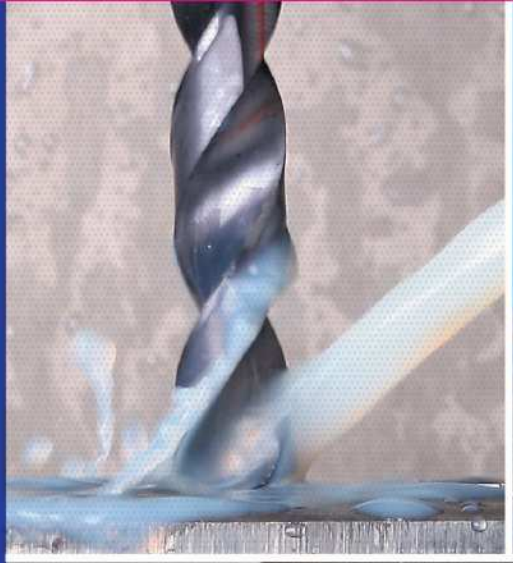
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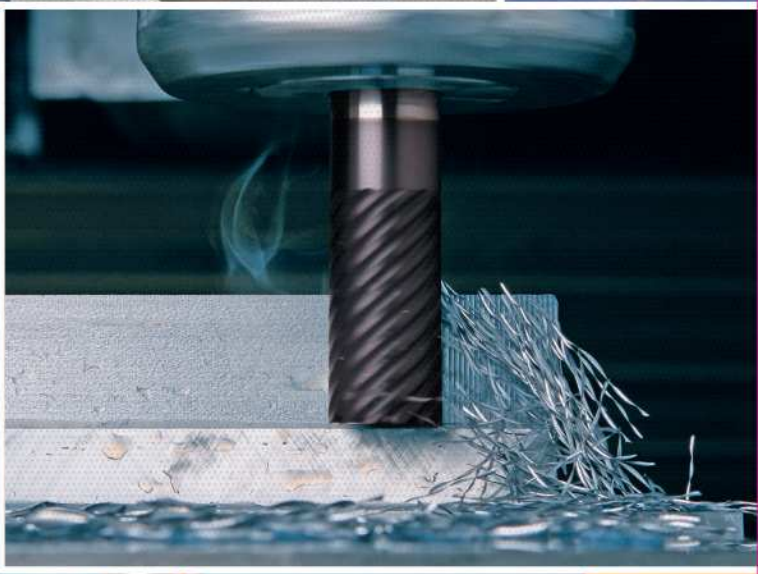
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UTENSILI DA TAGLIO
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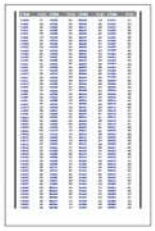
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NEW



Ou / Or

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Ou / Or

GAMME RANGE



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Pricelist N°01.2017

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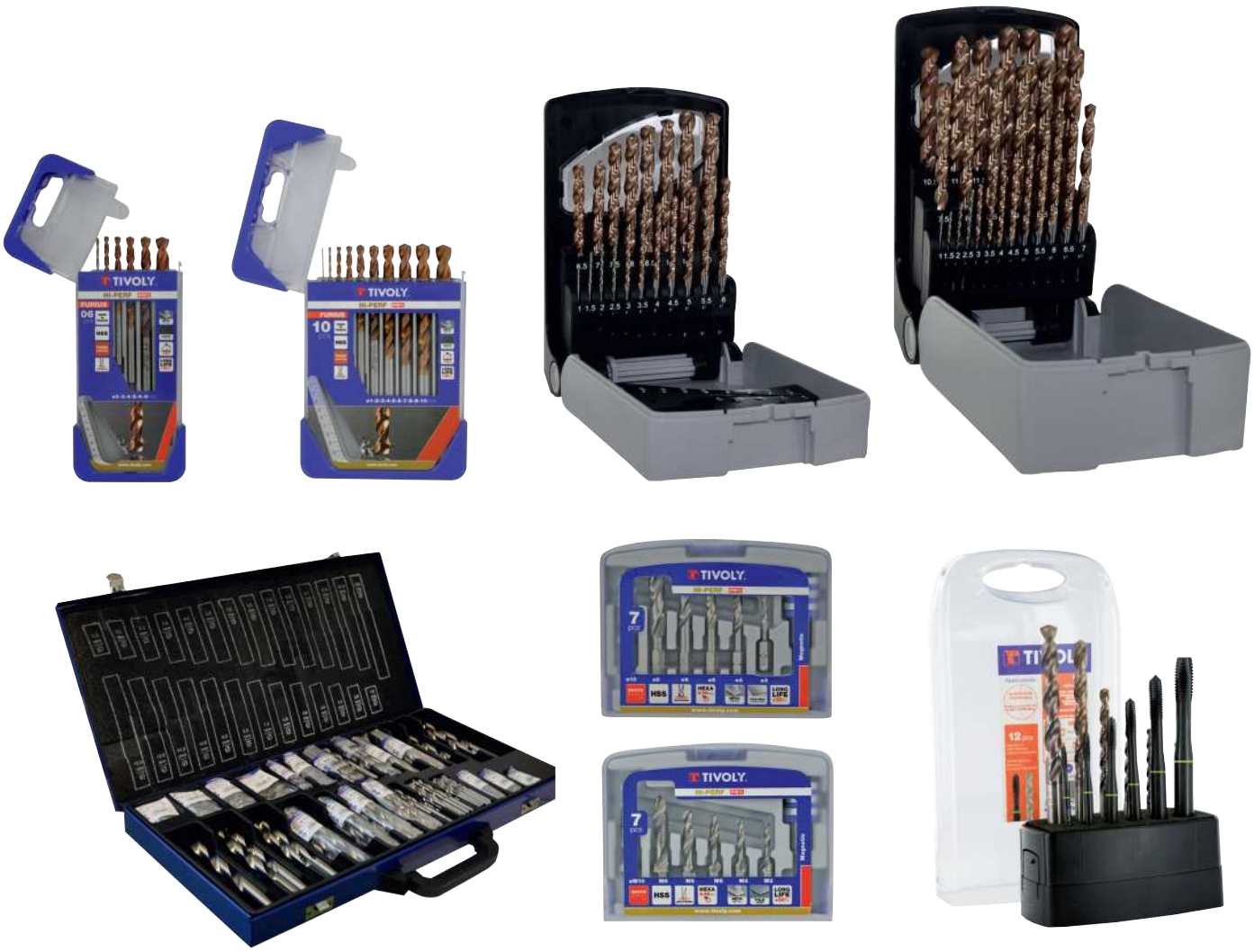
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DESIGNER & MANUFACTURER

CUTTING TOOLS & POWER TOOL ACCESSORIES

Created in 1917 in Tours-en-Savoie, TIVOLY® today is a global player in our domain with a presence on three continents.

Organized in business units, TIVOLY® covers three primary markets:

- Public, do it yourself building, with a complete line of quality tools and power tool accessories,
- Professional, marketing to the industrial and professional tradesman with a recognized quality and innovative brand of cutting tools,
- Industrial, working with mechanical and production lines with a technological base, composed of standard, special, and custom tools on demand.

TIVOLY® is recognized for our innovation and the quality of the offered products and services we offer, but also as an active participant in a globally clean environment ■

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HERRAMIENTAS DE CORTE Y ACCESORIOS PARA HERRAMIENTA ELECTROPORTÁTIL

Creado en 1917 en Tours-en-Savoie, TIVOLY® es hoy una de las principales organizaciones de dimensión mundial en su sector, con presencia en tres continentes.

Organizado en Unidades de Negocio, TIVOLY® se dirige a 3 mercados principalmente:

- Particular, mercado del Bricolaje, con una completa gama de herramientas y accesorios para herramienta electroportátil,
- Profesional, mercado del suministro industrial y la ferretería con una oferta de herramientas de corte reconocida por su calidad e innovación,
- Industrial, mercado de la producción, con una oferta tecnológica compuesta por herramienta estándar y especial ¨bajo pedido¨.

TIVOLY® quiere ser reconocido por la innovación y la calidad de sus productos, pero también, por contribuir activamente a la mejora del medio ambiente ■

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Organizzato in Business Unit, Tivoly® è presente su tre mercati principali:

- Bricolage, il mercato fai da te, con una gamma completa di utensili qualitativi e accessori per macchine utensili,
- Mercato professionale per la fornitura industriale e artigianale, con un offerta di utensili da taglio riconosciuta per la sua qualità e innovazione,
- Industriale, mercato della meccanica di produzione con un offerta tecnologia, composta da utensili standard e speciali "su misura".

Tivoly® ha l'ambizione di essere riconosciuta per la sua innovazione e la qualità della sua gamma prodotti e servizi, ed anche per il suo contributo nel rispetto dell'ambiente ■








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HERRAMIENTAS DE CORTE

UTENSILI DA TAGLIO

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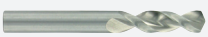
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HERRAMIENTAS DE CORTE
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HSS bits | Brocas HSS | Punte HSS

Item	Packshot	Designation	Application	Rge	Page
RK **9020051**		RK | HSS Roll forged stub length drill. RK | Broca HSS laminada cilíndrica extracorta. RK | Punta HSS laminata cilindrica extra-corta .	A	1>12	50
T **1140261**		HSS fully ground stub length drill | T LINE Broca HSS rectificada cilíndrica serie extra-corta | T LINE Punta HSS cilindrica extra-corta | T LINE	AB IJ	1>13	51
TEK **1140251**		TEK | HSS fully ground stub length drill. TEK | Broca HSS rectificada cilíndrica serie extra-corta. TEK | Punta HSS cilindrica extra-corta.	AB C H	1>20	52
TXD **1140271**		TXD | HSS fully ground double ended stub length drill TXD | Broca HSS rectificada doble punta. TXD | Punta HSS cilindrica doppio taglio.	AB C H	2>10	53
TPX **1143741**		TPX | HSS fully ground stub length drill. TPX | Broca HSS rectificada cilíndrica. TPX | Punta HSS cilindrica con cuspide per lamiera.	AB	3>10	54
MICRO-DRILL **8140321**		HSS fully ground micro drill. Micro-Broca HSS rectificada cilíndrica. Micro-punta cilindrica HSS gambo rinforzato.	AB IJ	0,15>1,45	55
TC **1140281**		HSSE5 fully ground stub length drill | T LINE Broca HSSE5 rectificada cilíndrica serie extra-corta | T LINE Punta HSSE5 cilindrica extra-corta | T LINE	AB C	2>10	57
PHOENIX **8140291**		PHOENIX | HSSE5 fully ground stub length drill. Type S PHOENIX | Broca HSSE5 rectificada cilíndrica serie extra-corta. Tipo S PHOENIX | Punta HSSE5 cilindrica extra-corta | Tipo S	AB C FGH	2>20	58
PHOENIX TiAlN **8143911**		PHOENIX | HSSE5 TiAlN fully ground stub length drill. Type S PHOENIX | Broca HSSE5 TiAlN rectificada cilíndrica serie extra-corta. Tipo S PHOENIX | Punta HSSE5 TiAlN cilindrica extra-corta | Tipo S	AB C FGH	2>20	60
LAZER 8% Co. **8140311**		HSS-E8 (M42) fully ground stub length drill. Broca HSS-E8 (M42) rectificada cilíndrica extra-corta Punta HSS-E8 cilindrica extra-corta. Tipo N	ARCo ARNi Ti	2>16	62
R **9020011**		R | HSS roll forged jobber length drill. R | Broca HSS laminada cilíndrica. Serie corta. R | Punta laminata cilindrica corta.	A	0,5>20	64
19 pcs **90200170002**		Set | E Estuche | E Cassetta | E	A		66
25 pcs **90200170003**		Set | G Estuche | G Cassetta | G	A		66
RRS **9020021**		RRS | HSS roll forged jobber length drill. Reduced shank. RRS | Broca HSS laminada cilíndrica. Serie corta. Mango reducido. RRS | Punta HSS laminata cilindrica corta | gambo ridotto.	A	13>20	67
RECTIF **1145101**		RECTIF | HSS jobber length drill | T LINE RECTIF | Broca HSS cilíndrica. Serie corta | T LINE RECTIF | Punta HSS cilindrica corta | T LINE	A	1>13	68
19 pcs **11451070015**		Set | E | RECTIF Estuche | E | RECTIF Cassetta | E | RECTIF	A		69
25 pcs **11451070017**		Set | G | RECTIF Estuche | G | RECTIF Cassetta | G | RECTIF	A		69
170 pcs **11451070024**		Set | V170 | RECTIF Estuche | V170 | RECTIF Cassetta | V170 | RECTIF	A		69
222 pcs **11451070026**		Set | V222 | RECTIF Estuche | V222 | RECTIF Cassetta | V222 | RECTIF	A		69

HSS bits | Brocas HSS | Punte HSS

Item	Packshot		Designation	Application	Rge	Page
T **1145201**			T | HSS fully ground jobber length drill | T LINE T | Broca HSS rectificada cilíndrica. Serie corta | T LINE T | Punta HSS cilindrica corta | T LINE	A B	0,5>13	70
19 pcs **11452070015**			Set | E | T Estuche | E | T Cassetta | E | T	A B		71
25 pcs **11452070017**			Set | G | T Estuche | G | T Cassetta | G | T	A B		72
91 pcs **11452070008**			Set | J | T Estuche | J | T Cassetta | J | T	A B		72
6 pcs **1143784**			T | HSS METAL DRILL BIT | fully ground, reduced shank drill. Split point T | 'BROCA metal HSS / rectificada Mango cilíndrico reducido corta. Punta en cruz. T | PUNTA METALLO HSS | Codolo cilindrico ridotto, affilatura a croce.	 	12-25	73
TSX **1145301**			TSX | HSS fully ground jobber length drill TSX | Broca HSS rectificada cilíndrica. Serie corta TSX | Punta HSS cilindrica corta. Tipo N	A B	0,2>25	74
19 pcs **11453070015**			TSX | HSS fully ground jobber length drill TSX | Broca HSS rectificada cilíndrica. Serie corta TSX | Punta HSS cilindrica corta. Tipo N	A B		77
25 pcs **11453070017**			TSX | HSS fully ground jobber length drill TSX | Broca HSS rectificada cilíndrica. Serie corta TSX | Punta HSS cilindrica corta. Tipo N	A B		77
170 pcs **11453070024**			TSX | HSS fully ground jobber length drill TSX | Broca HSS rectificada cilíndrica. Serie corta TSX | Punta HSS cilindrica corta. Tipo N	A B		77
222 pcs **11453070026**			TSX | HSS fully ground jobber length drill TSX | Broca HSS rectificada cilíndrica. Serie corta TSX | Punta HSS cilindrica corta. Tipo N	A B		77
001 **1140011**			001 | HSS fully ground jobber length drill. 001 | Broca HSS rectificada cilíndrica serie corta. 001 | Punta cilindrica corta. Tipo N.	AB C H	0,2>20	78
19 pcs **11400170015**			Set | E | 001 Estuche | E | 001 Cassetta | E | 001	AB C H		81
25 pcs **11400170017**			Set | G | 001 Estuche | G | 001 Cassetta | G | 001	AB C H		81
32 pcs **11400170009**			Set | F | 001 Estuche | F | 001 Cassetta | F | 001	AB C H		81
41 pcs **11400170011**			Set | D | 001 Estuche | D | 001 Cassetta | D | 001	AB C H		81
51 pcs **11400170010**			Set | C | 001 Estuche | C | 001 Cassetta | C | 001	AB C H		82
91 pcs **11400170008**			Set | J | 001 Estuche | J | 001 Cassetta | J | 001	AB C H		82
1140041			001RS | HSS fully ground jobber length drill. Reduced shank 001RS | Broca HSS rectificada cilídrica. Serie Corta. Mango reducido. 001RS | Punta HSS cilindrica corta. Tipo N | gambo ridotto.	AB C H	13>25	83
ALTAÏS **8140031**			ALTAIS | HSS fully ground jobber length drill. Elliptic point. ALTAIS | Broca HSS rectificada cilíndrica. Serie Corta. Afilado elíptico. ALTAIS | Punta HSS cilindrica corta. Tipo N | affilatura ellittica.	AB C H	0,2>16	84

HSS bits | Brocas HSS | Punte HSS

Item	Packshot	Designation	Application	Rge	Page
LEFT HAND **8140061**		LH | HSS fully ground jobber length drill. Left hand LH | Broca HSS rectificada cilíndrica. Serie Corta. Izquierda. LH | Punta HSS cilindrica corta. Tipo N | taglio sinistro	AB C IJ	1>16	86
FURIUS **1145411**		FURIUS | HSS FUSIO fully ground jobber length drill. Split point. FURIUS | Broca HSS FUSIO rectificada cilíndrica corta. Punta en cruz. FURIUS | Punta FURIUS HSS FUSIO cilindrica corta. Tipo N, affilatura a croce.	AB C IJ	0,5>13	87
FURIUS **1145416**		FURIUS | HSS FUSIO fully ground jobber length drill. Split point. FURIUS | Broca HSS FUSIO rectificada cilíndrica corta. Punta en cruz. FURIUS | Punta FURIUS HSS FUSIO cilindrica corta. Tipo N, affilatura a croce.	AB C IJ	1-13	88
FURIUS **1145414**		FURIUS | HSS FUSIO fully ground jobber length drill. Split point. FURIUS | Broca HSS FUSIO rectificada cilíndrica corta. Punta en cruz. FURIUS | Punta FURIUS HSS FUSIO cilindrica corta. Tipo N, affilatura a croce.	AB C IJ	1-13	89
10 pcs **11454170004**		CLIPSTER | 10 | FURIUS CLIPSTER | 10 | FURIUS CLIPSTER | 10 | FURIUS	AB C IJ		89
6 pcs **11454170005**		CLIPSTER | 6 | FURIUS CLIPSTER | 6 | FURIUS CLIPSTER | 6 | FURIUS	AB C IJ		89
13 pcs **11454170006**		CLIPSTER | 13 | FURIUS CLIPSTER | 13 | FURIUS CLIPSTER | 13 | FURIUS	AB C IJ		90
25 pcs **11454170002**		Set | BUMPER | FURIUS Estuche | BUMPER | FURIUS Cassetta | BUMPER | FURIUS	AB C IJ		90
19 pcs **11454170015**		Set | E | FURIUS Estuche | E | FURIUS Cassetta | E | FURIUS	AB C IJ		90
25 pcs **11454170017**		Set | G | FURIUS Estuche | G | FURIUS Cassetta | G | FURIUS	AB C IJ		90
32 pcs **11454170009**		Set | F | FURIUS Estuche | F | FURIUS Cassetta | F | FURIUS	AB C IJ		91
41 pcs **11454170010**		Set | C | FURIUS Estuche | C | FURIUS Cassetta | C | FURIUS	AB C IJ		91
51 pcs **11454170011**		Set | D | FURIUS Estuche | D | FURIUS Cassetta | D | FURIUS	AB C IJ		91
91 pcs **11454170008**		Set | J | FURIUS Estuche | J | FURIUS Cassetta | J | FURIUS	AB C IJ		91
CUT ALU **1140071**		HSS fully ground jobber length drill. S W type. Broca HSS rectificada cilíndrica corta. Tipo S W. Punta HSS cilindrica corta. Tipo S/W per alluminio.	K L	0,8>13	92
MINI-DRILL **8143991**		HSSE5 fully ground jobber length drill | 4 facet point Broca HSSE5 rectificada cilíndrica serie corta. 4 caras. Punta HSSE5 corta. 4 listelli.	AB CD FGH	0,8>2,45	93
MINI-DRILL **8144031**		HSSE5 (TiAlN) fully ground jobber length drill | 4 faces. Broca HSSE5 (TiALN) rectificada cilíndrica serie corta. 4 caras. Punta HSSE5 TiAlN corta. 4 listelli.	AB CD FGH	0,8>2,45	94
TC **1145501**		TC | HSSE5 fully ground jobber length drill TC | Broca HSSE5 rectificada cilíndrica. Serie corta TC | Punta HSSE5 cilindrica corta. Tipo N	A B C	1>13	95
TC **1145504**		TC | HSSE5 fully ground jobber length drill TC | Broca HSSE5 rectificada cilíndrica. Serie corta TC | Punta HSSE5 cilindrica corta. Tipo N		1-13	96

HSS bits | Brocas HSS | Punte HSS

Item	Packshot		Designation	Application	Rge	Page
19 pcs **11455070015**			Set | E | TC Estuche | E | TC Cassetta | E | TC	A B C		97
25 pcs **11455070017**			Set | G | TC Estuche | G | TC Cassetta | G | TC	A B C		97
TECHNIC metal **1145561**			TC | HSSE5 fully ground jobber length drill. Reduced shank TC | Broca HSSE5 rectificada cilíndrica. Serie Corta. Mango reducido TC | Punta HSSE5 cilindrica corta. Tipo N | gambo ridotto	A B C	14>20	98
CUTINOX 4F **1145581**			CUTINOX 4F | HSSE5 fully ground jobber length drill. 4 facet point. CUTINOX 4F | Broca HSSE5 rectificada cilíndrica corta.4 caras. CUTINOX 4F | Punta HSSE5 cilindrica corta | Tipo N | 4 listelli.	F G H	0,8>13	99
19 pcs **11455870015**			Set | E | CUTINOX 4F Estuche | E | CUTINOX 4F cassetta | E | CUTINOX 4F	H F G		101
25 pcs **11455870017**			Set | G | CUTINOX 4F Estuche | G | CUTINOX 4F cassetta | G | CUTINOX 4F	H F G		101
TBX 4F **1145611**			TBX 4F | HSSE5 BLADE fully ground jobber length drill. 4 facet point. TBX 4F | Broca HSSE5 BLADE rectificada cilíndrica corta.4 caras. TBX 4F | Punta HSSE5 BLADE cilindrica corta, Tipo N, 4 listelli.	C H	1>20	102
TBX 4F **1145614**			TBX 4F | HSSE5 BLADE fully ground jobber length drill. 4 facet point. TBX 4F | Broca HSSE5 BLADE rectificada cilíndrica corta.4 caras. TBX 4F | Punta HSSE5 BLADE cilindrica corta, Tipo N, 4 listelli.	C H	3-13	103
TBX 4F **1145616**			TBX 4F | HSSE5 BLADE fully ground jobber length drill. 4 facet point. TBX 4F | Broca HSSE5 BLADE rectificada cilíndrica corta.4 caras. TBX 4F | Punta HSSE5 BLADE cilindrica corta, Tipo N, 4 listelli.	C H	3-8	104
19 pcs **11456170015**			Set | E | TBX 4F Estuche | E | TBX 4F cassetta | E | TBX 4F	C H		104
25 pcs **11456170017**			Set | G | TBX 4F Estuche | G | TBX 4F cassetta | G | TBX 4F	C H		104
PHOENIX **8140121**			PHOENIX | HSSE5 fully ground jobber length drill. Type S PHOENIX | Broca HSSE5 rectificada cilíndrica serie corta. Tipo S PHOENIX | Punta HSSE5 cilindrica corta. Tipo S	AB C FGH	0,8>13	105
PHOENIX **8143921**			PHOENIX | HSSE5 TiAlN fully ground jobber length drill. Type S PHOENIX | Broca HSSE5 TiAlN rectificada cilíndrica serie corta. Tipo S PHOENIX | Punta HSSE5 TiAlN cilindrica corta. Tipo S	AB C FGH	0,8>13	107
LAZER 8% Co. **8140161**			LAZER | HSS-E8 (M42) fully ground jobber length drill. LAZER | Broca HSS-E8 (M42) rectificada cilíndrica corta LAZER | Punta HSS-E8 cilindrica corta. Tipo N | Tipo N	ARCo ARNi Ti	2>16	109
19 pcs **81401670015**			Set | E | LAZER Estuche | E | LAZER Cassetta | E | LAZER	ARCo ARNi Ti		111
25 pcs **81401670017**			Set | G | LAZER Estuche | G | LAZER Cassetta | G | LAZER	ARCo ARNi Ti		111
R | SL **9020031**			HSS Roll forged long series drill. Broca HSS laminada cilíndrica. Serie larga. Punta HSS laminata cilindrica lunga.	A	2>15	112
T | SL **1140561**			HSS fully ground long series drill | T LINE Broca HSS rectificada cilíndrica serie larga | T LINE Punta HSS cilindrica lunga. Tipo N | T LINE	A B	1>13	113
001 | SL **1140331**			HSS fully ground long series drill. Broca HSS rectificada cilíndrica serie larga. Punta HSS cilindrica lunga. Tipo N.	AB C H	1>20	114

HSS bits | Brocas HSS | Punte HSS

Item	Packshot		Designation	Application	Rge	Page
TSX | SL **1140361**			HSS fully ground long series drill. S Typ Broca HSS rectificada cilíndrica. Serie larga. Tipo S Punta HSS cilindrica lunga. Tipo S | 1/3 2/3.	C D	2>13	116
CUTALU | SL **1140381**			CUTALU | HSS fully ground long series drill. SW Type CUTALU | Broca HSS rectificada cilíndrica. Serie larga. Tipo S W. CUTALU | Punta HSS cilindrica lunga. Tipo S/W.	K L	1>13	117
TC | SL **1140571**			TC | HSSE5 fully ground long series drill TC | Broca HSSE5 rectificada cilíndrica serie larga TC | Punta HSSE5 cilindrica lunga. Tipo N	A B C	2,5>10	118
CUTINOX | SL **8140421**			CUTINOX L | HSSE5 fully ground long series drill CUTINOX L | Broca HSSE5 rectificada cilíndrica. Serie Larga CUTINOX L | Punta HSSE5 cilindrica lunga. Tipo N	F G H	1>13	119
PHOENIX | SL **8140441**			PHOENIX | HSSE5 fully ground long series drill. Type S. 1/3 2/3. PHOENIX | Broca HSSE5 rectificada. Serie Larga. Tipo S. Punta 1/3 2/3. PHOENIX | Punta HSSE5 cilindrica lunga. Tipo S | 1/3 2/3.	AB C FGH	2>13	120
LAZER 8% Co. | SL **8140481**			LAZER | HSS-E8 [M42] fully ground long series drill. Split point. LAZER | Broca HSS-E8 [M42] rectificada. Serie larga. Punta en cruz. LAZER | Punta HSS-E8 cilindrica lunga. Tipo N | affilatura a croce.	ARCo ARNI Ti	2>13	122
001 | L 160 **1142061**			HSS fully ground extra long series drill. Broca HSS rectificada. Serie extralarga. Punta HSS cilindrica extra-lunga.	AB C H	3>6	123
001 | L 200 **1142071**			HSS fully ground extra long series drill. Broca HSS rectificada. Serie extralarga. Punta HSS cilindrica extra-lunga.	AB C H	3>10	123
001 | L 250 **1142081**			HSS fully ground extra long series drill. Broca HSS rectificada. Serie extralarga. Punta HSS cilindrica extra-lunga.	AB C H	3,5>13	123
001 | L 315 **1142091**			HSS fully ground extra long series drill. Broca HSS rectificada. Serie extralarga. Punta HSS cilindrica extra-lunga.	AB C H	4>13	124
001 | L 400 **1142101**			HSS fully ground extra long series drill. Broca HSS rectificada. Serie extralarga. Punta HSS cilindrica extra-lunga.	AB C H	5>13	124
PHOENIX | XL 125 **8140671**			PHOENIX | HSSE5 fully ground extra long series drill. Type S PHOENIX | Broca HSSE5 rectificada. Serie Extralarga. Tipo S | L 125 PHOENIX | Punta HSSE5 cilindrica extra-lunga. Tipo S	C FGH	2>3	125
PHOENIX | XL 160 **8140681**			PHOENIX | HSSE5 fully ground extra long series drill. Type S PHOENIX | Broca HSSE5 rectificada. Serie Extralarga. Tipo S | L 125 PHOENIX | Punta HSSE5 cilindrica extra-lunga. Tipo S	C FGH	2>6	125
PHOENIX | XL 200 **8140691**			PHOENIX | HSSE5 fully ground extra long series drill. Type S PHOENIX | Broca HSSE5 rectificada. Serie Extralarga. Tipo S | L 125 PHOENIX | Punta HSSE5 cilindrica extra-lunga. Tipo S	C FGH	3>10	126
PHOENIX | XL 250 **8140701**			PHOENIX | HSSE5 fully ground extra long series drill. Type S PHOENIX | Broca HSSE5 rectificada. Serie Extralarga. Tipo S | L 125 PHOENIX | Punta HSSE5 cilindrica extra-lunga. Tipo S	C FGH	3>13	126
PHOENIX | XL 315 **8140711**			PHOENIX | HSSE5 fully ground extra long series drill. Type S PHOENIX | Broca HSSE5 rectificada. Serie Extralarga. Tipo S | L 125 PHOENIX | Punta HSSE5 cilindrica extra-lunga. Tipo S	C FGH	4>13	127
PHOENIX | XL 400 **8140721**			PHOENIX | HSSE5 fully ground extra long series drill. Type S PHOENIX | Broca HSSE5 rectificada. Serie Extralarga. Tipo S | L 125 PHOENIX | Punta HSSE5 cilindrica extra-lunga. Tipo S	C FGH	5>13	128
PHOENIX | XL 500 **8141821**			PHOENIX | HSSE5 fully ground extra long series drill. Type S PHOENIX | Broca HSSE5 rectificada. Serie Extralarga. Tipo S | L 125 PHOENIX | Punta HSSE5 cilindrica extra-lunga. Tipo S	C FGH	5>13	128
BARDAGE **1140541**			HSS fully ground extra long series drill. Split point. Broca HSS rectificada. Serie extralarga. Punta en cruz. Punta HSS cilindrica extra-lunga. Tipo N | affilatura a croce.	C D E	4>5,95	129

HSS bits | Brocas HSS | Punte HSS

Item	Packshot	Designation	Application	Rge	Page
AIRCRAFT Flex technology **8143811**		AIRCRAFT | HSS fully ground extra long series drill AIRCRAFT | Broca HSS rectificada. Serie extralarga AIRCRAFT | Punta HSS cilindrica extra-lunga. Tipo N	A B	2>8	130
R | CM **9020061**		HSS Roll forged jobber length drill morse taper shank. Broca HSS laminada. Serie corta. Mango cónico. Punta HSS laminata cono morse.	A	5>70	131
T | CM **1143791**		HSS fully ground jobber length drill morse taper shank | T LINE Broca HSS rectificada. Serie corta. Mango cónico | T LINE Punta HSS attacco cono morse corto | T LINE	AB IJ	3>40	133
001 | CM **1140981**		HSS fully ground | jobber length drill | morse taper shank. Broca HSS rectificada. Serie corta. Mango cónico. Punta HSS attacco cono morse corto.	AB C H	3>75	134
CUTINOX | CM **1141051**		CUTINOIX CM | HSSE5 fully ground | jobber length drill | morse taper shank. CUTINOIX CM | Broca HSSE5 rectificada. Serie corta. Mango cónico. CUTINOIX CM | Punta HSSE5 attacco cono morse corto.	F G H	10>40	136
001 SL | CM **1141101**		HSS fully ground | long series | drill morse taper shank. Broca HSS rectificada. Serie Larga. Mango cónico. Punta HSS attacco cono morse lungo.	AB C H	7>40	137
001 XL 315 | CM **1142041**		HSS fully ground extra long series drill morse taper shank | L 315 & 400 Broca HSS rectificada. Serie extralarga. Mango cónico | L 315 & 400 Punta HSS attacco cono morse extra-lunga | L 315 & 400	AB C H	6>23	138
001 XL 400 | CM **1142051**		HSS fully ground extra long series drill morse taper shank | L 315 & 400 Broca HSS rectificada. Serie extralarga. Mango cónico | L 315 & 400 Punta HSS attacco cono morse extra-lunga | L 315 & 400	AB C H	10>31	139
1110341		Tempered adapter. Casquillo de reducción templado. Bussola di riduzione temperata.		-	140
1110361		Tempered elongated adapter. Casquillo de reducción largo templado. Bussola di riduzione allungata temperata.		-	140
1110371		Cone punch. Extractor de conos. Caccia coni.		-	140
8140891		HSSE5 90° Spotting drill. Broca HSSE5 para puntear 90°. Punta HSSE5 a centrare 90°.	A B C	3>25	141
8140911		HSSE5 120° Spotting drill Broca HSSE5 para puntear 120°. Punta HSSE5 a centrare 120°.	A B C	3>25	141
8140811		60° Center drill | A form. Broca de centrar 60°. Punta HSS a centrare 60° forma A.	A B C	3,15>20	142
8140821		60°-120° Center drill. B Form. Broca para centrar 60°-120° Forma B Punta HSS a centrare 60°-120° Forma B	A B C	4>20	143
8140831		Radius center drill. R Form. Broca de centrar con radio. Forma R. Punta HSS a centrare con raggio forma R.	A B C	3,15>16	143
L 60 **8140841**		60° Center drill. A Form. Long series L 60 | 80 | 100 | 120 mm. Broca de centrar. Forma A. Serie larga. L 60 | 80 | 100 | 120. Punta HSSE55 a centrare 60° lunga | Forma A (L 60 | 80 | 100 | 120 mm).	A B C	3,5>5	144
L 80 **8140851**		60° Center drill. A Form. Long series L 60 | 80 | 100 | 120 mm. Broca de centrar. Forma A. Serie larga. L 60 | 80 | 100 | 120. Punta HSSE55 a centrare 60° lunga | Forma A (L 60 | 80 | 100 | 120 mm).	A B C	6>8	144
L 100 **8140861**		60° Center drill. A Form. Long series L 60 | 80 | 100 | 120 mm. Broca de centrar. Forma A. Serie larga. L 60 | 80 | 100 | 120. Punta HSSE55 a centrare 60° lunga | Forma A (L 60 | 80 | 100 | 120 mm).	A B C	10>12	144

HSS bits | Brocas HSS | Punte HSS

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L 120 **8140871**		60° Center drill. A Form. Long series L 60 | 80 | 100 | 120 mm. Broca de centrar. Forma A. Serie larga. L 60 | 80 | 100 | 120. Punta HSSE55 a centrare 60° lunga | Forma A (L 60 | 80 | 100 | 120 mm).	A B C	4>14	144

Carbide bits | Brocas metal duro | Punte carburo

Item	Packshot	Designation	Application	Rge	Page
Sirius+ | 2D **8242101**		SIRIUS | Solid Carbide Drill HELICA© | 3xd without coolant feed. SIRIUS | Broca metal duro HELICA© | 3xd sin refrigeración interna. SIRIUS | Punta in MD HELICA© | 3xd senza refrigerazione.	AB CD F	3>16	146
Sirius+ | 3D coolant **8243101**		SIRIUS | Solid Carbide Drill HELICA© | 3xd with coolant feed. SIRIUS | Broca metal duro HELICA© | 3xd con refrigeración interna. SIRIUS | Punta in MD HELICA© | 3xd con refrigerazione.	AB CD FGH	3>16	148
Sirius+ | 5D coolant **8244601**		SIRIUS | Solid Carbide Drill HELICA© | 5xd with coolant feed. SIRIUS | Broca metal duro HELICA© | 5xd con refrigeración interna. SIRIUS | Punta in MD HELICA | 5xd con refrigerazione.	AB CD FGH	3>16	150
Polaris | 3D coolant **8241501**		POLARIS | Solid Carbide Drill TiAlN | 3xd without coolant feed. POLARIS | Broca metal duro TiAlN | 3xd sin refrigeración interna. POLARIS | Punta in MD TiAlN | 3xd senza refrigerazione.	AB CD IJ	3>16	152
Polaris | 5D coolant **8241701**		POLARIS | Solid Carbide Drill TiAlN | 5xd with coolant feed. POLARIS | Broca metal duro TiAlN | 5xd con refrigeración interna. POLARIS | Punta in MD TiAlN | 5xd con refrigerazione.	AB CD FGH	4>20	153
3 flute **8240511**		Solid Carbide 3 flute drill. Broca metal duro monobloc 3 cortes. Punta in MD integrale 3 tagli.	AB IJ KLM	3>16	154
8240221		Solid Carbide stub length drill. Broca metal duro monobloc serie extra-corta. Punta in MD integrale extra-corta.	AB CDE FGH	1>16	155
8243921		Solid Carbide jobber length drill. Broca metal duro monobloc serie corta. Punta in MD integrale corta.	AB CDE FGH	1>14	157
DaggerZ3 **8243941**		DAGGER Z3 | Solid Carbide Dagger reamer drill | Z3. DAGGER Z3 | Broca escariadora | Z3. DAGGER Z3 | Punta alesatore a lancia Z3.	KLM X	2,4>10	158
DaggerZ4 **8243951**		DAGGER Z4 | Solid Carbide Dagger reamer drill | Z4. DAGGER Z4 | Broca escariadora | Z4. DAGGER Z4 | Punta alesatore a lancia Z4.	KLM X	2,4>10	159
8240201		Carbide tipped jobber length drill. Broca punta de metal duro serie corta. Punta con placchetta in MD riportato | corta.	AB CD IJ	2>20	160
8240501		Carbide tipped long drill. Broca punta de metal duro serie larga. Punta con placchetta in MD riportato | lunga.	AB CD IJ	2>20	162
8240931		Solid Carbide 90° Spotting drill. Broca de puntear 90°. Punta in MD a centrare 90° .	AB CDE FGH	4>16	163
8243911		Solid Carbide 120° Spotting drill. Broca de puntear 120°. Punta in MD a centrare 120°.	AB CDE FGH	4>16	163
8241941		Solid Carbide 60° Centre drill. Brocas de centrar metal duro 60°. Punta in MD a centrare 60°.	AB CDE FGH	3,15>10	164
8240011		Solid Carbide drill. Lock Destroyer Broca metal duro monobloc . Lock Destroyer Punta in MD integrale. Lock Destroyer	AB CDE FGH		165
3 pcs **82400170001**		Solid Carbide drill SET. Lock Destroyer EST. Broca metal duro monobloc . Lock Destroyer COF. Punta in MD integrale. Lock Destroyer	AB CDE FGH		165

Core hole drilling | Fresas huecas | Frese a carotare								
Item	**Packshot**	**Designation**	**Application**				**Rge**	**Page**
1037001		HSS TiAlN Core hole drill Weldon short series. Fresa hueca HSS TiALN Weldon Serie corta. Fresa per carotaggio HSS, TiAlN attacco Weldon, corta.	C	FGH	IJ		12>50	168
1037011		HSS TiAlN Core hole drill Weldon long series. Fresa hueca HSS TiALN Weldon Serie Larga. Fresa per carotaggio HSS, TiAlN attacco Weldon, lunga.	C	FGH	IJ		12>50	169
1037051		HSS Core hole drill Weldon short series. Fresa hueca HSS weldon serie corta. Fresa per carotaggio HSS, attacco Weldon, corta.	AB	P			12>50	170
1037061		HSS Core hole drill Weldon long series. fresa hueca HSS weldon serie larga. Fresa per carotaggio HSS, attacco Weldon, lunga.	AB	P			12>50	171
10370070001		Set | FCH04 Estuche | FCH04 Cassetta | FCH04	C	FGH	IJ			172
10370070005		Set | FCH08 Estuche | FCH08 Cassetta | FCH08	C	FGH	IJ			172
1037031		HSS Deburring tools Weldon. Fresa para desbastar HSS Weldon. Fresa per sbavatura HSS, attacco Weldon.	AB	IJ	P		25>55	172
1111121		Pilot pin for Core hole drill. Expulsores para fresa hueca. Pilota di guida per fresa di carotaggio.					6.34	173
1111151		Adapter Fein => Weldon. Adaptador Fein a weldon. Adattatore CM => Weldon.					19>19	173
1111131		Arbor holders CM => Weldon. Adaptadores de CM a Weldon. Adattatore CM => Weldon.					19>19	174
1111141		Arbor holders with lub. CM => Weldon. Adaptadores de CM a Weldon con sist. De lubricación integrado. Adattatore CM => Weldon con lubrificazione.					19>19	174

Regular Taps | Machos Regular | Maschio Regular

Item	Packshot	Designation	Application	Rge	Page
M | DIN 352 **1050051**		Set of 3 HSS DIN hand taps | T LINE Juego de 3 machos de Mano HSS DIN | T LINE Serie di 3 maschi a mano HSS ISO | T LINE	A B	3>30	180
M | DIN 352 **1501511**		Set of 3 HSS DIN hand taps. Juego de 3 machos de mano HSS DIN. Serie di 3 maschi a mano HSS DIN.	AB C	2>52	181
M | DIN 352 **1501521**		Set of 2 HSS DIN hand taps. Juego de 2 Machos de Mano HSS DIN. Serie di 2 maschi a mano HSS DIN.	A B C	4>30	182
M | DIN 352 LEFT HAND **9501081**		Set of 3 HSS DIN hand taps Left hand. Juego de 3 Machos de Mano HSS DIN Izquierdas. Serie di 3 maschi a mano HSS DIN, elica sinistra.	A B C	4>16	183
M | ISO 529 ASP **9501031**		Set of 3 HSSEE [ASP] ISO hand taps. Serial type with pilot. Juego de machos de mano HSSEE (ASP) ISO. Nº1 con guía. Serie di 3 maschi a mano HSS-EE [ASP] ISO con guida.	AB CDE FGH	3>16	183
UNC | DIN 352 **9521011**		Set of 3 HSS DIN hand taps Juego de 3 Machos de mano HSS DIN. Serie di 3 maschi a mano HSS DIN.	A B C	N°2>1"	184
UNF | DIN 2181 **9521021**		Set of 2 HSS DIN hand taps. Juego de 2 machos de mano HSS DIN. Serie di 2 maschi a mano HSS DIN.	A B C	N°3>1"	185
BSW | DIN 352 **9511011**		Set of 3 HSS DIN hand taps Juego de 3 Machos de Mano HSS DIN Serie di 3 maschi a mano HSS DIN.	A B C	1/8>1"1/4	186
BSF | DIN 2181 **9511021**		Set of 2 HSS DIN hand taps. Juego de 2 Machos de Mano HSS DIN. Serie di 2 maschi a mano HSS DIN.	A B C	1/4>1"	187
BSP(G) | DIN 5157 **9531021**		Set of 2 HSS DIN hand taps. Juego de 2 machos de mano HSS DIN. Serie di 2 maschi a mano HSS DIN.	A B C	1/8>2"	188
M | DIN 371 **9602011**		HSSE DIN machine tap Straight. Macho de máquina HSSE DIN recto. Maschio a macchina HSS-E DIN dritto.	A B	2>10	190
MF | DIN 371 **9602011**		HSSE DIN machine tap Straight. Macho de máquina HSSE DIN recto. Maschio a macchina HSS-E DIN dritto.	A B	2>10	190
M | DIN 376 **9603011**		HSSE DIN machine tap Straight. Macho de máquina HSSE DIN recto. Maschio a macchina HSS-E DIN dritto.	A B	3>40	191
MF | DIN 374 **9603011**		HSSE DIN machine tap Straight. Macho de máquina HSSE DIN recto. Maschio a macchina HSS-E DIN dritto.	A B	3>40	191
M | DIN 371 **9605411**		HSS EE [ASP] DIN machine tap Straight flute STEAM. Macho máquina HSSEE [ASP] DIN canal recto.STEAM. Maschio a macchina HSS-EE [ASP] DIN Steam dritto.	I J	3>10	192
MF | DIN 371 **9605411**		HSS EE [ASP] DIN machine tap Straight flute STEAM. Macho máquina HSSEE [ASP] DIN canal recto.STEAM. Maschio a macchina HSS-EE [ASP] DIN Steam dritto.	I J	3>10	192
M | DIN 376 **9606411**		HSS EE [ASP] DIN machine taps. Straight flute STEAM. Macho máquina HSSEE [ASP] DIN canal recto.STEAM. Maschio a macchina HSS-EE [ASP] DIN Steam dritto.	I J	6>16	193
MF | DIN 374 **9606411**		HSS EE [ASP] DIN machine taps. Straight flute STEAM. Macho máquina HSSEE [ASP] DIN canal recto.STEAM. Maschio a macchina HSS-EE [ASP] DIN Steam dritto.	I J	6>16	193
M | 371 **9602411**		HSS E DIN machine tap Straight flute STEAM. Macho máquina HSSE DIN canal recto.STEAM. Maschio a macchina HSS DIN Steam dritto.	I J	3>10	194

Regular Taps | Machos Regular | Maschio Regular

Item	Packshot	Designation	Application	Rge	Page
MF | 371 **9602411**		HSS E DIN machine tap Straight flute STEAM. Macho máquina HSSE DIN canal recto.STEAM. Maschio a macchina HSS DIN Steam dritto.	I J	3>10	194
M | DIN 371 / 376 **1050081**		HSS DIN machine tap GUN | T LINE Macho máquina HSS DIN GUN | T LINE Maschio a macchina HSS DIN Gun | T LINE	A B	3>20	194
M | DIN 371 **1602521**		HSS DIN machine tap GUN. Macho máquina HSS DIN GUN. Maschio a macchina HSS DIN Gun.	A B	2>10	195
MF | DIN 371 **1602521**		HSS DIN machine tap GUN. Macho máquina HSS DIN GUN. Maschio a macchina HSS DIN Gun.	A B	2>10	195
M | DIN 376 **1603521**		HSS DIN machine tap GUN. Macho máquina HSS DIN GUN. Maschio a macchina HSS DIN Gun.	A B	12>33	195
MF | DIN 374 **1603521**		HSS DIN machine tap GUN. Macho máquina HSS DIN GUN. Maschio a macchina HSS DIN Gun.	A B	12>33	195
M | 371 **9605021**		Machine tapping. Production. Metric/metric fine pitch. Macho máquina HSS EE [ASP] DIN GUN. Maschio a macchina HSS-EE [ASP] DIN Gun.	A B CDE	2>10	196
MF | 371 **9605021**		Machine tapping. Production. Metric/metric fine pitch. Macho máquina HSS EE [ASP] DIN GUN. Maschio a macchina HSS-EE [ASP] DIN Gun.	A B CDE	2>10	196
M | DIN 376 **9606021**		HSS EE [ASP] DIN machine tap GUN. Macho máquina HSS EE [ASP] DIN GUN. Maschio a macchina HSS-EE [ASP] DIN Gun.	A B CDE	3>18	197
MF | DIN 374 **9606021**		HSS EE [ASP] DIN machine tap GUN. Macho máquina HSS EE [ASP] DIN GUN. Maschio a macchina HSS-EE [ASP] DIN Gun.	A B CDE	3>18	197
M | DIN 371 **9605821**		HSS EE [ASP] DIN machine taps. GUN STEAM Back chamfer. Macho máquina HSS EE [ASP] DIN. GUN STEAM. Conicidad trasera. Maschio a macchina HSS-EE [ASP] DIN Steam Gun.	CDE FGH ARCo ARNi	2>10	198
MF | DIN 371 **9605821**		HSS EE [ASP] DIN machine taps. GUN STEAM Back chamfer. Macho máquina HSS EE [ASP] DIN. GUN STEAM. Conicidad trasera. Maschio a macchina HSS-EE [ASP] DIN Steam Gun.	CDE FGH ARCo ARNi	2>10	198
M | DIN 376 **9606821**		HSS EE [ASP] DIN machine taps. GUN STEAM Back chamfer. Macho máquina HSS EE [ASP] DIN. GUN STEAM conicidad trasera. Maschio a macchina HSS-EE [ASP] DIN Steam Gun.	CDE FGH ARCo ARNi	6>16	199
MF | DIN 374 **9606821**		HSS EE [ASP] DIN machine taps. GUN STEAM Back chamfer. Macho máquina HSS EE [ASP] DIN. GUN STEAM conicidad trasera. Maschio a macchina HSS-EE [ASP] DIN Steam Gun.	CDE FGH ARCo ARNi	6>16	199
M | DIN 371 **9605081**		HSSEE [ASP] DIN machine tap GUN interrupted threads. Macho de máquina HSSEE [ASP] DIN. GUN diente alterno. Maschio a macchina HSS-EE [ASP] DIN denti alternati Gun.	K L M	3>10	200
M | DIN 376 **9606081**		HSSEE [ASP] DIN machine tap GUN interrupted threads. Macho de máquina HSSEE (ASP) DIN. Diente alterno, Gun. Maschio a macchina HSS-EE [ASP] DIN denti alternati.	K L M	6>16	201
M | DIN 371 / 376 **1050091**		HSS ISO machine tap GUN interrupted threads. Macho máquina HSS ISO GUN diente alterno. Maschio a macchina HSS ISO Gun con denti alternati.	K L M	3>20	201
M | DIN 371 / 376 **1050101**		HSS DIN machine tap Spiral flute 35° | T LINE Macho de máquina HSS DIN helicoidal 35° | T LINE Maschio a macchina HSS DIN elica 35° | T LINE	A B	3>20	202
M | DIN 371 **1602551**		HSS DIN machine tap Spiral flute 35°. Macho de máquina HSS DIN helicoidal 35°. Maschio a macchina HSS DIN elica 35°.	A B	2>10	203

Regular Taps | Machos Regular | Maschio Regular

Item	Packshot	Designation	Application	Rge	Page
MF | DIN 371 **1602551**		HSS DIN machine tap Spiral flute 35°. Macho de máquina HSS DIN helicoidal 35°. Maschio a macchina HSS DIN elica 35°.	A B	2>10	203
M | DIN 376 **1603551**		HSS DIN machine tap Spiral flute 35°. Macho de máquina HSS DIN helicoidal 35°. Maschio a macchina HSS DIN elica 35°.	A B	12>33	203
MF | DIN 374 **1603551**		HSS DIN machine tap Spiral flute 35°. Macho de máquina HSS DIN helicoidal 35°. Maschio a macchina HSS DIN elica 35°.	A B	12>33	203
M | DIN 371 **9602031**		HSSE DIN machine tap Spiral flute 15°. Macho de máquina HSSE DIN helicoidal 15°. Maschio a macchina HSS-E DIN elica 15°.	C D E	2>8	204
MF | DIN 371 **9602031**		HSSE DIN machine tap Spiral flute 15°. Macho de máquina HSSE DIN helicoidal 15°. Maschio a macchina HSS-E DIN elica 15°.	C D E	2>8	204
M | DIN 376 **9603031**		HSSE DIN machine tap Spiral flute 15°. Macho de máquina HSSE DIN helicoidal 15°. Maschio a macchina HSS-E DIN elica 15°.	C D E	4>30	205
MF | DIN 374 **9603031**		HSSE DIN machine tap Spiral flute 15°. Macho de máquina HSSE DIN helicoidal 15°. Maschio a macchina HSS-E DIN elica 15°.	C D E	4>30	205
M | DIN 371 **9605051**		HSSEE [ASP] DIN machine taps spiral flute 35°. Macho máquina HSSEE (ASP) DIN Hél. 35º. Maschio a macchina HSS-EE [ASP] DIN elica 35°.	A B CDE	2>10	206
M | DIN 376 **9606051**		HSSEE [ASP] DIN machine taps spiral flute 35°. Macho máquina HSSEE (ASP) DIN Hél. 35º. Maschio a macchina HSS-EE [ASP] DIN elica 35°.	A B CDE	8>12	207
M | DIN 371 **9605851**		HSSEE [ASP] DIN machine taps spiral flute 35° STEAM back chamfer. Macho de máquina HSSEE (ASP) DIN, STEAM. Conic. trasera. Hél. 35º. Maschio a macchina HSS-EE [ASP] DIN Steam, elica 35°.	CDE FGH ARCo ARNi	3>10	208
MF | DIN 371 **9605851**		HSSEE [ASP] DIN machine taps spiral flute 35° STEAM back chamfer. Macho de máquina HSSEE (ASP) DIN, STEAM. Conic. trasera. Hél. 35º. Maschio a macchina HSS-EE [ASP] DIN Steam, elica 35°.	CDE FGH ARCo ARNi	3>10	208
M | DIN 376 **9606851**		HSSEE [ASP] DIN machine taps spiral flute 35° STEAM back chamfer. Macho de máquina HSSEE (ASP) DIN, STEAM. Conic. trasera. Hél. 35º. Maschio a macchina HSS-EE [ASP] DIN Steam, elica 35°.	CDE FGH ARCo ARNi	6>18	209
MF | DIN 374 **9606851**		HSSEE [ASP] DIN machine taps spiral flute 35° STEAM back chamfer. Macho de máquina HSSEE (ASP) DIN, STEAM. Conic. trasera. Hél. 35º. Maschio a macchina HSS-EE [ASP] DIN Steam, elica 35°.	CDE FGH ARCo ARNi	6>18	209
M | DIN 371 **9605061**		HSSEE (ASP), DIN, spiral flute, 45°, Z2. Macho máquina HSSEE (ASP) DIN, Z2, hél. 45°. Maschio a macchina HSS-EE [ASP] DIN Z2 elica 45°.	A KLM P	3>10	210
M | DIN 376 **9606061**		HSSEE (ASP), DIN, spiral flute, 45°, Z2. Macho máquina HSSEE (ASP) DIN, Z2, hél. 45°. Maschio a macchina HSS-EE [ASP] DIN Z2 elica 45°.	A KLM P	8>12	211
M | NFE 66112 SL **9704601**		HSSE NFE machine taps long straight. Macho de máquina HSSE NFE Largo. Recto. Maschio a macchina HSS-EE NFE lungo dritto.	A B CDE	3>16	212
M | NFE 66112 SL **9704611**		HSSE NFE machine tap long straight. Macho de máquina HSSE NFE Largo. Gun. Maschio a macchina HSS-E NFE lungo Gun.	A B CDE	3>12	212
M | NFE 66101 XL **9704011**		HSSE NFE machine tap long 280-520 straight. Machos de máquina HSSE NFE L 280-520 recto. Maschio a macchina HSS-E NFE L 280-520.	A B CDE	3>24	213
MF | NFE 66101 XL **9704011**		HSSE NFE machine tap long 280-520 straight. Machos de máquina HSSE NFE L 280-520 recto. Maschio a macchina HSS-E NFE L 280-520.	A B CDE	3>24	213

Regular Taps | Machos Regular | Maschio Regular

Item	Packshot	Designation	Application	Rge	Page
UNC | DIN 371 **9622011**		HSS E DIN machine tap Straight. Macho de máquina HSSE recto. Maschio a macchina HSS dritto.	A B KLM	N°6>3/8	216
UNF | DIN 371 **9622011**		HSS E DIN machine tap Straight. Macho de máquina HSSE recto. Maschio a macchina HSS dritto.	A B KLM	N°6>3/8	216
UNF | DIN 376 **9623011**		HSS E DIN machine tap Straight. Macho de máquina HSSE recto. Maschio a macchina HSS dritto.	A B KLM	7/16>3/4	217
UNC | DIN 371 **9622021**		HSSE DIN machine tap GUN. Macho de máquina HSSE DIN GUN. Maschio a macchina HSS-E DIN Gun.	A B KLM	N°4>3/8	218
UNF | DIN 371 **9622021**		HSSE DIN machine tap GUN. Macho de máquina HSSE DIN GUN. Maschio a macchina HSS-E DIN Gun.	A B KLM	N°4>3/8	218
UNC | DIN 376 **9623021**		HSSE DIN machine tap GUN. Macho de máquina HSSE DIN Gun. Maschio a macchina HSS-E DIN Gun.	A B KLM	1/4>1"	219
UNF | DIN 376 **9623021**		HSSE DIN machine tap GUN. Macho de máquina HSSE DIN Gun. Maschio a macchina HSS-E DIN Gun.	A B KLM	1/4>1"	219
UNC | DIN 371 **9622051**		HSSE DIN machine tap Spiral flute 35°. Macho de máquina HSSE DIN Hél. 35°. Maschio a macchina HSS-E DIN elica 35°.	A B KLM	N°4>3/8	220
UNF | DIN 371 **9622051**		HSSE DIN machine tap Spiral flute 35°. Macho de máquina HSSE DIN Hél. 35°. Maschio a macchina HSS-E DIN elica 35°.	A B KLM	N°4>3/8	220
UNC | DIN 376 **9623051**		HSSE DIN machine tap Spiral flute 35°. Macho de máquina HSSE DIN Hél. 35°. Maschio a macchina HSS-E DIN elica 35°.	A B KLM	5/16>3/4	221
UNF | DIN 376 **9623051**		HSSE DIN machine tap Spiral flute 35°. Macho de máquina HSSE DIN Hél. 35°. Maschio a macchina HSS-E DIN elica 35°.	A B KLM	5/16>3/4	221
BSW | DIN 371 **9612011**		HSSE DIN machine tap Straight. Macho de máquina HSSE DIN recto. Maschio a macchina HSS-E DIN dritto.	A B KLM	1/8>3/8	224
BSW | DIN 371 **9612021**		HSSE DIN machine tap GUN. Macho de máquina HSSE DIN Gun. Maschio a macchina HSS-E DIN Gun.	A B KLM	1/8>3/8	225
BSW | DIN 376 **9613021**		HSSE DIN machine tap GUN. Macho de máquina HSSE DIN Gun. Maschio a macchina HSS-E DIN Gun.	A B KLM	1/4>1"	225
BSW | DIN 371 **9612051**		HSSE DIN machine tap Spiral flute 35°. Macho de máquina HSSE DIN Hél. 35°. Maschio a macchina HSS-E DIN elica 35°.	A B KLM	1/8>3/8	226
BSW | DIN 376 **9613051**		HSSE DIN machine tap Spiral flute 35°. Macho de máquina HSSE DIN Hél. 35°. Maschio a macchina HSS-E DIN elica 35°.	A B KLM	1/2>1"	226
BSP(G) | DIN 5156 **9633011**		HSSE DIN machine tap Straight . Macho máquina HSSE DIN recto. Maschio a macchina HSS-E DIN dritto.	A B KLM	1/8>1"1/4	228
BSP(G) | DIN 5156 **9633021**		HSSE DIN machine tap GUN. Macho de máquina HSSE DIN GUN. Maschio a macchina HSS-E DIN Gun.	A B KLM	1/8>1"	228
BSP(G) | DIN 5156 **9633051**		HSSE DIN machine tap Spiral flute 35°. Macho de máquina HSSE DIN helicoidal 35°. Maschio a macchina HSS-E DIN elica 35°.	A B KLM	1/8>1"1/2	229

Regular Taps | Machos Regular | Maschio Regular

Item	Packshot	Designation	Application	Rge	Page
BSP(G) | DIN 5156 **9633031**		HSSE DIN machine tap Spiral flute 15°. Macho de máquina HSSE DIN Hél. 15°. Maschio a macchina HSS-E DIN elica 15°.	A B CDE	1/8>1"	229
NPT **9643101**		HSS machine tap Straight. Short series. Macho de máquina HSS recto. Serie corta. Maschio a macchina HSS dritto. Corto.	AB CDE KLM	1/16>1"	232
NPT **9643011**		HSS machine tap Straight . Macho de máquina HSS recto. Maschio a macchina HSS dritto.	AB CDE KLM	1/16>1"1/2	232
NPT **9663101**		HSS machine tap Straight. Short series. Macho de máquina HSS recto. Serie corta. Maschio a macchina HSS dritto. Corto.	AB CDE KLM	1/8>1"	233
NPT **9663011**		HSS machine tap Straight. Macho de máquina HSS recto. Maschio a macchina HSS dritto.	AB CDE KLM	1/8>3/4	233
PG | DIN 40433 **9653011**		HSSE DIN machine tap Straight. Macho de máquina HSSE DIN recto. Maschio a macchina HSS-E DIN dritto.	AB CDE KLM	7>29	234

General Purpose Taps | Machos multi-aplicaciones | Maschio Multi-applicazione

Item	Packshot	Designation	Application	Rge	Page
M | ISO 529 **1050031**		Set of 3 HSS ISO hand taps. Serial type. Juego de machos de mano HSSEE ISO. Perfil escalonado. Serie di 3 maschi a mano HSS ISO. Profilo scalinato.	AB C H	2>24	236
MF | ISO 529 **1050031**		Set of 3 HSS ISO hand taps. Serial type. Juego de machos de mano HSSEE ISO. Perfil escalonado. Serie di 3 maschi a mano HSS ISO. Profilo scalinato.	AB C H	2>24	236
M | DIN 352 **9501011**		Set of 3 HSS DIN hand taps. Juego de 3 machos de mano HSS DIN. Serie di 3 maschi a mano HSS DIN.	AB C H	2>42	237
MF | DIN 352 **9501021**		Set of 2 HSS DIN hand taps. Juego de 2 Machos de Mano HSS DIN. Serie di 2 maschi a mano HSS DIN.	AB C H	5>33	238
M | ISO 529 **1050071**		HSS ISO machine tap GUN back chamfer. Macho máquina GUN coni. inversa. Maschio a macchina HSS ISO Gun.	AB C H	3>18	239
MF | ISO 529 **1050071**		HSS ISO machine tap GUN back chamfer. Macho máquina GUN coni. inversa. Maschio a macchina HSS ISO Gun.	AB C H	3>18	239
M | DIN 371 **9602021**		HSS E DIN machine tap GUN back chamfer. Macho máquina HSS E DIN GUN Coni. inversa. Maschio a macchina HSS DIN Gun.	AB C H	2>10	240
MF | DIN 371 **9602021**		HSS E DIN machine tap GUN back chamfer. Macho máquina HSS E DIN GUN Coni. inversa. Maschio a macchina HSS DIN Gun.	AB C H	2>10	240
M | DIN 376 **9603021**		HSS E DIN machine tap GUN back chamfer. Macho máquina HSS E DIN GUN Coni. inversa. Maschio a macchina HSS DIN Gun.	AB C H	3>36	241
MF | DIN 374 **9603021**		HSS E DIN machine tap GUN back chamfer. Macho máquina HSS E DIN GUN Coni. inversa. Maschio a macchina HSS DIN Gun.	AB C H	3>36	241
M | ISO 529 **1050121**		HSS ISO machine tap Spiral flute 35° Back chamfer. Macho de máquina HSS ISO helicoidal 35° coni. Inversa. Maschio a macchina HSS ISO elica 35°.	AB C H	3>20	243
M | DIN 371 **9602051**		HSSE DIN machine tap Spiral flute 35° back chamfer. Macho de máquina HSSE DIN helicoidal 35° coni. Inversa. Maschio a macchina HSS-E DIN elica 35°.	AB C H	2>10	244

General Purpose Taps | Machos multi-aplicaciones | Maschio Multi-applicazione

Item	Packshot	Designation	Application	Rge	Page
MF | DIN 371 **9602051**		HSSE DIN machine tap Spiral flute 35° back chamfer. Macho de máquina HSSE DIN helicoidal 35° coni. Inversa. Maschio a macchina HSS-E DIN elica 35°.	AB C H	2>10	244
M | DIN 376 **9603051**		HSSE DIN machine tap Spiral flute 35° back chamfer. Macho de máquina HSSE DIN helicoidal 35° Coni. Inversa. Maschio a macchina HSS-E DIN elica 35°.	AB C H	4>30	245
MF | DIN 374 **9603051**		HSSE DIN machine tap Spiral flute 35° back chamfer. Macho de máquina HSSE DIN helicoidal 35° Coni. Inversa. Maschio a macchina HSS-E DIN elica 35°.	AB C H	4>30	245

Hi-Performance Flash-cut Taps | Machos Hi-Performance Flash-cut | Maschio Hi-Performance Flash-cut

Item	Packshot	Designation	Application	Rge	Page
M **960BT11**		HSSE DIN machine taps. | Flashcut | , straight. Macho de máquina HSSE | Flashcut | , recto. Maschio a macchina HSS-E DIN | Flashcut | dritto.	N O	3>14	248
MF **960BT11**		HSSE DIN machine taps. | Flashcut | , straight. Macho de máquina HSSE | Flashcut | , recto. Maschio a macchina HSS-E DIN | Flashcut | dritto.	N O	3>14	248
M **960CT11**		HSSEE (ASP) TiCN DIN machine taps. | Flashcut | , straight flute. Macho de máquina HSSE (ASP) TiCN | Flashcut | , recto. Maschio a macchina HSS-EE [ASP] TiCN DIN | Flashcut | dritto.	I J	3>14	249
MF **960CT11**		HSSEE (ASP) TiCN DIN machine taps. | Flashcut | , straight flute. Macho de máquina HSSE (ASP) TiCN | Flashcut | , recto. Maschio a macchina HSS-EE [ASP] TiCN DIN | Flashcut | dritto.	I J	3>14	249
M **960ST21**		HSSE TiN DIN machine taps. | Flashcut | . Macho de máquina HSSE TiN. | Flashcut | , gun. Maschio a macchina HSS-E TiN DIN | Flashcut | Gun.	A B CDE	3>14	250
MF **960ST21**		HSSE TiN DIN machine taps. | Flashcut | . Macho de máquina HSSE TiN. | Flashcut | , gun. Maschio a macchina HSS-E TiN DIN | Flashcut | Gun.	A B CDE	3>14	250
M **960IT21**		HSSEE (ASP) TiCN-MP. DIN machine taps | Flashcut | . Back chamfer. Macho de máquina HSSEE (ASP) TiCNMP | Flashcut | . Coni. inversa, gun. Maschio a macchina HSS-EE TiCN MP DIN | Flashcut | Gun.	CDE FGH ARCo ARNi Ti	3>14	251
MF **960IT21**		HSSEE (ASP) TiCN-MP. DIN machine taps | Flashcut | . Back chamfer. Macho de máquina HSSEE (ASP) TiCNMP | Flashcut | . Coni. inversa, gun. Maschio a macchina HSS-EE TiCN MP DIN | Flashcut | Gun.	CDE FGH ARCo ARNi Ti	3>14	251
M **960AT21**		HSSEE (ASP) TiN. DIN machine taps | Flashcut | . Interrupted threads. Macho de máquina HSSEE (ASP) TiN | Flashcut | . Diente alterno, gun. Maschio a macchina HSS-EE [ASP] TiN DIN | Flashcut | denti alternati Gun.	K L M	3>14	252
MF **960AT21**		HSSEE (ASP) TiN. DIN machine taps | Flashcut | . Interrupted threads. Macho de máquina HSSEE (ASP) TiN | Flashcut | . Diente alterno, gun. Maschio a macchina HSS-EE [ASP] TiN DIN | Flashcut | denti alternati Gun.	K L M	3>14	252
M **960ST51**		HSSE TiN. DIN machine taps. Spirale flute 35°. | Flashcut | . Macho de máquina HSSE TiN. | Flashcut | , hél 35°. Maschio a macchina HSS-EE TiN DIN | Flashcut | elica 35°.	A B CDE	3>14	253
MF **960ST51**		HSSE TiN. DIN machine taps. Spirale flute 35°. | Flashcut | . Macho de máquina HSSE TiN. | Flashcut | , hél 35°. Maschio a macchina HSS-EE TiN DIN | Flashcut | elica 35°.	A B CDE	3>14	253
M **960IT51**		HSSEE [ASP] TiCN-MP. DIN Spiral flute 35°. | Flashcut | , back chamfer. Macho máquina HSSEE (ASP) TiCNMP. | Flashcut | , con. inversa, hél 35°. Maschio a macchina HSS-EE [ASP] TiCN MP | Flashcut | , elica 35°.	CDE FGH ARCo ARNi Ti	3>14	254
MF **960IT51**		HSSEE [ASP] TiCN-MP. DIN Spiral flute 35°. | Flashcut | , back chamfer. Macho máquina HSSEE (ASP) TiCNMP. | Flashcut | , con. inversa, hél 35°. Maschio a macchina HSS-EE [ASP] TiCN MP | Flashcut | , elica 35°.	CDE FGH ARCo ARNi Ti	3>14	254

Hi-Performance Flash-cut Taps | Machos Hi-Performance Flash-cut | Maschio Hi-Performance Flash-cut

Item	Packshot	Designation	Application	Rge	Page
M **960AT51**		HSSEE (ASP) TiN DIN Spiral flute 35°. | Flashcut | , interrupted threads. Macho máquina HSSEE (ASP) TiN | Flashcut | , diente alterno, hél. 35°. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | Denti alternati elica 35°.	K L M	3>14	255
MF **960AT51**		HSSEE (ASP) TiN DIN Spiral flute 35°. | Flashcut | , interrupted threads. Macho máquina HSSEE (ASP) TiN | Flashcut | , diente alterno, hél. 35°. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | Denti alternati elica 35°.	K L M	3>14	255
M **960ST91**		HSSEE [ASP] TiN DIN Forming taps. | Flashcut | , grooves. Macho máquina HSSEE (ASP) TiN. | Flashcut | . Ranuras, laminación. Maschio a macchina HSS-EE TiN | Flashcut | , scanalature a rullare.	A B CDE	3>14	256
MF **960ST91**		HSSEE [ASP] TiN DIN Forming taps. | Flashcut | , grooves. Macho máquina HSSEE (ASP) TiN. | Flashcut | . Ranuras, laminación. Maschio a macchina HSS-EE TiN | Flashcut | , scanalature a rullare.	A B CDE	3>14	256
M **960IT91**		HSSEE (ASP) TiCN-MP. DIN Forming taps. | Flashcut | , grooves. Macho máquina HSSEE (ASP) TiCNMP | Flashcut | . Ranuras, laminación. Maschio a macchina HSS-EE TiCNMP | Flashcut | , scanalature a rullare.	CDE FGH O	3>14	257
MF **960IT91**		HSSEE (ASP) TiCN-MP. DIN Forming taps. | Flashcut | , grooves. Macho máquina HSSEE (ASP) TiCNMP | Flashcut | . Ranuras, laminación. Maschio a macchina HSS-EE TiCNMP | Flashcut | , scanalature a rullare.	CDE FGH O	3>14	257
M **960AT91**		HSSEE (ASP) TiN DIN forming taps | Flashcut | . Macho máquina HSSEE (ASP) TiN, | Flashcut | , laminación. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | a rullare.	K L M	3>14	258
MF **960AT91**		HSSEE (ASP) TiN DIN forming taps | Flashcut | . Macho máquina HSSEE (ASP) TiN, | Flashcut | , laminación. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | a rullare.	K L M	3>14	258
UNC **962BT11**		HSSE DIN machine taps. | Flashcut | , straight flute. Macho máquina HSSE | Flashcut | , recto. Maschio a macchina HSS-E DIN | Flashcut | dritto.	N O	1/4>1"	260
UNF **962BT11**		HSSE DIN machine taps. | Flashcut | , straight flute. Macho máquina HSSE | Flashcut | , recto. Maschio a macchina HSS-E DIN | Flashcut | dritto.	N O	1/4>1"	260
UNC **962CT11**		HSSEE (ASP) TiCN DIN machine taps. | Flashcut | , straight. Macho máquina HSSEE (ASP) TiCN Flash cut, recto. Maschio a macchina HSS-EE [ASP] TiCN DIN | Flashcut | dritto.	I J	1/4>1"	261
UNF **962CT11**		HSSEE (ASP) TiCN DIN machine taps. | Flashcut | , straight. Macho máquina HSSEE (ASP) TiCN Flash cut, recto. Maschio a macchina HSS-EE [ASP] TiCN DIN | Flashcut | dritto.	I J	1/4>1"	261
UNC **962ST21**		HSSE TiN DIN machine taps. | Flashcut | . Macho máquina HSSE TiN. Flaschcut, gun. Maschio a macchina HSS-E TiN DIN | Flashcut | Gun.	A B CDE	1/4>1"	262
UNF **962ST21**		HSSE TiN DIN machine taps. | Flashcut | . Macho máquina HSSE TiN. Flaschcut, gun. Maschio a macchina HSS-E TiN DIN | Flashcut | Gun.	A B CDE	1/4>1"	262
UNC **962IT21**		HSSEE (ASP) TiCNMP. DIN machine taps. | Flashcut | , back chamfer. Macho máquina HSSEE (ASP) TiCNMP | Flashcut | . Conicidad inversa, gun. Maschio a macchina HSS-EE [ASP] TiCN MP DIN | Flashcut | Gun.	CDE FGH ARCo ARNi Ti	1/4>1"	263
UNF **962IT21**		HSSEE (ASP) TiCNMP. DIN machine taps. | Flashcut | , back chamfer. Macho máquina HSSEE (ASP) TiCNMP | Flashcut | . Conicidad inversa, gun. Maschio a macchina HSS-EE [ASP] TiCN MP DIN | Flashcut | Gun.	CDE FGH ARCo ARNi Ti	1/4>1"	263
UNC **962AT21**		HSSEE (ASP) TiN. DIN machine taps | Flashcut | , interrupted threads. Macho máquina HSSEE (ASP) TiN | Flashcut | . Diente alterno, gun. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | Denti alternati Gun.	K L M	1/4>1"	264
UNF **962AT21**		HSSEE (ASP) TiN. DIN machine taps | Flashcut | , interrupted threads. Macho máquina HSSEE (ASP) TiN | Flashcut | . Diente alterno, gun. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | Denti alternati Gun.	K L M	1/4>1"	264

Hi-Performance Flash-cut Taps | Machos Hi-Performance Flash-cut | Maschio Hi-Performance Flash-cut

Item	Packshot	Designation	Application	Rge	Page
UNC **962ST51**		HSSE TiN. DIN machine taps, spirale flute 35°. | Flashcut | . Macho máquina HSSE TiN. | Flashcut | , hel. 35°. Maschio a macchina HSS-E TiN DIN | Flashcut | , elica 35°.	A B CDE	1/4>1"	265
UNF **962ST51**		HSSE TiN. DIN machine taps, spirale flute 35°. | Flashcut | . Macho máquina HSSE TiN. | Flashcut | , hel. 35°. Maschio a macchina HSS-E TiN DIN | Flashcut | , elica 35°.	A B CDE	1/4>1"	265
UNC **962IT51**		HSSEE (ASP) TiCNMP. DIN Spiral flute 35°. | Flashcut | , back chamfer. Macho máquina HSSEE (ASP) TiCNMP | Flashcut | . Coni. inversa, hel. 35°. Maschio a macchina HSS-EE [ASP] TiCN MP | Flashcut | , elica 35°.	CDE FGH ARCo ARNi Ti	1/4>1"	266
UNF **962IT51**		HSSEE (ASP) TiCNMP. DIN Spiral flute 35°. | Flashcut | , back chamfer. Macho máquina HSSEE (ASP) TiCNMP | Flashcut | . Coni. inversa, hel. 35°. Maschio a macchina HSS-EE [ASP] TiCN MP | Flashcut | , elica 35°.	CDE FGH ARCo ARNi Ti	1/4>1"	266
UNC **962AT51**		HSSEE [ASP] TiN DIN Spiral flute 35°. | Flashcut | , interrupted threads. Macho máquina HSSEE (ASP) TiN | Flashcut | . Diente alterno, hél. 35°. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | Denti alternati elica 35°.	K L M	1/4>1"	267
UNF **962AT51**		HSSEE [ASP] TiN DIN Spiral flute 35°. | Flashcut | , interrupted threads. Macho máquina HSSEE (ASP) TiN | Flashcut | . Diente alterno, hél. 35°. Maschio a macchina HSS-EE [ASP] TiN | Flashcut | Denti alternati elica 35°.	K L M	1/4>1"	267
BSP(G) **963BT11**		HSSE DIN machine taps. | Flashcut | , straight. Macho máquina HSSE | Flashcut | , recto. Maschio a macchina HSS-E DIN | Flashcut | Dritto.	N O	1/8>1"	270
BSPG **963CT11**		HSSEE [ASP] TiCN DIN machine taps. | Flashcut | , straight. Macho máquina HSSEE (ASP) TiCN | Flashcut | , recto. Maschio a macchina HSS-EE [ASP] TiCN DIN | Flashcut | Dritto.	I J	1/8>1"	271

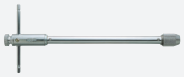
Dies | Cojinetes | Filiera

Item	Packshot	Designation	Application	Rge	Page
M MF 25,4 **1100031**		HSS ISO Dies. C form (cage 25,4), M/MF. Cojinetes HSS ISO forma C [25,4] M/MF. Filiera HSS ISO, forma C (Ø esterno 25,4), M/MF.	A B KLM	2>12	274
M MF 38,1 **1100041**		HSS ISO Dies. C form (cage 38,1), M/MF. Cojinetes HSS ISO forma C [diam. Int. 25,4-38,1-50,8-63,5] M MF. Filiera HSS ISO, forma C (Ø esterno 38,1), M/MF.	A B KLM	8>20	275
M MF 50,8 **1100051**		HSS ISO Dies. C form (cage 50,8), M/MF. Cojinetes HSS ISO forma C [50,8] M MF. Filiera HSS ISO, forma C (Ø esterno 50,8), M/MF.	A B KLM	16>24	276
M MF 63,5 **1100061**		HSS ISO Dies. C form (cage 63,5), M/MF. Cojinetes HSS ISO forma C [63,5] M MF. Filiera HSS ISO, forma C (Ø esterno 63,5), M/MF.	A B KLM	24>30	277
M **1100411**		HSS DIN Dies. B form, M. Cojinetes HSS DIN entrada forma B M. Filiera HSS DIN, forma B, M.	A B KLM	2>42	278
MF **1100441**		HSS DIN Dies. B form, MF. Cojinetes HSS DIN entrada forma B MF. Filiera HSS DIN, forma B, MF.	A B KLM	8>30	279
UNC **1100471**		HSS DIN Dies. C form, UNC. Cojinetes HSS DIN entrada forma B UNC. Filiera HSS DIN, forma C, UNC.	A B KLM	5>3/4	280
UNF **1100481**		HSS DIN Dies. B form, UNF. Cojinetes HSS DIN entrada forma B UNF. Filiera HSS DIN, forma B, UNF.	A B KLM	5>3/4	281
BSW **1100501**		HSS DIN Dies. B form, BSW. Cojinetes HSS DIN entrada forma B BSW. Filiera HSS DIN, forma B, BSW.	A B KLM	1/8>1"	282

Dies | Cojinetes | Filiera

Item	Packshot	Designation	Application	Rge	Page
BSP(G) **1100491**		HSS DIN Dies. B form, BSP G. Cojinetes HSS DIN entrada forma B BSP G. Filiera HSS DIN, forma B, BSP G.	A B KLM	1/8>1"1/2	283

Accessories & sets | Accesorios & estuches | Accesori & cofanetti

Item	Packshot	Designation	Application	Rge	Page
1110011		Tap wrench. Giramachos. Giramaschi con corpo e manico in acciaio.		-	286
1110031		Tap wrench with ratchet. Portamachos reversible con trinquete. Porta maschi reversibile con cricchetto.		-	286
1110041		Die holder. Steel body and handle. Porta cojinetes (acero). Porta filiera. Corpo e manico in acciaio.		-	287
1110051		End die holder. Steel body. Alargador de porta cojinetes (acero). Porta filiera verticale. Corpo in acciaio.		-	287
M DIN 352 HSS **11900170033**		Set | TF4 Estuche | TF4 Cassetta | TF4	AB H		290
M DIN 352 HSS **11900170029**		Set | TFT Estuche | TFT Cassetta | TFT	AB H		290
M DIN 371 HSS **11900170030**		Set | SGX Estuche | SGX Cassetta | SGX	AB		290
M DIN 371 HSS COBALT **11900170031**		Set | TGA Estuche | TGA Cassetta | TGA	AB		290
M DIN 371 ASP **81900170008**		Set | GUNOX Estuche | GUNOX Cassetta | GUNOX	CDE FGH		291
M DIN 376 ASP **81900170007**		Set | HELINOX Estuche | HELINOX Cassetta | HELINOX	CDE FGH		291
M | ISO 529 **11900170023**		Set | MGTI Estuche | MGTI Cassetta | MGTI	AB C H		291
M | ISO 529 **11900170024**		Set | MHTI Estuche | MHTI Cassetta | MHTI	AB C H		291
M | ISO 529 **11900170027**		Set | MGHTI Estuche | MGHTI Cassetta | MGHTI	AB C H		292
M | DIN 371 **11900170025**		Set | MGTD Estuche | MGTD Cassetta | MGTD	AB C H		292
M | DIN 371 Helico **11900170026**		Set | MHTD Estuche | MHTD Cassetta | MHTD	AB C H		292
M | DIN 371 Gun+Helico **11900170028**		Set | MGHTD Estuche | MGHTD Cassetta | MGHTD	AB C H		292
M | DIN 371 Gun **11900170032**		Set | TGU Estuche | TGU Cassetta | TGU	AB C H		293

Accessories & sets | Accesorios & estuches | Accesori & cofanetti

Item	Packshot	Designation	Application	Rge	Page
M | DIN 352 **81900170019**		Set | TMA Estuche | TMA Cassetta | TMA	A B C		293
M | DIN 352 **80511670001**		Set | 7x3 Estuche | 7x3 Cassetta | 7x3	A B C		293
11900870016		Set | MTF23 Estuche | MTF23 Cassetta | MTF23	AB		294
11900870017		Set | MTF29 Estuche | MTF29 Cassetta | MTF29	AB		294
11900870001		Set | MTF31 Estuche | MTF31 Cassetta | MTF31	AB		294
11900870004		Set | MTF20 Estuche | MTF20 Cassetta | MTF20	AB		295
11900870003		Set | MTF30 Estuche | MTF30 Cassetta | MTF30	AB		295
11900870006		Set | MTF37 Estuche | MTF37 Cassetta | MTF37	AB		295

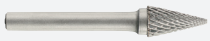
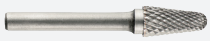
Countersinkers | Avellanador | Fresa per svasatura

Item	Packshot	Designation	Application	Rge	Page
1033151		HSS Countersinkers 60°. Avellanador HSS 60°. Fresa per svasatura HSS a 60°.	A B KLM	6,3>25	298
1033161		HSS-E5 Countersinkers 90°. Avellanador HSS-E5 90°. Fresa per svasatura HSS-E5 a 90° .	AB FGH KLM	4>12	299
1036631		HSSE5 TiAlN Countersinkers 90°. Avellanador HSSE5 TiALN 90°. Fresa per svasatura HSS-E5 a 90° .	AB FGH KLM	5>10	299
1031031		HSSE5 Counterbores 180°. Avellanador HSSE5 180°. Fresa per allargatura HSS-E5 a 180°.	A B KLM	4,2>20	300
1031041		HSSE5 Counterbores 90°. Avellanador HSSE5 90°. Fresa per allargatura HSS-E5 a 90°.	A B KLM	4,3>20,4	301
10331670005		Set | FNH06 Estuche | FNH06 Cassetta | FNH06	AB FGH KLM		302
10331670002		Set | FNH05 Estuche | FNH05 Cassetta | FNH05	AB FGH KLM		302
10366370001		Set | FNH06 | TIAlN Estuche | FNH06 | TIAlN Cassetta | FNH06 | TIAlN	AB FGH KLM		302
10310370002		Set | FLH Estuche | FLH Cassetta | FLH	AB FGH KLM		302

Rotary burrs | Fresa lima | Lima rotativa

Item	Packshot	Designation	Application	Rge	Page
1031601		Carbide rotary burrs. Cylindrical. Fresa lima cilíndrica. Lima rotativa in MD, cilindrica.	CDE FGH	4>20	304
1031611		Carbide rotary burrs. Cylindrical. Fresa lima cilíndrica. Lima rotativa in MD, cilindrica.	AB IJ NO	4>16	304
1031621		Carbide rotary burrs. Cylindrical end cutting. Fresa lima MD cilíndrica. Corte al centro. Lima rotativa in MD, cilindrica, doppio tagliente.	CDE FGH	4>16	305
1037161		Carbide rotary burrs. Cylindrical end cutting | T Line Fresa lima MD cilíndrica. Corte al centro | T Line Lima rotativa in MD, cilindrica, doppio tagliente | T Line	AB	6>12	305
1031631		Carbide rotary burrs. Cylindrical end cutting. Fresa lima MD cilíndrica. Corte al centro. Lima rotativa in MD, cilindrica, doppio tagliente.	AB IJ NO	6>20	306
1036651		Carbide rotary burrs. Cylindrical end cutting. Fresa lima MD cilíndrica. Corte al centro. Lima rotativa in MD, cilindrica, doppio tagliente.	KLM	10>16	306
1031641		Carbide rotary burrs. Domed cylindrical. Fresa lima MD cilíndrica con radio. Lima rotativa in MD, cilindrica, con raggio.	CDE FGH	4>20	307
1037171		Carbide rotary burrs. Domed cylindrical | T Line Fresa lima MD cilíndrica con radio | T Line Lima rotativa in MD, cilindrica, con raggio | T Line	AB	6>12	307
1031651		Carbide rotary burrs. Domed cylindrical. Fresa lima MD cilíndrica con radio. Lima rotativa in MD, cilindrica, con raggio.	AB IJ NO	6>20	308

Rotary burrs | Fresa lima | Lima rotativa

Item	Packshot	Designation	Application	Rge	Page
1036681		Carbide rotary burrs. Domed cylindrical. Fresa lima MD cilíndrica con radio. Lima rotativa in MD, cilindrica, con raggio.	KLM	10>16	308
1031701		Carbide rotary burrs. Cone. Fresa lima MD cilíndrica punta cónica. Lima rotativa in MD, tronco di cono.	CDE FGH	6>20	309
1031711		Carbide rotary burrs. Cone. Fresa lima MD cilíndrica punta cónica. Lima rotativa in MD, tronco di cono.	AB IJ NO	4>16	309
1031721		Carbide rotary burrs. Cone. Fresa lima MD punta cónica. Lima rotativa in MD, conica.	CDE FGH	4>16	310
1031741		Carbide rotary burrs. Cone. Fresa lima MD punta cónica. Lima rotativa in MD, conica.	CDE FGH	4>16	310
1031761		Carbide rotary burrs. Rounded cone. Fresa lima MD punta cónica redondeada. Lima rotativa in MD, conica, con raggio.	CDE FGH	6>16	311
1031771		Carbide rotary burrs. Rounded cone. Fresa lima MD punta cónica redondeada. Lima rotativa in MD, conica, con raggio.	AB IJ NO	6>16	311
1036701		Carbide rotary burrs. Rounded cone. Fresa lima MD punta cónica redondeada. Lima rotativa in MD, conica, con raggio.	KLM	10>16	312
1031781		Carbide rotary burrs. Tree. Fresa lima MD punta ojiva. Lima rotativa in MD a ogiva.	CDE FGH	4>16	313
1037181		Carbide rotary burrs. Tree | T Line Fresa lima MD punta ojiva | T Line Lima rotativa in MD a ogiva | T Line	AB	6>12	313
1031791		Carbide rotary burrs. Tree. Fresa lima MD punta ojiva. Lima rotativa in MD a ogiva.	AB IJ NO	6>16	314
1031801		Carbide rotary burrs. Oval. Fresa lima MD punta oval. Lima rotativa in MD, ovale, con raggio.	CDE FGH	6>16	315
1031811		Carbide rotary burrs. Oval. Fresa lima MD punta oval. Lima rotativa in MD, ovale, con raggio.	AB IJ NO	4>20	315
1031821		Carbide rotary burrs. Ball nosed tree. Fresa lima MD punta ojiva redondeada. Lima rotativa in MD a ogiva, con raggio.	CDE FGH	6>16	316
1037191		Carbide rotary burrs. Ball nosed tree | T Line Fresa lima MD punta ojiva redondeada | T Line Lima rotativa in MD a ogiva, con raggio | T Line	AB	6>12	316
1031831		Carbide rotary burrs. Ball nosed tree. Fresa lima MD punta ojiva redondeada. Lima rotativa in MD a ogiva, con raggio.	AB IJ NO	6>20	317
1036671		Carbide rotary burrs. Ball nosed tree. Fresa lima MD punta ojiva redondeada. Lima rotativa in MD a ogiva, con raggio.	KLM	10>16	317
1031841		Carbide rotary burrs. Ball. Fresa lima MD punta esférica. Lima rotativa in MD, sferica.	CDE FGH	4>20	318
1037201		Carbide rotary burrs. Ball | T Line Fresa lima MD punta esférica | T Line Lima rotativa in MD, sferica | T Line	AB	6>12	318

Rotary burrs | Fresa lima | Lima rotativa

Item	Packshot		Designation	Application	Rge	Page
1031851			Carbide rotary burrs. Ball. Fresa lima MD punta esférica. Lima rotativa in MD, sferica.	AB IJ NO	4>20	319
1036691			Carbide rotary burrs. Ball. Fresa lima MD punta esférica. Lima rotativa in MD, sferica.	KLM	10>20	319
1032051			Carbide rotary burrs. Cylindrical. Fresa lima cilíndrica. Lima rotativa in MD, cilindrica.	CDE FGH	3	320
1032151			Carbide rotary burrs. Cylindrical. Fresa lima cilíndrica. Lima rotativa in MD, cilindrica.	AB IJ NO	3	320
1032061			Carbide rotary burrs. Domed cylindrical. Fresa lima MD cilíndrica con radio. Lima rotativa in MD, cilindrica, con raggio.	CDE FGH	3	321
1032161			Carbide rotary burrs. Domed cylindrical. Fresa lima MD cilíndrica con radio. Lima rotativa in MD, cilindrica, con raggio.	AB IJ NO	3	321
1032071			Carbide rotary burrs. Cone 90°. Fresa lima MD punta cónica 90º. Dentado fino. Lima rotativa in MD, conica, 90°.	CDE FGH	3	322
1032171			Carbide rotary burrs. Cone 90°. Fresa lima MD punta cónica 90º. Dentado fino. Lima rotativa in MD, conica, 90°.	AB IJ NO	3	322
1032081			Carbide rotary burrs. Tree. Fresa lima MD punta ojiva. Lima rotativa in MD a ogiva.	CDE FGH	3	323
1032181			Carbide rotary burrs. Tree. Fresa lima MD punta ojiva. Lima rotativa in MD a ogiva.	AB IJ NO	3	323
1032091			Carbide rotary burrs. Cone. Fine teeth. Fresa lima MD cilíndrica punta cónica. Lima rotativa in MD, tronco di cono.	CDE FGH	3	324
1032191			Carbide rotary burrs. Cone. Fine teeth. Fresa lima MD cilíndrica punta cónica. Lima rotativa in MD, tronco di cono.	AB IJ NO	3	324
1032101			Carbide rotary burrs. Cone 90°. Fresa lima MD punta cónica 90º. Dentado fino. Lima rotativa in MD, conica, 90°.	CDE FGH	3	325
1032111			Carbide rotary burrs. Oval. Fresa lima MD punta oval. Lima rotativa in MD, ovale, con raggio.	CDE FGH	3	326
1032211			Carbide rotary burrs. Oval. Fresa lima MD punta oval. Lima rotativa in MD, ovale, con raggio.	AB IJ NO	3	326
1032121			Carbide rotary burrs. Ball. Fresa lima MD punta esférica. Lima rotativa in MD, sferica.	CDE FGH	3	327
1032221			Carbide rotary burrs. Ball. Fresa lima MD punta esférica. Lima rotativa in MD, sferica.	AB IJ NO	3	327
1032131			Carbide rotary burrs. Ball nosed tree. Fresa lima MD punta ojiva redondeada. Lima rotativa in MD a ogiva, con raggio.	CDE FGH	3	328
1032231			Carbide rotary burrs. Ball nosed tree. Fresa lima MD punta ojiva redondeada. Lima rotativa in MD a ogiva, con raggio.	AB IJ NO	3	328

Rotary burrs | Fresa lima | Lima rotativa

Item	Packshot	Designation	Application	Rge	Page
1032141		Carbide rotary burrs. Rounded cone. Fresa lima MD punta cónica redondeada. Lima rotativa in MD, conica, con raggio.	CDE FGH	3	329
1032241		Carbide rotary burrs. Rounded cone. Fresa lima MD punta cónica redondeada. Lima rotativa in MD, conica, con raggio.	AB IJ NO	3	329
8236831		Solid Carbide router end mills. Fresa Metal Duro recantear punta fresa. Fresa in MD per contornare con fresa all'estremità.	X	3>12	330
8236841		Solid Carbide router end mills. Drill point. Fresa Metal Duro recantear punta broca. Fresa in MD per contornare con punta all'estremità.	X	3>12	330
8236851		Solid Carbide router end mill. Drill point (fish tail). Fresa Metal Duro recantear punta broca "queue de poisson". Fresa in MD per contornare con estremità "coda di pesce".	X	3>12	331
10316070008		Set | FLK08 Estuche | FLK08 Cassetta | FLK08	AB IJ NO		332
10316070002		Set | FLK05 Estuche | FLK05 Cassetta | FLK05	AB IJ NO		332
10316070005		Set | FLK10 Estuche | FLK10 Cassetta | FLK10	AB IJ NO		332
MINI 10 pcs **10316070003**		Set | FLM Estuche | FLM Cassetta | FLM	AB IJ NO	3	332

HSS end mills | Fresas HSS | Frese HSS

Item	Packshot	Designation	Application	Rge	Page
8030881		HSSE8 Router end mills Z1. Fresa HSSE8 Z1. Fresa per contornare HSS-E8, Z1.	K L M	4>10	335
8030031		HSSE8 end mills Z2 short series Slotting. Fresa para ranurar HSSE8 Z2 serie corta. Fresa per scanalare HSS-E8, Z2 corta.	AB CD FGH	1>40	336
8036491		HSSE8 HIGHCUT end mills Z2 short series Slotting. Fresa para ranurar HSSE8 HIGHCUT Z2 serie corta. Fresa per scanalare HSS-E8, Z2 corta.	AB CD FGH	1>25	337
8030131		HSSE8 end mills Z2 Slotting. Fresas para ranurar HSSE8 Z2. Fresa per scanalare HSS-E8, Z2, normale.	AB CD FGH	2>20	338
8037131		HSSE8 TiAlN end mills Z3 Slotting. Fresas para ranurar HSSE8 TiAlN Z3. Fresa per scanalare HSS-E8, TiAlN, Z3, normale.	AB CD FGH	4>20	339
8030111		HSSE8 end mills Z3 short series Slotting. Fresas para ranurar HSSE8 Z3. Fresa per scanalare HSS-E8, Z3, corta.	AB CD FGH	2>32	340
8036171		HSSE8 HIGHCUT end mills Z3 short series Slotting. Fresas para ranurar HSSE8 (HIGHCUT) Z3. Fresa per scanalare HSS-E8 HIGHCUT, Z3, corta.	AB CD FGH	2>25	341
8034761		HSSE8 end mills. Z3 Slotting. Fresas para ranurar HSSE8 Z3. Fresa per scanalare HSS-E8, Z3, normale.	AB CD FGH	3>32	342
8036501		HSSE8 HIGHCUT end mills. Z3 Slotting. Fresas para ranurar HSSE8 (HIGHCUT) Z3. Fresa per scanalare HSS-E8, Z3, normale.	AB CD FGH	3>25	343

HSS end mills | Fresas HSS | Frese HSS

Item	Packshot	Designation	Application	Rge	Page
8030261		HSSE8 end mills Z2-3 Finishing. Fresa de acabado HSSE8 Z2-3. Fresa per finitura HSS-E8, Z2-3, normale.	KLM	3>32	344
8030281		HSSE8 end mills Z2-3 long series Finishing. Fresa de acabado HSSE8 Z2-3 serie larga. Fresa per finitura HSS-E8, Z2-3, lunga.	KLM	4>32	344
8037141		HSSE8 TiAlN end mills Z4 Finishing. Fresa de acabado HSSE8 TIALN Z4. Fresa per finitura HSS-E8, TiAlN Z4 normale.	AB CD FGH	4>20	345
8030191		HSSE8 HIGHTCUT end mills. Z3-6 Finishing. Fresa de acabado HSSE8 Z3-6. Fresa per finitura HSS-E8, Z3-6, normale.	AB CD FGH	2>40	346
8036221		HSSE8 HIGHTCUT end mills. Z3-6 Finishing. Fresa de acabado HSSE8 HIGHCUT Z3-6. Fresa per finitura HSS-E8, Z3-6, normale.	AB CD FGH	2>32	347
8030231		HSSE8 end mills. Z4-6 long series Finishing. Fresa de acabado HSSE8 Z4-6 serie larga. Fresa per finitura HSS-E8 Z4-6 lunga.	AB CD FGH	4>40	348
8036231		HSSE8 HIGHCUT end mills. Z4-6 long series Finishing. Fresa de acabado HSSE8 HIGHCUT Z4-6 serie larga. Fresa per finitura HSS-E8 HIGHCUT Z4-6 lunga.	AB CD FGH	4>30	349
8030151		HSSE8 end mills Z3 long series Finishing. Fresa de acabado HSSE8 Z3 serie larga. Fresa per finitura HSS-E8, Z3, lunga.	AB CD FGH	4>20	350
8030161		HSSE8 end mills. Z4 extra long series Finishing. Fresa de acabado HSSE8 Z4 serie extra larga. Fresa per finitura HSS-E8 Z4 extra lunga.	AB CD	6>20	351
8037151		HSSE8 TiAlN end mills Z4 Roughing. Fresa para desbastar HSSE8 TiALN Z4. Fresa per sgrossatura HSS-E8 TiAlN Z4 normale.	AB CD FGH	6>20	352
8036341		HSSE8 end mills Z4-6 Roughing. Fresa para desbastar HSSE8 Z4-6. Fresa per sgrossatura HSS-E8 Z4-6 normale.	AB CD FGH	6>32	353
8036351		HSSE8 HIGHCUT end mills Z4-6 Roughing. Fresa para desbastar HSSE8 HIGHCUT Z4-6. Fresa per sgrossatura HSS-E8 Z4-6 normale.	AB CD FGH	6>32	353
8036371		HSS PM (ASP) HIGHCUT, end mills. Z4-6, roughing. Fresa para desbaste HSS PM (ASP) HIGHCUT, Z4-6, normal. Fresa per sgrossatura HSS PM HIGHCUT Z4-6 normale.	AB CD FGH	6>32	354
8036411		HSSPM [ASP] end mills. Z4-6 long series Roughing. Fresa para desbaste HSSPM (ASP) (HIGHCUT) Z4-6 serie larga. Fresa per sgrossatura HSS PM HIGHCUT Z4-6 lunga.	AB CD FGH	8>32	355
8034651		HSSE8 end mills Z2 Morse taper shank Slotting. Fresa para ranurar HSSE8 Z2 mango cónico. Fresa per scanalatura HSS-E8 Z2, attacco cono morse.	AB CD IJ	12>50	356
8030421		HSSE8 end mills Z4-6 Morse taper shank Finishing. Fresa de acabado HSSE8 Z4-6 mango cónico. Fresa per finitura HSS-E8, Z4-6, attacco cono morse.	AB CD IJ	12>50	357
8030451		HSSE8 end mills Z4-6 long series Morse taper shank Finishing. Fresa de acabado HSSE8 Z4-6 serie larga. Mango cónico. Fresa per finitura HSS-E8, Z4-6, attacco cono morse, lunga.	AB CD IJ	12>50	358
8030461		HSSE8 end mills Z4-6 extra long series Morse taper shank Finishing. Fresa de acabado HSSE8 Z4-6 serie extra-larga. Mango cónico. Fresa per finitura HSS-E8, Z4-6, attacco cono morse, extra-lunga.	AB CD IJ	16>50	359
8036801		HSSE8 end mills Z4-6 Morse taper shank Roughing. Fresa para desbastar HSSE8 Z4-6. Mango cónico. Fresa per sgrossatura HSS-E8, Z4-6, attacco cono morse.	AB CD IJ	12>50	360

