANDRINI AUTO-SERRANTI PER ELETTROUTENSILI PORTATILI E PER TRAPANI STAZIONARI

Keyless drill chucks / Mandrins autoserrants pour perceuse / Portabroca autoajustable para taladro / Schnell Spann-Bohrfutter

28030 28032





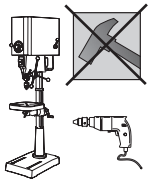


Art. 28030 Professional

cod.	Capacità *Sizes* mm	Attacco *Attachment*	L	pcs
2803010	1÷10	3/8x24 UNF	86	1
2803020	1÷10	1/2x20 UNF	86	1
2803030	1÷13	3/8x24 UNF	102	1
2803040	1÷13	1/2x20 UNF	102	1
2803050	1÷16	1/2x20 UNF	102	1
2803060	1÷16	5/8X16 UNF	102	1

Art. 28032 Professional

2803210	1÷10	B 12	86	1
2803220	1÷10	B 16	86	1
2803229	1÷13	B 12	102	1
2803230	1÷13	B 16	102	1
2803231	1÷13	B 18	108	1
2803240	1÷16	B 16	108	1
2803250	1÷16	B 18	108	1



MANDRINI AUTO-SERRANTI DI PRECISIONE PER TRAPANI A COLONNA E MACCHINE UTENSILI

Industrial quality keyless drill chucks / Mandrins auto-serrant pour perceuses industrielle
Portabroca autoajustable para taladro, calidad industrial / Genauigkeits-Schnellspann-Bohrfutter

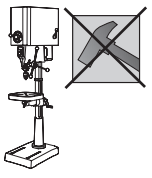
28034





Art. 28034 Professional Super

cod.	Capacità *Sizes* mm	Attacco *Attachment*	L	pcs
2803410	1÷10	B 12	70	1
2803430	1÷13	B 16	90	1
2803440	1÷16	B 16	103	1
2803450	1÷16	B 18	105	1
2803460	5÷20	B 22	124	1



28035

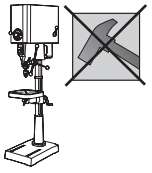
NEW





cod.	Capacità *Sizes* mm	Attacco *Attachment*	L	pcs
2803540	1-16	B16	95	1

TOP QUALITY



Caratteristiche del rivestimento TiN
Il rivestimento monostrato TiN ha lo scopo di incrementare la resistenza a fenomeni di usura e ossidazione cui gli utensili sono sottoposti durante le lavorazioni di foratura: ha ottime caratteristiche di microdurezza (HV 0.05 2300), un basso coefficiente di attrito (0.4), una temperatura massima di esercizio pari a 500°C. Il rivestimento di pochi µm, depositato per via fisica mediante vapore (Physical Vapour Deposition), consente pertanto di aumentare la vita utile degli utensili da taglio, migliorando anche la finitura superficiale ed il conseguente scorrimento dei trucioli di lavorazione.

Caratteristiche del rivestimento TiAlN
É un esclusivo rivestimento PVD che permette il taglio a secco con elevatissimi parametri di taglio e, quindi, con grandissimi rendimenti. Sopporta, infatti temperature di lavoro elevatissime, sino a 800° C, grazie alle caratteristiche uniche del rivestimento TiAlN: supercompatto e durissimo (3300 HV 0,05), con conducibilità termica molto bassa (0,05), basso coefficiente di attrito (0,3), ottima tenacità. Il forte calore sviluppato nella foratura (> 400° C), genera, in ambiente ossidante, Al2 03, particolarmente resistente alle elevate sollecitazioni termiche, mentre il substrato di TiAlN garantisce una elevata resistenza meccanica. È pertanto adatto al taglio dei materiali fortemente abrasivi (ghisa, leghe Si-Al) degli acciai duri e pastosi come l'acciaio inossidabile, ma anche degli acciai basso legati purché si incrementino notevolmente i 2 parametri di taglio fondamentali: la velocità e l'avanzamento (sino a 2 volte i valori di un utensile HSS convenzionale non rivestito).

TECHNICAL

Technical tables
Tableaux techniques
Prospectos tecnico
Technische Tabellen

TABELLE

CUTTING TOOLS ENGINEERING

Features of TiN coating
TiN monolayer coating can increase both wear and oxidation resistance of every tool. It has high hardness (HV 0.05 2300), low friction coefficient (0.4), maximum working temperature 500°C. The coating thickness is very low (µm) and it's produced by Physical Vapour Deposition. TiN coating increases the life cycle of the tool, also improving the surface finishing and the drilling chips removal.

Caractéristiques du revêtement TiN
Le revêtement monocouche TiN sert à augmenter la résistance aux phénomènes d'usure et d'oxydation auxquels les outils sont soumis pendant les travaux de perçage: il possède des caractéristiques optimales de microdureté (HV 0,05 2300), un coefficient de frottement faible (0,4), une température maximale de fonctionnement égale à 500°C. Le revêtement de quelques µm, déposé par un procédé physique par le biais de la vapeur (Physical Vapour Deposition), permet donc d'augmenter la vie utile des outils de coupe, en améliorant aussi la finition de la surface et donc l'évacuation des copeaux d'usinage produits.

Caracteristicas del recubrimiento TiN
El recubrimiento monocapa TiN tiene la finalidad de aumentar la resistencia al desgaste y a la oxidación que sufren los utensilios durante los trabajos de perforado: tiene óptimas características de microdureza (HV 0.05 2300), un bajo coeficiente de fricción (0.4), una temperatura máxima de funcionamiento equivalente a 500°C. El recubrimiento de pocos µm, depositado físicamente con vapor (Physical Vapour Deposition), consiente aumentar la duración de los utensilios de corte, mejorando también el acabado superficial y el consiguiente deslizamiento de las virutas generadas durante la actividad.



Features of TiAlN coating
This exclusive PVD coating makes dry cutting possible to the highest cutting standards and performance levels. The drill can withstand extremely high working temperatures of up to 800° C on account of the unique properties of the TiAlN coating, namely, it is ultra-thin and exceptionally hard (3300 HV 0,05) with extremely low thermal conductivity (0,05) low friction coefficient (0,3) and excellent toughness. The phenomenal heat created during drilling (>400°C) generates Al2 03, in oxidizing environments which is particularly resilient to high temperatures whilst the substrate in TiAlN guarantee high mechanical resistance. It is thus suitable for cutting highly abrasive materials (cast iron, Si-Al alloys) and hard, pasty steel such as stainless steel. Nonetheless, it is equally suitable for low alloy steel providing the most important cutting settings (speed and feed) are increased by up to twice the values used for conventional, uncoated HSS tools.

Caractéristiques du Revêtement TiAlN
Il s'agit d'un revêtement exclusif PVD qui permet une coupe à sec avec des paramètres de coupe très pointus et donc des rendements très élevés. Il support en effet des températures de travail très élevées, jusqu'à 800°C, grâce aux caractéristiques uniques du revêtement TiAlN : ultracompact et très dur (3300 HV 0,05) avec une conductibilité thermique très basse (0,05), un faible coefficient de frottement (0,3), une excellente ténacité. La forte chaleur se dégageant lors du perçage (>400° C) génère, dans un milieu oxydant, de l'Al2 03 particulièrement résistant aux sollicitations thermiques élevées, tandis que la sous-couche de TiAlN garantit une grande résistance méchanique.
Il convient par conséquent à la coupe de matériaux fortement abrasifs (fonte, alliages Si-Al), des acier durs et pâteux comme l'acier inoxydable mais aussi des aciers à faible teneur en alliage à condition d'augmenter sensiblement les 2 paramètres fondamentaux de coupe : la vitesse et l'avance (jusqu'à 2 fois les valeurs d'un outil HSS conventionnel sans revêtement).

Caracteristicas del recubrimiento TiAlN
Es un exclusivo revestimiento PVD que permite el corte seco con parámetros de corte elevadísimos y, por lo tando, con rendimientos muy grandes. En efecto, soporta temperaturas de trabajo mui elevadas hasta 800° C, gracias a las características únicas de revestimiento TiAlN : supercompacto y durísimo (3300 HV 0,05), con conductibilidad térmica muy baja (0,05) bajo coeficiente de roce (0,3), optima tenacidad. El fuerte calor desarrollado durante el taladrado (>400° C) genera, en ambiente oxidante, Al2 03, particularmente resistente a los elevados esfuerzos térmicos, mientras que el substrato de TiAlN garantiza una elevada resistencia mecánica. Por lo tanto es adecuado para el corte de los materiales fuertemente abrasivos (hierro fundido, aleaciones Si-Al), de los aceros duros y pastosos como el acero inoxidable, pero también de los aceros bajo aleados, con tanto de que se incrementen notablemente los 2 parámetros de corte fundamentales: la velocidad y el avance (hasta 2 veces los valores de una herramiente HSS convencional no revestida).

SCELTA DELLA PUNTA PER METALLO E DEI PARAMETRI DI TAGLIO DA USARE IN FUNZIONE DEL MATERIALE DA LAVORARE

Chart for metal drills selection and relative cutting speeds in accordance with the materials to work

1  Twist drills made of high speed steel

Materiale da lavorare Work-piece material	**Qualità punta** Drill quality	**Velocità periferica** Peripherical speed **Mt/min**	**Diametro punta** / Drill size - mm						**Refrigerante** Cooland
			2	**5**	**8**	**12**	**16**	**25**	
			Avanzamento / Feed (mm/giro)						
Acciaio non legato da costruzione Common steel / Acier non alliées / Acero no aliado R<600N/mm²	HSS HSS-CO	20÷25 25÷30	0.05	0.12	0.20	0.25	0.30	0.40	
Acciaio da costruzione basso legato Low alloy steel / Acier bas alliées / Acero bajo aliado R<700÷900N/mm²	HSS HSS-CO	10÷12 15÷18	0.03	0.07	**0.10**	0.16	0.20	0.25	
Acciaio legato al Ni Cr Ni Cr Steel / Acier au Ni Cr / Acero Ni Cr R<1100÷1300N/mm²	HSS HSS-CO	6÷8 8÷10	0.02	0.05	0.08	0.12	0.14	0.18	
Acciaio Inox martensitico ed austenitico Stainless steel / Acier inox / Acero inoxidable **Acciaio refrattario Acciaio resistente alla corrosione** Heat resistant steel, corrosion resistant steel Acier réfractaire, acier résistent à la corrosion Acero refractario y resistente à la corrosión	HSS-CO 5% HSS-CO 8%	6÷8 8÷10	0.02	0.05	0.08	0.12	0.14	0.18	
Acciaio alto legato con tenore di manganese >10% High manganese content steel / Acier haute percentage de manganese /Acero con elevada percentual de manganese	HSS-CO 8%	3÷5	0.02	0.05	0.08	0.12	0.14	0.18	
Superleghe Nimonic, Hastelloy, Inconel	HSS-CO 5% HSS-CO 8%	3÷8	0.02	0.05	0.08	0.12	0.14	0.18	
Titanio e leghe di titanio Titanium alloys / Titan / Titanio	HSS-CO 5% HSS-CO 8%	3÷6	0.02	0.05	0.08	0.12	0.14	0.18	
Nichel Monel	HSS-CO	10÷12	0.02	0.05	0.08	0.12	0.14	0.18	
Ghisa Grigia 200 HB Cast Iron / Fonte grise / Fundición	HSS HSS-CO	15÷20 20÷25	0.02	0.12	0.20	0.25	0.30	0.40	
Ghisa Grigia 350 HB Cast Iron / Fonte grise / Fundición	HSS HSS-CO	5÷10 20÷25	0.03	0.07	0.10	0.16	0.20	0.25	
Bronzo dolce Soft bronze / Bronze doux / Bronce douce	HSS HSS-CO	20÷35	0.05	0.08	0.14	0.20	0.25	0.30	
Bronzo duro Tough bronze / Bronze dur / Bronce duro	HSS HSS-CO	15÷30	0.05	0.08	0.14	0.20	0.25	0.30	
Ottone dolce Soft brass / Laiton doux / Oton douce	HSS HSS-CO	60÷80	0.08	0.18	0.25	0.30	0.35	0.40	
Ottone tenace Tough brass / Laiton dur / Oton duro	HSS HSS-CO	30÷50	0.05	0.15	0.20	0.25	0.35	0.40	
Rame puro Copper / Cuivre / Cobre	HSS	30÷60	0.05	0.14	0.18	0.22	0.30	0.40	
Rame elettrolitico Electrolite copper / Cuivre electrolite / Cobre elettrolitico	HSS	20÷35	0.05	0.14	0.18	0.22	0.30	0.40	
Alluminio Aluminium / Aluminium / Aluminio	HSS	40÷80	0.05	0.14	0.18	0.22	0.30	0.40	
Leghe alluminio Aluminium alloys / Alliages de alu / Aleaciones de aluminio	HSS	30÷60	0.05	0.14	0.18	0.22	0.30	0.40	
Silumin - Leghe Al-Si Silumin	HSS	30÷50	0.05	0.08	0.14	0.20	0.25	0.30	
Leghe al manganese Manganese alloys / Alliage de manganese / Aleaciones de manganese	HSS	60÷90	0.08	0.18	0.25	0.30	0.35	0.40	
Zinco e sue leghe Zinc alloys / Alliages de Zingue / Aleaciones de cinc	HSS	30÷50	0.05	0.14	0.18	0.20	0.25	0.30	
Resine termoplastiche (dolci) Soft plastic / Plastique doux / Plastico douce	HSS	20÷40	0.05	0.08	0.14	0.20	0.25	0.30	
Resine termoindurenti (dure) Hard plastic / Plastique dure / Plastico duro	HSS	10÷20	0.05	0.08	0.14	0.20	0.25	0.30	
Plexiglass	HSS	15÷20	0.05	0.08	0.14	0.20	0.25	0.30	
Gomma dura Hard rubber / Caoutchouc dur / Goma dura	HSS	15÷35	0.08	0.18	0.25	0.30	0.35	0.40	
Grafite Graphite / Graphite / Grafite	HSS	3÷6	a mano / *by hand /à main / a mano*						

Nota: Le punte elicoidali cilindriche rettificate garantiscono la realizzazione di fori di tolleranza H10÷H12
Fully ground twist drills made holes with H10÷H12 tolerance

acqua emulsionata con olio *oil+water*
olio da taglio - *cutting oil*
acqua - *water*
a secco - *dry*

CONVERSIONE DELLA VELOCITÀ PERIFERICA DI TAGLIO DA M/MIN IN GIRI/MIN IN FUNZIONE DEL DIAMETRO DELLA PUNTA

Cutting speed chart into revolution per minute (RPM), according to the twist drill diameter

2

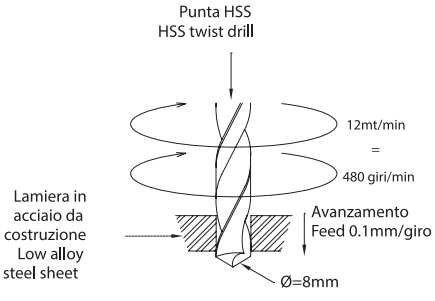
Diametro punta Drill size Ø		**Velocità di taglio /** Cutting speed Vt (mt/min)													
		3	**4**	**5**	**6**	**8**	**10**	**12**	**15**	**18**	**20**	**25**	**30**	**35**	**40**
(mm)	pollici *inch*	**Velocità di taglio /** Cutting speed							**n. giri/min (rpm)**						
2	5/64	480	640	800	960	1270	1590	1910	2390	2870	3180	3980	4780	5570	6370
3	1/8	320	420	530	640	850	1060	1270	1590	1910	2120	2650	3180	3720	4250
4	5/32	240	320	400	480	640	800	960	1190	1430	1590	1990	2390	2790	3180
5	13/64	190	250	320	380	510	640	760	960	1150	1270	1590	1910	2230	2550
6	15/64	160	210	270	320	420	530	640	800	960	1060	1330	1590	1860	2120
8	5/16	120	160	200	240	320	400	**480**	600	720	800	1000	1190	1390	1590
10	25/64	95	130	160	190	250	320	380	480	570	640	800	960	1110	1270
12	15/32	80	110	130	160	210	270	320	400	480	530	660	800	930	1060
14	35/64	70	90	110	140	180	230	270	340	410	450	570	680	800	910
16	5/8	60	80	100	120	160	200	240	300	360	400	500	600	700	800
18	23/32	55	70	90	110	140	180	210	270	320	350	440	530	620	710
20	25/32	50	65	80	100	130	160	190	240	290	320	400	480	560	640
22	7/8	45	60	70	85	120	140	170	220	260	290	360	430	510	580
24	15/16	40	55	65	80	110	130	160	200	240	270	330	400	460	530
27	1" 1/16	35	45	60	70	95	120	140	180	210	240	290	350	410	470
30	1" 1/8	30	40	55	65	85	110	130	160	190	210	270	320	370	420
32	1" 1/4	30	40	50	60	80	100	120	150	180	200	250	300	350	400
34	1" 3/8	30	35	45	55	75	95	110	140	170	190	230	280	330	370
36	1" 7/16	25	35	45	55	70	90	110	130	160	180	220	270	310	350
38	1" 1/2	25	35	40	50	65	85	100	130	150	170	210	250	290	340
40	1" 9/16	25	30	40	50	65	80	100	120	140	160	200	240	280	320
42	1" 5/8	25	30	40	45	60	75	90	110	140	150	190	230	270	300
44	1" 3/4	20	30	35	45	60	70	85	110	130	140	180	220	250	290
46	1" 13/16	20	30	35	40	55	70	85	100	120	140	170	210	240	280
48	1" 7/8	20	25	35	40	55	65	80	100	120	130	170	200	230	270
50	2"	20	25	30	40	50	65	75	100	110	130	160	190	220	250

$$\text{n° giri/min (r.p.m.)} = \frac{\text{Vt (Mt/min) x 1000}}{\text{3,14 x Ø (mm)}}$$

Formula di conversione della velocità periferica di taglio da mt/min in n.giri/min in funzione del diametro dell'utensile
Cutting tip speed conversion formula, from Meter Per Min. to RPM, in accordance with the tool size

Esempio di utilizzo delle tabelle:
Se si vuole praticare un foro del diametro di 8 mm con una punta HSS, in una lamiera in acciaio comune e si desidera conoscere i parametri di taglio adeguati alla foratura, si dovrà consultare la tabella n. 1 nella quale è indicato che una punta HSS da mm 8 avrà un avanzamento consigliato di 0,1 mm/giro ed una velocità di taglio di 10÷12 mt/min. Per la conversione della velocità da mt/min in giri/min, si consulterà la tabella n.2; incrociando la riga riferita al diametro 8 mm con la colonna che contiene la velocità 12 mt/min si troverà il valore di 480 giri/min. Il foro quindi andrà eseguito con una velocità di 480 giri/min e con un avanzamento di 0,1 mm/giro. Una buona lubrorefrigerazione infine garantirà un ottimo risultato di foratura.