HSS end mills | Fresas HSS | Frese HSS

Item	Packshot	Designation	Application	Rge	Page
8036811		HSSE8 end mills Z4-6 long series Morse taper shank Roughing. Fresa para desbastar HSSE8 Z4-6 serie larga. Mango cónico. Fresa per sgrossatura HSS-E8, Z4-6, attacco cono morse, lunga.	AB CD IJ	16>50	361
8031511		HSS slitting saws fine teeth. Fresa de sierra HSS dentado fino. Sega circolare HSS, denti dritti fini.	A B KLM	20>250	362
8031521		HSS slitting saws medium teeth. Fresa de sierra HSS dentado grueso. Sega circolare HSS, denti dritti grossi.	A B KLM	50>250	364
8031071		HSSE5 Woodruff cutters. Fresa wooddruff HSSE5. Fresa woodruff HSS-E5.	A B KLM	7,5>45,5	366
80371370001		Set | FZ03 Estuche | FZ03 Cassetta | FZ03	AB CD FGH		367
80371470001		Set | FZ04 Estuche | FZ04 Cassetta | FZ04	AB CD FGH		367
80371570001		Set | FRG Estuche | FRG Cassetta | FRG	AB CD FGH		367

Carbide end mills | Fresas metal duro | Frese carbure

Item	Packshot	Designation	Application	Rge	Page
8232971		Solid carbide end mills 25° Z1. Fresa Metal Duro 25°. Z1. Fresa in MD 25°. Z1.	KLM P	2>10	370
8236651		Solid carbide end mills, 25°, Z1. Fresa Metal Duro 25°, Z1. Fresa in MD 25°. Z1.	P	2>12	370
8236661		Solid carbide end mills, 25°, Z1. Left hand/right cutting. Fresa Metal Duro 25°. Z1. Izquierda. Fresa in MD 25°. Z1. Sinistra.	P	2>8	371
8236671		Solid carbide end mills, 25°, Z2. Fresa Metal Duro 25°, Z2. Fresa in MD 25°. Z2.	P	2>12	371
8236241		Solid carbide end mills, 20°, Z2, rake angle 15°. Fresa Metal Duro , 20°, Z2, ángulo de corte 15°. Fresa in MD 20°. Z2 angolo di taglio 15°.	K L M	3>20	372
8236251		Solid carbide SLIDECUT end mills, 20°, Z2, rake angle 15°. Fresa Metal Duro SLIDECUT, 20°, Z2, ángulo de corte 15°. Fresa in MD SLIDECUT 20°. Z2 angolo di taglio 15°.	K L M	3>20	373
8236131		Solid carbide end mills, 45°, Z2. Fresa Metal Duro 45°. Z2. Fresa in MD 45°. Z2.	KLM P	1>25	374
8236141		Solid carbide ALCUT end mills, 45°, Z2. Fresa Metal Duro ALCUT 45°. Z2. Fresa in MD ALCUT 45°. Z2.	KLM P	1>25	375
8236021		Solid carbide end mills, DIN, Z2 Chamfer edge protect. Fresa Metal Duro Z2, chaflán de protección. Fresa in MD Z2 con smussi di protezione.	AB CD FGH	1>25	376
8236151		Solid carbide HARDCUT end mills, DIN, Z2 Chamfer edge protect. Fresa Metal Duro HARDCUT Z2, chaflán de protección. Fresa in MD HARDCUT Z2 con smussi di protezione.	AB CD FGH	1>25	377
8236451		Solid carbide end mills, DIN, Z2 short. Chamfer edge protect. Fresa Metal Duro , DIN, Z2, corta. Fresa in MD DIN Z2 corta. Smusso di protezione.	AB CD FGH	1>20	378

Carbide end mills | Fresas metal duro | Frese carbure

Item	Packshot	Designation	Application	Rge	Page
8236461		Solid carbide ALCRONA end mills, DIN, Z2 short. Chamfer edge protect. Fresa Metal Duro ALCRONA, DIN, Z2, corta. Fresa in MD DIN Z2 corta. Smusso di protezione.	AB CD FGH	1>20	379
8236511		Solid carbide end mills, DiN, Z2, long. Chamfer edge protect. Fresa Metal Duro , DiN, Z2, larga. Fresa in MD DIN Z2 corta. Smusso di protezione.	AB CD FGH	2>20	380
8236521		Solid carbide ALCRONA end mills, DiN, Z2, long. Chamfer edge protect. Fresa Metal Duro ALCRONA, DiN, Z2, larga. Fresa in MD DIN Z2 corta. Smusso di protezione.	AB CD FGH	2>20	381
8236571		Solid carbi. , end mills, DIN, Z,2 extra long. Chamfer edge prot. Fresa Metal Duro , DIN, Z2, extra-larga. Fresa in MD Z2 extra-lunga.	AB CD FGH	3>20	382
8236581		Solid carbi. ALCRONA, end mills, DIN, Z,2 extra long. Chamfer edge prot. Fresa Metal Duro ALCRONA, DIN, Z2, extra-larga. Fresa in MD Z2 extra-lunga.	AB CD FGH	3>20	383
8236681		Solid carbide end mills, 25°, Z3, chamfer edge protect. Fresa Metal Duro 25°, Z3. Fresa in MD 25°. Z3. Smusso di protezione.	P	2>12	384
8236211		Solid carbide ULTRACUT end mills, Z3. Chamfer edge protection. Fresa Metal Duro ULTRACUT, Z3. Chaflán de protección. Fresa in MD ULTRACUT. Z3 con smussi di protezione.	CDE FGH ARCo ARNi Ti	3>20	384
8236441		Solid carbide ALCRONA end mills Z3 Corner radius. Rake angle 16°. Fresa MD ALCRONA Z3 con radio. Corte a 16°. Fresa in MD ALCRONA Z3 con raggio, taglio a 16° .	AB CD FGH	2>20	385
8236031		Solid carbide end mills, Z3. Chamfer edge protection. Fresa Metal Duro Z3, chaflán de protección. Fresa in MD. Z3 con smussi di protezione.	AB CD FGH	1>25	386
8236161		Solid carbide HARDCUT end mills, Z3. Chamfer edge protection. Fresa Metal Duro HARDCUT Z3, chaflán de protección. Fresa in MD HARDCUT Z3 con smussi di protezione.	AB CD FGH	1>25	387
8236471		Solid carbide end mills, DiN, Z3, short series. Chamfer edge protect. Fresa Metal Duro , DiN, Z3, corta, chaflán de protección. Fresa in MD DIN Z3 corta, smussi di protezione.	AB CD FGH	1>20	388
8236481		Solid carbide end mills, DiN, Z3, short series. Chamfer edge protect. Fresa Metal Duro ALCRONA, DiN, Z3, corta, chaflán de protección. Fresa in MD DIN Z3 corta, smussi di protezione.	AB CD FGH	1>20	389
8236531		Solid carbide end mills, DiN, Z3, long series. Chamfer edge protect. Fresa Metal Duro , DiN, Z3, larga, chaflán de protección. Fresa in MD DIN Z3 corta, smussi di protezione.	AB CD FGH	2>20	390
8236541		Solid carbide end mills, DiN, Z3, long series. Chamfer edge protect. Fresa Metal Duro ALCRONA, DiN, Z3, larga, chaflán de protección. Fresa in MD DIN Z3 corta, smussi di protezione.	AB CD FGH	2>20	391
8236101		Solid carbide end mills,DiN, Z3 extra long series. Chamfer edge protect. Fresa Metal Duro , DiN, Z3, extra-larga. Chaflán de protección. Fresa in MD Z3 extra-lunga.	AB CD FGH	3>20	392
8236601		Solid carbide end mills,DiN, Z3 extra long series. Chamfer edge protect. Fresa Metal Duro ALCRONA, DiN, Z3, extra-larga. Chaflán de protección. Fresa in MD Z3 extra-lunga.	AB CD FGH	3>20	393
8236401		Solid carbide ALCRONA end mills Z4 Corner radius. Fresa Metal Duro ALCRONA Z4 con radio. Fresa in MD ALCRONA Z4 con raggio.	CDE FGH IJ	6>20	394
8236421		Solid carbide ALCRONA, end mills, Z4, corner radius, twin depth flute. Fresa carburo ALCRONA, Z4, con radio con ropevirutas. Fresa in MD ALCRONA Z4 con raggio e gole profonde.	CDE FGH IJ	8>20	395
8236041		Solid carbide end mills Z4 Chamfer edge protection. Fresa Metal Duro Z4, chaflán de protección. Fresa in MD Z4 con smussi di protezione.	AB CD FGH	1>25	396

Carbide end mills | Fresas metal duro | Frese carbure

Item	Packshot	Designation	Application	Rge	Page
8236171		Solid carbide HARDCUT end mills Z4 Chamfer edge protection. Fresa Metal Duro HARDCUT Z4, chaflán de protección. Fresa in MD HARDCUT Z4 con smussi di protezione.	AB CD FGH	1>25	397
8236491		Solid carb. , end mills, DiN, Z4, short s. Chamfer edge protect. Fresa carburo , DiN, Z4, corta, chaflán de protección. Fresa in MD DIN Z4, corta, smussi di protezione.	AB CD FGH	1>20	398
8236501		Solid carb. ALCRONA, end mills, DiN, Z4, short s. Chamfer edge protect. Fresa carburo ALCRONA, DiN, Z4, corta, chaflán de protección. Fresa in MD DIN Z4, corta, smussi di protezione.	AB CD FGH	1>20	399
8236551		Solid carb. , end mills, DiN, Z4, long s. Chamfer edge protect. Fresa Metal Duro , DiN, Z4, larga. Chaflán de protección. Fresa in MD DIN Z4, lunga, smussi di protezione.	AB CD FGH	2>20	400
8236561		Solid carb. ALCRONA, end mills, DiN, Z4, long s. Chamfer edge protect. Fresa Metal Duro ALCRONA, DiN, Z4, larga. Chaflán de protección. Fresa in MD DIN Z4, lunga, smussi di protezione.	AB CD FGH	2>20	401
8236611		Solid carb. , end mills, DiN, Z4, extra lo. Chamfer edge protect. Fresa Metal Duro , DiN, Z4, extra-larga. Chaflán de protección. Fresa in MD Z4 extra-lunga, smussi di protezione.	AB CD FGH	3>20	402
8236621		Solid carb. ALCRONA, end mills, DiN, Z4, extra lo. Chamfer edge protect. Fresa Metal Duro ALCRONA, DiN, Z4, extra-larga. Chaflán de protección. Fresa in MD Z4 extra-lunga, smussi di protezione.	AB CD FGH	3>20	403
8236341		Solid carbide ULTRACUT Z4-8 Corner radius Rake angle 5°. Fresa Metal duro ULTRACUT Z4-8 con radio, corte a 5°. Fresa in MD ULTRACUT Z4-8 con raggio, taglio a 5°.	D E ARCo ARNi Ti	3>20	404
8236231		Solid carbide ULTRACUT end mills, Z6. Chamfer edge protect. Fresa Metal duro ULTRACUT, Z6, chaflán de protección. Fresa in MD ULTRACUT Z6, smussi di protezione.	AB CD FGH	6>20	405
8236361		Solid carbide ULTRACUT ZMAX rake angle 0°, chamfer edge protect. Fresa Metal Duro ULTRACUT ZMAX, corte a 0º, chaflán de protección. Fresa in MD ULTRACUT Z6, smussi di protezione.	D E ARCo ARNi Ti	6>16	405
8236061		Solid carbide Z2 Ball nosed. Fresa Metal Duro Z2 punta esférica. Fresa in MD Z2, semisferica.	AB CD FGH	1>25	406
8236181		Solid carbide HARDCUT Z2 Ball nosed. Fresa Metal Duro HARDCUT Z2 punta esférica. Fresa in MD Z2, semisferica.	AB CD FGH	1>25	407
8236711		Solid carbide Z3 Ball nosed. Fresa Metal Duro Z2 punta esférica. Fresa in MD, Z3, semisferica.	AB CD FGH	1>25	408
8236261		Solid carbide HARDCUT Z3 Ball nosed. Fresa Metal Duro HARDCUT Z2 punta esférica. Fresa in MD, Z3, semisferica.	AB CD FGH	1>25	409
8236071		Solid carbide Z4 Ball nosed. Fresa Metal Duro Z2 punta esférica. Fresa in MD Z4, semisferica.	AB CD FGH	1>25	410
8236191		Solid carbide HARDCUT Z4 Ball nosed. Fresa Metal Duro HARDCUT Z2 punta esférica. Fresa in MD Z4, semisferica.	AB CD FGH	1>25	411
8236281		Solid carbide ULTRACUT end mills Z2 rake angle 16° Oversize shank. Fresa MD ULTRACUT Z2 corte a 16º, mango reforzado. Fresa in MD ULTRACUT Z2 taglio a 16° codolo rinforzato.	CDE FGH ARCo ARNi Ti	3>12	412
8236311		Solid carbide ULTRACUT end mills Z2 rake angle 16°. Fresa MD ULTRACUT Z2 cote a 16º. Fresa in MD ULTRACUT Z2 taglio a 16°.	CDE FGH ARCo ARNi Ti	3>16	413

Hand reamers | Escariador de mano | Alesatore a mano

Item	Packshot	Designation	Application	Rge	Page
1040011		HSS Paris hand reamers Paris. Escariador de mano HSS Tipo Paris. Alesatore a mano HSS tipo francese.	A B	2>50	416
1040021		HSS American hand reamers. Escariador de mano HSS Tipo Americano. Alesatore a mano HSS tipo americano.	A B	2>32	418
1040061		HSS Pin hand reamers. Escariador de Mano HSS. Alesatore a mano HSS per spine coniche 2%.	A B	0,9>24,7	419
1040091		HSS Adjustable hand reamers. Escariador de mano HSS regulable. Alesatore a mano HSS espansibile.	A B	8>45	420
1040071		HSS Jet hand reamers. Escariador de mano HSS, surtidor. Alesatore a mano HSS per ugello.	A B	0,3>1,9	421
10400770001		Set | JET Estuche | JET Cassetta | JET	AB		421
1040101		HSS Center adjustable hand reamers. Escariador de mano HSS extensible. Alesatore a mano HSS a piccola espansione.	A B	5>32	422

Machine reamers | Escariador de maquina | Alesatore a macchina

Item	Packshot	Designation	Application	Rge	Page
8040121		HSSE Machine reamers. Straight. Escariador de máquina HSSE5 recto. Alesatore a macchina HSS-E5 tagli diritti.	AB CD FGH	1>20	424
8040131		HSSE Machine reamers. Spiral flute 10°. Escariador de máquina HSSE5 helicoidal 10º/ Alesatore a macchina HSS-E5 elicoidale 10°.	AB CD FGH	1>20	425
8040231		HSSE5 High precision machine reamers 1/100. Escariador de máquina HSSE5 gran precisión 1/100. Alesatore centesimale a macchina HSS-E5.	AB CDE IJ	0,7>20,05	426
8040151		HSS Bridge reamers. 5 flute. Morse taper shank. Escariador de máquina HSS. 5 cortes. Mango cónico. Alesatore a macchina HSS per lamiera, 5 tagli, cono morse.	A B	6>40	427
8040161		HSSE5 Machine reamers. Straight. Morse taper shank. Escariador de máquina HSS recto. Mango cónico. Alesatore a macchina HSS-E5, tagli diritti, cono morse.	AB CDE IJ	6>50	428
8040171		HSSE5 Machine reamers. Spiral flute. Morse taper shank. Escariador de máquina HSS helicoidal. Mango cónico. Alesatore a macchina HSS-E5, elicoidale, cono morse.	AB CDE FGH	6>50	429

DRILL DOCTOR & accessories | DRILL DOCTOR & accesorios | DRILL DOCTOR & accessori								
Item	**Packshot**		**Designation**				**Rge**	**Page**
1111177400B			DRILL DOCTOR 400 DRILL DOCTOR 400 DRILL DOCTOR 400				-	432
1111177500M			DRILL DOCTOR 500 DRILL DOCTOR 500 DRILL DOCTOR 500				-	432
1111177750M			DRILL DOCTOR 750 DRILL DOCTOR 750 DRILL DOCTOR 750				-	432
11111720004			DRILL DOCTOR WHEEL MUELA PAR DRILL DOCTOR RUOTA PER DRILL DOCTOR				-	433
11111720001			DRILL DOCTOR WHEEL MUELA PAR DRILL DOCTOR RUOTA PER DRILL DOCTOR				-	433
11111720002			DRILL DOCTOR CHUCK PORTABROCAS PAR DRILL DOCTOR MANDRINO PER DRILL DOCTOR				-	433

Drilling | Taladrado | Foratura

Item	Packshot		Designation	Application			Rge	Page
R **5020014**			HSS roll forged jobber length drill. Broca HSS laminada cilíndrica. Serie corta. Punta laminata cilindrica corta.				1-13	436
RRS **5020024**			HSS METAL DRILL BIT | Roll forged reduced shank | Light Usage HSS BROCA METAL | Lamin. Mango cilíndrico reducido | Uso OCASIONAL PUNTA METAL HSS | Lamin. Codolo cilindrico ridotto | Uso OCCASIONALE				14-20	437
R | SL **5020034**			HSS Roll forged long series drill. Broca HSS laminada cilíndrica. Serie larga. Punta HSS laminata cilindrica lunga.				2-12	437
T **1143774**			T | HSS fully ground jobber length drill | T LINE T | Broca HSS rectificada cilíndrica. Serie corta | T LINE T | Punta HSS cilindrica corta | T LINE				1-13	438
TSX **1143674**			TSX | HSS fully ground jobber length drill TSX | Broca HSS rectificada cilíndrica. Serie corta TSX | Punta HSS cilindrica corta. Tipo N				1-13	439
TX **1143672**			TSX | HSS fully ground jobber length drill TSX | Broca HSS rectificada cilíndrica. Serie corta TSX | Punta HSS cilindrica corta. Tipo N				0,8-13	440
1143684			HSS fully ground jobber length drill. Reduced shank Broca HSS rectificada cilídrica. Serie Corta. Mango reducido. Punta HSS cilindrica corta. Tipo N | gambo ridotto.				13,5-20	441
1143682			HSS fully ground jobber length drill. Reduced shank Broca HSS rectificada cilídrica. Serie Corta. Mango reducido. Punta HSS cilindrica corta. Tipo N | gambo ridotto.				14-20	441
HEXA **1143704**			EXTRA SHORT | HSS METAL DRILL BIT | fully ground, hexagonal shank drill. Split point. EXTRA SHORT | 'BROCA metal HSS / rectificada, Mango hexagonal, Punta en cruz. EXTRA CORTA | PUNTA METALLO HSS | Codolo Esagonale, affilatura a croce.				3-10	442
HEXA **1143432**			TECHNIC | HSS METAL DRILL BIT | fully ground, hexagonal shank drill. TECHNIC | 'BROCA metal HSS / rectificada Mango hexagonal corta. TECHNIC | PUNTA METALLO HSS | Codolo Esagonale.				1-10	443
STEAM_TiN **1145312**			TECHNIC STEAM TIN | HSS METAL DRILL BIT | fully ground jobber length drill. Split point. TECHNIC STEAM TIN | BROCA METAL HSS / rectificada cilíndrica corta.Punta en cruz. TECHNIC STEAM TIN | PUNTA METALLO HSS | cilindrica corta, affilatura a croce.				1-13	444
TECHNIC metal **1146854**			TECHNIC COBALT | HSSE5 METAL DRILL BIT | Round shank | Long life TECHNIC COBALT | BROCA METAL HSSE5 | Mango cilíndrico TECHNIC COBALT | PUNTA METALLO HSSE5 | Codolo cilindrico | Uso INTENSIVO				1-13	445
TECHNIC Metal **1146852**			TECHNIC COBALT | HSSE5 METAL DRILL BIT | Round shank | Long life TECHNIC COBALT | BROCA METAL HSSE5 | Mango cilíndrico TECHNIC COBALT | PUNTA METALLO HSSE5 | Codolo cilindrico | Uso INTENSIVO				0,8-13	446
TECHNIC SL Metal **1140572**			TECHNIC COBALT SL | HSSE5 METAL DRILL BIT | Round shank | Long life TECHNIC COBALT SL | BROCA METAL HSSE5 | Mango cilíndrico | Uso INTENSIVO TECHNIC COBALT SL | PUNTA METALLO HSSE5 | Codolo cilindrico | Uso INTENSIVO				2-8	447
XL 160 **1140622**			TECHNIC XL | HSS E5 METAL DRILL BIT | Round Shank | Long Life TECHNIC XL | BROCA METAL HSS E5 / Mango cilíndrico / Uso INTENSIVO TECHNIC XL | PUNTA METALLO HSS E5 | Codolo cilindrico | Uso INTENSIVO				4-5	448
XL 200 **1140632**			TECHNIC XL | HSS E5 METAL DRILL BIT | Round Shank | Long Life TECHNIC XL | BROCA METAL HSS E5 / Mango cilíndrico / Uso INTENSIVO TECHNIC XL | PUNTA METALLO HSS E5 | Codolo cilindrico | Uso INTENSIVO				6-8	448
XT60212			PROGRESSIVE SHANK HSS METAL DRILL BIT | Rnd Shank | T LINE BROCA ESCALONADA HSS | Mango cilíndrico | T LINE PUNTA CONICA HSS | Codolo cilindrico | T LINE				-	449
FCL **1143862**			HSS Sheet drill. Broca HSS cónica lisa. Punta HSS conica liscia allarga fori.				14>40	449

Drilling | Taladrado | Foratura

Item	Packshot	Designation	Application	Rge	Page
1144881	 	HSS Step drill. Straight flute | T LINE Broca HSS escalonada. Canal recto | T LINE Punta HSS conica scalinata | scanalature dritte | T LINE		12>37	450
1144862	 	HSS Step drill. Straight flute | T LINE Broca HSS escalonada. Canal recto | T LINE Punta HSS conica scalinata | scanalature dritte | T LINE		-	450
1144852	 	HSS Step drill. Helicoïdal flute. Broca HSS escalonada. Canal helicoidal. Punta HSS conica scalinata | scanalature elicoidali.	 	12>37	451
1143872	 	HI PERF | HSS Step drill TiAlN. Helicoidal flute HI PERF | Broca HSS escalonada TiALN. Canal helicoidal. HI PERF | Punta HSS TiAlN conica scalinata | scanalature elicoidali.	 	12>37	451
1144872	 	HI PERF | HSSE5 Step drill TiAlN. Helicoïdal flute. HI PERF | Broca HSSE5 escalonada TiALN. Canal helicoidal. HI PERF | Punta HSSE5 TiAlN conica scalinata | scanalature elicoidali.	  	12>37	452

Tapping & Threading | Cojinetes | Filettatura

Item	Packshot	Designation	Application	Rge	Page
1050012	 	EXTRA | HAND TAP - CHROME STEEL | Metric EXTRA | MACHO DE MANO ACERO AL CARBONO / Métrico EXTRA | MASCHO A MANO ACCIAIO AL CROMO | Metrico		-	453
M | DIN 352 **1050052**	 	TECHNIC | Set of 3 HSS DIN hand taps TECHNIC | Juego de 3 machos de Mano HSS DIN TECHNIC | Serie di 3 maschi a mano HSS ISO	 	-	453
M | ISO 529 **1050074**	 	TECHNIC | HSS ISO machine tap GUN back chamfer. TECHNIC | Macho máquina GUN coni. inversa. TECHNIC | Maschio a macchina HSS ISO Gun.	  	-	454
1050072	 	TECHNIC | HSS ISO machine tap GUN back chamfer. TECHNIC | Macho máquina GUN coni. inversa. TECHNIC | Maschio a macchina HSS ISO Gun.	  	-	454
M | HEXA **1050304**	 	EXTRA | HSS MACHINE TAP bit | Hex shank EXTRA | Machos HSS. Mango hexagonal 1/4". EXTRA | Maschio HSS dritto. Codolo esagonale 1/4".		-	455
M | HEXA **1050294**		EXTRA | HSS TAPPING DRILL BIT | Hex shank EXTRA | BROCA ROSCADORA Y FRESADORA HSS | Mango hexagonal EXTRA | PUNTA MASCHIATRICE & FRESA HSS | codolo esagonale		-	455
1050292		EXTRA | HSS TAPPING DRILL BIT | Hex shank EXTRA | BROCA ROSCADORA Y FRESADORA HSS | Mango hexagonal EXTRA | PUNTA MASCHIATRICE & FRESA HSS | codolo esagonale		-	455
25.4 **1100012**		EXTRA | EXTENDING DIES CHROME STEEL | 25,4 EXTRA | COJINETE ACERO AL CARBONO / Diam. 25,4 EXTRA | FILIERA ACCIAIO AL CROMO | 25,4		-	456
1110012		TAP WRENCH PORTA-MACHOS GIRA MASCHI		-	457
11100120001		TAP WRENCH PORTA-MACHOS GIRA MASCHI		-	457
1110042		EXTRA | DIE HOLDER EXTRA | PORTA-COJINETES EXTRA | GIRA-FILIERA		25,4-38,1	457

Milling | Fredado | Fresatura

Item	Packshot	Designation	Application	Rge	Page
XT60122		COUNTERSINK HSS - 90° | Round shank | T LINE AVELLANADOR HSS 90° | Mango cilíndrico | T LINE FRESA A SMUSSO HSS 90° | codolo cilindrico | T LINE		12-20	458

Milling | Fredado | Fresatura

Item	Packshot	Designation	Application	Rge	Page
1033234		HSS Countersinker bits 90°. Hexa shank 1/4" Avellanador HSS a 90°. Mango hexagonal 1/4". Fresa per svasatura HSS a 90°, coda esagonale 1/4.		6,3-20,5	458
1033162		HI PERF | HSSE5 Countersinkers 90°. HI PERF | Avellanador HSSE5 90°. HI PERF | Fresa per svasatura HSSE5 a 90° .		6,3-25	459
1036132		HI PERF | HSSE5 Deburring tools with hole 90°. HI PERF | Avellanador con agujero HSSE5 90°. HI PERF | Fresa per sbavatura e foratura HSSE5 a 90°.		2>20	459
1031632		HI PERF | Carbide rotary burrs. Cylindrical end cutting. HI PERF | Fresa lima MD cilíndrica. Corte al centro. HI PERF | Lima rotativa in MD, cilindrica, doppio tagliente.		6	460
1031652		HI PERF | Carbide rotary burrs. Domed cylindrical. HI PERF | Fresa lima MD cilíndrica con radio. HI PERF | Lima rotativa in MD, cilindrica, con raggio.		6	460
1031792		HI PERF | Carbide rotary burrs. Tree. HI PERF | Fresa lima MD punta ojiva. HI PERF | Lima rotativa in MD a ogiva.		6	461
1031832		HI PERF | Carbide rotary burrs. Ball nosed tree. HI PERF | Fresa lima MD punta ojiva redondeada. HI PERF | Lima rotativa in MD a ogiva, con raggio.		6	461
1031852		HI PERF | Carbide rotary burrs. Ball. HI PERF | Fresa lima MD punta esférica. HI PERF | Lima rotativa in MD, sferica.		6	462

Sets | Estuches | Cofanetti

Item	Packshot	Designation	Application	Rge	Page
6 pcs **50200170010**		6 STD METAL SET EST. STD 6 Pzs COF. STD 6 PZ		-	463
13 pcs **50200170008**		13 STD METAL SET EST. STD 13 Pzs COF. STD 13 PZ		-	463
19 pcs **50200170009**		19 STD METAL SET EST. STD 19 Pzs COF. STD 19 PZ		-	463
13 pcs **50200170005**		13 STD METAL SET TIN EST. STD 13 Pzs TIN COF. STD 13 PZ TIN		-	464
14 pcs **50200170011**		14 STD METAL SET TIN EST. STD 14 Pzs TIN COF. STD 14 PZ TIN		-	464
6 pcs **11437770005**		CLIPSTER A61 T CLIPSTER A61 T CLIPSTER A61 T		-	464
10 pcs **11437770004**		CLIPSTER AP63 T CLIPSTER AP63 T CLIPSTER AP63 T		-	464
6 pcx **11436770047**		CLIPSTER A11 TX CLIPSTER A11 TX CLIPSTER A11 TX		-	465
10 pcs **11436770049**		CLIPSTER AP13 TX CLIPSTER AP13 TX CLIPSTER AP13 TX		-	465
6 pcs **11453170002**		CLIPSTER A21 TECHNIC STEAM TIN CLIPSTER A21 TECHNIC STEAM TIN CLIPSTER A21 TECHNIC STEAM TIN		-	465

Sets | Estuches | Cofanetti

Item	Packshot	Designation	Application	Rge	Page
10 pcs **11453170001**		CLIPSTER A23 TECHNIC STEAM TIN CLIPSTER A23 TECHNIC STEAM TIN CLIPSTER A23 TECHNIC STEAM TIN		-	465
19 pcs **11453170015**		Set | E | TECHNIC STEAM TIN Estuche | E | TECHNIC STEAM TIN Cassetta | E | TECHNIC STEAM TIN			466
25 pcs **11453170017**		Set | G | TECHNIC STEAM TIN Estuche | G | TECHNIC STEAM TIN Cassetta | G | TECHNIC STEAM TIN			466
5 pcs **11468570003**		A30 TECHNIC COBALT SET EST. A30 TECHNIC COBALT COF. A30 TECHNIC COBALT			466
6 pcs **11468570002**		CLIPSTER A31 TECHNIC COBALT CLIPSTER A31 TECHNIC COBALT CLIPSTER A31 TECHNIC COBALT			466
10 pcs **11468570001**		CLIPSTER A33 TECHNIC COBALT CLIPSTER A33 TECHNIC COBALT CLIPSTER A33 TECHNIC COBALT			467
13 pcs **11468570006**		CLIPSTER PRO A34 CLIPSTER PRO A34 CLIPSTER PRO A34			467
19 pcs **11468570015**		Set | E | TECHNIC COBALT Estuche | E | TECHNIC COBALT Cassetta | E | TECHNIC COBALT			467
5 pcs **11434370001**		A15 METAL HEXA SET EST. A15 HEXA COF. A15 Esagonale		-	468
7 pcs **11437070002**		Set | FHX6 HEXA Estuche | FHX6 HEXA Cassetta | FHX6 HEXA			468
12 pcs **11437070001**		Set | FHX12 HEXA Estuche | FHX12 HEXA Cassetta | FHX12 HEXA			468
FCL **11438670001**		Set | FCL330 Estuche | FCL330 Cassetta | FCL330			468
11438770001		Set | FCE430 Estuche | FCE430 Cassetta | FCE430			469
11438770002		Set | FCE637 Estuche | FCE637 Cassetta | FCE637			469
11448770001		Set | FCE430 COBALT Estuche | FCE430 COBALT Cassetta | FCE430 COBALT			469
11448770002		Set | FCE637 COBALT Estuche | FCE637 COBALT Cassetta | FCE637 COBALT			469
11900970013		Set | MTF21 | Standard Estuche | MTF21 | Standard Cassetta | MTF21 | Standard		-	470
11900970014		Set | MTF39 | Standard Estuche | MTF39 | Standard Cassetta | MTF39 | Standard		-	470
11900970015		Set | MTF19 Estuche | MTF19 Cassetta | MTF19			470

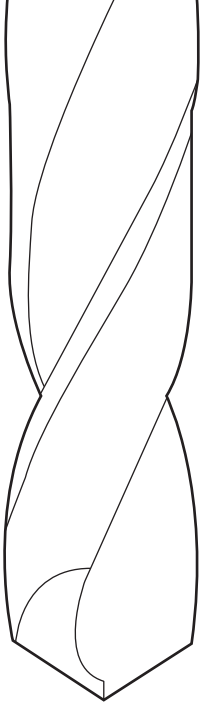
Sets | Estuches | Cofanetti

Item	Packshot	Designation	Application	Rge	Page
11900970017		Set | MTF29 | TECHNIC Estuche | MTF29 | TECHNIC Cassetta | MTF29 | TECHNIC			470
M HEXA taps **10503070001**		Set | THD HEXA Estuche | THD HEXA Cassetta | THD HEXA			471
M HEXA combi **10502970001**		Set | FTH HEXA Estuche | FTH HEXA Cassetta | FTH			471
10332370002		Set | FNH04 | HEXA Estuche | FNH04 | HEXA Cassetta | FNH04 | HEXA			472
10332370001		Set | FNH06 | HEXA Estuche | FNH06 | HEXA Cassetta | FNH06 | HEXA			472
10331670006		Set | FNH04 COBALT Estuche | FNH04 COBALT Cassetta | FNH04 COBALT			472
19 pcs **11300470015**		Set | E Empty Estuche | E Vacía Cassetta | E vuoto			473
25 pcs **11300470017**		Set | G Empty Estuche | G Vacía Cassetta | G vuoto			473

GENE-
RAL
CATALOGUE

DRILLING
TALADRADO
FORATURA

#01/07



DRILLING
TALADRADO
FORATURA

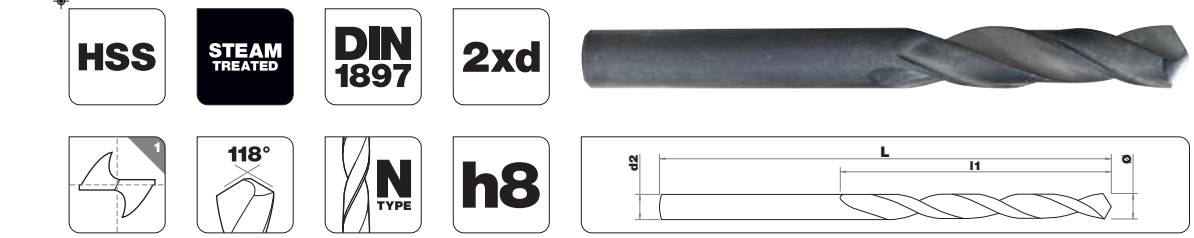
HSS BITS 50 #01
BROCAS HSS
PUNTE HSS

CARBIDE BITS 146 #01
BROCAS METAL DURO
PUNTE CARBURO

RK | HSS ROLL FORGED STUB LENGTH DRILL.

RK | BROCA HSS LAMINADA CILINDRICA EXTRACORTA.

RK | PUNTA HSS LAMINATA CILINDRICA EXTRA-CORTA .



For steels.

Para aceros en general.

Foratura acciaio comune.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

9020051	EAN	ø	d2	L	l1	QTY	PCB
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90200510320	3221910817824	3.2	3.2	49	18	1	10
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90200510350	3221910817862	3.5	3.5	52	20	1	10
90200510400	3221910817923	4	4	55	22	1	10
90200510420	3221910817947	4.2	4.2	55	22	1	10
90200510450	3221910817985	4.5	4.5	58	24	1	10
90200510500	3221910818029	5	5	62	26	1	10
90200510520	3221910818043	5.2	5.2	62	26	1	10
90200510550	3221910818074	5.5	5.5	66	28	1	10
90200510600	3221910818111	6	6	66	28	1	10
90200510650	3221910818135	6.5	6.5	70	31	1	10
90200510700	3221910818159	7	7	74	34	1	10
90200510750	3221910818173	7.5	7.5	74	34	1	10
90200510800	3221910818197	8	8	79	37	1	10
90200510850	3221910818210	8.5	8.5	79	37	1	10
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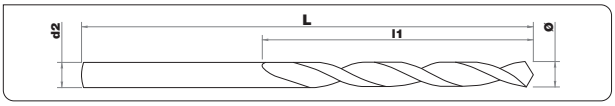


HSS FULLY GROUND STUB LENGTH DRILL | T LINE

BROCA HSS RECTIFICADA CILÍNDRICA SERIE EXTRA-CORTA | T LINE

PUNTA HSS CILINDRICA EXTRA-CORTA | T LINE





For steels and cast irons.

Para aceros y fundiciones.

Foratura di acciai <950 N/mm² e ghise.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

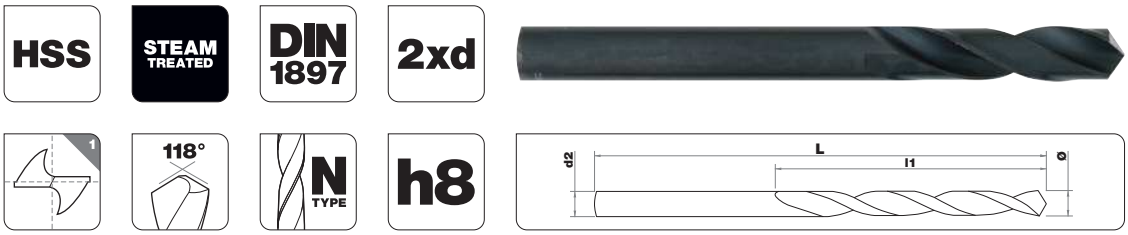
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11402610250	3221912002969	2.5	2.5	43	14	1	10
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11402611000	3221910154653	10	10	89	43	1	5
11402611050	3221912002938	10.5	10.5	89	43	1	5
11402611100	3221910154660	11	11	95	47	1	5
11402611150	3221912002945	11.5	11.5	95	47	1	5
11402611200	3221910154677	12	12	102	51	1	5
11402611250	3221912002952	12.5	12.5	102	51	1	5
11402611300	3221910154684	13	13	102	51	1	5



TEK | HSS FULLY GROUND STUB LENGTH DRILL.

TEK | BROCA HSS RECTIFICADA CILÍNDRICA SERIE EXTRA-CORTA.

TEK | PUNTA HSS CILINDRICA EXTRA-CORTA.



For steels and cast irons. Robustness, accuracy.

Para aceros y fundiciones. Fuerza, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

1140251	EAN	Ø	d2	L	l1	QTY	PCB
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11402510110	3221910151782	1.1	1.1	28	7	1	10
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11402510130	3221910151829	1.3	1.3	30	8	1	10
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11402510150	3221910151850	1.5	1.5	32	9	1	10
11402510160	3221910151874	1.6	1.6	34	10	1	10
11402510175	3221910151898	1.75	1.75	36	11	1	10
11402510180	3221910151904	1.8	1.8	36	11	1	10
11402510200	3221910151935	2	2	38	12	1	10
11402510210	3221910151942	2.1	2.1	38	12	1	10
11402510220	3221910151959	2.2	2.2	40	13	1	10
11402510230	3221910151973	2.3	2.3	40	13	1	10
11402510240	3221910151997	2.4	2.4	43	14	1	10
11402510250	3221910152000	2.5	2.5	43	14	1	10
11402510260	3221910152017	2.6	2.6	43	14	1	10
11402510270	3221910152024	2.7	2.7	46	16	1	10
11402510280	3221910152055	2.8	2.8	46	16	1	10
11402510290	3221910152079	2.9	2.9	46	16	1	10
11402510300	3221910152086	3	3	46	16	1	10
11402510310	3221910152093	3.1	3.1	49	18	1	10
11402510320	3221910152116	3.2	3.2	49	18	1	10
11402510325	3221910152123	3.25	3.25	49	18	1	10
11402510330	3221910152130	3.3	3.3	49	18	1	10
11402510340	3221910152147	3.4	3.4	52	20	1	10
11402510350	3221910152154	3.5	3.5	52	20	1	10
11402510360	3221910152178	3.6	3.6	52	20	1	10
11402510370	3221910152185	3.7	3.7	52	20	1	10
11402510380	3221910152208	3.8	3.8	55	22	1	10
11402510390	3221910152215	3.9	3.9	55	22	1	10
11402510400	3221910152239	4	4	55	22	1	10
11402510410	3221910152246	4.1	4.1	55	22	1	10
11402510420	3221910152253	4.2	4.2	55	22	1	10
11402510425	3221910152260	4.25	4.25	55	22	1	10
11402510430	3221910152277	4.3	4.3	58	24	1	10
11402510450	3221910152307	4.5	4.5	58	24	1	10
11402510460	3221910152314	4.6	4.6	58	24	1	10
11402510480	3221910152352	4.8	4.8	62	26	1	10
11402510490	3221910152369	4.9	4.9	62	26	1	10
11402510500	3221910152376	5	5	62	26	1	10
11402510510	3221910152383	5.1	5.1	62	26	1	10
11402510520	3221910152406	5.2	5.2	62	26	1	10
11402510525	3221910152413	5.25	5.25	62	26	1	10
11402510550	3221910152444	5.5	5.5	66	28	1	10
11402510575	3221910152482	5.75	5.75	66	28	1	10
11402510600	3221910152529	6	6	66	28	1	10
11402510620	3221910152543	6.2	6.2	70	31	1	10
11402510650	3221910152598	6.5	6.5	70	31	1	10
11402510660	3221910152604	6.6	6.6	70	31	1	10



1140251	EAN	Ø	d2	L	l1	QTY	PCB
11402510680	3221910152635	6.8	6.8	74	34	1	10
11402510700	3221910152659	7	7	74	34	1	10
11402510750	3221910152710	7.5	7.5	74	34	1	10
11402510800	3221910152789	8	8	79	37	1	10
11402510820	3221910152796	8.2	8.2	79	37	1	5
11402510850	3221910152826	8.5	8.5	79	37	1	5
11402510900	3221910152888	9	9	84	40	1	5
11402510950	3221910152895	9.5	9.5	84	40	1	5
11402511000	3221910152925	10	10	89	43	1	5
11402511050	3221910152963	10.5	10.5	89	43	1	5
11402511100	3221910152970	11	11	95	47	1	5
11402511150	3221910152987	11.5	11.5	95	47	1	5
11402511200	3221910152994	12	12	102	51	1	5
11402511250	3221910153007	12.5	12.5	102	51	1	5
11402511300	3221910153021	13	13	102	51	1	5

TXD | HSS FULLY GROUND DOUBLE ENDED STUB LENGTH DRILL

TXD | BROCA HSS RECTIFICADA DOBLE PUNTA.

TXD | PUNTA HSS CILINDRICA DOPPIO TAGLIO.



For steels and cast irons. Comfort, accuracy.

Para aceros y fundiciones. Confort, precisión.

Foratura di acciai <950 N/mm² e ghise. Comfort e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

1140271	EAN	Ø	d2	L	l1	QTY	PCB
11402710200	3221910154936	2	2	38	10	1	10
11402710220	3221910154943	2.2	2.2	40	10	1	10
11402710250	3221910154967	2.5	2.5	43	10	1	10
11402710300	3221910155001	3	3	46	10	1	10
11402710310	3221910155018	3.1	3.1	49	10	1	10
11402710320	3221910155025	3.2	3.2	49	10	1	10
11402710330	3221910155056	3.3	3.3	49	10	1	10
11402710350	3221910155070	3.5	3.5	52	13	1	10
11402710380	3221910155094	3.8	3.8	55	13	1	10
11402710400	3221910155100	4	4	55	13	1	10
11402710410	3221910155117	4.1	4.1	55	13	1	10
11402710420	3221910155124	4.2	4.2	55	13	1	10
11402710450	3221910155155	4.5	4.5	58	13	1	10
11402710480	3221910155162	4.8	4.8	62	16	1	10
11402710490	3221910155179	4.9	4.9	62	16	1	10
11402710500	3221910155186	5	5	62	16	1	10
11402710510	3221910155193	5.1	5.1	62	16	1	10
11402710520	3221910155209	5.2	5.2	62	16	1	10
11402710550	3221910155223	5.5	5.5	66	19	1	10
11402710600	3221910155247	6	6	66	19	1	10
11402710650	3221910155261	6.5	6.5	70	19	1	10
11402710700	3221910155278	7	7	74	19	1	10
11402710800	3221910155292	8	8	79	22	1	10
11402710900	3221910155315	9	9	84	22	1	5
11402711000	3221910155339	10	10	89	22	1	5



TPX | HSS FULLY GROUND STUB LENGTH DRILL.

TPX | BROCA HSS RECTIFICADA CILÍNDRICA.

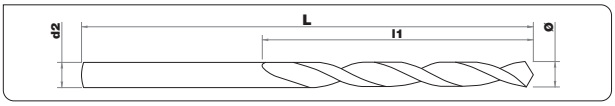
TPX | PUNTA HSS CILINDRICA CON CUSPIDE PER LAMIERA.



HSS | BRIGHT UNCOATED | DIN 1897 | 1xd







For sheet metal and plastics. Comfort accuracy.

Para chapas y plásticos. Confort, precisión.

Foratura e pulitura di lamiere e mat. plastici. Comfort e precisione.

AB

Steels for heat treatment
200-700N/mm²
Aceros para tratamiento térmico
200-700 N/mm²
Acciai per trattamento termico
200-700N/mm²

1143741	EAN	Ø	d2	L	l1	QTY	PCB
11437410300	3221910213640	3	3	46	16	1	10
11437410350	3221910213664	3.5	3.5	52	20	1	10
11437410400	3221910213671	4	4	55	22	1	10
11437410420	3221910213688	4.2	4.2	55	22	1	10
11437410450	3221910213695	4.5	4.5	58	24	1	10
11437410500	3221910213701	5	5	62	26	1	10
11437410550	3221910213725	5.5	5.5	66	28	1	10
11437410600	3221910213732	6	6	66	28	1	10
11437410800	3221910213749	8	8	79	37	1	10
11437411000	3221910213756	10	10	89	43	1	5



HSS FULLY GROUND MICRO DRILL.

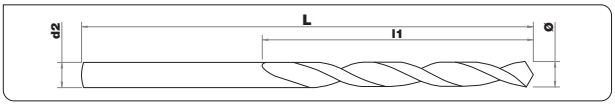
MICRO-BROCA HSS RECTIFICADA CILÍNDRICA.

MICRO-PUNTA CILINDRICA HSS GAMBO RINFORZATO.

HSS E5 | BRIGHT UNCOATED | simDiN 1899 | 2xd



8 | 118° | N TYPE | h6



For steels and cast irons, accuracy.

Para Aceros y fundiciones.Precisión.

Foratura di acciai <950 N/mm² e ghise, precisione.

AB Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

IJ Cast iron
Fundiciones
Ghisa

8140321	EAN	Ø	d2	L	l1	QTY	PCB
81403210015	3221910737238	0.15	1	25	1	1	10
81403210016	3221910737245	0.16	1	25	1.4	1	10
81403210017	3221910737252	0.17	1	25	1.4	1	10
81403210018	3221910737269	0.18	1	25	1.4	1	10
81403210019	3221910737276	0.19	1	25	1.4	1	10
81403210020	3221910737283	0.2	1	25	1.8	1	10
81403210021	3221910737290	0.21	1	25	1.8	1	10
81403210022	3221910737306	0.22	1	25	1.8	1	10
81403210023	3221910737313	0.23	1	25	1.8	1	10
81403210024	3221910737320	0.24	1	25	1.8	1	10
81403210025	3221910737337	0.25	1	25	2.2	1	10
81403210027	3221910737351	0.27	1	25	2.2	1	10
81403210028	3221910737368	0.28	1	25	2.2	1	10
81403210029	3221910737375	0.29	1	25	2.2	1	10
81403210030	3221910737382	0.3	1	25	2.2	1	10
81403210031	3221910737399	0.31	1	25	2.8	1	10
81403210032	3221910737405	0.32	1	25	2.8	1	10
81403210033	3221910737412	0.33	1	25	2.8	1	10
81403210034	3221910737429	0.34	1	25	2.8	1	10
81403210035	3221910737436	0.35	1	25	2.8	1	10
81403210037	3221910737443	0.37	1	25	2.8	1	10
81403210038	3221910737450	0.38	1	25	2.8	1	10
81403210040	3221910737467	0.4	1	25	3.2	1	10
81403210041	3221910737474	0.41	1	25	3.2	1	10
81403210042	3221910737481	0.42	1	25	3.2	1	10
81403210043	3221910737498	0.43	1	25	3.2	1	10
81403210044	3221910737504	0.44	1	25	3.2	1	10
81403210045	3221910737511	0.45	1	25	3.2	1	10
81403210046	3221910737528	0.46	1	25	3.6	1	10
81403210047	3221910737535	0.47	1	25	3.6	1	10
81403210049	3221910737542	0.49	1	25	3.6	1	10
81403210050	3221910737559	0.5	1	25	3.6	1	10
81403210051	3221910737566	0.51	1.5	25	4	1	10
81403210052	3221910737573	0.52	1.5	25	4	1	10
81403210053	3221910737580	0.53	1.5	25	4	1	10
81403210054	3221910737597	0.54	1.5	25	4	1	10
81403210055	3221910737603	0.55	1.5	25	4	1	10
81403210056	3221910737610	0.56	1.5	25	4.5	1	10
81403210058	3221910737627	0.58	1.5	25	4.5	1	10
81403210059	3221910737634	0.59	1.5	25	4.5	1	10
81403210060	3221910737641	0.6	1.5	25	4.5	1	10
81403210061	3221910737658	0.61	1.5	25	4.7	1	10
81403210062	3221910737665	0.62	1.5	25	4.7	1	10
81403210063	3221910737672	0.63	1.5	25	4.7	1	10
81403210065	3221910737689	0.65	1.5	25	4.7	1	10
81403210068	3221910737702	0.68	1.5	25	5.2	1	10
81403210069	3221910737719	0.69	1.5	25	5.2	1	10
81403210070	3221910737726	0.7	1.5	25	5.2	1	10
81403210071	3221910737733	0.71	1.5	25	5.2	1	10
81403210072	3221910737740	0.72	1.5	25	5.2	1	10
81403210073	3221910737757	0.73	1.5	25	5.2	1	10
81403210074	3221910737764	0.74	1.5	25	5.2	1	10
81403210075	3221910737771	0.75	1.5	25	5.2	1	10
81403210076	3221910737788	0.76	1.5	25	5.5	1	10
81403210077	3221910737795	0.77	1.5	25	5.5	1	10
81403210078	3221910737801	0.78	1.5	25	5.5	1	10



8140321	EAN	Ø	d2	L	l1	QTY	PCB
81403210079	3221910737818	0.79	1.5	25	5.5	1	10
81403210080	3221910737825	0.8	1.5	25	5.5	1	10
81403210085	3221910737832	0.85	1.5	25	5.5	1	10
81403210090	3221910737849	0.9	1.5	25	6	1	10
81403210095	3221910737856	0.95	1.5	25	6	1	10
81403210100	3221910737863	1	1.5	25	6.5	1	10
81403210105	3221910737870	1.05	1.5	25	6.5	1	10
81403210110	3221910737887	1.1	1.5	25	7	1	10
81403210120	3221910737894	1.2	1.5	25	7.5	1	10
81403210125	3221910737900	1.25	1.5	25	7.5	1	10
81403210130	3221910737917	1.3	1.5	25	7.5	1	10
81403210135	3221910737924	1.35	1.5	25	8.5	1	10
81403210140	3221910737931	1.4	1.5	25	8.5	1	10
81403210145	3221910737948	1.45	1.5	25	8.5	1	10

HSSE5 FULLY GROUND STUB LENGTH DRILL | T LINE

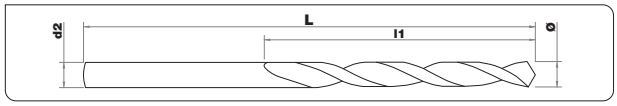
BROCA HSSE5 RECTIFICADA CILÍNDRICA SERIE EXTRA-CORTA | T LINE

PUNTA HSSE5 CILINDRICA EXTRA-CORTA | T LINE

HSS E5 | GOLD TREATED | DIN 1897 | 2xd



4 | 135° | N TYPE | h8



For steels and austenitic stainless steels.

Para aceros y aceros inoxidables austeníticos.

Foratura acciai e acciai inossidabili austenitici.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

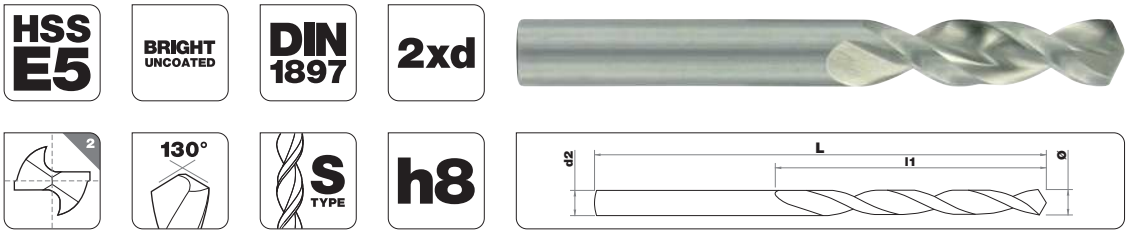
1140281	EAN	Ø	d3	L	l2	QTY	PCB
11402810200	3221912002983	2	2	38	12	1	10
11402810220	3221912002976	2.2	2.2	40	13	1	10
11402810250	3221912002990	2.5	2.5	43	14	1	10
11402810275	3221912003003	2.75	2.75	46	16	1	10
11402810300	3221912003010	3	3	46	16	1	10
11402810320	3221912003027	3.2	3.2	49	18	1	10
11402810325	3221912003034	3.25	3.25	49	18	1	10
11402810330	3221912003041	3.3	3.3	49	18	1	10
11402810350	3221912003058	3.5	3.5	52	20	1	10
11402810375	3221912003065	3.75	3.75	52	20	1	10
11402810400	3221912003072	4	4	55	22	1	10
11402810410	3221912003089	4.1	4.1	55	22	1	10
11402810420	3221912003096	4.2	4.2	55	22	1	10
11402810425	3221912003102	4.25	4.25	55	22	1	10
11402810450	3221912003119	4.5	4.5	58	24	1	10
11402810490	3221912003126	4.9	4.9	62	26	1	10
11402810500	3221912003133	5	5	62	26	1	10
11402810525	3221912003140	5.25	5.25	62	26	1	10
11402810550	3221912003157	5.5	5.5	66	28	1	10
11402810600	3221912003164	6	6	66	28	1	10
11402810650	3221912003171	6.5	6.5	70	31	1	10
11402810680	3221912003188	6.8	6.8	74	34	1	10
11402810700	3221912003195	7	7	74	34	1	10
11402810750	3221912003201	7.5	7.5	74	34	1	10
11402810800	3221912003218	8	8	79	37	1	10
11402810850	3221912003225	8.5	8.5	79	37	1	5
11402810900	3221912003232	9	9	84	40	1	5
11402810950	3221912003249	9.5	9.5	84	40	1	5
11402811000	3221912003256	10	10	89	43	1	5



PHOENIX | HSSE5 FULLY GROUND STUB LENGTH DRILL. TYPE S

PHOENIX | BROCA HSSE5 RECTIFICADA CILÍNDRICA SERIE EXTRA-CORTA. TIPO S

PHOENIX | PUNTA HSSE5 CILINDRICA EXTRA-CORTA | TIPO S



For deep holes. Universal application. High Performance.

Usos múltiples para agujeros profundos. Alto rendimiento.

Concepita per forature polivalenti e fori profondi. Alte prestazioni.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

J SG iron
Fundición nodular
Ghisa GS

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

8140291	EAN	Ø	d2	L	l1	QTY	PCB
81402910200	3221910430290	2	2	38	12	1	10
81402910210	3221910430306	2.1	2.1	38	12	1	10
81402910220	3221910430313	2.2	2.2	40	13	1	10
81402910230	3221910430320	2.3	2.3	40	13	1	10
81402910240	3221910430337	2.4	2.4	43	14	1	10
81402910250	3221910430344	2.5	2.5	43	14	1	10
81402910260	3221910430351	2.6	2.6	43	14	1	10
81402910270	3221910430368	2.7	2.7	46	16	1	10
81402910280	3221910430375	2.8	2.8	46	16	1	10
81402910290	3221910430382	2.9	2.9	46	16	1	10
81402910300	3221910430399	3	3	46	16	1	10
81402910310	3221910430405	3.1	3.1	49	18	1	10
81402910320	3221910430412	3.2	3.2	49	18	1	10
81402910330	3221910430436	3.3	3.3	49	18	1	10
81402910340	3221910430443	3.4	3.4	52	20	1	10
81402910350	3221910430450	3.5	3.5	52	20	1	10
81402910360	3221910430467	3.6	3.6	52	20	1	10
81402910370	3221910430481	3.7	3.7	52	20	1	10
81402910380	3221910430498	3.8	3.8	55	22	1	10
81402910390	3221910430504	3.9	3.9	55	22	1	10
81402910400	3221910430511	4	4	55	22	1	10
81402910410	3221910430528	4.1	4.1	55	22	1	10
81402910420	3221910430535	4.2	4.2	55	22	1	10
81402910430	3221910430542	4.3	4.3	58	24	1	10
81402910440	3221910430559	4.4	4.4	58	24	1	10
81402910450	3221910430566	4.5	4.5	58	24	1	10
81402910460	3221910430573	4.6	4.6	58	24	1	10
81402910470	3221910430580	4.7	4.7	58	24	1	10
81402910480	3221910430597	4.8	4.8	62	26	1	10
81402910490	3221910430603	4.9	4.9	62	26	1	10
81402910500	3221910430610	5	5	62	26	1	10
81402910510	3221910430627	5.1	5.1	62	26	1	10
81402910520	3221910430634	5.2	5.2	62	26	1	10
81402910530	3221910430641	5.3	5.3	62	26	1	10
81402910540	3221910430658	5.4	5.4	66	28	1	10
81402910550	3221910430665	5.5	5.5	66	28	1	10
81402910560	3221910430672	5.6	5.6	66	28	1	10
81402910570	3221910430689	5.7	5.7	66	28	1	10
81402910580	3221910430696	5.8	5.8	66	28	1	10
81402910590	3221910430702	5.9	5.9	66	28	1	10
81402910600	3221910430719	6	6	66	28	1	10
81402910610	3221910430726	6.1	6.1	70	31	1	10
81402910620	3221910430733	6.2	6.2	70	31	1	10
81402910630	3221910430740	6.3	6.3	70	31	1	10
81402910640	3221910430757	6.4	6.4	70	31	1	10
81402910650	3221910430764	6.5	6.5	70	31	1	10
81402910660	3221910430771	6.6	6.6	70	31	1	10
81402910670	3221910430788	6.7	6.7	70	31	1	10
81402910680	3221910430801	6.8	6.8	74	34	1	10
81402910690	3221910430818	6.9	6.9	74	34	1	10
81402910700	3221910430825	7	7	74	34	1	10



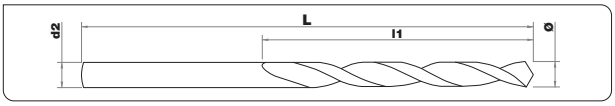
81402910710	3221910430832	7.1	7.1	74	34	1	10
81402910720	3221910430849	7.2	7.2	74	34	1	10
81402910730	3221910430856	7.3	7.3	74	34	1	10
81402910740	3221910430863	7.4	7.4	74	34	1	10
81402910750	3221910430870	7.5	7.5	74	34	1	10
81402910760	3221910430887	7.6	7.6	79	37	1	10
81402910770	3221910430894	7.7	7.7	79	37	1	10
81402910780	3221910430900	7.8	7.8	79	37	1	10
81402910790	3221910430917	7.9	7.9	79	37	1	10
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81402910810	3221910430931	8.1	8.1	79	37	1	5
81402910820	3221910430948	8.2	8.2	79	37	1	5
81402910830	3221910430955	8.3	8.3	79	37	1	5
81402910840	3221910430962	8.4	8.4	79	37	1	5
81402910850	3221910430979	8.5	8.5	79	37	1	5
81402910860	3221910430986	8.6	8.6	84	40	1	5
81402910870	3221910430993	8.7	8.7	84	40	1	5
81402910880	3221910431006	8.8	8.8	84	40	1	5
81402910890	3221910431013	8.9	8.9	84	40	1	5
81402910900	3221910431020	9	9	84	40	1	5
81402910910	3221910431037	9.1	9.1	84	40	1	5
81402910920	3221910431044	9.2	9.2	84	40	1	5
81402910930	3221910431051	9.3	9.3	84	40	1	5
81402910940	3221910431068	9.4	9.4	84	40	1	5
81402910950	3221910431075	9.5	9.5	84	40	1	5
81402910960	3221910431082	9.6	9.6	89	43	1	5
81402910970	3221910431099	9.7	9.7	89	43	1	5
81402910980	3221910431105	9.8	9.8	89	43	1	5
81402910990	3221910431112	9.9	9.9	89	43	1	5
81402911000	3221910431129	10	10	89	43	1	5
81402911010	3221910431136	10.1	10.1	89	43	1	5
81402911020	3221910431143	10.2	10.2	89	43	1	5
81402911030	3221910431150	10.3	10.3	89	43	1	5
81402911040	3221910431167	10.4	10.4	89	43	1	5
81402911050	3221910431174	10.5	10.5	89	43	1	5
81402911060	3221910431181	10.6	10.6	89	43	1	5
81402911070	3221910431198	10.7	10.7	95	47	1	5
81402911080	3221910431204	10.8	10.8	95	47	1	5
81402911090	3221910431211	10.9	10.9	95	47	1	5
81402911100	3221910431228	11	11	95	47	1	5
81402911110	3221910431235	11.1	11.1	95	47	1	5
81402911120	3221910431242	11.2	11.2	95	47	1	5
81402911130	3221910431259	11.3	11.3	95	47	1	5
81402911140	3221910431266	11.4	11.4	95	47	1	5
81402911150	3221910431273	11.5	11.5	95	47	1	5
81402911160	3221910431280	11.6	11.6	95	47	1	5
81402911170	3221910431297	11.7	11.7	95	47	1	5
81402911180	3221910431303	11.8	11.8	95	47	1	5
81402911190	3221910431310	11.9	11.9	102	51	1	5
81402911200	3221910431327	12	12	102	51	1	5
81402911210	3221910431334	12.1	12.1	102	51	1	5
81402911220	3221910431341	12.2	12.2	102	51	1	5
81402911230	3221910431358	12.3	12.3	102	51	1	5
81402911240	3221910431365	12.4	12.4	102	51	1	5
81402911250	3221910431372	12.5	12.5	102	51	1	5
81402911260	3221910431389	12.6	12.6	102	51	1	5
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81402911280	3221910431402	12.8	12.8	102	51	1	5
81402911290	3221910431419	12.9	12.9	102	51	1	5
81402911300	3221910431426	13	13	102	51	1	5
81402911350	3221910431433	13.5	13.5	107	54	1	5
81402911400	3221910431440	14	14	107	54	1	5
81402911450	3221910431457	14.5	14.5	111	56	1	5
81402911500	3221910431464	15	15	111	56	1	5
81402911550	3221910431471	15.5	15.5	115	58	1	1
81402911600	3221910431488	16	16	115	58	1	1
81402911650	3221910431495	16.5	16.5	119	60	1	1
81402911700	3221910431501	17	17	119	60	1	1
81402911750	3221910431518	17.5	17.5	123	62	1	1
81402911800	3221910431525	18	18	123	62	1	1
81402911850	3221910431532	18.5	18.5	127	64	1	1
81402911900	3221910431549	19	19	127	64	1	1
81402911950	3221910431556	19.5	19.5	131	66	1	1
81402912000	3221910431563	20	20	131	66	1	1

PHOENIX | HSSE5 TIALN FULLY GROUND STUB LENGTH DRILL. TYPE S

PHOENIX | BROCA HSSE5 TIALN RECTIFICADA CILÍNDRICA SERIE EXTRA-CORTA. TIPO S

PHOENIX | PUNTA HSSE5 TIALN CILINDRICA EXTRA-CORTA | TIPO S





For deep holes. Universal application. High Performance.

Usos múltiples para agujeros profundos. Alto rendimiento.

Concepita per forature polivalenti e fori profondi. Alte prestazioni.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

J SG iron
Fundición nodular
Ghisa GS

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

8143911	EAN	Ø	d2	L	l1	QTY	PCB
81439110200	3221910783655	2	2	38	12	1	10
81439110210	3221910783662	2.1	2.1	38	12	1	10
81439110220	3221910783679	2.2	2.2	40	13	1	10
81439110230	3221910783686	2.3	2.3	40	13	1	10
81439110240	3221910783693	2.4	2.4	43	14	1	10
81439110250	3221910783709	2.5	2.5	43	14	1	10
81439110260	3221910783716	2.6	2.6	43	14	1	10
81439110270	3221910783723	2.7	2.7	46	16	1	10
81439110280	3221910783730	2.8	2.8	46	16	1	10
81439110290	3221910783747	2.9	2.9	46	16	1	10
81439110300	3221910783754	3	3	46	16	1	10
81439110310	3221910783761	3.1	3.1	49	18	1	10
81439110320	3221910783778	3.2	3.2	49	18	1	10
81439110330	3221910783785	3.3	3.3	49	18	1	10
81439110340	3221910783792	3.4	3.4	52	20	1	10
81439110350	3221910783808	3.5	3.5	52	20	1	10
81439110360	3221910783815	3.6	3.6	52	20	1	10
81439110370	3221910783822	3.7	3.7	52	20	1	10
81439110380	3221910783839	3.8	3.8	55	22	1	10
81439110390	3221910783846	3.9	3.9	55	22	1	10
81439110400	3221910783853	4	4	55	22	1	10
81439110410	3221910783860	4.1	4.1	55	22	1	10
81439110420	3221910783877	4.2	4.2	55	22	1	10
81439110430	3221910783884	4.3	4.3	58	24	1	10
81439110440	3221910783891	4.4	4.4	58	24	1	10
81439110450	3221910783907	4.5	4.5	58	24	1	10
81439110460	3221910783914	4.6	4.6	58	24	1	10
81439110470	3221910783921	4.7	4.7	58	24	1	10
81439110480	3221910783938	4.8	4.8	62	26	1	10
81439110490	3221910783945	4.9	4.9	62	26	1	10
81439110500	3221910783952	5	5	62	26	1	10
81439110510	3221910783969	5.1	5.1	62	26	1	10
81439110520	3221910783976	5.2	5.2	62	26	1	10
81439110530	3221910783983	5.3	5.3	62	26	1	10
81439110540	3221910783990	5.4	5.4	66	28	1	10
81439110550	3221910784003	5.5	5.5	66	28	1	10
81439110560	3221910784010	5.6	5.6	66	28	1	10
81439110570	3221910784027	5.7	5.7	66	28	1	10
81439110580	3221910784034	5.8	5.8	66	28	1	10
81439110590	3221910784041	5.9	5.9	66	28	1	10
81439110600	3221910784058	6	6	66	28	1	10
81439110610	3221910784065	6.1	6.1	70	31	1	10
81439110620	3221910784072	6.2	6.2	70	31	1	10
81439110630	3221910784089	6.3	6.3	70	31	1	10
81439110640	3221910784096	6.4	6.4	70	31	1	10
81439110650	3221910784102	6.5	6.5	70	31	1	10
81439110660	3221910784119	6.6	6.6	70	31	1	10
81439110670	3221910784126	6.7	6.7	70	31	1	10
81439110680	3221910784133	6.8	6.8	74	34	1	10
81439110690	3221910784140	6.9	6.9	74	34	1	10
81439110700	3221910784157	7	7	74	34	1	10



8143911	EAN	Ø	d2	L	l1	QTY	PCB
81439110710	3221910784164	7.1	7.1	74	34	1	10
81439110720	3221910784171	7.2	7.2	74	34	1	10
81439110730	3221910784188	7.3	7.3	74	34	1	10
81439110740	3221910784195	7.4	7.4	74	34	1	10
81439110750	3221910784201	7.5	7.5	74	34	1	10
81439110760	3221910784218	7.6	7.6	79	37	1	10
81439110770	3221910784225	7.7	7.7	79	37	1	10
81439110780	3221910784232	7.8	7.8	79	37	1	10
81439110790	3221910784249	7.9	7.9	79	37	1	10
81439110800	3221910784256	8	8	79	37	1	10
81439110810	3221910784263	8.1	8.1	79	37	1	5
81439110820	3221910784270	8.2	8.2	79	37	1	5
81439110830	3221910784287	8.3	8.3	79	37	1	5
81439110840	3221910784294	8.4	8.4	79	37	1	5
81439110850	3221910784300	8.5	8.5	79	37	1	5
81439110860	3221910784317	8.6	8.6	84	40	1	5
81439110870	3221910784324	8.7	8.7	84	40	1	5
81439110880	3221910784331	8.8	8.8	84	40	1	5
81439110890	3221910784348	8.9	8.9	84	40	1	5
81439110900	3221910784355	9	9	84	40	1	5
81439110910	3221910784362	9.1	9.1	84	40	1	5
81439110920	3221910784379	9.2	9.2	84	40	1	5
81439110930	3221910784386	9.3	9.3	84	40	1	5
81439110940	3221910784393	9.4	9.4	84	40	1	5
81439110950	3221910784409	9.5	9.5	84	40	1	5
81439110960	3221910784416	9.6	9.6	89	43	1	5
81439110970	3221910784423	9.7	9.7	89	43	1	5
81439110980	3221910784430	9.8	9.8	89	43	1	5
81439110990	3221910784447	9.9	9.9	89	43	1	5
81439111000	3221910784454	10	10	89	43	1	5
81439111010	3221910784461	10.1	10.1	89	43	1	5
81439111020	3221910784478	10.2	10.2	89	43	1	5
81439111030	3221910784485	10.3	10.3	89	43	1	5
81439111040	3221910784492	10.4	10.4	89	43	1	5
81439111050	3221910784508	10.5	10.5	89	43	1	5
81439111060	3221910784515	10.6	10.6	89	43	1	5
81439111070	3221910784522	10.7	10.7	95	47	1	5
81439111080	3221910784539	10.8	10.8	95	47	1	5
81439111090	3221910784546	10.9	10.9	95	47	1	5
81439111100	3221910784553	11	11	95	47	1	5
81439111110	3221910784560	11.1	11.1	95	47	1	5
81439111120	3221910784577	11.2	11.2	95	47	1	5
81439111130	3221910784584	11.3	11.3	95	47	1	5
81439111140	3221910784591	11.4	11.4	95	47	1	5
81439111150	3221910784607	11.5	11.5	95	47	1	5
81439111160	3221910784614	11.6	11.6	95	47	1	5
81439111170	3221910784621	11.7	11.7	95	47	1	5
81439111180	3221910784638	11.8	11.8	95	47	1	5
81439111190	3221910784645	11.9	11.9	102	51	1	5
81439111200	3221910784652	12	12	102	51	1	5
81439111210	3221910784669	12.1	12.1	102	51	1	5
81439111220	3221910784676	12.2	12.2	102	51	1	5
81439111230	3221910784683	12.3	12.3	102	51	1	5
81439111240	3221910784690	12.4	12.4	102	51	1	5
81439111250	3221910784706	12.5	12.5	102	51	1	5
81439111260	3221910784713	12.6	12.6	102	51	1	5
81439111270	3221910784720	12.7	12.7	102	51	1	5
81439111280	3221910784737	12.8	12.8	102	51	1	5
81439111290	3221910784744	12.9	12.9	102	51	1	5
81439111300	3221910784751	13	13	102	51	1	5
81439111350	3221910784768	13.5	13.5	107	54	1	5
81439111400	3221910784775	14	14	107	54	1	5
81439111450	3221910784782	14.5	14.5	111	56	1	5
81439111500	3221910784799	15	15	111	56	1	5
81439111550	3221910784805	15.5	15.5	115	58	1	1
81439111600	3221910784812	16	16	115	58	1	1
81439111650	3221910784829	16.5	16.5	119	60	1	1
81439111700	3221910784836	17	17	119	60	1	1
81439111750	3221910784843	17.5	17.5	123	62	1	1
81439111800	3221910784850	18	18	123	62	1	1
81439111850	3221910784867	18.5	18.5	127	64	1	1
81439111900	3221910784874	19	19	127	64	1	1
81439111950	3221910784881	19.5	19.5	131	66	1	1
81439112000	3221910784898	20	20	131	66	1	1

HSS-E8 (M42) FULLY GROUND STUB LENGTH DRILL.

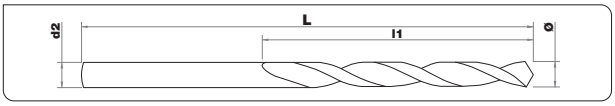
BROCA HSS-E8 (M42) RECTIFICADA CILÍNDRICA EXTRA-CORTA

PUNTA HSS-E8 CILINDRICA EXTRA-CORTA. TIPO N

HSS E8 | BRIGHT UNCOATED | DIN 1897 | 2xd



4 | 135° | N TYPE | h8



For Special alloys Nickel/Cobalt and titanium. High Performance.

Para aleaciones Nickel / Cobalt y Titanio. Alto rendimiento.

Foratura leghe nichel/cobalto e titanio. Alte prestazioni.

ARCo ARNi — Ni / Co based special alloys / Aleaciones refractarias Co / Ni / Leghe refrattarie Co / Ni

Ti — Titanium alloys / Aleaciones de titanio / Leghe di titanio

8140311	EAN	Ø	d2	L	l1	QTY	PCB
81403110200	3221910735753	2	2	38	12	1	10
81403110210	3221910735760	2.1	2.1	38	12	1	10
81403110220	3221910735777	2.2	2.2	40	13	1	10
81403110230	3221910735784	2.3	2.3	40	13	1	10
81403110240	3221910735791	2.4	2.4	43	14	1	10
81403110250	3221910735807	2.5	2.5	43	14	1	10
81403110260	3221910735814	2.6	2.6	43	14	1	10
81403110270	3221910735821	2.7	2.7	46	16	1	10
81403110280	3221910735838	2.8	2.8	46	16	1	10
81403110290	3221910735845	2.9	2.9	46	16	1	10
81403110300	3221910735852	3	3	46	16	1	10
81403110310	3221910735869	3.1	3.1	49	18	1	10
81403110320	3221910735876	3.2	3.2	49	18	1	10
81403110330	3221910735883	3.3	3.3	49	18	1	10
81403110340	3221910735890	3.4	3.4	52	20	1	10
81403110350	3221910735906	3.5	3.5	52	20	1	10
81403110360	3221910735913	3.6	3.6	52	20	1	10
81403110370	3221910735920	3.7	3.7	52	20	1	10
81403110380	3221910735937	3.8	3.8	55	22	1	10
81403110390	3221910735944	3.9	3.9	55	22	1	10
81403110400	3221910735951	4	4	55	22	1	10
81403110410	3221910735968	4.1	4.1	55	22	1	10
81403110420	3221910735975	4.2	4.2	55	22	1	10
81403110430	3221910735982	4.3	4.3	58	24	1	10
81403110440	3221910735999	4.4	4.4	58	24	1	10
81403110450	3221910736002	4.5	4.5	58	24	1	10
81403110460	3221910736019	4.6	4.6	58	24	1	10
81403110470	3221910736026	4.7	4.7	58	24	1	10
81403110480	3221910736033	4.8	4.8	62	26	1	10
81403110490	3221910736040	4.9	4.9	62	26	1	10
81403110500	3221910736057	5	5	62	26	1	10
81403110510	3221910736064	5.1	5.1	62	26	1	10
81403110520	3221910736071	5.2	5.2	62	26	1	10
81403110530	3221910736088	5.3	5.3	62	26	1	10
81403110540	3221910736095	5.4	5.4	66	28	1	10
81403110550	3221910736101	5.5	5.5	66	28	1	10
81403110560	3221910736118	5.6	5.6	66	28	1	10
81403110570	3221910736125	5.7	5.7	66	28	1	10
81403110580	3221910736132	5.8	5.8	66	28	1	10
81403110590	3221910736149	5.9	5.9	66	28	1	10
81403110600	3221910736156	6	6	66	28	1	10
81403110610	3221910736163	6.1	6.1	70	31	1	10
81403110620	3221910736170	6.2	6.2	70	31	1	10
81403110630	3221910736187	6.3	6.3	70	31	1	10
81403110640	3221910736194	6.4	6.4	70	31	1	10
81403110650	3221910736200	6.5	6.5	70	31	1	10
81403110660	3221910736217	6.6	6.6	70	31	1	10
81403110670	3221910736224	6.7	6.7	70	31	1	10
81403110680	3221910736231	6.8	6.8	74	34	1	10
81403110690	3221910736248	6.9	6.9	74	34	1	10
81403110700	3221910736255	7	7	74	34	1	10
81403110720	3221910736262	7.2	7.2	74	34	1	10
81403110750	3221910736279	7.5	7.5	74	34	1	10
81403110780	3221910736286	7.8	7.8	79	37	1	10
81403110800	3221910736293	8	8	79	37	1	10
81403110820	3221910736309	8.2	8.2	79	37	1	5

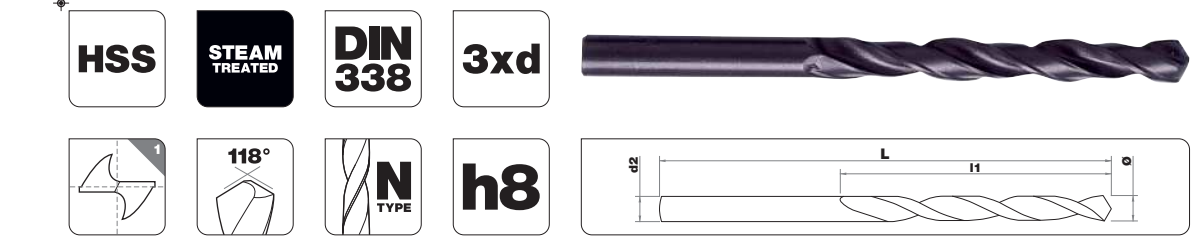


8140311	EAN	Ø	d2	L	l1	QTY	PCB
81403110850	3221910736316	8.5	8.5	79	37	1	5
81403110880	3221910736323	8.8	8.8	84	40	1	5
81403110900	3221910736330	9	9	84	40	1	5
81403110950	3221910736347	9.5	9.5	84	40	1	5
81403111000	3221910736354	10	10	89	43	1	5
81403111050	3221910736361	10.5	10.5	89	43	1	5
81403111100	3221910736378	11	11	95	47	1	5
81403111150	3221910736385	11.5	11.5	95	47	1	5
81403111200	3221910736392	12	12	102	51	1	5
81403111250	3221910736408	12.5	12.5	102	51	1	5
81403111300	3221910736415	13	13	102	51	1	5
81403111350	3221910736422	13.5	13.5	107	54	1	5
81403111400	3221910736439	14	14	107	54	1	5
81403111450	3221910736446	14.5	14.5	111	56	1	5
81403111500	3221910736453	15	15	111	56	1	5
81403111550	3221910736460	15.5	15.5	115	58	1	1
81403111600	3221910736477	16	16	115	58	1	1

R | HSS ROLL FORGED JOBBER LENGTH DRILL.

R | BROCA HSS LAMINADA CILÍNDRICA. SERIE CORTA.

R | PUNTA LAMINATA CILINDRICA CORTA.



For steels.

Para aceros en general.

Foratura acciaio comune.

A

Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

9020011	EAN	ø	d2	L	l1	QTY	PCB
90200110050	3221910100346	0.5	0.5	22	6	1	10
90200110060	3221910100353	0.6	0.6	24	7	1	10
90200110070	3221910100360	0.7	0.7	28	9	1	10
90200110080	3221910100384	0.8	0.8	30	10	1	10
90200110090	3221910100391	0.9	0.9	32	11	1	10
90200110100	3221910813673	1	1	32	11	1	10
90200110110	3221910100414	1.1	1.1	36	14	1	10
90200110120	3221910100421	1.2	1.2	38	16	1	10
90200110130	3221910100445	1.3	1.3	38	16	1	10
90200110140	3221910100452	1.4	1.4	40	18	1	10
90200110150	3221910813680	1.5	1.5	40	18	1	10
90200110160	3221910100476	1.6	1.6	43	20	1	10
90200110170	3221910100483	1.7	1.7	43	20	1	10
90200110180	3221910100506	1.8	1.8	46	22	1	10
90200110190	3221910100513	1.9	1.9	46	22	1	10
90200110200	3221910813697	2	2	49	24	1	10
90200110210	3221910100537	2.1	2.1	49	24	1	10
90200110220	3221910100544	2.2	2.2	53	27	1	10
90200110225	3221910100551	2.25	2.25	53	27	1	10
90200110230	3221910100568	2.3	2.3	53	27	1	10
90200110240	3221910100575	2.4	2.4	57	30	1	10
90200110250	3221910813703	2.5	2.5	57	30	1	10
90200110260	3221910100599	2.6	2.6	57	30	1	10
90200110270	3221910100605	2.7	2.7	61	33	1	10
90200110275	3221910100612	2.75	2.75	61	33	1	10
90200110280	3221910100629	2.8	2.8	61	33	1	10
90200110290	3221910100636	2.9	2.9	61	33	1	10
90200110300	3221910813710	3	3	61	33	1	10
90200110310	3221910100650	3.1	3.1	65	36	1	10
90200110320	3221910813727	3.2	3.2	65	36	1	10
90200110325	3221910100674	3.25	3.25	65	36	1	10
90200110330	3221910100681	3.3	3.3	65	36	1	10
90200110340	3221910100698	3.4	3.4	70	39	1	10
90200110350	3221910813734	3.5	3.5	70	39	1	10
90200110360	3221910100711	3.6	3.6	70	39	1	10
90200110370	3221910100728	3.7	3.7	70	39	1	10
90200110375	3221910100735	3.75	3.75	70	39	1	10
90200110380	3221910100742	3.8	3.8	75	43	1	10
90200110390	3221910100759	3.9	3.9	75	43	1	10
90200110400	3221910813741	4	4	75	43	1	10
90200110410	3221910100773	4.1	4.1	75	43	1	10
90200110420	3221910813758	4.2	4.2	75	43	1	10
90200110425	3221910100797	4.25	4.25	75	43	1	10
90200110430	3221910100803	4.3	4.3	80	47	1	10
90200110440	3221910100810	4.4	4.4	80	47	1	10
90200110450	3221910813765	4.5	4.5	80	47	1	10
90200110460	3221910100834	4.6	4.6	80	47	1	10
90200110470	3221910100841	4.7	4.7	80	47	1	10
90200110475	3221910100858	4.75	4.75	80	47	1	10
90200110480	3221910100865	4.8	4.8	86	52	1	10
90200110490	3221910100872	4.9	4.9	86	52	1	10
90200110500	3221910813772	5	5	86	52	1	10
90200110510	3221910100896	5.1	5.1	86	52	1	10
90200110520	3221910813789	5.2	5.2	86	52	1	10
90200110525	3221910100919	5.25	5.25	86	52	1	10
90200110530	3221910100926	5.3	5.3	86	52	1	10



9020011	EAN	Ø	d2	L	l1	QTY	PCB
90200110540	3221910100933	5.4	5.4	93	57	1	10
90200110550	3221910813796	5.5	5.5	93	57	1	10
90200110560	3221910100957	5.6	5.6	93	57	1	10
90200110570	3221910100964	5.7	5.7	93	57	1	10
90200110580	3221910100988	5.8	5.8	93	57	1	10
90200110590	3221910100995	5.9	5.9	93	57	1	10
90200110600	3221910813802	6	6	93	57	1	10
90200110610	3221910101015	6.1	6.1	101	63	1	10
90200110620	3221910813819	6.2	6.2	101	63	1	10
90200110625	3221910101039	6.25	6.25	101	63	1	10
90200110630	3221910101046	6.3	6.3	101	63	1	10
90200110640	3221910101053	6.4	6.4	101	63	1	10
90200110650	3221910813826	6.5	6.5	101	63	1	10
90200110660	3221910101077	6.6	6.6	101	63	1	10
90200110670	3221910813833	6.7	6.7	101	63	1	10
90200110675	3221910101091	6.75	6.75	109	69	1	10
90200110680	3221910101107	6.8	6.8	109	69	1	10
90200110690	3221910101114	6.9	6.9	109	69	1	10
90200110700	3221910813840	7	7	109	69	1	10
90200110710	3221910101138	7.1	7.1	109	69	1	10
90200110720	3221910101145	7.2	7.2	109	69	1	10
90200110730	3221910101169	7.3	7.3	109	69	1	10
90200110740	3221910101176	7.4	7.4	109	69	1	10
90200110750	3221910813857	7.5	7.5	109	69	1	10
90200110760	3221910101190	7.6	7.6	117	75	1	10
90200110770	3221910101206	7.7	7.7	117	75	1	10
90200110780	3221910101220	7.8	7.8	117	75	1	10
90200110790	3221910101237	7.9	7.9	117	75	1	10
90200110800	3221910813864	8	8	117	75	1	10
90200110810	3221910101251	8.1	8.1	117	75	1	5
90200110820	3221910101268	8.2	8.2	117	75	1	5
90200110825	3221910101275	8.25	8.25	117	75	1	5
90200110830	3221910101282	8.3	8.3	117	75	1	5
90200110840	3221910101299	8.4	8.4	117	75	1	5
90200110850	3221910813871	8.5	8.5	117	75	1	5
90200110860	3221910101312	8.6	8.6	125	81	1	5
90200110870	3221910101329	8.7	8.7	125	81	1	5
90200110875	3221910101336	8.75	8.75	125	81	1	5
90200110880	3221910101343	8.8	8.8	125	81	1	5
90200110890	3221910101350	8.9	8.9	125	81	1	5
90200110900	3221910813888	9	9	125	81	1	5
90200110910	3221910101374	9.1	9.1	125	81	1	5
90200110920	3221910101381	9.2	9.2	125	81	1	5
90200110940	3221910101411	9.4	9.4	125	81	1	5
90200110950	3221910813895	9.5	9.5	125	81	1	5
90200110980	3221910101466	9.8	9.8	133	87	1	5
90200111000	3221910813901	10	10	133	87	1	5
90200111020	3221910813918	10.2	10.2	133	87	1	5
90200111025	3221910101510	10.25	10.25	133	87	1	5
90200111050	3221910813925	10.5	10.5	133	87	1	5
90200111100	3221910813932	11	11	142	94	1	5
90200111120	3221910101626	11.2	11.2	142	94	1	5
90200111150	3221910813949	11.5	11.5	142	94	1	5
90200111200	3221910813956	12	12	151	101	1	5
90200111250	3221910813963	12.5	12.5	151	101	1	5
90200111300	3221910813970	13	13	151	101	1	5
90200111350	3221910101909	13.5	13.5	160	108	1	5
90200111400	3221910101961	14	14	160	108	1	5
90200111450	3221910101992	14.5	14.5	169	114	1	5
90200111500	3221910102029	15	15	169	114	1	5
90200111550	3221910102050	15.5	15.5	169	114	1	1
90200111600	3221910102081	16	16	178	120	1	1
90200111650	3221910102098	16.5	16.5	184	125	1	1
90200111700	3221910102104	17	17	184	125	1	1
90200111750	3221910102111	17.5	17.5	191	130	1	1
90200111800	3221910102128	18	18	191	130	1	1
90200111850	3221910102135	18.5	18.5	198	135	1	1
90200111900	3221910102142	19	19	198	135	1	1
90200111950	3221910102159	19.5	19.5	205	140	1	1
90200112000	3221910102166	20	20	205	140	1	1

SET | E



19 metal drills HSS Roll forged Ø 1>10 mm 1/2 mm

ESTUCHE | E



19 brocas metal HSS laminadas Ø 1>10 mm 1/2 mm

CASSETTA | E

90200170002

3221910104665

QTY	PCB
19	1

A

19 punte HSS laminate Ø da 1 a 10 mm 1/2 mm

SET | G



25 metal drills HSS Roll forged Ø 1>13 mm 1/2 mm

ESTUCHE | G



25 brocas metal HSS laminadas Ø 1>13 mm 1/2 mm

CASSETTA | G

90200170003

3221910104672

QTY	PCB
25	1

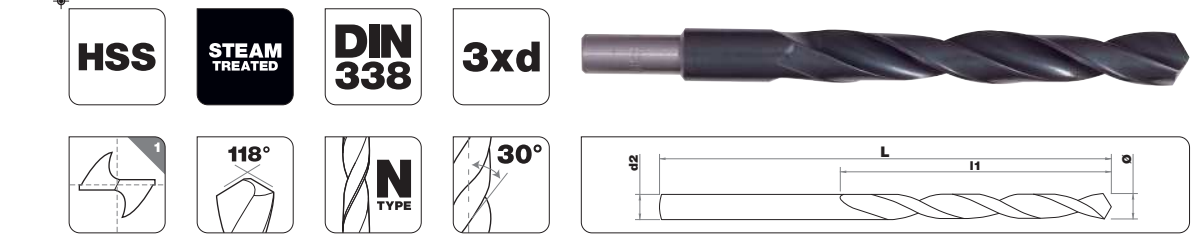
A

25 punte HSS laminate Ø da 1 a 13 mm 1/2 mm

RRS | HSS ROLL FORGED JOBBER LENGTH DRILL. REDUCED SHANK.

RRS | BROCA HSS LAMINADA CILÍNDRICA. SERIE CORTA. MANGO REDUCIDO.

RRS | PUNTA HSS LAMINATA CILINDRICA CORTA | GAMBO RIDOTTO.



For steels.

Para aceros en general.

Foratura acciaio comune.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

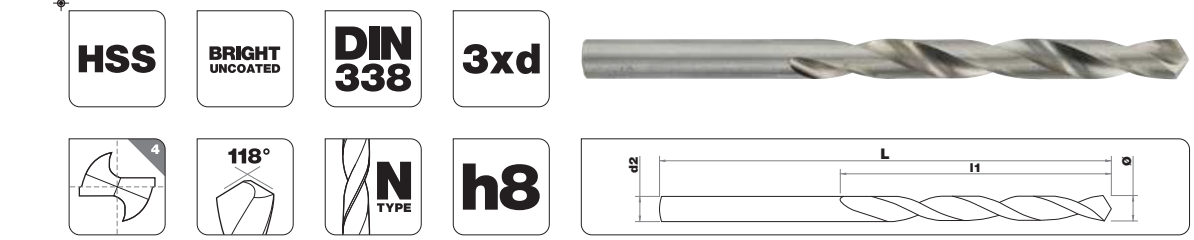
9020021	EAN	ø	d2	L	l1	QTY	PCB
90200211300	3221910102227	13	10	151	101	1	5
90200211350	3221910102234	13.5	12	160	108	1	5
90200211400	3221910102241	14	12	160	108	1	5
90200211450	3221910102258	14.5	12	169	114	1	5
90200211500	3221910102265	15	12	169	114	1	5
90200211550	3221910102272	15.5	12	178	120	1	1
90200211600	3221910102289	16	12	178	120	1	1
90200211650	3221910102296	16.5	12	184	125	1	1
90200211700	3221910102302	17	12	184	125	1	1
90200211750	3221910102319	17.5	12	191	130	1	1
90200211800	3221910102326	18	12	191	130	1	1
90200211850	3221910102333	18.5	12	198	135	1	1
90200211900	3221910102340	19	12	198	135	1	1
90200211950	3221910102357	19.5	12	205	140	1	1
90200212000	3221910102364	20	12	205	140	1	1



RECTIF | HSS JOBBER LENGTH DRILL | T LINE

RECTIF | BROCA HSS CILÍNDRICA. SERIE CORTA | T LINE

RECTIF | PUNTA HSS CILINDRICA CORTA | T LINE



For steels.

Para aceros en general.

Foratura acciaio comune.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

1145101	EAN	ø	d2	L	l1	QTY	PCB
11451010100	3221912024671	1	1	34	12	1	10
11451010150	3221912024688	1.5	1.5	40	18	1	10
11451010200	3221912024695	2	2	49	24	1	10
11451010250	3221912024701	2.5	2.5	57	30	1	10
11451010300	3221912024718	3	3	61	33	1	10
11451010320	3221912047847	3.2	3.2	65	36	1	10
11451010330	3221912024725	3.3	3.3	65	36	1	10
11451010350	3221912024732	3.5	3.5	70	39	1	10
11451010400	3221912024749	4	4	75	43	1	10
11451010420	3221912024756	4.2	4.2	75	43	1	10
11451010450	3221912024763	4.5	4.5	80	47	1	10
11451010500	3221912024770	5	5	86	52	1	10
11451010550	3221912024787	5.5	5.5	93	57	1	10
11451010600	3221912024794	6	6	93	57	1	10
11451010650	3221912024800	6.5	6.5	101	63	1	10
11451010700	3221912024817	7	7	109	69	1	10
11451010750	3221912024824	7.5	7.5	109	69	1	10
11451010800	3221912024831	8	8	117	75	1	10
11451010850	3221912024848	8.5	8.5	117	75	1	5
11451010900	3221912024855	9	9	125	81	1	5
11451010950	3221912024862	9.5	9.5	125	81	1	5
11451011000	3221912024879	10	10	133	87	1	5
11451011050	3221912024886	10.5	10.5	133	87	1	5
11451011100	3221912024893	11	11	142	94	1	5
11451011150	3221912024909	11.5	11.5	142	94	1	5
11451011200	3221912024916	12	12	151	101	1	5
11451011250	3221912024923	12.5	12.5	151	101	1	5
11451011300	3221912024930	13	13	151	101	1	5



SET | E | RECTIF

19 PCS | HSS | BRIGHT UNCOATED

DIN 338 | 4 | 118°

19 metal drills split point HSS Ø 1>10 mm 1/2

ESTUCHE | E | RECTIF



19 brocas metal punta en cruz HSS Ø 1>10 mm x 1/2

CASSETTA | E | RECTIF

11451070015

3221912016461

QTY	PCB
19	1

A

19 punte HSS affilatura a croce Ø da 1 a 10 mm in incrementi da 1/2

SET | G | RECTIF

25 PCS | HSS | BRIGHT UNCOATED

DIN 338 | 4 | 118°

25 metal drills split point HSS Ø 1>13 mm 1/2

ESTUCHE | G | RECTIF



25 brocas metal punta en cruz HSS Ø 1>13 mm 1/2

CASSETTA | G | RECTIF

11451070017

3221912016478

QTY	PCB
25	1

A

25 punte affilatura a croce Ø da 1 a 13 mm in incrementi da 1/2

SET | V170 | RECTIF

170 PCS | HSS | BRIGHT UNCOATED

DIN 338 | 4 | 118°

170 metal drills split point HSS Ø 1>10mm 1/2 (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs)

ESTUCHE | V170 | RECTIF



170 brocas metal punta en cruz HSS Ø 1>10 mm x1/2 (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs)

CASSETTA | V170 | RECTIF

11451070024

3221912024954

QTY	PCB
170	1

A

170 punte affilatura a croce HSS Ø da 1 a 10 mm in incrementi da 1/2 (Ø da 1 a 8x10 pz.) (Ø da 8,5 a 10x5 pz.)

SET | V222 | RECTIF

222 PCS | HSS | BRIGHT UNCOATED

DIN 338 | 4 | 118°

222 metal drills split point HSS Ø 1>13mm 1/2+3,3+4,2 (Ø 4 5x20 pcs) (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs) (10,5>13x2 pcs)

ESTUCHE | V222 | RECTIF



222 brocas metal punta en cruz HSS Ø 1>13mm x1/2+3,3+4,2 (Ø 4 5x20 pcs) (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs) (10,5>13x2 pcs)

CASSETTA | V222 | RECTIF

11451070026

3221912024947

QTY	PCB
222	1

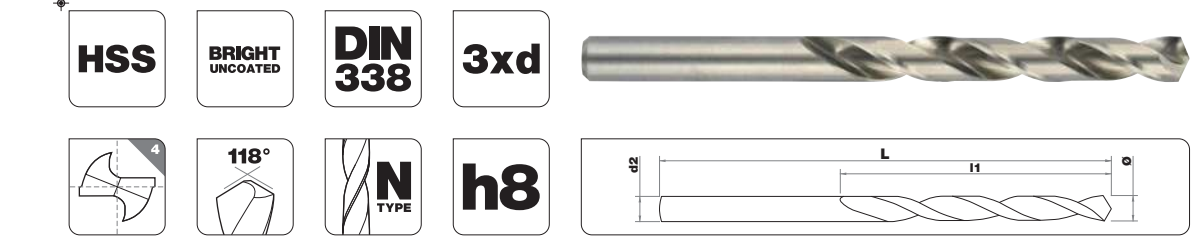
A

222 punte affilatura a croce HSS Ø da 1 a 13 mm in incrementi da 1/2+3,3+4,2 (Ø 4 e 5x20 pz.) (Ø da 1 a 8x10 pz.) (Ø da 8,5 a 10x5 pz.) (da 10,5 a 13x2 pz.)

T | HSS FULLY GROUND JOBBER LENGTH DRILL | T LINE

T | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA | T LINE

T | PUNTA HSS CILINDRICA CORTA | T LINE



For steels and cast irons.

Para aceros y fundiciones.

Foratura di acciai <950 N/mm² e ghise.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1145201	EAN	ø	d2	L	l1	QTY	PCB
11452010050	3221910837914	0.5	0.5	22	6	1	10
11452010060	3221910837921	0.6	0.6	24	7	1	10
11452010070	3221910837938	0.7	0.7	28	9	1	10
11452010080	3221910837945	0.8	0.8	30	10	1	10
11452010090	3221910837952	0.9	0.9	32	11	1	10
11452010100	3221910837969	1	1	34	12	1	10
11452010110	3221910837976	1.1	1.1	36	14	1	10
11452010120	3221910837983	1.2	1.2	38	16	1	10
11452010130	3221910837990	1.3	1.3	38	16	1	10
11452010140	3221910838003	1.4	1.4	40	18	1	10
11452010150	3221910838010	1.5	1.5	40	18	1	10
11452010160	3221910838027	1.6	1.6	43	20	1	10
11452010170	3221910838034	1.7	1.7	43	20	1	10
11452010180	3221910838041	1.8	1.8	46	22	1	10
11452010190	3221910838058	1.9	1.9	46	22	1	10
11452010200	3221910838065	2	2	49	24	1	10
11452010210	3221910838072	2.1	2.1	49	24	1	10
11452010220	3221910838089	2.2	2.2	53	27	1	10
11452010230	3221910838096	2.3	2.3	53	27	1	10
11452010240	3221910838102	2.4	2.4	57	30	1	10
11452010250	3221910838119	2.5	2.5	57	30	1	10
11452010260	3221910838126	2.6	2.6	57	30	1	10
11452010270	3221910838133	2.7	2.7	61	33	1	10
11452010280	3221910838140	2.8	2.8	61	33	1	10
11452010290	3221910838157	2.9	2.9	61	33	1	10
11452010300	3221910838164	3	3	61	33	1	10
11452010310	3221910838171	3.1	3.1	65	36	1	10
11452010320	3221910838188	3.2	3.2	65	36	1	10
11452010330	3221910838195	3.3	3.3	65	36	1	10
11452010340	3221910838201	3.4	3.4	70	39	1	10
11452010350	3221910838218	3.5	3.5	70	39	1	10
11452010360	3221910838225	3.6	3.6	70	39	1	10
11452010370	3221910838232	3.7	3.7	70	39	1	10
11452010380	3221910838249	3.8	3.8	75	43	1	10
11452010390	3221910838256	3.9	3.9	75	43	1	10
11452010400	3221910838263	4	4	75	43	1	10
11452010410	3221910838270	4.1	4.1	75	43	1	10
11452010420	3221910838287	4.2	4.2	75	43	1	10
11452010430	3221910838294	4.3	4.3	80	47	1	10
11452010440	3221910838300	4.4	4.4	80	47	1	10
11452010450	3221910838317	4.5	4.5	80	47	1	10
11452010460	3221910838324	4.6	4.6	80	47	1	10
11452010470	3221910838331	4.7	4.7	80	47	1	10
11452010480	3221910838348	4.8	4.8	86	52	1	10
11452010490	3221910838355	4.9	4.9	86	52	1	10
11452010500	3221910838362	5	5	86	52	1	10
11452010510	3221910838379	5.1	5.1	86	52	1	10
11452010520	3221910838386	5.2	5.2	86	52	1	10
11452010530	3221910838393	5.3	5.3	86	52	1	10
11452010540	3221910838409	5.4	5.4	93	57	1	10
11452010550	3221910838416	5.5	5.5	93	57	1	10
11452010560	3221910838423	5.6	5.6	93	57	1	10
11452010570	3221910838430	5.7	5.7	93	57	1	10
11452010580	3221910838447	5.8	5.8	93	57	1	10
11452010590	3221910838454	5.9	5.9	93	57	1	10
11452010600	3221910838461	6	6	93	57	1	10



1145201	EAN	Ø	d2	L	l1	QTY	PCB
11452010610	3221910838478	6.1	6.1	101	63	1	10
11452010620	3221910838485	6.2	6.2	101	63	1	10
11452010630	3221910838492	6.3	6.3	101	63	1	10
11452010640	3221910838508	6.4	6.4	101	63	1	10
11452010650	3221910838515	6.5	6.5	101	63	1	10
11452010660	3221910838522	6.6	6.6	101	63	1	10
11452010670	3221910838539	6.7	6.7	101	63	1	10
11452010680	3221910838546	6.8	6.8	109	69	1	10
11452010690	3221910838553	6.9	6.9	109	69	1	10
11452010700	3221910838560	7	7	109	69	1	10
11452010710	3221910838577	7.1	7.1	109	69	1	10
11452010720	3221910838584	7.2	7.2	109	69	1	10
11452010730	3221910838591	7.3	7.3	109	69	1	10
11452010740	3221910838607	7.4	7.4	109	69	1	10
11452010750	3221910838614	7.5	7.5	109	69	1	10
11452010760	3221910838621	7.6	7.6	117	75	1	10
11452010770	3221910838638	7.7	7.7	117	75	1	10
11452010780	3221910838645	7.8	7.8	117	75	1	10
11452010790	3221910838652	7.9	7.9	117	75	1	10
11452010800	3221910838669	8	8	117	75	1	10
11452010810	3221910838676	8.1	8.1	117	75	1	5
11452010820	3221910838683	8.2	8.2	117	75	1	5
11452010830	3221910838690	8.3	8.3	117	75	1	5
11452010840	3221910838706	8.4	8.4	117	75	1	5
11452010850	3221910838713	8.5	8.5	117	75	1	5
11452010860	3221910838720	8.6	8.6	125	81	1	5
11452010870	3221910838737	8.7	8.7	125	81	1	5
11452010880	3221910838744	8.8	8.8	125	81	1	5
11452010890	3221910838751	8.9	8.9	125	81	1	5
11452010900	3221910838768	9	9	125	81	1	5
11452010910	3221910838775	9.1	9.1	125	81	1	5
11452010920	3221910838782	9.2	9.2	125	81	1	5
11452010930	3221910838799	9.3	9.3	125	81	1	5
11452010940	3221910838805	9.4	9.4	125	81	1	5
11452010950	3221910838812	9.5	9.5	125	81	1	5
11452010960	3221910838829	9.6	9.6	133	87	1	5
11452010970	3221910838836	9.7	9.7	133	87	1	5
11452010980	3221910838843	9.8	9.8	133	87	1	5
11452010990	3221910838850	9.9	9.9	133	87	1	5
11452011000	3221910838867	10	10	133	87	1	5
11452011010	3221910838874	10.1	10.1	133	87	1	5
11452011020	3221910838881	10.2	10.2	133	87	1	5
11452011030	3221910838898	10.3	10.3	133	87	1	5
11452011040	3221910838904	10.4	10.4	133	87	1	5
11452011050	3221910838911	10.5	10.5	133	87	1	5
11452011100	3221910838966	11	11	142	94	1	5
11452011150	3221910839017	11.5	11.5	142	94	1	5
11452011200	3221910839062	12	12	151	101	1	5
11452011250	3221910839116	12.5	12.5	151	101	1	5
11452011300	3221910839161	13	13	151	101	1	5

SET | E | T



19 metal drills split point HSS Ø 1>10 mm 1/2

ESTUCHE | E | T



19 brocas metal punta en cruz HSS Ø 1>10 mm x 1/2

CASSETTA | E | T

11452070015

3221912016485

QTY	PCB
19	1



19 punte HSS affilatura a croce Ø da 1 a 10 mm in incrementi da 1/2

SET | G | T



25 metal drills split point HSS Ø 1>13 mm 1/2

ESTUCHE | G | T



25 brocas metal punta en cruz HSS Ø 1>13 mm 1/2

CASSETTA | G | T

11452070017

3221912016492

QTY	PCB
25	1



25 punte affilatura a croce Ø da 1 a 13 mm in incrementi da 1/2

SET | J | T



91 metal drills HSS Ø 1>10 mm x1/10

ESTUCHE | J | T



91 brocas metal HSS Ø 1>10 mm x1/10

CASSETTA | J | T

11452070008

3221912065742

QTY	PCB
91	1

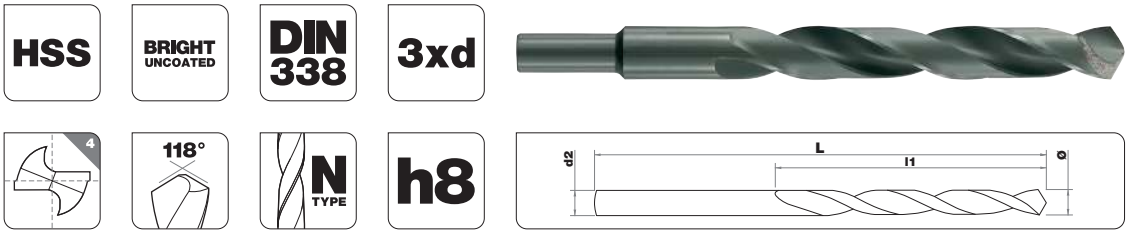


91 punte HSS Ø da 1 a 10 mm in incrementi da 1/10

T | HSS METAL DRILL BIT | FULLY GROUND, REDUCED SHANK DRILL. SPLIT POINT

T | 'BROCA METAL HSS / RECTIFICADA MANGO CILÍNDRICO REDUCIDO CORTA. PUNTA EN CRUZ.

T | PUNTA METALLO HSS | CODOLO CILINDRICO RIDOTTO, AFFILATURA A CROCE.



Ground HSS drill bit. For fast accurate drilling

Rapidez y precisión de taladrado. Broca HSS rectificada.

Foratura rapida e precisa.Punta a codolo ridotto HSS tagliato e molato.



Metal
Metal
Metallo



Aluminium Profiles
Perfiles aluminio
Profilo d'alluminio

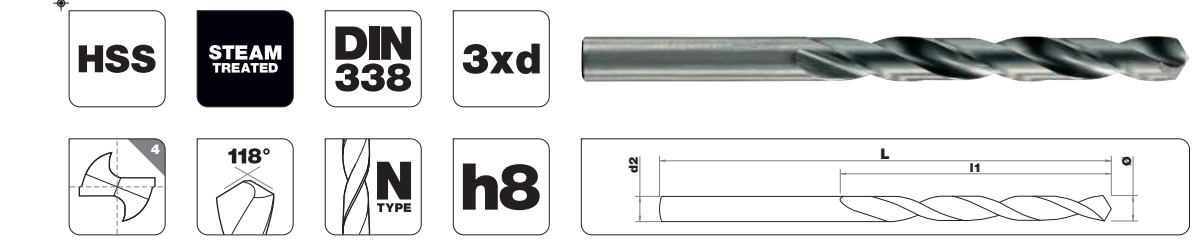
1143784	EAN	Ø	d2	L	l	QTY	PCB
11437841200	3221912003263	12	10	151	101	1	1
11437841250	3221912003270	12.5	10	151	101	1	1
11437841300	3221912003287	13	10	151	101	1	1
11437841350	3221912003294	13.5	12	160	108	1	1
11437841400	3221912003300	14	12	160	108	1	1
11437841450	3221912003317	14.5	12	169	114	1	1
11437841500	3221912003324	15	12	169	114	1	1
11437841550	3221912003331	15.5	12	178	120	1	1
11437841600	3221912003348	16	12	178	120	1	1
11437841650	3221912003355	16.5	12	184	125	1	1
11437841700	3221912003362	17	12	184	125	1	1
11437841750	3221912003379	17.5	12	191	130	1	1
11437841800	3221912003386	18	12	191	130	1	1
11437841850	3221912003393	18.5	12	198	135	1	1
11437841900	3221912003409	19	12	198	135	1	1
11437841950	3221912003416	19.5	12	205	140	1	1
11437842000	3221912003423	20	12	205	140	1	1
11437842100	3221912003430	21	12	205	140	1	1
11437842200	3221912003447	22	12	210	150	1	1
11437842300	3221912003454	23	12	210	150	1	1
11437842400	3221912003461	24	12	220	160	1	1
11437842500	3221912003478	25	12	220	160	1	1



TSX | HSS FULLY GROUND JOBBER LENGTH DRILL

TSX | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA

TSX | PUNTA HSS CILINDRICA CORTA. TIPO N



For steels and cast irons. Comfort, accuracy.

Para aceros y fundiciones. Confort, precisión.

Foratura di acciai <950 N/mm² e ghise. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1145301	EAN	Ø	d2	L	l1	QTY	PCB
11453010020	3221910850876	0.2	0.2	19	2,5	1	10
11453010025	3221912002747	0.25	0.25	19	3	1	10
11453010030	3221910850883	0.3	0.3	19	3	1	10
11453010035	3221912002808	0.35	0.35	19	4	1	10
11453010040	3221910850890	0.4	0.4	20	5	1	10
11453010045	3221912002815	0.45	0.45	20	5	1	10
11453010050	3221910850906	0.5	0.5	22	6	1	10
11453010055	3221912002822	0.55	0.55	24	7	1	10
11453010060	3221910850913	0.6	0.6	24	7	1	10
11453010065	3221912002839	0.65	0.65	26	8	1	10
11453010070	3221910850920	0.7	0.7	28	9	1	10
11453010075	3221910850937	0.75	0.75	29	9	1	10
11453010080	3221910850944	0.8	0.8	30	10	1	10
11453010085	3221912002846	0.85	0.85	30	10	1	10
11453010090	3221910850951	0.9	0.9	32	11	1	10
11453010095	3221912002761	0.95	0.95	32	11	1	10
11453010100	3221910850968	1	1	34	12	1	10
11453010105	3221912002778	1.05	1.05	34	12	1	10
11453010110	3221910850975	1.1	1.1	36	14	1	10
11453010120	3221910850982	1.2	1.2	38	14	1	10
11453010125	3221910850999	1.25	1.25	38	16	1	10
11453010130	3221910851002	1.3	1.3	38	16	1	10
11453010140	3221910851019	1.4	1.4	40	18	1	10
11453010150	3221910851026	1.5	1.5	40	18	1	10
11453010160	3221910851033	1.6	1.6	43	20	1	10
11453010170	3221910851040	1.7	1.7	43	20	1	10
11453010175	3221910851057	1.75	1.75	46	22	1	10
11453010180	3221910851064	1.8	1.8	46	22	1	10
11453010190	3221910851071	1.9	1.9	46	22	1	10
11453010200	3221910851088	2	2	49	24	1	10
11453010210	3221910851095	2.1	2.1	49	24	1	10
11453010220	3221910851101	2.2	2.2	53	27	1	10
11453010225	3221910851118	2.25	2.25	53	27	1	10
11453010230	3221910851125	2.3	2.3	53	27	1	10
11453010240	3221910851132	2.4	2.4	57	30	1	10
11453010250	3221910851149	2.5	2.5	57	30	1	10
11453010260	3221910851156	2.6	2.6	57	30	1	10
11453010270	3221910851163	2.7	2.7	61	33	1	10
11453010275	3221910851170	2.75	2.75	61	33	1	10
11453010280	3221910851187	2.8	2.8	61	33	1	10
11453010290	3221910851194	2.9	2.9	61	33	1	10
11453010300	3221910851200	3	3	61	33	1	10
11453010310	3221910851217	3.1	3.1	65	36	1	10
11453010320	3221910851224	3.2	3.2	65	36	1	10
11453010325	3221910851231	3.25	3.25	65	36	1	10
11453010330	3221910851248	3.3	3.3	65	36	1	10
11453010340	3221910851255	3.4	3.4	70	39	1	10
11453010350	3221910851262	3.5	3.5	70	39	1	10
11453010360	3221910851279	3.6	3.6	70	39	1	10
11453010370	3221910851286	3.7	3.7	70	39	1	10
11453010375	3221910851293	3.75	3.75	70	39	1	10
11453010380	3221910851309	3.8	3.8	75	43	1	10
11453010390	3221910851316	3.9	3.9	75	43	1	10
11453010400	3221910851323	4	4	75	43	1	10
11453010410	3221910851330	4.1	4.1	75	43	1	10
11453010420	3221910851347	4.2	4.2	75	43	1	10



1145301	EAN	Ø	d2	L	l1	QTY	PCB
11453010425	3221910851354	4.25	4.25	75	43	1	10
11453010430	3221910851361	4.3	4.3	80	47	1	10
11453010440	3221910851378	4.4	4.4	80	47	1	10
11453010450	3221910851385	4.5	4.5	80	47	1	10
11453010460	3221910851392	4.6	4.6	80	47	1	10
11453010470	3221910851408	4.7	4.7	80	47	1	10
11453010475	3221910851415	4.75	4.75	80	47	1	10
11453010480	3221910851422	4.8	4.8	86	52	1	10
11453010490	3221910851439	4.9	4.9	86	52	1	10
11453010500	3221910851446	5	5	86	52	1	10
11453010510	3221910851453	5.1	5.1	86	52	1	10
11453010520	3221910851460	5.2	5.2	86	52	1	10
11453010525	3221910851477	5.25	5.25	86	52	1	10
11453010530	3221910851484	5.3	5.3	86	52	1	10
11453010540	3221910851491	5.4	5.4	93	57	1	10
11453010550	3221910851507	5.5	5.5	93	57	1	10
11453010560	3221910851514	5.6	5.6	93	57	1	10
11453010570	3221910851521	5.7	5.7	93	57	1	10
11453010575	3221910851538	5.75	5.75	93	57	1	10
11453010580	3221910851545	5.8	5.8	93	57	1	10
11453010590	3221910851552	5.9	5.9	93	57	1	10
11453010600	3221910851569	6	6	93	57	1	10
11453010610	3221910851576	6.1	6.1	101	63	1	10
11453010620	3221910851583	6.2	6.2	101	63	1	10
11453010625	3221910851590	6.25	6.25	101	63	1	10
11453010630	3221910851606	6.3	6.3	101	63	1	10
11453010640	3221910851613	6.4	6.4	101	63	1	10
11453010650	3221910851620	6.5	6.5	101	63	1	10
11453010660	3221910851637	6.6	6.6	101	63	1	10
11453010670	3221910851644	6.7	6.7	101	63	1	10
11453010675	3221910851651	6.75	6.75	109	69	1	10
11453010680	3221910851668	6.8	6.8	109	69	1	10
11453010690	3221910851675	6.9	6.9	109	69	1	10
11453010700	3221910851682	7	7	109	69	1	10
11453010710	3221910851699	7.1	7.1	109	69	1	10
11453010720	3221910851705	7.2	7.2	109	69	1	10
11453010725	3221910851712	7.25	7.25	109	69	1	10
11453010730	3221910851729	7.3	7.3	109	69	1	10
11453010740	3221910851736	7.4	7.4	109	69	1	10
11453010750	3221910851743	7.5	7.5	109	69	1	10
11453010760	3221910851750	7.6	7.6	117	75	1	10
11453010770	3221910851767	7.7	7.7	117	75	1	10
11453010775	3221910851774	7.75	7.75	117	75	1	10
11453010780	3221910851781	7.8	7.8	117	75	1	10
11453010790	3221910851798	7.9	7.9	117	75	1	10
11453010800	3221910851804	8	8	117	75	1	10
11453010810	3221910851811	8.1	8.1	117	75	1	5
11453010820	3221910851828	8.2	8.2	117	75	1	5
11453010825	3221910851835	8.25	8.25	117	75	1	5
11453010830	3221910851842	8.3	8.3	117	75	1	5
11453010840	3221910851859	8.4	8.4	117	75	1	5
11453010850	3221910851866	8.5	8.5	117	75	1	5
11453010860	3221910851873	8.6	8.6	125	81	1	5
11453010870	3221910851880	8.7	8.7	125	81	1	5
11453010875	3221910851897	8.75	8.75	125	81	1	5
11453010880	3221910851903	8.8	8.8	125	81	1	5
11453010890	3221910851910	8.9	8.9	125	81	1	5
11453010900	3221910851927	9	9	125	81	1	5
11453010910	3221910851934	9.1	9.1	125	81	1	5
11453010920	3221910851941	9.2	9.2	125	81	1	5
11453010925	3221910851958	9.25	9.25	125	81	1	5
11453010930	3221910851965	9.3	9.3	125	81	1	5
11453010940	3221910851972	9.4	9.4	125	81	1	5
11453010950	3221910851989	9.5	9.5	125	81	1	5
11453010960	3221910851996	9.6	9.6	133	87	1	5
11453010970	3221910852009	9.7	9.7	133	87	1	5
11453010975	3221910852016	9.75	9.75	133	87	1	5
11453010980	3221910852023	9.8	9.8	133	87	1	5
11453010990	3221910852030	9.9	9.9	133	87	1	5
11453011000	3221910852047	10	10	133	87	1	5
11453011010	3221910852054	10.1	10.1	133	87	1	5
11453011020	3221910852061	10.2	10.2	133	87	1	5
11453011025	3221910852078	10.25	10.25	133	87	1	5
11453011030	3221910852085	10.3	10.3	133	87	1	5
11453011040	3221910852092	10.4	10.4	133	87	1	5
11453011050	3221910852108	10.5	10.5	133	87	1	5
11453011060	3221910852115	10.6	10.6	133	87	1	5
11453011070	3221910852122	10.7	10.7	142	94	1	5
11453011075	3221910852139	10.75	10.75	142	94	1	5
11453011080	3221910852146	10.8	10.8	142	94	1	5
11453011090	3221910852153	10.9	10.9	142	94	1	5

1145301	EAN	Ø	d2	L	l1	QTY	PCB
11453011100	3221910852160	11	11	142	94	1	5
11453011110	3221910852177	11.1	11.1	142	94	1	5
11453011120	3221910852184	11.2	11.2	142	94	1	5
11453011125	3221910852191	11.25	11.25	142	94	1	5
11453011130	3221910852207	11.3	11.3	142	94	1	5
11453011140	3221910852214	11.4	11.4	142	94	1	5
11453011150	3221910852221	11.5	11.5	142	94	1	5
11453011160	3221910852238	11.6	11.6	142	94	1	5
11453011170	3221910852245	11.7	11.7	142	94	1	5
11453011175	3221910852252	11.75	11.75	142	94	1	5
11453011180	3221910852269	11.8	11.8	151	101	1	5
11453011190	3221910852276	11.9	11.9	151	101	1	5
11453011200	3221910852283	12	12	151	101	1	5
11453011210	3221910852290	12.1	12.1	151	101	1	5
11453011220	3221910852306	12.2	12.2	151	101	1	5
11453011225	3221910852313	12.25	12.25	151	101	1	5
11453011230	3221910852320	12.3	12.3	151	101	1	5
11453011240	3221910852337	12.4	12.4	151	101	1	5
11453011250	3221910852344	12.5	12.5	151	101	1	5
11453011260	3221910852351	12.6	12.6	151	101	1	5
11453011270	3221910852368	12.7	12.7	151	101	1	5
11453011275	3221910852375	12.75	12.75	151	101	1	5
11453011280	3221910852382	12.8	12.8	151	101	1	5
11453011290	3221910852399	12.9	12.9	151	101	1	5
11453011300	3221910852405	13	13	151	101	1	5
11453011350	3221910852962	13.5	12	160	108	1	1
11453011400	3221910852979	14	12	160	108	1	1
11453011450	3221910852986	14.5	12	169	114	1	1
11453011500	3221910852993	15	12	169	114	1	1
11453011550	3221910853006	15.5	12	178	120	1	1
11453011600	3221910853013	16	12	178	120	1	1
11453011650	3221910853020	16.5	12	184	125	1	1
11453011700	3221910853037	17	12	184	125	1	1
11453011750	3221910853044	17.5	12	191	130	1	1
11453011800	3221910853051	18	12	191	130	1	1
11453011850	3221910853068	18.5	12	198	135	1	1
11453011900	3221910853075	19	12	198	135	1	1
11453011950	3221910853082	19.5	12	205	140	1	1
11453012000	3221910853099	20	12	205	140	1	1
11453012100	3221910853105	21	12	205	145	1	1
11453012200	3221910853112	22	12	210	150	1	1
11453012300	3221910853129	23	12	210	150	1	1
11453012400	3221910853136	24	12	220	160	1	1
11453012500	3221910853143	25	12	220	160	1	1

TSX | HSS FULLY GROUND JOBBER LENGTH DRILL

19 PCS | HSS | STEAM TREATED | DIN 338 | 118°

19 metal drills split point HSS Ø 1>10 mm 1/2

TSX | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA



19 brocas metal punta en cruz HSS Ø 1>10 mm x 1/2

TSX | PUNTA HSS CILINDRICA CORTA. TIPO N

11453070015

3221912016508

QTY	PCB
19	1

A B

19 punte HSS affilatura a croce Ø da 1 a 10 mm in incrementi da 1/2

TSX | HSS FULLY GROUND JOBBER LENGTH DRILL

25 PCS | HSS | STEAM TREATED | DIN 338 | 118°

25 metal drills split point HSS Ø 1>13 mm 1/2

TSX | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA



25 brocas metal punta en cruz HSS Ø 1>13 mm 1/2

TSX | PUNTA HSS CILINDRICA CORTA. TIPO N

11453070017

3221912016515

QTY	PCB
25	1

A B

25 punte affilatura a croce Ø da 1 a 13 mm in incrementi da 1/2

TSX | HSS FULLY GROUND JOBBER LENGTH DRILL

170 PCS | HSS | STEAM TREATED | DIN 338 | 118°

170 metal drills split point HSS Ø 1>10mm 1/2 (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs)

TSX | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA



170 brocas metal punta en cruz HSS Ø 1>10 mm x1/2 (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs)

TSX | PUNTA HSS CILINDRICA CORTA. TIPO N

11453070024

3221910899202

QTY	PCB
170	1

A B

170 punte affilatura a croce HSS Ø da 1 a 10 mm in incrementi da 1/2 (Ø da 1 a 8x10 pz.) (Ø da 8,5 a 10x5 pz.)

TSX | HSS FULLY GROUND JOBBER LENGTH DRILL

222 PCS | HSS | STEAM TREATED | DIN 338 | 118°

222 metal drills split point HSS Ø 1>13mm 1/2+3,3+4,2 (Ø 4 5x20 pcs) (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs) (10,5>13x2 pcs)

TSX | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA



222 brocas metal punta en cruz HSS Ø 1>13mm x1/2+3,3+4,2 (Ø 4 5x20 pcs) (Ø 1>8x10 pcs) (Ø 8,5>10x5 pcs) (10,5>13x2 pcs)

TSX | PUNTA HSS CILINDRICA CORTA. TIPO N

11453070026

3221910854157

QTY	PCB
222	1

A B

222 punte affilatura a croce HSS Ø da 1 a 13 mm in incrementi da 1/2+3,3+4,2 (Ø 4 e 5x20 pz.) (Ø da 1 a 8x10 pz.) (Ø da 8,5 a 10x5 pz.) (da 10,5 a 13x2 pz.)

001 | HSS FULLY GROUND JOBBER LENGTH DRILL.

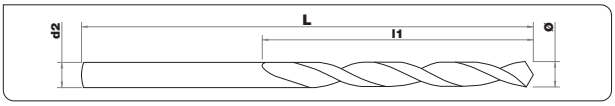
001 | BROCA HSS RECTIFICADA CILÍNDRICA SERIE CORTA.

001 | PUNTA CILINDRICA CORTA. TIPO N.

HSS | STEAM TREATED | DIN 338 | 3xd



118° | N TYPE | h8



For steels and cast irons. Robustness, accuracy.

Taladrado de aceros < 950 N/mm² y de fundiciones. Robustez, precis.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

1140011	EAN	Ø	d2	L	l1	QTY	PCB
11400110020	3221910061678	0.2	0.2	19	2,5	1	10
11400110025	3221910061685	0.25	0.25	19	3	1	10
11400110030	3221910061692	0.3	0.3	19	3	1	10
11400110035	3221910061708	0.35	0.35	19	4	1	10
11400110040	3221910061722	0.4	0.4	20	5	1	10
11400110045	3221910061739	0.45	0.45	20	5	1	10
11400110050	3221910061746	0.5	0.5	22	6	1	10
11400110055	3221910061753	0.55	0.55	24	7	1	10
11400110060	3221910061760	0.6	0.6	24	7	1	10
11400110065	3221910061777	0.65	0.65	26	8	1	10
11400110070	3221910061784	0.7	0.7	28	9	1	10
11400110075	3221910061791	0.75	0.75	28	9	1	10
11400110080	3221910061814	0.8	0.8	30	10	1	10
11400110085	3221910061821	0.85	0.85	30	10	1	10
11400110090	3221910061838	0.9	0.9	32	11	1	10
11400110095	3221910061845	0.95	0.95	32	11	1	10
11400110100	3221910061852	1	1	34	12	1	10
11400110105	3221910061869	1.05	1.05	34	12	1	10
11400110110	3221910061876	1.1	1.1	36	14	1	10
11400110115	3221910061883	1.15	1.15	36	14	1	10
11400110120	3221910061906	1.2	1.2	38	16	1	10
11400110125	3221910061913	1.25	1.25	38	16	1	10
11400110130	3221910061920	1.3	1.3	38	16	1	10
11400110135	3221910061937	1.35	1.35	40	18	1	10
11400110140	3221910061944	1.4	1.4	40	18	1	10
11400110150	3221910061968	1.5	1.5	40	18	1	10
11400110155	3221910061975	1.55	1.55	43	20	1	10
11400110160	3221910061999	1.6	1.6	43	20	1	10
11400110165	3221910062019	1.65	1.65	43	20	1	10
11400110170	3221910062026	1.7	1.7	43	20	1	10
11400110175	3221910062033	1.75	1.75	46	22	1	10
11400110180	3221910062040	1.8	1.8	46	22	1	10
11400110185	3221910062057	1.85	1.85	46	22	1	10
11400110190	3221910062064	1.9	1.9	46	22	1	10
11400110195	3221910062088	1.95	1.95	49	24	1	10
11400110200	3221910062101	2	2	49	24	1	10
11400110205	3221910062118	2.05	2.05	49	24	1	10
11400110210	3221910062125	2.1	2.1	49	24	1	10
11400110215	3221910062132	2.15	2.15	53	27	1	10
11400110220	3221910062149	2.2	2.2	53	27	1	10
11400110225	3221910062156	2.25	2.25	53	27	1	10
11400110230	3221910062163	2.3	2.3	53	27	1	10
11400110235	3221910062170	2.35	2.35	53	27	1	10
11400110240	3221910062194	2.4	2.4	57	30	1	10
11400110245	3221910062200	2.45	2.45	57	30	1	10
11400110250	3221910062217	2.5	2.5	57	30	1	10
11400110255	3221910062224	2.55	2.55	57	30	1	10
11400110260	3221910062231	2.6	2.6	57	30	1	10
11400110265	3221910062248	2.65	2.65	57	30	1	10
11400110270	3221910062255	2.7	2.7	61	33	1	10
11400110275	3221910062262	2.75	2.75	61	33	1	10



1140011	EAN	Ø	d2	L	l1	QTY	PCB
11400110280	3221910062286	2.8	2.8	61	33	1	10
11400110290	3221910062309	2.9	2.9	61	33	1	10
11400110295	3221910062316	2.95	2.95	61	33	1	10
11400110300	3221910062323	3	3	61	33	1	10
11400110305	3221910062330	3.05	3.05	65	36	1	10
11400110310	3221910062347	3.1	3.1	65	36	1	10
11400110315	3221910062354	3.15	3.15	65	36	1	10
11400110320	3221910062378	3.2	3.2	65	36	1	10
11400110325	3221910062385	3.25	3.25	65	36	1	10
11400110330	3221910062392	3.3	3.3	65	36	1	10
11400110335	3221910062408	3.35	3.35	65	36	1	10
11400110340	3221910062415	3.4	3.4	70	39	1	10
11400110350	3221910062439	3.5	3.5	70	39	1	10
11400110355	3221910062446	3.55	3.55	70	39	1	10
11400110360	3221910062460	3.6	3.6	70	39	1	10
11400110370	3221910062484	3.7	3.7	70	39	1	10
11400110375	3221910062491	3.75	3.75	70	39	1	10
11400110380	3221910062507	3.8	3.8	75	43	1	10
11400110390	3221910062521	3.9	3.9	75	43	1	10
11400110400	3221910062552	4	4	75	43	1	10
11400110405	3221910062569	4.05	4.05	75	43	1	10
11400110410	3221910062576	4.1	4.1	75	43	1	10
11400110420	3221910062590	4.2	4.2	75	43	1	10
11400110425	3221910062606	4.25	4.25	75	43	1	10
11400110430	3221910062613	4.3	4.3	80	47	1	10
11400110435	3221910062620	4.35	4.35	80	47	1	10
11400110440	3221910062644	4.4	4.4	80	47	1	10
11400110450	3221910062668	4.5	4.5	80	47	1	10
11400110460	3221910062682	4.6	4.6	80	47	1	10
11400110465	3221910062699	4.65	4.65	80	47	1	10
11400110470	3221910062705	4.7	4.7	80	47	1	10
11400110475	3221910062712	4.75	4.75	80	47	1	10
11400110480	3221910062736	4.8	4.8	86	52	1	10
11400110485	3221910062743	4.85	4.85	86	52	1	10
11400110490	3221910062750	4.9	4.9	86	52	1	10
11400110500	3221910062774	5	5	86	52	1	10
11400110510	3221910062798	5.1	5.1	86	52	1	10
11400110520	3221910062811	5.2	5.2	86	52	1	10
11400110525	3221910062828	5.25	5.25	86	52	1	10
11400110530	3221910062835	5.3	5.3	86	52	1	10
11400110540	3221910062859	5.4	5.4	93	57	1	10
11400110545	3221910062866	5.45	5.45	93	57	1	10
11400110550	3221910062873	5.5	5.5	93	57	1	10
11400110560	3221910062897	5.6	5.6	93	57	1	10
11400110570	3221910062910	5.7	5.7	93	57	1	10
11400110575	3221910062927	5.75	5.75	93	57	1	10
11400110580	3221910062934	5.8	5.8	93	57	1	10
11400110590	3221910062958	5.9	5.9	93	57	1	10
11400110600	3221910062972	6	6	93	57	1	10
11400110610	3221910062996	6.1	6.1	101	63	1	10
11400110620	3221910063016	6.2	6.2	101	63	1	10
11400110625	3221910063023	6.25	6.25	101	63	1	10
11400110630	3221910063030	6.3	6.3	101	63	1	10
11400110635	3221910876890	6.35	6.35	101	63	1	10
11400110640	3221910063054	6.4	6.4	101	63	1	10
11400110650	3221910063078	6.5	6.5	101	63	1	10
11400110660	3221910063092	6.6	6.6	101	63	1	10
11400110670	3221910063115	6.7	6.7	101	63	1	10
11400110675	3221910063122	6.75	6.75	109	69	1	10
11400110680	3221910063139	6.8	6.8	109	69	1	10
11400110690	3221910063153	6.9	6.9	109	69	1	10
11400110700	3221910063177	7	7	109	69	1	10
11400110710	3221910063191	7.1	7.1	109	69	1	10
11400110720	3221910063221	7.2	7.2	109	69	1	10
11400110725	3221910063238	7.25	7.25	109	69	1	10
11400110730	3221910063245	7.3	7.3	109	69	1	10
11400110740	3221910063269	7.4	7.4	109	69	1	10
11400110750	3221910063283	7.5	7.5	109	69	1	10
11400110760	3221910063313	7.6	7.6	117	75	1	10
11400110770	3221910063337	7.7	7.7	117	75	1	10
11400110775	3221910063344	7.75	7.75	117	75	1	10
11400110780	3221910063351	7.8	7.8	117	75	1	10
11400110790	3221910063375	7.9	7.9	117	75	1	10
11400110800	3221910063405	8	8	117	75	1	10
11400110810	3221910063429	8.1	8.1	117	75	1	5
11400110820	3221910063443	8.2	8.2	117	75	1	5
11400110825	3221910063450	8.25	8.25	117	75	1	5
11400110830	3221910063467	8.3	8.3	117	75	1	5
11400110840	3221910063498	8.4	8.4	117	75	1	5
11400110850	3221910063511	8.5	8.5	117	75	1	5
11400110860	3221910063535	8.6	8.6	125	81	1	5

1140011	EAN	Ø	d2	L	l1	QTY	PCB
11400110870	3221910063559	8.7	8.7	125	81	1	5
11400110875	3221910063573	8.75	8.75	125	81	1	5
11400110880	3221910063580	8.8	8.8	125	81	1	5
11400110890	3221910063603	8.9	8.9	125	81	1	5
11400110900	3221910063627	9	9	125	81	1	5
11400110910	3221910063641	9.1	9.1	125	81	1	5
11400110920	3221910063672	9.2	9.2	125	81	1	5
11400110925	3221910063689	9.25	9.25	125	81	1	5
11400110930	3221910063696	9.3	9.3	125	81	1	5
11400110940	3221910063719	9.4	9.4	125	81	1	5
11400110950	3221910063733	9.5	9.5	125	81	1	5
11400110960	3221910063764	9.6	9.6	133	87	1	5
11400110970	3221910063788	9.7	9.7	133	87	1	5
11400110975	3221910063795	9.75	9.75	133	87	1	5
11400110980	3221910063801	9.8	9.8	133	87	1	5
11400110990	3221910063825	9.9	9.9	133	87	1	5
11400111000	3221910063856	10	10	133	87	1	5
11400111010	3221910063863	10.1	10.1	133	87	1	5
11400111020	3221910063870	10.2	10.2	133	87	1	5
11400111025	3221910063887	10.25	10.25	133	87	1	5
11400111030	3221910063894	10.3	10.3	133	87	1	5
11400111040	3221910063917	10.4	10.4	133	87	1	5
11400111050	3221910063924	10.5	10.5	133	87	1	5
11400111060	3221910063931	10.6	10.6	133	87	1	5
11400111070	3221910063948	10.7	10.7	142	94	1	5
11400111075	3221910063962	10.75	10.75	142	94	1	5
11400111080	3221910063979	10.8	10.8	142	94	1	5
11400111090	3221910063993	10.9	10.9	142	94	1	5
11400111100	3221910064006	11	11	142	94	1	5
11400111110	3221910064013	11.1	11.1	142	94	1	5
11400111120	3221910064037	11.2	11.2	142	94	1	5
11400111125	3221910064044	11.25	11.25	142	94	1	5
11400111130	3221910064051	11.3	11.3	142	94	1	5
11400111140	3221910064068	11.4	11.4	142	94	1	5
11400111150	3221910064075	11.5	11.5	142	94	1	5
11400111160	3221910064099	11.6	11.6	142	94	1	5
11400111170	3221910064105	11.7	11.7	142	94	1	5
11400111175	3221910064112	11.75	11.75	142	94	1	5
11400111180	3221910064129	11.8	11.8	142	94	1	5
11400111190	3221910064136	11.9	11.9	151	101	1	5
11400111200	3221910064150	12	12	151	101	1	5
11400111210	3221910064167	12.1	12.1	151	101	1	5
11400111220	3221910064174	12.2	12.2	151	101	1	5
11400111225	3221910064181	12.25	12.25	151	101	1	5
11400111230	3221910064198	12.3	12.3	151	101	1	5
11400111240	3221910064204	12.4	12.4	151	101	1	5
11400111250	3221910064211	12.5	12.5	151	101	1	5
11400111260	3221910064228	12.6	12.6	151	101	1	5
11400111270	3221910064235	12.7	12.7	151	101	1	5
11400111275	3221910064242	12.75	12.75	151	101	1	5
11400111280	3221910064259	12.8	12.8	151	101	1	5
11400111290	3221910064273	12.9	12.9	151	101	1	5
11400111300	3221910064280	13	13	151	101	1	5
11400111350	3221910064358	13.5	13.5	160	108	1	5
11400111370	3221910064372	13.7	13.7	160	108	1	5
11400111380	3221910064396	13.8	13.8	160	108	1	5
11400111400	3221910064426	14	14	160	108	1	5
11400111420	3221910064440	14.2	14.2	169	114	1	5
11400111425	3221910064457	14.25	14.25	169	114	1	5
11400111450	3221910064495	14.5	14.5	169	114	1	5
11400111500	3221910064570	15	15	169	114	1	5
11400111550	3221910064655	15.5	15.5	178	120	1	1
11400111600	3221910064723	16	16	178	120	1	1
11400111650	3221910064785	16.5	16.5	184	125	1	1
11400111700	3221910064839	17	17	184	125	1	1
11400111750	3221910064884	17.5	17.5	191	130	1	1
11400111800	3221910064914	18	18	191	130	1	1
11400111850	3221910064945	18.5	18.5	198	135	1	1
11400111900	3221910064976	19	19	198	135	1	1
11400111950	3221910065010	19.5	19.5	205	140	1	1
11400112000	3221910065041	20	20	205	140	1	1

SET | E | 001

19 PCS | HSS | STEAM TREATED | DIN 338 | 118°

19 forets HSS Ø 1>10 mm 1/2

ESTUCHE | E | 001



19 forets HSS Ø 1>10 mm par 1/2

CASSETTA | E | 001

11400170015

3221912016416

QTY	PCB
19	1

AB | C | H

19 punte HSS Ø da 1 a 10 mm in incrementi da 1/2 mm

SET | G | 001

25 PCS | HSS | STEAM TREATED | DIN 338 | 118°

25 metal drills HSS Ø 1>13 mm par 1/2

ESTUCHE | G | 001



25 brocas metal HSS Ø 1>13 mm x1/2

CASSETTA | G | 001

11400170017

3221912016423

QTY	PCB
25	1

AB | C | H

25 punte HSS Ø da 1 a 13 mm in incrementi da 1/2 mm

SET | F | 001

32 PCS | HSS | STEAM TREATED | DIN 338 | 118°

32 metal drills HSS Ø 1>10,5 mm 1/2+1, 9/2,1/2,6/2,9/3,2/3,3/3,8/4,2/5,1/6,8/7,9/10,2 mm

ESTUCHE | F | 001



32 brocas metal HSS Ø 1>10,5 mm x1/2 +1,9/2,1/2,6/2,9/3,2/3,3/3,8/4,2/5,1/6,8/7,9/10,2 mm

CASSETTA | F | 001

11400170009

3221910008000

QTY	PCB
32	1

AB | C | H

32 punte HSS Ø da 1 a 10,5 mm in incrementi da 1/2+1,9/2,1/2,6/2,9/3,2/3,3/3,8/4,2/5,1/6,8/7,9/10,2 mm

SET | D | 001

41 PCS | HSS | STEAM TREATED | DIN 338 | 118°

41 metal drills HSS Ø 6>10 mm x1/10

ESTUCHE | D | 001



41 brocas metal HSS Ø 6>10 mm x1/10

CASSETTA | D | 001

11400170011

3221910008024

QTY	PCB
41	1

AB | C | H

41 punte HSS Ø 6 a 10 mm in incrementi da 1/10

SET | C | 001



51 metal drills HSS Ø 1>6 mm 1/10

ESTUCHE | C | 001



51 brocas metal HSS Ø 1>6 mm x1/10

CASSETTA | C | 001

11400170010

3221910008017

QTY	PCB
51	1



51 punte HSS Ø da 1 a 6 mm in incrementi da 1/10

SET | J | 001



91 metal drills HSS Ø 1>10 mm x1/10

ESTUCHE | J | 001



91 brocas metal HSS Ø 1>10 mm x1/10

CASSETTA | J | 001

11400170008

3221912065759

QTY	PCB
91	1

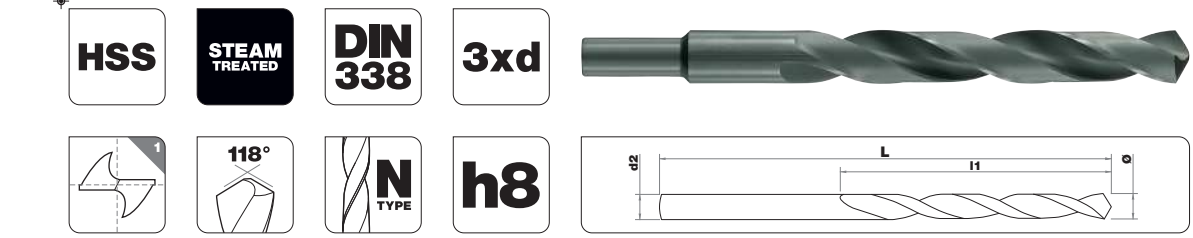


91 punte HSS Ø da 1 a 10 mm in incrementi da 1/10

001RS | HSS FULLY GROUND JOBBER LENGTH DRILL. REDUCED SHANK

001RS | BROCA HSS RECTIFICADA CILÍDRICA. SERIE CORTA. MANGO REDUCIDO.

001RS | PUNTA HSS CILINDRICA CORTA. TIPO N | GAMBO RIDOTTO.



For steels and cast irons. Robustness, accuracy.

Para Aceros y fundiciones. Robustez, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

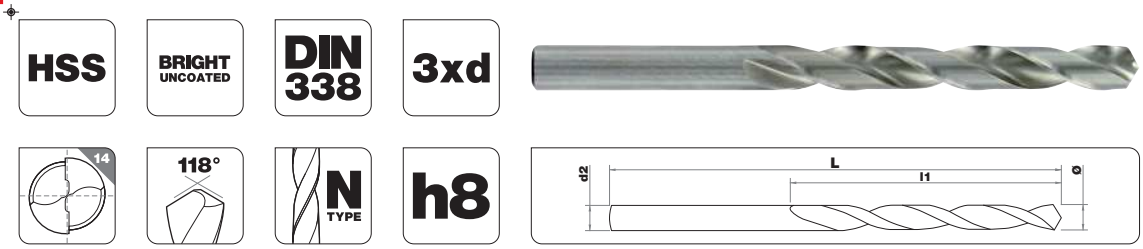
1140041	EAN	ø	d2	L	l1	QTY	PCB
11400411300	3221910126735	13	10	151	101	1	1
11400411350	3221910126766	13.5	12	160	108	1	1
11400411400	3221910126780	14	12	160	108	1	1
11400411450	3221910126810	14.5	12	169	114	1	1
11400411500	3221910126834	15	12	169	114	1	1
11400411550	3221910126872	15.5	12	178	120	1	1
11400411600	3221910126896	16	12	178	120	1	1
11400411650	3221910126926	16.5	12	184	125	1	1
11400411700	3221910126940	17	12	184	125	1	1
11400411750	3221910126964	17.5	12	191	130	1	1
11400411800	3221910126971	18	12	191	130	1	1
11400411850	3221910126995	18.5	12	198	135	1	1
11400411900	3221910127008	19	12	198	135	1	1
11400411950	3221910127022	19.5	12	205	140	1	1
11400412000	3221910127046	20	12	205	140	1	1
11400412100	3221910127077	21	12	205	140	1	1
11400412200	3221910127091	22	12	210	150	1	1
11400412300	3221910127121	23	12	210	150	1	1
11400412400	3221910127145	24	12	220	160	1	1
11400412500	3221910127169	25	12	220	160	1	1



ALTAIS | HSS FULLY GROUND JOBBER LENGTH DRILL. ELLIPTIC POINT.

ALTAIS | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA. AFILADO ELÍPTICO.

ALTAIS | PUNTA HSS CILINDRICA CORTA. TIPO N | AFFILATURA ELLITTICA.



For steels and cast irons. Comfort, accuracy.

Para Aceros y fundiciones. Confort, precisión.

Foratura di acciai <950 N/mm². Comfort e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8140031	EAN	Ø	d2	L	l1	QTY	PCB
81400310020	3221910841379	0.2	0.2	19	2.5	1	10*
81400310030	3221910841393	0.3	0.3	19	3	1	10
81400310040	3221910841409	0.4	0.4	20	5	1	10
81400310050	3221910841416	0.5	0.5	22	6	1	10
81400310060	3221910841423	0.6	0.6	24	7	1	10
81400310070	3221910841430	0.7	0.7	28	9	1	10
81400310075	3221910841447	0.75	0.75	28	9	1	10*
81400310080	3221910841454	0.8	0.8	30	10	1	10
81400310090	3221910841461	0.9	0.9	32	11	1	10
81400310100	3221910841478	1	1	34	12	1	10
81400310110	3221910841485	1.1	1.1	36	14	1	10
81400310120	3221910841492	1.2	1.2	38	16	1	10
81400310130	3221910841515	1.3	1.3	38	16	1	10
81400310140	3221910841522	1.4	1.4	40	18	1	10
81400310150	3221910841539	1.5	1.5	40	18	1	10
81400310160	3221910841546	1.6	1.6	43	20	1	10
81400310170	3221910841553	1.7	1.7	43	20	1	10
81400310180	3221910841577	1.8	1.8	46	22	1	10
81400310190	3221910841584	1.9	1.9	46	22	1	10
81400310200	3221910841591	2	2	49	24	1	10
81400310210	3221910841607	2.1	2.1	49	24	1	10
81400310220	3221910841614	2.2	2.2	53	27	1	10
81400310225	3221910841621	2.25	2.25	53	27	1	10
81400310230	3221910841638	2.3	2.3	53	27	1	10
81400310240	3221910841645	2.4	2.4	57	30	1	10
81400310250	3221910841652	2.5	2.5	57	30	1	10
81400310260	3221910841669	2.6	2.6	57	30	1	10
81400310270	3221910841676	2.7	2.7	61	33	1	10
81400310280	3221910841690	2.8	2.8	61	33	1	10
81400310290	3221910841706	2.9	2.9	61	33	1	10
81400310300	3221910841713	3	3	61	33	1	10
81400310310	3221910841720	3.1	3.1	65	36	1	10
81400310320	3221910841737	3.2	3.2	65	36	1	10
81400310325	3221910841744	3.25	3.25	65	36	1	10
81400310330	3221910841751	3.3	3.3	65	36	1	10
81400310340	3221910841768	3.4	3.4	70	39	1	10
81400310350	3221910841775	3.5	3.5	70	39	1	10
81400310360	3221910841782	3.6	3.6	70	39	1	10
81400310370	3221910841799	3.7	3.7	70	39	1	10
81400310380	3221910841812	3.8	3.8	75	43	1	10
81400310390	3221910841829	3.9	3.9	75	43	1	10
81400310400	3221910841836	4	4	75	43	1	10
81400310410	3221910841843	4.1	4.1	75	43	1	10
81400310420	3221910841850	4.2	4.2	75	43	1	10
81400310425	3221910841867	4.25	4.25	75	43	1	10*
81400310430	3221910841874	4.3	4.3	80	47	1	10
81400310440	3221910841881	4.4	4.4	80	47	1	10
81400310450	3221910841898	4.5	4.5	80	47	1	10
81400310460	3221910841904	4.6	4.6	80	47	1	10
81400310470	3221910841911	4.7	4.7	80	47	1	10
81400310480	3221910841935	4.8	4.8	86	52	1	10



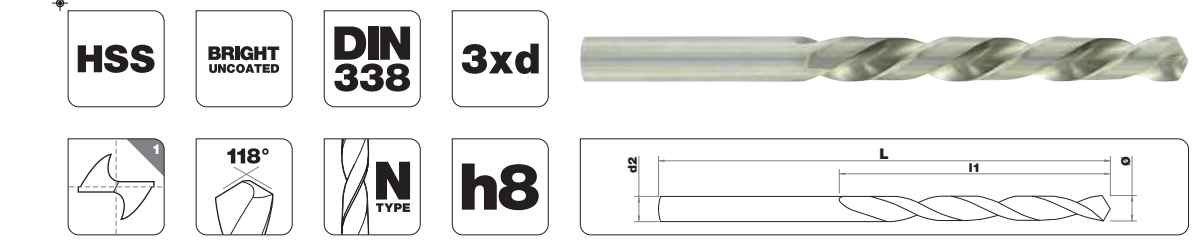
* Jusqu'à épuisement des stocks
While stocks last

8140031	EAN	Ø	d2	L	l1	QTY	PCB
81400310490	3221910841942	4.9	4.9	86	52	1	10
81400310500	3221910841959	5	5	86	52	1	10
81400310510	3221910841966	5.1	5.1	86	52	1	10
81400310520	3221910841973	5.2	5.2	86	52	1	10
81400310530	3221910841997	5.3	5.3	86	52	1	10
81400310540	3221910842000	5.4	5.4	93	57	1	10
81400310550	3221910842017	5.5	5.5	93	57	1	10
81400310560	3221910842024	5.6	5.6	93	57	1	10
81400310570	3221910842031	5.7	5.7	93	57	1	10
81400310580	3221910842055	5.8	5.8	93	57	1	10
81400310590	3221910842062	5.9	5.9	93	57	1	10
81400310600	3221910842079	6	6	93	57	1	10
81400310610	3221910842086	6.1	6.1	101	63	1	10
81400310620	3221910842093	6.2	6.2	101	63	1	10
81400310630	3221910842116	6.3	6.3	101	63	1	10
81400310640	3221910842123	6.4	6.4	101	63	1	10
81400310650	3221910842130	6.5	6.5	101	63	1	10
81400310660	3221910842147	6.6	6.6	101	63	1	10
81400310670	3221910842154	6.7	6.7	101	63	1	10
81400310675	3221910842161	6.75	6.75	109	69	1	10
81400310680	3221910842178	6.8	6.8	109	69	1	10
81400310690	3221910842185	6.9	6.9	109	69	1	10
81400310700	3221910842192	7	7	109	69	1	10
81400310710	3221910842208	7.1	7.1	109	69	1	10
81400310720	3221910842215	7.2	7.2	109	69	1	10
81400310730	3221910842239	7.3	7.3	109	69	1	10
81400310740	3221910842246	7.4	7.4	109	69	1	10
81400310750	3221910842253	7.5	7.5	109	69	1	10
81400310760	3221910842260	7.6	7.6	117	75	1	10
81400310770	3221910842277	7.7	7.7	117	75	1	10
81400310780	3221910842291	7.8	7.8	117	75	1	10
81400310790	3221910842307	7.9	7.9	117	75	1	10
81400310800	3221910842314	8	8	117	75	1	10
81400310810	3221910842321	8.1	8.1	117	75	1	5
81400310820	3221910842338	8.2	8.2	117	75	1	5
81400310830	3221910842352	8.3	8.3	117	75	1	5
81400310840	3221910842369	8.4	8.4	117	75	1	5
81400310850	3221910842376	8.5	8.5	117	75	1	5
81400310860	3221910842383	8.6	8.6	125	81	1	5
81400310870	3221910842390	8.7	8.7	125	81	1	5
81400310875	3221910842406	8.75	8.75	125	81	1	5
81400310880	3221910842413	8.8	8.8	125	81	1	5
81400310890	3221910842420	8.9	8.9	125	81	1	5
81400310900	3221910842437	9	9	125	81	1	5
81400310910	3221910842444	9.1	9.1	125	81	1	5
81400310920	3221910842451	9.2	9.2	125	81	1	5
81400310930	3221910842475	9.3	9.3	125	81	1	5
81400310940	3221910842482	9.4	9.4	125	81	1	5
81400310950	3221910842499	9.5	9.5	125	81	1	5
81400310960	3221910842505	9.6	9.6	133	87	1	5
81400310970	3221910842512	9.7	9.7	133	87	1	5
81400310980	3221910842536	9.8	9.8	133	87	1	5
81400310990	3221910842543	9.9	9.9	133	87	1	5
81400311000	3221910842550	10	10	133	87	1	5
81400311010	3221910842567	10.1	10.1	133	87	1	5
81400311020	3221910842574	10.2	10.2	133	87	1	5
81400311025	3221910842581	10.25	10.25	133	87	1	5
81400311030	3221910842598	10.3	10.3	133	87	1	5
81400311040	3221910842604	10.4	10.4	133	87	1	5
81400311050	3221910842611	10.5	10.5	133	87	1	5
81400311080	3221910842659	10.8	10.8	142	94	1	5
81400311100	3221910842673	11	11	142	94	1	5
81400311120	3221910842697	11.2	11.2	142	94	1	5
81400311150	3221910842734	11.5	11.5	142	94	1	5
81400311180	3221910842772	11.8	11.8	142	94	1	5
81400311200	3221910842796	12	12	151	101	1	5
81400311210	3221910842802	12.1	12.1	151	101	1	5
81400311220	3221910842819	12.2	12.2	151	101	1	5
81400311250	3221910842857	12.5	12.5	151	101	1	5
81400311300	3221910842918	13	13	151	101	1	5
81400311350	3221910842949	13.5	13.5	160	108	1	5
81400311400	3221910842994	14	14	160	108	1	5
81400311450	3221910843045	14.5	14.5	169	114	1	5
81400311500	3221910843090	15	15	169	114	1	5
81400311550	3221910843106	15.5	15.5	178	120	1	1
81400311600	3221910843113	16	16	178	120	1	1

LH | HSS FULLY GROUND JOBBER LENGTH DRILL. LEFT HAND

LH | BROCA HSS RECTIFICADA CILÍDRICA. SERIE CORTA. IZQUIERDA.

LH | PUNTA HSS CILINDRICA CORTA. TIPO N | TAGLIO SINISTRO



For steels and cast irons. Robustness, accuracy.

Para Aceros y fundiciones. Robustez, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

IJ Cast iron
Fundiciones
Ghisa

8140061	EAN	Ø	d2	L	l1	QTY	PCB
81400610100	3221910328474	1	1	34	12	1	10
81400610150	3221910328535	1.5	1.5	40	18	1	10
81400610180	3221910328573	1.8	1.8	46	22	1	10
81400610200	3221910879365	2	2	49	24	1	10
81400610250	3221910879372	2.5	2.5	57	30	1	10
81400610300	3221910879389	3	3	61	33	1	10
81400610310	3221910328740	3.1	3.1	65	36	1	10
81400610320	3221910328757	3.2	3.2	65	36	1	10
81400610330	3221910328771	3.3	3.3	65	36	1	10
81400610350	3221910328795	3.5	3.5	70	39	1	10
81400610400	3221910879419	4	4	75	43	1	10
81400610420	3221910328887	4.2	4.2	75	43	1	10
81400610450	3221910328924	4.5	4.5	80	47	1	10
81400610500	3221910879433	5	5	86	52	1	10
81400610520	3221910329037	5.2	5.2	86	52	1	10
81400610550	3221910879440	5.5	5.5	93	57	1	10
81400610600	3221910879457	6	6	93	57	1	10
81400610620	3221910879471	6.2	6.2	101	63	1	10
81400610650	3221910329198	6.5	6.5	101	63	1	10
81400610680	3221910329242	6.8	6.8	109	69	1	10
81400610700	3221910329266	7	7	109	69	1	10
81400610750	3221910329327	7.5	7.5	109	69	1	10
81400610800	3221910329389	8	8	117	75	1	10
81400610850	3221910329440	8.5	8.5	117	75	1	5
81400610900	3221910329501	9	9	125	81	1	5
81400610950	3221910329563	9.5	9.5	125	81	1	5
81400611000	3221910329624	10	10	133	87	1	5
81400611050	3221910329679	10.5	10.5	133	87	1	5*
81400611100	3221910879495	11	11	142	94	1	5
81400611200	3221910329839	12	12	151	101	1	5
81400611300	3221910329914	13	13	151	101	1	5*



* Jusqu'à épuisement des stocks
While stocks last

FURIUS | HSS FUSIO FULLY GROUND JOBBER LENGTH DRILL. SPLIT POINT.

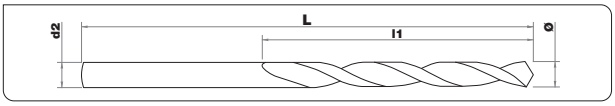
FURIUS | BROCA HSS FUSIO RECTIFICADA CILÍNDRICA CORTA.PUNTA EN CRUZ.

FURIUS | PUNTA FURIUS HSS FUSIO CILINDRICA CORTA. TIPO N, AFFILATURA A CROCE.

HSS | FUSIO COATED ø3-13mm ONLY | DIN 338 | 3xd



4 | 135° | N TYPE | h8



For steels < 950 N/mm². Speed, life span.

Para aceros < 950 N/mm². Velocidad, duración de vida.

Foratura di acciai <950 N/mm². Velocità e lunga durata .

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

IJ Cast iron
Fundiciones
Ghisa

1145411	EAN	ø	d2	L	l1	QTY	PCB
11454110050	3221912042606	0.5	0.5	22	6	1	10
11454110060	3221912042613	0.6	0.6	24	7	1	10
11454110070	3221912042620	0.7	0.7	28	9	1	10
11454110080	3221912042637	0.8	0.8	30	10	1	10
11454110090	3221912042644	0.9	0.9	32	11	1	10
11454110100	3221912042651	1	1	34	12	1	10
11454110110	3221912042668	1.1	1.1	36	14	1	10
11454110120	3221912042675	1.2	1.2	38	16	1	10
11454110130	3221912042682	1.3	1.3	38	16	1	10
11454110140	3221912042699	1.4	1.4	40	18	1	10
11454110150	3221912042705	1.5	1.5	40	18	1	10
11454110160	3221912042712	1.6	1.6	43	20	1	10
11454110170	3221912042729	1.7	1.7	43	20	1	10
11454110180	3221912042736	1.8	1.8	46	22	1	10
11454110190	3221912042743	1.9	1.9	46	22	1	10
11454110200	3221912042750	2	2	49	24	1	10
11454110210	3221912042767	2.1	2.1	49	24	1	10
11454110220	3221912042774	2.2	2.2	53	27	1	10
11454110230	3221912042781	2.3	2.3	53	27	1	10
11454110240	3221912042798	2.4	2.4	57	30	1	10
11454110250	3221912042804	2.5	2.5	57	30	1	10
11454110260	3221912042811	2.6	2.6	57	30	1	10
11454110270	3221912042828	2.7	2.7	61	33	1	10
11454110280	3221912042835	2.8	2.8	61	33	1	10
11454110290	3221912042842	2.9	2.9	61	33	1	10
11454110300	3221912042859	3	3	61	33	1	10
11454110310	3221912042866	3.1	3.1	65	36	1	10
11454110320	3221912042873	3.2	3.2	65	36	1	10
11454110325	3221912042897	3.25	3.25	65	36	1	10
11454110330	3221912042880	3.3	3.3	65	36	1	10
11454110340	3221912042903	3.4	3.4	70	39	1	10
11454110350	3221912042910	3.5	3.5	70	39	1	10
11454110360	3221912042927	3.6	3.6	70	39	1	10
11454110370	3221912042934	3.7	3.7	70	39	1	10
11454110380	3221912042941	3.8	3.8	75	43	1	10
11454110390	3221912042958	3.9	3.9	75	43	1	10
11454110400	3221912041821	4	4	75	43	1	10
11454110410	3221912041838	4.1	4.1	75	43	1	10
11454110420	3221912041845	4.2	4.2	75	43	1	10
11454110425	3221912041852	4.25	4.25	75	43	1	10
11454110430	3221912041869	4.3	4.3	80	47	1	10
11454110440	3221912041876	4.4	4.4	80	47	1	10
11454110450	3221912041883	4.5	4.5	80	47	1	10
11454110460	3221912041890	4.6	4.6	80	47	1	10
11454110470	3221912041906	4.7	4.7	80	47	1	10
11454110480	3221912041913	4.8	4.8	86	52	1	10
11454110490	3221912041920	4.9	4.9	86	52	1	10
11454110500	3221912041937	5	5	86	52	1	10
11454110510	3221912041944	5.1	5.1	86	52	1	10
11454110520	3221912041951	5.2	5.2	86	52	1	10
11454110525	3221912041975	5.25	5.25	86	52	1	10
11454110530	3221912041968	5.3	5.3	86	52	1	10
11454110540	3221912041982	5.4	5.4	93	57	1	10
11454110550	3221912041999	5.5	5.5	93	57	1	10
11454110560	3221912042002	5.6	5.6	93	57	1	10
11454110570	3221912042019	5.7	5.7	93	57	1	10



1145411	EAN	Ø	d2	L	l1	QTY	PCB
11454110580	3221912042033	5.8	5.8	93	57	1	10
11454110590	3221912042040	5.9	5.9	93	57	1	10
11454110600	3221912042057	6	6	93	57	1	10
11454110610	3221912042064	6.1	6.1	101	63	1	10
11454110620	3221912042071	6.2	6.2	101	63	1	10
11454110630	3221912042088	6.3	6.3	101	63	1	10
11454110640	3221912042095	6.4	6.4	101	63	1	10
11454110650	3221912042101	6.5	6.5	101	63	1	10
11454110660	3221912042118	6.6	6.6	101	63	1	10
11454110670	3221912042125	6.7	6.7	101	63	1	10
11454110675	3221912042132	6.75	6.75	109	69	1	10
11454110680	3221912042149	6.8	6.8	109	69	1	10
11454110690	3221912042156	6.9	6.9	109	69	1	10
11454110700	3221912042163	7	7	109	69	1	10
11454110710	3221912042170	7.1	7.1	109	69	1	10
11454110720	3221912042187	7.2	7.2	109	69	1	10
11454110730	3221912042194	7.3	7.3	109	69	1	10
11454110740	3221912042200	7.4	7.4	109	69	1	10
11454110750	3221912042217	7.5	7.5	109	69	1	10
11454110760	3221912042224	7.6	7.6	117	75	1	10
11454110770	3221912042231	7.7	7.7	117	75	1	10
11454110780	3221912042248	7.8	7.8	117	75	1	10
11454110790	3221912042255	7.9	7.9	117	75	1	10
11454110800	3221912042262	8	8	117	75	1	10
11454110810	3221912042279	8.1	8.1	117	75	1	5
11454110820	3221912042286	8.2	8.2	117	75	1	5
11454110830	3221912042293	8.3	8.3	117	75	1	5
11454110840	3221912042309	8.4	8.4	117	75	1	5
11454110850	3221912042316	8.5	8.5	117	75	1	5
11454110860	3221912042323	8.6	8.6	125	81	1	5
11454110870	3221912042330	8.7	8.7	125	81	1	5
11454110880	3221912042347	8.8	8.8	125	81	1	5
11454110890	3221912042354	8.9	8.9	125	81	1	5
11454110900	3221912042361	9	9	125	81	1	5
11454110910	3221912042385	9.1	9.1	125	81	1	5
11454110920	3221912042392	9.2	9.2	125	81	1	5
11454110930	3221912042408	9.3	9.3	125	81	1	5
11454110940	3221912042415	9.4	9.4	125	81	1	5
11454110950	3221912042422	9.5	9.5	125	81	1	5
11454110960	3221912042439	9.6	9.6	133	87	1	5
11454110970	3221912042446	9.7	9.7	133	87	1	5
11454110980	3221912042453	9.8	9.8	133	87	1	5
11454110990	3221912042460	9.9	9.9	133	87	1	5
11454111000	3221912042378	10	10	133	87	1	5
11454111010	3221912042477	10.1	10.1	133	87	1	5
11454111020	3221912042484	10.2	10.2	133	87	1	5
11454111025	3221912042507	10.25	10.25	133	87	1	5
11454111030	3221912042491	10.3	10.3	133	87	1	5
11454111040	3221912042514	10.4	10.4	133	87	1	5
11454111050	3221912042521	10.5	10.5	133	87	1	5
11454111100	3221912042538	11	11	142	94	1	5
11454111150	3221912042545	11.5	11.5	142	94	1	5
11454111200	3221912042552	12	12	151	101	1	5
11454111250	3221912042569	12.5	12.5	151	101	1	5
11454111300	3221912042576	13	13	151	101	1	5

1145416	EAN	Ø	d2	L	l1	QTY	PCB
11454160100	3221912044877	1	1	34	12	10	1
11454160150	3221912044884	1.5	1.5	40	18	10	1
11454160200	3221912044891	2	2	49	24	10	1
11454160250	3221912044914	2.5	2.5	57	30	10	1
11454160300	3221912044921	3	3	61	33	10	1
11454160320	3221912044938	3.2	3.2	65	36	10	1
11454160350	3221912044945	3.5	3.5	70	39	10	1
11454160400	3221912044952	4	4	75	43	10	1
11454160420	3221912044969	4.2	4.2	75	43	10	1
11454160450	3221912044976	4.5	4.5	80	47	10	1
11454160500	3221912044983	5	5	86	52	10	1
11454160520	3221912044990	5.2	5.2	86	52	10	1
11454160550	3221912045003	5.5	5.5	93	57	10	1
11454160600	3221912045010	6	6	93	57	10	1
11454160650	3221912045027	6.5	6.5	101	63	10	1
11454160680	3221912045034	6.8	6.8	109	69	10	1
11454160700	3221912045041	7	7	109	69	10	1
11454160750	3221912045058	7.5	7.5	109	69	10	1
11454160800	3221912045065	8	8	117	75	10	1
11454160850	3221912045072	8.5	8.5	117	75	5	1
11454160900	3221912045089	9	9	125	81	5	1
11454160950	3221912045096	9.5	9.5	125	81	5	1
11454161000	3221912045102	10	10	133	87	5	1
11454161100	3221912045119	11	11	142	94	2	1



1145416	EAN	Ø	d2	L	l1	QTY	PCB
11454161200	3221912045126	12	12	151	101	2	1
11454161300	3221912045133	13	13	151	101	2	1

1145414	EAN	Ø	d2	L	l1	QTY	PCB
11454140100	3221912045607	1	1	34	12	2	6
11454140150	3221912045614	1.5	1.5	40	18	2	6
11454140200	3221912045621	2	2	49	24	2	6
11454140250	3221912045638	2.5	2.5	57	30	2	6
11454140300	3221912045645	3	3	61	33	2	6
11454140320	3221912045652	3.2	3.2	65	36	2	6
11454140350	3221912045669	3.5	3.5	70	39	2	6
11454140400	3221912045676	4	4	75	43	2	6
11454140420	3221912045683	4.2	4.2	75	43	2	6
11454140450	3221912045690	4.5	4.5	80	47	2	6
11454140500	3221912045706	5	5	86	52	2	6
11454140550	3221912045713	5.5	5.5	93	57	1	6
11454140600	3221912045720	6	6	93	57	1	6
11454140650	3221912045737	6.5	6.5	101	63	1	6
11454140680	3221912045744	6.8	6.8	109	69	1	6
11454140700	3221912045751	7	7	109	69	1	6
11454140750	3221912045768	7.5	7.5	109	69	1	3
11454140800	3221912045775	8	8	117	75	1	3
11454140850	3221912045782	8.5	8.5	117	75	1	3
11454140900	3221912045799	9	9	125	81	1	3
11454140950	3221912045805	9.5	9.5	125	81	1	3
11454141000	3221912045812	10	10	133	87	1	3
11454141050	3221912045829	10.5	10.5	133	87	1	1
11454141100	3221912045836	11	11	142	94	1	1
11454141150	3221912045843	11.5	11.5	142	94	1	1
11454141200	3221912045850	12	12	151	101	1	1
11454141250	3221912045867	12.5	12.5	151	101	1	1
11454141300	3221912045874	13	13	151	101	1	1



CLIPSTER | 10 | FURIUS

NEW · 10 PCS · HSS · FUSIO COATED ø3-13mm ONLY · DIN 338 · 135°

10 metal drills HSS FUSIO Ø 1>10 mm

CLIPSTER | 10 | FURIUS



10 brocas metal HSS FUSIO Ø 1>10 mm

CLIPSTER | 10 | FURIUS

11454170004

3221912112514

QTY	PCB
10	1

AB · C · IJ

10 punte HSS FUSIO Ø da 1 a 10 mm

CLIPSTER | 6 | FURIUS

NEW · 06 PCS · HSS · FUSIO COATED ø3-13mm ONLY · DIN 338 · 135°

6 metal drills HSS FUSIO Ø 2-3-4-5-6-8 mm

CLIPSTER | 6 | FURIUS



6 brocas metal HSS FUSIO Ø 2-3-4-5-6-8 mm

CLIPSTER | 6 | FURIUS

11454170005

3221912112521

QTY	PCB
6	1

AB · C · IJ

6 punte HSS FUSIO Ø 2-3-4-5-6-8 mm

CLIPSTER | 13 | FURIUS

NEW

13 PCS

HSS

FUSIO COATED ø3-13mm ONLY

DIN 338

135°

13 metal drills HSS FUSIO Ø 1,5>6,5 mm / 0,5 + 3,3 +4,2 mm

CLIPSTER | 13 | FURIUS



13 brocas metal HSS FUSIO Ø 1,5>6,5 mm / 0,5 + 3,3 +4,2 mm

CLIPSTER | 13 | FURIUS

11454170006

3221912112538

QTY	PCB
13	1

AB C IJ

13 punte HSS FUSIO Ø 1,5>6,5 mm / 0,5 + 3,3 +4,2 mm

SET | BUMPER | FURIUS

26 PCS

HSS

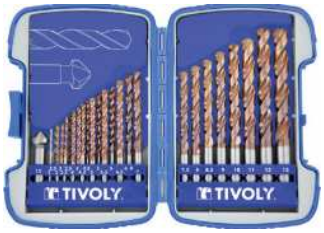
FUSIO COATED ø3-13mm ONLY

DIN 338

135°

25 metal drills HSS FUSIO Ø 2>9 mm 1/2 Ø 10 13x1+3,2+4,2+6,8+(Ø 3, 4, 5x2pcs)+1 countersink Ø 15 mm

ESTUCHE | BUMPER | FURIUS



25 brocas metal HSS FUSIO Ø 2>9 mm x1/2 Ø 10>13x1+3,2+4,2+6,8+(Ø 3, 4, 5x2 pcs)+1 avellanadores Ø 15 mm

CASSETTA | BUMPER | FURIUS

11454170002

3221912058096

QTY	PCB
25	1

AB C IJ

25 punte HSS FUSIO Ø da 2 a 9 mm in incrementi da 1/2 Ø da 10 a 13 in incrementi da 1+3,2+4,2+6,8+(Ø 3, 4, 5x2 pz.)+1 fresa per accecare Ø 15 mm

SET | E | FURIUS

19 PCS

HSS

FUSIO COATED ø3-13mm ONLY

DIN 338

135°

19 metal drills HSS FUSIO Ø 1>10 mm/1/2

ESTUCHE | E | FURIUS



19 brocas metal HSS FUSIO Ø 1>10 mm x1/2

CASSETTA | E | FURIUS

11454170015

3221912044839

QTY	PCB
19	1

AB C IJ

19 punte HSS FUSIO Ø da 1 a 10 mm in incrementi da 1/2

SET | G | FURIUS

25 PCS

HSS

FUSIO COATED ø3-13mm ONLY

DIN 338

135°

25 metal drills HSS FUSIO Ø 1>13 mm/1/2

ESTUCHE | G | FURIUS



25 brocas metal HSS FUSIO Ø 1>13 mm x 1/2

CASSETTA | G | FURIUS

11454170017

3221912044853

QTY	PCB
25	1

AB C IJ

25 punte HSS FUSIO Ø da 1 a 13 mm in incrementi da 1/2

SET | F | FURIUS

32 PCS | HSS | FUSIO COATED ø3-13mm ONLY | DIN 338 | 4 | 135°

32 metal drills HSS FUSIO Ø 1>10,5 mm/ 1/2+1,9/2,1/2,6/2,9/3,2/3,3/3,8/4,2/5,1/6 ,8/7,9/10,2

ESTUCHE | F | FURIUS



32 brocas metal HSS FUSIO Ø 1>10,5 mm x1/2+1,9/2,1/2,6/2,9/3,2/3,3/3,8/4,2/5 ,1/6,8/7,9/10,2

CASSETTA | F | FURIUS

11454170009

3221912058119

QTY	PCB
32	1

AB | C | IJ

32 punte HSS FUSIO Ø da 1 a 10,5 mm in incrementi da 1/2+1,9/2,1/2,6/2,9/3,2/3,3/ 3,8/4,2/5,1/6,8/7,9/10,2

SET | C | FURIUS

51 PCS | HSS | FUSIO COATED ø3-13mm ONLY | DIN 338 | 4 | 135°

51 metal drills HSS FUSIO Ø 1>6 mm/1/10

ESTUCHE | C | FURIUS



51 brocas metal HSS FUSIO Ø 1>6 mm x1/10

CASSETTA | C | FURIUS

11454170010

3221912058126

QTY	PCB
51	1

AB | C | IJ

51 punte HSS FUSIO Ø da 1 a 6 mm in incrementi da 1/10

SET | D | FURIUS

41 PCS | HSS | FUSIO COATED ø3-13mm ONLY | DIN 338 | 4 | 135°

41 metal drills HSS FUSIO Ø 6>10 mm/1/10

ESTUCHE | D | FURIUS



41 brocas metal HSS FUSIO Ø 6>10 mm x1/10

CASSETTA | D | FURIUS

11454170011

3221912058133

QTY	PCB
41	1

AB | C | IJ

41 punte HSS FUSIO Ø da 6 a 10 mm in incrementi da 1/10

SET | J | FURIUS

91 PCS | HSS | FUSIO COATED ø3-13mm ONLY | DIN 338 | 4 | 135°

91 metal drills HSS FUSIO Ø 1>10 mm x1/10

ESTUCHE | J | FURIUS



91 brocas metal HSS FUSIO Ø 1>10 mm x1/10

CASSETTA | J | FURIUS

11454170008

3221912058102

QTY	PCB
91	1

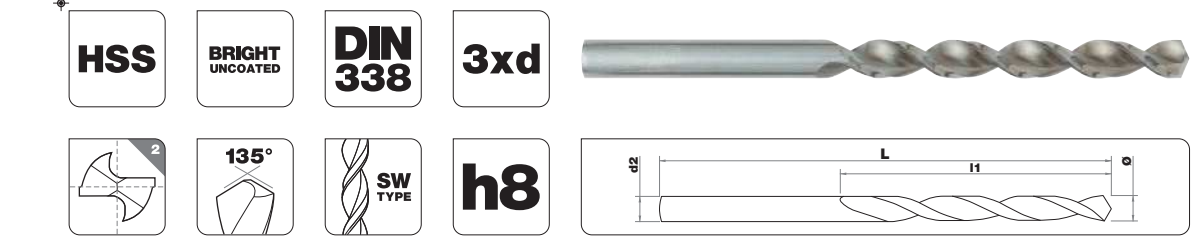
AB | C | IJ

91 punte HSS FUSIO Ø da 1 a 10 mm in incrementi da 1/10

HSS FULLY GROUND JOBBER LENGTH DRILL. S W TYPE.

BROCA HSS RECTIFICADA CILÍNDRICA CORTA. TIPO S W.

PUNTA HSS CILINDRICA CORTA. TIPO S/W PER ALLUMINIO.



For aluminium. Reduction of adhesive wear.(inserted edge).

Para aluminio. Reducción del desgaste adhesivo. (Filo recrecido).

Foratura di alluminio. Riduzione dell'usura.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

1140071	EAN	Ø	d2	L	l1	QTY	PCB
11400710250	3221910128364	2.5	2.5	57	30	1	10
11400710260	3221910128388	2.6	2.6	57	30	1	10
11400710280	3221910128425	2.8	2.8	61	33	1	10
11400710290	3221910128449	2.9	2.9	61	33	1	10*
11400710300	3221910128463	3	3	61	33	1	10
11400710310	3221910128470	3.1	3.1	65	36	1	10
11400710320	3221910128494	3.2	3.2	65	36	1	10
11400710330	3221910128517	3.3	3.3	65	36	1	10
11400710340	3221910128524	3.4	3.4	70	39	1	10
11400710350	3221910128531	3.5	3.5	70	39	1	10
11400710360	3221910128555	3.6	3.6	70	39	1	10
11400710370	3221910128562	3.7	3.7	70	39	1	10
11400710380	3221910128586	3.8	3.8	75	43	1	10
11400710400	3221910128616	4	4	75	43	1	10
11400710410	3221910128623	4.1	4.1	75	43	1	10
11400710420	3221910128630	4.2	4.2	75	43	1	10
11400710430	3221910128654	4.3	4.3	80	47	1	10
11400710450	3221910128685	4.5	4.5	80	47	1	10
11400710470	3221910128708	4.7	4.7	80	47	1	10
11400710490	3221910128746	4.9	4.9	86	52	1	10
11400710500	3221910128753	5	5	86	52	1	10
11400710510	3221910128760	5.1	5.1	86	52	1	10
11400710520	3221910128784	5.2	5.2	86	52	1	10
11400710550	3221910128821	5.5	5.5	93	57	1	10
11400710600	3221910128906	6	6	93	57	1	10
11400710650	3221910128975	6.5	6.5	101	63	1	10
11400710680	3221910129019	6.8	6.8	109	69	1	10
11400710700	3221910129033	7	7	109	69	1	10
11400710720	3221910129064	7.2	7.2	109	69	1	10
11400710750	3221910129101	7.5	7.5	109	69	1	10
11400710800	3221910129187	8	8	117	75	1	10
11400710850	3221910129255	8.5	8.5	117	75	1	5
11400710900	3221910129323	9	9	125	81	1	5
11400710950	3221910129392	9.5	9.5	125	81	1	5*
11400711000	3221910129460	10	10	133	87	1	5
11400711050	3221910129521	10.5	10.5	133	87	1	5*
11400711100	3221910129583	11	11	142	94	1	5
11400711150	3221910129644	11.5	11.5	142	94	1	5*
11400711200	3221910129705	12	12	151	101	1	5
11400711250	3221910129729	12.5	12.5	151	101	1	5*
11400711300	3221910129743	13	13	151	101	1	5*

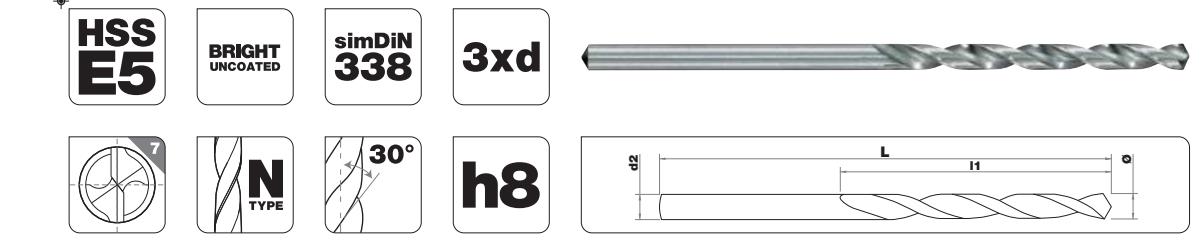


* Jusqu'à épuisement des stocks
While stocks last

HSSE5 FULLY GROUND JOBBER LENGTH DRILL | 4 FACET POINT

BROCA HSSE5 RECTIFICADA CILÍNDRICA SERIE CORTA. 4 CARAS.

PUNTA HSSE5 CORTA. 4 LISTELLI.



Optimized drilling for small diameters < 2,5 mm. Universal app.

Gama optimizada para los pequeños diametros < 2,5 mm. Usos múltiples.

Foratura ottimizzata dei piccoli diametri <2,5mm. Polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

NO Copper alloys
Aleaciones de cobre
Leghe di rame

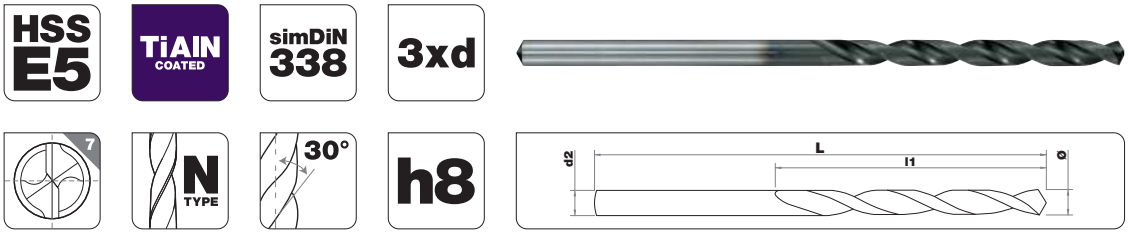
8143991	EAN	Ø	d2	L	l1	QTY	PCB
81439910080	3221910834296	0.8	0.8	30	10	1	10
81439910085	3221910835163	0.85	0.85	30	10	1	10
81439910090	3221910834302	0.9	0.9	32	11	1	10
81439910095	3221910834319	0.95	0.95	32	11	1	10
81439910100	3221910834326	1	1	34	12	1	10
81439910105	3221910834333	1.05	1.05	34	12	1	10
81439910110	3221910834340	1.1	1.1	36	14	1	10
81439910115	3221910834357	1.15	1.15	36	14	1	10
81439910120	3221910834364	1.2	1.2	38	16	1	10
81439910125	3221910834371	1.25	1.25	36	16	1	10
81439910130	3221910834388	1.3	1.3	36	16	1	10
81439910135	3221910835170	1.35	1.35	40	18	1	10
81439910140	3221910834395	1.4	1.4	40	18	1	10
81439910145	3221910835187	1.45	1.45	40	18	1	10
81439910150	3221910834401	1.5	1.5	40	18	1	10
81439910155	3221910835194	1.55	1.55	43	20	1	10
81439910160	3221910834418	1.6	1.6	43	20	1	10
81439910165	3221910835200	1.65	1.65	43	20	1	10
81439910170	3221910834425	1.7	1.7	43	20	1	10
81439910175	3221910834432	1.75	1.75	46	22	1	10
81439910180	3221910834449	1.8	1.8	46	22	1	10
81439910185	3221910835217	1.85	1.85	46	22	1	10
81439910190	3221910834456	1.9	1.9	46	22	1	10
81439910195	3221910835224	1.95	1.95	49	24	1	10
81439910200	3221910834463	2	2	49	24	1	10
81439910205	3221910835231	2.05	2.05	49	24	1	10
81439910210	3221910834470	2.1	2.1	49	24	1	10
81439910215	3221910835248	2.15	2.15	53	27	1	10
81439910220	3221910834487	2.2	2.2	53	27	1	10
81439910225	3221910834494	2.25	2.25	53	27	1	10
81439910230	3221910834500	2.3	2.3	53	27	1	10
81439910235	3221910835255	2.35	2.35	53	27	1	10
81439910240	3221910834517	2.4	2.4	57	30	1	10
81439910245	3221910834524	2.45	2.45	57	30	1	10



HSSE5 (TIALN) FULLY GROUND JOBBER LENGTH DRILL | 4 FACES.

BROCA HSSE5 (TIALN) RECTIFICADA CILÍNDRICA SERIE CORTA. 4 CARAS.

PUNTA HSSE5 TIALN CORTA. 4 LISTELLI.



Optimized drilling for small diameters < 2,5 mm. Universal app.

Gama optimizada para los pequeños diametros < 2,5 mm. Usos múltiples.

Foratura ottimizzata dei piccoli diametri <2,5mm. Polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8144031	EAN	Ø	d2	L	l1	QTY	PCB
81440310080	3221910834777	0.8	0.8	30	10	1	10
81440310085	3221910835361	0.85	0.85	30	10	1	10
81440310090	3221910834784	0.9	0.9	32	11	1	10
81440310095	3221910834791	0.95	0.95	32	11	1	10
81440310100	3221910834807	1	1	34	12	1	10
81440310105	3221910834814	1.05	1.05	34	12	1	10
81440310110	3221910834821	1.1	1.1	36	14	1	10
81440310115	3221910834838	1.15	1.15	36	14	1	10
81440310120	3221910834845	1.2	1.2	38	16	1	10
81440310125	3221910834852	1.25	1.25	36	16	1	10
81440310130	3221910834869	1.3	1.3	36	16	1	10
81440310135	3221910835378	1.35	1.35	40	18	1	10
81440310140	3221910834876	1.4	1.4	40	18	1	10
81440310145	3221910835385	1.45	1.45	40	18	1	10
81440310150	3221910834883	1.5	1.5	40	18	1	10
81440310155	3221910835392	1.55	1.55	43	20	1	10
81440310160	3221910834890	1.6	1.6	43	20	1	10
81440310165	3221910835408	1.65	1.65	43	20	1	10
81440310170	3221910834906	1.7	1.7	43	20	1	10
81440310175	3221910834913	1.75	1.75	46	22	1	10
81440310180	3221910834920	1.8	1.8	46	22	1	10
81440310185	3221910835415	1.85	1.85	46	22	1	10
81440310190	3221910834937	1.9	1.9	46	22	1	10
81440310195	3221910835422	1.95	1.95	49	24	1	10
81440310200	3221910834944	2	2	49	24	1	10
81440310205	3221910835439	2.05	2.05	49	24	1	10
81440310210	3221910834951	2.1	2.1	49	24	1	10
81440310215	3221910835446	2.15	2.15	53	27	1	10
81440310220	3221910834968	2.2	2.2	53	27	1	10
81440310225	3221910834975	2.25	2.25	53	27	1	10
81440310230	3221910834982	2.3	2.3	53	27	1	10
81440310235	3221910835453	2.35	2.35	53	27	1	10
81440310240	3221910834999	2.4	2.4	57	30	1	10
81440310245	3221910835002	2.45	2.45	57	30	1	10



TC | HSSE5 FULLY GROUND JOBBER LENGTH DRILL

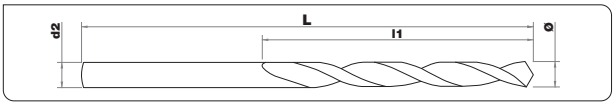
TC | BROCA HSSE5 RECTIFICADA CILÍNDRICA. SERIE CORTA

TC | PUNTA HSSE5 CILINDRICA CORTA. TIPO N

HSS E5 | GOLD TREATED | DIN 338 | 3xd



4 | 135° | N TYPE | h8



For steels and austenitic stainless steels.

Para aceros y aceros inoxidables austeníticos.

Foratura acciai e acciai inossidabili austenitici.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

1145501	EAN	Ø	d2	L	l1	QTY	PCB
11455010100	3221910839178	1	1	34	12	1	1
11455010110	3221910839185	1.1	1.1	36	14	1	10
11455010120	3221910839192	1.2	1.2	38	16	1	10
11455010125	3221912002532	1.25	1.25	38	16	1	10
11455010130	3221910839208	1.3	1.3	38	16	1	10
11455010140	3221910839215	1.4	1.4	40	18	1	10
11455010150	3221910839222	1.5	1.5	40	18	1	10
11455010160	3221910839239	1.6	1.6	43	20	1	10
11455010170	3221910839246	1.7	1.7	43	20	1	10
11455010175	3221912002549	1.75	1.75	46	22	1	10
11455010180	3221910839253	1.8	1.8	46	22	1	10
11455010190	3221910839260	1.9	1.9	46	22	1	10
11455010200	3221910839277	2	2	49	24	1	10
11455010210	3221910839284	2.1	2.1	49	24	1	10
11455010220	3221910839291	2.2	2.2	53	27	1	10
11455010225	3221912002556	2.25	2.25	53	27	1	10
11455010230	3221910839307	2.3	2.3	53	27	1	10
11455010240	3221910839314	2.4	2.4	57	30	1	10
11455010250	3221910839321	2.5	2.5	57	30	1	10
11455010260	3221910839338	2.6	2.6	57	30	1	10
11455010270	3221910839345	2.7	2.7	61	33	1	10
11455010275	3221912002563	2.75	2.75	61	33	1	10
11455010280	3221910839352	2.8	2.8	61	33	1	10
11455010290	3221910839369	2.9	2.9	61	33	1	10
11455010300	3221910839376	3	3	61	33	1	10
11455010310	3221910839383	3.1	3.1	65	36	1	10
11455010320	3221910839390	3.2	3.2	65	36	1	10
11455010325	3221912002570	3.25	3.25	65	36	1	10
11455010330	3221910839406	3.3	3.3	65	36	1	10
11455010340	3221910839413	3.4	3.4	70	39	1	10
11455010350	3221910839420	3.5	3.5	70	39	1	10
11455010360	3221910839437	3.6	3.6	70	39	1	10
11455010370	3221910839444	3.7	3.7	70	39	1	10
11455010375	3221912002587	3.75	3.75	70	39	1	10
11455010380	3221910839451	3.8	3.8	75	43	1	10
11455010390	3221910839468	3.9	3.9	75	43	1	10
11455010400	3221910839475	4	4	75	43	1	10
11455010410	3221910839482	4.1	4.1	75	43	1	10
11455010420	3221910839499	4.2	4.2	75	43	1	10
11455010425	3221912002594	4.25	4.25	75	43	1	10
11455010430	3221910839505	4.3	4.3	80	47	1	10
11455010440	3221910839512	4.4	4.4	80	47	1	10
11455010450	3221910839529	4.5	4.5	80	47	1	10
11455010460	3221910839536	4.6	4.6	80	47	1	10
11455010470	3221910839543	4.7	4.7	80	47	1	10
11455010475	3221910924393	4.75	4.75	80	47	1	10
11455010480	3221910839550	4.8	4.8	86	52	1	10
11455010490	3221910839567	4.9	4.9	86	52	1	10
11455010500	3221910839574	5	5	86	52	1	10
11455010510	3221910839581	5.1	5.1	86	52	1	10
11455010520	3221910839598	5.2	5.2	86	52	1	10
11455010525	3221912002600	5.25	5.25	86	52	1	10
11455010530	3221910839604	5.3	5.3	86	52	1	10
11455010540	3221910839611	5.4	5.4	93	57	1	10
11455010550	3221910839628	5.5	5.5	93	57	1	10
11455010560	3221910839635	5.6	5.6	93	57	1	10



1145501	EAN	Ø	d2	L	l1	QTY	PCB
11455010570	3221910839642	5.7	5.7	93	57	1	10
11455010575	3221912002617	5.75	5.75	93	57	1	10
11455010580	3221910839659	5.8	5.8	93	57	1	10
11455010590	3221910839666	5.9	5.9	93	57	1	10
11455010600	3221910839673	6	6	93	57	1	10
11455010610	3221910839680	6.1	6.1	101	63	1	10
11455010620	3221910839697	6.2	6.2	101	63	1	10
11455010625	3221912002624	6.25	6.25	101	63	1	10
11455010630	3221910839703	6.3	6.3	101	63	1	10
11455010640	3221910839710	6.4	6.4	101	63	1	10
11455010650	3221910839727	6.5	6.5	101	63	1	10
11455010660	3221910839734	6.6	6.6	101	63	1	10
11455010670	3221910839741	6.7	6.7	101	63	1	10
11455010675	3221912002631	6.75	6.75	109	69	1	10
11455010680	3221910839758	6.8	6.8	109	69	1	10
11455010690	3221910839765	6.9	6.9	109	69	1	10
11455010700	3221910839772	7	7	109	69	1	10
11455010710	3221910839789	7.1	7.1	109	69	1	10
11455010720	3221910839796	7.2	7.2	109	69	1	10
11455010725	3221912002648	7.25	7.25	109	69	1	10
11455010730	3221910839802	7.3	7.3	109	69	1	10
11455010740	3221910839819	7.4	7.4	109	69	1	10
11455010750	3221910839826	7.5	7.5	109	69	1	10
11455010760	3221910839833	7.6	7.6	117	75	1	10
11455010770	3221910839840	7.7	7.7	117	75	1	10
11455010775	3221912002655	7.75	7.75	117	75	1	10
11455010780	3221910839857	7.8	7.8	117	75	1	10
11455010790	3221910839864	7.9	7.9	117	75	1	10
11455010800	3221910839871	8	8	117	75	1	10
11455010810	3221910839888	8.1	8.1	117	75	1	5
11455010820	3221910839895	8.2	8.2	117	75	1	5
11455010825	3221912002662	8.25	8.25	117	75	1	5
11455010830	3221910839901	8.3	8.3	117	75	1	5
11455010840	3221910839918	8.4	8.4	117	75	1	5
11455010850	3221910839925	8.5	8.5	117	75	1	5
11455010860	3221910839932	8.6	8.6	125	81	1	5
11455010870	3221910839949	8.7	8.7	125	81	1	5
11455010875	3221912002679	8.75	8.75	125	81	1	5
11455010880	3221910839956	8.8	8.8	125	81	1	5
11455010890	3221910839963	8.9	8.9	125	81	1	5
11455010900	3221910839970	9	9	125	81	1	5
11455010910	3221910839987	9.1	9.1	125	81	1	5
11455010920	3221910839994	9.2	9.2	125	81	1	5
11455010925	3221912002686	9.25	9.25	125	81	1	5
11455010930	3221910840006	9.3	9.3	125	81	1	5
11455010940	3221910840013	9.4	9.4	125	81	1	5
11455010950	3221910840020	9.5	9.5	125	81	1	5
11455010960	3221910840037	9.6	9.6	133	87	1	5
11455010970	3221910840044	9.7	9.7	133	87	1	5
11455010980	3221910840051	9.8	9.8	133	87	1	5
11455010990	3221910840068	9.9	9.9	133	87	1	5
11455011000	3221910840075	10	10	133	87	1	5
11455011010	3221910840082	10.1	10.1	133	87	1	5
11455011020	3221910840099	10.2	10.2	133	87	1	5
11455011025	3221912002723	10.25	10.25	133	87	1	5
11455011030	3221910840105	10.3	10.3	133	87	1	5
11455011040	3221910840112	10.4	10.4	133	87	1	5
11455011050	3221910840129	10.5	10.5	133	87	1	5
11455011100	3221910840136	11	11	142	94	1	5
11455011150	3221910840143	11.5	11.5	142	94	1	5
11455011200	3221910840150	12	12	151	101	1	5
11455011250	3221910840167	12.5	12.5	151	101	1	5
11455011300	3221910840174	13	13	151	101	1	5
11455011350	3221912002693	13.5	13.5	160	108	1	5
11455011400	3221912002709	14	14	160	108	1	5
11455011500	3221912002730	15	15	168	114	1	5
11455011600	3221912002716	16	16	178	120	1	5

1145504	EAN	Ø	L	l	QTY	PCB
11455040100	3221912002259	1	34	12	2	6
11455040150	3221912002266	1.5	40	18	2	6
11455040200	3221912002273	2	49	24	2	6
11455040225	3221912002280	2.25	53	27	2	6
11455040250	3221912002297	2.5	57	30	2	6
11455040300	3221912002303	3	61	33	2	6
11455040325	3221912002310	3.25	65	36	2	6
11455040350	3221912002327	3.5	70	39	2	6
11455040400	3221912002334	4	75	43	2	6



1145504	EAN	Ø	L	l	QTY	PCB
11455040425	3221912002341	4.25	75	43	2	6
11455040450	3221912002358	4.5	80	47	2	6
11455040500	3221912002365	5	86	52	2	6
11455040550	3221912002372	5.5	93	57	1	6
11455040600	3221912002389	6	93	57	1	6
11455040650	3221912002396	6.5	101	63	1	6
11455040700	3221912002402	7	109	69	1	6
11455040750	3221912002419	7.5	109	69	1	3
11455040800	3221912002426	8	117	75	1	3
11455040850	3221912002433	8.5	117	75	1	3
11455040900	3221912002440	9	125	81	1	3
11455040950	3221912002457	9.5	125	81	1	3
11455041000	3221912002464	10	133	87	1	3
11455041050	3221912002471	10.5	133	87	1	1
11455041100	3221912002488	11	142	94	1	1
11455041150	3221912002495	11.5	142	94	1	1
11455041200	3221912002501	12	151	101	1	1
11455041250	3221912002518	12.5	151	101	1	1
11455041300	3221912002525	13	151	101	1	1

SET | E | TC



19 metal drills HSS E5 Ø 1>10 mm/1/2

ESTUCHE | E | TC



19 brocas metal HSS E5 Ø 1>10 mm x1/2

CASSETTA | E | TC

11455070015

3221912016522

QTY	PCB
19	1



19 punte HSS E5 Ø da 1 a 10 mm in incrementi da 1/2

SET | G | TC



25 metal drills HSS E5 Ø 1>13 mm/1/2

ESTUCHE | G | TC



25 brocas metal HSS E5 Ø 1>13 mm x1/2

CASSETTA | G | TC

11455070017

3221912016539

QTY	PCB
25	1



25 punte HSS E5 Ø da 1 a 13 mm in incrementi da 1/2

TC | HSSE5 FULLY GROUND JOBBER LENGTH DRILL. REDUCED SHANK

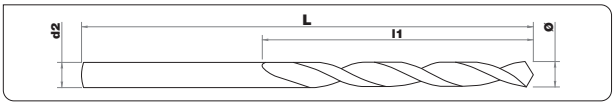
TC | BROCA HSSE5 RECTIFICADA CILÍDRICA. SERIE CORTA. MANGO REDUCIDO

TC | PUNTA HSSE5 CILINDRICA CORTA. TIPO N | GAMBO RIDOTTO

HSS E5 | GOLD TREATED | DIN 338 | 3xd



4 | 130° | N TYPE | h8



For steels and austenitic stainless steels.