Charts use example:
If you want to make a hole of 8 mm with an HSS bit into a metal sheet and you wish to know the correct cutting parameters, have a look on the chart n.1 where you can see that an HSS bit has a suggested feed of 0,1 mm/revolution and a cutting speed of 10÷12 mt/minute. For the speed conversion mt/min and rpm, please look at the chart n. 2; crossing the line containing the size 8 mm and the column of speed 10÷12 mt/min, you will find the value of 480 rpm .So that the drill should be made with a speed of 480 rpm with 0,1 mm/revolution feed. An appropriate lubricating finally guarantee the best cutting results.



PARAMETRI DI TAGLIO PER PUNTE IN METALLO DURO O CON PLACCHETTE IN METALLO DURO PER IL TAGLIO DEI METALLI

Recommended cutting parameter chart for tungsten carbide drill bits and carbide tipped twist drills on metals cuttings

3 

Metallo duro
H.M.

Materiale da lavorare Work-piece material	**Resistenza a trazione/durezza** Tensile strenght/hardness	**Velocità di taglio** Cutting speed **Mt/min**	**Diametro punta** / Drill size - mm **Avanzamento** / Feed (mm/giro)						**Refrigerante** Cooland
			2	**2,5**	**4**	**5**	**8**	**10**	
Acciaio basso legato Low alloy steel	fino / up to 700 N/mm²	80-100	0,025	0,0315	0,05	0,05	0,08	0,1	
Acciaio legato e alto legato High alloy steel	fino / up to 900 N/mm² oltre / beyond 900 N/mm²	70-90 60-70	0,02 0,0125	0,025 0,016	0,04 0,025	0,05 0,025	0,063 0,04	0,08 0,05	
Acciaio per utensili Tool steel	fino / up to 1000 N/mm² oltre / beyond 1000 N/mm²	50-60 20-40	0,0125 0,01	0,016 0,0125	0,025 0,02	0,025 0,025	0,04 0,0315	0,05 0,04	
Acciaio temprato Tempered steel	fino / up to 60 HRC	10-30	0,0063	0,008	0,0125	0,0125	0,02	0,025	
Acciaio per molle Spring steel		20-50	0,01	0,0125	0,02	0,025	0,0315	0,04	
Acciaio austenitico Cr-Ni, Inox, resistente agli acidi e al calore Austenitic stainless steel, acid resistant steel, heat resistant steel		20-40	0,008	0,01	0,016	0,02	0,025	0,0315	
Acciaio ferritico, inox, resistente al calore Ferritic steel, stainless steel, heat resistant steel		40-60	0,0125	0,016	0,025	0,025	0,04	0,05	
Acciaio duro al Mn Hard Mn steel		20-40	0,0063	0,008	0,0125	0,0125	0,02	0,025	
Acciaio fuso Cast steel	fino / up to 500 N/mm² oltre / beyond 500 N/mm²	60-80 30-60	0,025 0,016	0,0315 0,02	0,05 0,0315	0,05 0,0315	0,08 0,05	0,1 0,08	
Acciaio fuso legato / Ghisa in conchiglia Alloy cast steel / Chilled iron	fino / up to 350 HB oltre / beyond 350 HB	40-60 20-40	0,0125 0,0063	0,016 0,008	0,025 0,0125	0,025 0,0125	0,04 0,02	0,05 0,025	
Ghisa grigia Grey cast iron	fino / up to GG 40	70-100	0,025	0,0315	0,05	0,05	0,08	0,1	
Ghisa sferoidale / Ghisa malleabile Spheroidal cast iron / Malleable cast iron	fino / up to GGG 60 fino / up to GTW / GTS 55	50-80	0,02	0,025	0,04	0,05	0,063	0,08	
Rame Copper		80-110	0,02	0,025	0,04	0,05	0,063	0,08	
Bronzo Bronze	duro / hard tenero / soft	60-80 100-120	0,016 0,025	0,02 0,0315	0,0315 0,05	0,0315 0,05	0,05 0,08	0,063 0,1	
Leghe di alluminio fino a 11% Si Aluminium alloy up to 11% Si		100-140	0,0135	0,04	0,063	0,063	0,1	0,125	
Leghe di alluminio oltre 11% Si Aluminium alloy beyond 11% Si		60-100	0,02	0,025	0,04	0,05	0,063	0,08	
Ottone, Zn, Bronzo per getti Brass, Zn, Cast bronze		80-110	0,02	0,025	0,04	0,05	0,063	0,08	
Titanio e sue leghe Titanium alloy		20-40	0,01	0,0125	0,02	0,025	0,0315	0,04	
Leghe di magnesio Magnesium alloy		100-150	0,0315	0,04	0,063	0,063	0,1	0,125	
Materie plastiche dure Hard plastics		60-100	0,0315	0,04	0,063	0,063	0,1	0,125	
Materie plastiche tenere, laminati, termoplastici Soft plastics, thermoplastics, laminates		80-150	0,04	0,05	0,08	0,1	0,125	0,16	
Resine epossidiche rinforzate Reinforced epoxy resins		60-100	0,0315	0,04	0,063	0,063	0,1	0,125	

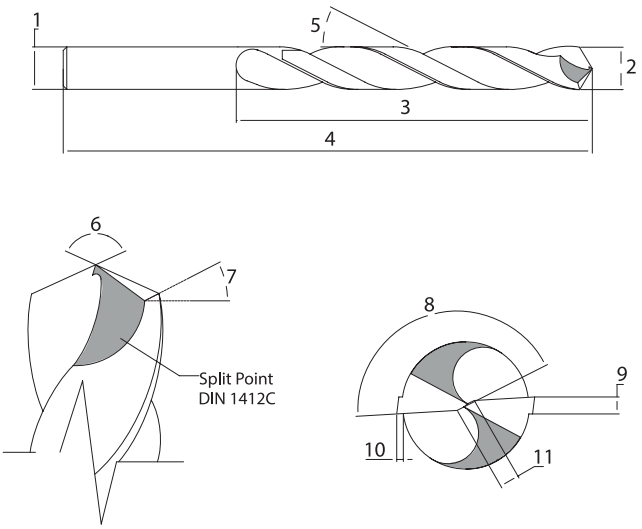
$$\text{n° giri/min (r.p.m.)} = \frac{\text{Vt (Mt/min) x 1000}}{\text{3,14 x Ø (mm)}}$$

Formula di conversione della velocità periferica di taglio da mt/min in n.giri/min in funzione del diametro dell'utensile
Cutting tip speed conversion formula, from Meter Per Min. to RPM, in accordance with the tool size

NOMENCLATURA PER PUNTE ELICOIDALI CILINDRICHE

Twist drill nomenclature

4

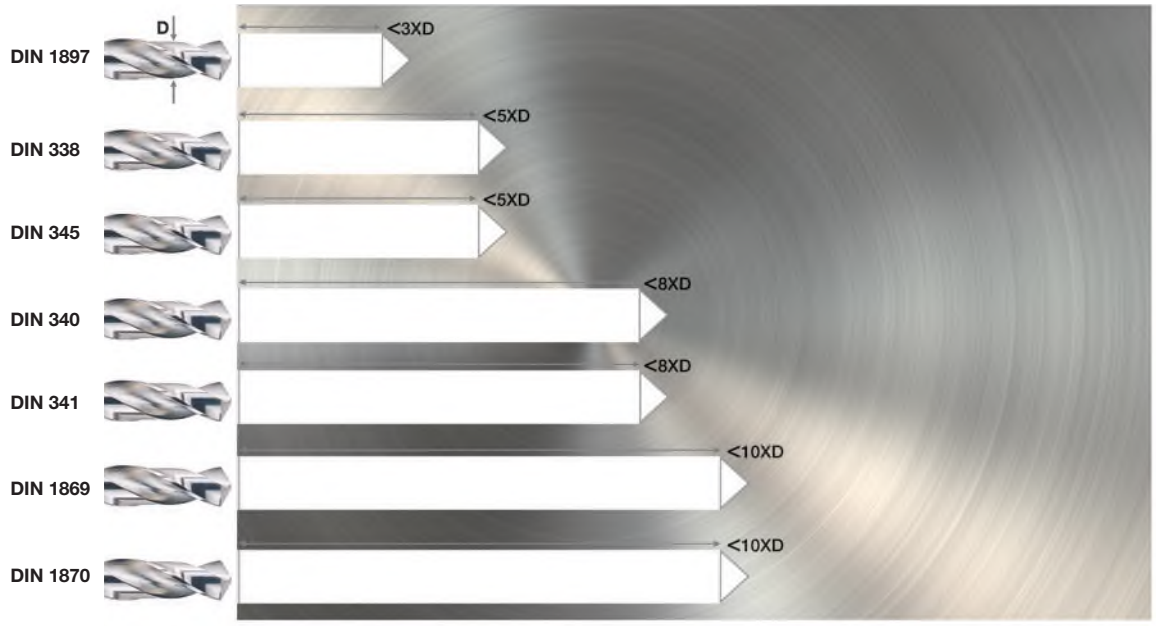


1	(d) Codolo - Shank Queue - Schaft
2	(Ø) Diametro - Diameter Diamètre - Bohrerdurchmesser
3	(l) Elica - Flute Goujure - Spannut
4	(L) Lunghezza totale - Overall length Longueur totale - Gesamttäge
5	(α) Angolo dell'elica - Helix angle Angle d'hèlice - Draliwinkel
6	Angolo dei taglienti - Point angle Angle au sommet - Spitzenwinkel
7	Angolo di spoglia - Lip clearance angle Angle de coupe - Spanwinkel
8	Angolo del tagliente centrale - Chisel edge angle Angle de l'arète centrale - Querschniden winkel
9	Fase - Land Largeur de listel - Fasenbreite
10	Profondità dello scarico - Depth of body clearance Profondeur du dègagement - Rückentiefe
11	Nocciolo - Web thickness Épaisseur de l'âme - Kerndicke

PROFONDITÀ DI FORATURA INDICATIVE PER PUNTE ELICOIDALI

Cutting depth according to twist drill standard

5



RELAZIONE TEORICA TRA LA VELOCITÀ DI TAGLIO E LA VITA UTILE DELL'UTENSILE

Theoretical link between the cutting speed and the tool life cycle

6

LEGGE DI TAYLOR

$$Vt \times T^n = C$$

Vt è la velocità di taglio espressa in m/min / **T** è la vita utile dell'utensile espressa in min / **C** (m/min) e **n** sono costanti che dipendono dalla tipologia di utensile. In particolare, per utensili HSS C=60 m/min e n=0.15, per utensili in metallo duro C=300 m/min e n=0.3

Vt is the cutting speed in m/min / T is the tool life cycle in min / C=60 m/min, n=0,15 for HSS cutting tools, C=300 m/min, n=0,3 for hard metal cutting tools. C (m/min) and n are constant values depending on the tool type

Una punta HSS di diametro 8 mm ha un ciclo di vita teorico di: 2500 h se usata a 400 giri/min - 25 h se usata a 800 giri/min.
HSS twist drill Ø 8 mm has a theorical tool life cycle of 2500h at 400rpm, 25h at 800rpm

VELOCITÀ DI TAGLIO PER FRESE A INCASSARE, SVASARE E SBAVARE IN FUNZIONE DEL MATERIALE DA LAVORARE

Recommended cutting parameter chart for countersinks and deburring tools in accordance with the materials to work

7 

Frese a svasare
Deburring tools

Materiale da lavorare Work-piece material	**Velocità di taglio** Cutting speed **Mt/min**	**Refrigerante** Cooland
Acciaio non legato Carbon steel	20	
Acciaio legato fino a 700 N/mm² Alloy steel up to 700 N/mm²	15	
Acciaio legato fino a 1000 N/mm² Alloy steel up to 1000 N/mm²	10	
Ghisa fino a 250 N/mm² Cast iron up to 250 N/mm²	10	
Ghisa oltre 250 N/mm² Cast iron beyond 250 N/mm²	8	
Ottone fragile Fragile brass	40	
Ottone plastico Tough brass	20	
Leghe di alluminio fino a 11% Si Aluminium alloys up to 11% Si	20	
Materiale termoplastico Thermoplastics	15	
Materiale termoindurente Thermosetting plastics	10	

PARAMETRI DI TAGLIO PER UTENSILI CONICI IN FUNZIONE DEL MATERIALE DA LAVORARE

Recommended cutting parameter chart for conical drill bits in accordance with the materials to work

8 

Utensili conici
Conical drill bits

Materiale da lavorare Work-piece material	**Profondità di foratura** Cutting depth **mm**	**Grandezza** Size								**Refrigerante** Cooland
		1	2	3	4	5	6	7	8	
		3÷14	6÷20	16÷30,5	26÷40	36÷50	40÷61	3÷31	3÷22,5	
		Giri/min - rpm								
Acciaio inox e alto legato Stainless steel high alloy steel	1	750	500	280	200	150	130	400	500	
Acciaio basso legato Low alloy steel	2	1100	740	420	300	220	190	580	740	
Ghisa fino a 250 N/mm² Cast iron up to 250 N/mm²	3	560	360	200	150	110	100	300	360	
Ghisa oltre 250 N/mm² Cast iron beyond 250 N/mm²	3	380	240	140	100	80	60	200	240	
Ottone fragile Fragile brass	3	2200	1500	830	600	440	400	1100	1500	
Ottone tenace Tough brass	3	1300	860	480	340	260	220	680	860	
Leghe leggere Light alloys	5	1100	740	420	300	220	190	580	740	
Plastica Plastics	5	1300	860	480	340	260	220	680	860	

PARAMETRI DI TAGLIO PER UTENSILI A GRADINO IN FUNZIONE DEL MATERIALE DA LAVORARE

Recommended cutting parameter chart for step drills in accordance with the materials to work