Para aceros y aceros inoxidables austeníticos.

Foratura acciai e acciai inossidabili austenitici.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

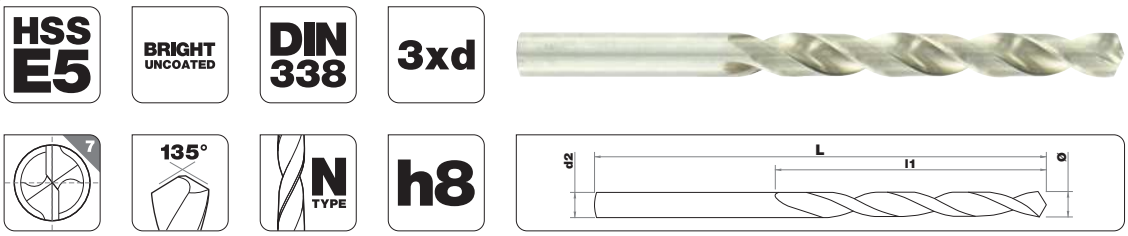
1145561	EAN	Ø	d2	L	l1	QTY	PCB
11455611400	3221912002174	14	12	160	108	1	1
11455611500	3221912002181	15	12	169	114	1	1
11455611600	3221912002198	16	12	178	120	1	1
11455611700	3221912002204	17	12	184	125	1	1
11455611800	3221912002211	18	12	191	130	1	1
11455611900	3221912002235	19	12	198	135	1	1
11455612000	3221912002228	20	12	205	140	1	1



CUTINOX 4F | HSSE5 FULLY GROUND JOBBER LENGTH DRILL. 4 FACET POINT.

CUTINOX 4F | BROCA HSSE5 RECTIFICADA CILÍNDRICA CORTA.4 CARAS.

CUTINOX 4F | PUNTA HSSE5 CILINDRICA CORTA | TIPO N | 4 LISTELLI.



For austenitic stainless steels

Para aceros inoxidables.

Foratura acciai inossidabili.

F Ferrititic stainless steels
Aceros inoxidables ferríticos
acciai inossidabili ferritici

G Martensitic stainless steels
Aceros inoxidables martensíticos
acciai inossidabili martensitici

H Austenitic stainless steels
Aceros inoxidables austeníticos
Acciai inossidabili austenitici

1145581	EAN	Ø	d2	L	l1	QTY	PCB
11455810080	3221912000330	0.8	0.8	30	10	1	10
11455810090	3221912000347	0.9	0.9	32	11	1	10
11455810100	3221912000354	1	1	34	12	1	10
11455810110	3221912000361	1.1	1.1	36	14	1	10
11455810120	3221912000378	1.2	1.2	38	16	1	10
11455810130	3221912000385	1.3	1.3	36	16	1	10
11455810140	3221912000392	1.4	1.4	40	18	1	10
11455810150	3221912000408	1.5	1.5	40	18	1	10
11455810160	3221912000415	1.6	1.6	43	20	1	10
11455810170	3221912000422	1.7	1.7	43	20	1	10
11455810180	3221912000439	1.8	1.8	46	22	1	10
11455810190	3221912000446	1.9	1.9	46	22	1	10
11455810200	3221912000453	2	2	49	24	1	10
11455810210	3221912000460	2.1	2.1	49	24	1	10
11455810220	3221912000477	2.2	2.2	53	27	1	10
11455810230	3221912000484	2.3	2.3	53	27	1	10
11455810240	3221912000491	2.4	2.4	57	30	1	10
11455810250	3221912000507	2.5	2.5	57	30	1	10
11455810260	3221912000514	2.6	2.6	57	30	1	10
11455810270	3221912000521	2.7	2.7	61	33	1	10
11455810275	3221912000538	2.75	2.75	61	33	1	10
11455810280	3221912000545	2.8	2.8	61	33	1	10
11455810290	3221912000552	2.9	2.9	61	33	1	10
11455810300	3221912000569	3	3	61	33	1	10
11455810310	3221912000576	3.1	3.1	65	36	1	10
11455810320	3221912000583	3.2	3.2	65	36	1	10
11455810325	3221912000590	3.25	3.25	65	36	1	10
11455810330	3221912000606	3.3	3.3	65	36	1	10
11455810340	3221912000613	3.4	3.4	70	39	1	10
11455810350	3221912000620	3.5	3.5	70	39	1	10
11455810360	3221912000637	3.6	3.6	70	39	1	10
11455810370	3221912000644	3.7	3.7	70	39	1	10
11455810375	3221912000651	3.75	3.75	70	39	1	10
11455810380	3221912000668	3.8	3.8	75	43	1	10
11455810390	3221912000682	3.9	3.9	75	43	1	10
11455810400	3221912000699	4	4	75	43	1	10
11455810410	3221912000705	4.1	4.1	75	43	1	10
11455810420	3221912000712	4.2	4.2	75	43	1	10
11455810425	3221912000729	4.25	4.25	75	43	1	10
11455810430	3221912000736	4.3	4.3	80	47	1	10
11455810440	3221912000743	4.4	4.4	80	47	1	10
11455810450	3221912000750	4.5	4.5	80	47	1	10
11455810460	3221912000767	4.6	4.6	80	47	1	10
11455810470	3221912000774	4.7	4.7	80	47	1	10
11455810475	3221912000781	4.75	4.75	80	47	1	10
11455810480	3221912000798	4.8	4.8	86	52	1	10
11455810490	3221912000804	4.9	4.9	86	52	1	10
11455810500	3221912000811	5	5	86	52	1	10
11455810510	3221912000828	5.1	5.1	86	52	1	10
11455810520	3221912000835	5.2	5.2	86	52	1	10
11455810525	3221912000842	5.25	5.25	86	52	1	10
11455810530	3221912000859	5.3	5.3	86	52	1	10
11455810540	3221912000866	5.4	5.4	93	57	1	10
11455810550	3221912000873	5.5	5.5	93	57	1	10
11455810560	3221912000880	5.6	5.6	93	57	1	10
11455810570	3221912000897	5.7	5.7	93	57	1	10



1145581	EAN	Ø	d2	L	l1	QTY	PCB
11455810575	3221912000903	5.75	5.75	93	57	1	10
11455810580	3221912000927	5.8	5.8	93	57	1	10
11455810590	3221912000934	5.9	5.9	93	57	1	10
11455810600	3221912000941	6	6	93	57	1	10
11455810610	3221912000958	6.1	6.1	101	63	1	10
11455810620	3221912000965	6.2	6.2	101	63	1	10
11455810625	3221912000972	6.25	6.25	101	63	1	10
11455810630	3221912000989	6.3	6.3	101	63	1	10
11455810640	3221912000996	6.4	6.4	101	63	1	10
11455810650	3221912001078	6.5	6.5	101	63	1	10
11455810660	3221912001085	6.6	6.6	101	63	1	10
11455810670	3221912001092	6.7	6.7	101	63	1	10
11455810675	3221912001115	6.75	6.75	109	69	1	10
11455810680	3221912001139	6.8	6.8	109	69	1	10
11455810690	3221912001146	6.9	6.9	109	69	1	10
11455810700	3221912001153	7	7	109	69	1	10
11455810710	3221912001160	7.1	7.1	109	69	1	10
11455810720	3221912001177	7.2	7.2	109	69	1	10
11455810730	3221912001184	7.3	7.3	109	69	1	10
11455810740	3221912001191	7.4	7.4	109	69	1	10
11455810750	3221912001207	7.5	7.5	109	69	1	10
11455810760	3221912001214	7.6	7.6	117	75	1	10
11455810770	3221912001221	7.7	7.7	117	75	1	10
11455810780	3221912001238	7.8	7.8	117	75	1	10
11455810790	3221912001245	7.9	7.9	117	75	1	10
11455810800	3221912000316	8	8	117	75	1	10
11455810810	3221912001252	8.1	8.1	117	75	1	5
11455810820	3221912001269	8.2	8.2	117	75	1	5
11455810830	3221912001276	8.3	8.3	117	75	1	5
11455810840	3221912001283	8.4	8.4	117	75	1	5
11455810850	3221912001290	8.5	8.5	117	75	1	5
11455810860	3221912001306	8.6	8.6	125	81	1	5
11455810870	3221912001313	8.7	8.7	125	81	1	5
11455810880	3221912001320	8.8	8.8	125	81	1	5
11455810890	3221912001337	8.9	8.9	125	81	1	5
11455810900	3221912000323	9	9	125	81	1	5
11455810910	3221912001344	9.1	9.1	125	81	1	5
11455810920	3221912001351	9.2	9.2	125	81	1	5
11455810930	3221912001368	9.3	9.3	125	81	1	5
11455810940	3221912001375	9.4	9.4	125	81	1	5
11455810950	3221912001382	9.5	9.5	125	81	1	5
11455810960	3221912001399	9.6	9.6	133	87	1	5
11455810970	3221912001405	9.7	9.7	133	87	1	5
11455810980	3221912001412	9.8	9.8	133	87	1	5
11455810990	3221912001436	9.9	9.9	133	87	1	5
11455811000	3221912001443	10	10	133	87	1	5
11455811020	3221912001450	10.2	10.2	133	87	1	5
11455811050	3221912001467	10.5	10.5	133	87	1	5
11455811100	3221912001474	11	11	142	94	1	5
11455811150	3221912001481	11.5	11.5	142	94	1	5
11455811200	3221912001498	12	12	151	101	1	5
11455811250	3221912001504	12.5	12.5	151	101	1	5
11455811300	3221912001511	13	13	151	101	1	5

SET | E | CUTINOX 4F



19 metal drills HSS E5 4 facet point Ø 1>10 mm/1/2

ESTUCHE | E | CUTINOX 4F



19 brocas metal HSS E5 4 caras Ø 1>10 mm x1/2

CASSETTA | E | CUTINOX 4F

11455870015

3221912016393

QTY	PCB
19	1



19 punte HSS E5 Ø 4 listelli da 1 a 10 mm in incrementi da 1/2

SET | G | CUTINOX 4F



25 metal drills HSS E5 4 facet point Ø 1>13 mm/1/2

ESTUCHE | G | CUTINOX 4F



25 brocas metal HSS E5 4 caras Ø 1>13 mm x1/2

CASSETTA | G | CUTINOX 4F

11455870017

3221912016409

QTY	PCB
25	1

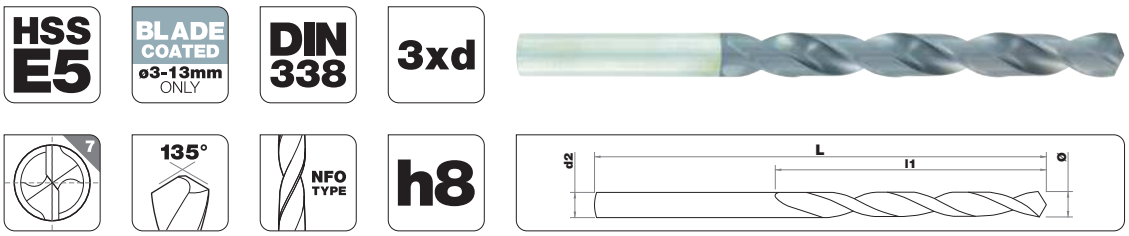


25 punte HSS E5 Ø 4 listelli da 1 a 13 mm in incrementi da 1/2

TBX 4F | HSSE5 BLADE FULLY GROUND JOBBER LENGTH DRILL. 4 FACET POINT.

TBX 4F | BROCA HSSE5 BLADE RECTIFICADA CILÍNDRICA CORTA.4 CARAS.

TBX 4F | PUNTA HSSE5 BLADE CILINDRICA CORTA, TIPO N, 4 LISTELLI.



For austenitic stainless steels. Speed, life span.

Para aceros inoxidables austéniticos. Velocidad, duración de vida.

Foratura acciai inossidabili austenitici. Velocità e lunga durata.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

1145611	EAN	Ø	d2	L	l1	QTY	PCB
11456110100	3221912003485	1	1	34	12	1	10
11456110110	3221912003492	1.1	1.1	36	14	1	10
11456110120	3221912003508	1.2	1.2	38	16	1	10
11456110130	3221912003515	1.3	1.3	38	16	1	10
11456110140	3221912003522	1.4	1.4	40	18	1	10
11456110150	3221912003539	1.5	1.5	40	18	1	10
11456110160	3221912003546	1.6	1.6	43	20	1	10
11456110170	3221912003553	1.7	1.7	43	20	1	10
11456110180	3221912003560	1.8	1.8	46	22	1	10
11456110190	3221912003577	1.9	1.9	46	22	1	10
11456110200	3221912003584	2	2	49	24	1	10
11456110210	3221912003591	2.1	2.1	49	24	1	10
11456110220	3221912003607	2.2	2.2	53	27	1	10
11456110230	3221912003614	2.3	2.3	53	27	1	10
11456110240	3221912003621	2.4	2.4	57	30	1	10
11456110250	3221912003638	2.5	2.5	57	30	1	10
11456110260	3221912003645	2.6	2.6	57	30	1	10
11456110270	3221912003652	2.7	2.7	61	33	1	10
11456110280	3221912003669	2.8	2.8	61	33	1	10
11456110290	3221912003676	2.9	2.9	61	33	1	10
11456110300	3221912003683	3	3	61	33	1	10
11456110310	3221912003690	3.1	3.1	65	36	1	10
11456110320	3221912003706	3.2	3.2	65	36	1	10
11456110330	3221912003713	3.3	3.3	65	36	1	10
11456110340	3221912003720	3.4	3.4	70	39	1	10
11456110350	3221912003737	3.5	3.5	70	39	1	10
11456110360	3221912003744	3.6	3.6	70	39	1	10
11456110370	3221912003751	3.7	3.7	70	39	1	10
11456110380	3221912003768	3.8	3.8	75	43	1	10
11456110390	3221912003775	3.9	3.9	75	43	1	10
11456110400	3221912003782	4	4	75	43	1	10
11456110410	3221912003799	4.1	4.1	75	43	1	10
11456110420	3221912003805	4.2	4.2	75	43	1	10
11456110430	3221912003812	4.3	4.3	80	47	1	10
11456110440	3221912003829	4.4	4.4	80	47	1	10
11456110450	3221912003836	4.5	4.5	80	47	1	10
11456110460	3221912003843	4.6	4.6	80	47	1	10
11456110470	3221912003850	4.7	4.7	80	47	1	10
11456110480	3221912003867	4.8	4.8	86	52	1	10
11456110490	3221912003874	4.9	4.9	86	52	1	10
11456110500	3221912003881	5	5	86	52	1	10
11456110510	3221912003898	5.1	5.1	86	52	1	10
11456110520	3221912003904	5.2	5.2	86	52	1	10
11456110530	3221912003911	5.3	5.3	86	52	1	10
11456110540	3221912003928	5.4	5.4	93	57	1	10
11456110550	3221912003935	5.5	5.5	93	57	1	10
11456110560	3221912003942	5.6	5.6	93	57	1	10
11456110570	3221912003959	5.7	5.7	93	57	1	10
11456110580	3221912003966	5.8	5.8	93	57	1	10
11456110590	3221912003973	5.9	5.9	93	57	1	10
11456110600	3221912003980	6	6	93	57	1	10
11456110610	3221912003997	6.1	6.1	101	63	1	10
11456110620	3221912004000	6.2	6.2	101	63	1	10
11456110630	3221912004017	6.3	6.3	101	63	1	10
11456110640	3221912004024	6.4	6.4	101	63	1	10
11456110650	3221912004031	6.5	6.5	101	63	1	10



1145611	EAN	Ø	d2	L	l1	QTY	PCB
11456110660	3221912004048	6.6	6.6	101	63	1	10
11456110670	3221912004055	6.7	6.7	101	63	1	10
11456110680	3221912004062	6.8	6.8	109	69	1	10
11456110690	3221912004079	6.9	6.9	109	69	1	10
11456110700	3221912004086	7	7	109	69	1	10
11456110710	3221912004093	7.1	7.1	109	69	1	10
11456110720	3221912004109	7.2	7.2	109	69	1	10
11456110730	3221912004116	7.3	7.3	109	69	1	10
11456110740	3221912004123	7.4	7.4	109	69	1	10
11456110750	3221912004130	7.5	7.5	109	69	1	10
11456110760	3221912004147	7.6	7.6	117	75	1	10
11456110770	3221912004154	7.7	7.7	117	75	1	10
11456110780	3221912004161	7.8	7.8	117	75	1	10
11456110790	3221912004178	7.9	7.9	117	75	1	10
11456110800	3221912004185	8	8	117	75	1	10
11456110810	3221912004208	8.1	8.1	117	75	1	5
11456110820	3221912004215	8.2	8.2	117	75	1	5
11456110830	3221912004222	8.3	8.3	117	75	1	5
11456110840	3221912004239	8.4	8.4	117	75	1	5
11456110850	3221912004246	8.5	8.5	117	75	1	5
11456110860	3221912004253	8.6	8.6	125	81	1	5
11456110870	3221912004260	8.7	8.7	125	81	1	5
11456110880	3221912004277	8.8	8.8	125	81	1	5
11456110890	3221912004284	8.9	8.9	125	81	1	5
11456110900	3221912004291	9	9	125	81	1	5
11456110910	3221912004307	9.1	9.1	125	81	1	5
11456110920	3221912004314	9.2	9.2	125	81	1	5
11456110930	3221912004321	9.3	9.3	125	81	1	5
11456110940	3221912004338	9.4	9.4	125	81	1	5
11456110950	3221912004345	9.5	9.5	125	81	1	5
11456110960	3221912004352	9.6	9.6	133	87	1	5
11456110970	3221912004369	9.7	9.7	133	87	1	5
11456110980	3221912004376	9.8	9.8	133	87	1	5
11456110990	3221912004383	9.9	9.9	133	87	1	5
11456111000	3221912004390	10	10	133	87	1	5
11456111020	3221912004406	10.2	10.2	133	87	1	5
11456111050	3221912004413	10.5	10.5	133	87	1	5
11456111100	3221912004420	11	11	142	94	1	5
11456111150	3221912004437	11.5	11.5	142	94	1	5
11456111200	3221912004444	12	12	151	101	1	5
11456111250	3221912004451	12.5	12.5	151	101	1	5
11456111300	3221912004468	13	13	151	101	1	5
11456111400	3221912004475	14	12	160	108	1	1
11456111500	3221912004482	15	12	169	114	1	1
11456111600	3221912004499	16	12	178	120	1	1
11456111700	3221912004505	17	12	184	125	1	1
11456111800	3221912004512	18	12	191	130	1	1
11456111900	3221912004529	19	12	198	135	1	1
11456112000	3221912004536	20	12	205	140	1	1

1145614	EAN	Ø	d2	L	l1	QTY	PCB
11456140300	3221912004710	3	3	61	33	1	3
11456140320	3221912004727	3.2	3.2	65	36	1	3
11456140350	3221912004734	3.5	3.5	70	39	1	3
11456140400	3221912004741	4	4	75	43	1	3
11456140420	3221912004758	4.2	4.2	75	43	1	3
11456140450	3221912004765	4.5	4.5	80	47	1	3
11456140500	3221912004772	5	5	86	52	1	3
11456140520	3221912004789	5.2	5.2	86	52	1	3
11456140550	3221912004796	5.5	5.5	93	57	1	3
11456140600	3221912004802	6	6	93	57	1	3
11456140650	3221912004819	6.5	6.5	101	63	1	3
11456140700	3221912004826	7	7	109	69	1	1
11456140750	3221912004833	7.5	7.5	109	69	1	1
11456140800	3221912004840	8	8	117	75	1	1
11456140850	3221912004857	8.5	8.5	117	75	1	1
11456140900	3221912004864	9	9	125	81	1	1
11456140950	3221912004871	9.5	9.5	125	81	1	1
11456141000	3221912004888	10	10	133	87	1	1
11456141050	3221912004895	10.5	10.5	133	87	1	1
11456141100	3221912004901	11	11	142	94	1	1
11456141150	3221912004918	11.5	11.5	142	94	1	1
11456141200	3221912004925	12	12	151	101	1	1
11456141250	3221912004932	12.5	12.5	151	101	1	1
11456141300	3221912004949	13	13	151	101	1	1



1145616	EAN	Ø	d2	L	l1	QTY	PCB
11456160300	3221912004567	3	3	61	33	10	1
11456160320	3221912004574	3.2	3.2	65	36	10	1
11456160350	3221912004581	3.5	3.5	70	39	10	1
11456160400	3221912004598	4	4	75	43	10	1
11456160420	3221912004611	4.2	4.2	75	43	10	1
11456160450	3221912004628	4.5	4.5	80	47	10	1
11456160500	3221912004635	5	5	86	52	10	1
11456160550	3221912004659	5.5	5.5	93	57	10	1
11456160600	3221912004666	6	6	93	57	10	1
11456160650	3221912004673	6.5	6.5	101	63	10	1*
11456160700	3221912004680	7	7	109	69	10	1*
11456160800	3221912004703	8	8	117	75	10	1



SET | E | TBX 4F



19 metal drills HSS E5 Blade 4 facet point
Ø 1>10 mm/1/2

ESTUCHE | E | TBX 4F



19 brocas metal HSS E5 Blade 4 caras Ø 1>10 mm x1/2

CASSETTA | E | TBX 4F

11456170015

3221912016317

QTY	PCB
19	1

C H

19 punte HSS E5 Blade 4 listelli Ø da 1 a 10 mm in incrementi da 1/2

SET | G | TBX 4F



25 metal drills HSS E5 Blade 4 facet point
Ø 1>13 mm/1/2

ESTUCHE | G | TBX 4F



25 brocas metal HSS E5 Blade 4 caras Ø 1>13 mm x1/2

CASSETTA | G | TBX 4F

11456170017

3221912016300

QTY	PCB
25	1

C H

25 punte HSS E5 Blade 4 listelli Ø da 1 a 13 mm in incrementi da 1/2

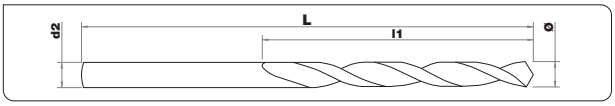
* Jusqu'à épuisement des stocks
While stocks last

PHOENIX | HSSE5 FULLY GROUND JOBBER LENGTH DRILL. TYPE S

PHOENIX | BROCA HSSE5 RECTIFICADA CILÍNDRICA SERIE CORTA. TIPO S

PHOENIX | PUNTA HSSE5 CILINDRICA CORTA. TIPO S





For deep holes. Universal application. High Performance.

Usos múltiples para agujeros profundos. Alto rendimiento.

Concepita per forature polivalenti e fori profondi. Alte prestazioni .

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

J SG iron
Fundición nodular
Ghisa GS

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

8140121	EAN	Ø	d2	L	l1	QTY	PCB
81401210250	3221910722708	2.5	2.5	57	30	1	10
81401210260	3221910722715	2.6	2.6	57	30	1	10
81401210270	3221910722722	2.7	2.7	61	33	1	10
81401210280	3221910722739	2.8	2.8	61	33	1	10
81401210290	3221910722746	2.9	2.9	61	33	1	10
81401210300	3221910722753	3	3	61	33	1	10
81401210310	3221910722760	3.1	3.1	65	36	1	10
81401210320	3221910722777	3.2	3.2	65	36	1	10
81401210325	3221910722784	3.25	3.25	65	36	1	10
81401210330	3221910722791	3.3	3.3	65	36	1	10
81401210340	3221910722807	3.4	3.4	70	39	1	10
81401210350	3221910722814	3.5	3.5	70	39	1	10
81401210360	3221910722821	3.6	3.6	70	39	1	10
81401210370	3221910722838	3.7	3.7	70	39	1	10
81401210380	3221910722845	3.8	3.8	75	43	1	10
81401210390	3221910722852	3.9	3.9	75	43	1	10
81401210400	3221910722869	4	4	75	43	1	10
81401210410	3221910722876	4.1	4.1	75	43	1	10
81401210420	3221910722883	4.2	4.2	75	43	1	10
81401210425	3221910722890	4.25	4.25	75	43	1	10
81401210430	3221910722906	4.3	4.3	80	47	1	10
81401210440	3221910722913	4.4	4.4	80	47	1	10
81401210450	3221910722920	4.5	4.5	80	47	1	10
81401210460	3221910722937	4.6	4.6	80	47	1	10
81401210470	3221910722944	4.7	4.7	80	47	1	10
81401210475	3221910722951	4.75	4.75	80	47	1	10
81401210480	3221910722968	4.8	4.8	86	52	1	10
81401210490	3221910722975	4.9	4.9	86	52	1	10
81401210500	3221910722982	5	5	86	52	1	10
81401210510	3221910722999	5.1	5.1	86	52	1	10
81401210520	3221910723002	5.2	5.2	86	52	1	10
81401210525	3221910723019	5.25	5.25	86	52	1	10
81401210530	3221910723026	5.3	5.3	86	52	1	10
81401210540	3221910723033	5.4	5.4	93	57	1	10
81401210550	3221910723040	5.5	5.5	93	57	1	10
81401210560	3221910723057	5.6	5.6	93	57	1	10
81401210570	3221910723064	5.7	5.7	93	57	1	10
81401210575	3221910723071	5.75	5.75	93	57	1	10
81401210580	3221910723088	5.8	5.8	93	57	1	10
81401210590	3221910723095	5.9	5.9	93	57	1	10
81401210600	3221910723101	6	6	93	57	1	10
81401210610	3221910723118	6.1	6.1	101	63	1	10
81401210620	3221910723125	6.2	6.2	101	63	1	10
81401210625	3221910723132	6.25	6.25	101	63	1	10
81401210630	3221910723149	6.3	6.3	101	63	1	10
81401210640	3221910723156	6.4	6.4	101	63	1	10
81401210650	3221910723163	6.5	6.5	101	63	1	10
81401210660	3221910723170	6.6	6.6	101	63	1	10
81401210670	3221910723187	6.7	6.7	101	63	1	10
81401210675	3221910723194	6.75	6.75	109	69	1	10
81401210680	3221910723200	6.8	6.8	109	69	1	10

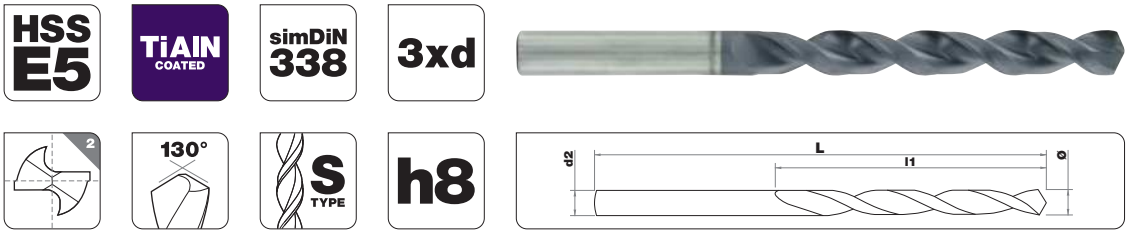


8140121	EAN	Ø	d2	L	l1	QTY	PCB
81401210690	3221910723217	6.9	6.9	109	69	1	10
81401210700	3221910723224	7	7	109	69	1	10
81401210710	3221910723231	7.1	7.1	109	69	1	10
81401210720	3221910723248	7.2	7.2	109	69	1	10
81401210725	3221910723255	7.25	7.25	109	69	1	10
81401210730	3221910723262	7.3	7.3	109	69	1	10
81401210740	3221910723279	7.4	7.4	109	69	1	10
81401210750	3221910723286	7.5	7.5	109	69	1	10
81401210760	3221910723293	7.6	7.6	117	75	1	10
81401210770	3221910723309	7.7	7.7	117	75	1	10
81401210775	3221910723316	7.75	7.75	117	75	1	10
81401210780	3221910723323	7.8	7.8	117	75	1	10
81401210790	3221910723330	7.9	7.9	117	75	1	10
81401210800	3221910723347	8	8	117	75	1	10
81401210810	3221910723354	8.1	8.1	117	75	1	5
81401210820	3221910723361	8.2	8.2	117	75	1	5
81401210825	3221910723378	8.25	8.25	117	75	1	5
81401210830	3221910723385	8.3	8.3	117	75	1	5
81401210840	3221910723392	8.4	8.4	117	75	1	5
81401210850	3221910723408	8.5	8.5	117	75	1	5
81401210860	3221910723415	8.6	8.6	125	81	1	5
81401210870	3221910723422	8.7	8.7	125	81	1	5
81401210880	3221910723446	8.8	8.8	125	81	1	5
81401210890	3221910723453	8.9	8.9	125	81	1	5
81401210900	3221910723460	9	9	125	81	1	5
81401210910	3221910723477	9.1	9.1	125	81	1	5
81401210920	3221910723484	9.2	9.2	125	81	1	5
81401210930	3221910723491	9.3	9.3	125	81	1	5
81401210940	3221910723507	9.4	9.4	125	81	1	5
81401210950	3221910723514	9.5	9.5	125	81	1	5
81401210960	3221910723521	9.6	9.6	133	87	1	5
81401210970	3221910723538	9.7	9.7	133	87	1	5
81401210980	3221910723545	9.8	9.8	133	87	1	5
81401210990	3221910723552	9.9	9.9	133	87	1	5
81401211000	3221910723569	10	10	133	87	1	5
81401211020	3221910723576	10.2	10.2	133	87	1	5
81401211025	3221910723583	10.25	10.25	133	87	1	5
81401211050	3221910723590	10.5	10.5	133	87	1	5
81401211075	3221910723606	10.75	10.75	142	94	1	5
81401211080	3221910723613	10.8	10.8	142	94	1	5
81401211100	3221910723620	11	11	142	94	1	5
81401211120	3221910723637	11.2	11.2	142	94	1	5
81401211150	3221910723644	11.5	11.5	142	94	1	5
81401211180	3221910723651	11.8	11.8	142	94	1	5
81401211200	3221910723668	12	12	151	101	1	5
81401211220	3221910723675	12.2	12.2	151	101	1	5
81401211250	3221910723682	12.5	12.5	151	101	1	5
81401211280	3221910723699	12.8	12.8	151	101	1	5
81401211300	3221910723705	13	13	151	101	1	5

PHOENIX | HSSE5 TIALN FULLY GROUND JOBBER LENGTH DRILL. TYPE S

PHOENIX | BROCA HSSE5 TIALN RECTIFICADA CILÍNDRICA SERIE CORTA. TIPO S

PHOENIX | PUNTA HSSE5 TIALN CILINDRICA CORTA. TIPO S



For deep holes. Universal application. High Performance.

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Concepita per forature polivalenti e fori profondi. Alte prestazioni .

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

J SG iron
Fundición nodular
Ghisa GS

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

8143921	EAN	Ø	d2	L	l1	QTY	PCB
81439210250	3221910784959	2.5	2.5	57	30	1	10
81439210260	3221910784966	2.6	2.6	57	30	1	10
81439210270	3221910784973	2.7	2.7	61	33	1	10
81439210280	3221910784980	2.8	2.8	61	33	1	10
81439210290	3221910784997	2.9	2.9	61	33	1	10
81439210300	3221910785000	3	3	61	33	1	10
81439210310	3221910785017	3.1	3.1	65	36	1	10
81439210320	3221910785024	3.2	3.2	65	36	1	10
81439210325	3221910785031	3.25	3.25	65	36	1	10
81439210330	3221910785048	3.3	3.3	65	36	1	10
81439210340	3221910785055	3.4	3.4	70	39	1	10
81439210350	3221910785062	3.5	3.5	70	39	1	10
81439210360	3221910785079	3.6	3.6	70	39	1	10
81439210370	3221910785086	3.7	3.7	70	39	1	10
81439210380	3221910785093	3.8	3.8	75	43	1	10
81439210390	3221910785109	3.9	3.9	75	43	1	10
81439210400	3221910785116	4	4	75	43	1	10
81439210410	3221910785123	4.1	4.1	75	43	1	10
81439210420	3221910785130	4.2	4.2	75	43	1	10
81439210425	3221910785147	4.25	4.25	75	43	1	10
81439210430	3221910785154	4.3	4.3	80	47	1	10
81439210440	3221910785161	4.4	4.4	80	47	1	10
81439210450	3221910785178	4.5	4.5	80	47	1	10
81439210460	3221910785185	4.6	4.6	80	47	1	10
81439210470	3221910785192	4.7	4.7	80	47	1	10
81439210475	3221910785208	4.75	4.75	80	47	1	10
81439210480	3221910785215	4.8	4.8	86	52	1	10
81439210490	3221910785222	4.9	4.9	86	52	1	10
81439210500	3221910785239	5	5	86	52	1	10
81439210510	3221910785246	5.1	5.1	86	52	1	10
81439210520	3221910785253	5.2	5.2	86	52	1	10
81439210525	3221910785260	5.25	5.25	86	52	1	10
81439210530	3221910785277	5.3	5.3	86	52	1	10
81439210540	3221910785284	5.4	5.4	93	57	1	10
81439210550	3221910785291	5.5	5.5	93	57	1	10
81439210560	3221910785307	5.6	5.6	93	57	1	10
81439210570	3221910785314	5.7	5.7	93	57	1	10
81439210575	3221910785321	5.75	5.75	93	57	1	10
81439210580	3221910785338	5.8	5.8	93	57	1	10
81439210590	3221910785345	5.9	5.9	93	57	1	10
81439210600	3221910785352	6	6	93	57	1	10
81439210610	3221910785369	6.1	6.1	101	63	1	10
81439210620	3221910785376	6.2	6.2	101	63	1	10
81439210625	3221910785383	6.25	6.25	101	63	1	10
81439210630	3221910785390	6.3	6.3	101	63	1	10
81439210640	3221910785406	6.4	6.4	101	63	1	10
81439210650	3221910785413	6.5	6.5	101	63	1	10
81439210660	3221910785420	6.6	6.6	101	63	1	10
81439210670	3221910785437	6.7	6.7	101	63	1	10
81439210675	3221910785444	6.75	6.75	109	69	1	10
81439210680	3221910785451	6.8	6.8	109	69	1	10

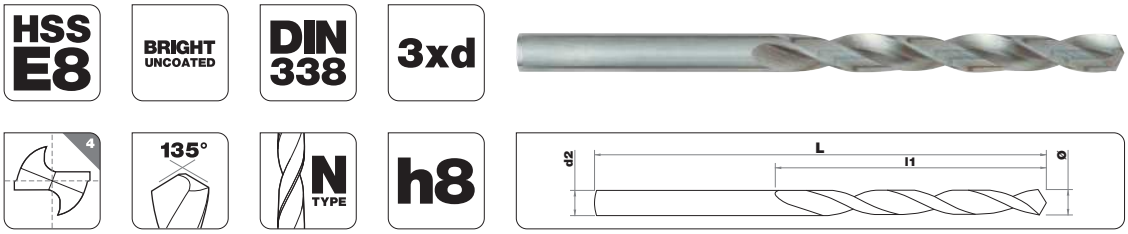


8143921	EAN	Ø	d2	L	l1	QTY	PCB
81439210690	3221910785468	6.9	6.9	109	69	1	10
81439210700	3221910785475	7	7	109	69	1	10
81439210710	3221910785482	7.1	7.1	109	69	1	10
81439210720	3221910785499	7.2	7.2	109	69	1	10
81439210725	3221910785505	7.25	7.25	109	69	1	10
81439210730	3221910785512	7.3	7.3	109	69	1	10
81439210740	3221910785529	7.4	7.4	109	69	1	10
81439210750	3221910785536	7.5	7.5	109	69	1	10
81439210760	3221910785543	7.6	7.6	117	75	1	10
81439210770	3221910785550	7.7	7.7	117	75	1	10
81439210775	3221910785567	7.75	7.75	117	75	1	10
81439210780	3221910785574	7.8	7.8	117	75	1	10
81439210790	3221910785581	7.9	7.9	117	75	1	10
81439210800	3221910785598	8	8	117	75	1	10
81439210810	3221910785604	8.1	8.1	117	75	1	5
81439210820	3221910785611	8.2	8.2	117	75	1	5
81439210825	3221910785628	8.25	8.25	117	75	1	5
81439210830	3221910785635	8.3	8.3	117	75	1	5
81439210840	3221910785642	8.4	8.4	117	75	1	5
81439210850	3221910785659	8.5	8.5	117	75	1	5
81439210860	3221910785666	8.6	8.6	125	81	1	5
81439210870	3221910785673	8.7	8.7	125	81	1	5
81439210880	3221910785680	8.8	8.8	125	81	1	5
81439210890	3221910785697	8.9	8.9	125	81	1	5
81439210900	3221910785703	9	9	125	81	1	5
81439210910	3221910785710	9.1	9.1	125	81	1	5
81439210920	3221910785727	9.2	9.2	125	81	1	5
81439210930	3221910785734	9.3	9.3	125	81	1	5
81439210940	3221910785741	9.4	9.4	125	81	1	5
81439210950	3221910785758	9.5	9.5	125	81	1	5
81439210960	3221910785765	9.6	9.6	133	87	1	5
81439210970	3221910785772	9.7	9.7	133	87	1	5
81439210980	3221910785789	9.8	9.8	133	87	1	5
81439210990	3221910785796	9.9	9.9	133	87	1	5
81439211000	3221910785802	10	10	133	87	1	5
81439211020	3221910785819	10.2	10.2	133	87	1	5
81439211025	3221910785826	10.25	10.25	133	87	1	5
81439211050	3221910785833	10.5	10.5	133	87	1	5
81439211075	3221910785840	10.75	10.75	142	94	1	5
81439211080	3221910785857	10.8	10.8	142	94	1	5
81439211100	3221910785864	11	11	142	94	1	5
81439211120	3221910785871	11.2	11.2	142	94	1	5
81439211150	3221910785888	11.5	11.5	142	94	1	5
81439211180	3221910785895	11.8	11.8	142	94	1	5
81439211200	3221910785901	12	12	151	101	1	5
81439211220	3221910785918	12.2	12.2	151	101	1	5
81439211250	3221910785925	12.5	12.5	151	101	1	5
81439211280	3221910785932	12.8	12.8	151	101	1	5
81439211300	3221910785949	13	13	151	101	1	5

LAZER | HSS-E8 (M42) FULLY GROUND JOBBER LENGTH DRILL.

LAZER | BROCA HSS-E8 (M42) RECTIFICADA CILÍNDRICA CORTA

LAZER | PUNTA HSS-E8 CILINDRICA CORTA. TIPO N | TIPO N



For Special alloys Nickel/Cobalt and titanium. High Performance.

Para aleaciones Nickel / Cobalt y Titanio. Alto rendimiento.

Foratura delle leghe nichel/cobalto e titanio. Alte prestazioni.

ARCo ARNi Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

Ti Titanium alloys
Aleaciones de titanio
Leghe di titanio

8140161	EAN	ø	d2	L	l1	QTY	PCB
81401610200	3221910402167	2	2	49	24	1	10
81401610210	3221910402174	2.1	2.1	49	24	1	10
81401610220	3221910402181	2.2	2.2	53	27	1	10
81401610225	3221910402198	2.25	2.25	53	27	1	10
81401610230	3221910402204	2.3	2.3	53	27	1	10
81401610240	3221910402211	2.4	2.4	57	30	1	10
81401610250	3221910402235	2.5	2.5	57	30	1	10
81401610260	3221910402242	2.6	2.6	57	30	1	10
81401610270	3221910402259	2.7	2.7	61	33	1	10
81401610275	3221910402266	2.75	2.75	61	33	1	10
81401610280	3221910402273	2.8	2.8	61	33	1	10
81401610290	3221910402280	2.9	2.9	61	33	1	10
81401610300	3221910402303	3	3	61	33	1	10
81401610310	3221910402310	3.1	3.1	65	36	1	10
81401610320	3221910402327	3.2	3.2	65	36	1	10
81401610325	3221910402334	3.25	3.25	65	36	1	10
81401610330	3221910402341	3.3	3.3	65	36	1	10
81401610340	3221910402358	3.4	3.4	70	39	1	10
81401610350	3221910402365	3.5	3.5	70	39	1	10
81401610360	3221910402372	3.6	3.6	70	39	1	10
81401610370	3221910402389	3.7	3.7	70	39	1	10
81401610375	3221910402396	3.75	3.75	70	39	1	10
81401610380	3221910402402	3.8	3.8	75	43	1	10
81401610390	3221910402419	3.9	3.9	75	43	1	10
81401610400	3221910402426	4	4	75	43	1	10
81401610410	3221910402433	4.1	4.1	75	43	1	10
81401610420	3221910402440	4.2	4.2	75	43	1	10
81401610425	3221910402457	4.25	4.25	75	43	1	10
81401610430	3221910402464	4.3	4.3	80	47	1	10
81401610440	3221910402471	4.4	4.4	80	47	1	10
81401610450	3221910402488	4.5	4.5	80	47	1	10
81401610460	3221910402495	4.6	4.6	80	47	1	10
81401610470	3221910402501	4.7	4.7	80	47	1	10
81401610475	3221910402518	4.75	4.75	80	47	1	10
81401610480	3221910402525	4.8	4.8	86	52	1	10
81401610490	3221910402532	4.9	4.9	86	52	1	10
81401610500	3221910402549	5	5	86	52	1	10
81401610510	3221910402556	5.1	5.1	86	52	1	10
81401610520	3221910402563	5.2	5.2	86	52	1	10
81401610525	3221910402570	5.25	5.25	86	52	1	10
81401610530	3221910402587	5.3	5.3	86	52	1	10
81401610540	3221910402594	5.4	5.4	93	57	1	10
81401610550	3221910402600	5.5	5.5	93	57	1	10
81401610560	3221910402617	5.6	5.6	93	57	1	10
81401610570	3221910402624	5.7	5.7	93	57	1	10
81401610575	3221910402631	5.75	5.75	93	57	1	10
81401610580	3221910402648	5.8	5.8	93	57	1	10
81401610590	3221910402655	5.9	5.9	93	57	1	10
81401610600	3221910402662	6	6	93	57	1	10
81401610610	3221910402679	6.1	6.1	101	63	1	10
81401610620	3221910402686	6.2	6.2	101	63	1	10
81401610625	3221910402693	6.25	6.25	101	63	1	10
81401610630	3221910402709	6.3	6.3	101	63	1	10
81401610640	3221910402723	6.4	6.4	101	63	1	10
81401610650	3221910402730	6.5	6.5	101	63	1	10
81401610660	3221910402747	6.6	6.6	101	63	1	10



8140161	EAN	Ø	d2	L	l1	QTY	PCB
81401610670	3221910402754	6.7	6.7	101	63	1	10
81401610675	3221910402761	6.75	6.75	109	69	1	10
81401610680	3221910402778	6.8	6.8	109	69	1	10
81401610690	3221910402785	6.9	6.9	109	69	1	10
81401610700	3221910402792	7	7	109	69	1	10
81401610710	3221910402808	7.1	7.1	109	69	1	10
81401610720	3221910402815	7.2	7.2	109	69	1	10
81401610725	3221910402822	7.25	7.25	109	69	1	10
81401610730	3221910402839	7.3	7.3	109	69	1	10
81401610740	3221910402846	7.4	7.4	109	69	1	10
81401610750	3221910402853	7.5	7.5	109	69	1	10
81401610760	3221910402860	7.6	7.6	117	75	1	10
81401610770	3221910402877	7.7	7.7	117	75	1	10
81401610775	3221910402884	7.75	7.75	117	75	1	10
81401610780	3221910402891	7.8	7.8	117	75	1	10
81401610790	3221910402907	7.9	7.9	117	75	1	10
81401610800	3221910402914	8	8	117	75	1	10
81401610810	3221910402921	8.1	8.1	117	75	1	5
81401610820	3221910402938	8.2	8.2	117	75	1	5
81401610825	3221910402945	8.25	8.25	117	75	1	5
81401610830	3221910402952	8.3	8.3	117	75	1	5
81401610840	3221910402969	8.4	8.4	117	75	1	5
81401610850	3221910402976	8.5	8.5	117	75	1	5
81401610860	3221910402983	8.6	8.6	125	81	1	5
81401610870	3221910402990	8.7	8.7	125	81	1	5
81401610875	3221910403003	8.75	8.75	125	81	1	5
81401610880	3221910403010	8.8	8.8	125	81	1	5
81401610890	3221910403027	8.9	8.9	125	81	1	5
81401610900	3221910403034	9	9	125	81	1	5
81401610910	3221910403041	9.1	9.1	125	81	1	5
81401610920	3221910403058	9.2	9.2	125	81	1	5
81401610925	3221910403065	9.25	9.25	125	81	1	5
81401610930	3221910403072	9.3	9.3	125	81	1	5
81401610940	3221910403089	9.4	9.4	125	81	1	5
81401610950	3221910403096	9.5	9.5	125	81	1	5
81401610960	3221910403102	9.6	9.6	133	87	1	5
81401610970	3221910403119	9.7	9.7	133	87	1	5
81401610975	3221910403126	9.75	9.75	133	87	1	5
81401610980	3221910403133	9.8	9.8	133	87	1	5
81401610990	3221910403140	9.9	9.9	133	87	1	5
81401611000	3221910403157	10	10	133	87	1	5
81401611010	3221910403164	10.1	10.1	133	87	1	5
81401611020	3221910403171	10.2	10.2	133	87	1	5
81401611025	3221910403188	10.25	10.25	133	87	1	5
81401611030	3221910403195	10.3	10.3	133	87	1	5
81401611040	3221910403201	10.4	10.4	133	87	1	5
81401611050	3221910403218	10.5	10.5	133	87	1	5
81401611060	3221910403225	10.6	10.6	133	87	1	5
81401611070	3221910403232	10.7	10.7	142	94	1	5
81401611075	3221910403249	10.75	10.75	142	94	1	5
81401611080	3221910403256	10.8	10.8	142	94	1	5
81401611090	3221910403263	10.9	10.9	142	94	1	5
81401611100	3221910403270	11	11	142	94	1	5
81401611110	3221910403287	11.1	11.1	142	94	1	5
81401611120	3221910403294	11.2	11.2	142	94	1	5
81401611125	3221910403300	11.25	11.25	142	94	1	5
81401611130	3221910403317	11.3	11.3	142	94	1	5
81401611140	3221910403324	11.4	11.4	142	94	1	5
81401611150	3221910403331	11.5	11.5	142	94	1	5
81401611160	3221910403348	11.6	11.6	142	94	1	5
81401611170	3221910403355	11.7	11.7	142	94	1	5
81401611175	3221910403362	11.75	11.75	142	94	1	5
81401611180	3221910403379	11.8	11.8	142	94	1	5
81401611190	3221910403386	11.9	11.9	151	101	1	5
81401611200	3221910403393	12	12	151	101	1	5
81401611210	3221910403409	12.1	12.1	151	101	1	5
81401611220	3221910403416	12.2	12.2	151	101	1	5
81401611225	3221910403423	12.25	12.25	151	101	1	5
81401611230	3221910403430	12.3	12.3	151	101	1	5
81401611240	3221910403447	12.4	12.4	151	101	1	5
81401611250	3221910403454	12.5	12.5	151	101	1	5
81401611260	3221910403461	12.6	12.6	151	101	1	5
81401611270	3221910403478	12.7	12.7	151	101	1	5
81401611275	3221910403485	12.75	12.75	151	101	1	5
81401611280	3221910403492	12.8	12.8	151	101	1	5
81401611300	3221910403515	13	13	151	101	1	5
81401611400	3221910403546	14	14	160	108	1	5
81401611500	3221910403584	15	15	169	114	1	5
81401611600	3221910403621	16	16	178	120	1	1

SET | E | LAZER



19 metal drills HSS-E8 Ø 1>10 mm/1/2

ESTUCHE | E | LAZER



19 brocas metal HSS-E8 Ø 1>10 mm x1/2

CASSETTA | E | LAZER

81401670015

3221912016379

QTY	PCB
19	1

ARCo ARNi Ti

19 punte HSS-E8 Ø da 1 a 10 mm in incrementi da 1/2

SET | G | LAZER



25 metal drills HSS-E8 Ø 1 >13 mm/1/2

ESTUCHE | G | LAZER



25 brocas metal HSS-E8 Ø 1 >13 mm x1/2

CASSETTA | G | LAZER

81401670017

3221912016386

QTY	PCB
25	1

ARCo ARNi Ti

25 punte HSS-E8 Ø da 1 a 13 mm in incrementi da 1/2

HSS ROLL FORGED LONG SERIES DRILL.

BROCA HSS LAMINADA CILÍNDRICA. SERIE LARGA.

PUNTA HSS LAMINATA CILINDRICA LUNGA.



Standard HSS roll forged bits - perfect for light occasional use

Producto de gama estándar ideal para uso ocasional. Broca HSS laminada.

Prodotto della gamma standard ideale per un utilizzo occasionale. Punta HSS laminata.

A

Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

9020031	EAN	Ø	d2	L	l1	QTY	PCB
90200310200	3221910819453	2	2	85	56	1	10
90200310250	3221910102401	2.5	2.5	95	62	1	10
90200310300	3221910102418	3	3	100	66	1	10
90200310320	3221910102425	3.2	3.2	106	69	1	10
90200310350	3221910102449	3.5	3.5	112	73	1	10
90200310400	3221910102456	4	4	119	78	1	10
90200310420	3221910102463	4.2	4.2	119	78	1	10
90200310450	3221910102470	4.5	4.5	126	82	1	10
90200310500	3221910102487	5	5	132	87	1	10
90200310550	3221910102500	5.5	5.5	139	91	1	10
90200310600	3221910102524	6	6	139	91	1	10
90200310650	3221910102531	6.5	6.5	148	97	1	10
90200310700	3221910819460	7	7	156	102	1	10
90200310750	3221910102562	7.5	7.5	156	102	1	10
90200310800	3221910102579	8	8	165	109	1	10
90200310850	3221910102586	8.5	8.5	165	109	1	5
90200310900	3221910102593	9	9	175	115	1	5
90200311000	3221910102616	10	10	184	121	1	5
90200311200	3221910102654	12	12	205	134	1	1



HSS FULLY GROUND LONG SERIES DRILL | T LINE

BROCA HSS RECTIFICADA CILÍNDRICA SERIE LARGA | T LINE

PUNTA HSS CILINDRICA LUNGA. TIPO N | T LINE



For steels < 700 N/mm²

Para aceros < 700 N/mm²

Foratura di acciai <700 N/mm²

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

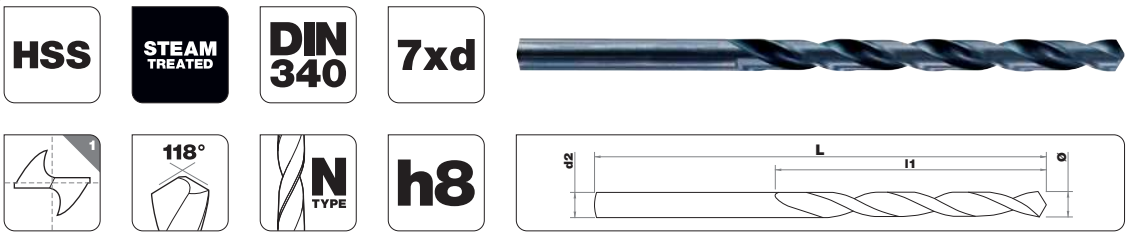
1140561	EAN	Ø	d2	L	l1	QTY	PCB
11405610100	3221912001696	1	1	56	33	1	10
11405610120	3221912001702	1.2	1.2	65	41	1	10
11405610150	3221912001719	1.5	1.5	70	45	1	10
11405610180	3221912001726	1.8	1.8	80	53	1	10
11405610200	3221912001733	2	2	85	56	1	10
11405610220	3221912001740	2.2	2.2	90	59	1	10
11405610225	3221912001757	2.25	2.25	90	59	1	10
11405610250	3221912001764	2.5	2.5	95	62	1	10
11405610275	3221912001771	2.75	2.75	100	66	1	10
11405610300	3221912001788	3	3	100	66	1	10
11405610320	3221912001795	3.2	3.2	106	69	1	10
11405610325	3221912001801	3.25	3.25	106	69	1	10
11405610330	3221912001818	3.3	3.3	106	69	1	10
11405610350	3221912001825	3.5	3.5	112	73	1	10
11405610375	3221912001832	3.75	3.75	112	73	1	10
11405610380	3221912001849	3.8	3.8	119	78	1	10
11405610400	3221912001856	4	4	119	78	1	10
11405610410	3221912001863	4.1	4.1	119	78	1	10
11405610420	3221912001870	4.2	4.2	119	78	1	10
11405610425	3221912001887	4.25	4.25	119	78	1	10
11405610450	3221912001894	4.5	4.5	126	82	1	10
11405610475	3221912001900	4.75	4.75	126	82	1	10
11405610480	3221912001917	4.8	4.8	132	87	1	10
11405610500	3221912001924	5	5	132	87	1	10
11405610520	3221912001931	5.2	5.2	132	87	1	10
11405610525	3221912001948	5.25	5.25	132	87	1	10
11405610550	3221912001955	5.5	5.5	139	91	1	10
11405610575	3221912001962	5.75	5.75	139	91	1	10
11405610580	3221912001979	5.8	5.8	139	91	1	10
11405610600	3221912001986	6	6	139	91	1	10
11405610625	3221912001993	6.25	6.25	148	97	1	10
11405610650	3221912002006	6.5	6.5	148	97	1	10
11405610675	3221912002013	6.75	6.75	156	102	1	10
11405610680	3221912002020	6.8	6.8	156	102	1	10
11405610700	3221912002037	7	7	156	102	1	10
11405610750	3221912002044	7.5	7.5	156	102	1	10
11405610800	3221912002051	8	8	165	109	1	10
11405610850	3221912002068	8.5	8.5	165	109	1	5
11405610900	3221912002075	9	9	175	115	1	5
11405610950	3221912002082	9.5	9.5	175	115	1	5
11405611000	3221912002150	10	10	184	121	1	5
11405611050	3221912002099	10.5	10.5	184	121	1	5
11405611100	3221912002105	11	11	195	128	1	5
11405611150	3221912002112	11.5	11.5	195	128	1	5
11405611200	3221912002129	12	12	205	134	1	5
11405611250	3221912002136	12.5	12.5	205	134	1	5
11405611300	3221912002143	13	13	205	134	1	5



HSS FULLY GROUND LONG SERIES DRILL.

BROCA HSS RECTIFICADA CILÍNDRICA SERIE LARGA.

PUNTA HSS CILINDRICA LUNGA. TIPO N.



For steels and cast irons. Robustness, accuracy.

Para aceros y fundiciones. Fuerza, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

1140331	EAN	ø	d2	L	l1	QTY	PCB
11403310100	3221910158002	1	1	56	33	1	10
11403310110	3221910158026	1,1	1,1	60	37	1	10
11403310120	3221910158040	1,2	1,2	65	41	1	10
11403310130	3221910158064	1,3	1,3	65	41	1	10
11403310140	3221910158088	1,4	1,4	70	45	1	10
11403310150	3221910158101	1,5	1,5	70	45	1	10
11403310160	3221910158132	1,6	1,6	76	50	1	10
11403310170	3221910158156	1,7	1,7	76	50	1	10
11403310180	3221910158170	1,8	1,8	80	53	1	10
11403310190	3221910158194	1,9	1,9	80	53	1	10
11403310200	3221910158224	2	2	85	56	1	10
11403310210	3221910158248	2,1	2,1	85	56	1	10
11403310220	3221910158262	2,2	2,2	90	59	1	10
11403310230	3221910158286	2,3	2,3	90	59	1	10
11403310240	3221910158316	2,4	2,4	95	62	1	10
11403310250	3221910158330	2,5	2,5	95	62	1	10
11403310260	3221910158354	2,6	2,6	95	62	1	10
11403310270	3221910158378	2,7	2,7	100	66	1	10
11403310280	3221910158408	2,8	2,8	100	66	1	10
11403310290	3221910158422	2,9	2,9	100	66	1	10
11403310300	3221910158446	3	3	100	66	1	10
11403310310	3221910158460	3,1	3,1	106	69	1	10
11403310320	3221910158491	3,2	3,2	106	69	1	10
11403310325	3221910158507	3,25	3,25	106	69	1	10
11403310330	3221910158514	3,3	3,3	106	69	1	10
11403310340	3221910158538	3,4	3,4	112	73	1	10
11403310350	3221910158552	3,5	3,5	112	73	1	10
11403310360	3221910158583	3,6	3,6	112	73	1	10
11403310370	3221910158606	3,7	3,7	112	73	1	10
11403310375	3221910158613	3,75	3,75	112	73	1	10
11403310380	3221910158620	3,8	3,8	119	78	1	10
11403310390	3221910158644	3,9	3,9	119	78	1	10
11403310400	3221910158675	4	4	119	78	1	10
11403310410	3221910158682	4,1	4,1	119	78	1	10
11403310420	3221910158699	4,2	4,2	119	78	1	10
11403310425	3221910158705	4,25	4,25	119	78	1	10
11403310430	3221910158712	4,3	4,3	126	82	1	10
11403310440	3221910158736	4,4	4,4	126	82	1	10
11403310450	3221910158743	4,5	4,5	126	82	1	10
11403310460	3221910158750	4,6	4,6	126	82	1	10
11403310470	3221910158767	4,7	4,7	126	82	1	10
11403310480	3221910158798	4,8	4,8	132	87	1	10
11403310490	3221910158804	4,9	4,9	132	87	1	10
11403310500	3221910158811	5	5	132	87	1	10
11403310510	3221910158828	5,1	5,1	132	87	1	10
11403310520	3221910158842	5,2	5,2	132	87	1	10
11403310525	3221910158859	5,25	5,25	132	87	1	10
11403310530	3221910158866	5,3	5,3	132	87	1	10
11403310540	3221910158873	5,4	5,4	139	91	1	10
11403310550	3221910158880	5,5	5,5	139	91	1	10
11403310560	3221910158910	5,6	5,6	139	91	1	10



1140331	EAN	Ø	d2	L	l1	QTY	PCB
11403310570	3221910158927	5,7	5,7	139	91	1	10
11403310575	3221910158934	5,75	5,75	139	91	1	10
11403310580	3221910158941	5,8	5,8	139	91	1	10
11403310590	3221910158958	5,9	5,9	139	91	1	10
11403310600	3221910158972	6	6	139	91	1	10
11403310610	3221910158989	6,1	6,1	148	97	1	10
11403310620	3221910158996	6,2	6,2	148	97	1	10
11403310625	3221910159009	6,25	6,25	148	97	1	10
11403310630	3221910159016	6,3	6,3	148	97	1	10
11403310640	3221910159030	6,4	6,4	148	97	1	10
11403310650	3221910159047	6,5	6,5	148	97	1	10
11403310660	3221910159054	6,6	6,6	148	97	1	10
11403310670	3221910159061	6,7	6,7	148	97	1	10
11403310675	3221910159078	6,75	6,75	156	102	1	10
11403310680	3221910159085	6,8	6,8	156	102	1	10
11403310690	3221910159092	6,9	6,9	156	102	1	10*
11403310700	3221910159108	7	7	156	102	1	10
11403310720	3221910159139	7,2	7,2	156	102	1	10
11403310740	3221910159160	7,4	7,4	156	102	1	10
11403310750	3221910159177	7,5	7,5	156	102	1	10
11403310760	3221910159191	7,6	7,6	165	109	1	10*
11403310780	3221910159221	7,8	7,8	165	109	1	10
11403310800	3221910159252	8	8	165	109	1	10
11403310810	3221910159269	8,1	8,1	165	109	1	5
11403310820	3221910159276	8,2	8,2	165	109	1	5
11403310825	3221910159283	8,25	8,25	165	109	1	5
11403310850	3221910159320	8,5	8,5	165	109	1	5
11403310860	3221910159337	8,6	8,6	175	115	1	5
11403310870	3221910159344	8,7	8,7	175	115	1	5*
11403310900	3221910159399	9	9	175	115	1	5
11403310910	3221910159405	9,1	9,1	175	115	1	5*
11403310950	3221910159467	9,5	9,5	175	115	1	5
11403310980	3221910159511	9,8	9,8	184	121	1	5
11403311000	3221910159542	10	10	184	121	1	5
11403311020	3221910159566	10,2	10,2	184	121	1	5
11403311025	3221910159573	10,25	10,25	184	121	1	5
11403311050	3221910159603	10,5	10,5	184	121	1	5
11403311100	3221910159641	11	11	195	128	1	5
11403311150	3221910159689	11,5	11,5	195	128	1	1
11403311180	3221910159719	11,8	11,8	195	128	1	1*
11403311200	3221910159740	12	12	205	134	1	1
11403311250	3221910159788	12,5	12,5	205	134	1	1
11403311300	3221910159825	13	13	205	134	1	1
11403311350	3221910159849	13,5	13,5	214	140	1	1*
11403311400	3221910159863	14	14	214	140	1	1
11403311450	3221910159894	14,5	14,5	220	144	1	1*
11403311500	3221910159917	15	15	220	144	1	1
11403311600	3221910159955	16	16	227	149	1	1
11403311700	3221910159993	17	17	235	154	1	1*
11403311800	3221910160036	18	18	241	158	1	1
11403311900	3221910160074	19	19	247	162	1	1*
11403312000	3221910160111	20	20	254	166	1	1

* Jusqu'à épuisement des stocks
While stocks last

HSS FULLY GROUND LONG SERIES DRILL. S TYP

BROCA HSS RECTIFICADA CILÍNDRICA. SERIE LARGA. TIPO S

PUNTA HSS CILINDRICA LUNGA. TIPO S | 1/3 2/3.



For steels < 950 N/mm². Wide dispersal of filings.

Para aceros . Gran desalojo de viruta.

Foratura di acciai <950 N/mm². Efficace rimozione dei trucioli.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

D Heat Treatable Steels <1200N/mm²
Aceros aleados y tratados < 1200N/mm²
Acciai per trattamento termico <1200N/mm²

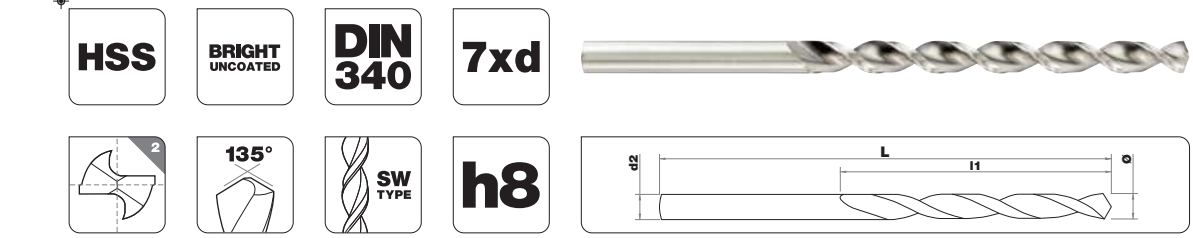
1140361	EAN	Ø	d2	L	l1	QTY	PCB
11403610200	3221910161231	2	2	85	56	1	10
11403610300	3221910161354	3	3	100	66	1	10
11403610320	3221910161378	3,2	3,2	106	69	1	10
11403610350	3221910161415	3,5	3,5	112	73	1	10
11403610400	3221910161477	4	4	119	78	1	10
11403610410	3221910161484	4,1	4,1	119	78	1	10
11403610420	3221910161491	4,2	4,2	119	78	1	10
11403610450	3221910161538	4,5	4,5	126	82	1	10
11403610500	3221910161590	5	5	132	87	1	10
11403610520	3221910161613	5,2	5,2	132	87	1	10
11403610550	3221910161651	5,5	5,5	139	91	1	10
11403610600	3221910161712	6	6	139	91	1	10
11403610650	3221910161774	6,5	6,5	148	97	1	10
11403610700	3221910161835	7	7	156	102	1	10
11403610800	3221910161958	8	8	165	109	1	10
11403610850	3221910162009	8,5	8,5	165	109	1	5
11403610900	3221910162061	9	9	175	115	1	5
11403611000	3221910162160	10	10	184	121	1	5



CUTALU | HSS FULLY GROUND LONG SERIES DRILL. SW TYPE

CUTALU | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE LARGA. TIPO S W.

CUTALU | PUNTA HSS CILINDRICA LUNGA. TIPO S/W.



For aluminium. Reduction of adhesive wear.(inserted edge).

Para aluminio. Reducción del desgaste adhesivo. (Filo recrecido).

Foratura di alluminio. Riduzione dell'usura.



Fat aluminium alloys

Aleaciones de aluminio dúctil

Leghe di alluminio grasso



Aluminium alloys Si<10%

Aleaciones de aluminio Si<10%

Leghe di alluminio grasso Si <10%

1140381	EAN	Ø	d2	L	l1	QTY	PCB
11403810100	3221910162306	1	1	56	33	1	10
11403810120	3221910162320	1,2	1,2	65	41	1	10
11403810130	3221910162344	1,3	1,3	65	41	1	10
11403810150	3221910162368	1,5	1,5	70	44	1	10
11403810200	3221910162429	2	2	85	56	1	10
11403810250	3221910162481	2,5	2,5	95	62	1	10
11403810260	3221910162498	2,6	2,6	95	62	1	10
11403810290	3221910162535	2,9	2,9	100	66	1	10
11403810300	3221910162542	3	3	100	66	1	10
11403810320	3221910162566	3,2	3,2	106	69	1	10
11403810330	3221910162580	3,3	3,3	106	69	1	10
11403810350	3221910162603	3,5	3,5	112	73	1	10
11403810400	3221910162665	4	4	119	78	1	10
11403810420	3221910162689	4,2	4,2	119	78	1	10
11403810450	3221910162726	4,5	4,5	126	82	1	10
11403810480	3221910162764	4,8	4,8	132	87	1	10
11403810500	3221910162788	5	5	132	87	1	10
11403810520	3221910162801	5,2	5,2	132	87	1	10
11403810550	3221910162849	5,5	5,5	139	91	1	10
11403810600	3221910162900	6	6	139	91	1	10
11403810620	3221910162924	6,2	6,2	148	97	1	10
11403810650	3221910162962	6,5	6,5	148	97	1	10
11403810700	3221910163020	7	7	156	102	1	10
11403810750	3221910163082	7,5	7,5	156	102	1	10
11403810800	3221910163143	8	8	165	109	1	10
11403810850	3221910163204	8,5	8,5	165	109	1	5
11403810900	3221910163259	9	9	175	115	1	5
11403811000	3221910163372	10	10	184	121	1	5



TC | HSSE5 FULLY GROUND LONG SERIES DRILL

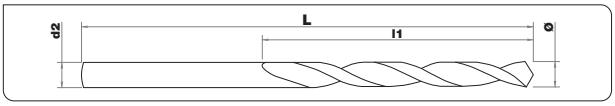
TC | BROCA HSSE5 RECTIFICADA CILÍNDRICA SERIE LARGA

TC | PUNTA HSSE5 CILINDRICA LUNGA. TIPO N

HSS E5 | GOLD TREATED | DIN 340 | 7xd



4 | 135° | N TYPE | h8



For steels and austenitic stainless steels.

Para aceros y aceros inoxidables austeníticos.

Foratura acciai e acciai inossidabili austenitici.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

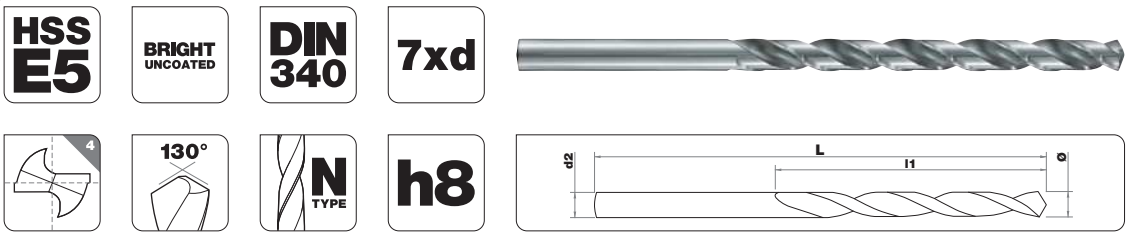
1140571	EAN	Ø	d2	L	l1	QTY	PCB
11405710250	3221912001528	2.5	2.5	95	62	1	10
11405710300	3221912001665	3	3	100	66	1	10
11405710350	3221912001535	3.5	3.5	112	73	1	10
11405710400	3221912001542	4	4	119	78	1	10
11405710450	3221912001559	4.5	4.5	126	82	1	10
11405710500	3221912001566	5	5	132	87	1	10
11405710550	3221912001573	5.5	5.5	139	91	1	10
11405710600	3221912001580	6	6	139	91	1	10
11405710650	3221912001597	6.5	6.5	148	97	1	10
11405710700	3221912001603	7	7	156	102	1	10
11405710800	3221912001610	8	8	165	109	1	10
11405710850	3221912001634	8.5	8.5	165	109	1	5
11405710900	3221912001641	9	9	175	115	1	5
11405711000	3221912001658	10	10	184	121	1	5



CUTINOX L | HSSE5 FULLY GROUND LONG SERIES DRILL

CUTINOX L | BROCA HSSE5 RECTIFICADA CILÍNDRICA. SERIE LARGA

CUTINOX L | PUNTA HSSE5 CILINDRICA LUNGA. TIPO N



For stainless steels.

Para aceros inoxidables.

Concepita per la foratura di acciai inossidabili.

F Ferrititic stainless steels
Aceros inoxidables ferríticos
acciai inossidabili ferritici

G Martensitic stainless steels
Aceros inoxidables martensíticos
acciai inossidabili martensitici

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

8140421	EAN	Ø	d2	L	l1	QTY	PCB
81404210100	3221910742942	1	1	56	33	1	10
81404210120	3221910742966	1,2	1,2	65	41	1	10
81404210125	3221910742973	1,25	1,25	65	41	1	10*
81404210130	3221910742980	1,3	1,3	70	45	1	10
81404210140	3221910742997	1,4	1,4	70	45	1	10
81404210150	3221910743000	1,5	1,5	76	50	1	10
81404210160	3221910743017	1,6	1,6	76	50	1	10
81404210170	3221910743024	1,7	1,7	80	53	1	10
81404210180	3221910743048	1,8	1,8	80	53	1	10
81404210200	3221910743062	2	2	85	56	1	10
81404210210	3221910743079	2,1	2,1	85	56	1	10*
81404210250	3221910743123	2,5	2,5	95	62	1	10
81404210270	3221910743147	2,7	2,7	100	66	1	10
81404210290	3221910743178	2,9	2,9	100	66	1	10
81404210300	3221910743185	3	3	100	66	1	10
81404210320	3221910743208	3,2	3,2	106	69	1	10
81404210325	3221910743215	3,25	3,25	106	69	1	10
81404210330	3221910743222	3,3	3,3	106	69	1	10
81404210350	3221910743239	3,5	3,5	112	73	1	10
81404210370	3221910743253	3,7	3,7	112	73	1	10
81404210380	3221910743260	3,8	3,8	119	78	1	10
81404210400	3221910743277	4	4	119	78	1	10
81404210410	3221910743284	4,1	4,1	119	78	1	10
81404210420	3221910743291	4,2	4,2	119	78	1	10
81404210430	3221910743307	4,3	4,3	126	82	1	10
81404210450	3221910743321	4,5	4,5	126	82	1	10
81404210500	3221910743369	5	5	132	87	1	10
81404210510	3221910743376	5,1	5,1	132	87	1	10
81404210520	3221910743383	5,2	5,2	132	87	1	10
81404210550	3221910743406	5,5	5,5	139	91	1	10
81404210580	3221910743444	5,8	5,8	139	91	1	10
81404210600	3221910743468	6	6	139	91	1	10
81404210650	3221910743499	6,5	6,5	148	97	1	10
81404210675	3221910743505	6,75	6,75	156	102	1	10*
81404210700	3221910743529	7	7	156	102	1	10
81404210800	3221910743574	8	8	165	109	1	10
81404210850	3221910743598	8,5	8,5	165	109	1	5
81404210900	3221910743628	9	9	175	115	1	5
81404210950	3221910743635	9,5	9,5	175	115	1	5
81404211000	3221910743659	10	10	184	121	1	5
81404211050	3221910743680	10,5	10,5	184	121	1	5
81404211200	3221910743772	12	12	205	134	1	1

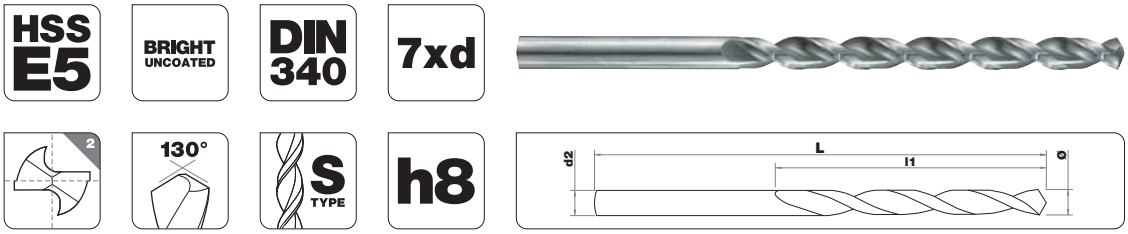


* Jusqu'à épuisement des stocks
While stocks last

PHOENIX | HSSE5 FULLY GROUND LONG SERIES DRILL. TYPE S. 1/3 2/3.

PHOENIX | BROCA HSSE5 RECTIFICADA. SERIE LARGA. TIPO S. PUNTA 1/3 2/3.

PHOENIX | PUNTA HSSE5 CILINDRICA LUNGA. TIPO S | 1/3 2/3.



For deep holes. Universal application. High Performance.

Para orificios profundos. Uso universal. Gran rendimiento.

Concepita per forature polivalenti e fori profondi. Alte prestazioni.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

J SG iron
Fundición nodular
Ghisa GS

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

8140441	EAN	Ø	d2	L	l1	QTY	PCB
81404410200	3221910745783	2	2	85	56	1	10
81404410210	3221910745790	2,1	2,1	85	56	1	10
81404410220	3221910745806	2,2	2,2	90	59	1	10
81404410230	3221910745813	2,3	2,3	90	59	1	10
81404410240	3221910745820	2,4	2,4	95	62	1	10
81404410250	3221910745837	2,5	2,5	95	62	1	10
81404410260	3221910745844	2,6	2,6	95	62	1	10
81404410270	3221910745851	2,7	2,7	100	66	1	10
81404410280	3221910745868	2,8	2,8	100	66	1	10
81404410290	3221910745875	2,9	2,9	100	66	1	10
81404410300	3221910745882	3	3	100	66	1	10
81404410310	3221910745899	3,1	3,1	106	69	1	10
81404410320	3221910745905	3,2	3,2	106	69	1	10
81404410325	3221910745912	3,25	3,25	106	69	1	10
81404410330	3221910745929	3,3	3,3	106	69	1	10
81404410340	3221910745936	3,4	3,4	112	73	1	10
81404410350	3221910745943	3,5	3,5	112	73	1	10
81404410360	3221910745950	3,6	3,6	112	73	1	10
81404410370	3221910745967	3,7	3,7	112	73	1	10
81404410375	3221910745974	3,75	3,75	112	73	1	10
81404410380	3221910745981	3,8	3,8	119	78	1	10
81404410390	3221910745998	3,9	3,9	119	78	1	10
81404410400	3221910746001	4	4	119	78	1	10
81404410410	3221910746018	4,1	4,1	119	78	1	10
81404410420	3221910746025	4,2	4,2	119	78	1	10
81404410425	3221910746032	4,25	4,25	119	78	1	10
81404410430	3221910746049	4,3	4,3	126	82	1	10
81404410440	3221910746056	4,4	4,4	126	82	1	10
81404410450	3221910746063	4,5	4,5	126	82	1	10
81404410460	3221910746070	4,6	4,6	126	82	1	10
81404410470	3221910746087	4,7	4,7	126	82	1	10
81404410480	3221910746094	4,8	4,8	132	87	1	10
81404410490	3221910746100	4,9	4,9	132	87	1	10
81404410500	3221910746117	5	5	132	87	1	10
81404410510	3221910746124	5,1	5,1	132	87	1	10
81404410520	3221910746131	5,2	5,2	132	87	1	10
81404410525	3221910746148	5,25	5,25	132	87	1	10
81404410530	3221910746155	5,3	5,3	132	87	1	10
81404410540	3221910746162	5,4	5,4	139	91	1	10
81404410550	3221910746179	5,5	5,5	139	91	1	10
81404410560	3221910746186	5,6	5,6	139	91	1	10
81404410570	3221910746193	5,7	5,7	139	91	1	10
81404410575	3221910746209	5,75	5,75	139	91	1	10
81404410580	3221910746216	5,8	5,8	139	91	1	10
81404410590	3221910746223	5,9	5,9	139	91	1	10
81404410600	3221910746230	6	6	139	91	1	10
81404410610	3221910746247	6,1	6,1	148	97	1	10
81404410620	3221910746254	6,2	6,2	148	97	1	10
81404410625	3221910746261	6,25	6,25	148	97	1	10
81404410630	3221910746278	6,3	6,3	148	97	1	10
81404410640	3221910746285	6,4	6,4	148	97	1	10



8140441	EAN	Ø	d2	L	l1	QTY	PCB
81404410650	3221910746292	6,5	6,5	148	97	1	10
81404410660	3221910746308	6,6	6,6	148	97	1	10
81404410670	3221910746315	6,7	6,7	148	97	1	10
81404410675	3221910746322	6,75	6,75	156	102	1	10
81404410680	3221910746339	6,8	6,8	156	102	1	10
81404410690	3221910746346	6,9	6,9	156	102	1	10
81404410700	3221910746353	7	7	156	102	1	10
81404410710	3221910746360	7,1	7,1	156	102	1	10
81404410720	3221910746377	7,2	7,2	156	102	1	10
81404410730	3221910746384	7,3	7,3	156	102	1	10
81404410740	3221910746391	7,4	7,4	156	102	1	10
81404410750	3221910746407	7,5	7,5	156	102	1	10
81404410760	3221910746414	7,6	7,6	165	109	1	10
81404410770	3221910746421	7,7	7,7	165	109	1	10
81404410775	3221910746438	7,75	7,75	165	109	1	10
81404410780	3221910746445	7,8	7,8	165	109	1	10
81404410790	3221910746452	7,9	7,9	165	109	1	10
81404410800	3221910746469	8	8	165	109	1	10
81404410810	3221910746476	8,1	8,1	165	109	1	5
81404410820	3221910746483	8,2	8,2	165	109	1	5
81404410830	3221910746490	8,3	8,3	165	109	1	5
81404410840	3221910746506	8,4	8,4	165	109	1	5
81404410850	3221910746513	8,5	8,5	165	109	1	5
81404410860	3221910746520	8,6	8,6	175	115	1	5
81404410870	3221910746537	8,7	8,7	175	115	1	5
81404410880	3221910746544	8,8	8,8	175	115	1	5
81404410890	3221910746551	8,9	8,9	175	115	1	5
81404410900	3221910746568	9	9	175	115	1	5
81404410910	3221910746575	9,1	9,1	175	115	1	5
81404410920	3221910746582	9,2	9,2	175	115	1	5
81404410930	3221910878917	9,3	9,3	175	115	1	5
81404410940	3221910814519	9,4	9,4	175	115	1	5
81404410950	3221910746599	9,5	9,5	175	115	1	5
81404410960	3221910746605	9,6	9,6	184	121	1	5
81404410970	3221910746612	9,7	9,7	184	121	1	5
81404410980	3221910746629	9,8	9,8	184	121	1	5
81404410990	3221910746636	9,9	9,9	184	121	1	5
81404411000	3221910746643	10	10	184	121	1	5
81404411025	3221910746650	10,25	10,25	184	121	1	5
81404411050	3221910746667	10,5	10,5	184	121	1	5
81404411075	3221910746674	10,75	10,75	195	128	1	5
81404411080	3221910746681	10,8	10,8	195	128	1	5
81404411100	3221910746698	11	11	195	128	1	5
81404411120	3221910746704	11,2	11,2	195	128	1	1
81404411150	3221910746711	11,5	11,5	195	128	1	1
81404411180	3221910746728	11,8	11,8	195	128	1	1
81404411200	3221910746735	12	12	205	134	1	1
81404411220	3221910746742	12,2	12,2	205	134	1	1
81404411225	3221910746759	12,25	12,25	205	134	1	1
81404411250	3221910746766	12,5	12,5	205	134	1	1
81404411275	3221910746773	12,75	12,75	205	134	1	1
81404411280	3221910746780	12,8	12,8	205	134	1	1
81404411300	3221910746797	13	13	205	134	1	1

LAZER | HSS-E8 [M42] FULLY GROUND LONG SERIES DRILL. SPLIT POINT.

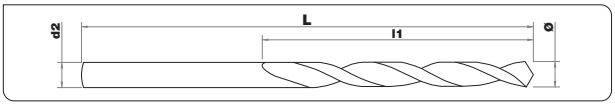
LAZER | BROCA HSS-E8 [M42] RECTIFICADA. SERIE LARGA. PUNTA EN CRUZ.

LAZER | PUNTA HSS-E8 CILINDRICA LUNGA. TIPO N | AFFILATURA A CROCE.

HSS E8 | BRIGHT UNCOATED | DIN 340 | 7xd



4 | 130° | N TYPE | h8



For Special alloys Nickel/Cobalt and titanium. High Performance.

Para aleaciones especiales Níquel/Cobalto y titanio. Gran rendimiento.

Concepita per leghe nichel/cobalto e titanio. Alte prestazioni.

ARCo ARNi

Ni / Co based special alloys

Aleaciones refractarias Co / Ni

Leghe refrattarie Co / Ni

Ti

Titanium alloys

Aleaciones de titanio

Leghe di titanio

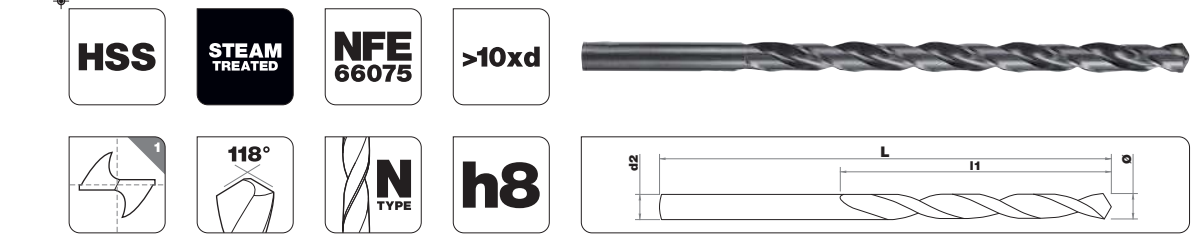
8140481	EAN	Ø	d2	L	l1	QTY	PCB
81404810200	3221910751425	2	2	85	56	1	10
81404810250	3221910751470	2,5	2,5	95	62	1	10
81404810280	3221910751500	2,8	2,8	100	66	1	10
81404810300	3221910751524	3	3	100	66	1	10
81404810320	3221910751548	3,2	3,2	106	69	1	10
81404810330	3221910751555	3,3	3,3	106	69	1	10
81404810350	3221910751579	3,5	3,5	112	73	1	10
81404810370	3221910751586	3,7	3,7	112	73	1	10
81404810400	3221910751616	4	4	119	78	1	10
81404810410	3221910751623	4,1	4,1	119	78	1	10
81404810420	3221910751630	4,2	4,2	119	78	1	10
81404810450	3221910751647	4,5	4,5	126	82	1	10
81404810470	3221910751661	4,7	4,7	126	82	1	10
81404810480	3221910751678	4,8	4,8	132	87	1	10
81404810500	3221910751692	5	5	132	87	1	10
81404810510	3221910751708	5,1	5,1	132	87	1	10
81404810550	3221910751746	5,5	5,5	139	91	1	10
81404810580	3221910751760	5,8	5,8	139	91	1	10
81404810600	3221910751784	6	6	139	91	1	10
81404810650	3221910751814	6,5	6,5	148	97	1	10
81404810680	3221910751845	6,8	6,8	156	102	1	10
81404810700	3221910751869	7	7	156	102	1	10
81404810750	3221910751890	7,5	7,5	156	102	1	10
81404810800	3221910751920	8	8	165	109	1	10
81404810820	3221910751944	8,2	8,2	165	109	1	5
81404810850	3221910751951	8,5	8,5	165	109	1	5
81404810900	3221910751999	9	9	175	115	1	5
81404810950	3221910752026	9,5	9,5	175	115	1	5
81404810980	3221910752040	9,8	9,8	184	121	1	5
81404811000	3221910752064	10	10	184	121	1	5
81404811100	3221910752095	11	11	195	128	1	10
81404811200	3221910752125	12	12	205	134	1	10
81404811250	3221910752149	12,5	12,5	205	134	1	1
81404811300	3221910752156	13	13	205	134	1	1



HSS FULLY GROUND EXTRA LONG SERIES DRILL.

BROCA HSS RECTIFICADA. SERIE EXTRALARGA.

PUNTA HSS CILINDRICA EXTRA-LUNGA.



For steels and cast irons. Robustness, accuracy.

Para Aceros y fundiciones. Robustez, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

1142061	EAN	Ø	d2	L	l1	QTY	PCB
11420610300	3221910845001	3	3	160	120	1	1
11420610350	3221910845018	3,5	3,5	160	120	1	1
11420610400	3221910845025	4	4	160	120	1	1
11420610450	3221910845032	4,5	4,5	160	120	1	1
11420610500	3221910845049	5	5	160	120	1	1
11420610550	3221910845056	5,5	5,5	160	120	1	1
11420610600	3221910845063	6	6	160	120	1	1



1142071	EAN	Ø	d2	L	l1	QTY	PCB
11420710300	3221910845070	3	3	200	150	1	1
11420710350	3221910845087	3,5	3,5	200	150	1	1
11420710400	3221910845094	4	4	200	150	1	1
11420710450	3221910845100	4,5	4,5	200	150	1	1
11420710500	3221910845117	5	5	200	150	1	1
11420710550	3221910845124	5,5	5,5	200	150	1	1
11420710600	3221910845131	6	6	200	150	1	1
11420710650	3221910845148	6,5	6,5	200	150	1	1
11420710700	3221910845155	7	7	200	150	1	1
11420710750	3221910845162	7,5	7,5	200	150	1	1
11420710800	3221910845179	8	8	200	150	1	1
11420710850	3221910845186	8,5	8,5	200	150	1	1
11420710900	3221910845193	9	9	200	150	1	1
11420710950	3221910845209	9,5	9,5	200	150	1	1
11420711000	3221910845216	10	10	200	150	1	1



1142081	EAN	Ø	d2	L	l1	QTY	PCB
11420810350	3221910845223	3,5	3,5	250	187	1	1
11420810400	3221910845230	4	4	250	187	1	1
11420810450	3221910845247	4,5	4,5	250	187	1	1
11420810500	3221910845254	5	5	250	187	1	1
11420810550	3221910845261	5,5	5,5	250	187	1	1
11420810600	3221910845278	6	6	250	187	1	1
11420810650	3221910845285	6,5	6,5	250	187	1	1
11420810700	3221910845292	7	7	250	187	1	1
11420810750	3221910845308	7,5	7,5	250	187	1	1
11420810800	3221910845315	8	8	250	187	1	1
11420810850	3221910845322	8,5	8,5	250	187	1	1
11420810900	3221910845339	9	9	250	187	1	1
11420810950	3221910845346	9,5	9,5	250	187	1	1
11420811000	3221910845353	10	10	250	187	1	1
11420811050	3221910845360	10,5	10,5	250	187	1	1
11420811100	3221910845377	11	11	250	187	1	1
11420811150	3221910845384	11,5	11,5	250	187	1	1
11420811200	3221910845391	12	12	250	187	1	1
11420811250	3221910845407	12,5	12,5	250	187	1	1
11420811300	3221910845414	13	13	250	187	1	1



1142091	EAN	Ø	d2	L	l1	QTY	PCB
11420910400	3221910845421	4	4	315	235	1	1
11420910450	3221910845438	4,5	4,5	315	235	1	1
11420910500	3221910845445	5	5	315	235	1	1
11420910550	3221910845452	5,5	5,5	315	235	1	1
11420910600	3221910845469	6	6	315	235	1	1
11420910650	3221910845476	6,5	6,5	315	235	1	1
11420910700	3221910845483	7	7	315	235	1	1
11420910750	3221910845490	7,5	7,5	315	235	1	1
11420910800	3221910845506	8	8	315	235	1	1
11420910850	3221910845513	8,5	8,5	315	235	1	1
11420910900	3221910845520	9	9	315	235	1	1
11420910950	3221910845537	9,5	9,5	315	235	1	1
11420911000	3221910845544	10	10	315	235	1	1
11420911050	3221910845551	10,5	10,5	315	235	1	1
11420911100	3221910845568	11	11	315	235	1	1
11420911150	3221910845575	11,5	11,5	315	235	1	1
11420911200	3221910845582	12	12	315	235	1	1
11420911250	3221910845599	12,5	12,5	315	235	1	1
11420911300	3221910845605	13	13	315	235	1	1



1142101	EAN	Ø	d2	L	l1	QTY	PCB
11421010500	3221910845612	5	5	400	300	1	1
11421010550	3221910845629	5,5	5,5	400	300	1	1
11421010600	3221910845636	6	6	400	300	1	1
11421010650	3221910845643	6,5	6,5	400	300	1	1
11421010700	3221910845650	7	7	400	300	1	1
11421010750	3221910845667	7,5	7,5	400	300	1	1
11421010800	3221910845674	8	8	400	300	1	1
11421010850	3221910845681	8,5	8,5	400	300	1	1
11421010900	3221910845698	9	9	400	300	1	1
11421010950	3221910845704	9,5	9,5	400	300	1	1
11421011000	3221910845711	10	10	400	300	1	1
11421011050	3221910845728	10,5	10,5	400	300	1	1
11421011100	3221910845735	11	11	400	300	1	1
11421011150	3221910845742	11,5	11,5	400	300	1	1
11421011200	3221910845759	12	12	400	300	1	1
11421011250	3221910845766	12,5	12,5	400	300	1	1
11421011300	3221910845773	13	13	400	300	1	1



PHOENIX | HSSE5 FULLY GROUND EXTRA LONG SERIES DRILL. TYPE S

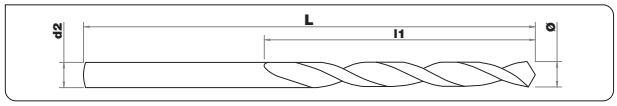
PHOENIX | BROCA HSSE5 RECTIFICADA. SERIE EXTRALARGA. TIPO S | L 125

PHOENIX | PUNTA HSSE5 CILINDRICA EXTRA-LUNGA. TIPO S

HSS E5 | BRIGHT UNCOATED | NFE 66075 | >10xd



130° | S TYPE | h8



For deep holes. Universal application. High Performance.

Para orificios profundos. Uso universal. Gran rendimiento.

Concepita per forature polivalenti e fori profondi. Alte prestazioni.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

8140671	EAN	Ø	d2	L	l1	QTY	PCB
81406710200	3221910752965	2	2	125	93	1	1
81406710210	3221910752972	2.1	2.1	125	93	1	1
81406710220	3221910752989	2.2	2.2	125	93	1	1
81406710230	3221910752996	2.3	2.3	125	93	1	1
81406710240	3221910753009	2.4	2.4	125	93	1	1
81406710250	3221910753016	2.5	2.5	125	93	1	1
81406710260	3221910753023	2.6	2.6	125	93	1	1
81406710270	3221910753030	2.7	2.7	125	93	1	1
81406710280	3221910753047	2.8	2.8	125	93	1	1
81406710290	3221910753054	2.9	2.9	125	93	1	1
81406710300	3221910753061	3	3	125	93	1	1



8140681	EAN	Ø	d2	L	l1	QTY	PCB
81406810200	3221910753078	2	2	160	120	1	1
81406810210	3221910753085	2.1	2.1	160	120	1	1
81406810220	3221910753092	2.2	2.2	160	120	1	1
81406810230	3221910753108	2.3	2.3	160	120	1	1
81406810240	3221910753115	2.4	2.4	160	120	1	1
81406810250	3221910753122	2.5	2.5	160	120	1	1
81406810260	3221910753139	2.6	2.6	160	120	1	1
81406810270	3221910753146	2.7	2.7	160	120	1	1
81406810280	3221910753153	2.8	2.8	160	120	1	1
81406810290	3221910753160	2.9	2.9	160	120	1	1
81406810300	3221910753177	3	3	160	120	1	1
81406810310	3221910753184	3.1	3.1	160	120	1	1
81406810320	3221910753191	3.2	3.2	160	120	1	1
81406810330	3221910753207	3.3	3.3	160	120	1	1
81406810340	3221910753214	3.4	3.4	160	120	1	1
81406810350	3221910753221	3.5	3.5	160	120	1	1
81406810360	3221910753238	3.6	3.6	160	120	1	1
81406810370	3221910753245	3.7	3.7	160	120	1	1
81406810380	3221910753252	3.8	3.8	160	120	1	1
81406810390	3221910753269	3.9	3.9	160	120	1	1
81406810400	3221910753276	4	4	160	120	1	1
81406810410	3221910753283	4.1	4.1	160	120	1	1
81406810420	3221910753290	4.2	4.2	160	120	1	1
81406810430	3221910753306	4.3	4.3	160	120	1	1
81406810440	3221910753313	4.4	4.4	160	120	1	1
81406810450	3221910753320	4.5	4.5	160	120	1	1
81406810460	3221910753337	4.6	4.6	160	120	1	1
81406810470	3221910753344	4.7	4.7	160	120	1	1
81406810480	3221910753351	4.8	4.8	160	120	1	1
81406810490	3221910753368	4.9	4.9	160	120	1	1
81406810500	3221910753375	5	5	160	120	1	1
81406810510	3221910753382	5.1	5.1	160	120	1	1
81406810520	3221910753399	5.2	5.2	160	120	1	1
81406810530	3221910753405	5.3	5.3	160	120	1	1
81406810540	3221910753412	5.4	5.4	160	120	1	1
81406810550	3221910753429	5.5	5.5	160	120	1	1
81406810560	3221910753436	5.6	5.6	160	120	1	1
81406810570	3221910753443	5.7	5.7	160	120	1	1
81406810580	3221910753450	5.8	5.8	160	120	1	1
81406810590	3221910753467	5.9	5.9	160	120	1	1
81406810600	3221910753474	6	6	160	120	1	1



8140691	EAN	Ø	d2	L	l1	QTY	PCB
81406910300	3221910753481	3	3	200	150	1	1
81406910310	3221910753498	3.1	3.1	200	150	1	1
81406910320	3221910753504	3.2	3.2	200	150	1	1
81406910330	3221910753511	3.3	3.3	200	150	1	1
81406910340	3221910753528	3.4	3.4	200	150	1	1
81406910350	3221910753535	3.5	3.5	200	150	1	1
81406910360	3221910753542	3.6	3.6	200	150	1	1
81406910370	3221910753559	3.7	3.7	200	150	1	1
81406910380	3221910753566	3.8	3.8	200	150	1	1
81406910390	3221910753573	3.9	3.9	200	150	1	1
81406910400	3221910753580	4	4	200	150	1	1
81406910410	3221910753597	4.1	4.1	200	150	1	1
81406910420	3221910753603	4.2	4.2	200	150	1	1
81406910430	3221910753610	4.3	4.3	200	150	1	1
81406910440	3221910753627	4.4	4.4	200	150	1	1
81406910450	3221910753634	4.5	4.5	200	150	1	1
81406910460	3221910753641	4.6	4.6	200	150	1	1
81406910470	3221910753658	4.7	4.7	200	150	1	1
81406910480	3221910753665	4.8	4.8	200	150	1	1
81406910490	3221910753672	4.9	4.9	200	150	1	1
81406910500	3221910753689	5	5	200	150	1	1
81406910510	3221910753696	5.1	5.1	200	150	1	1
81406910520	3221910753702	5.2	5.2	200	150	1	1
81406910530	3221910753719	5.3	5.3	200	150	1	1
81406910540	3221910753726	5.4	5.4	200	150	1	1
81406910550	3221910753733	5.5	5.5	200	150	1	1
81406910560	3221910753740	5.6	5.6	200	150	1	1
81406910570	3221910753757	5.7	5.7	200	150	1	1
81406910580	3221910753764	5.8	5.8	200	150	1	1
81406910590	3221910753771	5.9	5.9	200	150	1	1
81406910600	3221910753788	6	6	200	150	1	1
81406910610	3221910753795	6.1	6.1	200	150	1	1
81406910620	3221910753801	6.2	6.2	200	150	1	1
81406910630	3221910753818	6.3	6.3	200	150	1	1
81406910640	3221910753825	6.4	6.4	200	150	1	1
81406910650	3221910753832	6.5	6.5	200	150	1	1
81406910660	3221910753849	6.6	6.6	200	150	1	1
81406910670	3221910753856	6.7	6.7	200	150	1	1
81406910680	3221910753863	6.8	6.8	200	150	1	1
81406910690	3221910753870	6.9	6.9	200	150	1	1
81406910700	3221910753887	7	7	200	150	1	1
81406910710	3221910753894	7.1	7.1	200	150	1	1
81406910720	3221910753900	7.2	7.2	200	150	1	1
81406910730	3221910753917	7.3	7.3	200	150	1	1
81406910740	3221910753924	7.4	7.4	200	150	1	1
81406910750	3221910753931	7.5	7.5	200	150	1	1
81406910800	3221910753948	8	8	200	150	1	1
81406910850	3221910753955	8.5	8.5	200	150	1	1
81406910900	3221910753962	9	9	200	150	1	1
81406910950	3221910753979	9.5	9.5	200	150	1	1
81406911000	3221910753986	10	10	200	150	1	1



8140701	EAN	Ø	d2	L	l1	QTY	PCB
81407010300	3221910754013	3	3	250	187	1	1
81407010310	3221910754020	3.1	3.1	250	187	1	1
81407010320	3221910754037	3.2	3.2	250	187	1	1
81407010330	3221910754044	3.3	3.3	250	187	1	1
81407010340	3221910754051	3.4	3.4	250	187	1	1
81407010350	3221910754068	3.5	3.5	250	187	1	1
81407010360	3221910754075	3.6	3.6	250	187	1	1
81407010370	3221910754082	3.7	3.7	250	187	1	1
81407010380	3221910754099	3.8	3.8	250	187	1	1
81407010390	3221910754105	3.9	3.9	250	187	1	1
81407010400	3221910754112	4	4	250	187	1	1
81407010410	3221910754129	4.1	4.1	250	187	1	1
81407010420	3221910754136	4.2	4.2	250	187	1	1
81407010430	3221910754143	4.3	4.3	250	187	1	1
81407010440	3221910754150	4.4	4.4	250	187	1	1
81407010450	3221910754167	4.5	4.5	250	187	1	1
81407010460	3221910754174	4.6	4.6	250	187	1	1
81407010470	3221910754181	4.7	4.7	250	187	1	1
81407010480	3221910754198	4.8	4.8	250	187	1	1
81407010490	3221910754204	4.9	4.9	250	187	1	1
81407010500	3221910754211	5	5	250	187	1	1
81407010510	3221910754228	5.1	5.1	250	187	1	1
81407010520	3221910754235	5.2	5.2	250	187	1	1
81407010530	3221910754242	5.3	5.3	250	187	1	1
81407010540	3221910754259	5.4	5.4	250	187	1	1
81407010550	3221910754266	5.5	5.5	250	187	1	1
81407010560	3221910754273	5.6	5.6	250	187	1	1
81407010570	3221910754280	5.7	5.7	250	187	1	1



8140701	EAN	Ø	d2	L	l1	QTY	PCB
81407010580	3221910754297	5.8	5.8	250	187	1	1
81407010590	3221910754303	5.9	5.9	250	187	1	1
81407010600	3221910754310	6	6	250	187	1	1
81407010610	3221910754327	6.1	6.1	250	187	1	1
81407010620	3221910754334	6.2	6.2	250	187	1	1
81407010630	3221910754341	6.3	6.3	250	187	1	1
81407010640	3221910754358	6.4	6.4	250	187	1	1
81407010650	3221910754365	6.5	6.5	250	187	1	1
81407010660	3221910754372	6.6	6.6	250	187	1	1
81407010670	3221910754389	6.7	6.7	250	187	1	1
81407010680	3221910754396	6.8	6.8	250	187	1	1
81407010690	3221910754402	6.9	6.9	250	187	1	1
81407010700	3221910754419	7	7	250	187	1	1
81407010710	3221910754426	7.1	7.1	250	187	1	1
81407010720	3221910754433	7.2	7.2	250	187	1	1
81407010730	3221910754440	7.3	7.3	250	187	1	1
81407010740	3221910754457	7.4	7.4	250	187	1	1
81407010750	3221910754464	7.5	7.5	250	187	1	1
81407010800	3221910754471	8	8	250	187	1	1
81407010850	3221910754488	8.5	8.5	250	187	1	1
81407010900	3221910754495	9	9	250	187	1	1
81407010950	3221910754501	9.5	9.5	250	187	1	1
81407011000	3221910754518	10	10	250	187	1	1
81407011050	3221910754525	10.5	10.5	250	187	1	1
81407011100	3221910754532	11	11	250	187	1	1
81407011150	3221910754549	11.5	11.5	250	187	1	1
81407011200	3221910754556	12	12	250	187	1	1
81407011250	3221910754563	12.5	12.5	250	187	1	1
81407011300	3221910754570	13	13	250	187	1	1

8140711	EAN	Ø	d2	L	l1	QTY	PCB
81407110400	3221910754587	4	4	315	235	1	1
81407110410	3221910754594	4.1	4.1	315	235	1	1
81407110420	3221910754600	4.2	4.2	315	235	1	1
81407110430	3221910754617	4.3	4.3	315	235	1	1
81407110440	3221910754624	4.4	4.4	315	235	1	1
81407110450	3221910754631	4.5	4.5	315	235	1	1
81407110460	3221910754648	4.6	4.6	315	235	1	1
81407110470	3221910754655	4.7	4.7	315	235	1	1
81407110480	3221910754662	4.8	4.8	315	235	1	1
81407110490	3221910754679	4.9	4.9	315	235	1	1
81407110500	3221910754686	5	5	315	235	1	1
81407110510	3221910754693	5.1	5.1	315	235	1	1
81407110520	3221910754709	5.2	5.2	315	235	1	1
81407110530	3221910754716	5.3	5.3	315	235	1	1
81407110540	3221910754723	5.4	5.4	315	235	1	1
81407110550	3221910754730	5.5	5.5	315	235	1	1
81407110560	3221910754747	5.6	5.6	315	235	1	1
81407110570	3221910754754	5.7	5.7	315	235	1	1
81407110580	3221910754761	5.8	5.8	315	235	1	1
81407110590	3221910754778	5.9	5.9	315	235	1	1
81407110600	3221910754785	6	6	315	235	1	1
81407110610	3221910754792	6.1	6.1	315	235	1	1
81407110620	3221910754808	6.2	6.2	315	235	1	1
81407110630	3221910754815	6.3	6.3	315	235	1	1
81407110640	3221910754822	6.4	6.4	315	235	1	1
81407110650	3221910754839	6.5	6.5	315	235	1	1
81407110660	3221910754846	6.6	6.6	315	235	1	1
81407110670	3221910754853	6.7	6.7	315	235	1	1
81407110680	3221910754860	6.8	6.8	315	235	1	1
81407110690	3221910754877	6.9	6.9	315	235	1	1
81407110700	3221910754884	7	7	315	235	1	1
81407110710	3221910754891	7.1	7.1	315	235	1	1
81407110720	3221910754907	7.2	7.2	315	235	1	1
81407110730	3221910754914	7.3	7.3	315	235	1	1
81407110740	3221910754921	7.4	7.4	315	235	1	1
81407110750	3221910754938	7.5	7.5	315	235	1	1
81407110800	3221910754945	8	8	315	235	1	1
81407110850	3221910754952	8.5	8.5	315	235	1	1
81407110900	3221910754969	9	9	315	235	1	1
81407110950	3221910754976	9.5	9.5	315	235	1	1
81407111000	3221910754983	10	10	315	235	1	1
81407111050	3221910754990	10.5	10.5	315	235	1	1
81407111100	3221910755003	11	11	315	235	1	1
81407111150	3221910755010	11.5	11.5	315	235	1	1
81407111200	3221910755027	12	12	315	235	1	1
81407111250	3221910755034	12.5	12.5	315	235	1	1
81407111300	3221910755041	13	13	315	235	1	1



8140721	EAN	Ø	d2	L	l1	QTY	PCB
81407210500	3221910755058	5	5	400	300	1	1
81407210510	3221910755065	5.1	5.1	400	300	1	1
81407210520	3221910755072	5.2	5.2	400	300	1	1
81407210530	3221910755089	5.3	5.3	400	300	1	1
81407210540	3221910755096	5.4	5.4	400	300	1	1
81407210550	3221910755102	5.5	5.5	400	300	1	1
81407210560	3221910755119	5.6	5.6	400	300	1	1
81407210570	3221910755126	5.7	5.7	400	300	1	1
81407210580	3221910755133	5.8	5.8	400	300	1	1
81407210590	3221910755140	5.9	5.9	400	300	1	1
81407210600	3221910755157	6	6	400	300	1	1
81407210610	3221910755164	6.1	6.1	400	300	1	1
81407210620	3221910755171	6.2	6.2	400	300	1	1
81407210630	3221910755188	6.3	6.3	400	300	1	1
81407210640	3221910755195	6.4	6.4	400	300	1	1
81407210650	3221910755201	6.5	6.5	400	300	1	1
81407210660	3221910755218	6.6	6.6	400	300	1	1
81407210670	3221910755225	6.7	6.7	400	300	1	1
81407210680	3221910755232	6.8	6.8	400	300	1	1
81407210690	3221910755249	6.9	6.9	400	300	1	1
81407210700	3221910755256	7	7	400	300	1	1
81407210710	3221910755263	7.1	7	400	300	1	1
81407210720	3221910755270	7.2	7.2	400	300	1	1
81407210730	3221910755287	7.3	7.3	400	300	1	1
81407210740	3221910755294	7.4	7.4	400	300	1	1
81407210750	3221910755300	7.5	7.5	400	300	1	1
81407210800	3221910755317	8	8	400	300	1	1
81407210850	3221910755324	8.5	8.5	400	300	1	1
81407210900	3221910755331	9	9	400	300	1	1
81407210950	3221910755348	9.5	9.5	400	300	1	1
81407211000	3221910755355	10	10	400	300	1	1
81407211050	3221910755362	10.5	10.5	400	300	1	1
81407211100	3221910755379	11	11	400	300	1	1
81407211150	3221910755386	11.5	11.5	400	300	1	1
81407211200	3221910755393	12	12	400	300	1	1
81407211250	3221910755409	12.5	12.5	400	300	1	1
81407211300	3221910755416	13	13	400	300	1	1



8141821	EAN	Ø	d2	L	l1	QTY	PCB
81418210500	3221910763879	5	5	500	450	1	1
81418210600	3221910763886	6	6	500	450	1	1
81418210700	3221910763893	7	7	500	450	1	1
81418210800	3221910763909	8	8	500	450	1	1
81418210900	3221910763916	9	9	500	450	1	1
81418211000	3221910763923	10	10	500	450	1	1
81418211100	3221910763930	11	11	500	450	1	1
81418211200	3221910763947	12	12	500	450	1	1
81418211300	3221910763954	13	13	500	450	1	1



HSS FULLY GROUND EXTRA LONG SERIES DRILL. SPLIT POINT.

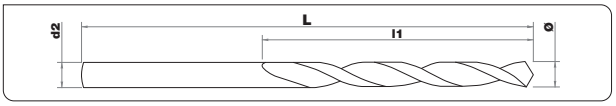
BROCA HSS RECTIFICADA. SERIE EXTRALARGA. PUNTA EN CRUZ.

PUNTA HSS CILINDRICA EXTRA-LUNGA. TIPO N | AFFILATURA A CROCE.

HSS | STEAM TREATED | TIVOLY NORM | 3xd



4 | 118° | N TYPE | h8



For boarding. Comfort. Accuracy.

Para rehundido , Confort, precisión.

Foratura di pannelli. Comfort e precisione.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

D Heat Treatable Steels <1200N/mm²
Aceros aleados y tratados < 1200N/mm²
Acciai per trattamento termico <1200N/mm²

E Heat Treatable Steels <1400N/mm²
Aceros aleados y tratados < 1400N/mm²
Acciai per trattamento termico <1400N/mm²

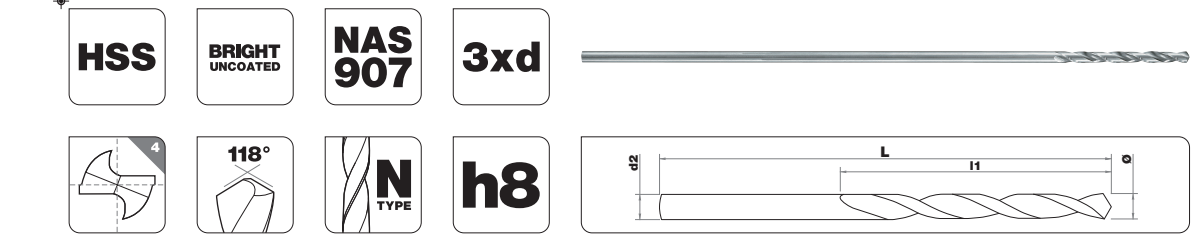
1140541	EAN	Ø	d2	L	l1	QTY	PCB
11405410400	3221910174392	4	4	150	35	1	10
11405410505	3221910174408	5,05	5,05	150	35	1	10
11405410565	3221910174439	5,65	5,65	150	35	1	10
11405410580	3221910174446	5,80	5,80	150	35	1	10
11405410595	3221910174453	5,95	5,95	150	35	1	10



AIRCRAFT | HSS FULLY GROUND EXTRA LONG SERIES DRILL

AIRCRAFT | BROCA HSS RECTIFICADA. SERIE EXTRALARGA

AIRCRAFT | PUNTA HSS CILINDRICA EXTRA-LUNGA. TIPO N



For hand drilling difficult to access structures.

Para el taladrado manual de estructuras de dificil acceso.

Concepita per la foratura manuale di strutture di difficile accesso.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

8143811	EAN	Ø	d2	L	l1	QTY	PCB
81438110200	3221910780289	2	2	306	29	1	10
81438110250	3221910780296	2,5	2,5	307	38	1	10
81438110300	3221910780302	3	3	307	43	1	10
81438110320	3221910780319	3,2	3,2	307	43	1	10
81438110326	3221910780326	3,26	3,26	307	43	1	10
81438110330	3221910780333	3,3	3,3	307	50	1	10
81438110350	3221910780340	3,5	3,5	307	56	1	10
81438110400	3221910780357	4	4	307	56	1	10
81438110410	3221910780371	4,1	4,1	307	56	1	10
81438110422	3221910780388	4,22	4,22	307	56	1	10
81438110450	3221910780395	4,5	4,5	307	60	1	10
81438110480	3221910780401	4,8	4,8	307	65	1	10
81438110500	3221910780418	5	5	308	65	1	10
81438110520	3221910780425	5,2	5,2	308	65	1	10
81438110550	3221910780432	5,5	5,5	308	70	1	10
81438110580	3221910780449	5,8	5,8	308	70	1	10
81438110600	3221910780456	6	6	308	70	1	10
81438110620	3221910780463	6,2	6,2	308	77	1	10
81438110650	3221910780470	6,5	6,5	308	77	1	10
81438110675	3221910780487	6,75	6,75	308	82	1	10
81438110780	3221910780494	7,8	7,8	308	82	1	10
81438110800	3221910780500	8	8	308	82	1	10

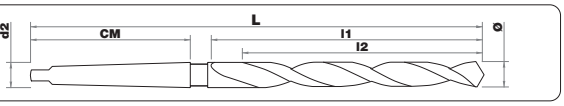


HSS ROLL FORGED JOBBER LENGTH DRILL MORSE TAPER SHANK.

BROCA HSS LAMINADA. SERIE CORTA. MANGO CÓNICO.

PUNTA HSS LAMINATA CONO MORSE.





For steels.

Para aceros en general.

Foratura acciaio comune.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²



9020061	EAN	Ø	CM	L	l1	QTY	PCB
90200610500	3221910102784	5	CM1	133	52	1	1
90200610550	3221910102814	5.5	CM1	138	57	1	1
90200610600	3221910102845	6	CM1	138	57	1	1
90200610650	3221910102876	6.5	CM1	144	63	1	1
90200610680	3221910102890	6.8	CM1	150	69	1	1
90200610700	3221910102906	7	CM1	150	69	1	1
90200610800	3221910102968	8	CM1	156	75	1	1
90200610850	3221910102999	8.5	CM1	156	75	1	1
90200610900	3221910103026	9	CM1	162	81	1	1
90200611000	3221910103088	10	CM1	168	87	1	1
90200611020	3221910103101	10.2	CM1	168	87	1	1
90200611025	3221910103118	10.25	CM1	168	87	1	1*
90200611050	3221910103125	10.5	CM1	168	87	1	1
90200611100	3221910103156	11	CM1	175	94	1	1
90200611150	3221910103187	11.5	CM1	175	94	1	1
90200611200	3221910103217	12	CM1	181	101	1	1
90200611250	3221910103248	12.5	CM1	181	101	1	1
90200611300	3221910813987	13	CM1	181	101	1	1
90200611350	3221910813994	13.5	CM1	189	108	1	1
90200611400	3221910814007	14	CM1	189	108	1	1
90200611450	3221910103361	14.5	CM2	214	114	1	1
90200611500	3221910814014	15	CM2	214	114	1	1
90200611550	3221910814021	15.5	CM2	218	120	1	1
90200611600	3221910814038	16	CM2	218	120	1	1
90200611650	3221910814045	16.5	CM2	223	125	1	1
90200611700	3221910814052	17	CM2	223	125	1	1
90200611750	3221910814069	17.5	CM2	228	130	1	1
90200611800	3221910814076	18	CM2	228	130	1	1
90200611850	3221910814083	18.5	CM2	233	135	1	1
90200611900	3221910814090	19	CM2	233	135	1	1
90200611950	3221910814106	19.5	CM2	238	140	1	1
90200612000	3221910814113	20	CM2	238	140	1	1
90200612050	3221910103644	20.5	CM2	243	145	1	1
90200612100	3221910814120	21	CM2	243	145	1	1
90200612150	3221910103682	21.5	CM2	248	150	1	1
90200612200	3221910814137	22	CM2	248	150	1	1
90200612250	3221910103729	22.5	CM2	276	155	1	1
90200612300	3221910814144	23	CM2	276	155	1	1
90200612400	3221910814151	24	CM3	281	160	1	1
90200612500	3221910814168	25	CM3	281	160	1	1
90200612550	3221910103842	25.5	CM3	286	165	1	1
90200612600	3221910814175	26	CM3	286	165	1	1
90200612650	3221910103873	26.5	CM3	286	165	1	1
90200612700	3221910814182	27	CM3	291	170	1	1
90200612750	3221910103897	27.5	CM3	291	170	1	1
90200612800	3221910814199	28	CM3	291	170	1	1
90200612850	3221910103910	28.5	CM3	296	175	1	1
90200612900	3221910814205	29	CM3	296	175	1	1
90200612950	3221910103934	29.5	CM3	296	175	1	1
90200613000	3221910814212	30	CM3	296	175	1	1
90200613050	3221910103958	30.5	CM3	301	180	1	1
90200613100	3221910814229	31	CM3	301	180	1	1
90200613150	3221910103972	31.5	CM3	301	180	1	1
90200613200	3221910814236	32	CM4	334	185	1	1
90200613300	3221910104016	33	CM4	334	185	1	1
90200613400	3221910104030	34	CM4	339	190	1	1

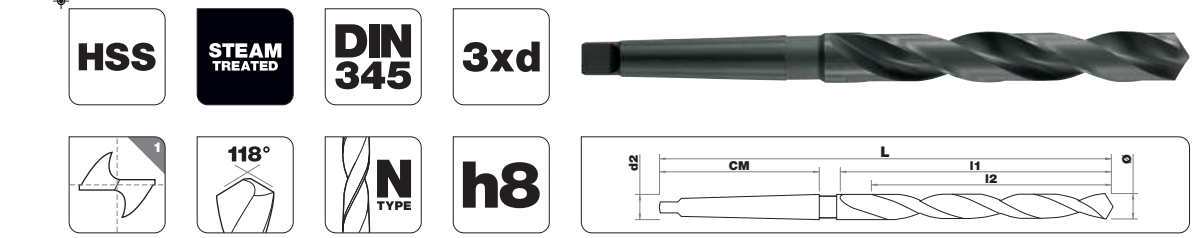
* Jusqu'à épuisement des stocks
While stocks last

9020061	EAN	Ø	CM	L	l1	QTY	PCB
90200613500	3221910104054	35	CM4	339	190	1	1
90200613600	3221910104078	36	CM4	344	195	1	1
90200613700	3221910104092	37	CM4	344	195	1	1
90200613800	3221910104115	38	CM4	349	200	1	1
90200613900	3221910104139	39	CM4	349	200	1	1
90200614000	3221910104153	40	CM4	349	200	1	1
90200614100	3221910104177	41	CM4	354	205	1	1
90200614200	3221910104191	42	CM4	354	205	1	1
90200614300	3221910104214	43	CM4	359	210	1	1
90200614400	3221910104238	44	CM4	359	210	1	1
90200614500	3221910104252	45	CM4	359	210	1	1
90200614600	3221910104276	46	CM4	364	215	1	1
90200614800	3221910104313	48	CM4	369	220	1	1
90200614900	3221910104337	49	CM4	369	220	1	1
90200615000	3221910104351	50	CM4	369	220	1	1

HSS FULLY GROUND JOBBER LENGTH DRILL MORSE TAPER SHANK | T LINE

BROCA HSS RECTIFICADA. SERIE CORTA. MANGO CÓNICO | T LINE

PUNTA HSS ATTACCO CONO MORSE CORTO | T LINE



For steels and cast irons.

Para aceros y fundiciones.

Foratura di acciai <950 N/mm² e ghise.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

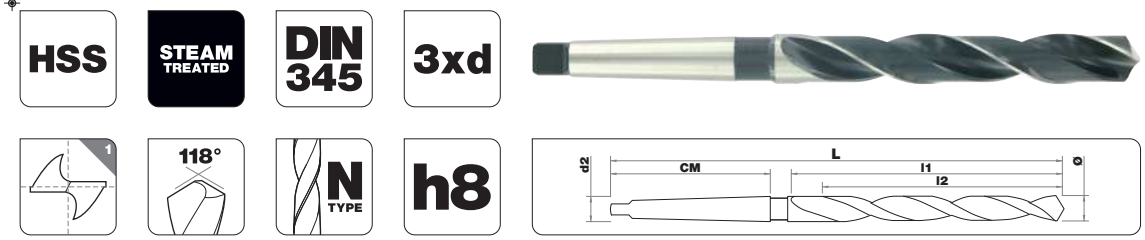
1143791	EAN	Ø	CM	L	l1	QTY	PCB
11437911000	3221910216894	10	CM1	168	87	1	1
11437911050	3221910216900	10.5	CM1	168	87	1	1
11437911100	3221910216917	11	CM1	175	94	1	1
11437911150	3221910216924	11.5	CM1	175	94	1	1
11437911200	3221910216931	12	CM1	182	101	1	1
11437911250	3221910216948	12.5	CM1	182	101	1	1
11437911300	3221910216955	13	CM1	182	101	1	1
11437911350	3221910216962	13.5	CM1	189	108	1	1
11437911400	3221910216979	14	CM1	189	108	1	1
11437911450	3221910216986	14.5	CM2	212	114	1	1
11437911500	3221910216993	15	CM2	212	114	1	1
11437911550	3221910217006	15.5	CM2	218	120	1	1
11437911600	3221910217013	16	CM2	218	120	1	1
11437911650	3221910217020	16.5	CM2	223	125	1	1
11437911700	3221910217037	17	CM2	223	125	1	1
11437911750	3221910217044	17.5	CM2	228	130	1	1
11437911800	3221910217051	18	CM2	228	130	1	1
11437911850	3221910217068	18.5	CM2	233	135	1	1
11437911900	3221910217075	19	CM2	233	135	1	1
11437911950	3221910217082	19.5	CM2	238	140	1	1
11437912000	3221910217099	20	CM2	238	140	1	1
11437912050	3221910217105	20.5	CM2	243	145	1	1
11437912100	3221910217112	21	CM2	243	145	1	1
11437912150	3221910217129	21.5	CM2	248	150	1	1
11437912200	3221910217136	22	CM2	248	150	1	1
11437912250	3221910217143	22.5	CM2	253	155	1	1
11437912300	3221910217150	23	CM2	253	155	1	1
11437912350	3221910217167	23.5	CM3	276	155	1	1
11437912400	3221910217174	24	CM3	281	160	1	1
11437912450	3221910217181	24.5	CM3	281	160	1	1
11437912500	3221910217198	25	CM3	281	160	1	1
11437912550	3221910217204	25.5	CM3	286	165	1	1
11437912600	3221910217211	26	CM3	286	165	1	1
11437912650	3221910217228	26.5	CM3	286	165	1	1
11437912700	3221910217235	27	CM3	291	170	1	1
11437912750	3221910217242	27.5	CM3	291	170	1	1
11437912800	3221910217259	28	CM3	291	170	1	1
11437912850	3221910217266	28.5	CM3	296	175	1	1
11437912900	3221910217273	29	CM3	296	175	1	1
11437912950	3221910217280	29.5	CM3	296	175	1	1
11437913000	3221910217297	30	CM3	296	175	1	1
11437913050	3221910217303	30.5	CM3	301	180	1	1
11437913100	3221910217310	31	CM3	301	180	1	1
11437913150	3221910217327	31.5	CM3	301	180	1	1
11437913200	3221910217334	32	CM4	334	185	1	1
11437913300	3221910217341	33	CM4	334	185	1	1
11437913400	3221910217358	34	CM4	339	190	1	1
11437913500	3221910217365	35	CM4	344	195	1	1
11437913600	3221910217372	36	CM4	344	195	1	1
11437913700	3221910217389	37	CM4	344	195	1	1
11437913800	3221910217396	38	CM4	349	200	1	1
11437913900	3221910217402	39	CM4	349	200	1	1
11437914000	3221910217419	40	CM4	349	200	1	1



HSS FULLY GROUND | JOBBER LENGTH DRILL | MORSE TAPER SHANK.

BROCA HSS RECTIFICADA. SERIE CORTA. MANGO CÓNICO.

PUNTA HSS ATTACCO CONO MORSE CORTO.



For steels and cast irons. Robustness, accuracy.

Para aceros y fundiciones. Robustez, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione .

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

1140981	EAN	Ø	CM	L	l1	QTY	PCB
11409810300	3221910177751	3	CM1	114	33	1	1
11409810350	3221910177799	3,5	CM1	120	39	1	1
11409810400	3221910177836	4	CM1	124	43	1	1
11409810420	3221910177850	4,2	CM1	124	43	1	1
11409810450	3221910177904	4,5	CM1	128	47	1	1
11409810500	3221910177973	5	CM1	133	52	1	1
11409810520	3221910178000	5,2	CM1	133	52	1	1*
11409810550	3221910178048	5,5	CM1	138	57	1	1
11409810600	3221910178123	6	CM1	138	57	1	1
11409810620	3221910178147	6,2	CM1	144	63	1	1*
11409810650	3221910178192	6,5	CM1	144	63	1	1
11409810670	3221910178215	6,7	CM1	144	63	1	1
11409810675	3221910178222	6,75	CM1	150	69	1	1
11409810680	3221910178239	6,8	CM1	150	69	1	1
11409810700	3221910178253	7	CM1	150	69	1	1
11409810750	3221910178321	7,5	CM1	150	69	1	1
11409810800	3221910178406	8	CM1	156	75	1	1
11409810850	3221910178475	8,5	CM1	156	75	1	1
11409810880	3221910178529	8,8	CM1	162	81	1	1*
11409810900	3221910178543	9	CM1	162	81	1	1
11409810950	3221910178611	9,5	CM1	162	81	1	1
11409810975	3221910178659	9,75	CM1	168	87	1	1
11409810980	3221910178666	9,8	CM1	168	87	1	1*
11409811000	3221910178697	10	CM1	168	87	1	1
11409811020	3221910178727	10,2	CM1	168	87	1	1
11409811025	3221910178734	10,25	CM1	168	87	1	1
11409811050	3221910178772	10,5	CM1	168	87	1	1
11409811075	3221910178819	10,75	CM1	175	94	1	1
11409811100	3221910178840	11	CM1	175	94	1	1
11409811150	3221910178918	11,5	CM1	175	94	1	1
11409811175	3221910178956	11,75	CM1	175	94	1	1
11409811200	3221910178994	12	CM1	182	101	1	1
11409811250	3221910179052	12,5	CM1	182	101	1	1
11409811270	3221910179076	12,7	CM1	182	101	1	1*
11409811275	3221910179083	12,75	CM1	182	101	1	1
11409811300	3221910179113	13	CM1	182	101	1	1
11409811325	3221910179151	13,25	CM1	189	108	1	1
11409811350	3221910179199	13,5	CM1	189	108	1	1
11409811375	3221910179229	13,75	CM1	189	108	1	1
11409811400	3221910179267	14	CM1	189	108	1	1
11409811410	3221910179274	14,1	CM2	212	114	1	1
11409811425	3221910179298	14,25	CM2	212	114	1	1
11409811450	3221910179342	14,5	CM2	212	114	1	1
11409811475	3221910179380	14,75	CM2	212	114	1	1
11409811500	3221910179410	15	CM2	212	114	1	1
11409811525	3221910179458	15,25	CM2	218	120	1	1
11409811550	3221910179496	15,5	CM2	218	120	1	1
11409811575	3221910179526	15,75	CM2	218	120	1	1
11409811600	3221910179564	16	CM2	218	120	1	1
11409811625	3221910179595	16,25	CM2	223	125	1	1
11409811650	3221910179632	16,5	CM2	223	125	1	1



* Jusqu'à épuisement des stocks
While stocks last

1140981	EAN	Ø	CM	L	l1	QTY	PCB
11409811675	3221910179670	16,75	CM2	223	125	1	1
11409811700	3221910179700	17	CM2	223	125	1	1
11409811720	3221910179731	17,2	CM2	228	130	1	1*
11409811750	3221910179786	17,5	CM2	228	130	1	1
11409811775	3221910179816	17,75	CM2	228	130	1	1
11409811800	3221910179854	18	CM2	228	130	1	1
11409811825	3221910179885	18,25	CM2	233	135	1	1
11409811850	3221910179922	18,5	CM2	233	135	1	1
11409811875	3221910179960	18,75	CM2	233	135	1	1
11409811900	3221910179991	19	CM2	233	135	1	1
11409811925	3221910180034	19,25	CM2	238	140	1	1
11409811950	3221910180072	19,5	CM2	238	140	1	1
11409811975	3221910180102	19,75	CM2	238	140	1	1
11409812000	3221910180140	20	CM2	238	140	1	1
11409812025	3221910180188	20,25	CM2	243	145	1	1
11409812050	3221910180218	20,5	CM2	243	145	1	1
11409812075	3221910180256	20,75	CM2	243	145	1	1
11409812100	3221910180287	21	CM2	243	145	1	1
11409812150	3221910180362	21,5	CM2	248	150	1	1
11409812200	3221910180430	22	CM2	248	150	1	1
11409812250	3221910180515	22,5	CM2	253	155	1	1
11409812300	3221910180584	23	CM2	253	155	1	1
11409812350	3221910180621	23,5	CM3	276	155	1	1
11409812400	3221910180652	24	CM3	281	160	1	1
11409812450	3221910180690	24,5	CM3	281	160	1	1
11409812500	3221910180720	25	CM3	281	160	1	1
11409812550	3221910180768	25,5	CM3	286	165	1	1
11409812575	3221910180775	25,75	CM3	286	165	1	1*
11409812600	3221910180782	26	CM3	286	165	1	1
11409812650	3221910180805	26,5	CM3	286	165	1	1
11409812700	3221910180836	27	CM3	291	170	1	1
11409812750	3221910180850	27,5	CM3	291	170	1	1
11409812800	3221910180881	28	CM3	291	170	1	1
11409812850	3221910180904	28,5	CM3	296	175	1	1
11409812900	3221910180935	29	CM3	296	175	1	1
11409812950	3221910180959	29,5	CM3	296	175	1	1
11409813000	3221910180980	30	CM3	296	175	1	1
11409813050	3221910181024	30,5	CM3	301	180	1	1
11409813100	3221910181048	31	CM3	301	180	1	1
11409813150	3221910181062	31,5	CM3	301	180	1	1
11409813200	3221910181086	32	CM4	334	185	1	1
11409813250	3221910181093	32,5	CM4	334	185	1	1
11409813300	3221910181116	33	CM4	334	185	1	1
11409813350	3221910181130	33,5	CM4	334	185	1	1
11409813400	3221910181147	34	CM4	339	190	1	1
11409813450	3221910181154	34,5	CM4	339	190	1	1
11409813500	3221910181185	35	CM4	339	190	1	1
11409813550	3221910181192	35,5	CM4	339	190	1	1
11409813600	3221910181215	36	CM4	344	195	1	1
11409813650	3221910181239	36,5	CM4	344	195	1	1
11409813700	3221910181253	37	CM4	344	195	1	1
11409813750	3221910181277	37,5	CM4	344	195	1	1*
11409813800	3221910181284	38	CM4	349	200	1	1
11409813850	3221910181307	38,5	CM4	349	200	1	1*
11409813900	3221910181321	39	CM4	349	200	1	1
11409813950	3221910181338	39,5	CM4	349	200	1	1*
11409814000	3221910181369	40	CM4	349	200	1	1
11409814050	3221910181383	40,5	CM4	354	205	1	1*
11409814100	3221910181390	41	CM4	354	205	1	1
11409814200	3221910181437	42	CM4	354	205	1	1
11409814300	3221910181451	43	CM4	359	210	1	1
11409814400	3221910181475	44	CM4	359	210	1	1
11409814500	3221910181512	45	CM4	359	210	1	1
11409814600	3221910181536	46	CM4	364	215	1	1
11409814700	3221910181550	47	CM4	364	215	1	1
11409814800	3221910181581	48	CM4	369	220	1	1
11409814900	3221910181604	49	CM4	369	220	1	1
11409815000	3221910181628	50	CM4	369	220	1	1
11409815100	3221910181659	51	CM5	412	225	1	1
11409815200	3221910181673	52	CM5	412	225	1	1
11409815300	3221910181697	53	CM5	412	225	1	1
11409815400	3221910181710	54	CM5	417	230	1	1
11409815500	3221910181734	55	CM5	417	230	1	1
11409815600	3221910181758	56	CM5	417	230	1	1
11409815700	3221910181772	57	CM5	422	235	1	1
11409815800	3221910181796	58	CM5	422	235	1	1
11409815900	3221910181819	59	CM5	422	235	1	1
11409816000	3221910181833	60	CM5	422	235	1	1

* Jusqu'à épuisement des stocks
While stocks last

CUTINOIX CM | HSSE5 FULLY GROUND | JOBBER LENGTH DRILL | MORSE TAPER SHANK.

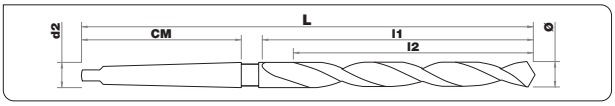
CUTINOIX CM | BROCA HSSE5 RECTIFICADA. SERIE CORTA. MANGO CÓNICO.

CUTINOIX CM | PUNTA HSSE5 ATTACCO CONO MORSE CORTO.

HSS E5 | STEAM TREATED | DIN 345 | 3xd



4 | 118° | N TYPE | h8



For stainless steels. High performance.

Para aceros inoxidables. Gran rendimiento.

Foratura acciai inossidabili .

F Ferrititic stainless steels
Aceros inoxidables ferríticos
acciai inossidabili ferritici

G Martensitic stainless steels
Aceros inoxidables martensíticos
acciai inossidabili martensitici

H Austenitic stainless steels
Aceros inoxidables austeníticos
Acciai inossidabili austenitici

1141051	EAN	Ø	CM	L	l1	QTY	PCB
11410511000	3221910184902	10	CM1	168	87	1	1
11410511050	3221910184919	10,5	CM1	168	87	1	1
11410511100	3221910184926	11	CM1	175	94	1	1
11410511150	3221910184933	11,5	CM1	175	94	1	1
11410511200	3221910184957	12	CM1	182	101	1	1
11410511250	3221910184964	12,5	CM1	182	101	1	1
11410511300	3221910184971	13	CM1	182	101	1	1
11410511350	3221910184988	13,5	CM1	189	108	1	1
11410511400	3221910184995	14	CM1	189	108	1	1
11410511450	3221910185008	14,5	CM2	212	114	1	1
11410511500	3221910185015	15	CM2	212	114	1	1
11410511550	3221910185022	15,5	CM2	218	120	1	1
11410511600	3221910185039	16	CM2	218	120	1	1
11410511650	3221910185053	16,5	CM2	223	125	1	1
11410511700	3221910185060	17	CM2	223	125	1	1
11410511750	3221910185077	17,5	CM2	228	130	1	1
11410511800	3221910185084	18	CM2	228	130	1	1
11410511850	3221910185091	18,5	CM2	233	135	1	1
11410511900	3221910185107	19	CM2	233	135	1	1
11410511950	3221910185114	19,5	CM2	238	140	1	1
11410512000	3221910185121	20	CM2	238	140	1	1
11410512050	3221910185138	20,5	CM2	243	145	1	1
11410512100	3221910185145	21	CM2	243	145	1	1
11410512150	3221910185152	21,5	CM2	248	150	1	1
11410512200	3221910185169	22	CM2	248	150	1	1
11410512250	3221910185176	22,5	CM2	253	155	1	1
11410512300	3221910185183	23	CM2	253	155	1	1
11410512350	3221910185190	23,5	CM3	276	155	1	1
11410512400	3221910185206	24	CM3	281	160	1	1
11410512450	3221910185213	24,5	CM3	281	160	1	1
11410512500	3221910185220	25	CM3	281	160	1	1
11410512550	3221910185237	25,5	CM3	286	165	1	1
11410512600	3221910185244	26	CM3	286	165	1	1
11410512650	3221910185251	26,5	CM3	286	165	1	1
11410512700	3221910185268	27	CM3	291	170	1	1
11410512750	3221910185275	27,5	CM3	291	170	1	1
11410512800	3221910185282	28	CM3	291	170	1	1
11410512850	3221910185299	28,5	CM3	296	175	1	1
11410512900	3221910185305	29	CM3	296	175	1	1
11410513000	3221910185329	30	CM3	296	175	1	1
11410513100	3221910185343	31	CM3	301	180	1	1
11410513200	3221910185350	32	CM4	334	185	1	1
11410513400	3221910185381	34	CM4	339	190	1	1
11410513500	3221910185398	35	CM4	339	190	1	1
11410513600	3221910759964	36	CM4	344	195	1	1
11410513700	3221910185411	37	CM4	344	195	1	1
11410513800	3221910759971	38	CM4	349	200	1	1
11410513900	3221910185435	39	CM4	349	200	1	1
11410514000	3221910185442	40	CM4	349	200	1	1



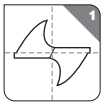
HSS FULLY GROUND | LONG SERIES | DRILL MORSE TAPER SHANK.

BROCA HSS RECTIFICADA. SERIE LARGA. MANGO CÓNICO.

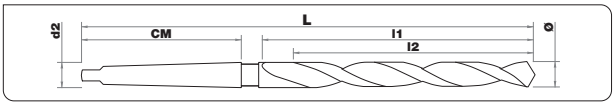
PUNTA HSS ATTACCO CONO MORSE LUNGO.

HSS | STEAM TREATED | DIN 341 | 7xd





118° | N TYPE | h8



For steels and cast irons. Robustness, accuracy.

Para aceros y fundiciones.Robustez, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C
Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H
Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ
Cast iron
Fundiciones
Ghisa

1141101	EAN	Ø	CM	L	l1	QTY	PCB
11411010700	3221910187132	7	CM1	174	93	1	1
11411010750	3221910187149	7,5	CM1	174	93	1	1
11411010800	3221910187156	8	CM1	181	100	1	1
11411010850	3221910187187	8,5	CM1	181	100	1	1
11411010900	3221910187217	9	CM1	188	107	1	1
11411010950	3221910187248	9,5	CM1	188	107	1	1
11411011000	3221910187279	10	CM1	197	116	1	1
11411011020	3221910187293	10,2	CM1	197	116	1	1
11411011050	3221910187316	10,5	CM1	197	116	1	1
11411011100	3221910187347	11	CM1	206	125	1	1
11411011150	3221910187378	11,5	CM1	206	125	1	1
11411011180	3221910187392	11,8	CM1	206	125	1	1
11411011200	3221910187408	12	CM1	215	134	1	1
11411011250	3221910187446	12,5	CM1	215	134	1	1
11411011300	3221910187484	13	CM1	215	134	1	1
11411011350	3221910187514	13,5	CM1	223	142	1	1
11411011400	3221910187545	14	CM1	223	142	1	1
11411011450	3221910187569	14,5	CM2	245	147	1	1
11411011500	3221910187583	15	CM2	245	147	1	1
11411011525	3221910187613	15,25	CM2	251	153	1	1
11411011550	3221910187620	15,5	CM2	251	153	1	1
11411011600	3221910187644	16	CM2	251	153	1	1
11411011625	3221910187651	16,25	CM2	257	159	1	1*
11411011650	3221910187668	16,5	CM2	257	159	1	1
11411011700	3221910187682	17	CM2	257	159	1	1
11411011750	3221910187705	17,5	CM2	263	165	1	1
11411011800	3221910187729	18	CM2	263	165	1	1
11411011850	3221910187743	18,5	CM2	269	171	1	1
11411011900	3221910187767	19	CM2	269	171	1	1
11411011950	3221910187798	19,5	CM2	275	177	1	1
11411012000	3221910187811	20	CM2	275	177	1	1
11411012050	3221910187835	20,5	CM2	282	184	1	1
11411012100	3221910187859	21	CM2	282	184	1	1
11411012150	3221910187873	21,5	CM2	289	191	1	1
11411012200	3221910187897	22	CM2	289	191	1	1
11411012250	3221910187910	22,5	CM2	296	198	1	1
11411012300	3221910187934	23	CM2	296	198	1	1
11411012350	3221910187941	23,5	CM3	319	198	1	1
11411012400	3221910187958	24	CM3	327	206	1	1
11411012450	3221910187965	24,5	CM3	327	206	1	1
11411012500	3221910187972	25	CM3	327	206	1	1
11411012550	3221910187989	25,5	CM3	335	214	1	1
11411012600	3221910187996	26	CM3	335	214	1	1
11411012650	3221910188009	26,5	CM3	335	214	1	1
11411012700	3221910188016	27	CM3	343	222	1	1
11411012750	3221910188023	27,5	CM3	343	222	1	1
11411012800	3221910188030	28	CM3	343	222	1	1
11411012850	3221910188047	28,5	CM3	351	230	1	1
11411012900	3221910188054	29	CM3	351	230	1	1
11411012950	3221910188061	29,5	CM3	351	230	1	1
11411013000	3221910188078	30	CM3	351	230	1	1



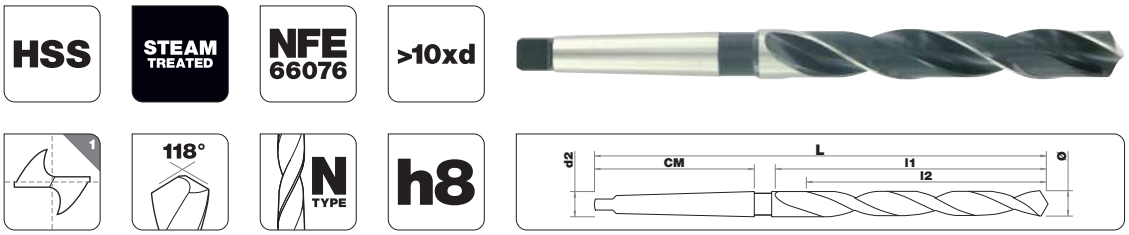
* Jusqu'à épuisement des stocks
While stocks last

1141101	EAN	Ø	CM	L	l1	QTY	PCB
11411013050	3221910188085	30,5	CM3	360	239	1	1
11411013100	3221910188092	31	CM3	360	239	1	1
11411013150	3221910188108	31,5	CM3	360	239	1	1
11411013200	3221910188115	32	CM4	397	248	1	1
11411013300	3221910188139	33	CM4	397	248	1	1
11411013400	3221910188153	34	CM4	406	257	1	1
11411013500	3221910188177	35	CM4	406	257	1	1
11411013600	3221910188191	36	CM4	416	267	1	1
11411013700	3221910188214	37	CM4	416	267	1	1
11411013800	3221910188238	38	CM4	426	277	1	1
11411013900	3221910188252	39	CM4	426	277	1	1
11411014000	3221910188276	40	CM4	426	277	1	1

HSS FULLY GROUND EXTRA LONG SERIES DRILL MORSE TAPER SHANK | L 315 & 400

BROCA HSS RECTIFICADA. SERIE EXTRALARGA. MANGO CÓNICO | L 315 & 400

PUNTA HSS ATTACCO CONO MORSE EXTRA-LUNGA | L 315 & 400



For steels and cast irons. Robustness, accuracy.

Para aceros y fundiciones.Robustez, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

1142041	EAN	Ø	CM	L	l1	QTY	PCB
11420410600	3221910190897	6	CM1	315	235	1	1*
11420410800	3221910190934	8	CM1	315	235	1	1
11420411000	3221910190972	10	CM1	315	235	1	1
11420411050	3221910190989	10,5	CM1	315	235	1	1
11420411100	3221910190996	11	CM1	315	235	1	1
11420411150	3221910191009	11,5	CM1	315	235	1	1
11420411200	3221910191016	12	CM2	315	215	1	1
11420411250	3221910191023	12,5	CM2	315	215	1	1
11420411300	3221910191030	13	CM2	315	215	1	1
11420411350	3221910191047	13,5	CM2	315	215	1	1
11420411400	3221910191054	14	CM2	315	215	1	1
11420411450	3221910191061	14,5	CM2	315	215	1	1
11420411500	3221910191078	15	CM2	315	215	1	1
11420411550	3221910191092	15,5	CM2	315	215	1	1
11420411600	3221910191108	16	CM2	315	215	1	1
11420411650	3221910191115	16,5	CM2	315	215	1	1
11420411700	3221910191122	17	CM2	315	215	1	1
11420411750	3221910191139	17,5	CM2	315	215	1	1
11420411800	3221910191146	18	CM2	315	215	1	1
11420411850	3221910191153	18,5	CM2	315	215	1	1
11420411900	3221910191160	19	CM2	315	215	1	1
11420411950	3221910191177	19,5	CM2	315	215	1	1
11420412000	3221910191184	20	CM2	315	215	1	1
11420412050	3221910191191	20,5	CM2	315	215	1	1
11420412100	3221910191207	21	CM2	315	215	1	1
11420412150	3221910191214	21,5	CM2	315	215	1	1
11420412200	3221910191221	22	CM2	315	215	1	1
11420412250	3221910191238	22,5	CM2	315	215	1	1*
11420412300	3221910191245	23	CM2	315	215	1	1



* Jusqu'à épuisement des stocks
While stocks last

1142051	EAN	Ø	CM	L	l1	QTY	PCB
11420511000	3221910191252	10	CM1	400	300	1	1
11420511050	3221910191269	10,5	CM1	400	300	1	1
11420511100	3221910191276	11	CM1	400	300	1	1
11420511150	3221910191283	11,5	CM1	400	300	1	1
11420511200	3221910191290	12	CM2	400	300	1	1
11420511250	3221910191306	12,5	CM2	400	300	1	1
11420511300	3221910191313	13	CM2	400	300	1	1
11420511350	3221910191320	13,5	CM2	400	300	1	1
11420511400	3221910191337	14	CM2	400	300	1	1
11420511450	3221910191344	14,5	CM2	400	300	1	1
11420511500	3221910191351	15	CM2	400	300	1	1
11420511550	3221910191368	15,5	CM2	400	300	1	1
11420511600	3221910191375	16	CM2	400	300	1	1
11420511650	3221910191382	16,5	CM2	400	300	1	1
11420511700	3221910191399	17	CM2	400	300	1	1
11420511750	3221910191405	17,5	CM2	400	300	1	1
11420511800	3221910191412	18	CM2	400	300	1	1
11420511850	3221910191429	18,5	CM2	400	300	1	1
11420511900	3221910191436	19	CM2	400	300	1	1
11420511950	3221910191443	19,5	CM2	400	300	1	1*
11420512000	3221910191450	20	CM2	400	300	1	1
11420512050	3221910191467	20,5	CM2	400	300	1	1
11420512100	3221910191474	21	CM2	400	300	1	1
11420512150	3221910191481	21,5	CM2	400	300	1	1
11420512200	3221910191498	22	CM2	400	300	1	1
11420512250	3221910191504	22,5	CM2	400	300	1	1*
11420512300	3221910191511	23	CM2	400	300	1	1
11420512400	3221910191528	24	CM3	400	300	1	1
11420512500	3221910191535	25	CM3	400	275	1	1
11420512600	3221910191542	26	CM3	400	275	1	1
11420512700	3221910191559	27	CM3	400	275	1	1
11420512800	3221910191566	28	CM3	400	275	1	1
11420512900	3221910191573	29	CM3	400	275	1	1
11420513000	3221910191580	30	CM3	400	275	1	1
11420513100	3221910191597	31	CM3	400	275	1	1



* Jusqu'à épuisement des stocks
While stocks last

TEMPERED ADAPTER.

CASQUILLO DE REDUCCIÓN TEMPLADO.

BUSSOLA DI RIDUZIONE TEMPERATA.

DIN 2185



Rectified interior and exterior cones.

Conos interiores y exteriores rectificados.

Coni interni ed esterni rettificati.

1110341	EAN	CE	CI	L	QTY	PCB
11103410201	3221910520458	2	1	92	1	1
11103410301	3221910520472	3	1	99	1	1
11103410302	3221910520489	3	2	112	1	1
11103410402	3221910520526	4	2	124	1	1
11103410403	3221910520533	4	3	140	1	1
11103410504	3221910520571	5	4	171	1	1



TEMPERED ELONGATED ADAPTER.

CASQUILLO DE REDUCCIÓN LARGO TEMPLADO.

BUSSOLA DI RIDUZIONE ALLUNGATA TEMPERATA.

DIN 2187



Rectified interior and exterior cones.

Conos interiores y exteriores rectificados.

Coni interni ed esterni rettificati.

1110361	EAN	CE	CI	L	QTY	PCB
11103610201	3221910521028	2	1	160	1	1
11103610202	3221910521035	2	2	175	1	1
11103610203	3221910521042	2	3	196	1	1
11103610302	3221910521073	3	2	194	1	1
11103610304	3221910521097	3	4	240	1	1
11103610405	3221910521141	4	5	300	1	1



CONE PUNCH.

EXTRACTOR DE CONOS.

CACCIA CONI.

TIVOLY NORM



1110371	EAN	CM	QTY	PCB
11103710102	3221910521707	1/2	1	1
11103710203	3221910521714	2/3	1	1
11103710304	3221910521721	3/4	1	1



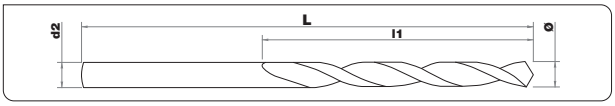
HSSE5 90° SPOTTING DRILL.

BROCA HSSE5 PARA PUNTEAR 90°.

PUNTA HSSE5 A CENTRARE 90°.

HSS E5 | BRIGHT UNCOATED | NF 66052 | 1xd | 90° | h8





For spotting, deburring, countersink.

Para puntear, desbastar, avellanar.

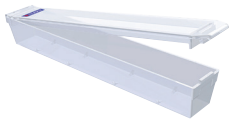
Per preforatura, sbavatura, svasatura.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

8140891	EAN	Ø	d2	L	l1	QTY	PCB
81408910300	3221910757458	3	3	50	10	1	1
81408910400	3221910757465	4	4	52	12	1	1
81408910500	3221910757472	5	5	60	15	1	1
81408910600	3221910757489	6	6	66	20	1	1
81408910800	3221910757496	8	8	79	25	1	1
81408911000	3221910757502	10	10	89	25	1	1
81408911200	3221910757519	12	12	102	30	1	1
81408911600	3221910757526	16	16	115	35	1	1
81408912000	3221910757533	20	20	131	40	1	1
81408912500	3221910757540	25	25	138	45	1	1



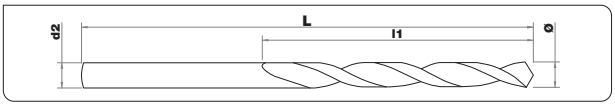
HSSE5 120° SPOTTING DRILL

BROCA HSSE5 PARA PUNTEAR 120°.

PUNTA HSSE5 A CENTRARE 120°.

HSS E5 | BRIGHT UNCOATED | NF 66052 | 1xd | 120° | h8





For spotting, deburring, countersink.

Para puntear, desbastar, avellanar.

Per preforatura, sbavatura, svasatura.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

8140911	EAN	Ø	d2	L	l1	QTY	PCB
81409110300	3221910757908	3	3	50	10	1	1
81409110400	3221910757915	4	4	52	12	1	1
81409110500	3221910757922	5	5	60	15	1	1
81409110600	3221910757939	6	6	66	20	1	1
81409110800	3221910757946	8	8	79	25	1	1
81409111000	3221910757953	10	10	89	25	1	1
81409111200	3221910757960	12	12	102	30	1	1
81409111600	3221910757977	16	16	115	35	1	1
81409112000	3221910757984	20	20	131	40	1	1
81409112500	3221910757991	25	25	138	45	1	1



60° CENTER DRILL | A FORM.

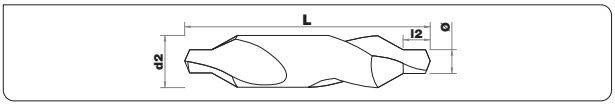
BROCA DE CENTRAR 60°.

PUNTA HSS A CENTRARE 60° FORMA A.

HSS | BRIGHT UNCOATED | DIN 333A | 60°



A FORM | h8



To center.

Para centrar forma A.

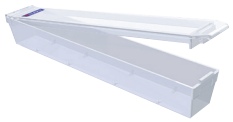
Per centraggio forma A.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

8140811	EAN	Ø	d2	L	QTY	PCB
8140811050315	3221910479763	3.15	0.5	25	1	1
8140811063315	3221910479770	3.15	0.63	25	1	1
8140811080315	3221910479794	3.15	0.8	25	1	1
8140811100315	3221910479831	3.15	1	31	1	1
8140811125315	3221910479893	3.15	1.25	31	1	1
8140811100400	3221910479848	4	1	35	1	1
8140811160400	3221910479923	4	1.6	35	1	1
8140811150500	3221910479916	5	1.5	40	1	1
8140811200500	3221910479947	5	2	40	1	1
8140811200600	3221910479954	6	2	45	1	1
8140811250630	3221910479978	6.3	2.5	45	1	1
8140811250800	3221910480004	8	2.5	50	1	1
8140811300800	3221910480035	8	3	50	1	1
8140811315800	3221910480042	8	3.15	50	1	1
8140811300100	3221910480011	10	3	55	1	1
8140811400100	3221910480059	10	4	55	1	1
8140811400120	3221910480103	12	4	63	1	1
8140811500120	3221910480189	12	5	63	1	1
8140811500125	3221910480202	12.5	5	63	1	1
8140811500140	3221910480219	14	5	71	1	1
8140811630160	3221910480264	16	6.3	71	1	1
8140811600180	3221910480257	18	6	80	1	1
8140811800200	3221910480271	20	8	80	1	1



60°-120° CENTER DRILL. B FORM.

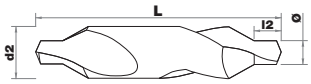
BROCA PARA CENTRAR 60°-120° FORMA B

PUNTA HSS A CENTRARE 60°-120° FORMA B

HSS | BRIGHT UNCOATED | DIN 333B | 60° 120°



B FORM | h8



For centering.

Para centrar.

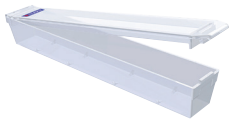
Per centraggio .

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

8140821	EAN	Ø	d2	L	l1	QTY	PCB
8140821100040	3221910756109	4	1	25	0.8	1	1
8140821125050	3221910756130	5	1.25	25	1.1	1	1
8140821100060	3221910756116	6	1	25	0.9	1	1
8140821160063	3221910756161	6.3	1.6	35	1.3	1	1
8140821150080	3221910756147	8	1.5	31	1.3	1	1
8140821200080	3221910756178	8	2	31	1.6	1	1
8140821200100	3221910756185	10	2	40	2	1	1
8140821250100	3221910756192	10	2.5	35	2	1	1
8140821315112	3221910756239	11.2	3.15	45	3.1	1	1
8140821250120	3221910756208	12	2.5	40	2.5	1	1
8140821300140	3221910756222	14	3	45	2.5	1	1
8140821400140	3221910756246	14	4	50	3.1	1	1
8140821400180	3221910756253	18	4	50	3.9	1	1
8140821500180	3221910756260	18	5	55	3.9	1	1
8140821630200	3221910756284	20	6.3	50	3.9	1	1



RADIUS CENTER DRILL. R FORM.

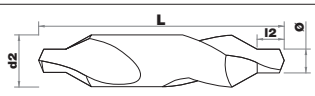
BROCA DE CENTRAR CON RADIO. FORMA R.

PUNTA HSS A CENTRARE CON RAGGIO FORMA R.

HSS | BRIGHT UNCOATED | DIN 333R | α



R FORM | h8



For centering.

Para centrar.

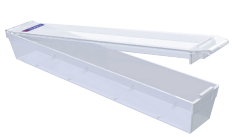
Per centraggio.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

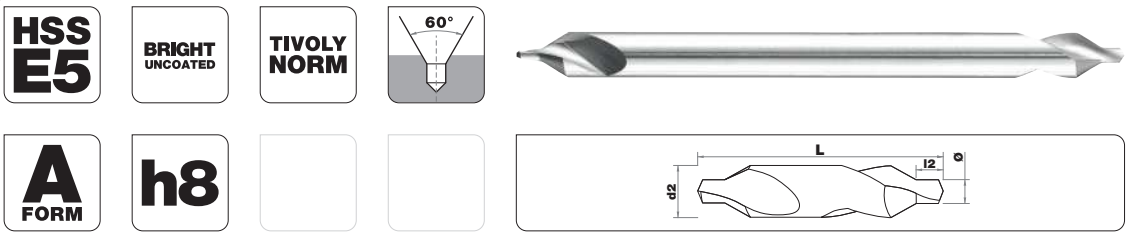
8140831	EAN	Ø	d2	L	l1	QTY	PCB
8140831050315	3221910756536	3.15	0.5	25	2.3	1	1
8140831080315	3221910756543	3.15	0.8	25	2.6	1	1
8140831100315	3221910756567	3.15	1	31	3	1	1
8140831125315	3221910756574	3.15	1.25	31	3.3	1	1
8140831160400	3221910756581	4	1.6	35	4.2	1	1
8140831200500	3221910756598	5	2	40	5	1	1
8140831250630	3221910756604	6.3	2.5	45	6.3	1	1
8140831315800	3221910756611	8	3.15	50	8	1	1
81408314001000	3221910756628	10	4	55	10	1	1
81408315001250	3221910756635	12.5	5	63	12.5	1	1
81408316301600	3221910756642	16	6.3	71	16	1	1



60° CENTER DRILL. A FORM. LONG SERIES L 60 | 80 | 100 | 120 MM.

BROCA DE CENTRAR. FORMA A. SERIE LARGA. L 60 | 80 | 100 | 120.

PUNTA HSSE55 A CENTRARE 60° LUNGA | FORMA A (L 60 | 80 | 100 | 120 MM).



For centering.

Para centrar.

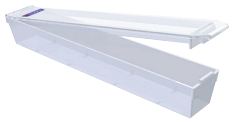
Per centraggio.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

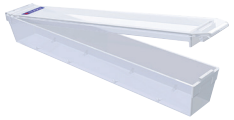
8140841	EAN	Ø	d2	L	l1	QTY	PCB
8140841075350	3221910481179	3.5	0.75	60	1	1	1
8140841100400	3221910481186	4	1	60	1.3	1	1
8140841150500	3221910481193	5	1.5	60	2	1	1



8140851	EAN	Ø	d2	L	l1	QTY	PCB
8140851200600	3221910481360	6	2	80	2.5	1	1
8140851250800	3221910481384	8	2.5	80	3.1	1	1
8140851300800	3221910481391	8	3	80	3.9	1	1

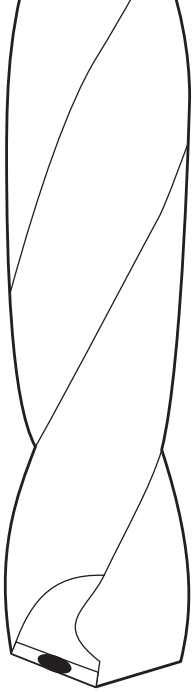


8140861	EAN	Ø	d2	L	l1	QTY	PCB
8140861300100	3221910481537	10	3	100	3.9	1	1
8140861400100	3221910481544	10	4	100	5	1	1
8140861400120	3221910481551	12	4	100	5	1	1



8140871	EAN	Ø	d2	L	l1	QTY	PCB
8140871100400	3221910756833	4	1	120	1.3	1	1
8140871150500	3221910756840	5	1.5	120	2	1	1
8140871200600	3221910756857	6	2	120	2.5	1	1
8140871250800	3221910756864	8	2.5	120	3.1	1	1
8140871300800	3221910756888	8	3	120	3.9	1	1
8140871500140	3221910756918	14	5	120	3.9	1	1
81408713001000	3221910756871	10	3	120	5	1	1
81408714001000	3221910756895	10	4	120	5	1	1
81408714001200	3221910756901	12	4	120	6.3	1	1

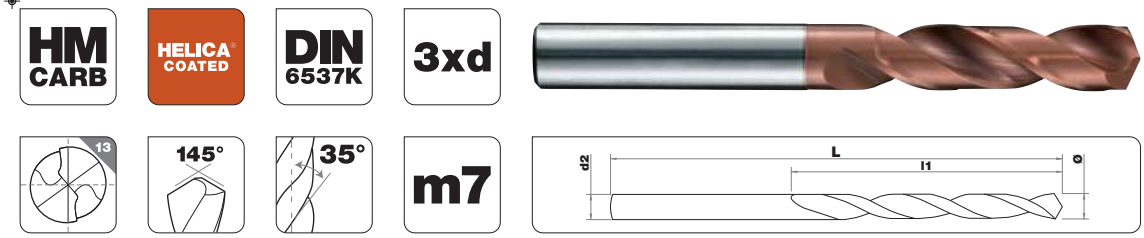




SIRIUS | SOLID CARBIDE DRILL HELICA© | 3XD WITHOUT COOLANT FEED.

SIRIUS | BROCA METAL DURO HELICA© | 3XD SIN REFRIGERACIÓN INTERNA.

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AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

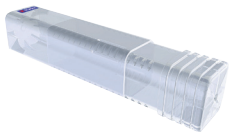
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

F Ferrititic stainless steels
Aceros inoxidables ferríticos
acciai inossidabili ferritici

IJ Cast iron
Fundiciones
Ghisa

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8242101	EAN	Ø	d2	L	l1	QTY	PCB
82421010300	3221910868499	3	6	62	20	1	1
82421010310	3221910868505	3.1	6	62	20	1	1
82421010320	3221910868512	3.2	6	62	20	1	1
82421010330	3221910868529	3.3	6	62	20	1	1
82421010340	3221910868536	3.4	6	62	20	1	1
82421010350	3221910868543	3.5	6	62	20	1	1
82421010360	3221910868550	3.6	6	62	20	1	1
82421010370	3221910868567	3.7	6	62	20	1	1
82421010380	3221910868574	3.8	6	66	24	1	1
82421010390	3221910868581	3.9	6	66	24	1	1
82421010400	3221910868598	4	6	66	24	1	1
82421010410	3221910868604	4.1	6	66	24	1	1
82421010420	3221910868611	4.2	6	66	24	1	1
82421010430	3221910868628	4.3	6	66	24	1	1
82421010440	3221910868635	4.4	6	66	24	1	1
82421010450	3221910868642	4.5	6	66	24	1	1
82421010460	3221910868659	4.6	6	66	24	1	1
82421010465	3221910868666	4.65	6	66	24	1	1
82421010470	3221910868673	4.7	6	66	24	1	1
82421010480	3221910868680	4.8	6	66	28	1	1
82421010490	3221910868697	4.9	6	66	28	1	1
82421010500	3221910868703	5	6	66	28	1	1
82421010510	3221910868710	5.1	6	66	28	1	1
82421010520	3221910868727	5.2	6	66	28	1	1
82421010530	3221910868734	5.3	6	66	28	1	1
82421010540	3221910868741	5.4	6	66	28	1	1
82421010550	3221910868758	5.5	6	66	28	1	1
82421010555	3221910868765	5.55	6	66	28	1	1
82421010560	3221910868772	5.6	6	66	28	1	1
82421010570	3221910868789	5.7	6	66	28	1	1
82421010580	3221910868796	5.8	6	66	28	1	1
82421010590	3221910868802	5.9	6	66	28	1	1
82421010600	3221910868819	6	6	66	28	1	1
82421010610	3221910868826	6.1	8	79	34	1	1
82421010620	3221910868833	6.2	8	79	34	1	1
82421010630	3221910868840	6.3	8	79	34	1	1
82421010640	3221910868857	6.4	8	79	34	1	1
82421010650	3221910868864	6.5	8	79	34	1	1
82421010660	3221910868871	6.6	8	79	34	1	1
82421010670	3221910868888	6.7	8	79	34	1	1
82421010675	3221910868895	6.75	8	79	34	1	1
82421010680	3221910868901	6.8	8	79	34	1	1
82421010690	3221910868918	6.9	8	79	34	1	1
82421010700	3221910868925	7	8	79	34	1	1
82421010710	3221910868932	7.1	8	79	41	1	1
82421010720	3221910868949	7.2	8	79	41	1	1
82421010730	3221910868956	7.3	8	79	41	1	1
82421010740	3221910868963	7.4	8	79	41	1	1
82421010750	3221910868970	7.5	8	79	41	1	1
82421010755	3221910868987	7.55	8	79	41	1	1
82421010760	3221910868994	7.6	8	79	41	1	1



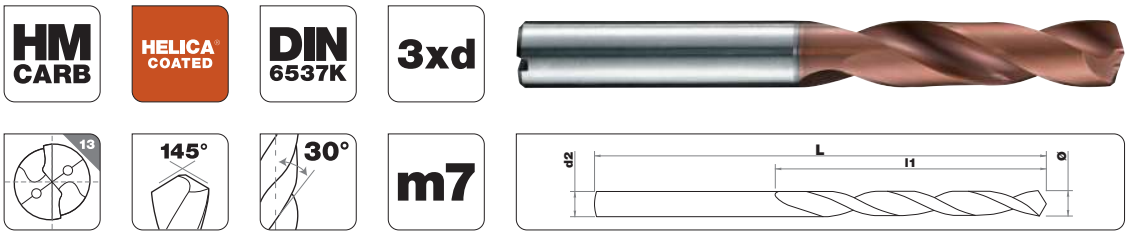
82421010770	3221910869007	7.7	8	79	41	1	1
82421010780	3221910869014	7.8	8	79	41	1	1
82421010790	3221910869021	7.9	8	79	41	1	1
82421010800	3221910869038	8	8	79	41	1	1
82421010810	3221910869045	8.1	10	89	47	1	1
82421010820	3221910869052	8.2	10	89	47	1	1
82421010830	3221910869069	8.3	10	89	47	1	1
82421010840	3221910869076	8.4	10	89	47	1	1
82421010850	3221910869083	8.5	10	89	47	1	1
82421010860	3221910869090	8.6	10	89	47	1	1
82421010870	3221910869106	8.7	10	89	47	1	1
82421010880	3221910869113	8.8	10	89	47	1	1
82421010890	3221910869120	8.9	10	89	47	1	1
82421010900	3221910869137	9	10	89	47	1	1
82421010910	3221910869144	9.1	10	89	47	1	1
82421010920	3221910869151	9.2	10	89	47	1	1
82421010930	3221910869168	9.3	10	89	47	1	1
82421010940	3221910869175	9.4	10	89	47	1	1
82421010950	3221910869182	9.5	10	89	47	1	1
82421010955	3221910869199	9.55	10	89	47	1	1
82421010960	3221910869205	9.6	10	89	47	1	1
82421010970	3221910869212	9.7	10	89	47	1	1
82421010980	3221910869229	9.8	10	89	47	1	1
82421010990	3221910869236	9.9	10	89	47	1	1
82421011000	3221910869243	10	10	89	47	1	1
82421011010	3221910869250	10.1	12	102	55	1	1
82421011020	3221910869267	10.2	12	102	55	1	1
82421011025	3221910869274	10.25	12	102	55	1	1
82421011030	3221910869281	10.3	12	102	55	1	1
82421011040	3221910869298	10.4	12	102	55	1	1
82421011050	3221910869304	10.5	12	102	55	1	1
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82421011070	3221910869328	10.7	12	102	55	1	1
82421011080	3221910869335	10.8	12	102	55	1	1
82421011090	3221910869342	10.9	12	102	55	1	1
82421011100	3221910869359	11	12	102	55	1	1
82421011110	3221910869366	11.1	12	102	55	1	1
82421011120	3221910869373	11.2	12	102	55	1	1
82421011130	3221910869380	11.3	12	102	55	1	1
82421011140	3221910869397	11.4	12	102	55	1	1
82421011150	3221910869403	11.5	12	102	55	1	1
82421011160	3221910869410	11.6	12	102	55	1	1
82421011170	3221910869427	11.7	12	102	55	1	1
82421011180	3221910869434	11.8	12	102	55	1	1
82421011190	3221910869441	11.9	12	102	55	1	1
82421011200	3221910869458	12	12	102	55	1	1
82421011210	3221910869465	12.1	14	107	60	1	1
82421011220	3221910869472	12.2	14	107	60	1	1
82421011230	3221910869489	12.3	14	107	60	1	1
82421011240	3221910869496	12.4	14	107	60	1	1
82421011250	3221910869502	12.5	14	107	60	1	1
82421011260	3221910869519	12.6	14	107	60	1	1
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82421011290	3221910869540	12.9	14	107	60	1	1
82421011300	3221910869557	13	14	107	60	1	1
82421011310	3221910869564	13.1	14	107	60	1	1
82421011320	3221910869571	13.2	14	107	60	1	1
82421011330	3221910869588	13.3	14	107	60	1	1
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82421011350	3221910869601	13.5	14	107	60	1	1
82421011360	3221910869618	13.6	14	107	60	1	1
82421011370	3221910869625	13.7	14	107	60	1	1
82421011380	3221910869632	13.8	14	107	60	1	1
82421011390	3221910869649	13.9	14	107	60	1	1
82421011400	3221910869656	14	14	107	60	1	1
82421011410	3221910869663	14.1	16	115	65	1	1
82421011420	3221910869670	14.2	16	115	65	1	1
82421011430	3221910869687	14.3	16	115	65	1	1
82421011440	3221910869694	14.4	16	115	65	1	1
82421011450	3221910869700	14.5	16	115	65	1	1
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82421011480	3221910869731	14.8	16	115	65	1	1
82421011490	3221910869748	14.9	16	115	65	1	1
82421011500	3221910869755	15	16	115	65	1	1
82421011510	3221910869762	15.1	16	115	65	1	1
82421011520	3221910869779	15.2	16	115	65	1	1
82421011525	3221910869786	15.25	16	115	65	1	1
82421011530	3221910869793	15.3	16	115	65	1	1
82421011540	3221910869809	15,4	16	115	65	1	1

8242101	EAN	Ø	d2	L	l1	QTY	PCB
82421011550	3221910869816	15.5	16	115	65	1	1
82421011560	3221910869823	15.6	16	115	65	1	1
82421011570	3221910869830	15.7	16	115	65	1	1
82421011580	3221910869847	15.8	16	115	65	1	1
82421011590	3221910869854	15.9	16	115	65	1	1
82421011600	3221910869861	16	16	115	65	1	1

SIRIUS | SOLID CARBIDE DRILL HELICA© | 3XD WITH COOLANT FEED.

SIRIUS | BROCA METAL DURO HELICA© | 3XD CON REFRIGERACIÓN INTERNA.

SIRIUS | PUNTA IN MD HELICA© | 3XD CON REFRIGERAZIONE.



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AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

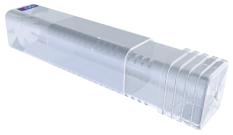
FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8243101	EAN	Ø	d2	L	l1	QTY	PCB
82431010300	3221910869878	3	6	62	20	1	1
82431010310	3221910869885	3.1	6	62	20	1	1
82431010320	3221910869892	3.2	6	62	20	1	1
82431010330	3221910869908	3.3	6	62	20	1	1
82431010340	3221910869915	3.4	6	62	20	1	1
82431010350	3221910869922	3.5	6	62	20	1	1
82431010360	3221910869939	3.6	6	62	20	1	1
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82431010380	3221910869953	3.8	6	66	24	1	1
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82431010490	3221910870072	4.9	6	66	28	1	1
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82431010630	3221910870225	6.3	8	79	34	1	1
82431010640	3221910870232	6.4	8	79	34	1	1
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82431010660	3221910870256	6.6	8	79	34	1	1
82431010670	3221910870263	6.7	8	79	34	1	1
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82431010755	3221910870362	7.55	8	79	41	1	1
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82431011450	3221910871086	14.5	16	115	65	1	1
82431011460	3221910871093	14.6	16	115	65	1	1
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SIRIUS | SOLID CARBIDE DRILL HELICA© | 5XD WITH COOLANT FEED.

SIRIUS | BROCA METAL DURO HELICA© | 5XD CON REFRIGERACIÓN INTERNA.

SIRIUS | PUNTA IN MD HELICA | 5XD CON REFRIGERAZIONE.

HM CARB

HELICA COATED

DIN 6537L

5xd

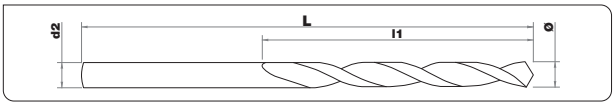








m7



Designed for difficult to machine alloys. high performance.

Diseñado para aleaciones dificiles de taladrar, alto rendimiento.

Concepita per le leghe di difficile lavorazione. Prestazioni elevate.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

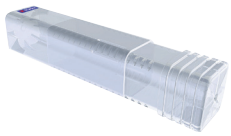
FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

82446010300	3221910871253	3	6	66	28	1	1
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82446010350	3221910871307	3.5	6	66	28	1	1
82446010360	3221910871314	3.6	6	66	28	1	1
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82446010520	3221910871482	5.2	6	82	44	1	1
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82446010540	3221910871505	5.4	6	82	44	1	1
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82446010570	3221910871543	5.7	6	82	44	1	1
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82446010590	3221910871567	5.9	6	82	44	1	1
82446010600	3221910871574	6	6	82	44	1	1
82446010610	3221910871581	6.1	8	91	53	1	1
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82446010650	3221910871628	6.5	8	91	53	1	1
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82446010670	3221910871642	6.7	8	91	53	1	1
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82446010720	3221910871703	7.2	8	91	53	1	1
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82446011480	3221910872496	14.8	16	133	83	1	1
82446011490	3221910872502	14.9	16	133	83	1	1
82446011500	3221910872519	15	16	133	83	1	1
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82446011520	3221910872533	15.2	16	133	83	1	1
82446011525	3221910872540	15.25	16	133	83	1	1
82446011530	3221910872557	15.3	16	133	83	1	1
82446011540	3221910872564	15.4	16	133	83	1	1
82446011550	3221910872571	15.5	16	133	83	1	1
82446011560	3221910872588	15.6	16	133	83	1	1
82446011570	3221910872595	15.7	16	133	83	1	1
82446011580	3221910872601	15.8	16	133	83	1	1
82446011590	3221910872618	15.9	16	133	83	1	1
82446011600	3221910872625	16	16	133	83	1	1

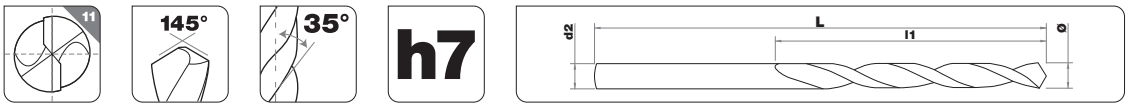
POLARIS | SOLID CARBIDE DRILL TIALN | 3XD WITHOUT COOLANT FEED.

POLARIS | BROCA METAL DURO TIALN | 3XD SIN REFRIGERACIÓN INTERNA.

POLARIS | PUNTA IN MD TIAIN | 3XD SENZA REFRIGERAZIONE.

HM CARB | TiAlN COATED | DIN 6537K | 3xd





Designed for universal application.

Diseñado para uso universal.

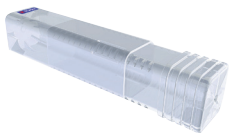
Concepita per forature polivalenti.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD
Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ
Cast iron
Fundiciones
Ghisa

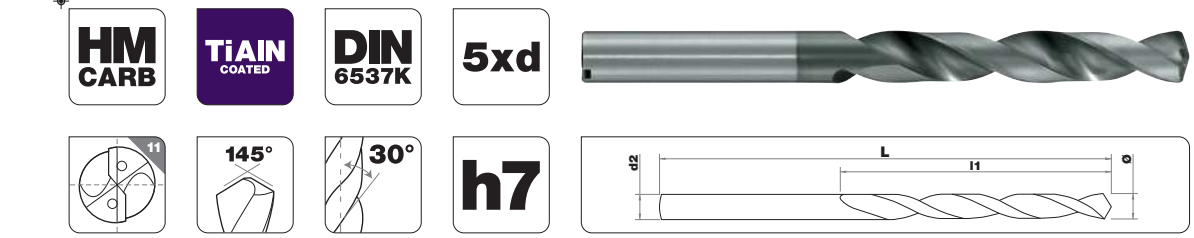
8241501	EAN	Ø	d2	L	l1	QTY	PCB
82415010300	3221910831882	3	6	62	20	1	1
82415010330	3221910831899	3.3	6	62	20	1	1
82415010350	3221910831905	3.5	6	62	20	1	1
82415010400	3221910831912	4	6	66	24	1	1
82415010420	3221910831929	4.2	6	66	24	1	1
82415010450	3221910831936	4.5	6	66	24	1	1
82415010500	3221910831943	5	6	66	28	1	1
82415010550	3221910831950	5.5	6	66	28	1	1
82415010600	3221910831967	6	6	66	28	1	1
82415010650	3221910831974	6.5	8	79	34	1	1
82415010675	3221910831981	6.75	8	79	34	1	1
82415010680	3221910831998	6.8	8	79	34	1	1
82415010700	3221910832001	7	8	79	34	1	1
82415010750	3221910832018	7.5	8	79	41	1	1
82415010800	3221910832025	8	8	79	41	1	1
82415010850	3221910832032	8.5	8	79	41	1	1
82415010900	3221910832049	9	10	89	47	1	1
82415010950	3221910832056	9.5	10	89	47	1	1
82415011000	3221910832063	10	10	89	47	1	1
82415011020	3221910832070	10.2	12	102	55	1	1
82415011050	3221910832087	10.5	12	102	55	1	1
82415011100	3221910832094	11	12	102	55	1	1
82415011150	3221910832100	11.5	12	102	55	1	1
82415011200	3221910832117	12	12	102	55	1	1
82415011250	3221910832124	12.5	14	107	60	1	1
82415011300	3221910832131	13	14	107	60	1	1
82415011350	3221910832148	13.5	14	107	60	1	1
82415011400	3221910832155	14	14	107	60	1	1
82415011450	3221910832162	14.5	16	115	65	1	1
82415011500	3221910832179	15	16	115	65	1	1
82415011550	3221910832186	15.5	16	115	65	1	1
82415011600	3221910832193	16	16	115	65	1	1



POLARIS | SOLID CARBIDE DRILL TIALN | 5XD WITH COOLANT FEED.

POLARIS | BROCA METAL DURO TIALN | 5XD CON REFRIGERACIÓN INTERNA.

POLARIS | PUNTA IN MD TIAIN | 5XD CON REFRIGERAZIONE.



Designed for universal application.

Diseñado para uso universal.

Concepita per forature polivalenti.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

8241701	EAN	ø	d2	L	l1	QTY	PCB
82417010400	3221910832575	4	6	74	36	1	1
82417010420	3221910832582	4.2	6	74	36	1	1
82417010450	3221910832599	4.5	6	74	36	1	1
82417010500	3221910832605	5	6	82	44	1	1
82417010550	3221910832612	5.5	6	82	44	1	1
82417010600	3221910832629	6	6	82	44	1	1
82417010650	3221910832636	6.5	8	91	53	1	1
82417010675	3221910832643	6.75	8	91	53	1	1
82417010680	3221910832650	6.8	8	91	53	1	1
82417010700	3221910832667	7	8	91	53	1	1
82417010750	3221910832674	7.5	8	91	53	1	1
82417010800	3221910832681	8	8	91	53	1	1
82417010850	3221910832698	8.5	10	103	61	1	1
82417010900	3221910832704	9	10	103	61	1	1
82417010950	3221910832711	9.5	10	103	61	1	1
82417011000	3221910832728	10	10	103	61	1	1
82417011020	3221910832735	10.2	12	118	71	1	1
82417011050	3221910832742	10.5	12	118	71	1	1
82417011100	3221910832759	11	12	118	71	1	1
82417011150	3221910832766	11.5	12	118	71	1	1
82417011200	3221910832773	12	12	118	71	1	1
82417011250	3221910832780	12.5	14	124	77	1	1
82417011300	3221910832797	13	14	124	77	1	1
82417011350	3221910832803	13.5	14	124	77	1	1
82417011400	3221910832810	14	14	124	77	1	1
82417011450	3221910832827	14.5	16	133	83	1	1
82417011500	3221910832834	15	16	133	83	1	1
82417011550	3221910832841	15.5	16	133	83	1	1
82417011600	3221910832858	16	16	133	83	1	1
82417011650	3221910832865	16.5	18	143	93	1	1
82417011700	3221910832872	17	18	143	93	1	1
82417011750	3221910832889	17.5	18	143	93	1	1
82417011800	3221910832896	18	18	143	93	1	1
82417011850	3221910832902	18.5	20	153	101	1	1
82417011900	3221910832919	19	20	153	101	1	1
82417011950	3221910832926	19.5	20	153	101	1	1
82417012000	3221910832933	20	20	153	101	1	1

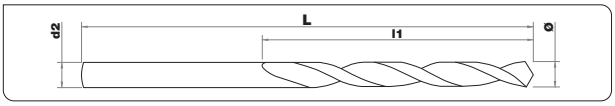


SOLID CARBIDE 3 FLUTE DRILL. | **BROCA METAL DURO MONOBLOC 3 CORTES.** | **PUNTA IN MD INTEGRALE 3 TAGLI.**

HM CARB | BRIGHT UNCOATED | simDiN 1897 | 2xd



18 | 140° | 30° | h6



Robustness and exceptional quality (roundness, surface finish).

Fuerza y calidad excepcional (redondez, acabado de la superficie).

Robustezza e qualità eccezionali (rotondità, finitura superficiale).

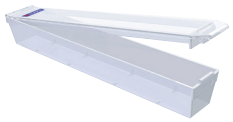
AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8240511	EAN	Ø	d2	L	l1	QTY	PCB
82405110300	3221910800765	3	3	46	27	1	1
82405110320	3221910800789	3.2	3.2	49	30	1	1
82405110330	3221910800796	3.3	3.3	49	30	1	1
82405110350	3221910800819	3.5	3.5	52	36	1	1
82405110400	3221910800864	4	4	55	38	1	1
82405110410	3221910800871	4.1	4.1	55	38	1	1
82405110420	3221910800888	4.2	4.2	55	38	1	1
82405110450	3221910800918	4.5	4.5	58	40	1	1
82405110470	3221910800932	4.7	4.7	58	40	1	1
82405110480	3221910800949	4.8	4.8	62	43	1	1
82405110500	3221910800963	5	5	62	43	1	1
82405110520	3221910800987	5.2	5.2	62	43	1	1
82405110550	3221910801014	5.5	5.5	66	45	1	1
82405110580	3221910801045	5.8	5.8	66	45	1	1
82405110600	3221910801069	6	6	66	45	1	1
82405110610	3221910801076	6.1	6.1	70	47	1	1
82405110620	3221910801083	6.2	6.2	70	47	1	1
82405110630	3221910801090	6.3	6.3	70	47	1	1
82405110650	3221910801113	6.5	6.5	70	47	1	1
82405110670	3221910801137	6.7	6.7	70	47	1	1
82405110680	3221910801144	6.8	6.8	74	49	1	1
82405110700	3221910801168	7	7	74	49	1	1
82405110750	3221910801212	7.5	7.5	74	49	1	1
82405110800	3221910801267	8	8	79	52	1	1
82405110850	3221910801311	8.5	8.5	79	52	1	1
82405110900	3221910801335	9	9	84	56	1	1
82405110950	3221910801359	9.5	9.5	84	56	1	1
82405111000	3221910801373	10	10	89	60	1	1



SOLID CARBIDE STUB LENGTH DRILL.

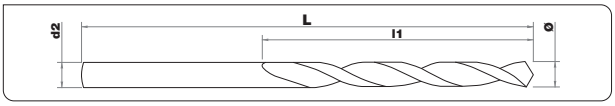
BROCA METAL DURO MONOBLOC SERIE EXTRA-CORTA.

PUNTA IN MD INTEGRALE EXTRA-CORTA.

HM CARB | BRIGHT UNCOATED | DIN 6539 | 2xd



12 | 118° | N TYPE | h6



For abrasive materials, good chip clearance, profitability.

Para materiales abrasivos, buena evacuación de viruta, rentabilidad.

Per materiali abrasivi, buona evacuazione dei trucioli. Redditività.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE — Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

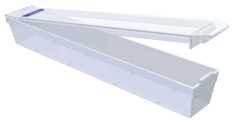
FGH — Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ — Cast iron
Fundiciones
Ghisa

KLM — Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

ARCo ARNi Ti — Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8240221	EAN	ø	d2	L	l1	QTY	PCB
82402210100	3221910799083	1	1	30	11	1	1
82402210110	3221910799090	1.1	1.1	30	11	1	1
82402210120	3221910799106	1.2	1.2	30	11	1	1
82402210130	3221910799113	1.3	1.3	30	11	1	1
82402210140	3221910799120	1.4	1.4	30	11	1	1
82402210150	3221910799137	1.5	1.5	30	11	1	1
82402210160	3221910799144	1.6	1.6	38	12	1	1
82402210170	3221910799151	1.7	1.7	38	12	1	1
82402210180	3221910799168	1.8	1.8	38	12	1	1
82402210190	3221910799175	1.9	1.9	38	12	1	1
82402210200	3221910799182	2	2	38	12	1	1
82402210210	3221910799199	2.1	2.1	38	12	1	1
82402210220	3221910799205	2.2	2.2	40	13	1	1
82402210230	3221910799212	2.3	2.3	40	13	1	1
82402210240	3221910799229	2.4	2.4	43	14	1	1
82402210250	3221910799236	2.5	2.5	43	14	1	1
82402210260	3221910799243	2.6	2.6	43	14	1	1
82402210270	3221910799250	2.7	2.7	46	16	1	1
82402210280	3221910799267	2.8	2.8	46	16	1	1
82402210290	3221910799274	2.9	2.9	46	16	1	1
82402210300	3221910799281	3	3	46	16	1	1
82402210310	3221910799298	3.1	3.1	49	18	1	1
82402210320	3221910799304	3.2	3.2	49	18	1	1
82402210330	3221910799311	3.3	3.3	49	18	1	1
82402210340	3221910799328	3.4	3.4	52	20	1	1
82402210350	3221910799335	3.5	3.5	52	20	1	1
82402210360	3221910799342	3.6	3.6	52	20	1	1
82402210370	3221910799359	3.7	3.7	52	20	1	1
82402210380	3221910799366	3.8	3.8	55	22	1	1
82402210390	3221910799373	3.9	3.9	55	22	1	1
82402210400	3221910799380	4	4	55	22	1	1
82402210410	3221910799397	4.1	4.1	55	22	1	1
82402210420	3221910799403	4.2	4.2	55	22	1	1
82402210430	3221910799410	4.3	4.3	58	24	1	1
82402210440	3221910799427	4.4	4.4	58	24	1	1
82402210450	3221910799434	4.5	4.5	58	24	1	1
82402210460	3221910799441	4.6	4.6	58	24	1	1
82402210470	3221910799458	4.7	4.7	58	24	1	1
82402210480	3221910799465	4.8	4.8	62	26	1	1
82402210490	3221910799472	4.9	4.9	62	26	1	1
82402210500	3221910799489	5	5	62	26	1	1
82402210510	3221910799496	5.1	5.1	62	26	1	1
82402210520	3221910799502	5.2	5.2	62	26	1	1
82402210530	3221910799519	5.3	5.3	62	26	1	1
82402210540	3221910799526	5.4	5.4	66	28	1	1
82402210550	3221910799533	5.5	5.5	66	28	1	1
82402210560	3221910799540	5.6	5.6	66	28	1	1
82402210570	3221910799557	5.7	5.7	66	28	1	1
82402210580	3221910799564	5.8	5.8	66	28	1	1
82402210590	3221910799571	5.9	5.9	66	28	1	1
82402210600	3221910799588	6	6	66	28	1	1



82402210	EAN	Ø	d2	L	l1	QTY	PCB
82402210610	3221910799595	6.1	6.1	70	31	1	1
82402210620	3221910799601	6.2	6.2	70	31	1	1
82402210630	3221910799618	6.3	6.3	70	31	1	1
82402210640	3221910799625	6.4	6.4	70	31	1	1
82402210650	3221910799632	6.5	6.5	70	31	1	1
82402210660	3221910799649	6.6	6.6	70	31	1	1
82402210670	3221910799656	6.7	6.7	70	31	1	1
82402210680	3221910799663	6.8	6.8	74	34	1	1
82402210690	3221910799670	6.9	6.9	74	34	1	1
82402210700	3221910799687	7	7	74	34	1	1
82402210710	3221910799694	7.1	7.1	74	34	1	1
82402210720	3221910799700	7.2	7.2	74	34	1	1
82402210730	3221910799717	7.3	7.3	74	34	1	1
82402210740	3221910799724	7.4	7.4	74	34	1	1
82402210750	3221910799731	7.5	7.5	74	34	1	1
82402210760	3221910799748	7.6	7.6	79	37	1	1
82402210770	3221910799755	7.7	7.7	79	37	1	1
82402210780	3221910799762	7.8	7.8	79	37	1	1
82402210790	3221910799779	7.9	7.9	79	37	1	1
82402210800	3221910799786	8	8	79	37	1	1
82402210810	3221910799793	8.1	8.1	79	37	1	1
82402210820	3221910799809	8.2	8.2	79	37	1	1
82402210830	3221910799816	8.3	8.3	79	37	1	1
82402210840	3221910799823	8.4	8.4	79	37	1	1
82402210850	3221910799830	8.5	8.5	79	37	1	1
82402210900	3221910799854	9	9	84	40	1	1
82402210950	3221910799878	9.5	9.5	84	40	1	1
82402211000	3221910799892	10	10	89	43	1	1
82402211020	3221910799908	10.2	10.2	89	43	1	1
82402211050	3221910799915	10.5	10.5	89	43	1	1
82402211100	3221910799922	11	11	95	47	1	1
82402211150	3221910799939	11.5	11.5	95	47	1	1
82402211200	3221910799946	12	12	102	51	1	1
82402211250	3221910799953	12.5	12.5	102	51	1	1
82402211300	3221910799960	13	13	102	51	1	1
82402211400	3221910799977	14	14	107	54	1	1
82402211600	3221910799991	16	16	115	58	1	1

SOLID CARBIDE JOBBER LENGTH DRILL.

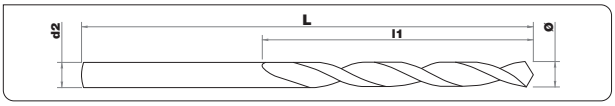
BROCA METAL DURO MONOBLOC SERIE CORTA.

PUNTA IN MD INTEGRALE CORTA.

HM CARB | BRIGHT UNCOATED | simDiN 338 | 3xd



12 | 118° | N TYPE | h6



For abrasive materials, good chip clearance, profitability.

Para materiales abrasivos, buena evacuación de viruta, rentabilidad.