9 

Utensili a gradino
Step drill bits

Materiale da lavorare Work-piece material	**Profondità di foratura** Cutting depth **mm**	**Grandezza** Size															**Refrigerante** Cooland
		1	2	3	4	5	6	7	8	9	10	11	21	22	23	24	
		4÷12	4÷12	12÷20	4÷20	20÷30	4÷30	30÷40	40÷50	6÷36	6÷58	4÷39	6,3÷26,75	6÷30,5	6÷37	6÷38	
		Giri/min - rpm															
Acciaio inox e alto legato Stainless steel high alloy steel	3÷4	800	800	400	530	250	380	180	140	300	200	300	400	350	300	300	
Acciaio basso legato Low alloy steel	3÷4	1200	1200	600	800	380	560	280	200	450	300	450	600	530	450	450	
Ghisa fino a 250 N/mm² Cast iron up to 250 N/mm²	3÷4	600	600	300	400	190	280	140	100	230	150	230	300	260	230	230	
Ghisa oltre 250 N/mm² Cast iron beyond 250 N/mm²	3÷4	400	400	200	260	130	190	90	70	150	100	150	200	180	150	150	
Ottone fragile Fragile brass	3÷4	2400	2400	1200	1600	760	1100	550	420	900	600	900	1200	1000	900	900	
Ottone tenace Tough brass	3÷4	1400	1400	700	920	450	650	320	240	530	350	530	700	620	530	530	
Leghe leggere Light alloys	3÷4	1200	1200	600	800	380	560	280	200	450	300	450	600	530	450	450	
Plastica Plastics	3÷4	1400	1400	700	920	450	650	320	240	530	350	530	700	620	530	530	

VELOCITÀ DI TAGLIO PER FRESE A TAZZA IN FUNZIONE DEL MATERIALE DA LAVORARE

Recommended cutting parameter chart for hole cutters in accordance with the materials to work

10 

Frese a tazza
Hole cutters

Materiale da lavorare Work-piece material	**ø Fresa** / Hole cutter **mm**												**Refrigerante** Cooland
	12÷17	18÷24	25÷32	33÷38	39÷44	46÷51	52÷57	58÷64	65÷70	71÷80	81÷90	91÷100	
	n. giri/min - rpm												
Acciaio basso legato Low alloy steel	550	380	300	240	200	170	150	130	120	110	100	90	
Acciaio inox e alto legato Stainless steel high alloy steel	230	160	130	100	80	70	60	60	50	50	40	40	
Ghisa Cast iron	280	190	150	120	100	90	80	70	60	60	50	40	
Leghe leggere Light alloys	870	590	470	370	310	270	240	210	190	170	150	140	
Alluminio Aluminium	870	590	470	370	310	270	240	210	190	170	150	140	
Plastica Plastics	660	450	350	280	240	210	180	160	150	130	120	100	

VELOCITÀ DI TAGLIO PER FRESE A CAROTARE IN FUNZIONE DEL MATERIALE DA LAVORARE

Recommended cutting parameter chart for core bits in accordance with the materials to work

11 

Frese a carotare in HSS
HSS Core drills

Materiale da lavorare Work-piece material	**ø Fresa** / Hole cutter **mm**							**Refrigerante** Cooland
	12÷15	16÷20	21÷25	26÷30	31÷35	36÷45	50÷60	
	n. giri/min - rpm							
Acciaio basso legato Low alloy steel	660	480	370	310	260	200	160	
Acciaio inox e alto legato Stainless steel high alloy steel	290	210	170	140	120	90	70	
Ghisa Cast iron	340	250	190	160	140	110	80	
Leghe leggere Light alloys	1030	740	580	480	410	320	240	

VELOCITÀ DI TAGLIO PER FRESE A CAROTARE CON DENTI IN METALLO DURO

Recommended cutting parameter chart for core bits in accordance with the materials to work

12 

Frese a carotare in HM
HM Core drills

Materiale da lavorare Work-piece material	**ø Fresa** / Hole cutter **mm**							**Refrigerante** Cooland
	12÷15	16÷20	21÷25	26÷30	31÷35	36÷45	50÷60	
	n. giri/min - rpm							
Acciaio basso legato Low alloy steel	1220	880	690	570	480	380	290	
Acciaio inox e alto legato Stainless steel high alloy steel	860	620	480	400	340	270	200	
Ghisa Cast iron	980	710	550	450	390	300	230	
Leghe leggere Light alloys	1470	1060	380	680	580	450	350	

VELOCITÀ DI TAGLIO PER FRESE A TAZZA TCT IN FUNZIONE DEL MATERIALE DA LAVORARE

Recommended cutting parameter chart for TCT hole cutters in accordance with the materials to work

13 

Frese a tazza T.C.T.
T.C.T. Hole cutters

Materiale da lavorare Work-piece material	**Spessore di foratura** Cutting depth **mm**	**ø Frese TCT** / TCT hole cutter **mm**						**Refrigerante** Cooland
		15÷20	21÷25	26÷30	31÷40	41÷50	51÷70	
		n. giri/min - rpm						
Acciaio basso legato Low alloy steel	4	710	550	450	360	280	210	
Acciaio inox e alto legato Stainless steel high alloy steel	2	530	420	340	270	210	160	
Ghisa Cast iron	4	620	480	400	320	250	190	
Ottone Brass	4	800	620	510	410	320	240	
Alluminio Aluminium	4	880	690	570	450	350	270	
Plastica Plastics	4	740	580	480	380	300	220	

VELOCITÀ DI TAGLIO PER SEGHE A TAZZA IN FUNZIONE DEL MATERIALE DA LAVORARE

Recommended cutting parameter chart for bimetal hole saws in accordance with the materials to work

14 

Seghe a tazza
Bimetal hole saws

Materiale da lavorare Work-piece material	**ø Sega** / Hole saw **mm**																	**Refrigerante** Cooland
	14÷17	19÷24	25÷32	33÷38	40÷44	46÷51	52÷57	59÷64	65÷70	73÷79	83÷89	92÷98	102÷108	111÷121	127÷140	146÷152	160÷210	
	n. giri/min - rpm																	
Ferro / Acciaio dolce Low alloy steel	530	360	280	230	190	170	140	130	120	110	90	80	80	70	60	50	40	
Acciai trattati - Acciai inox Stainless steel - High alloy steel	210	140	110	90	80	70	60	50	50	40	40	30	30	30	20	20	20	
Ghisa Cast iron	250	170	140	110	90	180	70	60	60	50	40	40	40	30	30	30	20	
Ottone Brass	740	510	400	320	270	230	200	180	170	150	130	120	110	100	80	70	60	
Alluminio e leghe leggere Aluminium Light alloys	850	580	450	360	300	270	230	210	190	170	150	130	120	110	100	80	70	
Legno Wood	960	650	510	410	340	300	260	230	210	190	170	150	140	120	110	100	80	
Plastica Plastics	640	430	340	270	230	200	170	150	140	130	110	100	90	80	70	60	50	
Cartongesso Gypsum board	960	650	510	410	340	300	260	230	210	190	170	150	140	120	110	100	80	

VELOCITÀ DI TAGLIO IN FUNZIONE DEL DIAMETRO DELLA FRESA ROTATIVA IN HSS

Recommended cutting parameter chart for HSS rotary files

15 

Z2: Vt 220 ÷ 250 m/min
Z3: Vt 80 ÷ 220 m/min

Frese Rotative HSS
HSS rotary files

Diametro fresa Rotary burr diameter **mm**	**Velocità di taglio** / Cutting speed **Mt/min**							
	80	100	150	200	220	230	240	250
	n. giri/min - rpm							
6	4250	5310	7960	10620	11680	12210	12740	13270
8	3180	3980	5970	7960	8760	9160	9550	9950
10	2550	3180	4780	6370	7010	7320	7640	7960
12	2120	2650	3980	5310	5840	6100	6370	6630
15	1700	2120	3180	4250	4670	4880	5100	5310

VELOCITÀ DI TAGLIO IN FUNZIONE DEL DIAMETRO DELLA FRESA ROTATIVA IN METALLO DURO

Recommended cutting parameter chart for carbide rotary files

16 

Tutti i tipi di taglio (HM1,HM3 PLUS, HM3, HM4): Vt 300 ÷ 400 m/min
All cut types (HM1,HM3 PLUS, HM3, HM4): Vt 300 ÷ 400 m/min

Frese Rotative HM
HM rotary files

Diametro fresa Rotary burr diameter **mm**	**Velocità di taglio** / Cutting speed **Mt/min**					
	300	320	340	360	380	400
	n. giri/min - rpm					
6	15930	16980	18050	19100	20170	21230
8	11950	12740	13535	14330	15130	15920
10	9550	10190	10830	11465	12100	12740
12	7960	8490	9020	9560	10085	10620
16	5970	6370	6770	7160	7570	7960

PARAMETRI DI TAGLIO DELLA SEGA CIRCOLARE IN HSS

Recommended cutting parameter chart for HSS band saw blades

17 

Seghe Circolari HSS
HSS circular blades

Materiale da lavorare Work-piece material	**Velocità avanzamento** Feed rate (mm/min)	**Velocità periferica di taglio** Cutting speed (mt/min)	**Refrigerante** Cooland
Acciaio con R<500 N/mm² Steel with R<500 N/mm²	15÷25	70÷100	
Acciaio con R<800 N/mm² Steel with R<800 N/mm²	10÷15	25÷35	
Acciaio con R<1000 N/mm² Steel with R<1000 N/mm²	5÷10	30÷40	
Acciaio con R<1400 N/mm² Steel with R<1400 N/mm²	5÷7	15÷25	
Acciaio inox Stainless steel	5÷7	25÷35	
Ghisa Cast iron	10÷15	50÷70	
Alluminio Aluminium	20÷40	70÷150	
Ottone e Bronzo Brass and bronze	20÷40	70÷150	
Rame Copper	20÷40	70÷150	
Plastica Plastics	20÷50	100÷200	

PARAMETRI DI TAGLIO DELLA SEGA CIRCOLARE IN METALLO DURO

Recommended cutting parameter chart for carbide band saw blades

18 

Seghe Circolari H.M.
H.M. circular blades

Materiale da lavorare Work-piece material	**Velocità periferica di taglio** Cutting speed **(mt/sec.)**	**Velocità di avanzamento** Feed rate **(mt/min.)**	**Art 27050**	**Art 27055**	**Art 27060**	**Art 27070**	**Refrigerante** Cooland
Legno tenero Soft wood	60÷90	10÷40					
Legno duro Hard wood	50÷70	10÷30					
Compensato truciolare Plywood-chipboard	60÷80	10÷20					
Plastica Plastics	25÷60	5÷10					
Alluminio Aluminium	20÷30	5÷8					
Ferro, Acciaio dolce Iron, Steel	20÷30	5÷8					
Leghe leggere Light alloys	20÷30	5÷8					

SCELTA DELLA LAMA E DEI SUOI PARAMETRI DI TAGLIO IN FUNZIONE DEL MATERIALE DA LAVORARE

Chart for blades selection and relative cutting speed in accordance with the materials to work



Materiale da lavorare Work-piece material	**Valori DIN**	**M-42** **Art 25016**	**M-42** **Art 25010**	**M-42** **Art 25011**	**ASP** **Art 25018**	**Velocità di taglio** Cutting speed **Mt/min**	**Refrigerante** Cooland
Acciai da costruzione Structurall steels	St 37 / St 44 St 50 / St 60	■	■	■		80-100 50-70	1:20
Acciai da cementazione Case-Hardening steels	C 10 / C 15 14 NiCr14 21 NiCRMo 2 16 MnCr 5	■	■	■		80-100 40-55 50-60 50-60	1:15
Acciai automatici Free-Machining steels	9 S20	■	■	■		80-100	1:15
Acciai da bonifica Heat treating steels	C 35 / C 40 / C 45 40 Mn 4 36 NiCr 6 2 34 CrNiMo 42 CrMo 4		■	■	■	60-70 60-70 50-65 50-65 50-65	1:10
Acciai per cuscinetti a sfera Ball bearing tool steels	100 Cr 6 100 CrMn 6		■	■	■	35-50	1:10
Acciai per molle Spring steels	60 Si 7 50 Cr V4		■	■	■	45-60	1:10
Acciai per utensili per lavorazioni a freddo Cold-working tool steels	125 Cr 1 X 210 Cr 12 X 155 CrVMo 12 1 100 MnCrW 4 90 MnCrV 8		■	■	■	40-50 20-30 20-30 40-50 30-35	1:30 1:30 1:30 1:30 1:30
Acciai per utensili per lavorazioni a caldo Hot-working tool steels	40 CrMnMo 7 X 40 CrMoV 5 1 56 NiCrMoV 7 40 CrMnNiMo 8 6 4		■	■	■	20-25 18-22 25-30 20-25	1:20 1:20 1:20 1:20
Acciai rapidi High speed steels	S 6-5-2-5 S 6-5-2 S 3-3-2 S 18-0-1 S 18-1-2-10			■	■	35-45	1:10
Acciai per valvole Valve steels	W 45 CrSi 9 3 X 45 CrNiW 18 9			■	■	30-40	1:10
Acciai per alte temperature Heat resistant steels	X 20 CrMoV 12 1 X 5 NiCrTi 26 15			■	■	15-25	1:8
Acciai resistenti al calore Heat resistant steels	X 10 CrSi 6 X 10 CrAl 18 X 15 CrNiSi 25 30		■		■	15-25	1:8
Acciai inossidabili Stainless steels	X 5 CrNi 18 9 X 10 CrNiMoTi 1810	■	■	■	■	30-40	1:8
Acciai legati Alloyed steels	1000-1500 N/mm²			■	■	25-35	1:10
Leghe speciali a base di Nichel Nichel-Base Alloys	Nimonic Nimonic Hastelloy Hastelloy Incoloy Inconel				■	10-20 10-20 10-20 10-20 10-25 10-25	1:6
Plastiche Plastics	Teflon PVC		■	■		100-400	1:50 a secco/dry
Bronzo Bronze	CuSn 6 G-CuSn 8				■	80-150	1:30
Bronzo Alluminio Bronze-Aluminium	CuAl 8 CuAl 8 Fe G-CuAl 10 Fe				■	50-70 35-50 35-50	1:30
Alluminio Aluminium	Al-99,5		■	■		80-800	1:30
Ghisa Cast irons	G-AlSiCu 4 GG - 15 GG - 30 GTW - 40 GTS - 65 GGG - 50		■	■		50-70	a secco/dry
Fusioni d'acciaio Casting iron	GS - 38 GS - 60		■	■		40-60	1:30
Ottone Brass	CuZn10 CuZn408b 2		■	■		100-600	1:30
Rame Copper	Cu 99,0 Cu Be 2		■	■		100-400	1:10
Titanio Titanium	Ti 1		■	■	■	10-20	1:10

Consigli / Tips:



A = Trucioli sottili e/o spezzettati indicano una pressione di taglio insufficiente
Thin or powdery chips: increase feed pressure
B = Trucioli spessi, compressi e con una colorazione bluastra segnalano un eccessivo carico di lavoro
Heavy thick blue chips: reduce feed rate
C = Trucioli sottili e morbidamente arricciati rilevano un corretto utilizzo dei parametri di taglio
Loosely curled chips: correct feed speed

SCELTA DELLE VELOCITÀ DI TAGLIO DEI MASCHI A MACCHINA, IN FUNZIONE DEL MATERIALE DA FILETTARE

Chart for machine taps selection and relative cutting speed in accordance with the materials to work

20



Maschi a macchina
Machine taps

Materiale da lavorare Work-piece material	**Velocità di taglio** Cutting speed **(m/min.)**	**Refrigerante** Cooland
Acciaio basso legato Low alloy steel	10÷20	
Acciai refrattari, Acciai per utensili Heat resistant steel, Tool steel	4÷8	
Acciai R>1200 N/mm² Steel R>1200N/mm²	2÷5	
Acciaio inox Stainless steel	5÷10	
Leghe speciali Nimonic, Hastelloy	2÷4	
Ghisa sferoidale Spheroidal cast iron	6÷20	
Ghisa malleabile Malleable cast iron	6÷12	
Ottone truciolo corto Brass short chipping	20÷30	
Ottone truciolo lungo, Leghe di rame, leghe di zinco Brass long chipping, Cu alloy, Zn alloy	10÷15	
Bronzo Bronze	6÷15	
Alluminio truciolo corto Alu Short chipping	15÷30	
Alluminio truciolo lungo, Leghe di magnesio Alu long-chipping, Mg alloy	10÷20	
Titanio Titanium	3÷4	
Plastica e materiali termoplastici Thermoplastics	5÷15	
Materiali termoindurenti Thermosetting materials	5÷10	

Note / Notes: Valido per i fori ciechi e passanti / Suited for blind and through holes
Consigli / Tips: Utilizzare per spessori <1,5 Ø dell'utensile / To be used with thickness < 1,5 Ø of the tool

SCELTA DEI MASCHI A MACCHINA CON ANELLI COLORATI IN FUNZIONE DEL MATERIALE DA FILETTARE

Chart for colored rings machine taps selection and relative cutting speed in accordance with the materials to work