Per materiali abrasivi, buona evacuazione dei trucioli. Redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

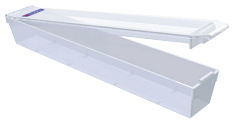
FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8243921	EAN	ø	d2	L	l1	QTY	PCB
82439210100	3221910809331	1	1	34	12	1	1
82439210110	3221910809348	1.1	1.1	36	14	1	1
82439210120	3221910809355	1.2	1.2	38	16	1	1
82439210130	3221910809362	1.3	1.3	38	16	1	1
82439210140	3221910809379	1.4	1.4	40	18	1	1
82439210150	3221910809386	1.5	1.5	40	18	1	1
82439210160	3221910809393	1.6	1.6	43	20	1	1
82439210170	3221910809409	1.7	1.7	43	20	1	1
82439210180	3221910809416	1.8	1.8	46	22	1	1
82439210190	3221910809423	1.9	1.9	46	22	1	1
82439210200	3221910809430	2	2	49	24	1	1
82439210210	3221910809447	2.1	2.1	49	24	1	1
82439210220	3221910809454	2.2	2.2	53	27	1	1
82439210230	3221910809461	2.3	2.3	53	27	1	1
82439210240	3221910809478	2.4	2.4	57	30	1	1
82439210250	3221910809485	2.5	2.5	57	30	1	1
82439210260	3221910809492	2.6	2.6	57	30	1	1
82439210270	3221910809508	2.7	2.7	61	33	1	1
82439210280	3221910809515	2.8	2.8	61	33	1	1
82439210290	3221910809522	2.9	2.9	61	33	1	1
82439210300	3221910809539	3	3	61	33	1	1
82439210310	3221910809546	3.1	3.1	65	36	1	1
82439210320	3221910809553	3.2	3.2	65	36	1	1
82439210330	3221910809560	3.3	3.3	65	36	1	1
82439210340	3221910809577	3.4	3.4	70	39	1	1
82439210350	3221910809584	3.5	3.5	70	39	1	1
82439210360	3221910809591	3.6	3.6	70	39	1	1
82439210370	3221910809607	3.7	3.7	70	39	1	1
82439210380	3221910809614	3.8	3.8	75	43	1	1
82439210390	3221910809621	3.9	3.9	75	43	1	1
82439210400	3221910809638	4	4	75	43	1	1
82439210410	3221910809645	4.1	4.1	75	43	1	1
82439210420	3221910809652	4.2	4.2	75	43	1	1
82439210430	3221910809669	4.3	4.3	80	47	1	1
82439210440	3221910809676	4.4	4.4	80	47	1	1
82439210450	3221910809683	4.5	4.5	80	47	1	1
82439210460	3221910809690	4.6	4.6	80	47	1	1
82439210470	3221910809706	4.7	4.7	80	47	1	1
82439210480	3221910809713	4.8	4.8	86	52	1	1
82439210490	3221910809720	4.9	4.9	86	52	1	1
82439210500	3221910809737	5	5	86	52	1	1
82439210510	3221910809744	5.1	5.1	86	52	1	1
82439210520	3221910809751	5.2	5.2	86	52	1	1
82439210530	3221910809768	5.3	5.3	86	52	1	1
82439210540	3221910809775	5.4	5.4	93	57	1	1
82439210550	3221910809782	5.5	5.5	93	57	1	1
82439210560	3221910809799	5.6	5.6	93	57	1	1
82439210570	3221910809805	5.7	5.7	93	57	1	1
82439210580	3221910809812	5.8	5.8	93	57	1	1
82439210590	3221910809829	5.9	5.9	93	57	1	1
82439210600	3221910809836	6	6	93	57	1	1



82243921	EAN	Ø	d2	L	l1	QTY	PCB
82439210610	3221910809843	6.1	6.1	101	63	1	1
82439210620	3221910809850	6.2	6.2	101	63	1	1
82439210630	3221910809867	6.3	6.3	101	63	1	1
82439210640	3221910809874	6.4	6.4	101	63	1	1
82439210650	3221910809881	6.5	6.5	101	63	1	1
82439210660	3221910809898	6.6	6.6	101	63	1	1
82439210670	3221910809904	6.7	6.7	101	63	1	1
82439210680	3221910809911	6.8	6.8	109	69	1	1
82439210690	3221910809928	6.9	6.9	109	69	1	1
82439210700	3221910809935	7	7	109	69	1	1
82439210750	3221910809980	7.5	7.5	109	69	1	1
82439210780	3221910810016	7.8	7.8	117	75	1	1
82439210800	3221910810030	8	8	117	75	1	1
82439210850	3221910810085	8.5	8.5	117	75	1	1
82439210900	3221910810108	9	9	125	81	1	1
82439210950	3221910810122	9.5	9.5	125	81	1	1
82439211000	3221910810146	10	10	133	87	1	1
82439211020	3221910810153	10.2	10.2	133	87	1	1
82439211050	3221910810160	10.5	10.5	133	87	1	1
82439211100	3221910810177	11	11	142	94	1	1
82439211150	3221910810184	11.5	11.5	142	94	1	1
82439211200	3221910810191	12	12	151	101	1	1
82439211300	3221910810207	13	13	151	101	1	1
82439211400	3221910810214	14	14	160	108	1	1

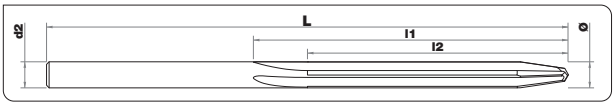
DAGGER Z3 | SOLID CARBIDE DAGGER REAMER DRILL | Z3.

DAGGER Z3 | BROCA ESCARIADORA | Z3.

DAGGER Z3 | PUNTA ALESATORE A LANCIA Z3.

HM CARB | TIVOLY NORM | Z3 | 5°





Designed for Carbon, Carbon/Alu. For thickness > 5mm.

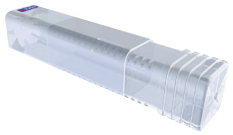
Diseñado para Carbón, Carbon/Alu. Para espesor > 5mm.

Concepita per carbonio, carbonio/alluminio. Per spessori > 5mm.

KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

X
Composites
Composites Fibras
Fibre composite

82243941	EAN	Ø	d2	L	l1	QTY	PCB
82439410240	3221910886707	2.4	2.4	100	60	1	10
82439410250	3221910886714	2.5	2.5	100	60	1	10
82439410300	3221910886721	3	3	100	60	1	10
82439410310	3221910886738	3.1	3.1	100	60	1	10
82439410320	3221910886745	3.2	3.2	100	60	1	10
82439410330	3221910886752	3.3	3.3	100	60	1	10
82439410350	3221910886769	3.5	3.5	100	60	1	10
82439410370	3221910886776	3.7	3.7	100	60	1	10
82439410375	3221910886783	3.75	3.75	100	60	1	10
82439410380	3221910886790	3.8	3.8	100	60	1	10
82439410390	3221910886806	3.9	3.9	100	60	1	10
82439410400	3221910886813	4	4	100	60	1	10
82439410410	3221910886820	4.1	4.1	100	60	1	10
82439410420	3221910886837	4.2	4.2	100	60	1	10
82439410430	3221910886844	4.3	4.3	100	60	1	10
82439410450	3221910886851	4.5	4.5	100	60	1	10
82439410460	3221910886868	4.6	4.6	100	60	1	10
82439410470	3221910886875	4.7	4.7	100	60	1	10
82439410476	3221910886882	4.762	4.76	100	60	1	10
82439410480	3221910886899	4.8	4.8	100	60	1	10
82439410500	3221910886905	5	5	100	60	1	10
82439410510	3221910886912	5.1	5.1	100	60	1	10
82439410520	3221910886929	5.2	5.2	100	60	1	10
82439410530	3221910886936	5.3	5.3	100	60	1	10
82439410540	3221910886943	5.4	5.4	100	60	1	10
82439410550	3221910886950	5.5	5.5	100	60	1	10
82439410580	3221910886967	5.8	5.8	100	60	1	10
82439410600	3221910886974	6	6	100	60	1	10
82439410610	3221910886981	6.1	6.1	100	60	1	10
82439410620	3221910886998	6.2	6.2	100	60	1	10
82439410630	3221910887001	6.3	6.3	100	60	1	10



8243941	EAN	Ø	d2	L	l1	QTY	PCB
82439410635	3221910887018	6.354	6.35	100	60	1	10
82439410650	3221910887025	6.5	6.5	100	60	1	10
82439410700	3221910887032	7	7	100	60	1	10
82439410751	3221910887049	7.505	7.5	100	60	1	10
82439410790	3221910887056	7.9	7.9	100	60	1	10
82439410793	3221910887063	7.938	7.94	100	60	1	10
82439410800	3221910887070	8	8	100	60	1	10
82439410900	3221910887087	9	9	100	60	1	10
82439410950	3221910887094	9.5	9.5	100	60	1	10
82439410952	3221910887100	9.525	9.53	100	60	1	10
82439411000	3221910887117	10	10	100	60	1	10

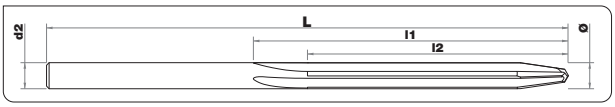
DAGGER Z4 | SOLID CARBIDE DAGGER REAMER DRILL | Z4.

DAGGER Z4 | BROCA ESCARIADORA | Z4.

DAGGER Z4 | PUNTA ALESATORE A LANCIA Z4.

HM CARB | TIVOLY NORM | Z4 | 0°





Designed for Carbon, Carbon/Alu. For thickness < 5mm.

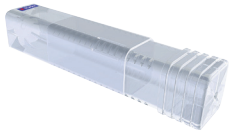
Diseñado para Carbon, Carbon/Alu. Para espesor < 5mm.

Concepita per carbonio, carbonio/alluminio. Per spessori < 5mm.

KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

X
Composites
Composites Fibras
Fibre composite

8243951	EAN	Ø	d2	L	l1	QTY	PCB
82439510240	3221910887124	2.4	2.4	100	60	1	10
82439510250	3221910887131	2.5	2.5	100	60	1	10
82439510300	3221910887148	3	3	100	60	1	10
82439510310	3221910887155	3.1	3.1	100	60	1	10
82439510320	3221910887162	3.2	3.2	100	60	1	10
82439510330	3221910887179	3.3	3.3	100	60	1	10
82439510350	3221910887186	3.5	3.5	100	60	1	10
82439510370	3221910887193	3.7	3.7	100	60	1	10
82439510375	3221910887209	3.75	3.75	100	60	1	10
82439510380	3221910887216	3.8	3.8	100	60	1	10
82439510390	3221910887223	3.9	3.9	100	60	1	10
82439510400	3221910887230	4	4	100	60	1	10
82439510410	3221910887247	4.1	4.1	100	60	1	10
82439510420	3221910887254	4.2	4.2	100	60	1	10
82439510430	3221910887261	4.3	4.3	100	60	1	10
82439510450	3221910887278	4.5	4.5	100	60	1	10
82439510460	3221910887285	4.6	4.6	100	60	1	10
82439510470	3221910887292	4.7	4.7	100	60	1	10
82439510476	3221910887308	4.762	4.76	100	60	1	10
82439510480	3221910887315	4.8	4.8	100	60	1	10
82439510500	3221910887322	5	5	100	60	1	10
82439510510	3221910887339	5.1	5.1	100	60	1	10
82439510520	3221910887346	5.2	5.2	100	60	1	10
82439510530	3221910887353	5.3	5.3	100	60	1	10
82439510540	3221910887360	5.4	5.4	100	60	1	10
82439510550	3221910887377	5.5	5.5	100	60	1	10
82439510580	3221910887384	5.8	5.8	100	60	1	10
82439510600	3221910887391	6	6	100	60	1	10
82439510610	3221910887407	6.1	6.1	100	60	1	10
82439510620	3221910887414	6.2	6.2	100	60	1	10
82439510630	3221910887421	6.3	6.3	100	60	1	10
82439510635	3221910887438	6.354	6.35	100	60	1	10
82439510650	3221910887445	6.5	6.5	100	60	1	10
82439510700	3221910887452	7	7	100	60	1	10
82439510751	3221910887469	7.505	7.5	100	60	1	10
82439510790	3221910887476	7.9	7.9	100	60	1	10
82439510793	3221910887483	7.938	7.94	100	60	1	10
82439510800	3221910887490	8	8	100	60	1	10
82439510900	3221910887506	9	9	100	60	1	10
82439510950	3221910887513	9.5	9.5	100	60	1	10
82439510952	3221910887520	9.525	9.53	100	60	1	10
82439511000	3221910887537	10	10	100	60	1	10



CARBIDE TIPPED JOBBER LENGTH DRILL.

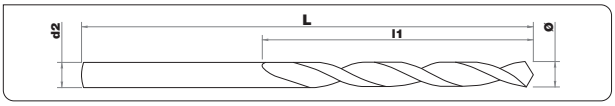
BROCA PUNTA DE METAL DURO SERIE CORTA.

PUNTA CON PLACCHETTA IN MD RIPORTATO | CORTA.

HM CARB | BRIGHT UNCOATED | simDIN 338 | 3xd



9 | 120° | N TYPE | h8



For steels & composites, universal application.

Para aceros y composites.

Foratura di acciai e compositi. Polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

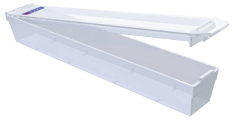
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8240201	EAN	Ø	d2	L	l1	QTY	PCB
82402010200	3221910412302	2	2	49	24	1	1
82402010210	3221910412319	2.1	2.1	49	24	1	1
82402010220	3221910412326	2.2	2.2	53	27	1	1
82402010230	3221910412333	2.3	2.3	53	27	1	1
82402010240	3221910412340	2.4	2.4	57	30	1	1
82402010250	3221910412357	2.5	2.5	57	30	1	1
82402010260	3221910412364	2.6	2.6	57	30	1	1
82402010270	3221910412371	2.7	2.7	61	33	1	1
82402010280	3221910412388	2.8	2.8	61	33	1	1
82402010290	3221910412395	2.9	2.9	61	33	1	1
82402010300	3221910412401	3	3	61	33	1	1
82402010310	3221910412418	3.1	3.1	65	36	1	1
82402010320	3221910412425	3.2	3.2	65	36	1	1
82402010330	3221910412432	3.3	3.3	65	36	1	1
82402010340	3221910412449	3.4	3.4	70	39	1	1
82402010350	3221910412456	3.5	3.5	70	39	1	1
82402010360	3221910412463	3.6	3.6	70	39	1	1
82402010370	3221910412470	3.7	3.7	70	39	1	1
82402010380	3221910412487	3.8	3.8	75	43	1	1
82402010390	3221910412494	3.9	3.9	75	43	1	1
82402010400	3221910412500	4	4	75	43	1	1
82402010410	3221910412517	4.1	4.1	75	43	1	1
82402010420	3221910412524	4.2	4.2	75	43	1	1
82402010430	3221910412531	4.3	4.3	80	47	1	1
82402010440	3221910412548	4.4	4.4	80	47	1	1
82402010450	3221910412555	4.5	4.5	80	47	1	1
82402010460	3221910412562	4.6	4.6	80	47	1	1
82402010470	3221910412579	4.7	4.7	80	47	1	1
82402010480	3221910412586	4.8	4.8	86	52	1	1
82402010490	3221910412593	4.9	4.9	86	52	1	1
82402010500	3221910412609	5	5	86	52	1	1
82402010510	3221910412616	5.1	5.1	86	52	1	1
82402010520	3221910412623	5.2	5.2	86	52	1	1
82402010530	3221910412630	5.3	5.3	86	52	1	1
82402010540	3221910412647	5.4	5.4	93	57	1	1
82402010550	3221910412654	5.5	5.5	93	57	1	1
82402010560	3221910412661	5.6	5.6	93	57	1	1
82402010570	3221910412678	5.7	5.7	93	57	1	1
82402010580	3221910412685	5.8	5.8	93	57	1	1
82402010590	3221910412708	5.9	5.9	93	57	1	1
82402010600	3221910412715	6	6	93	57	1	1
82402010610	3221910412722	6.1	6.1	101	63	1	1
82402010620	3221910412739	6.2	6.2	101	63	1	1
82402010630	3221910412746	6.3	6.3	101	63	1	1
82402010640	3221910412753	6.4	6.4	101	63	1	1
82402010650	3221910412760	6.5	6.5	101	63	1	1
82402010660	3221910412777	6.6	6.6	101	63	1	1
82402010670	3221910412784	6.7	6.7	101	63	1	1
82402010680	3221910412791	6.8	6.8	109	69	1	1
82402010690	3221910412807	6.9	6.9	109	69	1	1
82402010700	3221910412814	7	7	109	69	1	1



8240201	EAN	Ø	d2	L	l1	QTY	PCB
82402010710	3221910412821	7.1	7.1	109	69	1	1
82402010720	3221910412838	7.2	7.2	109	69	1	1
82402010730	3221910412845	7.3	7.3	109	69	1	1
82402010740	3221910412852	7.4	7.4	109	69	1	1
82402010750	3221910412869	7.5	7.5	109	69	1	1
82402010760	3221910412876	7.6	7.6	117	75	1	1
82402010770	3221910412883	7.7	7.7	117	75	1	1
82402010780	3221910412890	7.8	7.8	117	75	1	1
82402010790	3221910412906	7.9	7.9	117	75	1	1
82402010800	3221910412913	8	8	117	75	1	1
82402010810	3221910412920	8.1	8.1	117	75	1	1
82402010820	3221910412937	8.2	8.2	117	75	1	1
82402010830	3221910412944	8.3	8.3	117	75	1	1
82402010840	3221910412951	8.4	8.4	117	75	1	1
82402010850	3221910412968	8.5	8.5	117	75	1	1
82402010860	3221910412975	8.6	8.6	125	81	1	1
82402010870	3221910412982	8.7	8.7	125	81	1	1
82402010880	3221910412999	8.8	8.8	125	81	1	1
82402010890	3221910413002	8.9	8.9	125	81	1	1
82402010900	3221910413019	9	9	125	81	1	1
82402010910	3221910413026	9.1	9.1	125	81	1	1
82402010920	3221910413033	9.2	9.2	125	81	1	1
82402010930	3221910413040	9.3	9.3	125	81	1	1
82402010940	3221910413057	9.4	9.4	125	81	1	1
82402010950	3221910413064	9.5	9.5	125	81	1	1
82402010960	3221910413071	9.6	9.6	133	87	1	1
82402010970	3221910413088	9.7	9.7	133	87	1	1
82402010980	3221910413095	9.8	9.8	133	87	1	1
82402010990	3221910413101	9.9	9.9	133	87	1	1
82402011000	3221910413118	10	10	133	87	1	1
82402011020	3221910413132	10.2	10.2	133	87	1	1
82402011050	3221910413149	10.5	10.5	133	87	1	1
82402011100	3221910413156	11	11	142	94	1	1
82402011120	3221910413163	11.2	11.2	142	94	1	1
82402011150	3221910413170	11.5	11.5	142	94	1	1
82402011200	3221910413187	12	12	151	101	1	1
82402011220	3221910413194	12.2	12.2	151	101	1	1
82402011250	3221910413200	12.5	12.5	151	101	1	1
82402011300	3221910413217	13	13	151	101	1	1
82402011350	3221910413231	13.5	13.5	160	108	1	1
82402011400	3221910413248	14	14	160	108	1	1
82402011420	3221910413255	14.2	14.2	169	114	1	1
82402011450	3221910413262	14.5	14.5	169	114	1	1
82402011500	3221910413279	15	15	169	114	1	1
82402011520	3221910413286	15.2	15.2	178	120	1	1
82402011550	3221910413293	15.5	15.5	178	120	1	1
82402011600	3221910413309	16	16	178	120	1	1
82402011650	3221910413316	16.5	16.5	184	125	1	1
82402011700	3221910413323	17	17	184	125	1	1
82402011750	3221910413330	17.5	17.5	191	130	1	1
82402011800	3221910413347	18	18	191	130	1	1
82402011850	3221910413354	18.5	18.5	198	135	1	1
82402011900	3221910413361	19	19	198	135	1	1
82402011950	3221910413378	19.5	19.5	204	140	1	1
82402012000	3221910413385	20	20	204	140	1	1

CARBIDE TIPPED LONG DRILL.

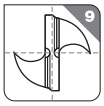
BROCA PUNTA DE METAL DURO SERIE LARGA.

PUNTA CON PLACCHETTA IN MD RIPORTATO | LUNGA.

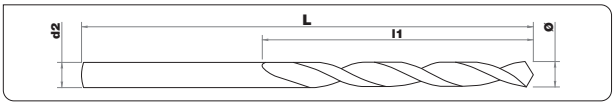


HM CARB | BRIGHT UNCOATED | simDiN 340 | 5xd





120° | N TYPE | h8



For steels < 1200/mm² & composites, universal application.

Para aceros < 1200 N/mm² y composites.

Foratura di acciai <1200 N/mm² e compositi. Polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

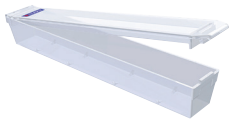
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8240501	EAN	Ø	d2	L	l1	QTY	PCB
82405010200	3221910458478	2	2	85	56	1	1
82405010240	3221910458515	2.4	2.4	95	62	1	1
82405010250	3221910458522	2.5	2.5	95	62	1	1
82405010300	3221910458577	3	3	100	66	1	1
82405010320	3221910458591	3.2	3.2	106	69	1	1
82405010330	3221910458607	3.3	3.3	106	69	1	1
82405010350	3221910458621	3.5	3.5	112	73	1	1
82405010400	3221910458676	4	4	119	78	1	1
82405010420	3221910458690	4.2	4.2	119	78	1	1
82405010450	3221910458720	4.5	4.5	126	82	1	1
82405010480	3221910458751	4.8	4.8	132	87	1	1
82405010490	3221910458768	4.9	4.9	132	87	1	1
82405010500	3221910458775	5	5	132	87	1	1
82405010520	3221910458799	5.2	5.2	132	87	1	1
82405010550	3221910458829	5.5	5.5	139	91	1	1
82405010600	3221910458874	6	6	139	91	1	1
82405010650	3221910458928	6.5	6.5	148	97	1	1
82405010700	3221910458980	7	7	156	102	1	1
82405010750	3221910459031	7.5	7.5	156	102	1	1
82405010780	3221910459062	7.8	7.8	165	106	1	1
82405010800	3221910459086	8	8	165	106	1	1
82405010850	3221910459130	8.5	8.5	165	106	1	1
82405010900	3221910459185	9	9	175	115	1	1
82405011000	3221910459208	10	10	184	121	1	1
82405011100	3221910459222	11	11	195	128	1	1
82405011200	3221910459246	12	12	205	134	1	1
82405011300	3221910459260	13	13	205	134	1	1
82405011450	3221910459291	14.5	14.5	220	144	1	1
82405011600	3221910459321	16	16	227	149	1	1
82405011700	3221910459338	17	17	235	154	1	1



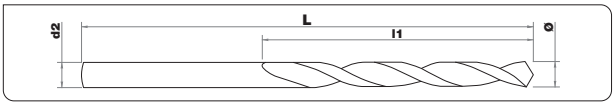
SOLID CARBIDE 90° SPOTTING DRILL.

BROCA DE PUNTEAR 90°.

PUNTA IN MD A CENTRARE 90° .

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | 90° | h6





For spotting, deburring, countersink.

Para puntear, desbastar, avellanar.

Per preforatura, sbavatura, svasatura.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

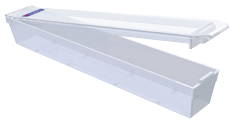
FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8240931	EAN	ø	d2	L	l1	QTY	PCB
82409310400	3221910801595	4	4	50	12	1	1
82409310500	3221910801601	5	5	50	15	1	1
82409310600	3221910801618	6	6	50	18	1	1
82409310800	3221910801625	8	8	60	23	1	1
82409311000	3221910801632	10	10	70	24	1	1
82409311200	3221910801649	12	12	70	24	1	1
82409311600	3221910801656	16	16	80	26	1	1



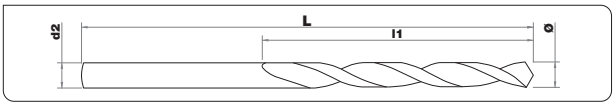
SOLID CARBIDE 120° SPOTTING DRILL.

BROCA DE PUNTEAR 120°.

PUNTA IN MD A CENTRARE 120°.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | 120° | h6





For spotting, deburring, countersink.

Para puntear, desbastar, avellanar.

Per preforatura, sbavatura, svasatura.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

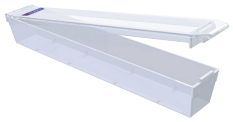
FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8243911	EAN	ø	d2	L	l1	QTY	PCB
82439110400	3221910809263	4	4	50	12	1	1
82439110500	3221910809270	5	5	50	15	1	1
82439110600	3221910809287	6	6	50	18	1	1
82439110800	3221910809294	8	8	60	23	1	1
82439111000	3221910809300	10	10	70	24	1	1
82439111200	3221910809317	12	12	70	24	1	1
82439111600	3221910809324	16	16	80	26	1	1



SOLID CARBIDE 60° CENTRE DRILL.

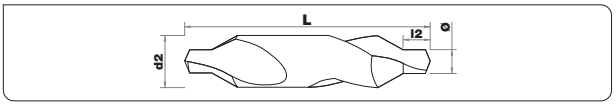
BROCAS DE CENTRAR METAL DURO 60°.

PUNTA IN MD A CENTRARE 60°.

HM CARB | BRIGHT UNCOATED | DIN 333A | 60°



A FORM | h8



For centering.

Para centrar.

Per centrare.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

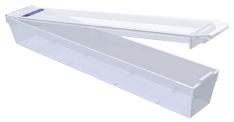
FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8241941	EAN	Ø	d2	L	l1	QTY	PCB
8241941100315	3221910803889	3.15	1	30	1.9	1	1
8241941160400	3221910803896	4	1.6	35	2.8	1	1
8241941200500	3221910803902	5	2	40	3.3	1	1
8241941250630	3221910803919	6.3	2.5	45	4.1	1	1
8241941315800	3221910803926	8	3.15	50	4.9	1	1
82419414001000	3221910803933	10	4	55	6.2	1	1



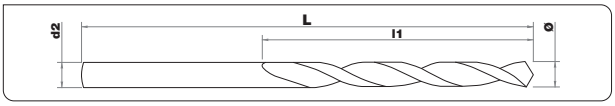
SOLID CARBIDE DRILL. LOCK DESTROYER

BROCA METAL DURO MONOBLOC . LOCK DESTROYER

PUNTA IN MD INTEGRALE. LOCK DESTROYER

NEW | HM CARB | BRIGHT UNCOATED | Ø 6mm





Designed for destroying locks, high Performance.

Diseñado para cerraduras de destrucción, alto rendimiento.

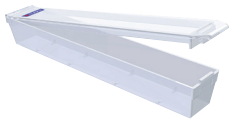
Progettato per serrature di distruzione. Prestazioni elevate.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steels
Aceros inoxidables
Acciai inossidabili

	8240011	EAN	Ø	d2	L	l1	QTY	PCB
NEW	82400110001	3221912105646	6	6	67	35	1	1



SOLID CARBIDE DRILL SET. LOCK DESTROYER

EST. BROCA METAL DURO MONOBLOC . LOCK DESTROYER

COF. PUNTA IN MD INTEGRALE. LOCK DESTROYER

NEW | 03 PCS | HM CARB | BRIGHT UNCOATED | Ø 6mm



82400170001
3221912123398

QTY	PCB
3	1

AB | CDE | FGH

Designed for destroying locks, high Performance.

Diseñado para cerraduras de destrucción, alto rendimiento.

Progettato per serrature di distruzione. Prestazioni elevate.

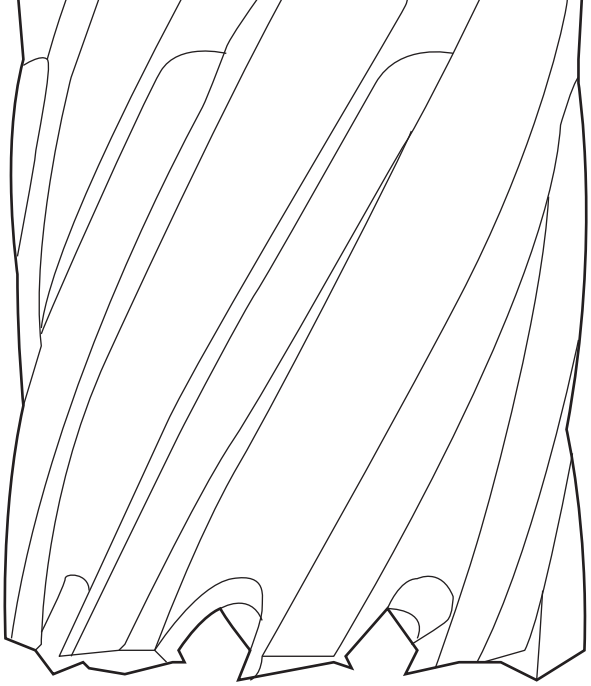
GENE-
RAL
CATALOGUE

CORE HOLE DRILLING

FRESADO HUECO

CAROTATURA

#02/07



HSS TIALN CORE HOLE DRILL WELDON SHORT SERIES.

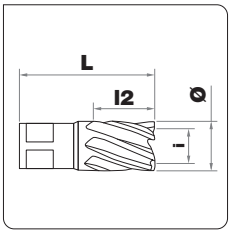
FRESA HUECA HSS TIALN WELDON SERIE CORTA.

FRESA PER CAROTAGGIO HSS, TIAIN ATTACCO WELDON, CORTA.

HSS | TiAIN COATED | TIVOLY NORM

Z 4-14 | WELDON 19mm





For stainless steels and steels drilling, comfort, speed, life span.

Taladrado de aceros e inoxidables. Confort, rapidez, duración de vida.

Foratura di acciai e inox. Comfort e velocità di taglio. Lunga durata.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

1037001	EAN	Ø	L	l2	i	Z	QTY	PCB
10370011200	3221910824945	12	60	30	6	4	1	1
10370011300	3221910824952	13	60	30	6	4	1	1
10370011400	3221910824969	14	60	30	6	4	1	1
10370011500	3221910824976	15	60	30	6	4	1	1
10370011600	3221910824983	16	60	30	7	5	1	1
10370011700	3221910824990	17	60	30	8	5	1	1
10370011800	3221910825003	18	60	30	9	5	1	1
10370011900	3221910825010	19	60	30	10	5	1	1
10370012000	3221910825027	20	60	30	11	5	1	1
10370012100	3221910825034	21	60	30	12	5	1	1
10370012200	3221910825041	22	60	30	13	6	1	1
10370012300	3221910825058	23	60	30	14	6	1	1
10370012400	3221910825065	24	60	30	15	6	1	1
10370012500	3221910825072	25	60	30	16	6	1	1
10370012600	3221910825089	26	60	30	17	6	1	1
10370012700	3221910825096	27	60	30	18	6	1	1
10370012800	3221910825102	28	60	30	19	8	1	1
10370012900	3221910825119	29	60	30	20	8	1	1
10370013000	3221910825126	30	60	30	21	8	1	1
10370013100	3221910825133	31	60	30	22	8	1	1
10370013200	3221910825140	32	60	30	23	8	1	1
10370013300	3221910825157	33	60	30	24	8	1	1
10370013400	3221910825164	34	60	30	25	10	1	1
10370013500	3221910825171	35	60	30	26	10	1	1
10370013600	3221910825188	36	60	30	27	10	1	1
10370013700	3221910825195	37	60	30	28	10	1	1
10370013800	3221910825201	38	60	30	29	10	1	1
10370013900	3221910825218	39	60	30	30	10	1	1
10370014000	3221910825225	40	60	30	31	12	1	1
10370014100	3221910825232	41	60	30	32	12	1	1
10370014200	3221910825249	42	60	30	33	12	1	1
10370014300	3221910825256	43	60	30	34	12	1	1
10370014400	3221910825263	44	60	30	35	12	1	1
10370014500	3221910825270	45	60	30	36	12	1	1
10370014600	3221910825287	46	60	30	37	14	1	1
10370014700	3221910825294	47	60	30	38	14	1	1
10370014800	3221910825300	48	60	30	39	14	1	1
10370014900	3221910825317	49	60	30	40	14	1	1
10370015000	3221910825324	50	60	30	41	14	1	1



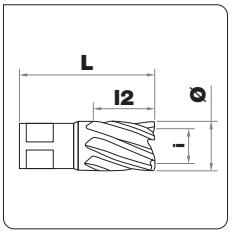
HSS TIALN CORE HOLE DRILL WELDON LONG SERIES.

FRESA HUECA HSS TIALN WELDON SERIE LARGA.

FRESA PER CAROTAGGIO HSS, TIAIN ATTACCO WELDON, LUNGA.

HSS | TiAlN COATED | TIVOLY NORM | Z 4-14 | WELDON 19mm





For stainless steels and steels drilling, comfort, speed, life span.

Taladrado de aceros e inoxidables. Confort, rapidez, duración de vida.

Foratura di acciai e inox. Comfort e velocità di taglio. Lunga durata.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

1037011	EAN	Ø	L	l2	i	Z	QTY	PCB
10370111200	3221910825331	12	80	50	6	4	1	1
10370111300	3221910825348	13	80	50	6	4	1	1
10370111400	3221910825355	14	80	50	6	4	1	1
10370111500	3221910825362	15	80	50	6	4	1	1
10370111600	3221910825379	16	80	50	7	5	1	1
10370111700	3221910825386	17	80	50	8	5	1	1
10370111800	3221910825393	18	80	50	9	5	1	1
10370111900	3221910825409	19	80	50	10	5	1	1
10370112000	3221910825416	20	80	50	11	5	1	1
10370112100	3221910825423	21	80	50	12	5	1	1
10370112200	3221910825430	22	80	50	13	6	1	1
10370112300	3221910825447	23	80	50	14	6	1	1
10370112400	3221910825454	24	80	50	15	6	1	1
10370112500	3221910825461	25	80	50	16	6	1	1
10370112600	3221910825478	26	80	50	17	6	1	1
10370112700	3221910825485	27	80	50	18	6	1	1
10370112800	3221910825492	28	80	50	19	8	1	1
10370112900	3221910825508	29	80	50	20	8	1	1
10370113000	3221910825515	30	80	50	21	8	1	1
10370113100	3221910825522	31	80	50	22	8	1	1
10370113200	3221910825539	32	80	50	23	8	1	1
10370113300	3221910825546	33	80	50	24	8	1	1
10370113400	3221910825553	34	80	50	25	10	1	1
10370113500	3221910825560	35	80	50	26	10	1	1
10370113600	3221910825577	36	80	50	27	10	1	1
10370113700	3221910825584	37	80	50	28	10	1	1
10370113800	3221910825591	38	80	50	29	10	1	1
10370113900	3221910825607	39	80	50	30	10	1	1
10370114000	3221910825614	40	80	50	31	12	1	1
10370114100	3221910825621	41	80	50	32	12	1	1
10370114200	3221910825638	42	80	50	33	12	1	1
10370114300	3221910825645	43	80	50	34	12	1	1
10370114400	3221910825652	44	80	50	35	12	1	1
10370114500	3221910825669	45	80	50	36	12	1	1
10370114600	3221910825676	46	80	50	37	14	1	1
10370114700	3221910825683	47	80	50	38	14	1	1
10370114800	3221910825690	48	80	50	39	14	1	1
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10370115000	3221910825713	50	80	50	41	14	1	1

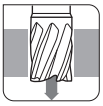


HSS CORE HOLE DRILL WELDON SHORT SERIES.

FRESA HUECA HSS WELDON SERIE CORTA.

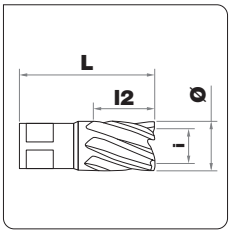
FRESA PER CAROTAGGIO HSS, ATTACCO WELDON, CORTA.

HSS | BRIGHT UNCOATED | TIVOLY NORM



Z 4-14 | WELDON 19mm





For steels drilling.

Taladrado de aceros.

Foratura degli acciai.

AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

P

Composite Plastics
Composites plásticos
Plastiche composite

1037051	EAN	Ø	L	l2	i	Z	QTY	PCB
10370511200	3221910859664	12	60	30	6	4	1	1
10370511300	3221910859671	13	60	30	6	4	1	1
10370511400	3221910859688	14	60	30	6	4	1	1
10370511500	3221910859695	15	60	30	7	4	1	1
10370511600	3221910859701	16	60	30	8	5	1	1
10370511700	3221910859718	17	60	30	9	5	1	1
10370511800	3221910859725	18	60	30	10	5	1	1
10370511900	3221910859732	19	60	30	11	5	1	1
10370512000	3221910859749	20	60	30	12	6	1	1
10370512100	3221910859756	21	60	30	13	6	1	1
10370512200	3221910859763	22	60	30	14	6	1	1
10370512300	3221910859770	23	60	30	15	6	1	1
10370512400	3221910859787	24	60	30	16	6	1	1
10370512500	3221910859794	25	60	30	17	6	1	1
10370512600	3221910859800	26	60	30	18	6	1	1
10370512700	3221910859817	27	60	30	19	6	1	1
10370512800	3221910859824	28	60	30	20	8	1	1
10370513000	3221910859848	30	60	30	22	8	1	1
10370513200	3221910859862	32	60	30	24	8	1	1
10370513500	3221910859893	35	60	30	27	10	1	1
10370513800	3221910859923	38	60	30	30	10	1	1
10370514000	3221910859947	40	60	30	32	12	1	1
10370514200	3221910859961	42	60	30	34	12	1	1
10370514500	3221910859992	45	60	30	37	12	1	1
10370514800	3221910860028	48	60	30	40	14	1	1
10370515000	3221910860042	50	60	30	42	14	1	1



HSS CORE HOLE DRILL WELDON LONG SERIES.

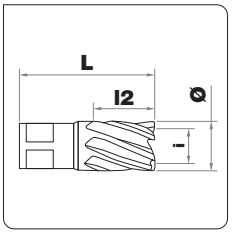
FRESA HUECA HSS WELDON SERIE LARGA.

FRESA PER CAROTAGGIO HSS, ATTACCO WELDON, LUNGA.

HSS | BRIGHT UNCOATED | TIVOLY NORM

Z 4-14 | WELDON 19mm





For steels drilling.

Taladrado de aceros.

Foratura degli acciai.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

P Composite Plastics
Composites plásticos
Plastiche composite

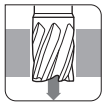
1037061	EAN	Ø	L	l2	i	Z	QTY	PCB
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10370611300	3221910860066	13	80	50	6	4	1	1
10370611400	3221910860073	14	80	50	6	4	1	1
10370611500	3221910860080	15	80	50	7	4	1	1
10370611600	3221910860097	16	80	50	8	5	1	1
10370611700	3221910860103	17	80	50	9	5	1	1
10370611800	3221910860110	18	80	50	10	5	1	1
10370611900	3221910860127	19	80	50	11	5	1	1
10370612000	3221910860134	20	80	50	12	6	1	1
10370612100	3221910860141	21	80	50	13	6	1	1
10370612200	3221910860158	22	80	50	14	6	1	1
10370612300	3221910860165	23	80	50	15	6	1	1
10370612400	3221910860172	24	80	50	16	6	1	1
10370612500	3221910860189	25	80	50	17	6	1	1
10370612600	3221910860196	26	80	50	18	6	1	1
10370612700	3221910860202	27	80	50	19	6	1	1
10370612800	3221910860219	28	80	50	20	8	1	1
10370613000	3221910860233	30	80	50	22	8	1	1
10370613200	3221910860257	32	80	50	24	8	1	1
10370613500	3221910860288	35	80	50	27	10	1	1
10370613800	3221910860318	38	80	50	30	10	1	1
10370614000	3221910860332	40	80	50	32	12	1	1
10370614200	3221910860356	42	80	50	34	12	1	1
10370614500	3221910860387	45	80	50	37	12	1	1
10370614800	3221910860417	48	80	50	40	14	1	1
10370615000	3221910860431	50	80	50	42	14	1	1



SET | FCH04

FCH 04 | WELDON 19mm | 04 PCS

HSS | TiAIN COATED



4 core hole drills HSS TiAlN Ø 12-14-18-22 mm+pilot

ESTUCHE | FCH04



4 fraisas huecas HSS TiAlN Ø 12-14-18-22 mm+expulsores

CASSETTA | FCH04

10370070001

3221910825829

QTY	PCB
4	1

C | FGH | IJ

4 frese per carotaggio HSS TiAlN Ø 12-14-18-22 mm+espulsore

SET | FCH08

FCH 08 | WELDON 19mm | 08 PCS

HSS | TiAIN COATED



8 core hole drills HSS TiAlN Ø 12-14-14-16-18-18-20-22 mm+pilot

ESTUCHE | FCH08



8 fraisas huecas HSS TiAlN Ø 12 -14-14-16-18-18-20-22 mm+expulsores

CASSETTA | FCH08

10370070005

3221910897390

QTY	PCB
8	1

C | FGH | IJ

8 frese per carotaggio HSS TiAlN Ø 12-14-14-16-18-18-20-22 mm+espulsore

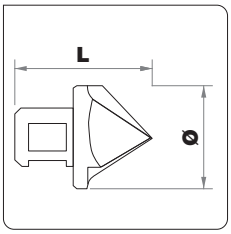
HSS DEBURRING TOOLS WELDON.

HSS | BRIGHT UNCOATED | TIVOLY NORM

Z3 | WELDON 19mm







Universal application, finishing.

FRESA PARA DESBASTAR HSS WELDON.

Uso univeral. Acabado.

FRESA PER SBAVATURA HSS, ATTACCO WELDON.

Uso polivalente per finitura dei fori.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ — Cast iron
Fundiciones
Ghisa

P — Composite Plastics
Composites plásticos
Plastiche composite

1037031	EAN	Ø	L	Z	QTY	PCB
10370312500	3221910825782	25	43	3	1	1
10370313000	3221910825799	30	47	3	1	1
10370314000	3221910825805	40	52	3	1	1
10370315500	3221910825812	55	63	4	1	1



PILOT PIN FOR CORE HOLE DRILL.

EXPULSORES PARA FRESA HUECA.

PILOTA DI GUIDA PER FRESA DI CAROTAGGIO.

TIVOLY NORM | WELDON 19mm



Pointing before drilling and core ejection.

Punteado previo al taladrado y extractor.

Guida di foratura ed estrazione materiale.

1111121	EAN	Ø	L	QTY	PCB
11111210001	3221910825720	6.34	77	1	1
11111210002	3221910825737	6.34	103	1	1



ADAPTER FEIN => WELDON.

ADAPTADOR FEIN A WELDON.

ADATTATORE CM => WELDON.

TIVOLY NORM | WELDON 19mm | FEIN QUICK-IN



For use with Weldon core hole drill on Fein machine.

Para uso con fresas huecas Weldon en máquinas Fein.

Per l'uso delle frese carotatrici Weldon su macchine Fein.

1111151	EAN	Ø	F	QTY	PCB
11111510001	3221910843526	19	18	1	1



ARBOR HOLDERS CM => WELDON.

ADAPTADORES DE CM A WELDON.

ADATTATORE CM => WELDON.

TIVOLY NORM

WELDON 19mm



For use with Weldon core hole drill on CM column drill.

Para uso con fresas huecas Weldon en taladros de columnas.

Per l'uso delle frese carotatrici Weldon su foratrici a colonna CM.

1111131	EAN	Ø	CM	QTY	PCB
11111310002	3221910825744	19	2	1	1
11111310003	3221910825751	19	3	1	1



ARBOR HOLDERS WITH LUB. CM => WELDON.

ADAPTADORES DE CM A WELDON CON SIST. DE LUBRICACIÓN INTEGRADO.

ADATTATORE CM => WELDON CON LUBRIFICAZIONE.

TIVOLY NORM

WELDON 19mm

LUB



For use with Weldon core hole drill on CM column drill.

Para uso con fresas huecas Weldon en taladros de columnas.

Per l'uso delle frese carotatrici Weldon su foratrici a colonna CM.

1111141	EAN	Ø	CM	QTY	PCB
11111410002	3221910825768	19	2	1	1
11111410003	3221910825775	19	3	1	1



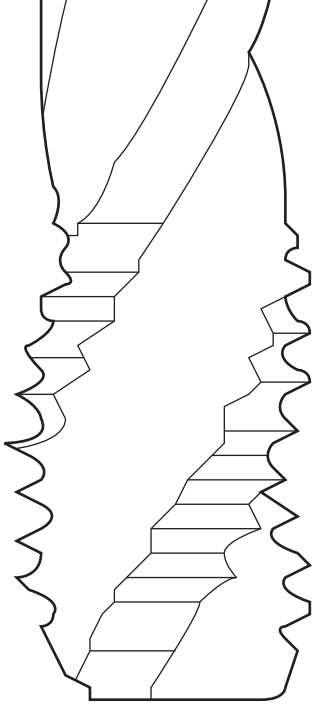
GENE-
RAL
CATALOGUE

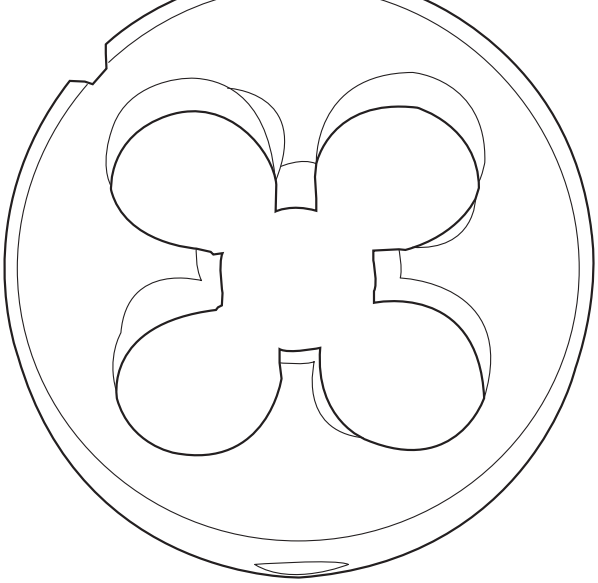
TAPPING & THREADING

ROSCADO & COJINETES

MASCHATURA & FELETTATURA

#03/07





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

REGULAR TAPS 180 #03
MACHOS REGULAR
MASCHIO REGULAR

GENERAL PURPOSE TAPS 236 #03
MACHOS MULTI-APLICACIONES
MASCHIO MULTI-APPLICAZIONE

HI-PERFORMANCE FLASH-CUT TAPS 248 #03
MACHOS HI-PERFORMANCE FLASH-CUT
MASCHIO HI-PERFORMANCE FLASH-CUT

DIES 274 #03
COJINETES
FILIERA

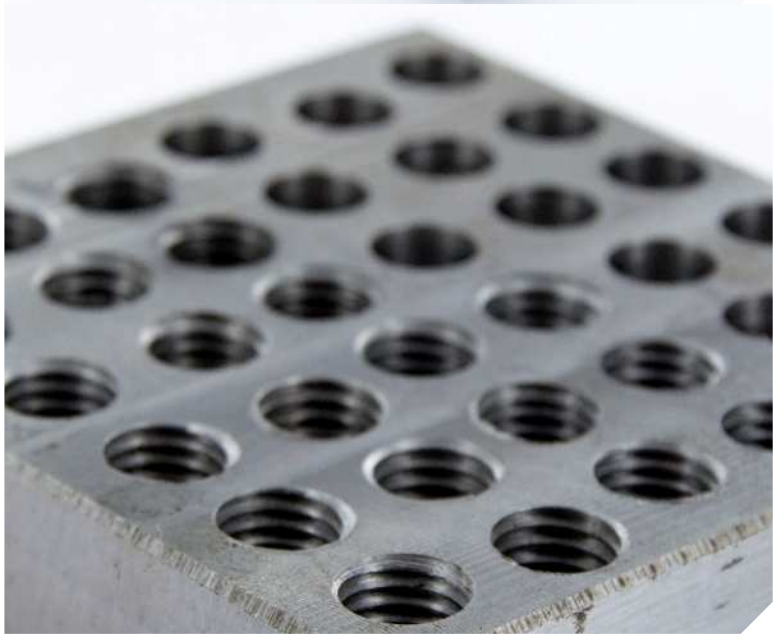
ACCESSORIES & SETS 286 #03
ACCESORIOS & ESTUCHES
ACCESORI & COFANETTI

Polyvalence de fonctionnement dans les principales matières utilisées :
aciers doux, aciers pour traitement thermique, fontes, aciers inoxydables austénitiques (304L/316L), aluminium profilés ou plats.

Tapping in standard steel, stainless steel and aluminium.







professionnel@tivoly.com

TIVOLY

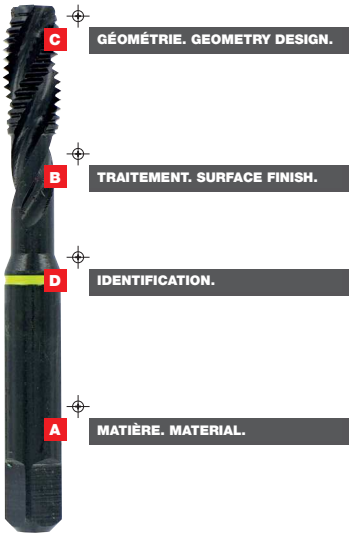
TARAUDS MULTI-APPLICATIONS
GENERAL PURPOSE TAPS

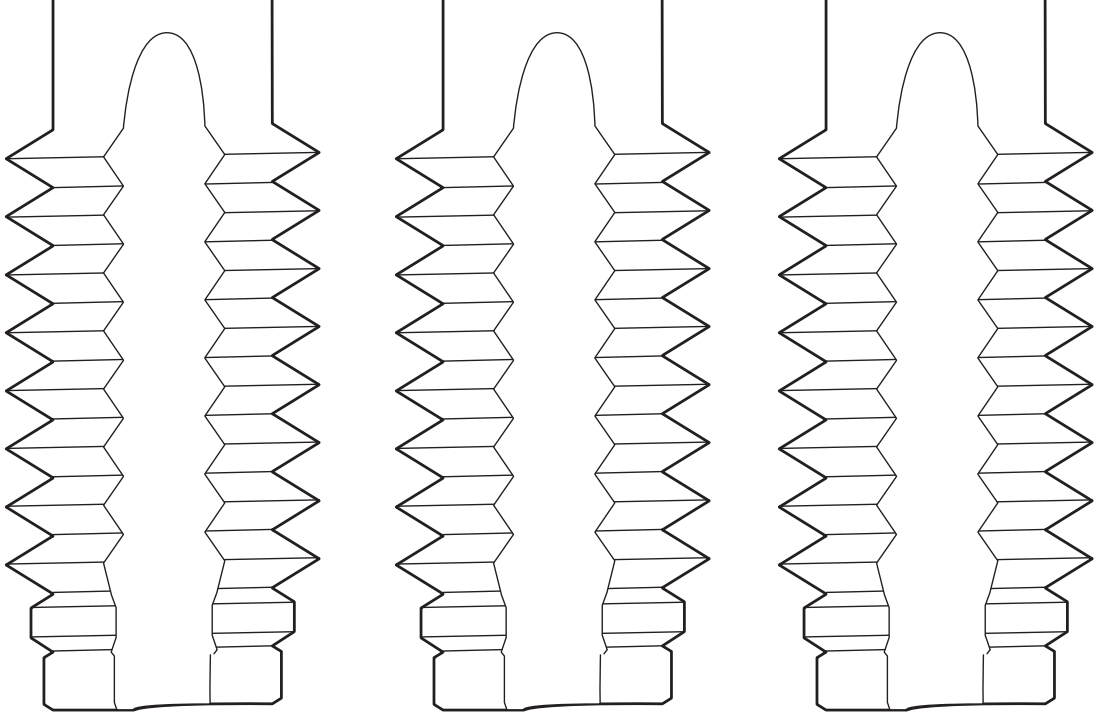
Tivoly® a conçu des géométries spéciales multi applications. Des angles de coupe spécifiques associés à des profils spéciaux (progressivité ou conicité arrière) confèrent aux tarauds multi applications Tivoly® des performances élevées et constantes quel que soit la matière usinée.

- Réduction de la friction
- Evacuation des copeaux facilitée
- Sortie du tarauds aisée
- Réduction des sollicitation sur les derniers filets.

Tivoly offers a new range specially designed for general purpose applications.
With a geometry design optimised for general purpose applications (specific cutting angles for special profiles, progressive cutting or reverse cones) Tivoly®'s general purpose taps guarantee high quality and consistent performance in all types of material.

- reduces friction and cutting tool wear
- optimised swarf removal
- reduced stoppages
- smooth accurate tapping.





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

REGULAR - HAND TAPS M-MF 180 #03
REGULAR - MACHOS DE MAANO M-MF
REGULAR - MASCHI A MANO M-MF

REGULAR - HAND TAPS UNC-UNF 184 #03
REGULAR - MACHOS DE MAANO-UNF
REGULAR - MASCHI A MANO UNC-UNF

REGULAR - HAND TAPS BSW-BSF 186 #03
REGULAR - MACHOS DE MAANO BSW-BSF
REGULAR - MASCHI A MANO BSW-BSF

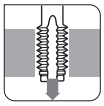
REGULAR - HAND TAPS BSP G 188 #03
REGULAR - MACHOS DE MAANO BSP G
REGULAR - MASCHI A MANO BSP G

SET OF 3 HSS DIN HAND TAPS | T LINE

JUEGO DE 3 MACHOS DE MANO HSS DIN | T LINE

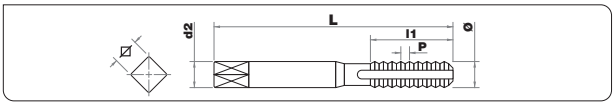
SERIE DI 3 MASCHI A MANO HSS ISO | T LINE

HSS | BRIGHT UNCOATED | DIN 352





x3 SET | C FORM | 6H | M



Steels hand tapping.

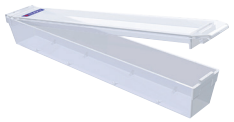
Roscado manual de aceros.

Filettatura manuale degli acciai.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1050051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
1050051030050	3221910551360	M3	0.5	40	11	3.5	352	1	1
1050051040070	3221910551384	M4	0.7	45	13	4.5	352	1	1
1050051050080	3221910551414	M5	0.8	50	15	6	352	1	1
1050051060100	3221910551445	M6	1	50	16	6	352	1	1
1050051070100	3221910551469	M7	1	50	19	6	352	1	1
1050051080125	3221910551483	M8	1.25	56	22	6	352	1	1
1050051100150	3221910551513	M10	1.5	70	24	7	352	1	1
1050051120175	3221910551544	M12	1.75	75	29	9	352	1	1
1050051140200	3221910551568	M14	2	80	30	11	352	1	1
1050051160200	3221910551575	M16	2	80	32	12	352	1	1
1050051180250	3221910551582	M18	2.5	95	40	16	352	1	1
1050051200250	3221910551599	M20	2.5	90	40	16	352	1	1
1050051220250	3221910551605	M22	2.5	100	40	18	352	1	1
1050051240300	3221910853310	M24	3	110	45	18	352	1	1
1050051270300	3221910853327	M27	3	110	50	20	352	1	1
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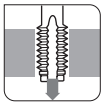


SET OF 3 HSS DIN HAND TAPS.

JUEGO DE 3 MACHOS DE MANO HSS DIN.

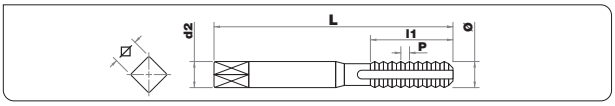
SERIE DI 3 MASCHI A MANO HSS DIN.

HSS | BRIGHT UNCOATED | DIN 352





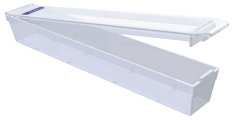
x3 SET | A FORM | 6H | M



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

1501511	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
150151100200040	3221912005168	M2	0.4	36	9	2.8	352	1	1
150151100250045	3221912005175	M2,5	0.45	40	10	2.8	352	1	1
150151100300050	3221912005182	M3	0.5	40	11	3.5	352	1	1
150151100350060	3221912005199	M3,5	0.6	45	13	4	352	1	1
150151100400070	3221912005205	M4	0.7	45	13	4.5	352	1	1
150151100500080	3221912005212	M5	0.8	50	15	6	352	1	1
150151100600100	3221912005229	M6	1	50	16	6	352	1	1
150151100700100	3221912005236	M7	1	50	19	6	352	1	1
150151100800125	3221912005243	M8	1.25	56	22	6	352	1	1
150151100900125	3221912005250	M9	1.25	63	22	6	352	1	1
150151101000150	3221912005267	M10	1.5	70	24	7	352	1	1
150151101100150	3221912005274	M11	1.5	70	24	8	352	1	1
150151101200175	3221912005281	M12	1.75	75	29	9	352	1	1
150151101400200	3221912005298	M14	2	80	30	11	352	1	1
150151101600200	3221912005304	M16	2	80	32	12	352	1	1
150151101800250	3221912005311	M18	2.5	95	40	14	352	1	1
150151102000250	3221912005328	M20	2.5	95	40	16	352	1	1
150151102200250	3221912005335	M22	2.5	100	40	18	352	1	1
150151102400300	3221912005342	M24	3	110	45	18	352	1	1
150151102700300	3221912005359	M27	3	110	50	20	352	1	1
150151103000350	3221912005366	M30	3.5	125	56	22	352	1	1
150151103300350	3221912005373	M33	3.5	125	56	25	352	1	1
150151103600400	3221912005380	M36	4	150	63	28	352	1	1
150151103900400	3221912005397	M39	4	150	63	32	352	1	1
150151104200450	3221912005403	M42	4.5	150	63	32	352	1	1
150151104500450	3221912005410	M45	4,5	160	70	36	352	1	1
150151105200500	3221912005427	M52	5	180	75	40	352	1	1

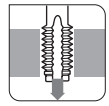


SET OF 2 HSS DIN HAND TAPS.

JUEGO DE 2 MACHOS DE MANO HSS DIN.

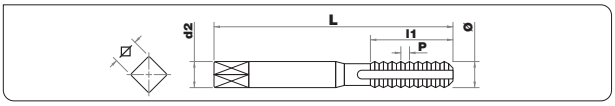
SERIE DI 2 MASCHI A MANO HSS DIN.

HSS | BRIGHT UNCOATED | DIN 2181





x2 SET | C FORM | 6H | MF

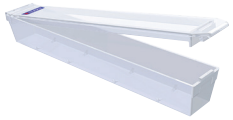


A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

1501521	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
150152100400050	3221912005434	MF4	0,5	50	14,5	6	2181	1	1
150152100500050	3221912005441	MF5	0.5	50	11	6	2181	1	1
150152100600050	3221912005458	MF6	0.5	50	14	6	2181	1	1
150152100600075	3221912005465	MF6	0.75	50	14	6	2181	1	1
150152100700075	3221912005472	MF7	0,75	50	19	6	2181	1	1
150152100800075	3221912005489	MF8	0.75	50	18	6	2181	1	1
150152100800100	3221912005496	MF8	1	56	22	6	2181	1	1
150152101000100	3221912005502	MF10	1	63	18	7	2181	1	1
150152101000125	3221912005519	MF10	1.25	70	24	7	2181	1	1
150152101100100	3221912005526	MF11	1	63	20	8	2181	1	1
150152101200100	3221912005533	MF12	1	70	20	9	2181	1	1
150152101200125	3221912005557	MF12	1.25	70	20	9	2181	1	1
150152101200150	3221912005564	MF12	1.5	70	20	9	2181	1	1
150152101400100	3221912005571	MF14	1	70	22	11	2181	1	1
150152101400125	3221912005588	MF14	1.25	70	22	11	2181	1	1
150152101400150	3221912005595	MF14	1.5	70	22	11	2181	1	1
150152101600100	3221912005601	MF16	1	70	22	12	2181	1	1
150152101600150	3221912005618	MF16	1.5	70	22	12	2181	1	1
150152101800100	3221912005625	MF18	1	80	22	14	2181	1	1
150152101800150	3221912005632	MF18	1.5	80	22	14	2181	1	1
150152101800200	3221912005649	MF18	2	80	22	14	2181	1	1
150152102000100	3221912005656	MF20	1	80	22	16	2181	1	1
150152102000150	3221912005663	MF20	1.5	80	22	16	2181	1	1
150152102000200	3221912005670	MF20	2	80	22	16	2181	1	1
150152102200150	3221912005687	MF22	1.5	80	22	18	2181	1	1
150152102200200	3221912005694	MF22	2	80	22	18	2181	1	1
150152102400150	3221912005700	MF24	1.5	90	22	18	2181	1	1
150152102400200	3221912005717	MF24	2	90	22	18	2181	1	1
150152102700150	3221912005724	MF27	1,5	90	22	20	2181	1	1
150152102700200	3221912005731	MF27	2	90	22	18	2181	1	1
150152103000150	3221912005748	MF30	1.5	90	22	22	2181	1	1
150152103000200	3221912005755	MF30	2	90	22	22	2181	1	1

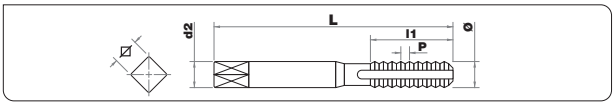


SET OF 3 HSS DIN HAND TAPS LEFT HAND.

JUEGO DE 3 MACHOS DE MANO HSS DIN IZQUIERDAS.

SERIE DI 3 MASCHI A MANO HSS DIN, ELICA SINISTRA.





Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

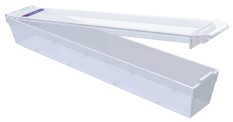
Filettatura manuale multi-applicazione. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

9501081	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
950108100400070	8420609241192	M4	0.7	45	13	4.5	352	1	1
950108100500080	8420609241208	M5	0.8	50	15	6	352	1	1
950108100600100	8420609241215	M6	1	50	16	6	352	1	1
950108100800125	8420609241239	M8	1,25	56	22	6	352	1	1
950108101000150	8420609241253	M10	1,5	70	24	7	352	1	1
950108101200175	8420609241277	M12	1.75	75	29	9	352	1	1
950108101400200	8420609241284	M14	2	80	30	11	352	1	1
950108101600200	8420609241291	M16	2	80	32	12	352	1	1

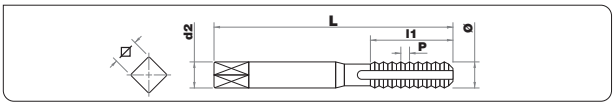


SET OF 3 HSSEE [ASP] ISO HAND TAPS. SERIAL TYPE WITH PILOT.

JUEGO DE MACHOS DE MANO HSSEE (ASP) ISO. Nº1 CON GUÍA.

SERIE DI 3 MASCHI A MANO HSS-EE [ASP] ISO CON GUIDA.





Very high strength, universal application.

Muy alta resistencia, usos múltiples.

Altissima resistenza, polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

9501031	EAN	Ø	P	L	l	d2	ISO	QTY	PCB
950103100300050	8420609240348	M3	0.5	48	11	3.15	529	1	1
950103100400070	8420609240362	M4	0.7	53	13	4	529	1	1
950103100500080	8420609240379	M5	0.8	58	16	5	529	1	1
950103100600100	8420609240386	M6	1	66	19	6.3	529	1	1
950103100800125	8420609240409	M8	1.25	72	22	8	529	1	1
950103101000150	8420609240430	M10	1.5	80	24	10	529	1	1
950103101200175	8420609240447	M12	1.75	89	29	9	529	1	1
950103101400200	8420609240454	M14	2	95	30	11.2	529	1	1
950103101600200	8420609240461	M16	2	102	32	12.5	529	1	1

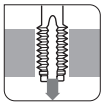


SET OF 3 HSS DIN HAND TAPS

JUEGO DE 3 MACHOS DE MANO HSS DIN.

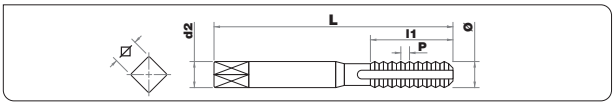
SERIE DI 3 MASCHI A MANO HSS DIN.

HSS | BRIGHT UNCOATED | DIN 352





x3 SET | 6H | UNC



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

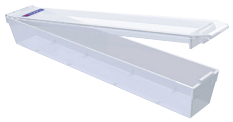
Filettatura manuale multi-applicazione. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

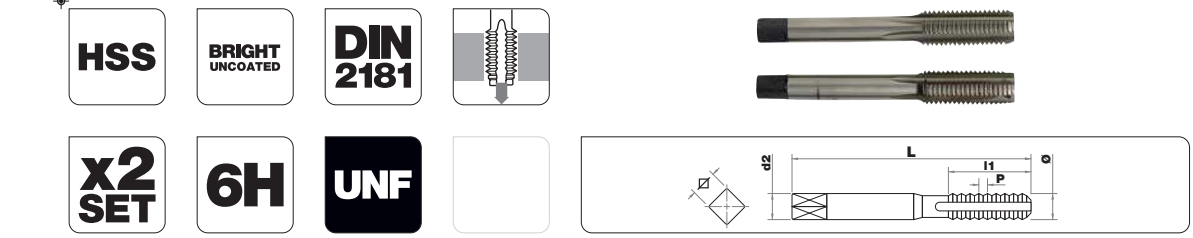
9521011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
952101100002560	8420609249839	N°2	56	36	10	2.8	352	1	1
952101100003480	8420609249846	N°3	48	40	11	3.5	352	1	1
952101100004400	8420609249853	N°4	40	40	11	3.5	352	1	1
952101100005400	8420609249860	N°5	40	40	11	3.5	352	1	1
952101100006320	8420609249877	N°6	32	45	13	4	352	1	1
952101100008320	8420609249884	N°8	32	45	13	4	352	1	1
952101100010240	8420609249891	N°10	24	50	16	6	352	1	1
952101100012240	8420609249907	N°12	24	50	18	6	352	1	1
952101100140200	8420609249921	1/4	20	56	22	6	352	1	1
952101100516180	8420609249976	5/16	18	63	25	6	352	1	1
952101100380160	8420609249952	3/8	16	70	28	7	352	1	1
952101100716140	8420609249990	7/16	14	75	30	8	352	1	1
952101100120130	8420609249914	1/2	13	80	32	9	352	1	1
952101100916120	8420609250019	9/16	12	80	32	11	352	1	1
952101100580110	8420609249983	5/8	11	90	36	12	352	1	1
952101100340100	8420609249945	3/4	10	105	40	14	352	1	1
952101100780090	8420609250002	7/8	9	110	45	18	352	1	1
952101110000080	8420609250026	1"	8	110	50	20	352	1	1



SET OF 2 HSS DIN HAND TAPS.

JUEGO DE 2 MACHOS DE MANO HSS DIN.

SERIE DI 2 MASCHI A MANO HSS DIN.



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

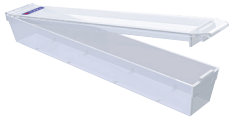
Filettatura manuale multi-applicazione. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

9521021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
952102100003560	8420609250163	N°3	56	40	11	3.5	2181	1	1
952102100004480	8420609250170	N°4	48	40	11	3.5	2181	1	1
952102100005440	8420609250187	N°5	44	40	11	3.5	2181	1	1
952102100006400	8420609250194	N°6	40	45	13	4	2181	1	1
952102100008360	8420609250200	N°8	36	45	13	4	2181	1	1
952102100010320	8420609250217	N°10	32	50	16	6	2181	1	1
952102100012280	8420609250224	N°12	28	50	18	6	2181	1	1
952102100140280	8420609250248	1/4	28	56	22	6	2181	1	1
952102100516240	8420609250279	5/16	24	63	25	6	2181	1	1
952102100380240	8420609250262	3/8	24	70	25	7	2181	1	1
952102100716200	8420609250293	7/16	20	75	30	8	2181	1	1
952102100120200	8420609250231	1/2	20	80	32	9	2181	1	1
952102100916180	8420609250316	9/16	18	90	32	12	2181	1	1
952102100580180	8420609250286	5/8	18	90	32	12	2181	1	1
952102100340160	8420609250255	3/4	16	105	35	14	2181	1	1
952102100780140	8420609250309	7/8	14	110	35	18	2181	1	1
952102110000120	8420609250323	1"	12	110	35	20	2181	1	1



SET OF 3 HSS DIN HAND TAPS

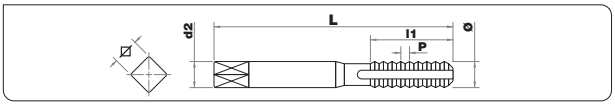
JUEGO DE 3 MACHOS DE MANO HSS DIN

SERIE DI 3 MASCHI A MANO HSS DIN.

HSS | BRIGHT UNCOATED | DIN 352



x3 SET | BSW



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual de aceros.

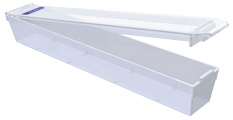
Filettatura manuale multi-applicazione. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

9511011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
951101100180400	8420609247828	1/8	40	40	11	3.5	352	1	1
951101100532320	8420609247880	5/32	32	45	13	4.5	352	1	1
951101100316240	8420609247835	3/16	24	50	16	6	352	1	1
951101100732240	8420609247910	7/32	24	50	18	6	352	1	1
951101100140200	8420609247811	1/4	20	56	22	6	352	1	1
951101100516180	8420609247873	5/16	18	63	25	6	352	1	1
951101100380160	8420609247866	3/8	16	70	28	7	352	1	1
951101100716140	8420609247903	7/16	14	75	30	8	352	1	1
951101100120120	8420609247804	1/2	12	80	32	9	352	1	1
951101100916120	8420609247934	9/16	12	80	32	9	352	1	1
951101100580110	8420609247897	5/18	11	90	36	12	352	1	1
951101100340100	8420609247859	3/4	10	105	40	14	352	1	1
951101100780090	8420609247927	7/8	9	110	45	18	352	1	1
951101110000080	8420609247958	1"	8	110	50	20	352	1	1
951101110140070	8420609247972	1"1/4	7	125	56	25	352	1	1



SET OF 2 HSS DIN HAND TAPS.

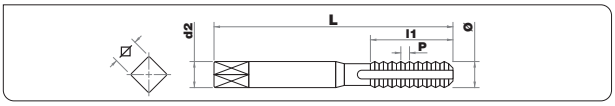
JUEGO DE 2 MACHOS DE MANO HSS DIN.

SERIE DI 2 MASCHI A MANO HSS DIN.

HSS | BRIGHT UNCOATED | DIN 2181 | x2 SET



BSF



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

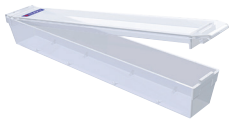
Filettatura manuale multi-applicazione. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

9511021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
951102100140260	8420609248061	1/4	26	56	22	6	2181	1	1
951102100380200	8420609248092	3/8	20	70	28	7	2181	1	1
951102100716180	8420609248122	7/16	18	75	30	8	2181	1	1
951102100120160	8420609248054	1/2	16	80	32	9	2181	1	1
951102100916160	8420609248146	9/16	16	80	32	11	2182	1	1
951102100780110	8420609248139	7/8	19,5	45	18	14,5	2183	1	1
951102110000100	8420609248153	1"	10	110	50	20	2184	1	1



SET OF 2 HSS DIN HAND TAPS.

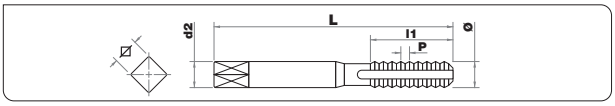
JUEGO DE 2 MACHOS DE MANO HSS DIN.

SERIE DI 2 MASCHI A MANO HSS DIN.

HSS | BRIGHT UNCOATED | DIN 5157 | x2 SET



BSP G



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

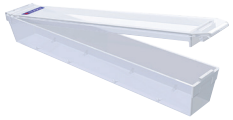
Filettatura manuale multi-applicazione. Robustezza e precisione.

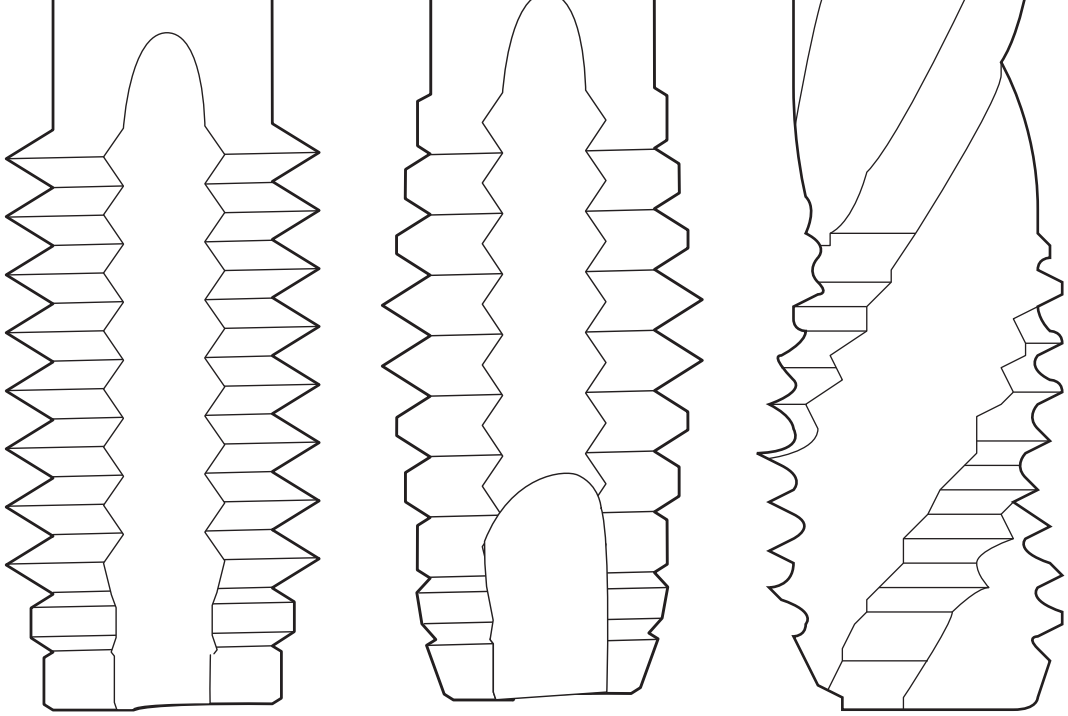
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

9531021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
953102100180280	8420609252716	1/8	28	63	18	7	5157	1	1
953102100140190	8420609252709	1/4	19	70	20	11	5157	1	1
953102100380190	8420609252730	3/8	19	70	20	12	5157	1	1
953102100120140	8420609252693	1/2	14	80	22	16	5157	1	1
953102100580140	8420609252747	5/8	14	80	22	18	5157	1	1
953102100340140	8420609252723	3/4	14	90	22	20	5157	1	1
953102100780140	8420609252754	7/8	14	90	22	22	5157	1	1
953102110000110	8420609252761	1"	11	100	25	25	5157	1	1
953102110180110	8420609252792	1"1/8	11	125	32	28	5157	1	1
953102110140110	8420609252785	1"1/4	11	125	32	32	5157	1	1
953102110380110	8420609252815	1"3/8	11	125	32	36	5157	1	1
953102110120110	8420609252778	1"1/2	11	140	32	36	5157	1	1
953102120000110	8420609252822	2"	11	160	36	45	5157	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

REGULAR - MACHINE TAP M-MF 190 #03
REGULAR - MACHOS MAQUINA M-MF
REGULAR - MASCHIO A MACCHINA M-MF

REGULAR - MACHINE TAP UNC-UNF 216 #03
REGULAR - MACHOS MAQUINA UNC-UNF
REGULAR - MASCHIO A MACCHINA UNC-UNF

REGULAR - MACHINE TAP BSW-BSF 224 #03
REGULAR - MACHOS MAQUINA BSW-BSF
REGULAR - MASCHIO A MACCHINA BSW-BSF

REGULAR - MACHINE TAP BSP G 228 #03
REGULAR - MACHOS MAQUINA BSP G
REGULAR - MASCHIO A MACCHINA BSP G

REGULAR - MACHINE TAP NPT 232 #03
REGULAR - MACHOS MAQUINA NPT
REGULAR - MASCHIO A MACCHINA NPT

REGULAR - MACHINE TAP BSPT Rc 233 #03
REGULAR - MACHOS MAQUINA BSPT RC
REGULAR - MASCHIO A MACCHINA BSPT RC

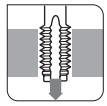
REGULAR - TARAUDS MACHINE PG 234 #03
REGULAR - MACHOS MAQUINA PG
REGULAR - MASCHIO A MACCHINA PG

HSSE DIN MACHINE TAP STRAIGHT.

MACHO DE MÁQUINA HSSE DIN RECTO.

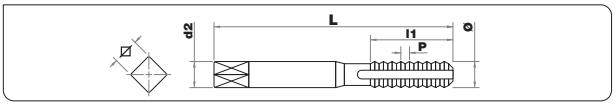
MASCHIO A MACCHINA HSS-E DIN DRITTO.

HSS E | BRIGHT UNCOATED | DIN 371





C FORM | 6H | M MF



Metal tapping. Short filings. Robustness, accuracy.

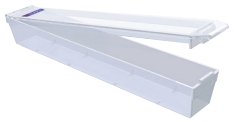
Roscado de metales de viruta corta. Confort, precisión.

Filettatura dei metalli a truciolo corto. Robustezza e precisione.

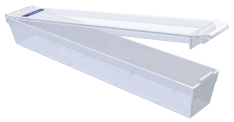
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

9602011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960201100200040	8420609297670	M2	0.4	45	8	2.8	371	1	1
960201100250045	8420609297694	M2,5	0.45	50	9	2.8	371	1	1
960201100260045	8420609297700	M2,6	0.45	50	9	2.8	371	1	1
960201100300050	8420609297717	M3	0.5	56	10	3.5	371	1	1
960201100350060	8420609297724	M3,5	0.6	56	11	4	371	1	1
960201100400070	8420609297762	M4	0.7	63	12	4.5	371	1	1
960201100500080	8420609297816	M5	0.8	70	14	6	371	1	1
960201100600100	8420609297854	M6	1	80	16	6	371	1	1
960201100800125	8420609297908	M8	1.25	90	18	8	371	1	1
960201101000150	8420609297960	M10	1.5	100	20	10	371	1	1



9602011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960201100400050	8420609297755	MF4	0.5	63	10	4.5	371	1	1
960201100500050	8420609297793	MF5	0.5	70	11	6	371	1	1
960201100700075	8420609297861	MF7	0.75	80	16	7	371	1	1
960201100800075	8420609297885	MF8	0.75	90	18	8	371	1	1
960201100800100	8420609297892	MF8	1	90	18	8	371	1	1
960201101000100	8420609297946	MF10	1	100	20	10	371	1	1
960201101000125	8420609297953	MF10	1.25	100	20	10	371	1	1



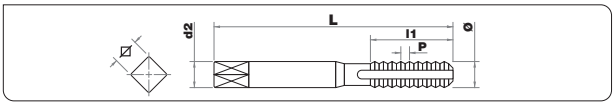
HSSE DIN MACHINE TAP STRAIGHT.

MACHO DE MÁQUINA HSSE DIN RECTO.

MASCHIO A MACCHINA HSS-E DIN DRITTO.

HSS E | BRIGHT UNCOATED | DIN 374/376 | C FORM | 6H | M MF





Metal tapping. Short filings. Robustness, accuracy.

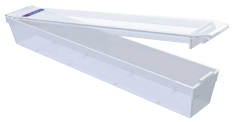
Roscado de metales de viruta corta. Confort, precisión.

Filettatura dei metalli a truciolo corto. Robustezza e precisione.

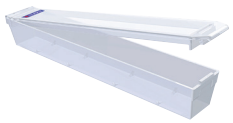
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

9603011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960301100300050	8420609303944	M3	0.4	45	8	2.2	376	1	1
960301100400070	8420609303982	M4	0.7	63	12	2.8	376	1	1
960301100500080	8420609304019	M5	0.8	70	14	3.5	376	1	1
960301100600100	8420609304040	M6	1	80	16	4.5	376	1	1
960301100800125	8420609304095	M8	1.25	90	18	6	376	1	1
960301101000150	8420609304163	M10	1.5	100	20	7	376	1	1
960301101200175	8420609304248	M12	1.75	110	22	9	376	1	1
960301101400200	8420609304323	M14	2	10	25	11	376	1	1
960301101600200	8420609304408	M16	2	110	28	12	376	1	1
960301102000250	8420609304507	M20	2.5	140	32	16	376	1	1
960301102400300	8420609304606	M24	3	160	32	18	376	1	1
960301103000350	8420609304729	M30	3.5	180	40	22	376	1	1
960301103300350	8420609304774	M33	3.5	180	40	25	376	1	1
960301103600400	8420609304835	M36	4	200	45	28	376	1	1
960301103900400	8420609304873	M39	4	200	45	32	376	1	1
960301104200450	8420609304934	M42	4.5	200	50	32	376	1	1
960301104500450	8420609304972	M45	4.5	220	50	36	376	1	1
960301104800500	8420609304989	M48	5	250	56	36	376	1	1



9603011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960301100600075	8420609304033	MF6	0.75	80	12	4.5	376	1	1
960301100800100	8420609304088	MF8	1	90	18	8	374	1	1
960301101000100	8420609304149	MF10	1	90	18	7	374/6	1	1
960301101000125	8420609304156	MF10	1.25	100	20	7	374/6	1	1
960301101200100	8420609304217	MF12	1	100	22	9	374/6	1	1
960301101200125	8420609304224	MF12	1,25	100	22	9	374/6	1	1
960301101200150	8420609304231	MF12	1.5	100	22	9	374/6	1	1
960301101300100	8420609304255	MF13	1	100	22	9	374/6	1	1
960301101400100	8420609304293	MF14	1	100	22	11	374/6	1	1
960301101400150	8420609304316	MF14	1.5	100	22	11	374/6	1	1
960301101500100	8420609304330	MF15	1	100	22	11	374/6	1	1
960301101600100	8420609304378	MF16	1	100	22	12	374/6	1	1
960301101600125	8420609304385	MF16	1.25	100	22	12	374/6	1	1
960301101600150	8420609304392	MF16	1.5	110	22	12	374/6	1	1
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960301102000100	8420609304460	MF20	1	125	25	14	374/6	1	1
960301102000150	8420609304484	MF20	1	125	25	16	374/6	1	1
960301102200100	8420609304514	MF22	1	125	25	18	374/6	1	1
960301102200150	8420609304538	MF22	1.5	125	25	18	374/6	1	1
960301102400200	8420609304590	MF24	2	140	25	18	374/6	1	1
960301102500150	8420609304613	MF25	1.5	140	25	18	374/6	1	1
960301102700200	8420609304668	MF27	2	140	25	18	374/6	1	1
960301103000200	8420609304712	MF30	2	150	32	22	374/6	1	1
960301103200150	8420609304736	MF32	1.5	150	28	28	374/6	1	1
960301103600150	8420609304804	MF36	1.5	170	32	28	374/6	1	1
960301104000150	8420609304880	MF40	1.5	170	32	32	374/6	1	1

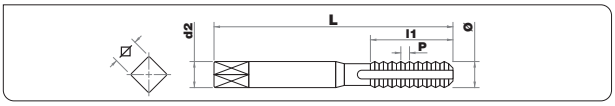


HSS EE [ASP] DIN MACHINE TAP STRAIGHT FLUTE STEAM.

MACHO MÁQUINA HSSEE [ASP] DIN CANAL RECTO.STEAM.

MASCHIO A MACCHINA HSS-EE [ASP] DIN STEAM DRITTO.





Tap cast iron. Robustness, accuracy.

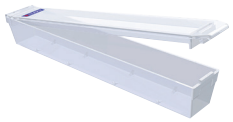
Fundición. Confort, precisión.

Filettatura ghise. Robustezza e precisione.

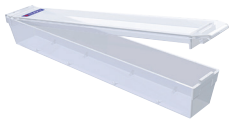
I Grey cast iron
Fundición gris
ghisa grigia

J SG iron
Fundición nodular
Ghisa GS

9605411	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960541100300050	8420609320767	M3	0.5	56	10	3.5	371	1	1
960541100350060	8420609320774	M3,5	0.6	56	11	4	371	1	1
960541100400070	8420609320781	M4	0.7	63	12	4.5	371	1	1
960541100500080	8420609320804	M5	0.8	70	14	6	371	1	1
960541100600100	8420609320811	M6	1	80	16	6	371	1	1
960541100800125	8420609320842	M8	1.25	90	18	8	371	1	1
960541101000150	8420609320880	M10	1.5	100	20	10	371	1	1



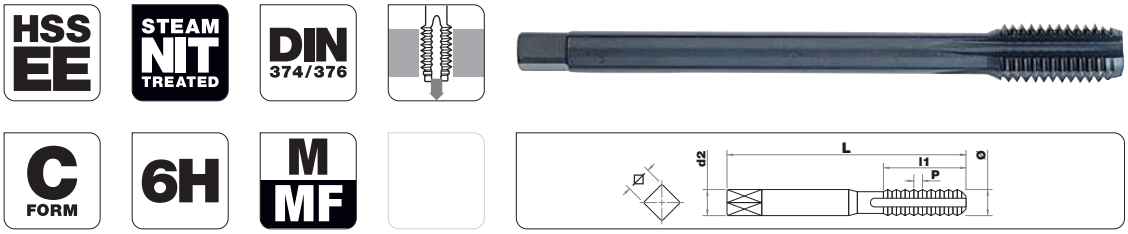
9605411	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960541100800100	8420609320835	MF8	1	90	18	8	371	1	1
960541101000100	8420609320866	MF10	1	90	18	10	371	1	1



HSS EE [ASP] DIN MACHINE TAPS. STRAIGHT FLUTE STEAM.

MACHO MÁQUINA HSSEE [ASP] DIN CANAL RECTO.STEAM.

MASCHIO A MACCHINA HSS-EE [ASP] DIN STEAM DRITTO.



Tap cast iron. Robustness, accuracy.

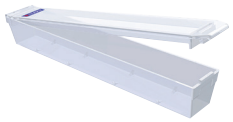
Fundición. Confort, precisión.

Filettatura ghise. Robustezza e precisione.

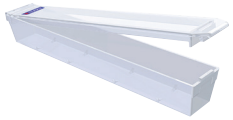
I Grey cast iron
Fundición gris
ghisa grigia

J SG iron
Fundición nodular
Ghisa GS

9606411	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960641100600100	8420609326981	M6	1	80	16	4.5	376	1	1
960641100800125	8420609327025	M8	1.25	90	18	6	376	1	1
960641101000150	8420609327063	M10	1.5	100	20	7	376	1	1
960641101200175	8420609327117	M12	1.75	110	22	9	376	1	1
960641101400200	8420609327131	M14	2	110	25	11	376	1	1
960641101600200	8420609327155	M16	2	110	28	12	376	1	1



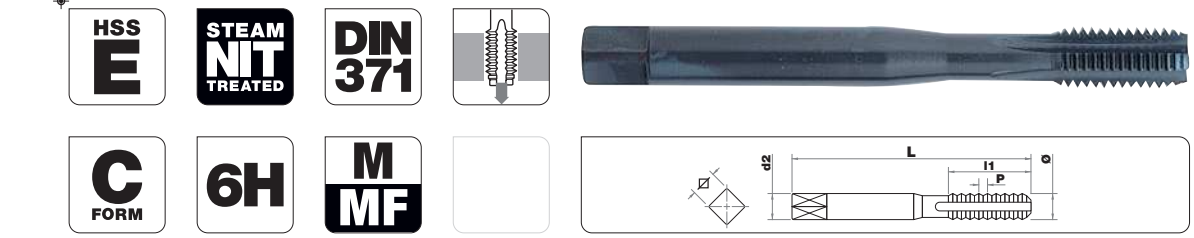
9606411	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960641100800100	8420609327018	MF8	1	90	18	6	374	1	1
960641101000100	8420609327049	MF10	1	90	18	7	374	1	1
960641101200150	8420609327100	MF12	1.5	100	22	11	374	1	1
960641101400150	8420609327124	MF14	1.5	100	22	11	374	1	1
960641101600150	8420609327148	MF16	1.5	110	22	12	374	1	1



HSS E DIN MACHINE TAP STRAIGHT FLUTE STEAM.

MACHO MÁQUINA HSSE DIN CANAL RECTO.STEAM.

MASCHIO A MACCHINA HSS DIN STEAM DRITTO.



Tap cast iron. Comfort, accuracy.

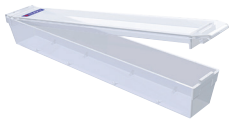
Fundición. Confort, precisión.

Filettatura ghise. Comfort e precisione.

I Grey cast iron
Fundición gris
ghisa grigia

J SG iron
Fundición nodular
Ghisa GS

9602411	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960241100300050	8420609301421	M3	0.5	56	10	3.5	371	1	1
960241100400070	8420609301469	M4	0.7	63	12	4.5	371	1	1
960241100500080	8420609301513	M5	0.8	70	14	6	371	1	1
960241100600100	8420609301551	M6	1	80	16	6	371	1	1
960241100800125	8420609301605	M8	1.25	90	18	8	371	1	1
960241101000150	8420609301674	M10	1.5	100	20	10	371	1	1

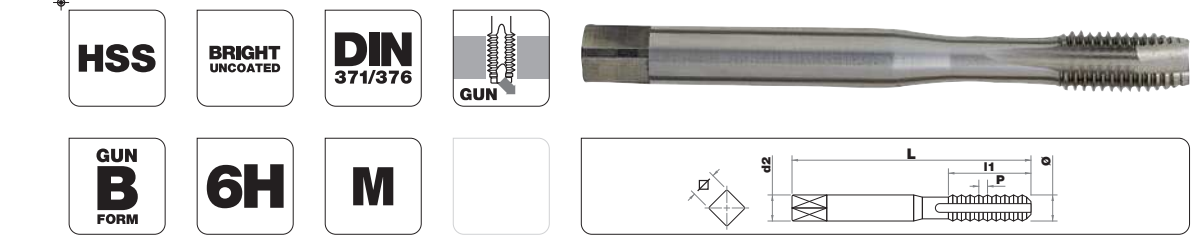


9602411	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960241101000100	8420609301650	MF10	1	90	18	10	371	1	1
960241101000125	8420609301667	MF10	1.25	100	20	10	371	1	1

HSS DIN MACHINE TAP GUN | T LINE

MACHO MÁQUINA HSS DIN GUN | T LINE

MASCHIO A MACCHINA HSS DIN GUN | T LINE



Steel machine tapping.

Roscado a máquina de aceros.

Filettatura a macchina degli acciai.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1050081	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
1050081030050	3221910852450	M3	0.5	56	10	3.5	371	1	1
1050081040070	3221910852467	M4	0.7	63	12	4.5	371	1	1
1050081050080	3221910852474	M5	0.8	70	14	6	371	1	1
1050081060100	3221910852481	M6	1	80	16	6	371	1	1
1050081080125	3221910852498	M8	1.25	90	18	8	371	1	1
1050081100150	3221910852504	M10	1.5	100	20	10	371	1	1
1050081120175	3221910852511	M12	1.75	110	22	9	376	1	1
1050081140200	3221910852528	M14	2	110	25	11	376	1	1
1050081160200	3221910852535	M16	2	110	28	12	376	1	1
1050081180250	3221910852542	M18	2.5	125	32	14	376	1	1
1050081200250	3221910852559	M20	2.5	140	32	16	376	1	1

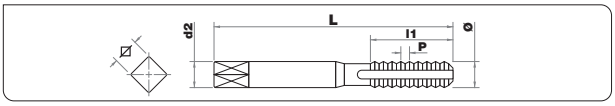


HSS DIN MACHINE TAP GUN. | **MACHO MÁQUINA HSS DIN GUN.** | **MASCHIO A MACCHINA HSS DIN GUN.**

HSS E | BRIGHT UNCOATED | DIN 371/374 376 | GUN



GUN B FORM | 6H | M MF

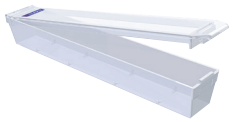


Steel machine tapping. | Roscado a máquina de aceros. | Filettatura a macchina degli acciai.

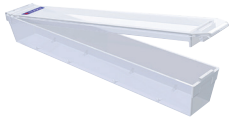
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1602521	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160252100200040	3221912005762	M2	0,40	45	8	2,8	371	1	1
160252100250045	3221912005779	M2,5	0,45	50	9	2,8	371	1	1
160252100300050	3221912005786	M3	0,50	56	10	3,5	371	1	1
160252100400070	3221912005793	M4	0,70	63	12	4,5	371	1	1
160252100500080	3221912005809	M5	0,80	70	14	6	371	1	1
160252100600100	3221912005816	M6	1	80	16	6	371	1	1
160252100800125	3221912005830	M8	1,25	90	18	8	371	1	1
160252101000150	3221912005854	M10	1,5	100	20	10	371	1	1



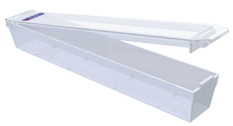
1602521	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160252100800100	3221912005823	MF8	1	90	16	8	371	1	1
160252101000100	3221912005847	MF10	1	100	18	10	371	1	1



1603521	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160352101200175	3221912005984	M12	1,75	110	22	9	376	1	1
160352101400200	3221912006004	M14	2	110	25	11	376	1	1
160352101600200	3221912006011	M16	2	110	28	12	376	1	1
160352101800250	3221912006028	M18	2,5	125	32	14	376	1	1
160352102000250	3221912006035	M20	2,5	140	32	16	376	1	1
160352102400300	3221912006042	M24	3	160	32	18	376	1	1
160352102700300	3221912006059	M27	3	160	36	20	376	1	1
160352103000350	3221912006066	M30	3,5	180	40	22	376	1	1
160352103300350	3221912006073	M33	3,5	180	40	25	376	1	1



1603521	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160352101200150	3221912005977	MF12	1,5	100	22	9	374	1	1
160352101400150	3221912005991	MF14	1,5	100	22	11	374	1	1



MACHINE TAPPING. PRODUCTION.
METRIC/METRIC FINE PITCH.

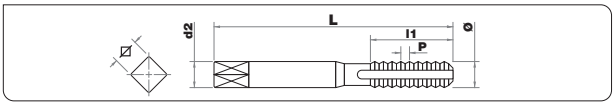
MACHO MÁQUINA HSS EE [ASP] DIN GUN.

MASCHIO A MACCHINA HSS-EE [ASP] DIN GUN.

HSS EE | BRIGHT UNCOATED | DIN 371 | GUN

GUN B FORM | 6H | M MF





HSS EE [ASP] DIN machine tap GUN.

Diseñado para aceros < 950 N/mm². Alto rendimiento.

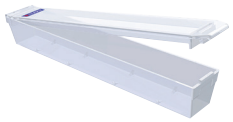
Filettatura degli acciai <950 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

9605021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960502100200040	8420609317880	M2	0.4	45	8	2.8	371	1	1
960502100250045	8420609317897	M2,5	0.45	50	9	2.8	371	1	1
960502100300050	8420609317903	M3	0.5	56	10	3.5	371	1	1
960502100350060	8420609317910	M3,5	0.6	56	11	4	371	1	1
960502100400070	8420609317934	M4	0.7	63	12	4.5	371	1	1
960502100500080	8420609317965	M5	0.8	70	14	6	371	1	1
960502100600100	8420609317989	M6	1	80	16	6	371	1	1
960502100700100	8420609317996	M7	1	80	16	7	371	1	1
960502100800125	8420609318023	M8	1.25	90	18	8	371	1	1
960502101000150	8420609318078	M10	1.5	100	20	10	371	1	1



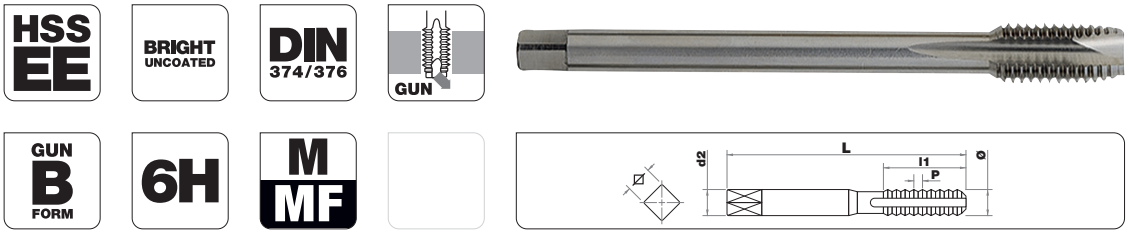
9605021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960502100800100	8420609318016	MF8	1	90	18	8	371	1	1
960502101000100	8420609318054	MF10	1	90	18	10	371	1	1



HSS EE [ASP] DIN MACHINE TAP GUN.

MACHO MÁQUINA HSS EE [ASP] DIN GUN.

MASCHIO A MACCHINA HSS-EE [ASP] DIN GUN.



Steel tapping < 950 N/mm². Robustness, accuracy.

Diseñado para aceros < 950 N/mm². Alto rendimiento.

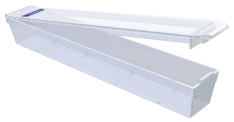
Filettatura degli acciai <950 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

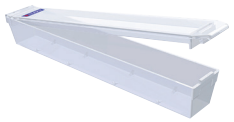
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

9606021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960602100300050	8420609323508	M3	0.45	50	9	2.2	376	1	1
960602100400070	8420609323515	M4	0.7	63	12	2.8	376	1	1
960602100500080	8420609323522	M5	0.8	70	14	3.5	376	1	1
960602100600100	8420609323539	M6	1	80	16	4.5	376	1	1
960602100800125	8420609323560	M8	1.25	90	18	6	376	1	1
960602101000150	8420609323607	M10	1.5	100	20	7	376	1	1
960602101200175	8420609323652	M12	1.75	110	22	9	376	1	1
960602101400200	8420609323683	M14	2	110	25	11	376	1	1
960602101600200	8420609323713	M16	2	110	28	12	376	1	1
960602101800250	8420609323737	M18	2.5	125	32	14	376	1	1



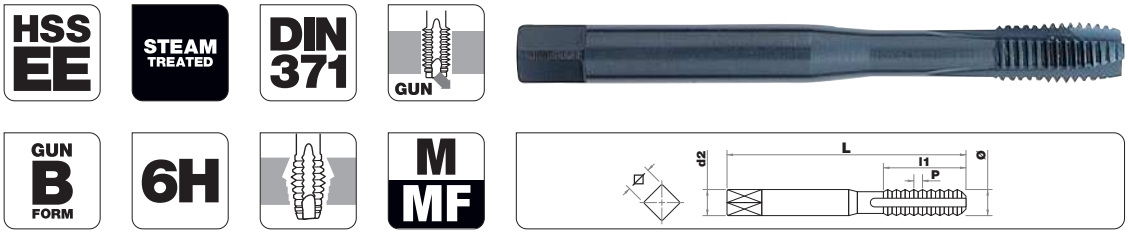
9606021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960602100800100	8420609323553	MF8	1	90	18	6	374	1	1
960602101000100	8420609323584	MF10	1	90	18	7	374	1	1
960602101200150	8420609323645	MF12	1.5	100	22	9	374	1	1
960602101400150	8420609323676	MF14	1.5	100	22	11	374	1	1
960602101600150	8420609323706	MF16	1.5	110	22	12	374	1	1
960602101800150	8420609558221	MF18	1.5	110	25	14	374	1	1



HSS EE [ASP] DIN MACHINE TAPS. GUN STEAM BACK CHAMFER.

MACHO MÁQUINA HSS EE [ASP] DIN. GUN STEAM. CONICIDAD TRASERA.

MASCHIO A MACCHINA HSS-EE [ASP] DIN STEAM GUN.



Stainless steel tapping. Robustness, accuracy.

Roscado de Inoxidables. Robustez, precisión.

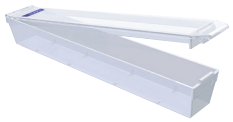
Filettatura acciai inossidabili. Robustezza e precisione.

CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

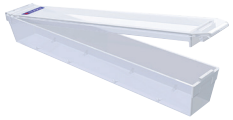
FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi
Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

9605821	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960582100200040	8420609557460	M2	0.4	45	8	2.8	371	1	1
960582100250045	8420609438042	M2,5	0.45	50	9	2.8	371	1	1
960582100300050	8420609322204	M3	0.5	56	10	2.5	371	1	1
960582100350060	8420609322211	M3,5	0.6	56	11	4	371	1	1
960582100400070	8420609322228	M4	0.7	63	12	4.5	371	1	1
960582100500080	8420609322235	M5	0.8	70	14	6	371	1	1
960582100600100	8420609322242	M6	1	80	16	6	371	1	1
960582100800125	8420609322273	M8	1.25	90	18	8	371	1	1
960582101000150	8420609322297	M10	1.5	100	20	10	371	1	1



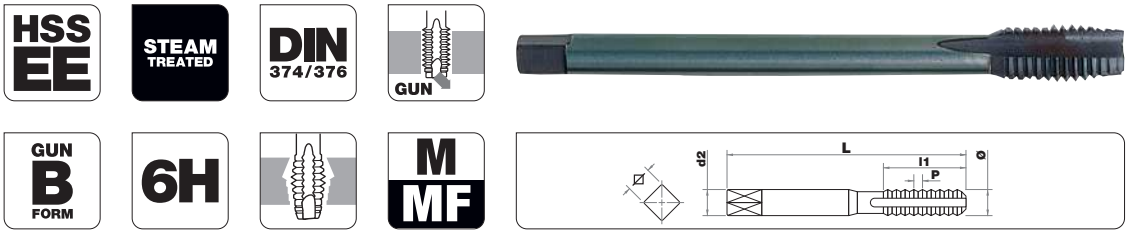
9605821	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960582100800100	8420609322266	MF8	1	90	18	8	371	1	1
960582101000100	8420609322280	MF10	1	90	18	10	371	1	1



HSS EE [ASP] DIN MACHINE TAPS. GUN STEAM BACK CHAMFER.

MACHO MÁQUINA HSS EE [ASP] DIN. GUN STEAM CONICIDAD TRASERA.

MASCHIO A MACCHINA HSS-EE [ASP] DIN STEAM GUN.



Stainless steel tapping. Robustness, accuracy.

Roscado de Inoxidables. Robustez, precisión.

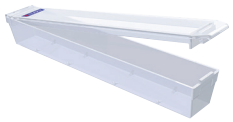
Filettatura acciai inossidabili. Robustezza e precisione.

CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

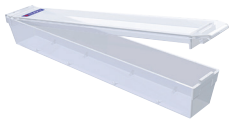
FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi
Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

9606821	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960682100600100	8420609328183	M6	1	80	16	4.5	376	1	1
960682100800125	8420609328213	M8	1.25	90	18	6	376	1	1
960682101000150	8420609328244	M10	1.5	100	20	7	376	1	1
960682101200175	8420609328282	M12	1.75	110	22	9	376	1	1
960682101400200	8420609328305	M14	2	110	25	11	376	1	1
960682101600200	8420609328329	M16	2	110	28	12	376	1	1
960682101800250	8420609328343	M18	2.5	125	32	14	376	1	1
960682102000250	8420609328350	M20	2.5	140	32	16	376	1	1
960682102400300	8420609328398	M24	3	160	32	18	376	1	1



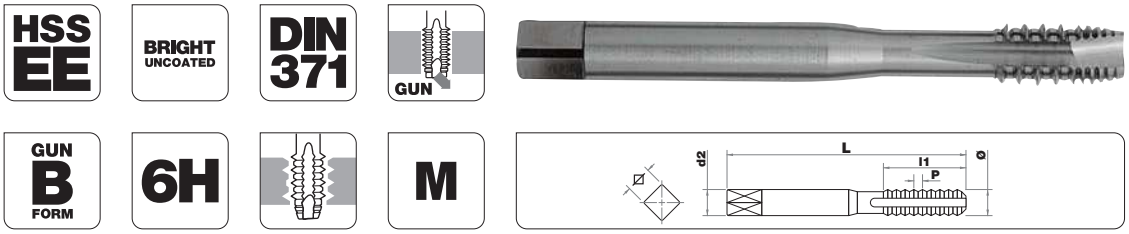
9606821	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960682100800100	8420609328206	MF8	1	90	18	6	374	1	1
960682101000100	8420609328220	MF10	1	90	18	7	374	1	1
960682101200150	8420609328275	MF12	1.5	100	22	9	374	1	1
960682101400150	8420609328299	MF14	1.5	100	22	11	374	1	1
960682101600150	8420609328312	MF16	1.5	110	22	12	374	1	1



HSSEE [ASP] DIN MACHINE TAP GUN INTERRUPTED THREADS.

MACHO DE MÁQUINA HSSEE [ASP] DIN. GUN DIENTE ALTERNO.

MASCHIO A MACCHINA HSS-EE [ASP] DIN DENTI ALTERNATI GUN.



Aluminium tapping. Reduction of adhesive wear. Robustness.

Roscado de aluminio. Reducción del desgaste adhesivo. Robustez.

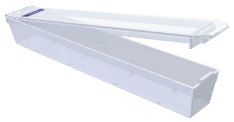
Filettatura alluminio. Riduzione dell'usura adesiva. Robustezza.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

9605081	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960508100300050	8420609318788	M3	0.5	56	10	3.5	371	1	1
960508100400070	8420609318801	M4	0.7	63	12	4.5	371	1	1
960508100500080	8420609318818	M5	0.8	70	14	6	371	1	1
960508100600100	8420609318832	M6	1	80	16	6	371	1	1
960508100700100	8420609318849	M7	1	80	16	7	371	1	1
960508100800125	8420609318863	M8	1.25	90	18	8	371	1	1
960508101000150	8420609318894	M10	1.5	100	20	10	371	1	1



HSSEE [ASP] DIN MACHINE TAP GUN INTERRUPTED THREADS.

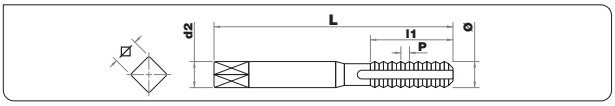
MACHO DE MÁQUINA HSSEE (ASP) DIN. DIENTE ALTERNO, GUN.

MASCHIO A MACCHINA HSS-EE [ASP] DIN DENTI ALTERNATI.

HSS EE | BRIGHT UNCOATED | DIN 374/376 | GUN



GUN B FORM | 6H | M



Aluminium tapping. Reduction of adhesive wear. Robustness.

Roscado de aluminio. Reducción del desgaste adhesivo. Robustez.

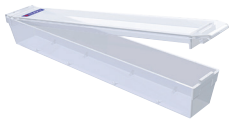
Filettatura alluminio. Riduzione dell'usura adesiva. Robustezza.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

9606081	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960608100600100	8420609324840	M6	1	80	16	4.5	376	1	1
960608100800125	8420609324871	M8	1.25	90	18	8	376	1	1
960608101000150	8420609324901	M10	1.5	100	20	7	376	1	1
960608101200175	8420609324932	M12	1.75	110	22	9	376	1	1
960608101400200	8420609324956	M14	2	110	25	11	376	1	1
960608101600200	8420609324970	M16	2	110	28	12	376	1	1



HSS ISO MACHINE TAP GUN INTERRUPTED THREADS.

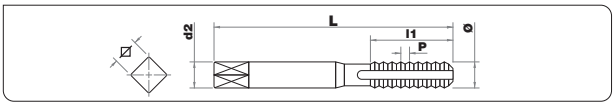
MACHO MÁQUINA HSS ISO GUN DIENTE ALTERNO.

MASCHIO A MACCHINA HSS ISO GUN CON DENTI ALTERNATI.

HSS | BRIGHT UNCOATED | ISO 529 | GUN



GUN B FORM | 6H | M



Tap aluminium. Reduction of adhesive wear.

Roscado de aluminio. Reducción del desgaste adhesivo.

Filettatura dell'alluminio. Riduzione dell'usura adesiva.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

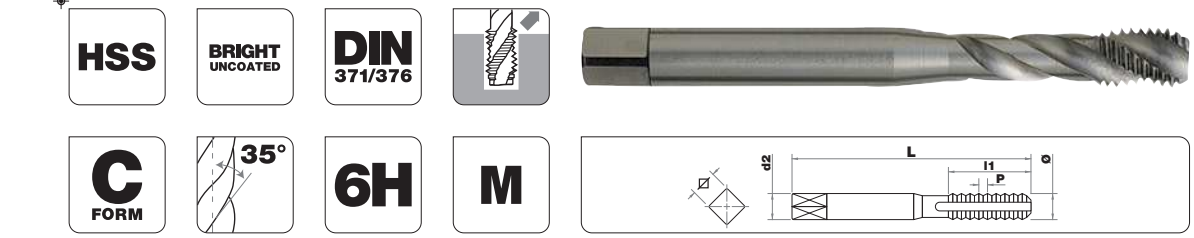
1050091	EAN	Ø	P	L	l	d2	ISO	QTY	PCB
1050091030050	3221910677510	M3	0.5	48	14.5	3.15	529	1	1
1050091040070	3221910677541	M4	0.7	53	13	4	529	1	1
1050091050080	3221910677558	M5	0.8	58	16	5	529	1	1
1050091060100	3221910677572	M6	1	66	19	6.3	529	1	1
1050091080125	3221910677602	M8	1.25	72	22	8	529	1	1
1050091100150	3221910677633	M10	1.5	80	24	10	529	1	1
1050091120175	3221910677640	M12	1.75	89	29	9	529	1	1
1050091140200	3221910677657	M14	2	95	30	11.2	529	1	1
1050091160200	3221910677664	M16	2	102	32	12.5	529	1	1



HSS DIN MACHINE TAP SPIRAL FLUTE 35° | T LINE

MACHO DE MÁQUINA HSS DIN HELICOIDAL 35° | T LINE

MASCHIO A MACCHINA HSS DIN ELICA 35° | T LINE



Steel machine tapping.

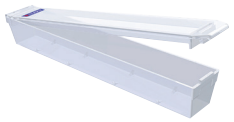
Rosacado a máquina de aceros.

Filettatura a macchina degli acciai.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1050101	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
1050101030050	3221910852566	M3	0.5	56	5	3.5	371	1	1
1050101040070	3221910852573	M4	0.7	63	7	4.5	371	1	1
1050101050080	3221910852580	M5	0.8	70	9	6	371	1	1
1050101060100	3221910852597	M6	1	80	10	6	371	1	1
1050101080125	3221910852603	M8	1.25	90	12	8	371	1	1
1050101100150	3221910852610	M10	1.5	100	14	10	371	1	1
1050101120175	3221910852627	M12	1.75	110	16	9	376	1	1
1050101140200	3221910852634	M14	2	110	18	11	376	1	1
1050101160200	3221910852641	M16	2	110	18	12	376	1	1
1050101180250	3221910852658	M18	2.5	125	25	14	376	1	1
1050101200250	3221910852665	M20	2.5	140	25	16	376	1	1



HSS DIN MACHINE TAP SPIRAL FLUTE 35°.

MACHO DE MÁQUINA HSS DIN HELICOIDAL 35°.

MASCHIO A MACCHINA HSS DIN ELICA 35°.



Steel machine tapping.

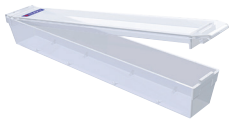
Rosacado a máquina de aceros.

Filettatura a macchina degli acciai.

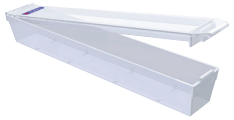
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1602551	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160255100200040	3221912005861	M2	0,4	45	8	2,8	371	1	1
160255100250045	3221912005878	M2,5	0,45	50	5	2,8	371	1	1
160255100300050	3221912005885	M3	0,5	50	5	3,5	371	1	1
160255100400070	3221912005892	M4	0,7	63	7	4,5	371	1	1
160255100500080	3221912005908	M5	0,8	70	9	6	371	1	1
160255100600100	3221912005915	M6	1	80	10	6	371	1	1
160255100800125	3221912005939	M8	1,25	90	12	8	371	1	1
160255101000150	3221912005953	M10	1,5	100	14	10	371	1	1



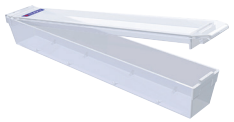
1602551	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160255100800100	3221912005922	MF8	1	90	10	8	371	1	1
160255101000100	3221912005946	MF10	1	100	14	10	371	1	1



1603551	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160355101200175	3221912006097	M12	1,75	110	16	9	376	1	1
160355101400200	3221912006110	M14	2	110	18	11	376	1	1
160355101600200	3221912006127	M16	2	110	18	12	376	1	1
160355101800250	3221912006134	M18	2,5	125	25	14	376	1	1
160355102000250	3221912006141	M20	2,5	140	25	16	376	1	1
160355102400300	3221912006158	M24	3	160	30	18	376	1	1
160355102700300	3221912006165	M27	2	160	30	20	376	1	1
160355103000350	3221912006172	M30	2,5	180	35	22	376	1	1
160355103300350	3221912006189	M33	2,5	180	40	25	376	1	1



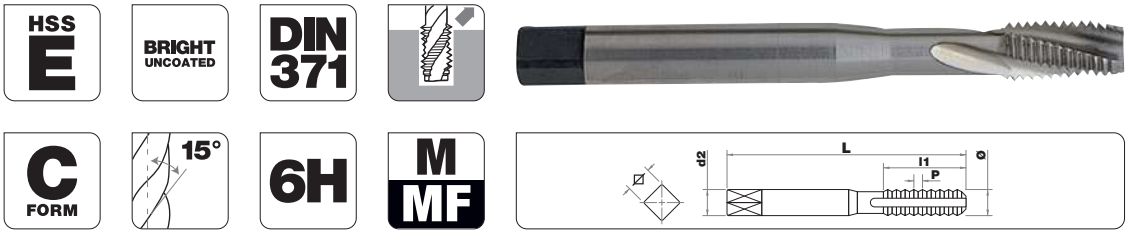
1603551	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
160355101200150	3221912006080	MF12	1,5	100	14	9	374	1	1
160355101400150	3221912006103	MF14	1,50	100	18	11	374	1	1



HSSE DIN MACHINE TAP SPIRAL FLUTE 15°.

MACHO DE MÁQUINA HSSE DIN HELICOIDAL 15°.

MASCHIO A MACCHINA HSS-E DIN ELICA 15°.



High strength steel tapping. Shallow holes. Robustness.

Roscado de aceros resistentes. Orificios poco profundos. Robustez.

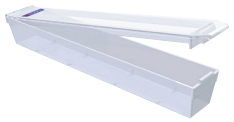
Filettatura degli acciai resistenti. Fori poco profondi. Robustezza.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

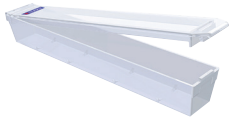
D Heat Treatable Steels <1200N/mm²
Aceros aleados y tratados < 1200N/mm²
Acciai per trattamento termico <1200N/mm²

E Heat Treatable Steels <1400N/mm²
Aceros aleados y tratados < 1400N/mm²
Acciai per trattamento termico <1400N/mm²

9602031	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960203100200040	8420609298318	M2	0.4	45	8	2.1	371	1	1
960203100300050	8420609298332	M3	0.5	56	10	3.5	371	1	1
960203100400070	8420609298363	M4	0.7	63	12	4.5	371	1	1
960203100500080	8420609298400	M5	0.8	70	14	6	371	1	1
960203100600100	8420609298431	M6	1	80	16	6	371	1	1
960203100700100	8420609298455	M7	1	80	16	7	371	1	1
960203100800125	8420609298486	M8	1.25	90	18	8	371	1	1
960203100900125	8420609298509	M9	1.25	90	18	9	371	1	1
960203101000150	8420609298547	M10	1.5	100	20	10	371	1	1



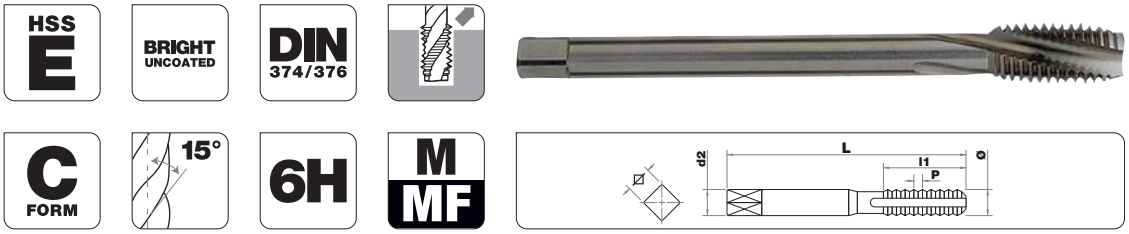
9602031	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960203100500075	8420609298394	MF5	0.75	70	12	6	371	1	1
960203100800100	8420609298479	MF8	1	90	18	8	371	1	1



HSSE DIN MACHINE TAP SPIRAL FLUTE 15°.

MACHO DE MÁQUINA HSSE DIN HELICOIDAL 15°.

MASCHIO A MACCHINA HSS-E DIN ELICA 15°.



High strength steel tapping. Shallow holes. Robustness.

Roscado de aceros resistentes. Orificios poco profundos. Robustez.

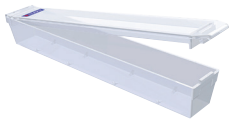
Filettatura degli acciairesistenti. Fori poco profondi. Robustrezza.

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

D Heat Treatable Steels <1200N/mm²
Aceros aleados y tratados < 1200N/mm²
Acciai per trattamento termico <1200N/mm²

E Heat Treatable Steels <1400N/mm²
Aceros aleados y tratados < 1400N/mm²
Acciai per trattamento termico <1400N/mm²

9603031	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960303100400070	8420609306204	M4	0.7	63	12	2.8	376	1	1
960303100500080	8420609306235	M5	0.8	70	14	3.5	376	1	1
960303100600100	8420609306266	M6	1	80	16	4.5	376	1	1
960303100800125	8420609306327	M8	1.25	90	18	6	376	1	1
960303101000150	8420609306396	M10	1.5	100	20	7	376	1	1
960303101200175	8420609306464	M12	1.75	110	22	9	376	1	1
960303101400200	8420609306549	M14	2	110	25	11	376	1	1
960303101600200	8420609306617	M16	2	110	28	12	376	1	1
960303101800250	8420609306662	M18	2.5	125	32	14	376	1	1
960303102000250	8420609306716	M20	2.5	140	32	16	376	1	1
960303102200250	8420609306754	M22	2.5	140	32	18	376	1	1
960303102400300	8420609306808	M24	3	160	32	18	376	1	1
960303102700300	8420609306860	M27	3	160	36	20	376	1	1
960303103000350	8420609306914	M30	3.5	180	40	22	376	1	1



9603031	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960303100800100	8420609306310	MF8	1	90	18	6	374	1	1
960303101000100	8420609306372	MF10	1	90	18	7	374	1	1
960303101000125	8420609306389	MF10	1.25	100	20	7	374	1	1
960303101200100	8420609306433	MF12	1	100	22	9	374	1	1
960303101200125	8420609306440	MF12	1.25	100	22	9	374	1	1
960303101200150	8420609306457	MF12	1.5	100	22	9	374	1	1
960303101400100	8420609306518	MF14	1	100	22	11	374	1	1
960303101400125	8420609306525	MF14	1.25	100	22	11	374	1	1
960303101400150	8420609306532	MF14	1.5	100	22	11	374	1	1
960303101600150	8420609306600	MF16	1.5	110	22	12	374	1	1
960303101800150	8420609306648	MF18	1.5	110	25	14	374	1	1
960303102000150	8420609306693	MF20	1.5	125	25	16	374	1	1
960303102200150	8420609306730	MF22	1.5	125	25	18	374	1	1
960303102400150	8420609306785	MF24	1.5	140	25	18	374	1	1
960303102400200	8420609306792	MF24	2	140	25	18	374	1	1
960303103000150	8420609306891	MF30	1.5	150	32	22	374	1	1

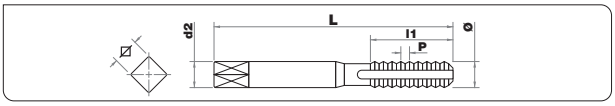


HSSEE [ASP] DIN MACHINE TAPS SPIRAL FLUTE 35°.

MACHO MÁQUINA HSSEE (ASP) DIN HÉL. 35°.

MASCHIO A MACCHINA HSS-EE [ASP] DIN ELICA 35°.





Steel tapping < 950 N/mm². Robustness, accuracy.

Roscado de aceros < 950 N/mm². Robustez, precisión.

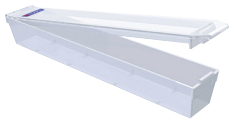
Filettatura degli acciai <950 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

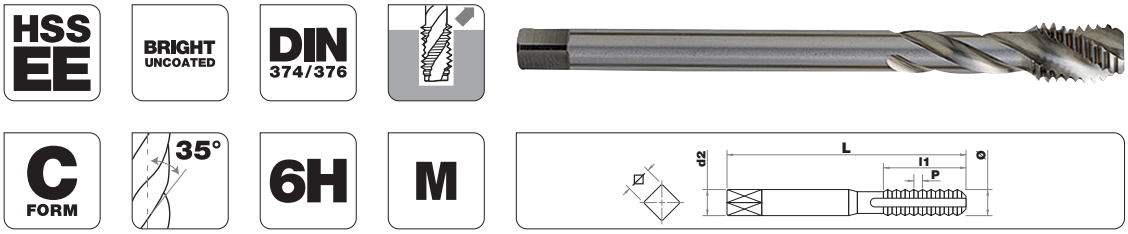
9605051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960505100200040	8420609318368	M2	0.4	45	8	2.8	371	1	1
960505100250045	8420609318375	M2,5	0.45	50	5	2.8	371	1	1
960505100300050	8420609318382	M3	0.5	56	5	3.5	371	1	1
960505100400070	8420609318412	M4	0.7	63	7	4.5	371	1	1
960505100500080	8420609318436	M5	0.8	70	9	6	371	1	1
960505100600100	8420609318450	M6	1	80	10	6	376	1	1
960505100800125	8420609318498	M8	1.25	90	12	8	371	1	1
960505101000150	8420609318528	M10	1.5	100	14	10	371	1	1



HSSEE [ASP] DIN MACHINE TAPS SPIRAL FLUTE 35°.

MACHO MÁQUINA HSSEE (ASP) DIN HÉL. 35°.

MASCHIO A MACCHINA HSS-EE [ASP] DIN ELICA 35°.



Steel tapping < 950 N/mm². Robustness, accuracy.

Roscado de aceros < 950 N/mm². Robustez, precisión.

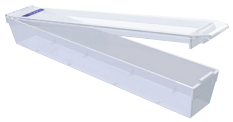
Filettatura degli acciai <950 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

9606051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960605100800125	8420609324253	M8	1.25	90	12	6	376	1	1
960605101000150	8420609324307	M10	1.5	100	14	7	376	1	1
960605101200175	8420609324345	M12	1.75	110	16	9	376	1	1



HSSEE [ASP] DIN MACHINE TAPS SPIRAL FLUTE 35° STEAM BACK CHAMFER.

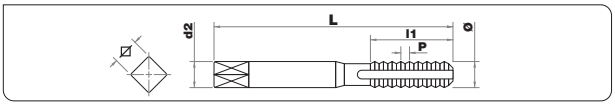
MACHO DE MÁQUINA HSSEE (ASP) DIN, STEAM. CONIC. TRASERA. HÉL. 35°.

MASCHIO A MACCHINA HSS-EE [ASP] DIN STEAM, ELICA 35°.

HSS EE | STEAM TREATED | DIN 371



C FORM | 35° | M MF



Stainless steel tapping. Robustness, accuracy.

Roscado de aceros inoxidables. Robustez, precisión.

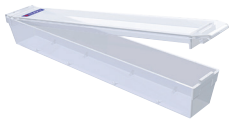
Filettatura acciai inossidabili. Robustezza e precisione.

CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

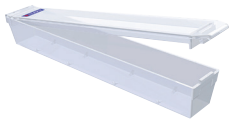
FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi
Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

9605851	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960585100300050	8420609322419	M3	0.5	56	5	3.5	371	1	1
960585100350060	8420609322426	M3,5	0.6	56	6	4	371	1	1
960585100400070	8420609322433	M04	0.7	63	7	4.5	371	1	1
960585100500080	8420609322440	M5	0.8	70	9	6	371	1	1
960585100600100	8420609322457	M6	1	80	10	6	371	1	1
960585100800125	8420609322488	M8	1.25	90	12	8	371	1	1
960585101000150	8420609322518	M10	1.5	100	14	10	371	1	1



9605851	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960585100800100	8420609322471	MF8	1	90	12	8	371	1	1
960585101000100	8420609322495	MF10	1	90	14	10	371	1	1



HSSEE [ASP] DIN MACHINE TAPS SPIRAL FLUTE 35° STEAM BACK CHAMFER.

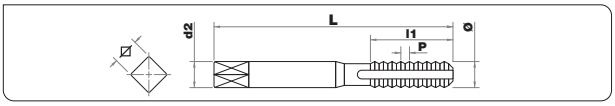
MACHO DE MÁQUINA HSSEE (ASP) DIN, STEAM. CONIC. TRASERA. HÉL. 35°.

MASCHIO A MACCHINA HSS-EE [ASP] DIN STEAM, ELICA 35°.

HSS EE | STEAM TREATED | DIN 374/376



C FORM | 35° | M MF



Stainless steel tapping. Robustness, accuracy.

Roscado de aceros inoxidables. Robustez, precisión.

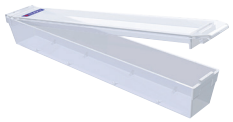
Filettatura acciai inossidabili. Robustezza e precisione.

CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi
Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

9606851	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960685100600100	8420609328473	M6	1	80	10	4.5	376	1	1
960685100800125	8420609328503	M8	1.25	90	12	6	376	1	1
960685101000150	8420609328527	M10	1.5	100	14	7	376	1	1
960685101200175	8420609328558	M12	1.75	110	16	9	376	1	1
960685101400200	8420609328589	M14	2	110	18	11	376	1	1
960685101600200	8420609328619	M16	2	110	18	12	376	1	1
960685101800250	8420609328640	M18	2.5	125	25	14	376	1	1
960685102000250	8420609328664	M20	2.5	140	25	18	376	1	1
960685102200250	8420609558931	M22	2.5	140	25	18	376	1	1
960685102400300	8420609328701	M24	3	160	30	18	376	1	1



9606851	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960685100800100	8420609328497	MF8	1	90	12	6	374	1	1
960685101000100	8420609328510	MF10	1	90	14	7	374	1	1
960685101200150	8420609328541	MF12	1.5	100	14	9	374	1	1
960685101400150	8420609328572	MF14	1.5	100	18	11	374	1	1
960685101600150	8420609328602	MF16	1.5	110	18	12	374	1	1
960685101800150	8420609328633	MF18	1.5	110	18	14	374	1	1



HSSEE (ASP), DIN, SPIRAL FLUTE, 45°, Z2.

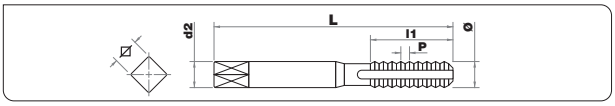
MACHO MÁQUINA HSSEE (ASP) DIN, Z2, HÉL. 45°.

MASCHIO A MACCHINA HSS-EE [ASP] DIN Z2 ELICA 45°.

HSS EE | BRIGHT UNCOATED | DIN 371



C FORM | 45° | 6H | M



For light non-ferrous alloys and Plastics.

Roscado de aleaciones ligeras y plásticos

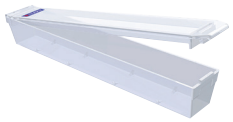
Filettatura leghe leggere e materiali plastici.

A — Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

KLM — Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P — Composite Plastics
Composites plásticos
Plastiche composite

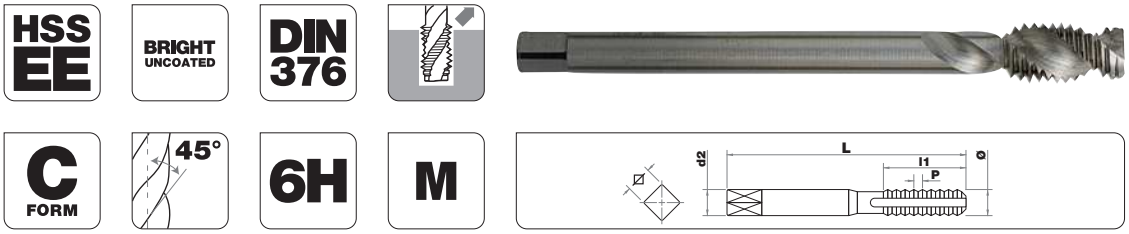
9605061	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960506100300050	8420609318559	M3	0.5	56	10	3.5	371	1	1
960506100400070	8420609318573	M4	0.7	63	12	4.5	371	1	1
960506100500080	8420609318580	M5	0.8	70	14	6	371	1	1
960506100600100	8420609318597	M6	1	80	16	6	371	1	1
960506100800125	8420609318627	M8	1.25	90	18	8	371	1	1
960506101000150	8420609318672	M10	1.5	100	20	10	371	1	1



HSSEE (ASP), DIN, SPIRAL FLUTE, 45°, Z2.

MACHO MÁQUINA HSSEE (ASP) DIN, Z2, HÉL. 45°.

MASCHIO A MACCHINA HSS-EE [ASP] DIN Z2 ELICA 45°.



For light non-ferrous alloys and Plastics.

Roscado de aleaciones ligeras y plásticos.

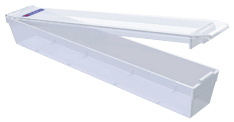
Filettatura leghe leggere e materiali plastici.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P Composite Plastics
Composites plásticos
Plastiche composite

9606061	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960606100800125	8420609324628	M8	1.25	90	18	6	376	1	1
960606101000150	8420609324666	M10	1.5	100	20	7	376	1	1
960606101200175	8420609324703	M12	1.75	110	22	9	376	1	1

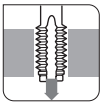


HSSE NFE MACHINE TAPS LONG STRAIGHT.

MACHO DE MÁQUINA HSSE NFE LARGO. RECTO.

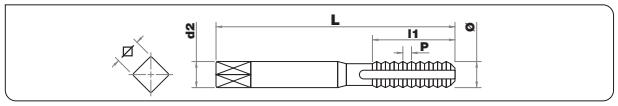
MASCHIO A MACCHINA HSS-EE NFE LUNGO DRITTO.

HSS E | BRIGHT UNCOATED | NFE 66112





A FORM | 6H | M



Multi-application machine tapping. Deep access.

Roscado a máquina de agujeros profundos

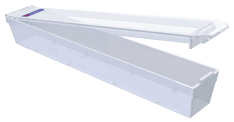
Filettatura a macchina multiapplicazione. Imbocco lungo.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

9704601	EAN	Ø	P	L	l	d2	NFE	QTY	PCB
970460100300050	8420609615689	M3	0.5	90	19	2.1	66112	1	1
970460100400070	8420609615696	M4	0.7	100	20	2.9	66112	1	1
970460100500080	8420609615702	M5	0.8	110	25	3.7	66112	1	1
970460100600100	8420609615719	M6	1	120	27	4.5	66112	1	1
970460100800125	8420609615726	M8	1.25	135	32	6.2	66112	1	1
970460101000150	8420609615733	M10	1.5	150	38	7.6	66112	1	1
970460101200175	8420609615740	M12	1.75	165	43	9	66112	1	1
970460101400200	8420609615757	M14	2	180	50	10.5	66112	1	1
970460101600200	8420609615764	M16	2	190	50	12.5	66112	1	1



HSSE NFE MACHINE TAP LONG STRAIGHT.

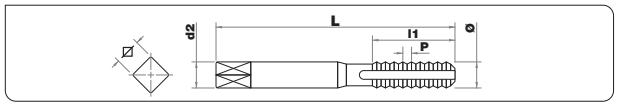
MACHO DE MÁQUINA HSSE NFE LARGO. GUN.

MASCHIO A MACCHINA HSS-E NFE LUNGO GUN.

HSS E | BRIGHT UNCOATED | NFE 66112 | GUN



GUN B FORM | 6H | M



Multi-application machine tapping. Deep access. Comfort, accuracy.

Roscado a máquina multi-aplicación. Rosc. Profundos. Confort, precis.

Filettatura macchina multiapp. Imbocco lungo. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

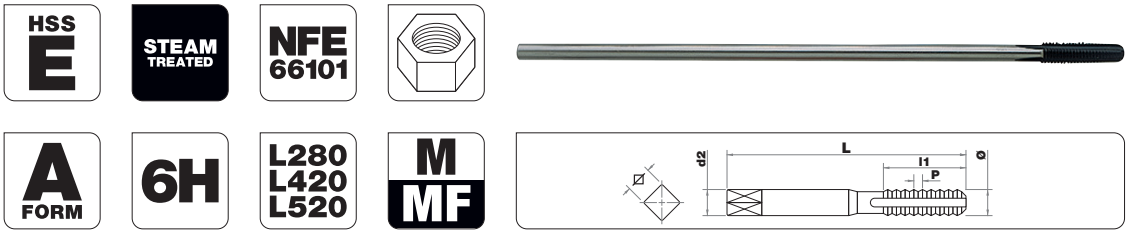
9704611	EAN	Ø	P	L	l	d2	NFE	QTY	PCB
970461100300050	8420609615771	M3	0.5	90	19	2.1	66112	1	1
970461100400070	8420609615788	M4	0.7	100	20	2.9	66112	1	1
970461100500080	8420609615795	M5	0.8	110	25	3.7	66112	1	1
970461100600100	8420609615801	M6	1	120	27	4.5	66112	1	1
970461100800125	8420609615818	M8	1.25	135	32	6.2	66112	1	1
970461101000150	8420609615825	M10	1.5	150	38	7.6	66112	1	1
970461101200175	8420609615832	M12	1.75	165	43	9	66112	1	1



HSSE NFE MACHINE TAP LONG 280-520 STRAIGHT.

MACHOS DE MÁQUINA HSSE NFE L 280-520 RECTO.

MASCHIO A MACCHINA HSS-E NFE L 280-520.



Serial machine tapping.

Roscado a máquina en serie.

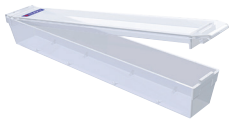
Filettatura a macchina in continuo.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

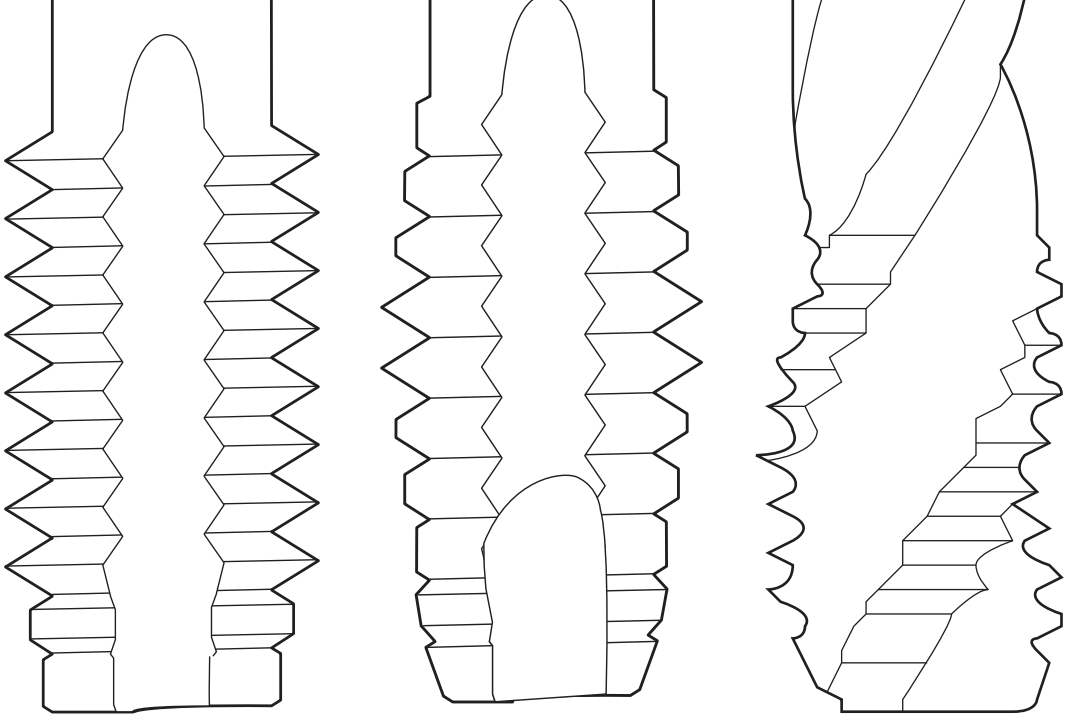
CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

9704011	EAN	Ø	P	L	l	d2	NFE	QTY	PCB
970401100300050	8420609364952	M3	0.5	280	12.5	2.3	66101	1	1
970401100400070	8420609364983	M4	0.7	280	18	2.9	66101	1	1
970401100500080	8420609365027	M5	0.8	280	20	3.8	66101	1	1
970401100600100	8420609365058	M6	1	280	25	4.5	66101	1	1
970401100700100	8420609365072	M7	1	280	25	5.5	66101	1	1
970401100800125	8420609365102	M8	1.25	280	32	6.1	66101	1	1
970401101000150	8420609365171	M10	1.5	280	38	7.7	66101	1	1
970401101200175	8420609365249	M12	1.75	420	44	9.3	66101	1	1
970401101400200	8420609365317	M14	2	420	50	10.9	66101	1	1
970401101600200	8420609365386	M16	2	520	50	12.9	66101	1	1
970401101800250	8420609365423	M18	2.5	520	63	14.1	66101	1	1
970401102000250	8420609365461	M20	2.5	520	63	16.1	66101	1	1
970401102200250	8420609365515	M22	2.5	520	63	18	66101	1	1
970401102400300	8420609365553	M24	3	520	75	19.3	66101	1	1



9704011	EAN	Ø	P	L	l	d2	NFE	QTY	PCB
970401100600075	8420609365041	MF6	0.75	280	25	4.5	66101	1	1
970401100800100	8420609365096	MF8	1	280	32	6.1	66101	1	1
970401101000100	8420609365157	MF10	1	280	38	7.7	66101	1	1
970401101200125	8420609365225	MF12	1.25	420	38	10.1	66101	1	1
970401101200150	8420609365232	MF12	1.5	420	44	9.6	66101	1	1
970401101400150	8420609365300	MF14	1.5	420	50	11.8	66101	1	1
970401102000150	8420609365447	MF20	1.5	520	63	17.8	66101	1	1
970401102200150	8420609365492	MF22	1.5	520	63	19.8	66101	1	1
970401102400150	8420609365539	MF24	1.5	520	75	21.8	66101	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

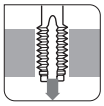
REGULAR - MACHINE TAP UNC-UNF 216
REGULAR - MACHOS MAQUINA UNC-UNF
REGULAR - MASCHIO A MACCHINA UNC-UNF

HSS E DIN MACHINE TAP STRAIGHT.

MACHO DE MÁQUINA HSSE RECTO.

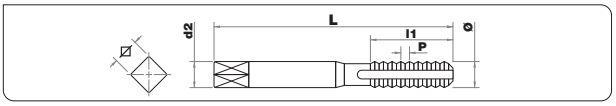
MASCHIO A MACCHINA HSS DRITTO.

HSS E | BRIGHT UNCOATED | DIN 371





C FORM | 2B | UNC UNF



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

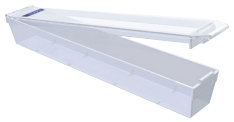
Filettatura di materiali a truciolo corto. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

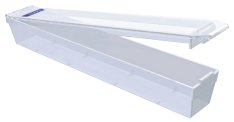
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9622011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962201100006320	8420609340314	CN°6	32	56	11	4	371	1	1
962201100008320	8420609340338	CN°8	32	63	12	4.5	371	1	1
962201100140200	8420609340406	C1/4	20	80	16	7	371	1	1
962201100380160	8420609340420	C3/8	16	90	18	9	371	1	1
962201100516180	8420609340444	C5/16	18	90	18	8	371	1	1



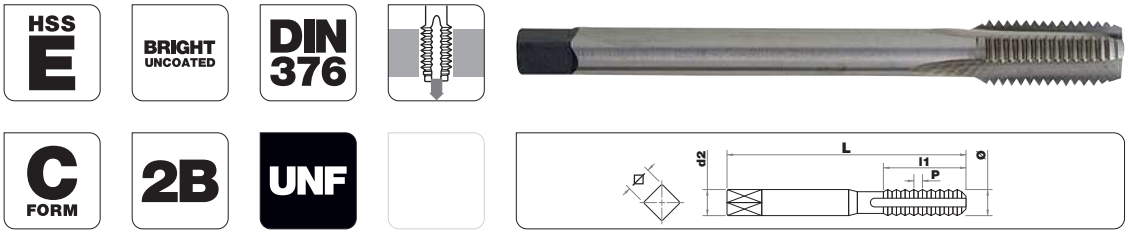
9622011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962201100010320	8420609340369	FN°10	32	70	14	6	371	1	1
962201100140280	8420609340413	F1/4	28	80	16	7	371	1	1
962201100380240	8420609340437	F3/8	24	100	18	9	371	1	1



HSS E DIN MACHINE TAP STRAIGHT.

MACHO DE MÁQUINA HSSE RECTO.

MASCHIO A MACCHINA HSS DRITTO.



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

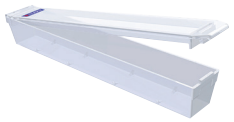
Filettatura di materiali a truciolo corto. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9623011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962301100716200	8420609342578	F7/16	20	100	22	8	376	1	1
962301100120200	8420609342455	F1/2	20	110	25	9	376	1	1
962301100916180	8420609342615	F9/16	18	110	25	11	376	1	1
962301100580180	8420609342554	F5/8	18	110	25	12	376	1	1
962301100340160	8420609342493	F3/4	16	125	32	14	376	1	1



HSSE DIN MACHINE TAP GUN.

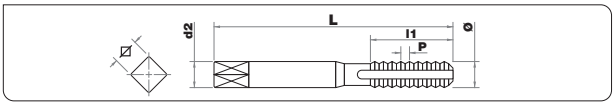
MACHO DE MÁQUINA HSSE DIN GUN.

MASCHIO A MACCHINA HSS-E DIN GUN.

HSS E | BRIGHT UNCOATED | DIN 371 | GUN



GUN B FORM | 2B | UNC UNF



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

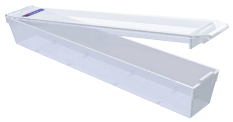
Filettatura degli acciai <700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

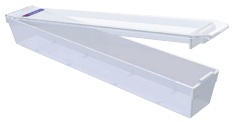
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9622021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962202100004400	8420609340499	CN°4	40	56	11	3.5	371	1	1
962202100005400	8420609340512	CN°5	40	56	11	3.5	371	1	1
962202100006320	8420609340536	CN°6	32	56	11	4	371	1	1
962202100008320	8420609340550	CN°8	32	63	12	4.5	371	1	1
962202100010240	8420609340574	CN°10	24	70	14	6	371	1	1
962202100012240	8420609340598	CN°12	24	80	14	6	371	1	1
962202100140200	8420609340611	C1/4	20	80	16	7	371	1	1
962202100516180	8420609340659	C5/16	18	90	18	8	371	1	1
962202100380160	8420609340635	C3/8	16	90	18	9	371	1	1



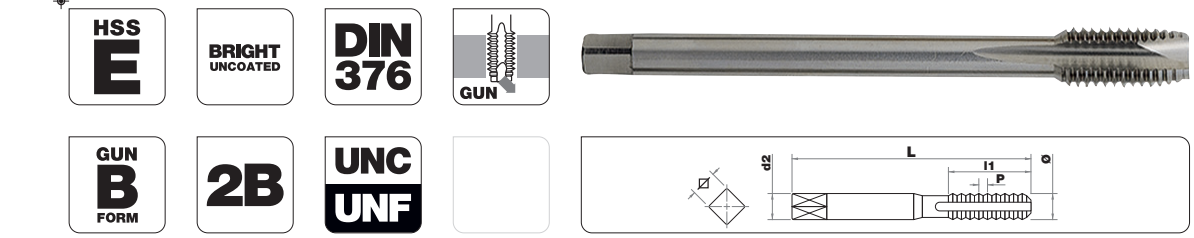
9622021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962202100010320	8420609340581	FN°10	32	70	14	6	371	1	1
962202100012280	8420609340604	FN°12	28	80	17	6	371	1	1
962202100140280	8420609340628	F1/4	28	80	16	7	371	1	1
962202100516240	8420609340666	F5/16	24	90	18	8	371	1	1
962202100380240	8420609340642	F3/8	24	100	18	9	371	1	1



HSSE DIN MACHINE TAP GUN.

MACHO DE MÁQUINA HSSE DIN GUN.

MASCHIO A MACCHINA HSS-E DIN GUN.



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

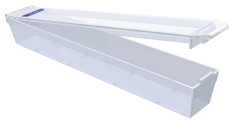
Filettatura degli acciai <700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

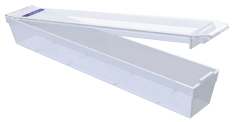
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9623021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962302100140200	8420609342882	C1/4	20	80	16	4.5	376	1	1
962302100516180	8420609342943	C5/16	18	90	18	6	376	1	1
962302100380160	8420609342929	C3/8	16	90	18	7	376	1	1
962302100716140	8420609342981	C7/16	14	100	22	8	376	1	1
962302100120130	8420609342868	C1/2	13	110	25	9	376	1	1
962302100580110	8420609342967	C5/8	11	110	28	12	376	1	1
962302100340100	8420609342905	C3/4	10	125	32	14	376	1	1
962302100780090	8420609343001	C7/8	9	140	32	18	376	1	1
962302110000080	8420609343063	C1"	8	160	36	20	376	1	1



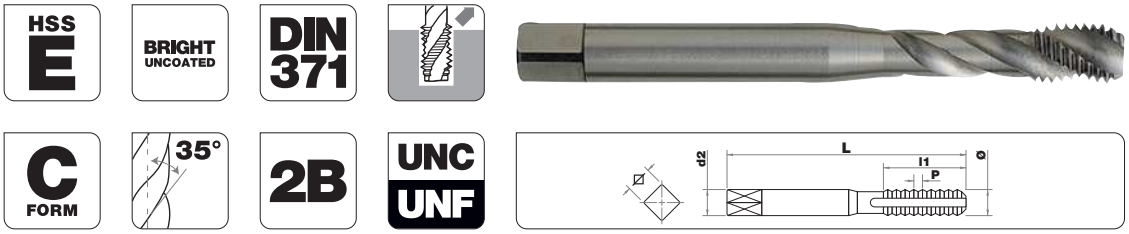
9623021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962302100380240	8420609342936	F3/8	24	100	18	7	376	1	1
962302100716200	8420609342998	F7/16	20	100	22	8	376	1	1
962302100120200	8420609342875	F1/2	20	110	25	9	376	1	1
962302100580180	8420609342974	F5/8	18	110	25	12	376	1	1
962302100340160	8420609342912	F3/4	16	125	32	14	376	1	1
962302100780140	8420609343018	F7/8	14	125	32	18	376	1	1
962302110000120	8420609343070	F1"	12	140	32	20	376	1	1



HSSE DIN MACHINE TAP SPIRAL FLUTE 35°.

MACHO DE MÁQUINA HSSE DIN HÉL. 35°.

MASCHIO A MACCHINA HSS-E DIN ELICA 35°.



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

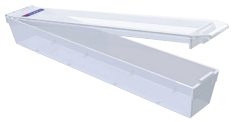
Filettatura degli acciai<700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

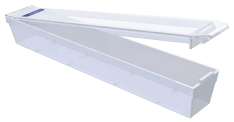
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9622051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962205100004400	8420609341076	CN°4	40	56	5	3.5	371	1	1
962205100006320	8420609341113	CN°6	32	56	7	4	371	1	1
962205100008320	8420609341137	CN°8	32	63	7	4.5	371	1	1
962205100010240	8420609341151	CN°10	24	70	10	6	371	1	1
962205100140200	8420609341199	C1/4	20	80	12	7	371	1	1
962205100516180	8420609341236	C5/16	18	90	12	8	371	1	1
962205100380160	8420609341212	C3/8	19	90	14	9	371	1	1



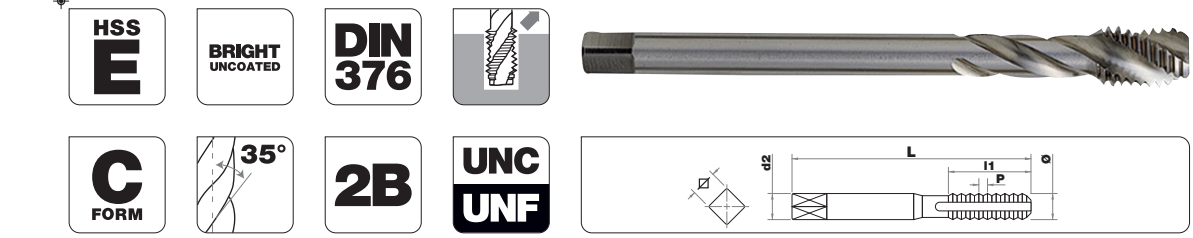
9622051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962205100010320	8420609341168	FN°10	32	70	9	6	371	1	1
962205100140280	8420609341205	F1/4	28	80	10	7	371	1	1
962205100516240	8420609341243	F5/16	24	90	12	8	371	1	1
962205100380240	8420609341229	F3/8	24	100	14	9	371	1	1



HSSE DIN MACHINE TAP SPIRAL FLUTE 35°.

MACHO DE MÁQUINA HSSE DIN HÉL. 35°.

MASCHIO A MACCHINA HSS-E DIN ELICA 35°.



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

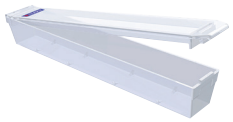
Filettatura degli acciai<700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

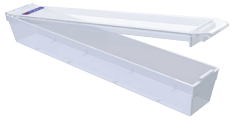
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

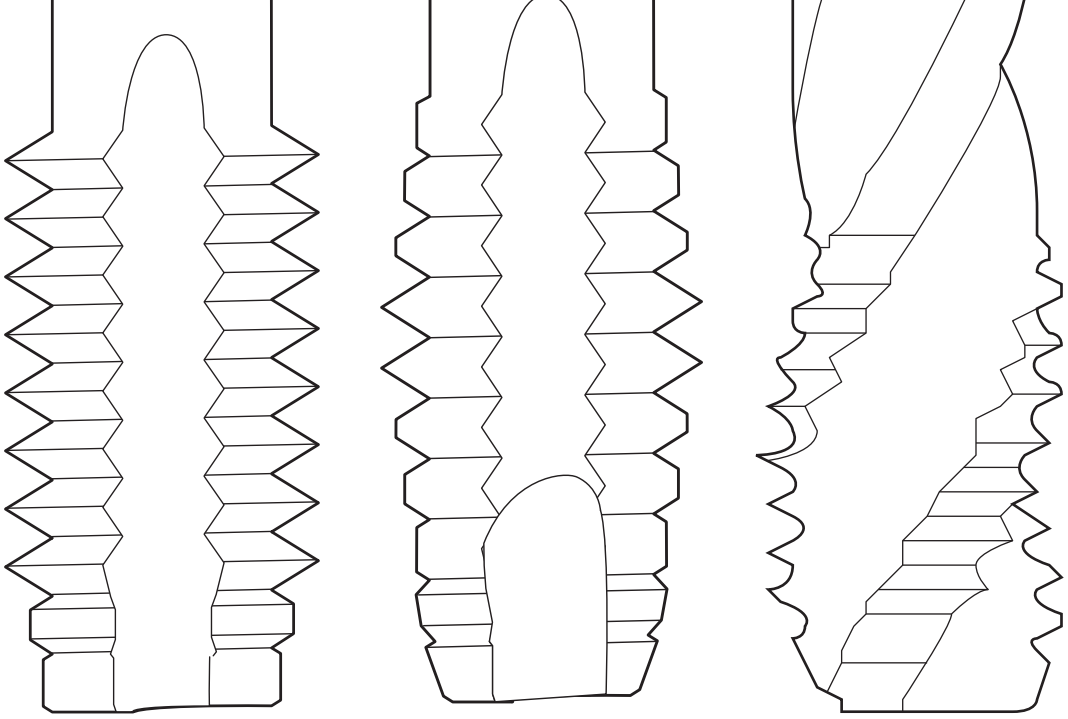
KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9623051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962305100516180	8420609343766	C5/16	18	90	12	6	376	1	1
962305100380160	8420609343742	C3/8	16	90	14	7	376	1	1
962305100716140	8420609343803	C7/16	14	100	16	8	376	1	1
962305100120130	8420609343681	C1/2	13	110	16	9	376	1	1
962305100916120	8420609343841	C9/16	12	110	18	11	376	1	1
962305100580110	8420609343780	C5/8	11	110	20	12	376	1	1
962305100340100	8420609343728	C3/4	10	125	25	14	376	1	1
962305100780090	8420609343827	C7/8	9	140	28	18	376	1	1
962305110000080	8420609343865	C1"	8	160	30	20	376	1	1



9623051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962305100716200	8420609343810	F7/16	20	100	14	8	376	1	1
962305100120200	8420609343698	F1/2	20	110	16	9	376	1	1
962305100916180	8420609343858	F9/16	18	110	18	11	376	1	1
962305100580180	8420609343797	F5/8	18	110	18	12	376	1	1
962305100340160	8420609343735	F3/4	16	125	18	14	376	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

REGULAR - MACHINE TAP BSW-BSF 224
REGULAR - MACHOS MAQUINA BSW-BSF
REGULAR - MASCHIO A MACCHINA BSW-BSF

HSSE DIN MACHINE TAP STRAIGHT.

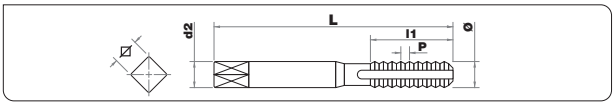
MACHO DE MÁQUINA HSSE DIN RECTO.

MASCHIO A MACCHINA HSS-E DIN DRITTO.

HSS E | BRIGHT UNCOATED | DIN 371



C FORM | BSW



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

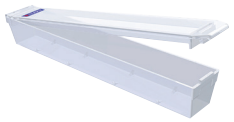
Filettatura dei metalli a truciolo corto. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9612011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
961201100180400	8420609336294	W1/8	40	56	11	3.5	371	1	1
961201100532320	8420609336355	W5/32	32	63	12	4.5	371	1	1
961201100316240	8420609336300	W3/16	24	70	14	6	371	1	1
961201100140200	8420609336270	W1/4	20	80	16	7	371	1	1
961201100516180	8420609336331	W5/16	18	90	18	8	371	1	1
961201100380160	8420609336317	W3/8	16	90	18	9	371	1	1



HSSE DIN MACHINE TAP GUN.

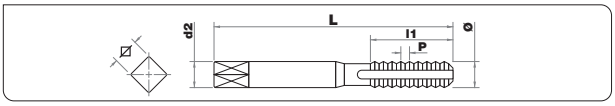
MACHO DE MÁQUINA HSSE DIN GUN.

MASCHIO A MACCHINA HSS-E DIN GUN.

HSS E | BRIGHT UNCOATED | DIN 371 | GUN



GUN B FORM | BSW



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

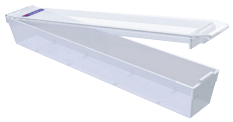
Filettatura degli acciai <700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9612021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
961202100180400	8420609336409	W1/8	40	56	11	3.5	371	1	1
961202100316240	8420609336416	W3/16	24	70	14	6	371	1	1
961202100140200	8420609336386	W1/4	20	80	16	7	371	1	1
961202100516180	8420609336461	W5/16	18	90	18	8	371	1	1
961202100380160	8420609336447	W3/8	16	90	18	9	371	1	1



HSSE DIN MACHINE TAP GUN.

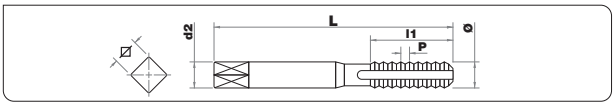
MACHO DE MÁQUINA HSSE DIN GUN.

MASCHIO A MACCHINA HSS-E DIN GUN.

HSS E | BRIGHT UNCOATED | DIN 376 | GUN



GUN B FORM | BSW



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

Filettatura degli acciai <700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9613021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
961302100140200	8420609337673	W1/4	20	80	16	4.5	376	1	1
961302100380160	8420609337758	W3/8	16	90	18	7	376	1	1
961302100716140	8420609337826	W7/16	14	100	22	8	376	1	1
961302100120120	8420609337659	W1/2	12	110	25	9	376	1	1
961302100580110	8420609337802	W5/8	11	110	28	12	376	1	1
961302100340100	8420609337734	W3/4	10	125	32	14	376	1	1
961302110000080	8420609337901	W1"	8	160	36	20	376	1	1



HSSE DIN MACHINE TAP SPIRAL FLUTE 35°.

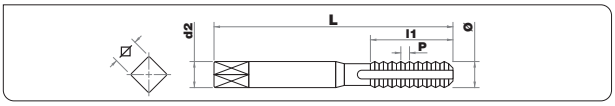
MACHO DE MÁQUINA HSSE DIN HÉL. 35°.

MASCHIO A MACCHINA HSS-E DIN ELICA 35°.

HSS E | BRIGHT UNCOATED | DIN 371



C FORM | 35° | BSW



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

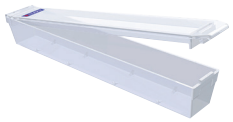
Filettatura degli acciai <700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9612051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
961205100180400	8420609336713	W1/8	40	56	7	3.5	371	1	1
961205100316240	8420609336720	W3/16	24	70	10	6	371	1	1
961205100140200	8420609336706	W1/4	20	80	12	7	371	1	1
961205100516180	8420609336744	W5/16	18	90	12	8	371	1	1
961205100380160	8420609336737	W3/8	16	90	14	9	371	1	1



HSSE DIN MACHINE TAP SPIRAL FLUTE 35°.

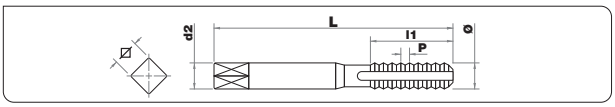
MACHO DE MÁQUINA HSSE DIN HÉL. 35°.

MASCHIO A MACCHINA HSS-E DIN ELICA 35°.

HSS E | BRIGHT UNCOATED | DIN 376



C FORM | 35° | BSW



Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

Filettatura degli acciai <700 N/mm². Robustezza e precisione.

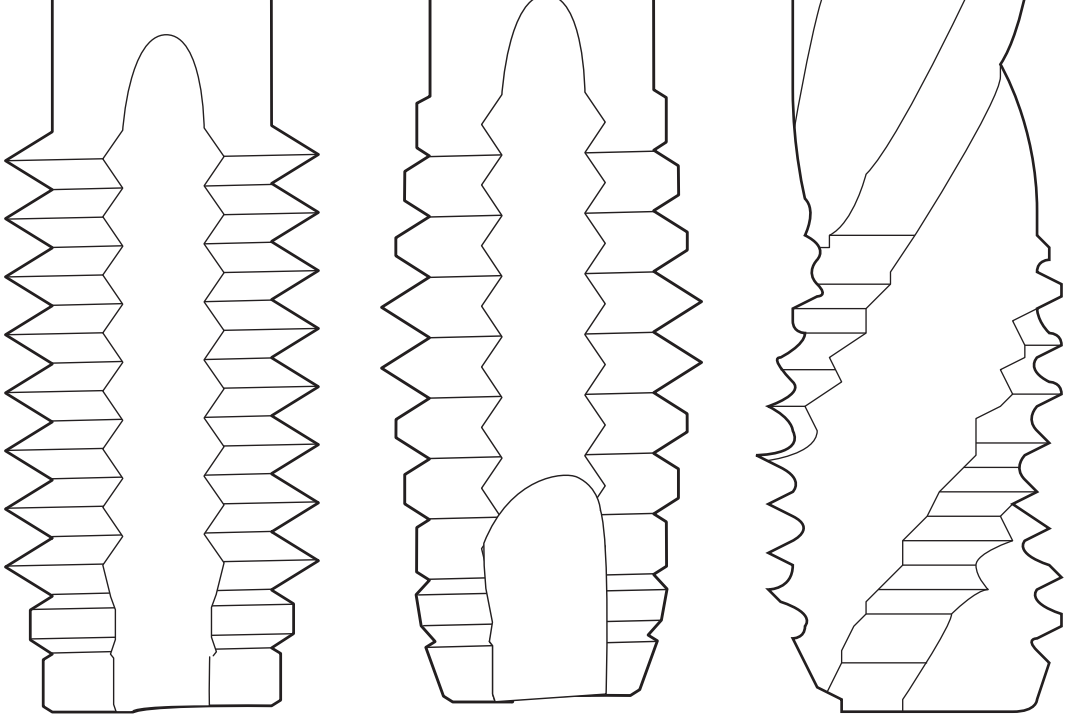
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9613051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
961305100120120	8420609338366	W1/2	12	110	16	9	376	1	1
961305100580110	8420609338441	W5/8	11	110	20	12	376	1	1
961305100340100	8420609338403	W3/4	10	125	25	14	376	1	1
961305110000080	8420609338519	W1"	8	160	30	20	376	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

■ **REGULAR - MACHINE TAP BSP G**
REGULAR - MACHOS MAQUINA BSP G
REGULAR - MASCHIO A MACCHINA BSP G

228

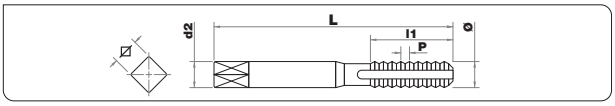
HSSE DIN MACHINE TAP STRAIGHT .

MACHO MÁQUINA HSSE DIN RECTO.

MASCHIO A MACCHINA HSS-E DIN DRITTO.

HSS E | BRIGHT UNCOATED | DIN 5156 | C FORM | BSP G





Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

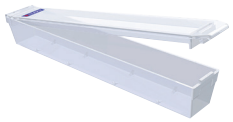
Filettatura dei metalli a truciolo corto. Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9633011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
963301100180280	8420609348709	G1/8	28	90	18	7	5156	1	1
963301100140190	8420609348693	G1/4	19	100	22	11	5156	1	1
963301100380190	8420609348723	G3/8	19	100	25	12	5156	1	1
963301100120140	8420609348686	G1/2	14	125	25	16	5156	1	1
963301100340140	8420609348716	G3/4	14	140	28	20	5156	1	1
963301110000110	8420609348754	G1"	11	160	36	25	5156	1	1
963301110140110	8420609348778	G1"1/4	11	170	40	32	5156	1	1



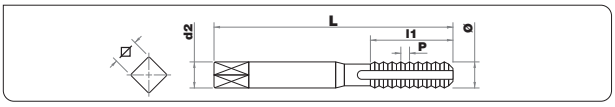
HSSE DIN MACHINE TAP GUN.

MACHO DE MÁQUINA HSSE DIN GUN.

MASCHIO A MACCHINA HSS-E DIN GUN.

HSS E | BRIGHT UNCOATED | DIN 5156 | GUN | GUN B FORM | BSP G





Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

Filettatura degli acciai <700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9633021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
963302100180280	8420609348884	G1/8	28	90	18	7	5156	1	1
963302100140190	8420609348877	G1/4	19	100	22	11	5156	1	1
963302100380190	8420609348907	G3/8	19	100	25	12	5156	1	1
963302100120140	8420609348860	G1/2	14	125	25	16	5156	1	1
963302100580140	8420609348914	G5/8	14	125	25	18	5156	1	1
963302100340140	8420609348891	G3/4	14	140	28	20	5156	1	1
963302110000110	8420609348938	G1"	11	160	36	25	5156	1	1



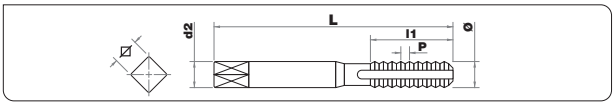
HSSE DIN MACHINE TAP SPIRAL FLUTE 35°.

MACHO DE MÁQUINA HSSE DIN HELICOIDAL 35°.

MASCHIO A MACCHINA HSS-E DIN ELICA 35°.

HSS E | BRIGHT UNCOATED | DIN 5156 | C FORM | 35° | BSP G





Steel tapping < 700 N/mm². Robustness, accuracy.

Roscado de aceros < 700 N/mm². Robustez, precisión.

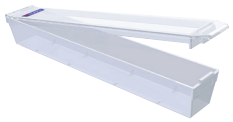
Filettatura degli acciai <700 N/mm². Robustezza e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9633051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
963305100180280	8420609349201	G1/8	28	90	18	7	5156	1	1
963305100140190	8420609349195	G1/4	19	100	22	11	5156	1	1
963305100380190	8420609349225	G3/8	19	100	25	12	5156	1	1
963305100120140	8420609349188	G1/2	14	125	25	16	5156	1	1
963305100340140	8420609349218	G3/4	14	125	25	18	5156	1	1
963305110000110	8420609349256	G1"	14	140	28	20	5156	1	1
963305110140110	8420609349270	G1"1/4	11	160	36	25	5156	1	1
963305110120110	8420609349263	G1"1/2	11	190	32	36	5156	1	1



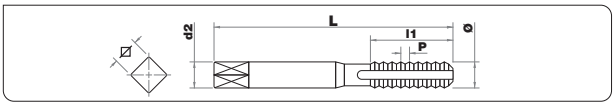
HSSE DIN MACHINE TAP SPIRAL FLUTE 15°.

MACHO DE MÁQUINA HSSE DIN HÉL. 15°.

MASCHIO A MACCHINA HSS-E DIN ELICA 15°.

HSS E | BRIGHT UNCOATED | DIN 5156 | C FORM | 15° | BSP G





High strength steel tapping. Shallow holes. Robustness.

Roscado de aceros resistentes. Orificios poco profundos. Robustez.

Filettatura degli acciai resistenti. Fori poco profondi. Robustezza.

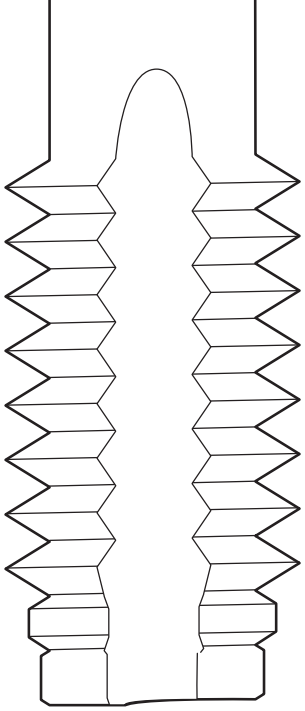
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

9633031	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
963303100180280	8420609349041	G1/8	28	90	18	7	5156	1	1
963303100140190	8420609349034	G1/4	19	100	22	11	5156	1	1
963303100380190	8420609349065	G3/8	19	100	25	12	5156	1	1
963303100120140	8420609349027	G1/2	14	125	25	16	5156	1	1
963303100780140	8420609349089	G7/8	14	125	25	18	5156	1	1
963303100340140	8420609349058	G3/4	14	140	28	20	5156	1	1
963303110000110	8420609349096	G1"	11	160	36	25	5156	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

REGULAR - MACHINE TAP NPT 232 #03
REGULAR - MACHOS MAQUINA NPT
REGULAR - MASCHIO A MACCHINA NPT

REGULAR - MACHINE TAP BSPT Rc 233 #03
REGULAR - MACHOS MAQUINA BSPT Rc
REGULAR - MASCHIO A MACCHINA BSPT Rc

REGULAR - MACHINE TAP PG 234 #03
REGULAR - MACHOS MAQUINA PG
REGULAR - MASCHIO A MACCHINA PG

HSS MACHINE TAP STRAIGHT. SHORT SERIES.

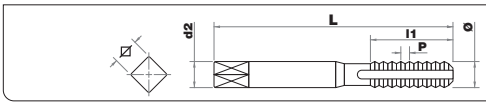
MACHO DE MÁQUINA HSS RECTO. SERIE CORTA.

MASCHIO A MACCHINA HSS DRITTO. CORTO.

HSS | BRIGHT UNCOATED | TIVOLY NORM



C FORM | 1:16 | NPT



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

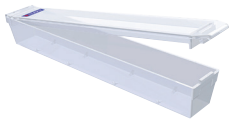
Filettatura dei metalli a truciolo corto. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9643101	EAN	Ø	P	L	l	d2	QTY	PCB
964310100116270	8420609351143	NPT1/16	27	56	15	6	1	1
964310100180270	8420609351174	NPT1/8	27	70	15	8	1	1
964310100140180	8420609351167	NPT1/4	18	70	21	11	1	1
964310100380180	8420609351198	NPT3/8	18	75	21	14	1	1
964310100120140	8420609351150	NPT1/2	14	80	27	18	1	1
964310100340140	8420609351181	NPT3/4	14	90	27	22	1	1
964310110000115	8420609351211	NPT1"	11.5	110	33	25	1	1



HSS MACHINE TAP STRAIGHT .

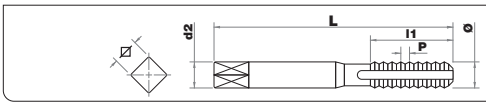
MACHO DE MÁQUINA HSS RECTO.

MASCHIO A MACCHINA HSS DRITTO.

HSS | BRIGHT UNCOATED | simDiN 5156



C FORM | 1:16 | NPT



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

Filettatura dei metalli a truciolo corto. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9643011	EAN	Ø	P	L	l	d2	QTY	PCB
964301100116270	8420609351020	NPT1/16	27	90	15	6	1	1
964301100180270	8420609351051	NPT1/8	27	90	15	8	1	1
964301100140180	8420609351044	NPT1/4	18	100	21	11	1	1
964301100380180	8420609351075	NPT3/8	18	110	21	14	1	1
964301100120140	8420609351037	NPT1/2	14	140	27	18	1	1
964301100340140	8420609351068	NPT3/4	14	140	27	22	1	1
964301110000115	8420609351099	NPT1"	11.5	160	33	25	1	1
964301110140115	8420609351112	1"1/4	11.5	170	33	32	1	1

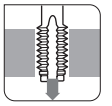


HSS MACHINE TAP STRAIGHT. SHORT SERIES.

MACHO DE MÁQUINA HSS RECTO. SERIE CORTA.

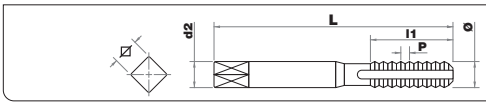
MASCHIO A MACCHINA HSS DRITTO. CORTO.

HSS | BRIGHT UNCOATED | TIVOLY NORM





C FORM | 1:16 | BSPT Rc



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

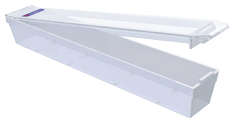
Filettatura dei metalli a truciolo corto. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9663101	EAN	Ø	P	L	l	d2	QTY	PCB
966310100180280	8420609351945	RC1/8	28	70	15	8	1	1
966310100140190	8420609351938	RC1/4	19	70	21	11	1	1
966310100380190	8420609351969	RC3/8	19	75	21	14	1	1
966310100120140	8420609351921	RC1/2	14	80	27	18	1	1
966310100580140	8420609351976	RC5/8	14	90	27	18	1	1
966310100340140	8420609351952	RC3/4	14	90	27	22	1	1
966310110000110	8420609351990	RC1"	11	110	39	25	1	1

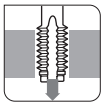


HSS MACHINE TAP STRAIGHT.

MACHO DE MÁQUINA HSS RECTO.

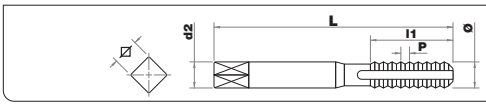
MASCHIO A MACCHINA HSS DRITTO.

HSS | BRIGHT UNCOATED | simDiN 5156





C FORM | 1:16 | BSPT Rc



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

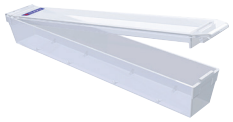
Filettatura dei metalli a truciolo corto. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9663011	EAN	Ø	P	L	l	d2	QTY	PCB
966301100180280	8420609351853	RC1/8	27	90	15	8	1	1
966301100140190	8420609351846	RC1/4	18	100	21	11	1	1
966301100380190	8420609351877	RC3/8	18	110	21	14	1	1
966301100120140	8420609351839	RC1/2	14	140	27	18	1	1
966301100580140	8420609351884	RC5/8	14	140	27	22	1	1
966301100340140	8420609351860	RC3/4	11.5	160	27	25	1	1

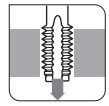


HSSE DIN MACHINE TAP STRAIGHT.

MACHO DE MÁQUINA HSSE DIN RECTO.

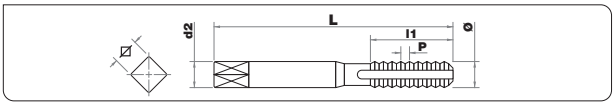
MASCHIO A MACCHINA HSS-E DIN DRITTO.

HSS E | BRIGHT UNCOATED | DIN 40433





C FORM | PG



Metal tapping. Short filings. Robustness, accuracy.

Roscado de metales de viruta corta. Confort, precisión.

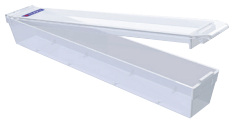
Filettatura dei metalli a truciolo corto. Robustezza e precisione.

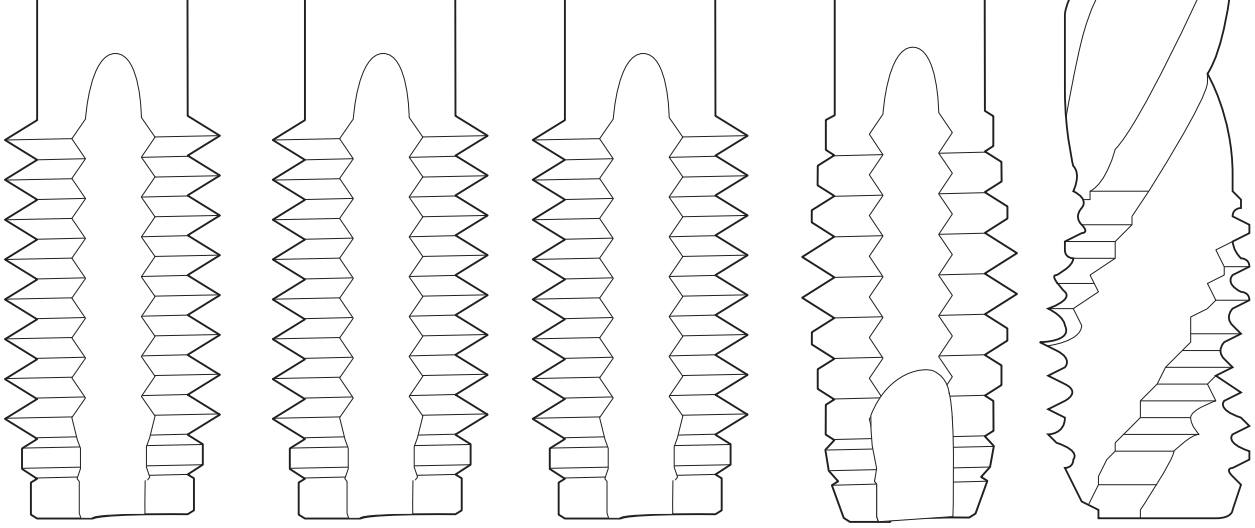
AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

9653011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
965301100700200	8420609351631	PG 7	20	100	22	9	40433	1	1
965301100900180	8420609351648	PG 9	18	100	25	12	40433	1	1
965301101100180	8420609351655	PG 11	18	110	25	14	40433	1	1
965301101350180	8420609351662	PG 13,5	18	125	25	16	40433	1	1
965301101600180	8420609351679	PG 16	18	125	25	18	40433	1	1
965301102100160	8420609351693	PG 21	16	150	28	20	40433	1	1
965301102900160	8420609351709	PG 29	16	170	32	28	40433	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

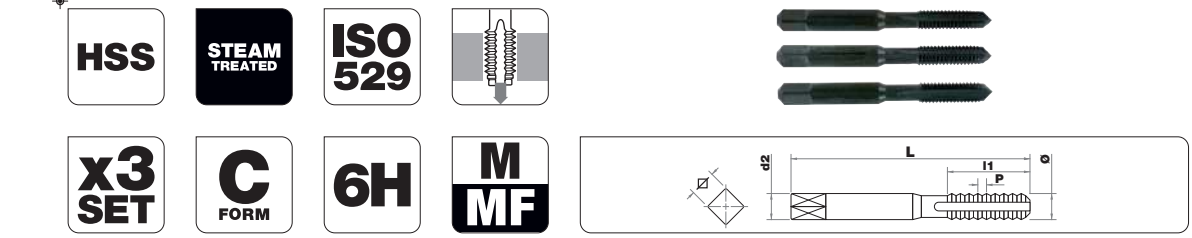
MULTI-APPLICATIONS - HAND TAPS M-MF 236 #03
MULTI-APPLICATIONS - MACHOS DE MAANO M-MF
MULTI-APPLICATIONS - MASCHI A MANO M-MF

MULTI-APPLICATIONS - MACHINE TAP M-MF 239 #03
REGULAR - MACHOS MAQUINA M-MF
REGULAR - MASCHIO A MACCHINA M-MF

SET OF 3 HSS ISO HAND TAPS.
SERIAL TYPE.

JUEGO DE MACHOS DE MANO HSSEE ISO. PERFIL ESCALONADO.

SERIE DI 3 MASCHI A MANO HSS ISO. PROFILO SCALINATO.



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

Filettatura manuale multi-applicazione. Robustezza e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

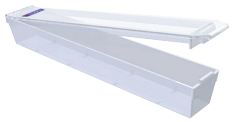
H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

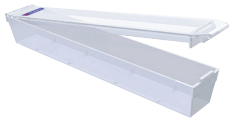
KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P Composite Plastics
Composites plásticos
Plastiche composite

1050031	EAN	Ø	P	L	l	d2	ISO	QTY	PCB
1050031020040	3221910539931	M2	0.4	42	8,5	2.5	529	1	1
1050031025045	3221910539962	M2,5	0.45	44.5	10	2.8	529	1	1
1050031030050	3221910539979	M3	0.5	48	15	3.15	529	1	1
1050031035060	3221910540012	M3,5	0.6	50	20,5	3.55	529	1	1
1050031040070	3221910540036	M4	0.7	53	12,5	4	529	1	1
1050031040075	3221910540043	M4	0.75	53	12,5	4	529	1	1
1050031050080	3221910540074	M5	0.8	58	15,5	5	529	1	1
1050031050090	3221910540081	M5	0.9	58	15,5	5	529	1	1
1050031060100	3221910540128	M6	1	66	19	6.3	529	1	1
1050031070100	3221910540142	M7	1	66	18,5	7.1	529	1	1
1050031080125	3221910540180	M8	1.25	72	22	8	529	1	1
1050031090125	3221910540210	M9	1.25	72	22	8	529	1	1
1050031100150	3221910540265	M10	1.5	80	23	10	529	1	1
1050031110150	3221910540289	M11	1.5	85	24	8	529	1	1
1050031120175	3221910540326	M12	1.75	89	29	9	529	1	1
1050031140200	3221910540395	M14	2	95	30	11.2	529	1	1
1050031160200	3221910540449	M16	2	102	32	12.5	529	1	1
1050031180250	3221910540487	M18	2.5	112	37	14	529	1	1
1050031200250	3221910540524	M20	2.5	112	37	14	529	1	1
1050031220250	3221910540548	M22	2.5	118	38	16	529	1	1
1050031240300	3221910540579	M24	3	130	45	18	529	1	1
1050031270300	3221910540609	M27	3	135	45	20	529	1	1
1050031300350	3221910540630	M30	3.5	138	48	20	529	1	1



1050031	EAN	Ø	P	L	l	d2	ISO	QTY	PCB
1050031030060	3221910539986	MF3	0.6	48	14.5	3.15	529	1	1
1050031080100	3221910540173	MF8	1	69	19	8	529	1	1
1050031090100	3221910540203	MF9	1	69	19	9	529	1	1
1050031100100	3221910540241	MF10	1	76	20	10	529	1	1
1050031100125	3221910540258	MF10	1.25	76	20	10	529	1	1
1050031120100	3221910540296	MF12	1	84	24	9	529	1	1
1050031120125	3221910540302	MF12	1.25	84	24	9	529	1	1
1050031120150	3221910540319	MF12	1.5	89	29	9	529	1	1
1050031140125	3221910540364	MF14	1.25	90	25	11.2	529	1	1
1050031140150	3221910540371	MF14	1,5	90	30	11,2	529	1	1
1050031160150	3221910540432	MF16	1.5	102	32	12.5	529	1	1
1050031180150	3221910540463	MF18	1.5	104	29	14	529	1	1
1050031200150	3221910540517	MF20	1,5	104	29	14	529	1	1
1050031220150	3221910540531	MF22	1.5	113	38	16	529	1	1
1050031240150	3221910540555	MF24	1.5	120	45	18	529	1	1

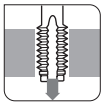


SET OF 3 HSS DIN HAND TAPS.

JUEGO DE 3 MACHOS DE MANO HSS DIN.

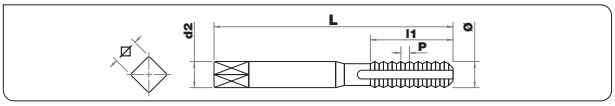
SERIE DI 3 MASCHI A MANO HSS DIN.

HSS | STEAM TREATED | DIN 352





x3 SET | A FORM | 6H | M



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

Filettatura manuale multi-applicazione. Robustezza e precisione.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C — Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

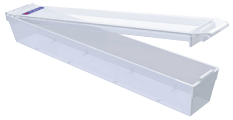
H — Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ — Cast iron
Fundiciones
Ghisa

KLM — Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P — Composite Plastics
Composites plásticos
Plastiche composite

9501011	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
950101100200040	8420609239175	M2	0.4	36	11,5	2.8	352	1	1
950101100250045	8420609239199	M2,5	0.45	40	12	2.8	352	1	1
950101100300050	8420609239212	M3	0.5	40	11	3.5	352	1	1
950101100350060	8420609239229	M3,5	0.6	45	12	4	352	1	1
950101100400070	8420609239243	M4	0.7	45	12,5	4.5	352	1	1
950101100500080	8420609239274	M5	0.8	50	14,5	6	352	1	1
950101100600100	8420609239298	M6	1	50	15,5	6	352	1	1
950101100700100	8420609239304	M7	1	50	19	6	352	1	1
950101100800125	8420609239311	M8	1.25	56	22	6	352	1	1
950101100900125	8420609239328	M9	1.25	63	22	6	352	1	1
950101101000150	8420609239335	M10	1.5	70	24	7	352	1	1
950101101100150	8420609239342	M11	1.5	70	24	8	352	1	1
950101101200175	8420609239359	M12	1.75	75	29	9	352	1	1
950101101400200	8420609239373	M14	2	80	29	11	352	1	1
950101101600200	8420609239380	M16	2	80	31	12	352	1	1
950101101800250	8420609239397	M18	2.5	95	39	14	352	1	1
950101102000250	8420609239403	M20	2.5	95	39	16	352	1	1
950101102200250	8420609239410	M22	2.5	100	40	18	352	1	1
950101102400300	8420609239427	M24	3	110	45	18	352	1	1
950101102700300	8420609239434	M27	3	110	50	20	352	1	1
950101103000350	8420609239441	M30	3.5	125	56	22	352	1	1
950101103300350	8420609239458	M33	3.5	125	56	25	352	1	1
950101103600400	8420609239465	M36	4	150	63	28	352	1	1
950101103900400	8420609239472	M39	4	150	63	32	352	1	1
950101104200450	8420609239489	M42	4.5	150	63	32	352	1	1

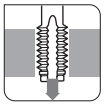


SET OF 2 HSS DIN HAND TAPS.

JUEGO DE 2 MACHOS DE MANO HSS DIN.

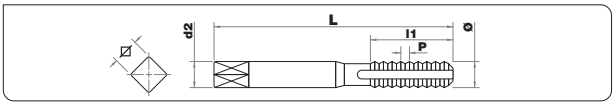
SERIE DI 2 MASCHI A MANO HSS DIN.

HSS | STEAM TREATED | DIN 2181





x2 SET | C FORM | 6H | MF



Multipurpose hand tapping. Robustness, accuracy.

Roscado manual multi-aplicación. Robustez, precisión.

Filettatura manuale multi-applicazione. Robustezza e precisione.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C — Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

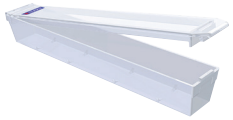
H — Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ — Cast iron
Fundiciones
Ghisa

KLM — Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P — Composite Plastics
Composites plásticos
Plastiche composite

9501021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
950102100500050	8420609239601	MF5	0.5	50	14,5	6	2181	1	1
950102100500075	8420609239618	MF5	0.75	50	15	6	2181	1	1
950102100600075	8420609239632	MF6	0.75	50	15,5	6	2181	1	1
950102100800075	8420609239656	MF8	0.75	50	22	6	2181	1	1
950102100800100	8420609239663	MF8	1	56	22	6	2181	1	1
950102101000100	8420609239700	MF10	1	63	18	7	2181	1	1
950102101000125	8420609239717	MF10	1.25	70	24	7	2181	1	1
950102101100100	8420609239731	MF11	1	63	20	8	2181	1	1
950102101100125	8420609239748	MF11	1.25	63	20	8	2181	1	1
950102101200100	8420609239755	MF12	1	70	20	9	2181	1	1
950102101200125	8420609239762	MF12	1.25	70	20	9	2181	1	1
950102101200150	8420609239779	MF12	1.5	70	20	9	2181	1	1
950102101400100	8420609239816	MF14	1	70	20	11	2181	1	1
950102101400125	8420609239823	MF14	1.25	70	20	11	2181	1	1
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950102101600100	8420609239878	MF16	1	70	22	12	2181	1	1
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950102102200150	8420609240010	MF22	1.5	80	22	18	2181	1	1
950102102200200	8420609240027	MF22	2	80	22	18	2181	1	1
950102102400150	8420609240041	MF24	1.5	90	22	18	2181	1	1
950102102400200	8420609240058	MF24	2	90	22	18	2181	1	1
950102102600150	8420609240089	MF26	1.5	90	22	20	2181	1	1
950102102700200	8420609240119	MF27	2	90	22	18	2181	1	1
950102103000150	8420609240157	MF30	1.5	90	22	22	2181	1	1
950102103000200	8420609240164	MF30	2	90	22	22	2181	1	1
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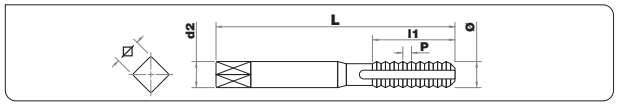


HSS ISO MACHINE TAP GUN BACK CHAMFER.

MACHO MÁQUINA GUN CONI. INVERSA.

MASCHIO A MACCHINA HSS ISO GUN.





Multi-application machine tapping. Comfort, accuracy.

Multi-aplicación. Confort, precisión.

Filettatura a macchina multiapplicazione. Comfort e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

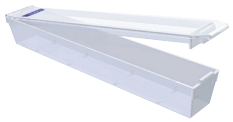
C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

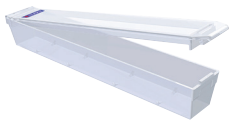
IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1050071	EAN	Ø	P	L	l	d2	ISO	QTY	PCB
1050071030050	3221910540654	M3	0.5	48	23	3.15	529	1	1
1050071035060	3221910540685	M3,5	0.6	50	20,5	3.55	529	1	1
1050071040070	3221910540708	M4	0.7	53	10	4	529	1	1
1050071050080	3221910540753	M5	0.8	58	11	5	529	1	1
1050071060100	3221910540791	M6	1	66	14	6.3	529	1	1
1050071070100	3221910540807	M7	1	66	18,5	7.1	529	1	1
1050071080125	3221910540845	M8	1.25	72	17,5	8	529	1	1
1050071090125	3221910540869	M9	1,25	72	22	8	529	1	1
1050071100150	3221910540920	M10	1.5	80	21	10	529	1	1
1050071120175	3221910540982	M12	1.75	89	29	9	529	1	1
1050071140200	3221910541033	M14	2	95	30	11.2	529	1	1
1050071160200	3221910541071	M16	2	102	32	12.5	529	1	1
1050071180250	3221910541118	M18	2.5	112	37	14	529	1	1
1050071200250	3221910541149	M20	2.5	112	37	14	529	1	1
1050071220250	3221910541163	M22	2.5	118	38	16	529	1	1
1050071240300	3221910541194	M24	3	130	45	18	529	1	1
1050071300350	3221910541255	M30	3.5	138	48	20	529	1	1



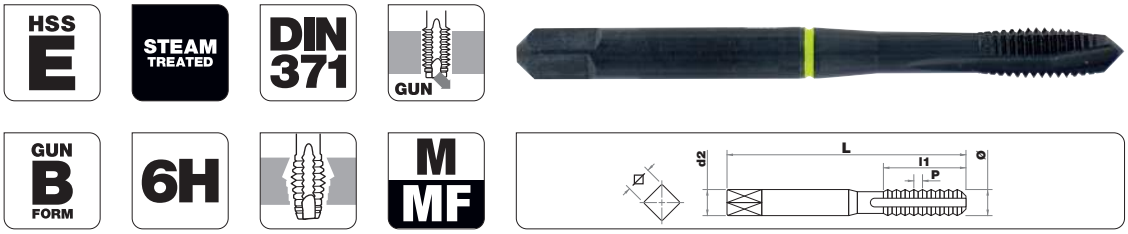
1050071	EAN	Ø	P	L	l	d2	ISO	QTY	PCB
1050071050050	3221910540746	MF5	0.5	58	11	5	529	1	1
1050071060075	3221910540784	MF6	0,75	66	14	6.3	529	1	1
1050071080100	3221910540838	MF8	1	69	17,5	8	529	1	1
1050071100100	3221910540906	MF10	1	80	21	10	529	1	1
1050071100125	3221910540913	MF10	1.25	80	21	10	529	1	1
1050071120100	3221910540951	MF12	1,00	89	24	9	529	1	1
1050071120125	3221910540968	MF12	1,25	89	24	9	529	1	1
1050071120150	3221910540975	MF12	1.5	89	29	9	529	1	1
1050071140125	3221910541002	MF14	1.25	90	25	11.2	529	1	1
1050071140150	3221910541019	MF14	1.5	95	30	11.2	529	1	1
1050071160150	3221910541064	MF16	1.5	102	32	12.5	529	1	1
1050071180150	3221910541095	MF18	1.5	104	29	14	529	1	1



HSS E DIN MACHINE TAP GUN BACK CHAMFER.

MACHO MÁQUINA HSS E DIN GUN CONI. INVERSA.

MASCHIO A MACCHINA HSS DIN GUN.



Multi-application machine tapping. Comfort, accuracy.

Multi-aplicación. Confort, precisión.

Filettatura a macchina multiapplicazione. Comfort e precisione.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C
Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

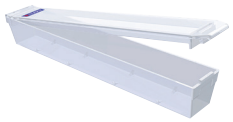
H
Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ
Cast iron
Fundiciones
Ghisa

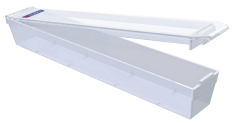
KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P
Composite Plastics
Composites plásticos
Plastiche composite

9602021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960202100200040	8420609297991	M2	0.4	45	10	2.8	371	1	1
960202100250045	8420609298004	M2,5	0.45	50	10	2.8	371	1	1
960202100300050	8420609298028	M3	0.5	56	7	3.5	371	1	1
960202100350060	8420609298035	M3,5	0.6	56	8,4	4	371	1	1
960202100400070	8420609298066	M4	0.7	63	10	4.5	371	1	1
960202100500080	8420609298110	M5	0.8	70	11,2	6	371	1	1
960202100600100	8420609298158	M6	1	80	14	6	371	1	1
960202100700100	8420609298172	M7	1	80	14	7	371	1	1
960202100800125	8420609298202	M8	1.25	90	17,5	8	371	1	1
960202100900125	8420609298226	M9	1.25	90	17,5	8	371	1	1
960202101000150	8420609298264	M10	1.5	100	21	10	371	1	1



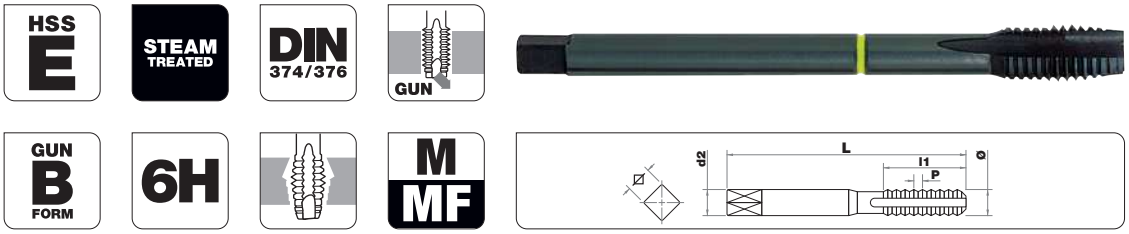
9602021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960202100400050	8420609298059	MF4	0.5	63	10	4.5	371	1	1
960202100500050	8420609298097	MF5	0.5	70	11,2	6	371	1	1
960202100600075	8420609298141	MF6	0.75	80	14	6	371	1	1
960202100800075	8420609298189	MF8	0,75	90	17,5	8	371	1	1
960202100800100	8420609298196	MF8	1	90	17,5	8	371	1	1
960202101000100	8420609298240	MF10	1	90	21	10	371	1	1
960202101000125	8420609298257	MF10	1.25	100	21	10	371	1	1



HSS E DIN MACHINE TAP GUN BACK CHAMFER.