21



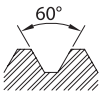
Maschi a macchina
Machine taps

Materiale da lavorare Work-piece material	**Velocità di taglio** Cutting speed **(m/min.)**	**Refrigerante** Cooland	**Art. 10500**	**Art. 10504**	**Art. 10508**	**Art. 10510**	**Art. 10511**	**Art. 10513**
Acciaio basso legato Low alloy steel	10÷20			■				
Acciai refrattari, Acciai per utensili Heat resistant steel, Tool steel	4÷8		■	■		■		
Acciai R>1200 N/mm² Steel R1200>N/mm²	2÷5					■		
Acciaio inox Stainless steel	5÷10		■	■				
Leghe speciali Nimonic, Hastelloy	2÷4							
Ghisa sferoidale Spheroidal cast ironl	6÷20		■		■			
Ghisa malleabile Malleable cast iron	6÷12				■			
Ottone truciolo corto Brass short chipping	20÷30				■			■
Ottone truciolo lungo, leghe di rame, leghe di zinco Brass long chipping, Cu alloy, Zn alloy	10÷15			■				
Bronzo Bronze	6÷15			■	■			
Alluminio truciolo corto Alu Short chipping	15÷30		■		■			
Alluminio truciolo lungo, leghe di magnesio Alu long-chipping, Mg alloy	10÷20			■			■	
Titanio Titanium	3÷4		■	■				
Plastica e materiali termoplastici Thermoplastics	5÷15				■	■		
Materiali termoindurenti Thermosetting materials	5÷10				■			

Note / Notes: Valido per i fori ciechi e passanti / Suited for blind and through holes
Consigli / Tips: Utilizzare per spessori <1,5 Ø dell'utensile / To be used with thickness < 1,5 Ø of the tool

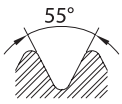
TABELLA DI CONVERSIONE DELLE FILETTATURE A POLLICE IN MISURE METRICHE

Conversion chart from metric to inch threads



M-MF

BSW



BSP-BSW-BSF

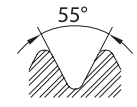
pollici inches	mm
1/16-60	1,59
3/32-48	2,38
1/8-40	3,17
5/32-32	3,96
3/16-24	4,76
7/32-24	5,55
1/4-20	6,35
5/16-18	7,93
3/8-16	9,52

pollici inches	mm
7/16-14	11,11
1/2-12	12,70
9/16-12	14,28
5/8-11	15,87
3/4-10	19,05
7/8-9	22,22
1”-8	25,40
1.1/8-7	28,57
1.1/4-7	31,75

pollici inches	mm
1.3/8-6	34,92
1.1/2-6	38,10
1.5/8-5	41,28
1.3/4-5	44,45
1.7/8-4,5	47,63
2”-4,5	50,80
2.1/4-4	57,15
2.1/2-4	63,50
2.3/4-3,5	69,85

pollici inches	mm
3”-3,5	76,20
3.1/4-3 1/4	82,55
3.1/2-3 1/4	88,90
3.3/4-3	95,24
4”-3	101,60
4.1/2-2 7/8	114,30
5”-2 3/4	127,00
5.1/2-2 5/8	139,70
6” 2,5	152,40

BSP - BSPT



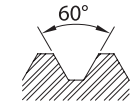
BSPT 1:16

pollici inches	mm	dist. di misura per BSPT dist. of the measure BSPT
1/8-28	9,72	10,10
1/4-19	13,15	15,00
3/8-19	16,66	15,40
1/2-14	20,95	20,50
5/8-14	22,90	20,10
3/4-14	26,44	21,80
7/8-14	30,20	24,45

pollici inches	mm	dist. di misura per BSPT dist. of the measure BSPT
1”-11	33,24	26,00
1.1/8-11	37,89	-
1.1/4-11	41,91	28,30
1.3/8-11	44,32	-
1.1/2-11	47,80	28,30
1.3/4-11	53,74	30,30
2”-11	59,61	32,70

pollici inches	mm	dist. di misura per BSPT dist. of the measure BSPT
2.1/4-11	65,71	36,10
2.1/2-11	75,18	37,10
2.3/4-11	81,53	-
3”-11	87,88	40,20
4”-11	113,03	-
5”-11	138,43	-

NPT



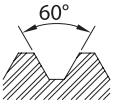
NPT-NPTF 1:16

pollici inches	mm	dist. di misura dist. of the measure
1/16-27	7,77	9,85
1/8-27	10,12	9,85
1/4-18	13,46	14,65
3/8-18	16,90	15,05
1/2-14	21,06	20,05

pollici inches	mm	dist. di misura dist. of the measure
5/8-14	22,71	20,05
3/4-14	26,40	21,35
1”-11,5	33,05	25,45
1.1/4-11,5	41,80	27,45
1.1/2-11,5	47,87	27,45

pollici inches	mm	dist. di misura dist. of the measure
1.3/4-11,5	56,04	27,75
2”-11,5	59,91	32,15
2.1/2-8	72,51	36,30
3”-8	88,42	39,40

UNC-UNF



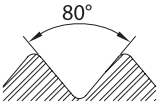
UNC-UNF

pollici inches	UNC	UNF	mm
n.1	64	72	1,85
n.2	56	64	2,18
n.3	48	56	2,51
n.4	40	48	2,84
n.5	40	44	3,17
n.6	32	40	3,50
n.8	32	36	4,16
n.10	24	32	4,82

pollici inches	UNC	UNF	mm
n.12	24	28	5,48
3/16	24	32	4,76
1/4	20	28	6,35
5/16	18	24	7,93
3/8	16	24	9,52
7/16	14	20	11,11
1/2	13	20	12,70
9/16	12	18	14,28

pollici inches	UNC	UNF	mm
5/8	11	18	15,87
3/4	10	16	19,05
7/8	9	14	22,22
1”	8	14	25,40
1.1/8	7	12	28,40
1.1/4	7	12	31,75
1.3/8	6	12	34,92
1.1/2	6	12	38,10

PG



Pg

n.	fil. per pollice threads per inch	mm
PG 7	20	12,50
PG 9	18	15,20
PG 11	18	18,60
PG 13,5	18	20,40

n.	fil. per pollice threads per inch	mm
PG 16	18	22,50
PG 21	16	28,30
PG 29	16	37,00
PG 36	16	47,00

n.	fil. per pollice threads per inch	mm
PG 42	16	54,00
PG 48	16	59,30

TABELLA RELATIVA AI PREFORI DI MASCHIATURA

Tapping drill sizes chart

M

M	*Ø mm*
M 1 x 0,25	0,75
M 1,1 x 0,25	0,85
M 1,2 x 0,25	0,95
M 1,4 x 0,3	1,1
M 1,6 x 0,35	1,25
M 1,7 x 0,35	1,3
M 1,8 x 0,35	1,45
M 2 x 0,4	1,6
M 2,2 x 0,45	1,75

M	*Ø mm*
M 2,3 x 0,4	1,9
M 2,5 x 0,45	2,05
M 2,6 x 0,45	2,1
M 3 x 0,5	2,5
M 3,5 x 0,6	2,9
M 4 x 0,7	3,3
M 4,5 x 0,75	3,7
M 5 x 0,8	4,2
M 6 x 1	5

M	*Ø mm*
M 7 x 1	6
M 8 x 1,25	6,8
M 9 x 1,25	7,8
M 10 x 1,5	8,5
M 11 x 1,5	9,5
M 12 x 1,75	10,2
M 14 x 2	12
M 16 x 2	14
M 18 x 2,5	15,5

M	*Ø mm*
M 20 x 2,5	17,5
M 22 x 2,5	19,5
M 24 x 3	21
M 27 x 3	24
M 30 x 3,5	26,5
M 33 x 3,5	29,5
M 36 x 4	32
M 39 x 4	35
M 42 x 4,5	37,5

M	*Ø mm*
M 45 x 4,5	40,5
M 48 x 5	43
M 52 x 5	47
M 3 x 0,6	2,4
M 3,5 x 0,75	2,75
M 4 x 0,75	3,25
M 5 x 0,9	4,1

MF

MF	*Ø mm*
M 3 x 0,35	2,65
M 3,5 x 0,35	3,15
M 4 x 0,35	3,65
M 4 x 0,5	3,5
M 5 x 0,5	4,5
M 6 x 0,5	5,5
M 6 x 0,75	5,2
M 7 x 0,75	6,2
M 8 x 0,5	7,5
M 8 x 0,75	7,2
M 8 x 1	7
M 9 x 1	8
M 10 x 0,5	9,5
M 10 x 0,75	9,2
M 10 x 1	9
M 10 x 1,25	8,8
M 11 x 1	10
M 12 x 0,75	10,2

MF	*Ø mm*
M 12 x 1	11
M 12 x 1,25	10,8
M 12 x 1,5	10,5
M 13 x 1	12
M 13 x 1,5	11,5
M 13 x 1,75	11,2
M 14 x 1	13
M 14 x 1,25	12,8
M 14 x 1,5	12,5
M 15 x 1	14
M 15 x 1,5	13,5
M 15 x 2	13
M 16 x 1	15
M 16 x 1,5	14,5
M 18 x 1	17
M 18 x 1,5	16,5
M 18 x 2	16
M 20 x 1	19

MF	*Ø mm*
M 20 x 1,5	18,5
M 20 x 2	18
M 22 x 1	21
M 22 x 1,5	20,5
M 22 x 2	20
M 24 x 1	23
M 24 x 1,5	22,5
M 24 x 2	22
M 25 x 1	24
M 25 x 1,5	23,5
M 26 x 1	25
M 26 x 1,5	24,5
M 27 x 1	26
M 27 x 1,5	25,5
M 27 x 2	25
M 28 x 1,5	26,5
M 28 x 2	26
M 30 x 1	29

MF	*Ø mm*
M 30 x 1,5	28,5
M 30 x 2	28
M 32 x 1,5	30,5
M 33 x 1,5	31,5
M 33 x 2	31
M 34 x 1,5	32,5
M 35 x 1,5	33,5
M 36 x 1,5	34,5
M 36 x 2	34
M 36 x 3	33
M 38 x 1,5	36,5
M 39 x 1,5	37,5
M 39 x 2	37
M 39 x 3	36
M 40 x 1,5	38,5
M 40 x 2	38
M 40 x 3	37
M 42 x 1,5	40,5

MF	*Ø mm*
M 42 x 2	40
M 42 x 3	39
M 45 x 1,5	43,5
M 45 x 2	43
M 45 x 3	42
M 48 x 1,5	46,5
M 48 x 2	46
M 48 x 3	45
M 50 x 1,5	48,5
M 50 x 2	48
M 50 x 3	47
M 52 x 1,5	50,5
M 52 x 2	50
M 52 x 3	49

BSW

BSW	*Ø mm*
W 3/32	1,8
W 1/8	2,6
W 5/32	3,1
W 3/16	3,6
W 7/32	4,4

BSW	*Ø mm*
W 1/4	5,1
W 5/16	6,5
W 3/8	7,9
W 7/16	9,3
W 1/2	10,5

BSW	*Ø mm*
W 9/16	12
W 5/8	13,5
W 3/4	16,5
W 7/8	19,25
W 1”	22

BSW	*Ø mm*
W 1.1/8	24,75
W 1.1/4	27,75
W 1.3/8	30,2
W 1.1/2	33,5
W 1.3/4	38,5

BSW	*Ø mm*
W 2”	44,5

BSF

BSF	*Ø mm*
BSF 1/4	5,2
BSF 5/16	6,6

BSF	*Ø mm*
BSF 3/8	8,1
BSF 7/16	9,5

BSF	*Ø mm*
BSF 1/2	11
BSF 5/8	14

BSF	*Ø mm*
BSF 3/4	16,5
BSF 7/8	19,5

BSF	*Ø mm*
BSF 1”	22,5

UNC

UNC	Ø mm	UNC	Ø mm	UNC	Ø mm	UNC	Ø mm	UNC	Ø mm
No. 1-64	1,5	No. 10-24	3,9	9/16 - 12	12,2	1.3/8 - 6	30,75	3” - 4	70
No. 2-56	1,8	No. 12-24	4,5	5/8 - 11	13,5	1.1/2 - 6	34	3.1/4 - 4	76,2
No. 3-48	2,1	1/4 - 20	5,2	3/4 - 10	16,5	1.3/4 - 5	39,5	3.1/2 - 4	82,6
No. 4-40	2,3	5/16 - 18	6,6	7/8 - 9	19,5	2” -4,5	51,5		
No. 5-40	2,6	3/8 - 16	8	1” - 8	22,25	2.1/4 - 4,5	51,5		
No. 6-32	2,85	7/16 - 14	9,4	1.1/8 - 7	25	2.1/2 - 4	51,5		
No. 8-32	3,5	1/2 - 13	10,8	1.1/4 - 7	28,25	2.3/4 - 4	63,5		

UNF

UNF	Ø mm	UNF	Ø mm	UNF	Ø mm	UNF	Ø mm	UNF	Ø mm
No. 0-80	1,3	No. 5-44	2,7	1/4-20	5,15	9/16-18	12,9	1.1/8-12	26,5
No. 1-72	1,6	No. 6-40	3	5/16-24	6,9	5/8-18	14,5	1.1/4-12	29,5
No. 2-64	1,9	No. 8-36	3,5	3/8-24	8,5	3/4-16	17,5	1.3/8-12	32,5
No. 3-56	2,1	No. 10-32	4,1	7/16-20	9,9	7/8-14	20,25	1.1/2-12	36
No. 4-48	2,4	No. 12-28	4,7	1/2-20	11,5	1”-12	23,25		

BSP

BSP	Ø mm	BSP	Ø mm	BSP	Ø mm	BSP	Ø mm	BSP	Ø mm
G 1/8	1,3	G 5/8	2,4	G 1.1/8	4,1	G 1.3/4	8,5	G 2.3/4	14,5
G 1/4	1,6	G 3/4	2,7	G 1.1/4	4,7	G 2”	9,9	G 3”	17,5
G 3/8	1,9	G 7/8	3	G 1.3/8	5,15	G 2.1/4	11,5		
G 1/2	2,1	G 1”	3,5	G 1.1/2	6,9	G 2.1/2	12,9		

BSPT

BSPT	Ø mm	BSPT	Ø mm	BSPT	Ø mm	BSPT	Ø mm	BSPT	Ø mm
1/8-28	8,20	1/2-14	18,00	7/8-14	27,50	1.1/2-11	44,00	3”-11	84,00
1/4-19	11,00	5/8-14	20,25	1”-11	29,50	2”-11	56,00		
3/8-19	14,50	3/4-14	23,50	1.1/4-11	38,50	2.1/2-11	71,00		

NPT

NPT	Ø mm	NPT	Ø mm	NPT	Ø mm	NPT	Ø mm
1/16-27	6,25	3/8-18	14,5	1”-11,5	29	2”-11,5	56
1/8-27	8,5	1/2-14	18	1.1/4-11,5	38	2.1/2-8	67
1/4-18	11,2	3/4-14	23	1.1/2-11,5	44	3”-8	83

PG

PG	Ø mm	PG	Ø mm	PG	Ø mm	PG	Ø mm	PG	Ø mm
PG 7	11,4	PG 11	17,25	PG 16	21,25	PG 29	35,5	PG 42	52,5
PG 9	14	PG 13,5	19	PG 21	26,9	PG 36	45,5	PG 48	58

TABELLA RELATIVA AI PREFORI DI MASCHIATURA PER MASCHI A RULLARE

Drill size cutting taps chart for forming ta

M

M	Ø mm	M	Ø mm	M	Ø mm	M	Ø mm	M	Ø mm
M 3 x 0,35	2,80	M 5 x 0,5	4,80	M 8 x 1	7,50	M 10 x 1,25	9,40	M 12 x 1,5	11,25
M 4 x 0,5	3,80	M 6 x 0,75	5,60	M 10 x 1	9,50	M 12 x 1,25	11,50	M 14 x 1,5	13,25

TABELLA PER FILETTATURA ESTERNA

External thread chart

M

M	*Ø mm*
M 1 x 0,25	0,97
M 1,1 x 0,25	1,07
M 1,2 x 0,25	1,17
M 1,4 x 0,3	1,36
M 1,6 x 0,35	1,54
M 1,7 x 0,35	1,64
M 1,8 x 0,35	1,74
M 2 x 0,4	1,93
M 2,2 x 0,45	2,13

M	*Ø mm*
M 2,3 x 0,4	2,23
M 2,5 x 0,45	2,43
M 2,6 x 0,45	2,53
M 3 x 0,5	2,92
M 3 x 0,6	2,91
M 3,5 x 0,6	3,41
M 3,5 x 0,75	3,41
M 4 x 0,7	3,91
M 4 x 0,75	3,91

M	*Ø mm*
M 4,5 x 0,75	4,41
M 5 x 0,8	4,90
M 5 x 0,9	4,89
M 6 x 1	5,88
M 7 x 1	6,88
M 8 x 1,25	7,87
M 9 x 1,25	8,87
M 10 x 1,5	9,85
M 11 x 1,5	10,85

M	*Ø mm*
M 12 x 1,75	11,83
M 14 x 2	13,82
M 16 x 2	15,82
M 18 x 2,5	17,79
M 20 x 2,5	19,79
M 22 x 2,5	21,79
M 24 x 3	23,77
M 27 x 3	26,77
M 30 x 3,5	29,73

M	*Ø mm*
M 33 x 3,5	32,73
M 36 x 4	35,70
M 39 x 4	38,70
M 42 x 4,5	41,69
M 45 x 4,5	41,69
M 48 x 5	47,66
M 52 x 5	51,66

MF

MF	*Ø mm*
M 3 x 0,35	2,94
M 3,5 x 0,35	3,44
M 4 x 0,35	3,94
M 4 x 0,5	3,93
M 5 x 0,5	4,93
M 6 x 0,5	5,93
M 6 x 0,75	5,90
M 7 x 0,75	6,90
M 8 x 0,5	7,93
M 8 x 0,75	7,90
M 8 x 1	7,83
M 9 x 1	8,88
M 10 x 0,5	9,93
M 10 x 0,75	9,90
M 10 x 1	9,88
M 10 x 1,25	9,86
M 11 x 1	10,88
M 12 x 0,75	11,90

MF	*Ø mm*
M 12 x 1	11,88
M 12 x 1,25	11,86
M 12 x 1,5	11,85
M 13 x 1	12,88
M 13 x 1,5	12,85
M 13 x 1,75	12,83
M 14 x 1	13,88
M 14 x 1,25	13,86
M 14 x 1,5	13,85
M 15 x 1	14,88
M 15 x 1,5	14,85
M 15 x 2	14,82
M 16 x 1	15,88
M 16 x 1,5	15,85
M 18 x 1	17,88
M 18 x 1,5	17,85
M 18 x 2	17,82
M 20 x 1	19,88

MF	*Ø mm*
M 20 x 1,5	19,85
M 20 x 2	19,82
M 22 x 1	21,88
M 22 x 1,5	21,85
M 22 x 2	21,82
M 24 x 1	23,88
M 24 x 1,5	23,85
M 24 x 2	23,82
M 25 x 1	24,88
M 25 x 1,5	24,85
M 26 x 1	25,88
M 26 x 1,5	25,85
M 27 x 1	26,88
M 27 x 1,5	26,85
M 27 x 2	26,82
M 28 x 1,5	27,85
M 28 x 2	27,82
M 30 x 1	29,88

MF	*Ø mm*
M 30 x 1,5	29,85
M 30 x 2	29,82
M 32 x 1,5	31,85
M 33 x 1,5	32,85
M 33 x 2	32,82
M 34 x 1,5	33,85
M 35 x 1,5	34,85
M 36 x 1,5	35,85
M 36 x 2	35,82
M 36 x 3	35,76
M 38 x 1,5	37,85
M 39 x 1,5	38,85
M 39 x 2	38,82
M 39 x 3	38,76
M 40 x 1,5	39,85
M 40 x 2	39,82
M 40 x 3	39,76
M 42 x 1,5	41,85

MF	*Ø mm*
M 42 x 2	41,82
M 42 x 3	41,76
M 45 x 1,5	44,85
M 45 x 2	44,82
M 45 x 3	44,76
M 48 x 1,5	47,85
M 48 x 2	47,82
M 48 x 3	47,46
M 50 x 1,5	49,85
M 50 x 2	49,82
M 50 x 3	49,76
M 52 x 1,5	51,85
M 52 x 2	51,82
M 52 x 3	51,76

BSW

BSW	*Ø mm*
W 1/4	6,16
W 5/16	7,76
W 3/8	9,30

BSW	*Ø mm*
W 7/16	10,89
W 1/2	12,43
W 9/16	13,92

BSW	*Ø mm*
W 5/8	15,62
W 3/4	18,76
W 7/8	21,89

BSW	*Ø mm*
W 1”	25,08
W 1.1/8	28,21

BSF

BSF	*Ø mm*
BSF 3/16	4,67
BSF 1/4	6,25
BSF 5/16	7,82

BSF	*Ø mm*
BSF 3/8	9,39
BSF 7/16	10,97
BSF 1/2	12,54

BSF	*Ø mm*
BSF 9/16	14,12
BSF 5/8	15,71
BSF 3/4	18,85

BSF	*Ø mm*
BSF 7/8	22,02
BSF 1”	25,17

UNC

UNC	*Ø mm*
No. 1-64	1,79
No. 2-56	2,12
No. 3-48	2,44
No. 4-40	2,76
No. 5-40	3,09
No. 6-32	3,41

UNC	*Ø mm*
No. 8-32	4,07
No. 10-24	4,71
No. 12-24	5,37
1/4-20	6,22
5/16-18	7,80
3/8-16	9,37

UNC	*Ø mm*
7/16-14	10,95
1/2-13	12,52
9/16-12	14,10
5/8-11	15,68
3/4-10	18,84
7/8-9	22

UNC	*Ø mm*
1”-8	25,16
1.1/8-7	28,31
1.1/4-7	31,49
1.3/8-6	34,63
1.1/2-6	37,81
1.3/4-5	44,12

UNC	*Ø mm*
2”-4.5	50,45
2.1/4-4.5	56,80
2.1/2-4	63,10
2.3/4-4	69,45
3”-4	75,80

25 | ...continua

UNF

UNF	*Ø mm*	*UNF*	*Ø mm*	*UNF*	*Ø mm*	*UNF*	*Ø mm*	*UNF*	*Ø mm*
No. 0-80	1,47	No. 5-44	3,10	1/4-28	6,24	9/16-18	14,14	1.1/8-12	28,38
No. 1-72	1,79	No. 6-40	3,42	5/16-24	7,82	5/8-18	15,73	1.1/4-12	31,56
No. 2-64	2,12	No. 8-36	4,08	3/8-24	9,41	3/4-16	18,89	1.3/8-12	34,73
No. 3-56	2,44	No. 10-32	4,73	7/16-20	10,98	7/8-14	22,05	1.1/2-12	37,91
No. 4-48	2,77	No. 12-28	5,38	1/2-20	12,56	1”-12	25,21		

BSP

BSP	*Ø mm*	*BSP*	*Ø mm*	*BSP*	*Ø mm*	*BSP*	*Ø mm*	*BSP*	*Ø mm*
G 1/8	9,62	G 1/2	20,81	G 7/8	30,06	G 1.1/4	41,73	G 1.3/4	53,56
G 1/4	13,03	G 5/8	22,77	G 1”	33,07	G 1.3/8	44,14	G 2”	59,43
G 3/8	16,53	G 3/4	26,30	G 1.1/8	37,71	G 1.1/2	47,62		

NPT

NPT	*Ø mm*	*NPT*	*Ø mm*	*NPT*	*Ø mm*	*NPT*	*Ø mm*	*NPT*	*Ø mm*
1/16	8,17	1/4	14,10	1/2	21,85	1”	34,16	1.1/2	48,87
1/8	10,55	3/8	17,52	3/4	27,16	1.1/4	42,74	2”	60,95

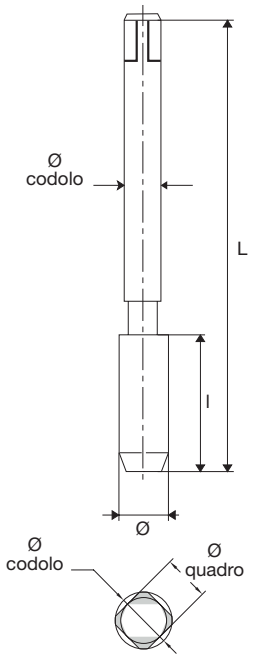
PG

PG	*Ø mm*	*PG*	*Ø mm*	*PG*	*Ø mm*	*PG*	*Ø mm*	*PG*	*Ø mm*
PG 7	12,4	PG 11	18,5	PG 16	22,4	PG 29	36,85	PG 42	53,85
PG 9	15,1	PG 13,5	20,3	PG 21	28,15	PG 36	46,85	PG 48	59,15

DIMENSIONI TIPICHE DI CODOLO E QUADRO DEI MASCHI, IN FUNZIONE DELLA NORMA DI PRODUZIONE

Dimension of shank and square depending on the applicable standard

26 |



Ø Codolo *Shank*	Ø Quadro *Square*	DIN 352	DIN 371	DIN 376	DIN 374	ISO 529
2,5	2,1	M1÷1,8	M1÷1,8	M3,5	M3,5	M1÷2
2,8	2,1	M2÷2,5	M2÷2,5	M4	M4	M2,2÷2,5
3,2	2,4					M3
3,5	2,7	M3	M3	M5	M5	M3,5
4	3	M3,5	M3,5			M4
4,5	3,4	M4	M4	M6	M5,5÷6	M4,5
6	4,9	M5÷8	M5÷6	M8	M8	M6
7	5,5	M10		M10	M9÷10	
8	6,2		M8			M8
9	7	M12		M12	M12	
10	8		M10			M10
11	9	M14		M14	M14	
12	9	M16		M16	M16	
14	11	M18		M18	M18	
16	12	M20		M20	M20	M22
18	14,5	M22÷24		M22÷24	M22÷24	
20	16	M27		M27	M27÷28	M27÷M30
22	18	M30		M30	M30	
25	20	M33		M33	M33	
28	22	M36		M36	M36	
32	24	M39÷42		M39÷42	M39÷42	M50
36	29	M45÷48		M45÷48	M45÷48	
40	32	M52		M52		

DIAMETRO DELLA PUNTA IN FUNZIONE DELLE DIMENSIONI DEL FILETTO DA RIPRISTINARE

Drill diameter according to thread dimension to be restored

27

DIN 8140 - ISO 2/6H

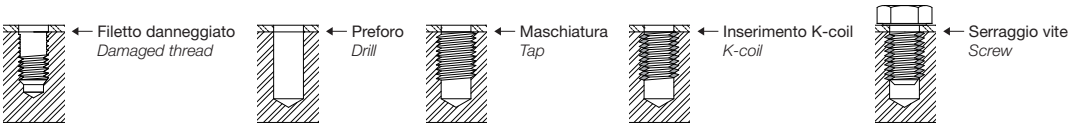


K-COIL

Acciaio inox austenitico 18/8
Austenitic stainless steel 18/8

10606 - M/MF

	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm
M	2 x 0,4	2,10	10 x 1,25	10,30	18 x 2,5	18,60	27 x 3	27,75
	2,2 x 0,45	2,30	10 x 1	10,30	18 x 2	18,50	27 x 2	27,50
	2,5 x 0,45	2,60	11 x 1,5	11,40	18 x 1,5	18,50	27 x 1,5	27,50
	3 x 0,5	3,20	12 x 1,75	12,40	20 x 2,5	20,60	28 x 1,5	28,50
	3,5 x 0,6	3,70	12 x 1,5	12,40	20 x 2	20,50	30 x 3,5	31,00
	4 x 0,7	4,20	12 x 1,25	12,30	20 x 1,5	20,50	30 x 2	30,50
	5 x 0,8	5,20	12 x 1	12,30	22 x 2,5	22,60	30 x 1,5	30,50
	6 x 1	6,30	14 x 2	14,50	22 x 2	22,50	33 x 3,5	34,00
	7 x 1	7,30	14 x 1,5	14,40	22 x 1,5	22,50	33 x 2	33,50
	8 x 1,25	8,30	14 x 1,25	14,40	24 x 3	24,75	36 x 4	37,00
	8 x 1	8,30	14 x 1	14,30	24 x 2	24,50	36 x 3	37,00
	9 x 1,25	9,30	16 x 2	16,50	24 x 1,5	24,50	36 x 2	36,50
	10 x 1,5	10,40	16 x 1,5	16,40	26 x 1,5	26,50	36 x 1,5	36,50



10607 - UNC

	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm
N.	8 x 32	4,40	5/16 x 18	8,30	9/16 x 12	14,80	1” x 8	26,25
	10 x 24	5,10	3/8 x 16	9,90	5/8 x 11	16,50	1.1/8 x 7	29,50
	12 x 24	5,70	7/16 x 14	11,60	3/4 x 10	19,75	1.1/4 x 7	33,00
UNC	1/4 x 20	6,70	1/2 x 13	13,00	7/8 x 9	23,00	1.1/2 x 6	39,50

10608 - UNF

	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm
N.	8 x 36	4,40	3/8 x 24	9,80	5/8 x 18	16,25	1.1/8 x 12	29,00
	10 x 32	5,10	7/16 x 20	11,50	3/4 x 16	19,50	1.1/4 x 12	32,50
	1/4 x 28	6,60	1/2 x 20	13,00	7/8 x 14	22,75	1.1/2 x 12	38,50
UNF	5/16 x 24	8,20	9/16 x 18	14,80	1” x 12	26,00		

10609 - BSW

Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm
1/8 x 40	3,40	5/16 x 18	8,30	1/2 x 12	13,00	3/4 x 10	20,00
3/16 x 24	5,10	3/8 x 16	9,90	9/16 x 12	14,80	7/8 x 9	23,00
1/4 x 20	6,70	7/16 x 14	11,60	5/8 x 11	16,70	1” x 8	26,50

10610 - BSF

Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm
3/16 x 32	5,00	3/8 x 20	9,90	9/16 x 16	14,80	7/8 x 11	22,70
1/4 x 26	6,60	7/16 x 18	11,60	5/8 x 14	16,40	1” x 10	26,50
5/16 x 22	8,30	1/2 x 16	13,00	3/4 x 12	19,50		

10610 - BSF

	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm	Filetto *Thread*	Ø *Drill size* mm
G	1/8 x 28	10,00	3/8 x 19	17,10	5/8 x 14	23,40	7/8 x 14	30,60
	1/4 x 19	13,60	1/2 x 14	21,50	3/4 x 14	27,00	1” x 11	33,70

DIMENSIONI CARATTERISTICHE DEGLI INSERTI FILETTATI METRICI

Metric wire-thread insert dimensions

28  **1.5 d** **Metric**

	Diametro Punta per preforo (mm) *Drill size*	Diametro Coil non installato min (mm) *ø Coil free min*	Diametro Coil non installato max (mm) *ø Coil free max*	Profondità di foratura min (mm) *Drilling depth*	Profondità di filettatura min (mm) *Threading depth*	Lunghezza nominale Coil installato (mm) *Coil lenght inside its site*
2x0,4	2,1	2,49	2,70	4,80	4,40	3,00
2,2x0,45	2,3	2,76	3,00	5,33	4,88	3,30
2,5x0,45	2,6	3,05	3,70	5,78	5,33	3,75
3x0,5	3,2	3,61	4,35	6,75	6,25	4,50
3,5x0,6	3,7	4,24	4,95	7,95	7,35	5,25
4x0,7	4,2	4,86	5,60	9,15	8,45	6,00
5x0,8	5,2	5,98	6,80	11,10	10,30	7,50
6x1	6,3	7,23	7,95	13,50	12,50	9,00
7x1	7,3	8,22	9,20	15,00	14,00	10,50
8x1,25	8,3	9,53	10,35	17,63	16,38	12,00
8x1	8,3	9,39	10,25	16,50	15,50	12,00
9x1,25	9,4	10,52	11,16	19,13	17,88	13,50
10x1,5	10,4	11,83	12,50	21,75	20,25	15,00
10x1,25	10,3	11,74	12,65	20,63	19,38	15,00
10x1	10,3	11,41	12,50	19,50	18,50	15,00
11x1,5	11,4	12,82	13,59	23,25	21,75	16,50
12x1,75	12,5	14,13	15,00	25,88	24,13	18,00
12x1,5	12,4	14,09	15,20	24,75	23,25	18,00
12x1,25	12,3	13,76	15,00	23,63	22,38	18,00
12x1	12,3	13,43	14,49	22,50	21,50	18,00
14x2	14,5	16,43	17,35	30,00	28,00	21,00
14x1,5	14,4	16,11	17,25	27,75	26,25	21,00
14x1,25	14,3	15,78	17,03	26,63	25,38	21,00
14x1	14,3	15,45	16,68	25,50	24,50	21,00
16x2	16,5	18,41	19,60	33,00	31,00	24,00
16x1,5	16,5	18,13	19,60	30,75	29,25	24,00
18x2,5	18,8	21,04	22,00	38,25	35,75	27,00
18x2	18,5	20,80	21,85	36,00	34,00	27,00
18x1,5	18,5	20,15	21,75	33,75	32,25	27,00
20x2,5	20,8	23,02	24,40	41,25	38,75	30,00
20x2	20,5	22,82	24,05	39,00	37,00	30,00
20x1,5	20,5	22,17	24,00	36,75	35,25	30,00
22x2,5	22,8	25,00	26,90	44,25	41,75	33,00
22x2	22,5	24,84	26,50	42,00	40,00	33,00
22x1,5	22,5	24,19	26,45	39,75	38,25	33,00
24x3	25,0	27,62	29,00	49,50	46,50	36,00
24x2	24,5	26,86	29,10	45,00	43,00	36,00
24x1,5	24,5	26,21	28,28	42,75	41,25	36,00
26x1,5	26,5	28,23	30,46	45,75	44,25	39,00
27x3	28,0	30,59	32,40	54,00	51,00	40,50
27x2	27,5	29,89	32,30	49,50	47,50	40,50
30x3,5	31,0	34,20	35,81	60,75	57,25	45,00
30x2	30,5	32,92	35,70	54,00	52,00	45,00
33x3,5	34,0	37,17	38,80	65,25	61,75	49,50
33x2	33,5	35,95	39,20	58,50	56,50	49,50
36x4	37,0	40,78	42,67	72,00	68,00	54,00
36x3	37,0	40,30	42,70	67,50	64,50	54,00

NUMERO DI SPIRE DEGLI INSERTI FILETTATI METRICI IN FUNZIONE DELLA LUNGHEZZA DELL'INSERTO

Number of turns of the coil depending on the insert length

29

	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*	N. spire max *N. max*
	1 D		1,5 D		2 D		2,5 D		3 D	
2x0,4	3,3	3,0	5,7	5,2	8,1	7,4	10,5	9,6	13,0	11,8
2,2x0,45	3,2	2,9	5,5	5,0	7,9	7,1	10,3	9,3	12,6	11,2
2,5x0,45	3,8	3,1	6,5	5,2	9,2	7,4	11,9	9,5	14,6	11,9
3x0,5	4,3	3,4	7,2	5,8	10,1	8,2	13,1	10,5	16,0	12,2
3,5x0,6	4,1	3,4	7,0	5,8	9,8	8,2	12,6	10,5	15,5	12,2
4x0,7	4,0	3,4	6,8	5,7	9,6	8,1	12,3	10,5	15,1	12,2
5x0,8	4,5	3,9	7,6	6,5	10,6	9,2	13,7	11,8	16,7	14,6
6x1	4,3	3,8	7,2	6,4	10,1	9,1	13,1	11,7	16,0	14,5
7x1	5,3	4,6	8,7	7,7	12,1	10,7	15,6	13,7	19,0	16,8
8x1,25	4,7	4,2	7,8	7,1	10,9	9,9	14,1	12,8	17,2	15,9
8x1	6,1	5,6	10,0	9,1	13,8	12,5	17,7	16,0	21,5	19,5
9x1,25	5,5	5,1	9,0	8,4	12,5	11,7	16,1	15,0	19,6	18,3
9x1	7,1	6,5	11,5	10,5	15,8	14,5	20,2	18,5	24,5	22,5
10x1,5	4,9	4,6	8,2	7,7	11,5	10,8	14,7	13,8	18,0	16,9
10x1,25	6,1	5,6	10,0	9,2	13,8	12,7	17,7	16,3	21,5	19,8
10x1	8,1	7,3	12,9	11,7	17,8	16,1	22,6	20,5	27,5	24,9
11x1,5	5,6	5,2	9,2	8,6	12,8	12,0	16,4	15,4	20,0	18,7
11x1,25	6,9	6,4	11,2	10,3	15,4	14,2	19,7	18,1	23,9	22,0
11x1	9,1	8,4	14,4	13,3	19,8	18,2	25,1	23,1	30,4	28,0
12x1,75	5,1	4,8	8,5	7,9	11,9	11,1	15,2	14,2	18,6	17,3
12x1,5	6,1	5,6	10,0	9,2	13,8	12,7	17,7	16,2	21,5	19,8
12x1,25	7,7	7,0	12,4	11,2	17,0	15,5	21,6	19,7	26,3	23,9
12x1	10,1	9,3	15,9	14,7	21,7	20,0	27,6	25,4	33,4	30,8
13x1,75	5,7	5,3	9,4	8,7	13,0	12,2	16,7	15,6	20,3	19,0
13x1,5	6,8	6,2	11,0	10,1	15,2	13,9	19,3	17,8	23,5	21,6
13x1,25	8,5	7,8	13,5	12,5	18,6	17,1	23,6	21,7	28,7	26,4
14x2	5,3	5,0	8,7	8,2	12,1	11,4	15,6	14,6	19,0	17,9
14x1,5	7,5	6,9	12,0	11,1	16,5	15,3	21,0	19,4	25,5	23,6
14x1,25	9,3	8,6	14,7	13,6	20,2	18,6	25,6	23,6	31,0	28,6
14x1	12,1	11,1	18,9	17,4	25,7	23,7	32,5	30,0	39,3	36,2
15x2	5,8	5,4	9,5	8,8	13,1	12,3	16,8	15,7	20,5	19,2
15x1,25	8,1	7,5	12,9	11,9	17,8	16,4	22,6	20,8	27,5	25,3
16x2	6,3	5,9	10,2	9,5	14,2	13,2	18,1	16,9	22,0	20,5
16x1,5	8,8	8,0	13,9	12,8	19,1	17,5	24,3	22,3	29,4	27,0
18x2,5	5,5	5,2	9,0	8,6	12,5	11,9	16,1	15,3	19,6	18,6
18x2	7,1	6,7	11,5	10,9	15,8	15,0	20,2	19,1	24,5	23,2
18x1,5	10,1	9,3	15,9	14,6	21,7	20,0	27,6	25,4	33,4	30,7
20x2,5	6,3	5,9	10,2	9,6	14,2	13,3	18,1	16,9	22,0	20,6
20x2	8,1	7,7	12,9	12,2	17,8	16,8	22,6	21,4	27,5	25,9
20x1,5	11,4	10,5	17,9	16,4	24,4	22,4	30,9	28,3	37,4	34,3
22x2,5	7,1	6,5	11,4	10,5	15,8	14,5	20,1	18,5	24,5	22,5
22x2	9,1	8,5	14,4	13,4	19,8	18,4	25,1	23,4	30,4	28,4
22x1,5	12,7	11,6	19,9	18,1	27,0	24,6	34,2	31,1	41,3	37,6
24x3	6,3	5,9	10,2	9,7	14,2	13,4	18,1	17,1	22,0	20,9
24x2	10,1	9,2	15,9	14,6	21,7	19,9	27,6	25,3	33,4	30,6
24x1,5	14,0	12,9	21,8	20,1	29,7	27,3	37,5	34,5	45,3	41,7
26x1,5	15,4	14,2	23,8	22,0	32,3	29,8	40,8	37,6	49,2	45,4
27x3	7,3	6,8	11,7	11,0	16,2	15,2	20,6	19,3	25,1	23,5
27x2	11,6	10,6	18,1	16,7	24,7	22,7	31,3	28,8	37,9	34,8
30x3,5	6,9	6,5	11,1	10,5	15,3	14,5	19,5	18,6	23,8	22,6
30x3	8,1	7,6	12,9	12,2	17,8	16,8	22,6	21,3	27,5	25,9
30x2	13,0	12,0	20,4	18,7	27,7	25,4	35,0	32,1	42,3	38,8
33x3,5	7,7	7,4	12,4	11,8	17,0	16,2	21,7	20,7	26,4	25,1
33x3	9,1	8,5	14,4	13,5	19,8	18,5	25,1	23,6	30,4	28,6
33x2	14,5	13,3	22,6	20,6	30,6	28,0	38,7	35,3	46,8	42,7
36x4	7,3	6,9	11,7	11,2	16,2	15,4	20,6	19,6	25,1	23,8
36x3	10,1	9,5	15,9	14,9	21,7	20,4	27,6	25,9	33,4	31,4
39x4	8,0	7,7	12,9	12,2	17,7	16,8	22,5	21,4	27,3	26,0
42x4,5	7,6	7,3	12,2	11,8	16,8	16,2	21,5	20,7	26,1	25,1
42x3	12,1	11,4	18,9	17,8	25,7	24,2	32,5	30,6	39,3	37,1

DIMENSIONI CARATTERISTICHE DEGLI INSERTI FILETTATI UNC

UNC wire-thread insert dimensions

30 

UNC

	Diametro Punta per preforo (mm) *Drill size*	Diametro Coil non installato min (mm) *ø Coil free min*	Diametro Coil non installato max (mm) *ø Coil free max*	Profondità di foratura min (mm) *Drilling depth*	Profondità di filettatura min (mm) *Threading depth*	Lunghezza nominale Coil installato (mm) *Coil lenght inside its site*	N. spire del Coil min *N coil min*	N. spire del Coil max *N coil max*
NO. 8 x 32	4,4	5,08	5,59	9,83	9,02	6,25	5,50	6,10
NO.10 x 24	5,1	6,10	6,60	11,99	10,92	7,24	4,60	5,00
NO.12 x 24	5,7	6,86	7,11	12,98	11,94	8,23	5,60	6,00
1/4 x 20	6,7	7,87	8,38	15,24	13,97	9,53	5,30	5,70
5/16 x 18	8,3	9,65	10,16	18,24	16,84	11,91	6,30	6,70
3/8 x 16	9,9	11,43	11,94	21,44	19,84	14,27	6,80	7,20
7/16 x 14	11,6	13,21	13,97	24,82	23,01	16,66	7,00	7,40
1/2 x 13	13,0	14,99	15,75	27,84	25,88	19,05	7,50	8,00
9/16 x 12	15,0	16,76	17,53	30,96	28,83	21,44	7,90	8,40
5/8 x 11	16,5	18,80	19,56	34,21	31,90	23,80	8,10	8,50
3/4 x 10	19,8	22,10	23,11	40,01	37,47	28,58	9,00	9,50
7/8 x 9	23,0	25,65	26,67	46,02	43,21	33,32	9,60	10,00
1' x 8	26,2	29,21	30,48	52,37	49,20	38,10	9,80	10,20
1.1/8 x 7	29,5	33,02	34,54	59,18	55,55	42,85	9,60	10,10
1.1/4 x 7	32,5	36,07	37,59	63,96	60,33	47,63	10,90	11,40
1.1/2 x 6	39,5	43,18	44,96	76,20	71,96	57,15	11,20	11,70

DIMENSIONI CARATTERISTICHE DEGLI INSERTI FILETTATI UNF

UNF wire-thread insert dimensions

31 

UNF

	Diametro Punta per preforo (mm) *Drill size*	Diametro Coil non installato min (mm) *ø Coil free min*	Diametro Coil non installato max (mm) *ø Coil free max*	Profondità di foratura min (mm) *Drilling depth*	Profondità di filettatura min (mm) *Threading depth*	Lunghezza nominale Coil installato (mm) *Coil lenght inside its site*	N. spire del Coil min *N coil min*	N. spire del Coil max *N coil max*
NO. 8 x 36	4,4	5,08	5,59	9,42	8,71	6,25	6,1	6,9
NO.10 x 32	5,1	5,84	6,60	10,82	10,01	7,24	6,4	7,2
1/4 x 28	6,6	7,62	8,38	13,61	12,70	9,53	7,7	8,5
5/16 x 24	8,2	9,40	10,16	16,66	15,60	11,91	8,5	9,2
3/8 x 24	9,8	10,92	11,94	19,05	17,98	14,27	10,5	11,4
7/16 x 20	11,5	12,95	13,97	22,38	21,11	16,66	10,2	11,1
1/2 x 20	13,0	14,48	15,75	24,77	23,50	19,05	11,9	12,9
9/16 x 18	14,7	16,26	17,53	27,76	26,37	21,44	12,2	13,3
5/8 x 18	16,3	17,78	19,30	30,15	28,75	23,80	13,8	14,9
3/4 x 16	19,5	21,34	22,86	35,71	34,14	28,58	14,7	15,9
7/8 x 14	22,5	24,89	26,67	41,50	39,67	33,32	15,1	16,3
1' x 12	26,0	28,45	30,48	47,63	45,52	38,10	14,8	16
1.1/8 x 12	29,5	31,75	33,78	52,37	50,27	42,85	16,9	18,2
1.1/4 x 12	32,5	34,80	37,34	57,15	55,04	47,63	19	20,4
1.1/2 x 12	38,5	41,15	44,45	66,68	64,57	57,15	23,1	24,9
1.1/2 x 6	39,5	43,18	44,96	76,20	71,96	57,15	11,20	11,70

DIMENSIONI CARATTERISTICHE DEGLI INSERTI FILETTATI BSW

BSW wire-thread insert dimensions

32



BSW

	Diametro Punta per preforo (mm) *Drill size*	Diametro Coil non installato min (mm) *ø Coil free min*	Diametro Coil non installato max (mm) *ø Coil free max*	Profondità di foratura min (mm) *Drilling depth*	Profondità di filettatura min (mm) *Threading depth*	Lunghezza nominale Coil installato (mm) *Coil lenght inside its site*	N. spire del Coil min *N coil min*	N. spire del Coil max *N coil max*
1/8 x 40	3,4	3,81	4,32	7,62	6,99	4,75	5,1	5,8
3/16 x 24	5,0	5,84	6,60	11,91	10,85	7,14	4,6	5,1
1/4 x 20	6,7	7,87	8,38	15,24	13,97	9,53	5,4	5,9
5/16 x 18	8,3	9,40	10,16	18,24	16,84	11,91	6,4	6,9
3/8 x 16	10,0	11,18	11,94	21,44	19,84	14,27	6,9	7,4
7/16 x 14	11,6	13,21	13,97	24,82	23,01	16,66	7,1	7,6
1/2 x 12	13,0	14,99	16,00	28,58	26,47	19,05	7,0	7,4
9/16 x 12	14,8	16,51	17,53	30,96	28,83	21,44	8,0	8,6
5/8 x 11	16,7	18,29	19,56	34,21	31,90	23,80	8,2	8,7
3/4 x 10	20,0	21,84	22,86	40,01	37,47	28,58	9,2	9,7
7/8 x 9	23,2	25,15	26,67	46,02	43,21	33,32	9,7	10,2
1" x 8	26,5	28,70	30,48	52,37	49,20	38,10	9,9	10,4

DIMENSIONI CARATTERISTICHE DEGLI INSERTI FILETTATI BSF

BSF wire-thread insert dimensions

33



BSF

	Diametro Punta per preforo (mm) *Drill size*	Diametro Coil non installato min (mm) *ø Coil free min*	Diametro Coil non installato max (mm) *ø Coil free max*	Profondità di foratura min (mm) *Drilling depth*	Profondità di filettatura min (mm) *Threading depth*	Lunghezza nominale Coil installato (mm) *Coil lenght inside its site*	N. spire del Coil min *N coil min*	N. spire del Coil max *N coil max*
3/16 x 32	5,0	5,84	6,35	10,72	9,91	7,14	6,5	7,2
1/4 x 26	6,6	7,62	8,38	13,92	12,95	9,53	7,1	7,9
5/16 x 22	8,3	9,40	10,16	17,09	15,95	11,91	7,7	8,5
3/8 x 20	9,8	11,18	12,19	19,99	18,72	14,27	8,6	9,4
7/16 x 18	11,6	12,95	14,22	23,01	21,62	16,66	9,1	10,0
1/2 x 16	13,2	14,73	16,00	26,19	24,61	19,05	9,3	10,2
9/16 x 16	14,8	16,26	17,78	28,58	26,97	21,44	10,6	11,7
5/8 x 14	16,3	18,29	19,56	31,98	30,15	23,80	10,4	11,3
3/4 x 12	19,5	21,84	23,37	38,10	35,99	28,58	10,8	11,7
7/8 x 11	22,8	25,15	27,18	43,74	41,43	33,32	11,6	12,6
1" x 10	26,2	28,70	30,99	49,53	46,99	38,10	12,1	13,2

DIMENSIONI CARATTERISTICHE DEGLI INSERTI FILETTATI BSP

BSP wire-thread specific insert dimensions

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BSP

	Diametro Punta per preforo (mm) *Drill size*	Diametro Coil non installato min (mm) *ø Coil free min*	Diametro Coil non installato max (mm) *ø Coil free max*	Profondità di foratura min (mm) *Drilling depth*	Profondità di filettatura min (mm) *Threading depth*	Lunghezza nominale Coil installato (mm) *Coil lenght inside its site*	N. spire del Coil min *N coil min*	N. spire del Coil max *N coil max*
1/8 x 28	10,0	10,92	11,94	8,84	7,92	4,75	3,2	3,6
1/4 x 19	13,6	14,99	16,26	15,54	14,20	9,53	5	5,4
3/8 x 19	17,1	18,54	20,07	20,29	18,97	14,27	8,2	8,9
1/2 x 14	21,5	23,37	25,15	27,20	25,40	19,05	8,1	8,8
5/8 x 14	23,4	25,40	27,43	31,95	30,15	23,80	10,4	11,3
3/4 x 14	27,0	28,96	31,24	36,73	34,93	28,58	12,9	13,9
7/8 x 14	30,5	32,77	35,31	41,50	39,67	33,32	15,3	16,5
1" x 11	33,7	36,32	39,12	48,49	46,18	38,10	13,6	14,7

VELOCITÀ DI TAGLIO ESPRESSE IN M/MIN PER ALESATORI IN FUNZIONE DEL MATERIALE DA LAVORARE

Cutting speed chart in m/min for reamers according to the work-piece material

35 

Alesatori
Reamers

Materiale da lavorare *Work-piece material*	**Velocità di taglio** *Cutting speed (m/min)*
Acciaio con R<550 MPa *Steel with R<550 MPa*	10÷15
Acciaio con 550<R<850 MPa *Steel with 550<R<850 MPa*	12÷15
Acciaio 850<R<1200 MPa *Steel with 850<R<1200 MPa*	7÷10
Acciaio inox austenitico *Austenitic stainless steel*	6÷8
Acciaio inox ferritico o martensitico *Ferrtici and martensitic stailess steel*	5÷6
Acciaio inox duplex o alto legato *Duplex and high alloy stainless steel*	4÷5
Ghisa nodulare *Nodular cast iron*	9÷11
Ghisa lamellare *Lamellar cast iron*	13÷15
Rame e sue leghe a truciolo lungo *Copper and long chip alloys*	16÷20
Rame e sue leghe a truciolo corto *Copper and short chip alloys*	20÷24
Plastica *Plastics*	11÷13
Polimeri termoindurenti *Thermosetting polymers*	7÷10

Utilizzare valori di avanzamento più elevati rispetto alle operazioni di foratura, perché in alesatura si asporta un minor volume di materiale. Inoltre si utilizzano velocità di taglio inferiori per evitare il surriscaldamento dell'utensile e del pezzo in lavorazione.
Use higher feed rates than drilling operations, because a smaller volume of material is removed in reaming. Furthermore, lower cutting speeds are used to prevent overheating of the tool and the work-piece material.)

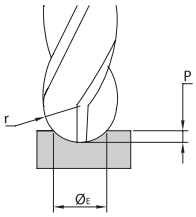
VELOCITÀ DI TAGLIO ESPRESSE IN M/MIN PER FRESE FRONTALI IN FUNZIONE DEL MATERIALE DA LAVORARE

Cutting speed chart in m/min for end mills according to the work-piece material

36 

Frese frontali
End mills

Materiale da lavorare *Work-piece material*	**Velocità di taglio** *Cutting speed (m/min)* **HSS-CO**	**Velocità di taglio** *Cutting speed (m/min)* **HSS-CO+TiAlN**	**Velocità di taglio** *Cutting speed (m/min)* **HM**
Acciaio con R<550 MPa *Steel with R<550 MPa*	15÷25	25÷40	40÷80
Acciaio con 550<R<850 MPa *Steel with 550<R<850 MPa*	10÷15	15÷30	30÷45
Acciaio 850<R<1200 MPa *Steel with 850<R<1200 MPa*	12÷20	20÷25	25÷30
Acciaio inox austenitico *Austenitic stainless steel*	12÷15	15÷20	20÷25
Acciaio inox ferritico o martensitico *Ferrtici and martensitic stailess steel*	8÷12	12÷20	20÷22
Acciaio inox duplex o alto legato *Duplex and high alloy stainless steel*	5÷8	8÷10	10÷12
Ghisa nodulare *Nodular cast iron*	20÷30	30÷40	40÷50
Ghisa lamellare *Lamellar cast iron*	15÷20	20÷30	30÷60
Rame e sue leghe a truciolo lungo *Copper and long chip alloys*	50÷100	100÷110	110÷220
Plastica *Plastics*	50÷100	100÷170	170÷300
Alluminio *Aluminium*	50÷100	100÷170	170÷300
Polimeri termoindurenti *Thermosetting polymers*	20÷30	30÷45	45÷60



$$n° \text{ giri/min (r.p.m.)} = \frac{Vt \text{ (Mt/min)} \times 1000}{3{,}14 \times Ø \text{ (mm)}}$$

Nel caso di frese frontali raggiate usare $Ø_E$ al posto di Ø
When using ball nose end mills please insert $Ø_E$ instead of Ø

$$Ø_E = 2\sqrt{P(2r-P)}$$

Tasso di rimozione del materiale T
Material removing rate T

$$T = \frac{P \times R \times A}{1000} \quad \frac{Cm^3}{min}$$

P Profondità assiale (mm) *Axial depth*
R Profondità radiale (mm) *Radial depth*
A Avanzamento (mm/min) *Feed*

CORRISPONDENZA MISURE METRICHE E MISURE IN POLLICI PER PUNTE DA EDILIZIA

Correspondence of metric and inches dimensions for construction tips

37

Dimensioni in mm *Dimensions (mm)*	**Dimensioni in pollici** *Dimensione (inches)*
3,5X110	9/64x4
3,5X135	9/64x5
4X110	5/32x4
4X160	5/32x6
5X110	3/16x4
5X160	3/16x6
5X210	13/64x8
5X310	3/16x12
5,5X110	7/32x4
5,5X160	7/32x6
5,5X210	7/32x8
5,5X260	7/32x10
5,5X310	7/32x12
5,5X460	7/32x18
6X110	15/64x4
6X160	15/64x6
6X210	15/64x8
6X260	15/64x10
6X460	15/64x18
6,5X110	1/4x4
6,5X160	1/4x6
6,5X210	1/4x8
6,5X260	1/4x10
6,5X310	1/4x12
7X110	9/32x4
7X160	9/32x6
7X210	9/32x8
8X110	5/16x4
8X160	5/16x6
8X210	5/16x8
8X260	5/16x10
8X310	5/16x12
8X410	5/16x16
8X460	5/16x18
8X610	5/16x24
9X160	11/32x6
9X210	11/32x8
9,5X160	3/8x6
10X1000	3/8x40
10X110	3/8x4
10X160	3/8x6
10X210	3/8x8
10X260	3/8x10
10X310	3/8x12
10X360	3/8x14
10X460	3/8x18
10X610	3/8x24
11X160	7/16x6
11X210	7/16x8
11X260	7/16x10
11X310	7/16x12
12X1000	15/32x40
12X160	15/32x6
12X210	15/32x8
12X260	15/32x10
12X310	15/32x12

Dimensioni in mm *Dimensions (mm)*	**Dimensioni in pollici** *Dimensione (inches)*
12X360	15/32x14
12X460	15/32x18
12X610	15/32x24
13X160	1/2x6
13X210	1/2x8
13X260	1/2x10
13X310	1/2x12
13X460	1/2x18
14X1000	9/16x40
14X160	9/16x6
14X210	9/16x8
14X260	9/16x10
14X310	9/16x12
14X460	9/16x18
14X610	9/16x24
15X160	19/32x6
15X210	19/32x8
15X260	19/32x10
15X460	19/32x18
16X1000	5/8x40
16X160	5/8x6
16X210	5/8x8
16X260	5/8x10
16X310	5/8x12
16X460	5/8x18
16X610	5/8x24
16X800	5/8x32
17X210	11/16x8
18X1000	23/32x40
18X200	23/32x8
18X250	23/32x10
18X300	23/32x12
18X450	23/32x18
18X600	23/32x24
19X200	24/32x8
19X450	24/32x18
20X1000	25/32x40
20X200	25/32x8
20X300	25/32x12
20X450	25/32x18
20X600	25/32x24
22X1000	7/8x40
22X250	7/8x10
22X300	7/8x12
22X450	7/8x18
22X600	7/8x24
24X250	15/16x10
24X450	31/32x18
25X1000	1"x40
25X250	1"x10
25X300	1"x12
25X450	1"x18
26X250	1-1/32x10
26X450	1-1/32x18
28X450	1-1/8x18
30X450	1-3/16x18

Taglio materiali edili / *Building materials cutting*

VELOCITÀ DI TAGLIO ESPRESSE IN GIRI AL MINUTO PER LA FORATURA NEL MURO E NEL CEMENTO

Cutting speed chart in RPM for drilling into concrete and bricks

38 

Muro
Masonry

Diametro Punta *Drill size*	3	4	5	6	8	10	12	14	16
Velocità giri/min. *Speed r.p.m.*	2000	1800	1400	1200	900	700	600	500	400

Consigli / Tips **Granito e pietre dure: ridurre la velocità del 40÷60%**
Granite and hard stones: reduce speed (-40÷60%)

VELOCITÀ DI TAGLIO ESPRESSE IN GIRI AL MINUTO NELL'IMPIEGO DELLE PUNTE UNIVERSALI "FORATUTTO"

Cutting speed chart in RPM for drilling with universal drills

39 

Foratutto
Multi-Purpose

Materiale da lavorare *Work-piece material*	**Diametro punta** / *Drill size (mm)*	
	3÷7	8÷12
	Velocità di taglio / *Cutting speed (r.p.m.)*	
Acciaio duro *Hard steel*	1800÷800	800÷500
Muro, Marmo *Masonry, Marble*	2000÷800	800÷500
Vetro, Ceramica* *Glass, Tiles*	1000÷400	400÷300
Legno, Plastica *Wood, Plastics*	1200÷600	600÷300

***Consigli** / Tips **Velocità più bassa possibile. Lubrificare con trementina**
Lowest speed possible. Use kerosene as lubricant

VELOCITÀ DI TAGLIO PER FRESE A TAZZA PER EDILIZIA A SOLA ROTAZIONE,IN FUNZIONE DEL MATERIALE DA LAVORARE

Cutting speed chart in RPM for drilling into concrete and bricks on rotation only

40 

Frese a tazza con denti in MD
Carbide tipped hole cutters

Materiale da lavorare *Work-piece material*	**Diametro fresa** / *Core bit diameter (mm)*			
	16÷35	38÷55	60÷85	100÷150
	Velocità di taglio / *Cutting speed (r.p.m.)*			
Calcestruzzo, Muro *Concrete, Masonry*	2800÷1600	1500÷1000	950÷680	580÷380
Ceramica, Marmo *Tiles, Marble*	2500÷1100	1000÷700	650÷450	400÷250
Pietra *Stone*	1800÷800	750÷500	470÷340	300÷200

VELOCITÀ DI TAGLIO PER FRESE A ROTOPERCUSSIONE PER EDILIZIA IN FUNZIONE DEL MATERIALE DA LAVORARE

Chart for percussion core bits selection and relative cutting speed in accordance with the materials to work

41 

Rotopercussione
Rotary percussion

Materiale da lavorare *Work-piece material*	**Diametro fresa** / *Core bit diameter (mm)*			
	25÷40	45÷65	70÷100	110÷130
	Velocità di taglio / *Cutting speed (r.p.m.)*			
Calcestruzzo, Muro *Concrete, Masonry*	2150÷1350	1200÷850	770÷550	500÷400
Cemento armato *Armoured concrete*	1600÷1000	900÷600	550÷400	360÷300
Pietre dure *Hard stone*	760÷470	420÷300	270÷200	170÷150

VELOCITÀ DI TAGLIO PER FRESE A TAZZA CON DENTI RIVESTITI IN CARBURO DI TUNGSTENO IN GRANI

Chart for carbide grit hole saw selection and relative cutting speed

42 

Frese a tazza con denti rivestiti in grani di carburo di tungsteno
Carbide grit hole saws

Materiale da lavorare *Work-piece material*	**Diametro fresa** / *Core bit diameter (mm)*							
	16÷20	22÷29	32÷38	44÷51	54÷60	64÷76	83÷95	102÷114
	Velocità di taglio / *Cutting speed (r.p.m.)*							
Mattoni, Ceramica *Brick, Ceramic*	500	350	260	190	160	130	100	80
Ardesia *Slate*	1200	850	650	480	400	320	260	220
Plastica rinforzata *Reinforced plastics*	1700	1200	900	670	570	450	350	300
Fibre *Fiber*	710	510	390	290	250	190	160	125

Consigli / Tips **Assicurare una continua refrigerazione ad acqua**
Keep a continuos water cooling

VELOCITÀ DI TAGLIO PER PUNTE E FRESE A TAZZA DIAMANTATE NELLA FORATURA DI PIASTRELLE IN GRES PORCELLANATO

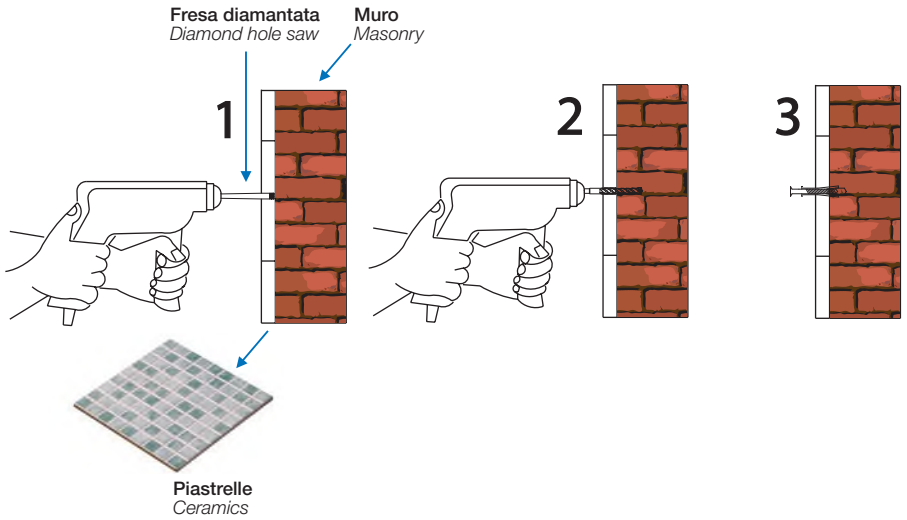
Chart for carbide grit hole saw selection and relative cutting speed for sandware

43 

Frese a tazza diamantate
Diamond core drills

Diametro fresa *Core drill diameter*	4÷6	8÷10	12÷16	18÷25	28÷35	40÷50	60÷80
Velocità giri/min. *Speed r.p.m.*	3000	2000	1500	1000	600	400	300

Consigli / Tips **Assicurare una continua refrigerazione ad acqua**
Keep a continuos water cooling



VELOCITÀ DI TAGLIO PER PUNTE PER LEGNO NELLA FORATURA DI LEGNI DURI E TENERI

Chart for woodworking drills selection and relative cutting speed into soft and hard wood

44

	Articolo *Item*	Materiale da lavorare *Work-piece material*	Velocità di taglio *Cutting speed (r.p.m.)*
	Punta per legno con punta guida a centrare *Wood working drills brad point* *Art. 05001, 05020, 05025, 05200, 05210, 05212*	legno tenero / *soft wood* legno duro / *tough wood*	800÷1400 700÷1200
	**Punta elicoidale per legno per casseformi** *Wood working drills for plankings* *Art. 05030, 05033*	legno tenero / *soft wood* legno duro / *tough wood*	700÷1200 600÷1000
	Punta a spirale tipo Lewis *Auger bits, Lewis type* *Art. 05035, 05036, 05037, 05038, 05040, 05042, 05044*	legno tenero / *soft wood* legno duro / *tough wood*	400÷1200 300÷1000

Consigli / Tips **Per articoli professionali, aumentare la velocità di +25%**
For professional use, increse cutting speed +25%

VELOCITÀ DI TAGLIO PER UTENSILI PER LEGNO NELLA FORATURA DI LEGNI DURI E TENERI

Chart for woodworking drills selection and relative cutting speed into soft and hard wood

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	Articolo *Item*	Materiale da lavorare *Work-piece material*	Velocità di taglio *Cutting speed (r.p.m.)*
	**Mecchia piatta** *Wood spade bit* *Art. 05045, 05048*	legno tenero / *soft wood* legno duro / *tough wood*	500-1500 400-1300
	**Mecchia regolabile** *Expansive wood bit* *Art. 050503*	legno tenero / *soft wood* legno duro / *tough wood*	400-1300 300-1200
	**Frese Forstner in WS** *Wood center bits, forstner type (WS)* *Art. 05063, 05067*	legno tenero / *soft wood* legno duro / *tough wood*	600-2000 500-1700
	**Frese Forstner in MD** *Wood center bits, forstner type (HM)* *Art. 05065*	legno tenero / *soft wood* legno duro / *tough wood*	800-2200 700-2000

VELOCITÀ DI TAGLIO PER FRESE A TAZZA NELLA FORATURA DI LEGNI DURI E TENERI

Chart for hole saws selection and relative cutting speed into soft and hard wood

46

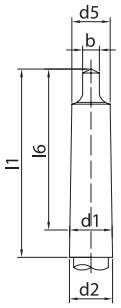
	Articolo *Item*	Materiale da lavorare *Work-piece material*	Velocità di taglio *Cutting speed (r.p.m.)*
	**Frese a tazza** *Hole saws for wood* *Art. 05078*	legno tenero / *soft wood* legno duro / *tough wood*	300-600 200-500

DIMENSIONI CARATTERISTICHE DEI CONI MORSE IN ACCORDO ALLA NORMA DIN 228

Morse taper drill chucks dimensions in accordance with the DIN 228 standards

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Coni morse
Morse taper



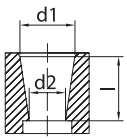
Cono Morse	*l 1* mm	*l 6* mm	*d1* mm	*d5* mm	*b* mm	*d2* mm	*Conicità* %
0	59,5	56,5	9,045	6,1	3,9	9,2	5,205
1	65,5	62,0	12,065	9,0	5,2	12,2	4,988
2	80,0	75,0	17,780	14,0	6,3	18,0	4,995
3	99,0	94,0	23,825	19,1	7,9	24,1	5,020
4	124,0	117,5	31,267	25,2	11,9	31,6	5,194
5	156,0	149,5	44,339	36,5	15,9	44,7	5,263
6	218,0	210,0	63,348	52,4	19,0	63,8	5,214

DIMENSIONI CARATTERISTICHE DEI CONI DI ATTACCO DEI MANDRINI IN ACCORDO ALLE NORME DIN 238 E JACOBS®

Taper drill chucks dimensions in accordance with the DIN 238 standards and Jacobs®

48

Coni di attacco dei mandrini
Taper drill chuck shank



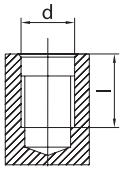
Tipo di norma	*Cono del mandrino*	*d1* mm	*d2* mm	*l* mm
DIN 238	B6	6,35	5,85	10,0
	B10	10,094	9,4	14,5
	B12	12,065	11,1	18,5
	B16	15,733	14,5	24,0
	B18	17,780	16,2	32,0
	B22	21,793	19,8	40,5
	B24	23,825	21,3	50,5
JACOBS	J0	6,350	5,803	11,11
	J1	9,754	8,468	16,67
	J2	14,2	12,39	22,23
	J2 corto	13,94	12,39	19,05
	J33	15,85	14,24	25,4
	J6	17,17	15,85	25,4
	J3	20,6	18,95	30,96
	J4	28,55	26,35	42,07

DIMENSIONI CARATTERISTICHE DEGLI ATTACCHI FILETTATI DEI MANDRINI

Thread drill chucks dimensions

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Attacchi filettati dei mandrini
Threaded drill chuck shank



Tipo	*Classe*	*d* mm	*Passo* mm	*l* mm
3/8” x 24 UNF	3B	9,525	1,058	14,5
1/2” x 20 UNF	3B	12,700	1,270	16,0
5/8” x 16 UNF	3B	15,875	1,588	19,0
3/4” x 16 UNF	3B	19,050	1,588	19,0
M14 x 2	MA	14,00	2,00	19,0
M18 x 2.5	MA	18,00	2,50	19,0

VALORI DI TOLLERANZA ESPRESSI IN MM IN FUNZIONE DEL DIAMETRO DELL'UTENSILE

Tolerance values according to the tool diameter

50

Gradi di tolleranza *Tolerance grade*	Diametro dell'utensile (mm) / *Tool diameter (mm)*					
	0÷3	**3÷6**	**6÷10**	**10÷18**	**18÷30**	**30÷50**
h8 (toll. costruttiva delle punte per metallo in acciaio superrapido rettificate) *Production tolerance of hss ground twist drills*	0 -0,014	0 -0,018	0 -0,022	0 -0,027	0 -0,027	0 -0,039
H10 (toll. minima sul foro creato dalle punte per metallo rettificate) *Minimum tolerance of the hole made by ground twist drills*	+0,040 0	+0,048 0	+0,058 0	+0,070 0	+0,070 0	+0,100 0
H12 (toll. massima sul foro creato dalle punte per metallo rettificate) *Maximum tolerance of the hole made by ground twist drills*	+0,100 0	+0,120 0	+0,150 0	+0,180 0	+0,180 0	+0,250 0
h7 (toll. costruttiva delle punte in metallo duro) *Production tolerance of carbide twist drills*	0 -0,010	0 -0,012	0 -0,015	0 -0,018	0 -0,018	0 -0,025
h10 (toll. costruttiva di svasatori e frese frontali in metallo duro) *Production tolerance of carbide end mills and deburring tools*	0 -0,040	0 -0,048	0 -0,058	0 -0,070	0 -0,070	0 -0,100
G6 (toll. sul filetto creato dai maschi sovradimensionati in acciaio superrapido) *Production tolerance of the thread made by hss oversized taps*	+0,008 +0,002	+0,012 +0,004	+0,014 +0,005	+0,017 +0,006	+0,017 +0,006	+0,025 +0,009
G7 (toll. sul filetto creato dai maschi sovradimensionati in acciaio superrapido) *Production tolerance of the thread made by hss oversized taps*	+0,012 +0,002	+0,016 +0,004	+0,020 +0,005	+0,024 +0,006	+0,024 +0,006	+0,034 +0,009
H7 (toll. sul foro creato dagli alesatori) *Tolerance of the hole made by the reamers*	+0,010 0	+0,012 0	+0,015 0	+0,018 0	+0,018 0	+0,025 0
e8 (toll. costruttiva delle frese frontali in acciaio superrapido) *Production tolerance of hss end mills*	-0,014 -0,028	-0,020 -0,038	-0,025 -0,047	-0,032 -0,059	-0,032 -0,059	-0,050 -0,089
k10 (toll. costruttiva delle frese frontali in acciaio superrapido) *Production tolerance of hss end mills*	+0,040 0	+0,048 0	+0,058 0	+0,070 0	+0,070 0	+0,100 0
k12 (toll. costruttiva delle frese frontali in acciaio superrapido) *Production tolerance of hss end mills*	+0,100 0	+0,120 0	+0,150 0	+0,180 0	+0,180 0	+0,250 0

Nota: I gradi di tolleranza IT5÷IT13 sono idonei agli usuali accoppiamenti meccanici
IT5÷IT13 tolerance range are suitable for the common mechanical coupling

TABELLA DI CONVERSIONE DELLE DUREZZE (ROCKWELL E VICKERS) E DI COMPARAZIONE CON I VALORI DI RESISTENZA A TRAZIONE

Hardness (Rockwell and Vickers) and traction resistance conversion chart

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HV *Vickers hardness*	**HRC** *Rockwell hardness*	**Carico di resistenza** *Tensile strength Carbon steel* (N/mm^2)	**Carico di resistenza** *Tensile strength Stainless steel* (N/mm^2)
940	68		
920	67,5		
900	67	2521	2374
880	66,4		
864	66		
860	65,9		
840	65,3		
829	65	2413	2276
820	64,7		
800	64		
782	63,5		
780	63,3		
773	63	2305	2178
760	62,5		
745	62		
740	61,8		
737	61,7	2217	2089
720	61		
700	60,1		
698	60		
690	59,7	2119	2001
680	59,2		
675	59		
670	58,8		
667	58,7		
660	58,3		
655	58	2040	1923
650	57,8		
639	57		

HV *Vickers hardness*	**HRC** *Rockwell hardness*	**Carico di resistenza** *Tensile strength Carbon steel* (N/mm^2)	**Carico di resistenza** *Tensile strength Stainless steel* (N/mm^2)
630	56,8		
620	56,3		
615	56	1962	1854
610	55,7		
600	55,2		
596	55		
590	54,7	1883	1785
580	54,1		
570	53,6		
569	53,5		
560	53	1815	1707
550	52,3		
547	52,1		
544	52		
540	51,7		
530	51,1		
528	51	1746	1648
520	50,5		
510	49,8		
508	49,6		
500	49,1		
491	48,5	1628	1540
490	48,4		
480	47,7		
472	47,1	1560	1481
470	46,9		
460	46,1		
455	45,7	1511	1432
450	45,3		

Nota: la durezza è la misura della resistenza di un materiale alla deformazione plastica. Si misura valutando l'area dell'impronta che lascia un penetratore sottoposto a un carico specifico. Il penetratore è una piramide di diamante con angolo al vertice di 136° per la durezza Vickers, mentre è un cono di diamante con angolo al vertice di 120° per la durezza Rockwell. / *Note: hardness is the measure of material strenght to plastic deformation. Push the indenter against the material at a certain load and measure the impression area to find the hardness value. The indenter can be a diamond pyramid with 136° angle at the top for Vickers hardness test or it can be a diamond cone with 120° angle at the top for Rockwell hardness test.*

SCALA MOHS DI DUREZZA

Mohs hardness scale

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Valore di durezza *Mohs value*	1	2	3	4	5	6	7	8	9	10
Materiali *Materials*	Talco *Talc*	Gesso *Gypsum*	Calcite *Calcite*	Fluorite *Fluorite*	Apatite *Apatite*	Ortoclasio *Orthoclase*	Quarzo *Quartz*	Topazio *Topaz*	Corindone *Corundum*	Diamante *Diamond*

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CONDIZIONI GENERALI DI VENDITA

Le condizioni di seguito riportate si intendono accettate dal committente in fase di ordinazione.

1. ORDINI: con il conferimento dell'ordine si intendono approvate dal committente tutte le condizioni di vendita in vigore, salvo accordi particolari accettati dai contraenti. Tutti gli ordini sono irrevocabili da parte del committente ma potranno non essere da noi evasi a nostro insindacabile giudizio e senza obbligo di comunicazione o giustificazione. Nell'ordine è necessario specificare il codice dell'articolo.
2. PREZZI: i prezzi si intendono per merce franco nostro magazzino (imballo, iva, trasporto esclusi) e non sono impegnativi. I prezzi che avranno valore saranno quelli in vigore al momento della spedizione.
3. IMBALLO: gratuito, salvo specifiche richieste del committente, che verranno fatturate al costo.
4. SPEDIZIONE: verrà effettuata come segue:
a) a mezzo nostro corriere di fiducia, in porto franco con addebito in fattura, in tal caso la merce sarà parzialmente assicurata** (vedere punto 10 dell'elenco);
b) a corriere di fiducia del committente: la resa sarà franco nostro stabilimento di Monticello e la merce viaggia a totale rischio e pericolo del committente. Pertanto in caso di ritardi, ammanchi, avaria, furti, etc. i reclami devono essere indirizzati al Vettore, solo ed unico responsabile.
5. CONSEGNE: il termine di consegna, qualora venisse indicato, è puramente indicativo e pertanto solleva la nostra società da ogni qualsivoglia rivalsa.
6. RECLAMI: debbono pervenire per iscritto entro 8 giorni dalla data di ricevimento merce. Trascorso tale termine, i reclami non verranno accettati. I reclami di qualsiasi natura non sospendono l'obbligo di effettuare i pagamenti nella forma convenuta. L'acquirente, nel caso che la merce sia da noi ritenuta non idonea, ha diritto esclusivamente alla sostituzione della stessa o all'accredito dell'importo. Ogni altro tipo di indennizzo si intende privo di valore. Per qualsiasi contestazione si elegge unico foro competente quello del Tribunale di Lecco.
7. RESI: ogni reso o sostituzione dovrà essere preventivamente autorizzato da KRINO SPA. La merce sarà accettata di ritorno, salvo verifica all'arrivo in magazzino. Questa dovrà essere inviata in porto franco e accompagnata dalla bolla di consegna con indicati gli estremi della fattura con la quale è stata precedentemente fornita.
8. PAGAMENTI: debbono essere effettuati esclusivamente alla nostra sede, secondo le forme concordate. Nel caso di ritardato pagamento, verranno addebitati gli interessi bancari dalla data di scadenza concordata sino all'avvenuto pagamento, maggiorati delle eventuali spese accessorie.
9. CARATTERISTICHE DEI PRODOTTI: le immagini contenute nel presente catalogo sono puramente indicative, pertanto la nostra azienda si riserva il diritto di apportare modifiche migliorative dei prodotti senza nessun obbligo di preavviso.

LA RIPRODUZIONE ANCHE PARZIALE DEL PRESENTE CATALOGO È VIETATA

10. VALORE DELL'ORDINE: la spedizione verrà effettuata come segue:
- ordini singoli (non cumulabili) di importo superiore a Euro 600,00: spedizione in porto franco a mezzo nostro corriere di fiducia;
- ordini singoli (non cumulabili) di importo inferiore ad Euro 600,00: spedizione in porto franco con addebito in fattura di Euro 10,00;
- ordini singoli (non cumulabili) di importo inferiore ad Euro 100,00: spedizione in porto franco con addebito in fattura di Euro 10,00 + addebito di € 10 per oneri gestionali.

Riepilogando:

Valore ordine	Trasporto / Addebito	Oneri gestionali
Maggiore di Euro 600,00	Porto Franco	-
Minore di Euro 600,00	Euro 10,00	-
Minore di Euro 100,00	Euro 10,00	Euro 10,00

GENERAL SALES CONDITIONS

1. ORDERS: when an order is placed, all conditions are automatically accepted by the client. The order is irrevocable but we reserve the right to accept it. All orders should specify the items numbers.
2. PRICES: all prices are ex works (packing, VAT and freight excluded).
3. PACKAGING: is free, a part of special requirements extra charged.
4. SHIPMENT: It can be CIF with invoice charge, by parcel post or with a forwarding agent suggested by the customer.
5. DELIVERY TIME: is purely indicative.
6. CLAIMS: They should be notified within 8 days from the date of goods receipt. We shall only arrange free replacement of the tools acknowledged as defective ones by us. In case of dispute, the Civil Court of LECCO will be competent.
7. GOODS RETURNED: Any goods return should be authorized by us.
8. PAYMENTS: to be made directly to our head office. In case of late payment, we charge the bank interest rate, including additional expenses.
9. PRODUCTS CARACTERISTICS: The images of this catalogue are purely indicatives, we reserve the right to make modifications without any notice.
THE REPRODUCTION OF THIS CATALOGUE IS PROHIBITED.
Any clause contained into your order sheets which is in contrast with the above mentioned conditions it is not valid.

CONDITIONS GENERAL DE VENTE

1. COMMANDES: Chaque commande envoyée accepte automatiquement nos conditions de vente. Les commandes sont irrévocables mais nous nous réservons le droit de les accepter. Dans les commandes signalez les codes des références.
2. PRIX: Les prix sont pour marchandise franco départ (emballage, VAT et transport exclus).
3. EMBALLAGE: gratuit, sauf spécifique demande du client et qui sera chargée sur la facture.
4. EXPEDITION: CIF avec charge sur facture, par plis postal ou par le transporteur du client.
5. DELAI DE LIVRAISON: Le délai est seulement indicatif.
6. RECLAMATIONS: Ils doivent être notifiés par écrit dans 8 jours de la date de réception de la marchandise. Ils seront pris en considération si les outils seront reconnues pour nous défectueux. Le Tribunal de LECCO sera compétent en cas de n'importe quelle contestation.
7. MERCHANDISE RENDUE: Chaque envoi doit être autorisé par nous.
8. PAIEMENTS: devront parvenir exclusivement à notre siège en respect des accords pris. En cas de
retards nous débiterons les intérêts de banque et tous les frais accessoires.
9. CARACTERISTIQUES DES PRODUITS: Les images contenues dans ce catalogue là sont indicatives. Notre société se réserve le droit d'apporter des modifications aux produits sans aucune notification.
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n'est pas valable.

CONDICIONES GENERALES DE VENTA

1. PEDIDOS: con el envio del pedido el cliente acepta automáticamente todas las condiciones de venta.
2. PRECIOS: Los precios son porte debidos (embalajes, IVA y transporte excluidos)
3 EMBALAJE: gratuito. salvo embalaje especial cargado en factura.
4. PORTES: Pagado con cargo en factura, paquete postal, con trasportista del cliente.
5. PLAZO DE ENTREGA: aproximado
6. RECLAMACIONES: Se atenderán todas aquellas reclamaciones que se planten dentro del plazo de los 8 días siguientes a la recepción del material y comunicados sus discrepancias. En caso de litigio el fuero competente es el Tribunal de Lecco.
7. DEVOLUCIONES DE MATERIAL: Es obligatoria autorización de la Empresa para devolución del material.
8. PAGO: El pago debe ser enviado directamente a nuestra casa central.
9. CARACTERISTICAS DE LOS PRODUCTOS: Las imagines de este catalogo son indicativas. Nos reservamos el derecho de modificar cualquier articulo sin previo aviso.
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