MACHO MÁQUINA HSS E DIN GUN CONI. INVERSA.

MASCHIO A MACCHINA HSS DIN GUN.



Multi-application machine tapping. Comfort, accuracy.

Multi-aplicación. Confort, precisión.

Filettatura a macchina multiapplicazione. Comfort e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

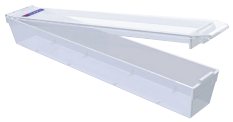
H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

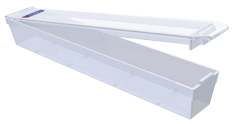
KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P Composite Plastics
Composites plásticos
Plastiche composite

9603021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960302100300050	8420609305085	M3	0.5	56	10	2.7	376	1	1
960302100400070	8420609305115	M4	0.7	63	12	2.8	376	1	1
960302100500080	8420609305153	M5	0.8	70	13,5	3.5	376	1	1
960302100600100	8420609305184	M6	1	80	15,5	4.5	376	1	1
960302100800125	8420609305245	M8	1.25	90	17	6	376	1	1
960302101000150	8420609305313	M10	1.5	100	20	7	376	1	1
960302101200175	8420609305382	M12	1.75	110	22	9	376	1	1
960302101400200	8420609305467	M14	2	110	25	11	376	1	1
960302101600200	8420609305535	M16	2	110	28	12	376	1	1
960302101800250	8420609305580	M18	2.5	125	32	14	376	1	1
960302102000250	8420609305634	M20	2.5	140	32	16	376	1	1
960302102200250	8420609305689	M22	2.5	140	32	18	376	1	1
960302102400300	8420609305726	M24	3	160	32	18	376	1	1
960302102700300	8420609305788	M27	3	160	36	20	376	1	1
960302103000350	8420609305849	M30	3.5	180	40	22	376	1	1
960302103300350	8420609305894	M33	3.5	180	40	25	376	1	1
960302103600400	8420609305955	M36	4	200	45	28	376	1	1
960302103900400	8420609305986	M39	4	200	45	32	376	1	1
960302104200450	8420609306051	M42	4.5	200	50	32	376	1	1
960302104800500	8420609306105	M48	5	250	56	36	376	1	1



9603021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960302100800100	8420609305238	MF8	1	90	18	6	374	1	1
960302101000100	8420609305290	MF10	1	90	18	7	374	1	1
960302101000125	8420609305306	MF10	1.25	100	20	7	374	1	1
960302101100125	8420609305337	MF11	1.25	100	20	7	374	1	1
960302101200100	8420609305351	MF12	1	100	22	9	374	1	1
960302101200125	8420609305368	MF12	1.25	100	22	9	374	1	1
960302101200150	8420609305375	MF12	1.5	100	22	9	374	1	1
960302101400100	8420609305436	MF14	1	100	22	11	374	1	1
960302101400125	8420609305443	MF14	1.25	100	22	11	374	1	1
960302101400150	8420609305450	MF14	1.5	100	22	11	374	1	1
960302101500150	8420609305498	MF15	1.5	100	22	11	374	1	1
960302101600100	8420609305504	MF16	1	100	22	12	374	1	1
960302101600125	8420609305511	MF16	1.25	100	22	12	374	1	1
960302101600150	8420609305528	MF16	1,5	110	22	12	374	1	1
960302101800100	8420609305542	MF18	1	110	25	14	374	1	1
960302101800150	8420609305566	MF18	1.5	110	25	14	374	1	1
960302101800200	8420609305573	MF18	2	125	28	14	374	1	1
960302102000100	8420609305597	MF20	1	125	25	16	374	1	1
960302102000150	8420609305610	MF20	1.5	125	25	16	374	1	1
960302102000200	8420609305627	MF20	2	140	25	16	374	1	1
960302102200150	8420609305665	MF22	1.5	125	25	18	374	1	1
960302102200200	8420609305672	MF22	2	140	28	18	374	1	1
960302102400150	8420609305702	MF24	1.5	140	25	18	374	1	1
960302102400200	8420609305719	MF24	2	140	25	18	374	1	1
960302102500150	8420609305733	MF25	1.5	140	25	18	374	1	1
960302102600150	8420609305740	MF26	1.5	140	25	18	374	1	1
960302102700150	8420609305764	MF27	1.5	140	25	18	374	1	1
960302102800150	8420609305795	MF28	1.5	140	28	20	374	1	1

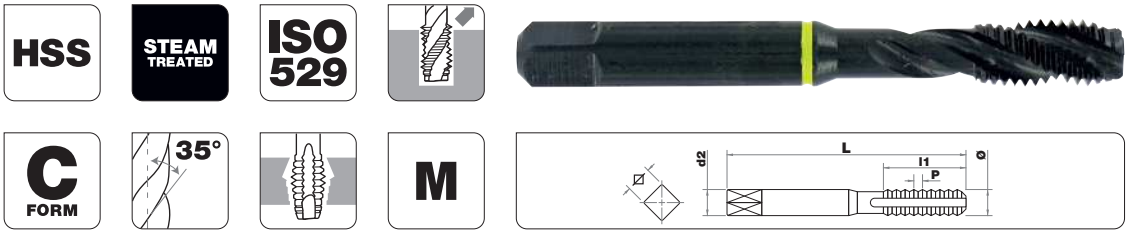


9603021	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960302103000150	8420609305818	MF30	1.5	150	32	22	374	1	1
960302103000200	8420609305825	MF30	2	150	32	22	374	1	1
960302103200150	8420609305856	MF32	1.5	150	28	22	374	1	1
960302103600150	8420609305924	MF36	1.5	170	32	28	374	1	1
960302103600200	8420609305931	MF36	2	170	32	28	374	1	1
960302103600300	8420609305948	MF36	3	170	32	28	374	1	1

HSS ISO MACHINE TAP SPIRAL FLUTE 35° BACK CHAMFER.

MACHO DE MÁQUINA HSS ISO HELICOIDAL 35° CONI. INVERSA.

MASCHIO A MACCHINA HSS ISO ELICA 35°.



Multi-application machine tapping.
Comfort, accuracy.

Roscado a máquina multi-aplicación..
Confort, precisión.

Filettatura a macchina multiapplicazione.
Comfort e precisione.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C
Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

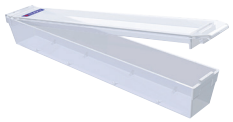
H
Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ
Cast iron
Fundiciones
Ghisa

KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P
Composite Plastics
Composites plásticos
Plastiche composite

1050121	EAN	Ø	P	L	l	d2	ISO	QTY	PCB
1050121030050	3221910678050	M3	0.5	48	23	3.15	529	1	1
1050121040070	3221910678074	M4	0.7	53	10	4	529	1	1
1050121050080	3221910678098	M5	0.8	58	11	5	529	1	1
1050121060100	3221910678104	M6	1	66	14	6.3	529	1	1
1050121080125	3221910678128	M8	1.25	72	17,5	8	529	1	1
1050121100150	3221910678142	M10	1.5	80	21	10	529	1	1
1050121120175	3221910678159	M12	1.75	89	16	9	529	1	1
1050121140200	3221910678166	M14	2	95	18	11.2	529	1	1
1050121160200	3221910678173	M16	2	102	18	12.5	529	1	1
1050121180250	3221910678180	M18	2.5	112	25	14	529	1	1
1050121200250	3221910678197	M20	2.5	112	25	14	529	1	1

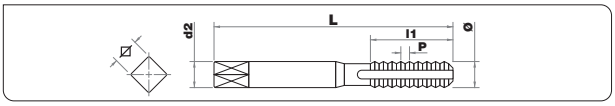


HSSE DIN MACHINE TAP SPIRAL FLUTE 35° BACK CHAMFER.

MACHO DE MÁQUINA HSSE DIN HELICOIDAL 35° CONI. INVERSA.

MASCHIO A MACCHINA HSS-E DIN ELICA 35°.





Multi-application machine tapping. Comfort, accuracy.

Multi-aplicación. Confort, precisión.

Filettatura a macchina multiapplicazione. Comfort e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

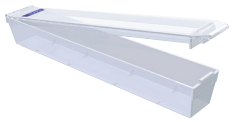
H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

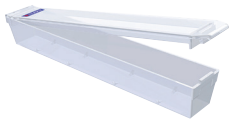
KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P Composite Plastics
Composites plásticos
Plastiche composite

9602051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960205100200040	8420609298769	M2	0.4	45	10	2.8	371	1	1
960205100250045	8420609298776	M2,5	0.45	50	10	2.8	371	1	1
960205100300050	8420609298783	M3	0.5	50	7	3,5	371	1	1
960205100350060	8420609298790	M3,5	0.6	56	8,4	4	371	1	1
960205100400070	8420609298813	M4	0.7	63	10	4.5	371	1	1
960205100500080	8420609298868	M5	0.8	70	11,2	6	371	1	1
960205100600100	8420609298899	M6	1	80	14	6	371	1	1
960205100700100	8420609298912	M7	1	80	14	7	371	1	1
960205100800125	8420609298943	M8	1.25	90	17,5	8	371	1	1
960205100900125	8420609298967	M9	1.25	90	17,5	9	371	1	1



9602051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960205100800100	8420609298936	MF8	1	90	17,5	8	371	1	1
960205101000150	8420609299001	M10	1.5	100	21	10	371	1	1
960205101000100	8420609298981	MF10	1	90	21	6	371	1	1
960205101000125	8420609298998	MF10	1.25	100	21	10	371	1	1

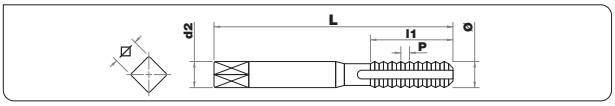


HSSE DIN MACHINE TAP SPIRAL FLUTE 35° BACK CHAMFER.

MACHO DE MÁQUINA HSSE DIN HELICOIDAL 35° CONI. INVERSA.

MASCHIO A MACCHINA HSS-E DIN ELICA 35°.





Multi-application machine tapping. Comfort, accuracy.

Multi-aplicación. Confort, precisión.

Filettatura a macchina multiapplicazione. Comfort e precisione.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

C Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²
Acciai per trattamento termico <950N/mm²

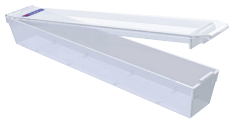
H Austenitic stainless steels
Aceros inoxidables austeniticos
Acciai inossidabili austenitici

IJ Cast iron
Fundiciones
Ghisa

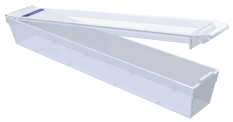
KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

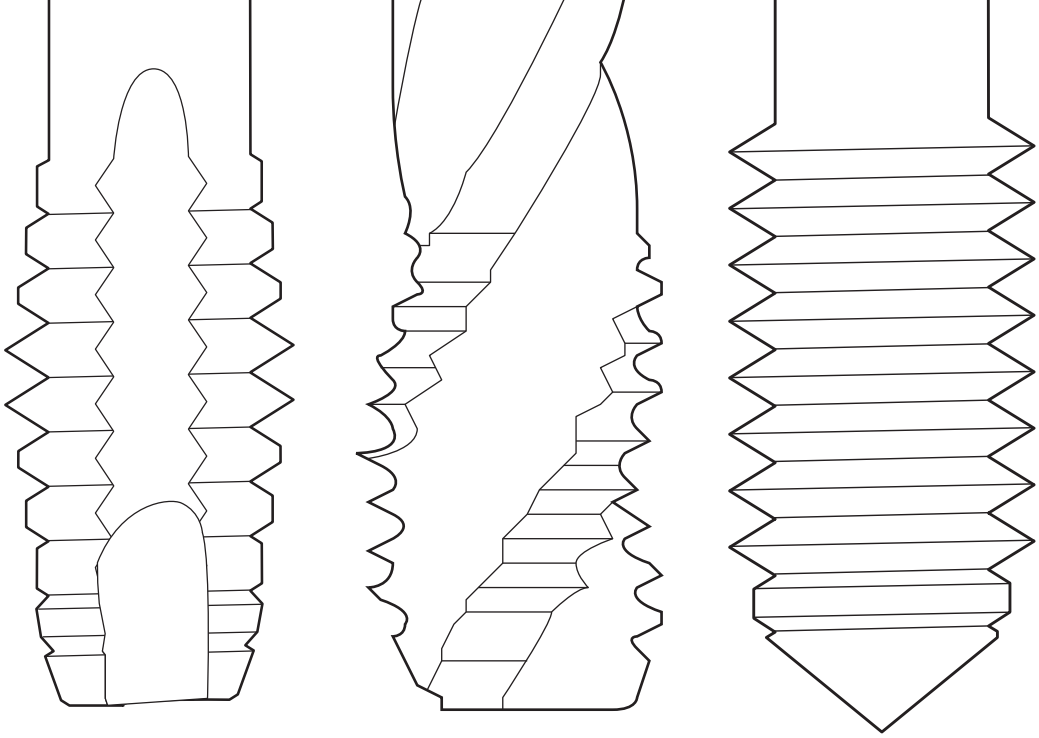
P Composite Plastics
Composites plásticos
Plastiche composite

9603051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960305100400070	8420609307393	M4	0.7	63	7	2.8	376	1	1
960305100500080	8420609307423	M5	0.8	70	8,5	3.5	376	1	1
960305100600100	8420609307454	M6	1	80	9,5	3.5	376	1	1
960305100800125	8420609307508	M8	1.25	90	12	6	376	1	1
960305101000150	8420609307560	M10	1.5	100	14	7	376	1	1
960305101200175	8420609307638	M12	1.75	110	16	9	376	1	1
960305101400200	8420609307690	M14	2	110	18	11	376	1	1
960305101600200	8420609307768	M16	2	110	18	12	376	1	1
960305101800250	8420609307812	M18	2.5	125	25	14	376	1	1
960305102000250	8420609307850	M20	2.5	140	25	16	376	1	1
960305102200250	8420609307898	M22	2.5	140	25	18	376	1	1
960305102400300	8420609307935	M24	3	160	30	18	376	1	1
960305102700300	8420609307997	M27	3	160	30	20	376	1	1
960305103000350	8420609308048	M30	3.5	180	35	22	376	1	1
960305103300350	8420609308093	M33	3.5	180	40	25	376	1	1
960305103600400	8420609308147	M36	4	200	45	28	376	1	1



9603051	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960305100800100	8420609307492	MF8	1	90	12	6	374	1	1
960305101000100	8420609307546	MF10	1	90	12	7	374	1	1
960305101000125	8420609307553	MF10	1.25	100	14	7	374	1	1
960305101200100	8420609307607	MF12	1	100	14	9	374	1	1
960305101200125	8420609307614	MF12	1.25	100	14	9	374	1	1
960305101200150	8420609307621	MF12	1.5	100	14	9	374	1	1
960305101400100	8420609307669	MF14	1	100	16	11	374	1	1
960305101400125	8420609307676	MF14	1.25	100	16	11	374	1	1
960305101400150	8420609307683	MF14	1.5	100	18	11	374	1	1
960305101600150	8420609307751	MF16	1.5	110	18	12	374	1	1
960305101800150	8420609307799	MF18	1.5	110	18	14	374	1	1
960305102000150	8420609307836	MF20	1.5	125	18	16	374	1	1
960305102200150	8420609307874	MF22	1.5	125	18	18	374	1	1
960305102400150	8420609307911	MF24	1.5	140	18	18	374	1	1
960305103000150	8420609308024	MF30	1.5	150	22	22	374	1	1
960305103000200	8420609308031	MF30	2	150	22	22	374	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

FLASH-CUT MACHINE TAP M-MF 248 #03
FLASH-CUT - MACHOS MAQUINA M-MF
FLASH-CUT - MASCHIO A MACCHINA M-MF

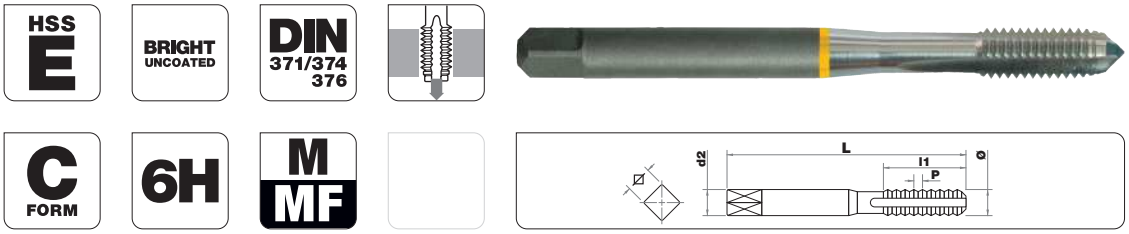
FLASH-CUT MACHINE TAP UNC-UNF 260 #03
FLASH-CUT - MACHOS MAQUINA UNC-UNF
FLASH-CUT - MASCHIO A MACCHINA UNC-UNF

FLASH-CUT MACHINE TAP BSP G 270 #03
FLASH-CUT - MACHOS MAQUINA BSP G
FLASH-CUT - MASCHIO A MACCHINA BSP G

HSSE DIN MACHINE TAPS. | FLASH-CUT | , STRAIGHT.

MACHO DE MÁQUINA HSSE | FLASHCUT | , RECTO.

MASCHIO A MACCHINA HSS-E DIN | FLASHCUT | DRITTO.



Designed for copper alloys. High Performance.

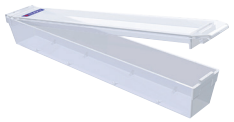
Diseñado para aleaciones de cobre. Alto rendimiento.

Concepito per le leghe di rame. Alte prestazioni.

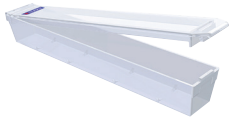
N Brass / Latón / ottone

O Bronze / Bronce / Bronzo

960BT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960BT1100300050	8420609526480	M3	0.5	56	10	3.5	371	1	1
960BT1100400070	8420609526497	M4	0.7	63	12	4.5	371	1	1
960BT1100500080	8420609526503	M5	0.8	70	14	6	371	1	1
960BT1100600100	8420609526510	M6	1	80	16	6	371	1	1
960BT1100800125	8420609526527	M8	1.25	90	18	8	371	1	1
960BT1101000150	8420609526534	M10	1.5	100	20	10	371	1	1
960BT1101200175	8420609526541	M12	1.75	110	22	9	376	1	1
960BT1101400200	8420609526558	M14	2	110	25	111	376	1	1
960BT1101600200	8420609526565	M16	2	110	28	12	376	1	1



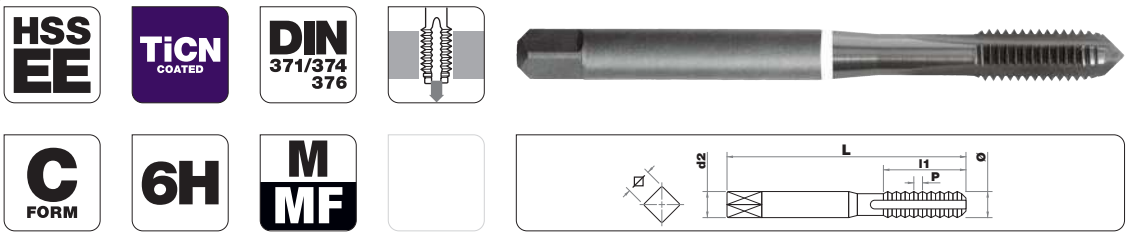
960BT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960BT1100800100	8420609596209	MF8	1	90	18	8	371	1	1
960BT1101000100	8420609596216	MF10	1	90	18	10	374	1	1
960BT1101200150	8420609596223	MF12	1.5	100	22	9	374	1	1
960BT1101400150	8420609596230	MF14	1.5	100	22	11	374	1	1



HSSEE (ASP) TICN DIN MACHINE TAPS. | FLASHCUT | , STRAIGHT FLUTE.

MACHO DE MÁQUINA HSSE (ASP) TICN | FLASHCUT | , RECTO.

MASCHIO A MACCHINA HSS-EE [ASP] TICN DIN | FLASHCUT | DRITTO.



Designed for Cast iron. High Performance.

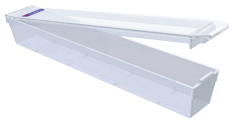
Diseñado para Fundicion. Alto rendimiento.

Concepito per le ghise. Alte prestazioni.

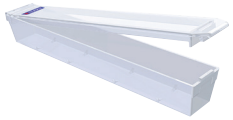
I Grey cast iron
Fundición gris
ghisa grigia

J SG iron
Fundición nodular
Ghisa GS

960CT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960CT1100300050	8420609526572	M3	0.5	56	10	3.5	371	1	1
960CT1100400070	8420609526589	M4	0.7	63	12	4.5	371	1	1
960CT1100500080	8420609526596	M5	0.8	70	14	6	371	1	1
960CT1100600100	8420609526602	M6	1	80	16	6	371	1	1
960CT1100800125	8420609526626	M8	1.25	90	18	8	371	1	1
960CT1101000150	8420609526633	M10	1.5	100	20	10	371	1	1
960CT1101200175	8420609526640	M12	1.75	110	22	9	376	1	1
960CT1101400200	8420609526657	M14	2	110	25	11	376	1	1
960CT1101600200	8420609526664	M16	2	110	28	12	376	1	1



960CT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960CT1100800100	8420609526619	MF8	1	90	18	8	371	1	1
960CT1101000100	8420609596247	MF10	1	90	18	10	371	1	1
960CT1101200150	8420609596254	MF12	1.5	100	22	9	374	1	1
960CT1101400150	8420609596261	MF14	1.5	100	22	11	374	1	1

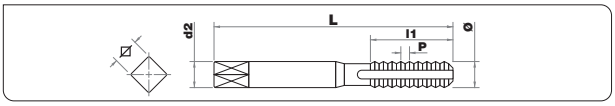


HSSE TIN DIN MACHINE TAPS. | FLASHCUT | .

MACHO DE MÁQUINA HSSE TIN. | FLASHCUT | , GUN.

MASCHIO A MACCHINA HSS-E TIN DIN | FLASHCUT | GUN.





Designed for Steels < 950 N/mm². High Performance.

Diseñado para aceros < 950 N/mm². Alto rendimiento.

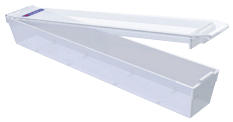
Concepito per gli acciai <950 N/mm². Alte prestazioni.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

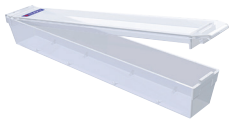
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

960ST21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960ST2100300050	8420609526954	M3	0.5	56	10	3.5	371	1	1
960ST2100400070	8420609526961	M4	0.7	63	12	4.5	371	1	1
960ST2100500080	8420609526978	M5	0.8	70	14	6	371	1	1
960ST2100600100	8420609526985	M6	1	80	16	6	371	1	1
960ST2100800125	8420609526992	M8	1.25	90	18	8	371	1	1
960ST2101000150	8420609527005	M10	1.5	100	20	10	371	1	1
960ST2101200175	8420609527012	M12	1.75	110	22	9	376	1	1
960ST2101400200	8420609527029	M14	2	110	25	11	376	1	1
960ST2101600200	8420609527043	M16	2	110	28	12	376	1	1



960ST21	EAN	Ø	P	L	l	d3	DIN	QTY	PCB
960ST2100800100	8420609596391	MF8	1	90	18	8	371	1	1
960ST2101000100	8420609596407	MF10	1	90	18	10	371	1	1
960ST2101200150	8420609596414	MF12	1,5	100	22	9	374	1	1
960ST2101400150	8420609596421	MF14	1,5	100	22	11	374	1	1



HSSEE (ASP) TICN-MP. DIN MACHINE TAPS | FLASHCUT | . BACK CHAMFER.

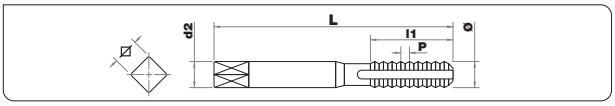
MACHO DE MÁQUINA HSSEE (ASP) TICNMP | FLASHCUT | . CONI. INVERSA, GUN.

MASCHIO A MACCHINA HSS-EE TICN MP DIN | FLASHCUT | GUN.

HSS EE | TiCN MP COATED | DIN 371/374 376 | GUN



GUN B FORM | 6H | M MF



Designed for exotic materials (Inox, Ni/Co, Ti). High Performance.

Diseñado para materiales exóticos (Inox, Ni/Co, Ti). Alto rendimiento.

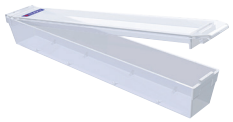
Concepito per materiali esotici [inox, Ni/Co, Ti]. Alte prestazioni.

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

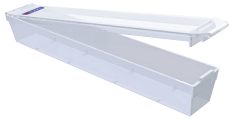
FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

960IT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960IT2100300050	8420609526688	M3	0.5	56	10	3.5	371	1	1
960IT2100400070	8420609526695	M4	0.7	63	12	4.5	371	1	1
960IT2100500080	8420609526701	M5	0.8	70	14	6	371	1	1
960IT2100600100	8420609526718	M6	1	80	16	6	371	1	1
960IT2100800125	8420609526725	M8	1.25	90	18	8	371	1	1
960IT2101000150	8420609526732	M10	1.5	100	20	10	371	1	1
960IT2101200175	8420609526749	M12	1.75	110	22	9	376	1	1
960IT2101400200	8420609526756	M14	2	110	25	11	376	1	1
960IT2101600200	8420609526763	M16	2	110	28	12	376	1	1



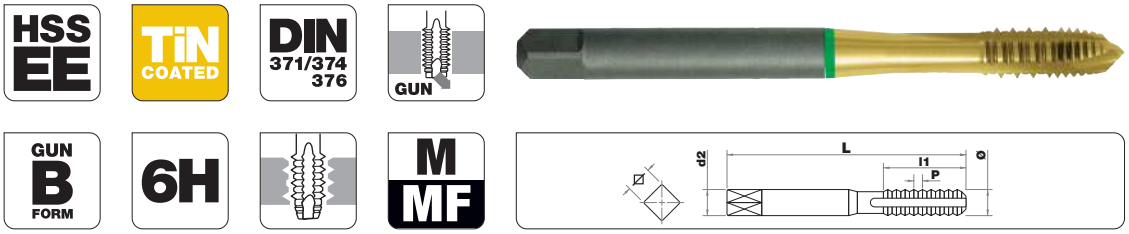
960IT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960IT2100800100	8420609596278	MF8	1	90	18	8	371	1	1
960IT2101000100	8420609596285	MF10	1	90	18	10	371	1	1
960IT2101200150	8420609596292	MF12	1.5	100	22	9	374	1	1
960IT2101400150	8420609596308	MF14	1.5	100	22	11	374	1	1



HSSEE (ASP) TIN. DIN MACHINE TAPS | FLASHCUT | . INTERRUPTED THREADS.

MACHO DE MÁQUINA HSSEE (ASP) TIN | FLASHCUT | . DIENTE ALTERNO, GUN.

MASCHIO A MACCHINA HSS-EE [ASP] TIN DIN | FLASHCUT | DENTI ALTERNATI GUN.



Designed for Aluminium alloys. High Performance.

Diseñado para Aleaciones de aluminio. Alto rendimiento.

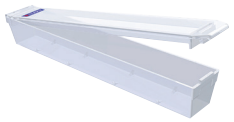
Concepito per le leghe di alluminio. Alte prestazioni.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

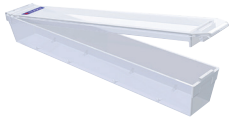
L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

960AT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960AT2100300050	8420609526213	M3	0.5	56	10	3.5	371	1	1
960AT2100400070	8420609526220	M4	0.7	63	12	4.5	371	1	1
960AT2100500080	8420609526237	M5	0.8	70	14	6	371	1	1
960AT2100600100	8420609526244	M6	1	80	16	6	371	1	1
960AT2100800125	8420609526251	M8	1.25	90	18	8	371	1	1
960AT2101000150	8420609526268	M10	1.5	100	20	10	371	1	1
960AT2101200175	8420609526275	M12	1.75	110	22	9	376	1	1
960AT2101400200	8420609526282	M14	2	110	28	11	376	1	1
960AT2101600200	8420609526299	M16	2	110	28	12	376	1	1



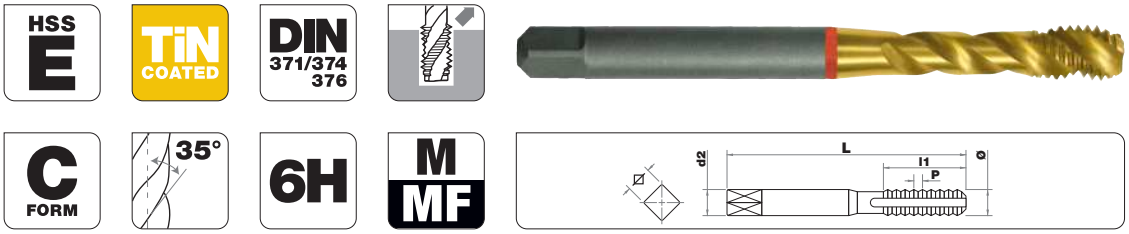
960AT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960AT2100800100	8420609596087	MF8	1	90	18	8	371	1	1
960AT2101000100	8420609596094	MF10	1	90	18	10	371	1	1
960AT2101200150	8420609596100	MF12	1.5	100	22	9	374	1	1
960AT2101400150	8420609596117	MF14	1.5	100	22	11	374	1	1



HSSE TIN. DIN MACHINE TAPS. SPIRALE FLUTE 35°. | FLASHCUT | .

MACHO DE MÁQUINA HSSE TIN. | FLASHCUT | , HÉL 35°.

MASCHIO A MACCHINA HSS-EE TIN DIN | FLASHCUT | ELICA 35°.



Designed for Steels < 950 N/mm². High Performance.

Diseñado para aceros < 950 N/mm². Alto rendimiento.

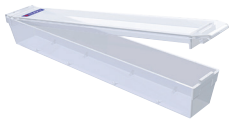
Concepito per gli acciai <950 N/mm². Alte prestazioni.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

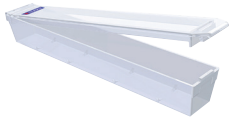
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

960ST51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960ST5100300050	8420609527050	M3	0.5	56	5	3.5	371	1	1
960ST5100400070	8420609527067	M4	0.7	63	7	4.5	371	1	1
960ST5100500080	8420609527074	M5	0.8	70	9	6	371	1	1
960ST5100600100	8420609527081	M6	1	80	10	6	371	1	1
960ST5100800125	8420609527098	M8	1.25	90	12	8	371	1	1
960ST5101000150	8420609527104	M10	1.5	100	14	10	371	1	1
960ST5101200175	8420609527111	M12	1.75	110	16	9	376	1	1
960ST5101400200	8420609527128	M14	2	110	18	11	376	1	1
960ST5101600200	8420609527135	M16	2	110	18	12	376	1	1



960ST51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960ST5100800100	8420609596438	MF8	1	90	12	8	371	1	1
960ST5101000100	8420609596445	MF10	1	90	14	10	371	1	1
960ST5101200150	8420609596452	MF12	1.5	100	14	9	374	1	1
960ST5101400150	8420609596469	MF14	1.5	100	18	11	374	1	1



HSSEE [ASP] TICN-MP. DIN SPIRAL FLUTE 35°. | FLASHCUT | , BACK CHAMFER.

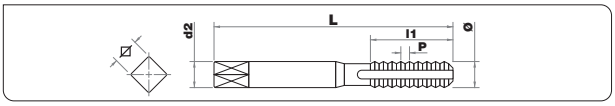
MACHO MÁQUINA HSSEE (ASP) TIC-NMP. | FLASHCUT | , CON. INVERSA, HÉL 35°.

MASCHIO A MACCHINA HSS-EE [ASP] TICN MP | FLASHCUT | , ELICA 35°.

HSS EE | TiCN MP COATED | DIN 371/374 376



C FORM | 35° | M MF



Designed for exotic materials [Inox, Ni/Co, Ti]. High Performance.

Diseñado para materiales exóticos [Inox, Ni/Co ,Ti]. Alto rendimiento.

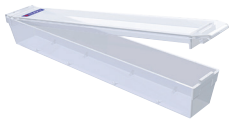
Concepito per materiali esotici [inox, Ni/Co, Ti]. Alte prestazioni.

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

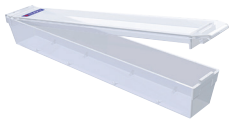
FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

960IT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960IT5100300050	8420609526770	M3	0.5	56	5	3.5	371	1	1
960IT5100400070	8420609526787	M4	0.7	63	7	4.5	371	1	1
960IT5100500080	8420609526794	M5	0.8	70	9	6	371	1	1
960IT5100600100	8420609526800	M6	1	80	10	6	371	1	1
960IT5100800125	8420609526817	M8	1.25	90	12	8	371	1	1
960IT5101000150	8420609526824	M10	1.5	100	14	10	371	1	1
960IT5101200175	8420609526831	M12	1.75	110	16	9	376	1	1
960IT5101400200	8420609526848	M14	2	110	18	11	376	1	1
960IT5101600200	8420609526855	M16	2	110	18	12	376	1	1



960IT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960IT5100800100	8420609596315	MF8	1	90	12	8	371	1	1
960IT5101000100	8420609596322	MF10	1	90	14	10	371	1	1
960IT5101200150	8420609596339	MF12	1.5	100	14	9	374	1	1
960IT5101400150	8420609596346	MF14	1.5	100	18	11	374	1	1

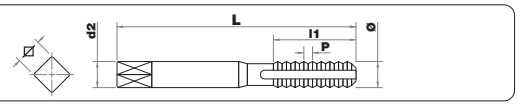


HSSEE (ASP) TIN DIN SPIRAL FLUTE 35°. | FLASHCUT | , INTERRUPTED THREADS.

MACHO MÁQUINA HSSEE (ASP) TIN | FLASHCUT | , DIENTE ALTERNO, HÉL. 35°.

MASCHIO A MACCHINA HSS-EE [ASP] TIN | FLASHCUT | DENTI ALTERNATI ELICA 35°.





Designed for Aluminium alloys.High Performance.

Diseñado para Aleaciones de aluminio. Alto rendimiento.

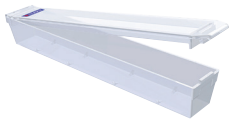
Concepito per le leghe d'alluminio. Alte prestazioni.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

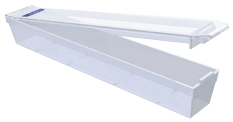
L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

960AT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960AT5100300050	8420609526305	M3	0.5	56	5	3.5	371	1	1
960AT5100400070	8420609526312	M4	0.7	63	7	4.5	371	1	1
960AT5100500080	8420609526329	M5	0.8	70	9	6	371	1	1
960AT5100600100	8420609526336	M6	1	80	10	6	371	1	1
960AT5100800125	8420609526343	M8	1.25	90	12	8	371	1	1
960AT5101000150	8420609526350	M10	1.5	100	14	10	371	1	1
960AT5101200175	8420609526367	M12	1.75	110	16	9	376	1	1
960AT5101400200	8420609526374	M14	2	110	18	11	376	1	1
960AT5101600200	8420609526381	M16	2	110	18	12	376	1	1



960AT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960AT5100800100	8420609596124	MF8	1	90	12	8	371	1	1
960AT5101000100	8420609596131	MF10	1	90	14	10	371	1	1
960AT5101200150	8420609596148	MF12	1.5	100	14	9	374	1	1
960AT5101400150	8420609596155	MF14	1.5	100	18	11	374	1	1



HSSEE [ASP] TIN DIN FORMING TAPS. | FLASHCUT | , GROOVES.

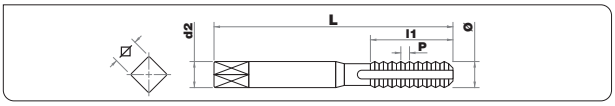
MACHO MÁQUINA HSSEE (ASP) TIN. | FLASHCUT | . RANURAS, LAMINACIÓN.

MASCHIO A MACCHINA HSS-EE TIN | FLASHCUT | , SCANALATURE A RULLARE.

HSS EE | TiN COATED | DIN 371/374 376



C FORM | 6HX | M MF



Designed for Steels 8%. High Performance.

Diseñado para aceros 8%. Alto rendimiento.

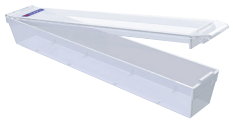
Concepito per gli acciai 8% Alte prestazioni.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

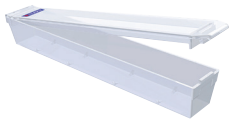
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

960ST91	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960ST9100300050	8420609527142	M3	0.5	56	10	3.5	371	1	1
960ST9100400070	8420609527159	M4	0.7	63	12	4.5	371	1	1
960ST9100500080	8420609527166	M5	0.8	70	14	6	371	1	1
960ST9100600100	8420609527173	M6	1	80	16	6	371	1	1
960ST9100800125	8420609527180	M8	1.25	90	18	8	371	1	1
960ST9101000150	8420609527197	M10	1.5	100	20	10	371	1	1
960ST9101200175	8420609527203	M12	1.75	110	22	9	376	1	1
960ST9101400200	8420609527210	M14	2	110	25	11	376	1	1
960ST9101600200	8420609527227	M16	2	110	28	12	376	1	1



960ST91	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960ST9100800100	8420609596476	MF8	1	90	18	8	371	1	1
960ST9101000100	8420609596483	MF10	1	90	18	10	371	1	1
960ST9101200150	8420609596490	MF12	1.5	100	22	9	374	1	1
960ST9101400150	8420609596506	MF14	1.5	100	22	11	374	1	1

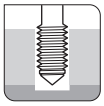


HSSEE (ASP) TICN-MP. DIN FORMING TAPS. | FLASHCUT | , GROOVES.

MACHO MÁQUINA HSSEE (ASP) TICNMP | FLASHCUT | . RANURAS, LAMINACIÓN.

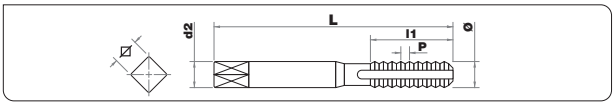
MASCHIO A MACCHINA HSS-EE TIC-NMP | FLASHCUT | , SCANALATURE A RULLARE.

HSS EE | TiCN MP COATED | DIN 371/374 376





C FORM | 6HX | M MF



Designed for exotic materials (Inox, Ni/Co, Ti). A > 8%. High Perf.

Diseñado para mat. exóticos (Inox, Ni/Co, Ti). A > 8%. Alto rendimiento.

Concepito per mat. esotici [inox, Ni/Co, Ti] A>8%. Alte prestazioni.

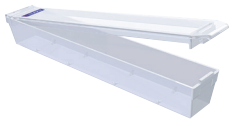
CDE — Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH — Stainless Steel
Aceros inoxidables
Acciai inossidabili

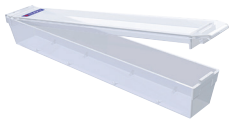
O — Bronze
Bronce
Bronzo

ARCo ARNi — Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

960IT91	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960IT9100300050	8420609526862	M3	0.5	56	10	3.5	371	1	1
960IT9100400070	8420609526879	M4	0.7	63	12	4.5	371	1	1
960IT9100500080	8420609526886	M5	0.8	70	14	6	371	1	1
960IT9100600100	8420609526893	M6	1	80	16	6	371	1	1
960IT9100800125	8420609526909	M8	1.25	90	18	8	371	1	1
960IT9101000150	8420609526916	M10	1.5	100	20	10	371	1	1
960IT9101200175	8420609526923	M12	1.75	110	22	9	376	1	1
960IT9101400200	8420609526930	M14	2	110	25	11	376	1	1
960IT9101600200	8420609526947	M16	2	110	28	12	376	1	1



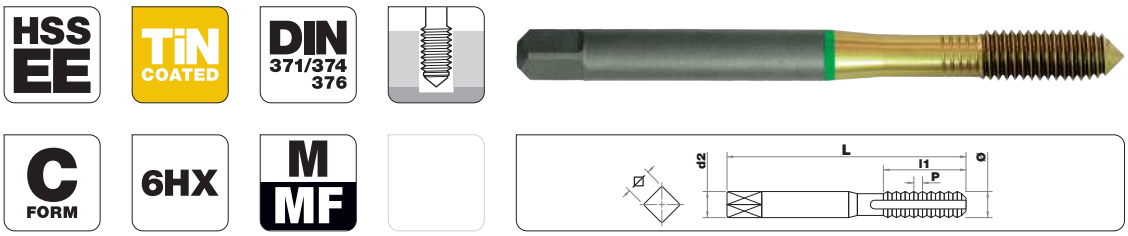
960IT91	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960IT9100800100	8420609596353	MF8	1	90	18	8	371	1	1
960IT9101000100	8420609596360	MF10	1	90	18	10	371	1	1
960IT9101200150	8420609596377	MF12	1.5	100	22	9	374	1	1
960IT9101400150	8420609596384	MF14	1.5	100	22	11	374	1	1



HSSEE (ASP) TIN DIN FORMING TAPS | FLASHCUT | .

MACHO MÁQUINA HSSEE (ASP) TIN, | FLASHCUT | , LAMINACIÓN.

MASCHIO A MACCHINA HSS-EE [ASP] TIN | FLASHCUT | A RULLARE.



Designed for Aluminium alloys. A > 8%. High Performance.

Diseñado para Aleaciones de aluminio. A > 8%. Alto rendimiento.

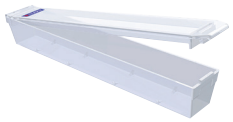
Concepito per le leghe in alluminio A>8%. Alte prestazioni.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

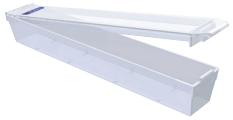
L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

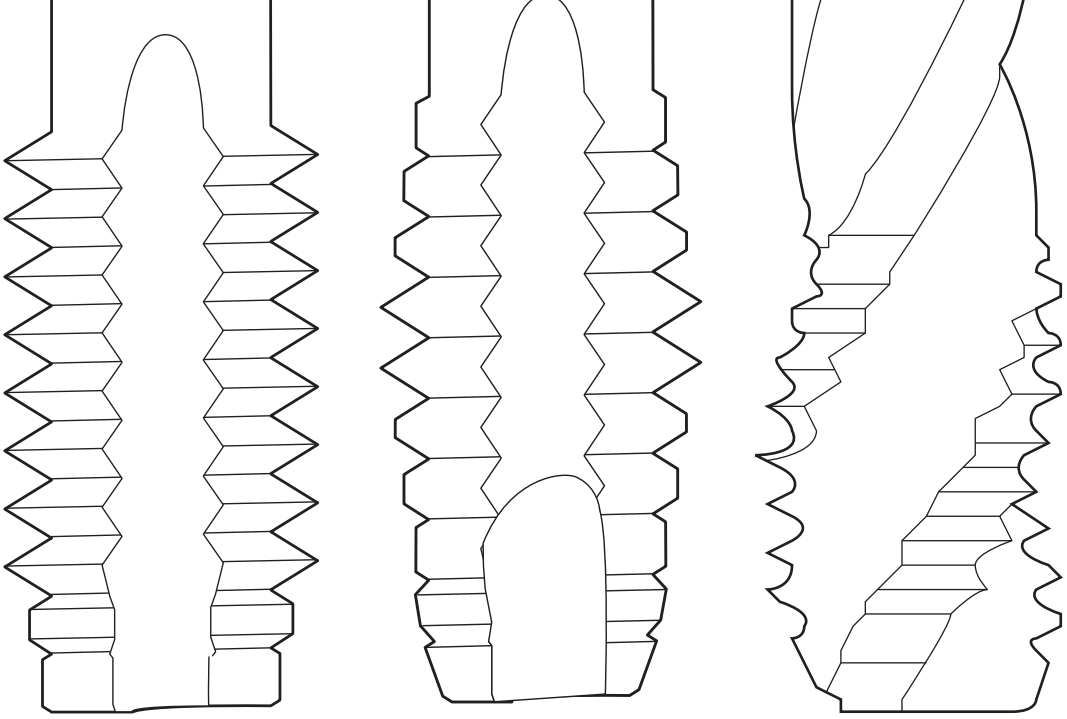
M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

960AT91	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960AT9100400070	8420609526404	M4	0,7	63	12	4,5	371	1	1
960AT9100500080	8420609526411	M5	0,8	70	14	6	371	1	1
960AT9100600100	8420609526428	M6	1	80	16	6	371	1	1
960AT9100300050	8420609526398	M3	0,5	56	10	3,5	371	1	1
960AT9100800125	8420609526435	M8	1,25	90	18	8	371	1	1
960AT9101000150	8420609526442	M10	4,5	100	20	10	371	1	1
960AT9101200175	8420609526459	M12	1,76	110	22	9	376	1	1
960AT9101400200	8420609526466	M14	2	110	25	11	376	1	1
960AT9101600200	8420609526473	M16	2	110	28	12	376	1	1



960AT91	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
960AT9100800100	8420609596162	MF8	1	90	18	8	371	1	1
960AT9101000100	8420609596179	MF10	1	90	18	10	371	1	1
960AT9101200150	8420609596186	MF12	1,5	100	22	9	374	1	1
960AT9101400150	8420609596193	MF14	1,5	100	22	11	374	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

FLASH-CUT - MACHINE TAP UNC-UNF 260
FLASH-CUT - MACHOS MAQUINA UNC-UNF
FLASH-CUT - MASCHIO A MACCHINA UNC-UNF

HSSE DIN MACHINE TAPS. | FLASH-CUT | , STRAIGHT FLUTE.

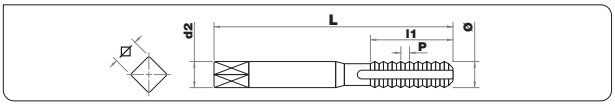
MACHO MÁQUINA HSSE | FLASH-CUT | , RECTO.

MASCHIO A MACCHINA HSS-E DIN | FLASHCUT | DRITTO.

HSS E | BRIGHT UNCOATED | DIN 371/376



C FORM | 2B | UNC UNF



Designed for copper alloys. High Performance.

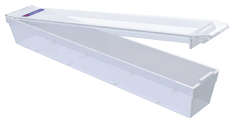
Diseñado para aleaciones de cobre. Alto rendimiento.

Concepito per le leghe di rame. Alte prestazioni.

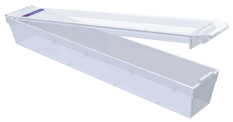
N Brass / Latón / ottone

O Bronze / Bronce / Bronzo

962BT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962BT1100140200	8420609614941	C 1/4	20	80	16	7	371	1	1
962BT1100380160	8420609614989	C 3/8	16	90	18	9	371	1	1
962BT1100120130	8420609614927	C 1/2	13	110	25	9	376	1	1
962BT1100340100	8420609614965	C 3/4	10	125	32	14	376	1	1
962BT1110000080	8420609615009	C 1"	8	160	36	20	376	1	1



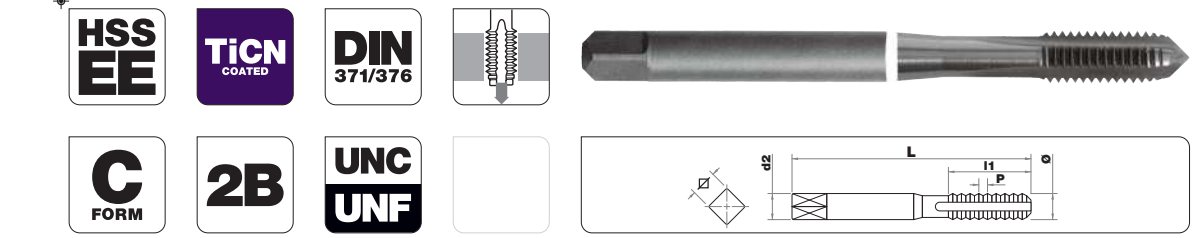
962BT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962BT1100140280	8420609614958	F 1/4	28	80	16	7	371	1	1
962BT1100380240	8420609614996	F 3/8	24	100	18	9	371	1	1
962BT1100120200	8420609614934	F 1/2	20	110	25	9	376	1	1
962BT1100340160	8420609614972	F 3/4	16	125	32	14	376	1	1
962BT1110000120	8420609615016	F 1"	12	140	32	20	376	1	1



HSSEE (ASP) TICN DIN MACHINE TAPS. | FLASHCUT | , STRAIGHT.

MACHO MÁQUINA HSSEE (ASP) TICN FLASH CUT, RECTO.

MASCHIO A MACCHINA HSS-EE [ASP] TICN DIN | FLASHCUT | DRITTO.



Designed for Cast iron. High Performance.

Diseñado para Fundicion. Alto rendimiento.

Concepito per le ghise. Alte prestazioni.



Grey cast iron

Fundición gris

ghisa grigia

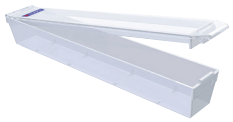


SG iron

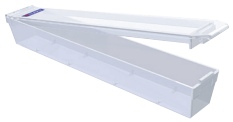
Fundición nodular

Ghisa GS

962CT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962CT1100140200	8420609615047	C 1/4	20	80	16	7	371	1	1
962CT1100380160	8420609615085	C 3/8	16	90	18	9	371	1	1
962CT1100120130	8420609615023	C 1/2	13	110	25	9	376	1	1
962CT1100340100	8420609615061	C 3/4	10	125	32	14	376	1	1
962CT1110000080	8420609615108	C 1"	8	160	36	20	376	1	1



962CT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962CT1100140280	8420609615054	F 1/4	28	80	16	7	371	1	1
962CT1100380240	8420609615092	F 3/8	24	100	18	9	371	1	1
962CT1100120200	8420609615030	F 1/2	20	110	25	9	376	1	1
962CT1100340160	8420609615078	F 3/4	16	125	32	14	376	1	1
962CT1110000120	8420609615115	F 1"	12	140	32	20	376	1	1

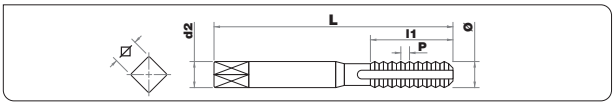


HSSE TIN DIN MACHINE TAPS. | FLASHCUT | .

MACHO MÁQUINA HSSE TIN. FLASCHCUT, GUN.

MASCHIO A MACCHINA HSS-E TIN DIN | FLASHCUT | GUN.





Designed for Steels < 950 N/mm². High Performance.

Diseñado para aceros < 950 N/mm². Alto rendimiento.

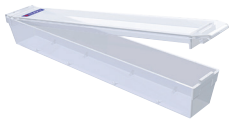
Concepito per gli acciai <950 N/mm². Alte prestazioni.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

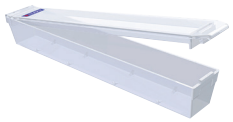
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

962ST21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962ST2100140200	8420609615344	C 1/4	20	80	16	7	371	1	1
962ST2100380160	8420609615382	C 3/8	16	90	18	9	371	1	1
962ST2100120130	8420609615320	C 1/2	13	110	25	9	376	1	1
962ST2100340100	8420609615368	C 3/4	10	125	32	14	376	1	1
962ST2110000080	8420609615405	C 1"	8	160	36	20	376	1	1



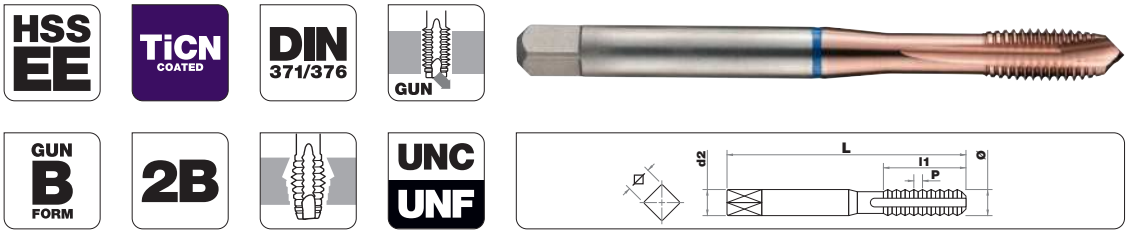
962ST21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962ST2100140280	8420609615351	F 1/4	28	80	16	7	371	1	1
962ST2100380240	8420609615399	F 3/8	24	100	18	9	371	1	1
962ST2100120200	8420609615337	F 1/2	20	110	25	9	376	1	1
962ST2100340160	8420609615375	F 3/4	16	125	32	14	376	1	1
962ST2110000120	8420609615412	F 1"	12	140	32	20	376	1	1



HSSEE (ASP) TICNMP. DIN MACHINE TAPS. | FLASHCUT | , BACK CHAMFER.

MACHO MÁQUINA HSSEE (ASP) TICNMP | FLASHCUT | . CONICIDAD INVERSA, GUN.

MASCHIO A MACCHINA HSS-EE [ASP] TICN MP DIN | FLASHCUT | GUN.



Designed for exotic materials (Inox, Ni/Co, Ti). High Performance.

Diseñado para materiales exóticos (Inox, Ni/Co, Ti). Alto rendimiento.

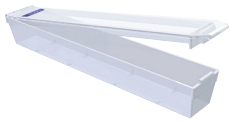
Concepito per materiali esotici [inox, Ni/Co, Ti]. Alte prestazioni.

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

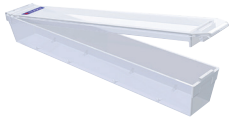
FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

962IT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962IT2100140200	8420609615146	C 1/4	20	80	16	7	371	1	1
962IT2100380160	8420609615184	C 3/8	16	90	18	9	371	1	1
962IT2100120130	8420609615122	C 1/2	13	110	25	9	376	1	1
962IT2100340100	8420609615160	C 3/4	10	125	32	14	376	1	1
962IT2110000080	8420609615207	C 1"	8	160	36	20	376	1	1



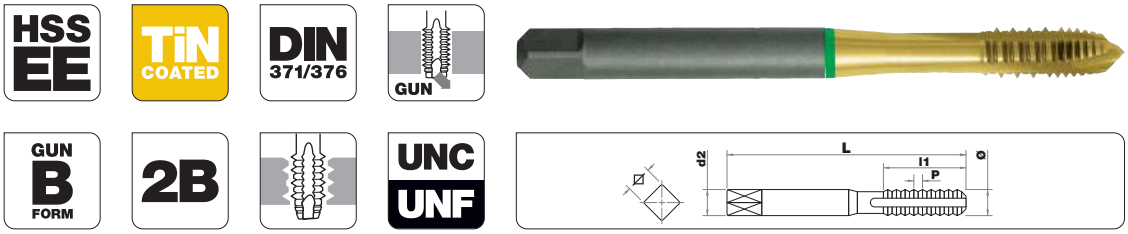
962IT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962IT2100140280	8420609615153	F 1/4	28	80	16	7	371	1	1
962IT2100380240	8420609615191	F 3/8	24	100	18	9	371	1	1
962IT2100120200	8420609615139	F 1/2	20	110	25	9	376	1	1
962IT2100340160	8420609615177	F 3/4	16	125	32	14	376	1	1
962IT2110000120	8420609615214	F 1"	12	140	32	20	376	1	1



HSSEE (ASP) TIN. DIN MACHINE TAPS | FLASHCUT | , INTERRUPTED THREADS.

MACHO MÁQUINA HSSEE (ASP) TIN | FLASHCUT | . DIENTE ALTERNO, GUN.

MASCHIO A MACCHINA HSS-EE [ASP] TIN | FLASHCUT | DENTI ALTERNATI GUN.



Designed for Aluminium alloys. High Performance.

Diseñado para Aleaciones de aluminio. Alto rendimiento.

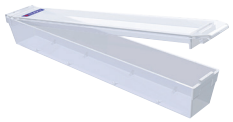
Concepito per le leghe di alluminio. Alte prestazioni.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

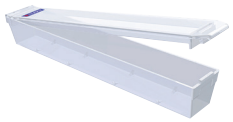
L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

962AT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962AT2100140200	8420609614743	C 1/4	20	80	16	7	371	1	1
962AT2100380160	8420609614781	C 3/8	16	90	18	9	371	1	1
962AT2100120130	8420609614729	C 1/2	13	110	25	9	376	1	1
962AT2100340100	8420609614767	C 3/4	10	125	32	14	376	1	1
962AT2110000080	8420609614804	C 1"	8	160	36	20	376	1	1



962AT21	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962AT2100140280	8420609614750	F 1/4	28	80	16	7	371	1	1
962AT2100380240	8420609614798	F 3/8	24	100	18	9	371	1	1
962AT2100120200	8420609614736	F 1/2	20	110	25	9	376	1	1
962AT2100340160	8420609614774	F 3/4	16	125	32	14	376	1	1
962AT2110000120	8420609614811	F 1"	12	140	32	20	376	1	1

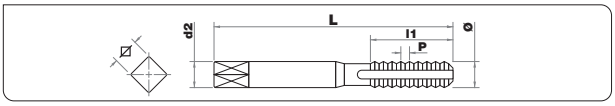


HSSE TIN. DIN MACHINE TAPS, SPIRALE FLUTE 35°. | FLASHCUT | .

MACHO MÁQUINA HSSE TIN. | FLASHCUT | , HEL. 35°.

MASCHIO A MACCHINA HSS-E TIN DIN | FLASHCUT | , ELICA 35°.





Designed for Steels < 950 N/mm². High Performance.

Diseñado para aceros < 950 N/mm². Alto rendimiento.

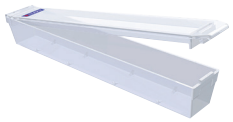
Concepito per gli acciai <950 N/mm². Alte prestazioni.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

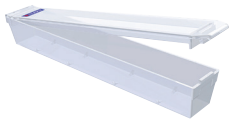
B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

962ST51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962ST5100140200	8420609615443	C 1/4	20	80	12	7	371	1	1
962ST5100380160	8420609615481	C 3/8	16	90	14	9	371	1	1
962ST5100120130	8420609615429	C 1/2	13	110	16	9	376	1	1
962ST5100340100	8420609615467	C 3/4	10	125	25	14	376	1	1
962ST5110000080	8420609615504	C 1"	8	160	30	20	376	1	1



962ST51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962ST5100140280	8420609615450	F 1/4	28	80	10	7	371	1	1
962ST5100380240	8420609615498	F 3/8	24	100	14	9	371	1	1
962ST5100120200	8420609615436	F 1/2	20	110	16	9	376	1	1
962ST5100340160	8420609615474	F 3/4	16	125	18	14	376	1	1
962ST5110000120	8420609615511	F 1"	12	140	25	20	376	1	1

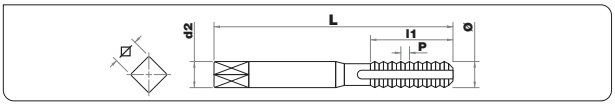


HSSEE (ASP) TICNMP. DIN SPIRAL FLUTE 35°. | FLASHCUT | , BACK CHAMFER.

MACHO MÁQUINA HSSEE (ASP) TICNMP | FLASHCUT | . CONI. INVERSA, HEL. 35°.

MASCHIO A MACCHINA HSS-EE [ASP] TICN MP | FLASHCUT | , ELICA 35°.





Designed for exotic materials (Inox, Ni/Co, Ti). High Performance.

Diseñado para materiales exóticos (Inox, Ni/Co, Ti). Alto rendimiento.

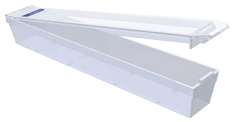
Concepito per materiali esotici [inox, Ni/Co, Ti]. Alte prestazioni.

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

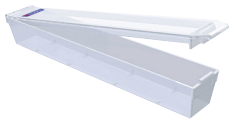
FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

962IT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962IT5100140200	8420609615245	C 1/4	20	80	12	7	371	1	1
962IT5100380160	8420609615283	C 3/8	16	90	14	9	371	1	1
962IT5100120130	8420609615221	C 1/2	13	110	16	9	376	1	1
962IT5100340100	8420609615269	C 3/4	10	125	25	14	376	1	1
962IT5110000080	8420609615306	C 1"	8	160	30	20	376	1	1



962IT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962IT5100140280	8420609615252	F 1/4	28	80	10	7	371	1	1
962IT5100380240	8420609615290	F 3/8	24	100	14	9	371	1	1
962IT5100120200	8420609615238	F 1/2	20	110	16	9	376	1	1
962IT5100340160	8420609615276	F 3/4	16	125	18	14	376	1	1
962IT5110000120	8420609615313	F 1"	12	140	25	20	376	1	1

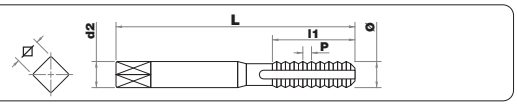


HSSEE [ASP] TIN DIN SPIRAL FLUTE 35°. | FLASHCUT | , INTERRUPTED THREADS.

MACHO MÁQUINA HSSEE (ASP) TIN | FLASHCUT | . DIENTE ALTERNO, HÉL. 35°.

MASCHIO A MACCHINA HSS-EE [ASP] TIN | FLASHCUT | DENTI ALTERNATI ELICA 35°.





Designed for Aluminium alloys. High Performance.

Diseñado para Aleaciones de aluminio. Alto rendimiento.

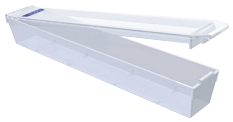
Concepito per le leghe in alluminio. Alte prestazioni.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

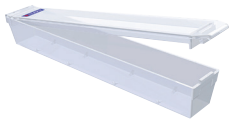
L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

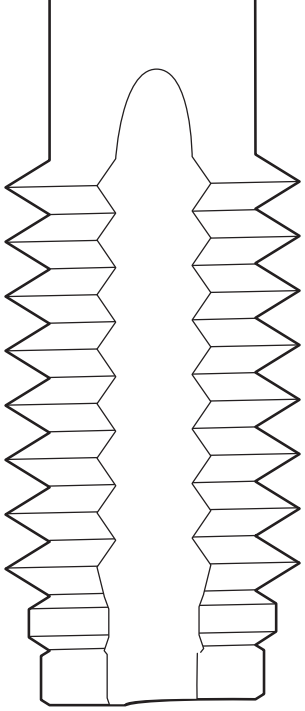
M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

962AT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962AT5100140200	8420609614842	C 1/4	20	80	12	7	371	1	1
962AT5100380160	8420609614880	C 3/8	16	90	14	9	371	1	1
962AT5100120130	8420609614828	C 1/2	13	110	16	9	376	1	1
962AT5100340100	8420609614866	C 3/4	10	125	25	14	376	1	1
962AT5110000080	8420609614903	C 1"	8	160	30	20	376	1	1



962AT51	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
962AT5100140280	8420609614859	F 1/4	28	80	10	7	371	1	1
962AT5100380240	8420609614897	F 3/8	24	100	14	9	371	1	1
962AT5100120200	8420609614835	F 1/2	20	110	16	9	376	1	1
962AT5100340160	8420609614873	F 3/4	16	125	18	14	376	1	1
962AT5110000120	8420609614910	F 1"	12	140	25	20	376	1	1





FLASH-CUT MACHINE TAP BSP G
FLASH-CUT - MACHOS MAQUINA BSP G
FLASH-CUT - MASCHIO A MACCHINA BSP G

270

HSSE DIN MACHINE TAPS. | FLASH-CUT | , STRAIGHT.

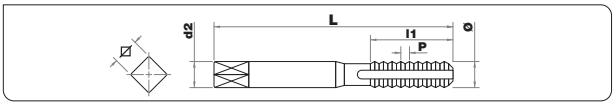
MACHO MÁQUINA HSSE | FLASH-CUT | , RECTO.

MASCHIO A MACCHINA HSS-E DIN | FLASHCUT | DRITTO.

HSS E | BRIGHT UNCOATED | DIN 5156



C FORM | 6H | BSP G



Designed for copper alloys. High Performance.

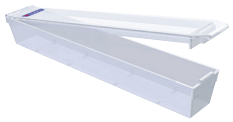
Diseñado para aleaciones de cobre. Alto rendimiento.

Concepito per le leghe di rame. Alte prestazioni.

N Brass / Latón / ottone

O Bronze / Bronce / Bronzo

963BT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
963BT1100180280	8420609615580	G1/8	28	90	18	7	5156	1	1
963BT1100140190	8420609615573	G1/4	19	100	22	11	5156	1	1
963BT1100380190	8420609615603	G3/8	19	100	25	12	5156	1	1
963BT1100120140	8420609615566	G1/2	14	125	25	16	5156	1	1
963BT1100340140	8420609615597	G3/4	14	140	28	20	5156	1	1
963BT1110000110	8420609615610	G1"	11	160	36	25	5156	1	1

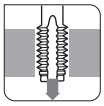


HSSEE [ASP] TICN DIN MACHINE TAPS. | FLASHCUT | , STRAIGHT.

MACHO MÁQUINA HSSEE (ASP) TICN | FLASHCUT | , RECTO.

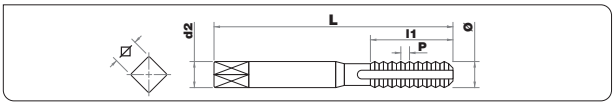
MASCHIO A MACCHINA HSS-EE [ASP] TICN DIN | FLASHCUT | DRITTO.

HSS EE | TiCN COATED | DIN 5156





C FORM | 6H | BSP G



Designed for Cast iron. High Performance.

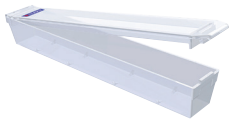
Diseñado para Fundicion. Alto rendimiento.

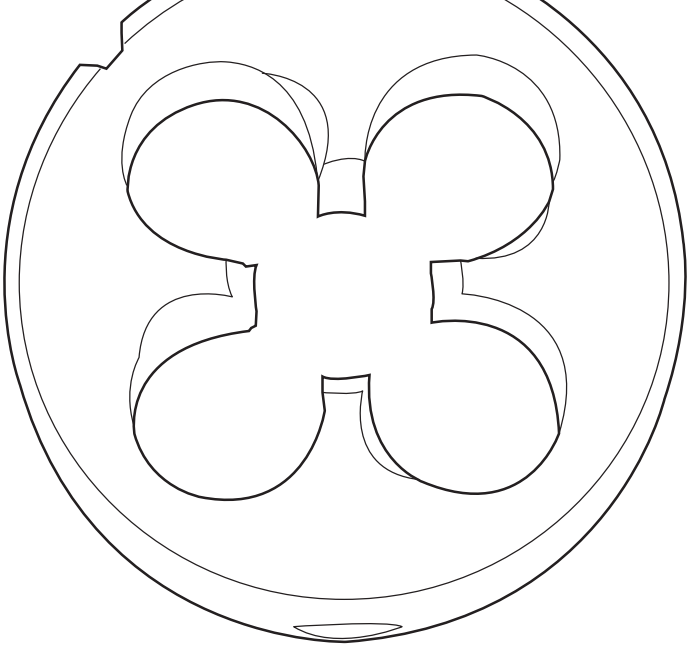
Concepito per le ghise. Alte prestazioni.

I Grey cast iron
Fundición gris
ghisa grigia

J SG iron
Fundición nodular
Ghisa GS

963CT11	EAN	Ø	P	L	l	d2	DIN	QTY	PCB
963CT1100180280	8420609615641	G1/8	28	90	18	7	5156	1	1
963CT1100140190	8420609615634	G1/4	19	100	22	11	5156	1	1
963CT1100380190	8420609615665	G3/8	19	100	25	12	5156	1	1
963CT1100120140	8420609615627	G1/2	14	125	25	16	5156	1	1
963CT1100340140	8420609615658	G3/4	14	140	28	20	5156	1	1
963CT1110000110	8420609615672	G1"	11	160	36	25	5156	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

DIES M-MF 274 #03
COJINETES M-MF
FILIERA M-MF

DIES UNC-UNF 280 #03
COJINETES UNC-UNF
FILIERA UNC-UNF

DIES BSW 282 #03
COJINETES BSW
FILIERA BSW

DIES BSP G 283 #03
COJINETES BSP G
FILIERA BSP G

HSS ISO DIES. C FORM (CAGE 25,4), M/MF.

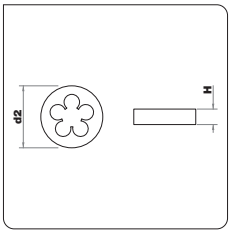
COJINETES HSS ISO FORMA C [25,4] M/MF.

FILIERA HSS ISO, FORMA C (Ø ESTERNO 25,4), M/MF.

HSS | BRIGHT UNCOATED | NFE 74001 | 25,4

C FORM | M MF





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100031	EAN	Ø	P	H	d2	NFE	QTY	PCB
1100031020040	3221910552473	M2	0.4	8	25.4	74001	1	1
1100031025045	3221910552497	M2,5	0.45	8	25.4	74001	1	1
1100031030050	3221910552503	M3	0.5	8	25.4	74001	1	1
1100031040070	3221910552534	M4	0.7	8	25.4	74001	1	1
1100031050080	3221910552589	M5	0.8	8	25.4	74001	1	1
1100031060100	3221910552626	M6	0.1	9	25.4	74001	1	1
1100031070100	3221910552640	M7	0.1	9	25.4	74001	1	1
1100031080125	3221910552688	M8	1.25	9	25.4	74001	1	1
1100031090125	3221910552718	M9	1.25	9	25.4	74001	1	1
1100031100150	3221910552749	M10	1.5	9	25.4	74001	1	1
1100031120175	3221910552770	M12	1.75	9	25.4	74001	1	1
1100031030060	3221910552510	MF3	0.6	8	25.4	74001	1	1
1100031035060	3221910552527	MF3,5	0.6	8	25.4	74001	1	1
1100031040075	3221910552541	MF4	0.75	8	25.4	74001	1	1
1100031040080	3221910552558	MF4	0.8	8	25.4	74001	1	1
1100031045075	3221910552565	MF4,5	0.75	8	25.4	74001	1	1
1100031050075	3221910552572	MF5	0.75	8	25.4	74001	1	1
1100031050090	3221910552596	MF5	0.9	8	25.4	74001	1	1
1100031050100	3221910552602	MF5	1	8	25.4	74001	1	1
1100031060075	3221910552619	MF6	0.75	9	25.4	74001	1	1
1100031060125	3221910552633	MF6	1.25	9	25.4	74001	1	1
1100031080100	3221910552671	MF8	1	9	25.4	74001	1	1
1100031080150	3221910552695	MF8	1.5	9	25.4	74001	1	1
1100031100100	3221910552725	MF10	1	9	25.4	74001	1	1
1100031100125	3221910552732	MF10	1.25	9	25.4	74001	1	1



HSS ISO DIES. C FORM (CAGE 38,1), M/MF.

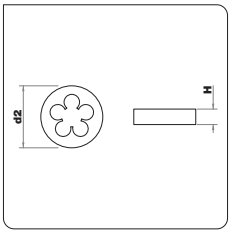
COJINETES HSS ISO FORMA C [DIAM. INT. 25,4-38,1-50,8- 63,5] M MF.

FILIERA HSS ISO, FORMA C (Ø ESTERNO 38,1), M/MF.

HSS | BRIGHT UNCOATED | NFE 74001 | 38,1

C FORM | M MF





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100041	EAN	Ø	P	H	d2	NFE	QTY	PCB
1100041080125	3221910553425	M8	1.25	13	38.1	74001	1	1
1100041090125	3221910553432	M9	1.25	13	38.1	74001	1	1
1100041100150	3221910553463	M10	1.5	13	38.1	74001	1	1
1100041110150	3221910553487	M11	1.5	13	38.1	74001	1	1
1100041120175	3221910553524	M12	1.75	13	38.1	74001	1	1
1100041130175	3221910553555	M13	1.75	13	38.1	74001	1	1
1100041140200	3221910553593	M14	2	13	38.1	74001	1	1
1100041160200	3221910553616	M16	2	13	38.1	74001	1	1
1100041180250	3221910553647	M18	2.5	13	38.1	74001	1	1
1100041200250	3221910553661	M20	2.5	13	38.1	74001	1	1
1100041100100	3221910553449	MF10	1	13	38.1	74001	1	1
1100041100125	3221910553456	MF10	1.25	13	38.1	74001	1	1
1100041120100	3221910553494	MF12	1	13	38.1	74001	1	1
1100041120125	3221910553500	MF12	1.25	13	38.1	74001	1	1
1100041120150	3221910553517	MF12	1.5	13	38.1	74001	1	1
1100041130150	3221910553548	MF13	1.5	13	38.1	74001	1	1
1100041140100	3221910553562	MF14	1	13	38.1	74001	1	1
1100041140125	3221910553579	MF14	1.25	13	38.1	74001	1	1
1100041140150	3221910553586	MF14	1.5	13	38.1	74001	1	1
1100041160150	3221910553609	MF16	1.5	13	38.1	74001	1	1
1100041180150	3221910553623	MF18	1.5	13	38.1	74001	1	1
1100041180200	3221910553630	MF18	2	13	38.1	74001	1	1
1100041200150	3221910553654	M20	1.5	13	38.1	74001	1	1



HSS ISO DIES. C FORM (CAGE 50,8), M/MF.

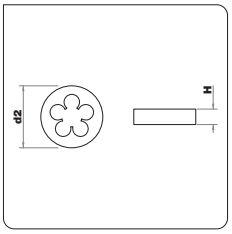
COJINETES HSS ISO FORMA C [50,8] M MF.

FILIERA HSS ISO, FORMA C (Ø ESTERNO 50,8), M/MF.

HSS | BRIGHT UNCOATED | NFE 74001 | 50,8

C FORM | M MF





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100051	EAN	Ø	P	H	d2	NFE	QTY	PCB
1100051160200	3221910709372	M16	2	17	50.8	74001	1	1
1100051200250	3221910709419	M20	2.5	17	50.8	74001	1	1
1100051220150	3221910709426	MF22	1.5	17	50.8	74001	1	1
1100051220250	3221910709433	M22	2.5	17	50.8	74001	1	1
1100051240300	3221910709457	M24	3	17	50.8	74001	1	1
1100051270300	3221910709464	M27	3	17	50.8	74001	1	1
1100051180150	3221910709389	MF18	1.5	17	50.8	74001	1	1
1100051180250	3221910709396	M18	2.5	17	50.8	74001	1	1
1100051200150	3221910709402	MF20	1.5	17	50.8	74001	1	1
1100051240150	3221910709440	MF24	1.5	17	50.8	74001	1	1



HSS ISO DIES. C FORM (CAGE 63,5), M/MF.

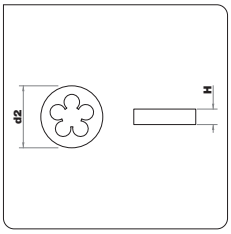
COJINETES HSS ISO FORMA C [63,5] M MF.

FILIERA HSS ISO, FORMA C (Ø ESTERNO 63,5), M/MF.

HSS | BRIGHT UNCOATED | NFE 74001 | 63,5

C FORM | M MF





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100061	EAN	Ø	P	H	d2	NFE	QTY	PCB
1100061240300	3221910709679	M24	3	20	63.5	74001	1	1
1100061270300	3221910709709	M27	3	20	63.5	74001	1	1
1100061300350	3221910709747	M30	3.5	20	63.5	74001	1	1
1100061330350	3221910709754	M33	3.5	20	63.5	74001	1	1
1100061360400	3221910709761	M36	4	20	63.5	74001	1	1
1100061270150	3221910709686	MF27	1.5	20	63.5	74001	1	1
1100061270200	3221910709693	MF27	2	20	63.5	74001	1	1
1100061280150	3221910709716	MF28	1.5	20	63.5	74001	1	1
1100061300150	3221910709723	MF30	1.5	20	63.5	74001	1	1
1100061300200	3221910709730	MF30	2	20	63.5	74001	1	1



HSS DIN DIES. B FORM, M.

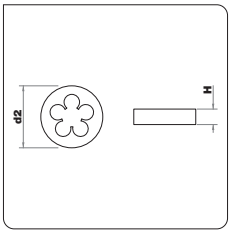
COJINETES HSS DIN ENTRADA FORMA B M.

FILIERA HSS DIN, FORMA B, M.

HSS | BRIGHT UNCOATED | EN 22568 | 16-75

GUN B FORM | M





A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100411	EAN	Ø	P	H	d2	EN	QTY	PCB
1100411020040	3221910711955	M2	0.4	5	16	22568	1	1
1100411025045	3221910711962	M2,5	0.45	5	16	22568	1	1
1100411030050	3221910711979	M3	0.5	5	20	22568	1	1
1100411040070	3221910711986	M4	0.7	5	20	22568	1	1
1100411050080	3221910711993	M5	0.8	7	20	22568	1	1
1100411060100	3221910712006	M6	1	7	20	22568	1	1
1100411070100	3221910712013	M7	1	9	25	22568	1	1
1100411080125	3221910712020	M8	1.25	9	25	22568	1	1
1100411090125	3221910712037	M9	1.25	9	25	22568	1	1
1100411100150	3221910712044	M10	1.5	11	30	22568	1	1
1100411110150	3221910712051	M11	1.5	11	30	22568	1	1
1100411120175	3221910712068	M12	1.75	14	38	22568	1	1
1100411140200	3221910712075	M14	2	14	38	22568	1	1
1100411160200	3221910712082	M16	2	18	45	22568	1	1
1100411180250	3221910712099	M18	2.5	18	45	22568	1	1
1100411200250	3221910712105	M20	2.5	18	45	22568	1	1
1100411220250	3221910712112	M22	2.5	22	55	22568	1	1
1100411240300	3221910712129	M24	3	22	55	22568	1	1
1100411270300	3221910712136	M27	3	25	65	22568	1	1
1100411300350	3221910712143	M30	3.5	25	65	22568	1	1
1100411330350	3221910712150	M33	3.5	25	65	22568	1	1
1100411360400	3221910712167	M36	4	25	65	22568	1	1
1100411390400	3221910712174	M39	4	30	75	22568	1	1
1100411420450	3221910712181	M42	4.5	30	75	22568	1	1



HSS DIN DIES. B FORM, MF.

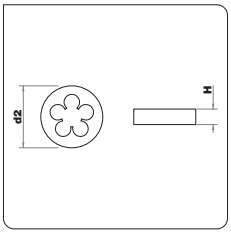
COJINETES HSS DIN ENTRADA FORMA B MF.

FILIERA HSS DIN, FORMA B, MF.

HSS | BRIGHT UNCOATED | EN 22568 | 25-65

GUN B FORM | MF





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100441	EAN	Ø	P	H	d2	EN	QTY	PCB
1100441080100	3221910712761	MF8	1	9	25	22568	1	1
1100441100100	3221910712778	MF10	1	11	30	22568	1	1
1100441100125	3221910712785	MF10	1.25	11	30	22568	1	1
1100441120100	3221910712792	MF12	1	10	38	22568	1	1
1100441120125	3221910712808	MF12	1.25	10	38	22568	1	1
1100441120150	3221910712815	MF12	1.5	10	38	22568	1	1
1100441140100	3221910712822	MF14	1	10	38	22568	1	1
1100441140125	3221910712839	MF14	1.25	10	38	22568	1	1
1100441140150	3221910712846	MF14	1.5	10	38	22568	1	1
1100441160150	3221910712853	MF16	1.5	14	45	22568	1	1
1100441180150	3221910712860	MF18	1.5	14	45	22568	1	1
1100441200150	3221910712877	MF20	1.5	14	45	22568	1	1
1100441220150	3221910712884	MF22	1.5	16	55	22568	1	1
1100441240150	3221910712891	MF24	1.5	16	55	22568	1	1
1100441300150	3221910712907	MF30	1.5	18	65	22568	1	1



HSS DIN DIES. C FORM, UNC.

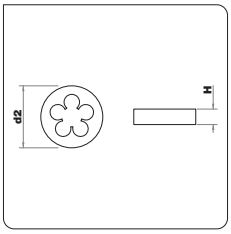
COJINETES HSS DIN ENTRADA FORMA B UNC.

FILIERA HSS DIN, FORMA C, UNC.

HSS | BRIGHT UNCOATED | EN 22568 | 20-45

GUN B FORM | UNC





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100471	EAN	Ø	P	H	d2	EN	QTY	PCB
11004710005	3221910713157	UNC5	40	5	20	22568	1	1
11004710006	3221910713164	UNC6	32	5	20	22568	1	1
11004710008	3221910713171	UNC8	32	5	20	22568	1	1
11004710010	3221910713188	UNC10	24	7	20	22568	1	1
11004710012	3221910713195	UNC12	24	7	20	22568	1	1
11004710104	3221910713218	UNC1/4	20	7	20	22568	1	1
11004710516	3221910713249	UNC5/16	18	9	25	22568	1	1
11004710308	3221910713232	UNC3/8	16	11	30	22568	1	1
11004710716	3221910713256	UNC7/16	14	11	30	22568	1	1
11004710102	3221910713201	UNC1/2	13	14	38	22568	1	1
11004710304	3221910713225	UNC3/4	10	18	45	22568	1	1



HSS DIN DIES. B FORM, UNF.

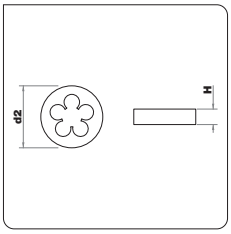
COJINETES HSS DIN ENTRADA FORMA B UNF.

FILIERA HSS DIN, FORMA B, UNF.

HSS | BRIGHT UNCOATED | EN 22568 | 20-45

GUN B FORM | UNF





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100481	EAN	Ø	P	H	d2	EN	QTY	PCB
11004810005	3221910713263	UNF5	44	5	20	22568	1	1
11004810006	3221910713270	UNF6	40	5	20	22568	1	1
11004810008	3221910713287	UNF8	36	5	20	22568	1	1
11004810010	3221910713294	UNF10	32	7	20	22568	1	1
11004810012	3221910713300	UNF12	28	7	20	22568	1	1
11004810104	3221910713324	UNF1/4	28	7	20	22568	1	1
11004810516	3221910713355	UNF5/16	24	9	25	22568	1	1
11004810308	3221910713348	UNF3/8	24	11	30	22568	1	1
11004810716	3221910713362	UNF7/16	20	11	30	22568	1	1
11004810102	3221910713317	UNF1/2	20	10	38	22568	1	1
11004810304	3221910713331	UNF3/4	16	11	45	22568	1	1



HSS DIN DIES. B FORM, BSW.

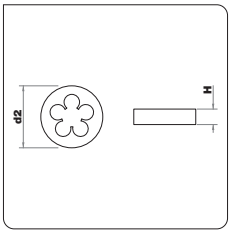
COJINETES HSS DIN ENTRADA FORMA B BSW.

FILIERA HSS DIN, FORMA B, BSW.

HSS | BRIGHT UNCOATED | EN 24231 | 20-55

GUN B FORM | BSW





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100501	EAN	Ø	P	H	d2	EN	QTY	PCB
11005010108	3221910713492	BSW1/8	40	5	20	24231	1	1
11005010532	3221910713553	BSW5/32	32	5	20	24231	1	1
11005010316	3221910713522	BSW3/16	24	7	20	24231	1	1
11005010104	3221910713485	BSW1/4	20	7	20	24231	1	1
11005010516	3221910713546	BSW5/16	18	9	25	24231	1	1
11005010308	3221910713515	BSW3/8	16	11	30	24231	1	1
11005010716	3221910713577	BSW7/16	14	11	30	24231	1	1
11005010102	3221910713478	BSW1/2	12	14	38	24231	1	1
11005010508	3221910713539	BSW5/8	11	18	45	24231	1	1
11005010304	3221910713508	BSW3/4	10	18	45	24231	1	1
11005010708	3221910713560	BSW7/8	9	22	55	24231	1	1
11005011000	3221910713584	BSW1"	8	22	55	24231	1	1



HSS DIN DIES. B FORM, BSP G.

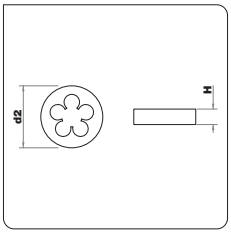
COJINETES HSS DIN ENTRADA FORMA B BSP G.

FILIERA HSS DIN, FORMA B, BSP G.

HSS | BRIGHT UNCOATED | EN 24231 | 30-90

GUN B FORM | BSP G





Multipurpose threading. Comfort, accuracy.

Roscado multi-aplicación. Confort, precisión.

Filettatura multiapplicazione. Comfort e precisione.

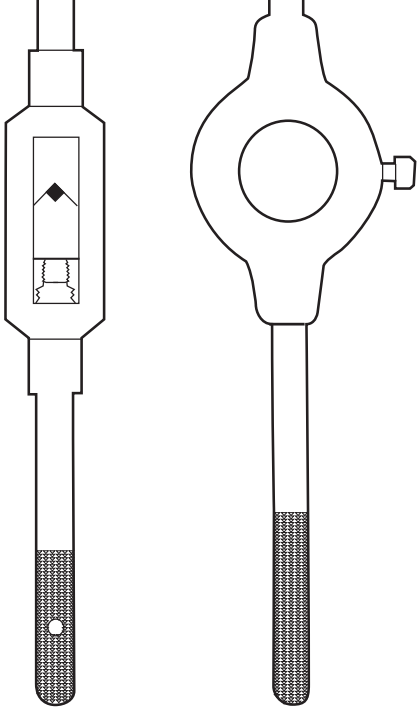
A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1100491	EAN	Ø	P	H	d2	EN	QTY	PCB
11004910108	3221910713393	G1/8	28	11	30	24231	1	1
11004910104	3221910713386	G1/4	19	10	38	24231	1	1
11004910308	3221910713416	G3/8	19	14	45	24231	1	1
11004910102	3221910713379	G1/2	14	14	45	24231	1	1
11004910508	3221910713423	G5/8	14	16	55	24231	1	1
11004910304	3221910713409	G3/4	14	16	55	24231	1	1
11004910708	3221910713430	G7/8	14	18	65	24231	1	1
11004911000	3221910713447	G1	11	18	65	24231	1	1
11004911104	3221910713461	G1"1/4	11	20	75	24231	1	1
11004911102	3221910713454	G1"1/2	11	22	90	24231	1	1





TAP WRENCH.

GIRAMACHOS.

GIRAMASCHI CON CORPO E MANICO IN ACCIAIO.

TIVOLY NORM

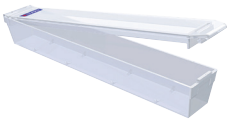


Robustness, life span.

Robustez, duración de vida.

Robustezza, lunga durata.

1110011	EAN	N°	M to M	QTY	PCB
11100110000	3221910548094	N°0	M1-6	1	1
11100110010	3221910548100	N°1	M3-8	1	1
11100110015	3221910548117	N°1,5	M3-12	1	1
11100110020	3221910548124	N°2	M4-14	1	1
11100110030	3221910548148	N°3	M6-20	1	1
11100110040	3221910548155	N°4	M9-27	1	1



TAP WRENCH WITH RATCHET.

PORTAMACHOS REVERSIBLE CON TRINQUETE.

PORTA MASCHI REVERSIBILE CON CRICCHETTO.

TIVOLY NORM



Special narrow access tapping.

especial para el roscado en lugares de difícil acceso.

Filettatura speciale negli spazi ristretti.

1110031	EAN	Ø	L	QTY	PCB
11100310001	3221910714529	2 - 5	85	1	1
11100310002	3221910714536	4,5 - 6,5	105	1	1
11100310003	3221910714543	2 - 5	250	1	1
11100310004	3221910714550	4,5 - 6,5	300	1	1



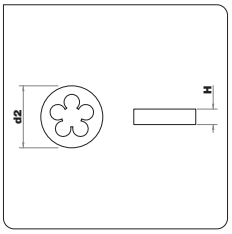
DIE HOLDER. STEEL BODY AND HANDLE.

PORTA COJINETES (ACERO).

PORTA FILIERA. CORPO E MANICO IN ACCIAIO.

TIVOLY NORM





Hand threading. Robustness, life span.

Roscado manual. Robustez, duracion de vida.

Filettatura manuale. Robustezza, lunga durata.

1110041	EAN	d2	TIV.	H		QTY	PCB
11100410254	3221910554309	25.4	-			1	1
11100410381	3221910554316	38.1	-			1	1
11100410508	3221910554347	50.8	-			1	1
11100410635	3221910554354	63.5	-			1	1
11100410205	3221910554477	20	-	5	-	1	1
11100410207	3221910554491	20	-	7	-	1	1
11100410259	3221910554514	25	-	9	-	1	1
11100413011	3221910554583	30	-	11	-	1	1
11100413810	3221910554590	38	-	10	-	1	1
11100413814	3221910554606	38	-	14	-	1	1
11100414514	3221910554613	45	-	14	-	1	1
11100414518	3221910554620	45	-	18	-	1	1
11100415516	3221910554637	55	-	16	-	1	1
11100415522	3221910554644	55	-	22	-	1	1
11100416518	3221910554651	65	-	18	-	1	1
11100416525	3221910554668	65	-	25	-	1	1



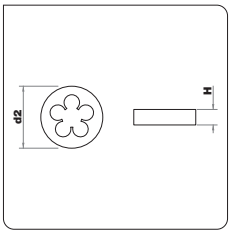
END DIE HOLDER. STEEL BODY.

ALARGADOR DE PORTA COJINETES (ACERO).

PORTA FILIERA VERTICALE. CORPO IN ACCIAIO.

TIVOLY NORM





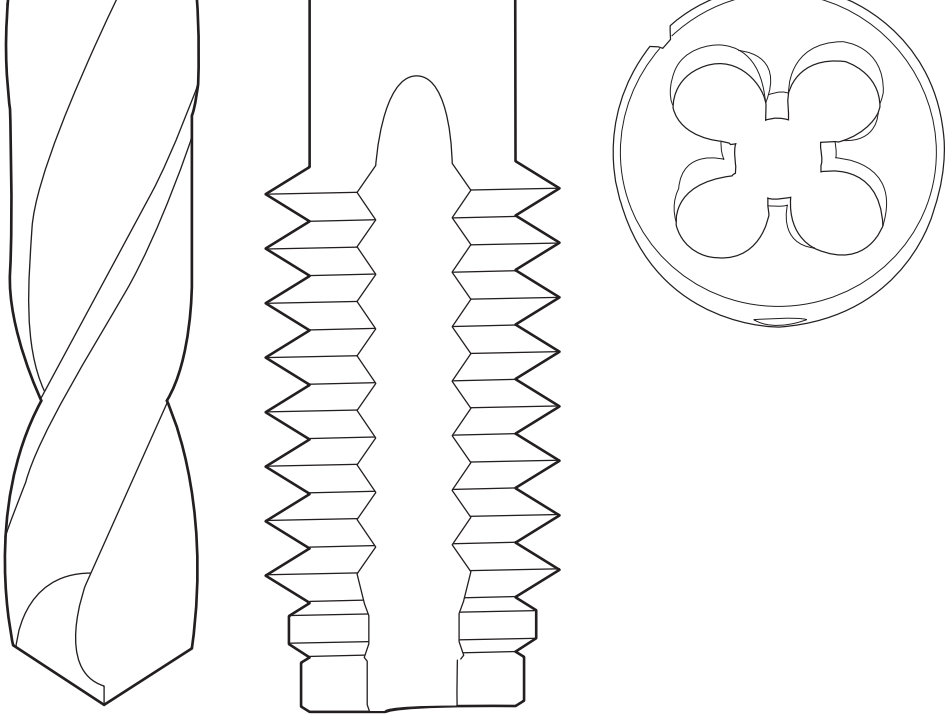
Machine threading. Robustness, life span.

Roscado a máquina. Robustez, duración de vida.

Filettatura manuale. Robustezza, lunga durata.

1110051	EAN	Ø	d2	QTY	PCB
11100510254	3221910714642	25,4	8	1	1
11100510381	3221910714659	38.1	13	1	1





TAPPING & THREADING
ROSCADO & COJINETES
MASCHATURA & FELETTATURA

SETS
ESTUCHES
COFANETTI

SET | TF4

NEW

08 PCS | HSS | 4

HSS | DIN 352 | GUN

4 taps HSS DiN 352 GUN Steam M4 à M8 + 4 drills HSS

ESTUCHE | TF4



4 machos HSS GUN DiN 352 Steam M4 à M8 + 4 brocas HSS

CASSETTA | TF4

11900170033

3221912117465

QTY	PCB
8	1

AB | H

4 maschi HSS GUN DiN 352 Steam da M4 a M8 + 4 punte HSS

SET | TFT

15 PCS | HSS | 4

HSS | DIN 352 | GUN

7 taps HSS DiN 352 GUN Steam M3 à M12 + 7 drills TSX HSS + 1 TAG

ESTUCHE | TFT



7 machos HSS GUN DiN 352 Steam M3 à M12 + 7 brocas TSX HSS + 1 TAG

CASSETTA | TFT

11900170029

3221912000064

QTY	PCB
15	1

AB | H

7 maschi HSS GUN DiN 352 Steam da M3 a M12 + 7 punte TSX HSS + 1 TAG

SET | SGX

14 PCS | FUSIO COATED ø3-13mm ONLY | 4

HSS | DIN 371/376 | GUN

7 taps HSS GUN DiN 371/376 M3 à M12+7 FURIUS drill bits HSS Fusio

ESTUCHE | SGX



7 machos HSS GUN DiN 371/376 M3 à M12+7 brocas metal FURIUS HSS Fusio

CASSETTA | SGX

11900170030

3221912016355

QTY	PCB
14	1

AB

7 maschi HSS GUN DiN 371/376 da M3 a M12+7 punte FURIUS HSS Fusio

SET | TGA

14 PCS | FUSIO COATED ø3-13mm ONLY | 4

HSS E | DIN 371/376 | GUN

7 taps HSS E GUN M3 DiN 371/376 à M12+7 FURIUS metal drills HSS Fusio

ESTUCHE | TGA



7 machos HSS E GUN DiN 371/376 M3>M12+7 brocas metal FURIUS HSS Fusio

CASSETTA | TGA

11900170031

3221912016362

QTY	PCB
14	1

AB

7 maschi HSS E GUN DiN 371/376 da M3 a M12+7 punte FURIUS HSS Fusio

SET | GUNOX

10 PCS · HSS E · 7 · HSS EE · DIN 371 · GUN

5 taps HSS EE GUN DiN 371 M4>M10 60582 + 5 metal drills HSS E5 14558

ESTUCHE | GUNOX



5 machos HSS EE GUN DiN 371 M4>M10 60582 + 5 brocas metal HSS E5 14558

CASSETTA | GUNOX

81900170008

3221910522520

QTY	PCB
10	1

CDE · FGH

5 maschi HSS EE GUN DiN 371 da M4 a M10 60582 + 5 punte HSS E5 14558

SET | HELINOX

10 PCS · HSS E · 7 · HSS EE · DIN 371

5 taps HSS EE HELICO 35° DiN 371 M4>M10 60585 + 5 metal drills HSS E5 14558

ESTUCHE | HELINOX



5 machos HSS EE HELICO 35° DiN 371 M4>M10 60585 + 5 brocas metal HSS E5 14558

CASSETTA | HELINOX

81900170007

3221910522513

QTY	PCB
10	1

CDE · FGH

5 maschi HSS EC HELICO 35° DiN 371 da M4 a M10 60585 + 5 punte HSS E5 14558

SET | MGTI

12 PCS · HSS E · 7 · HSS · ISO 529 · GUN

6 taps HSS GUN ISO529 M3>M10+6 metal drills TBX HSS E5 Blade

ESTUCHE | MGTI



6 machos HSS GUN ISO529 M3>M10+6 brocas metal TBX HSS E5 Blade

CASSETTA | MGTI

11900170023

3221910900632

QTY	PCB
12	1

AB · C · H

6 maschi HSS GUN ISO529 da M3 a M10+6 punte TBX HSS E5 Blade

SET | MHTI

12 PCS · HSS E · 7 · HSS · ISO 529

6 taps HSS HELICO ISO529 M3>M10+6 metal drills TBX HSS E5 Blade

ESTUCHE | MHTI



6 machos HSS HELICO ISO529 M3>M10+6 brocas metal TBX HSS E5 Blade

CASSETTA | MHTI

11900170024

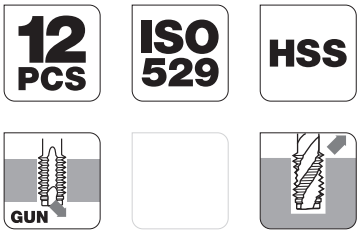
3221910900649

QTY	PCB
12	1

AB · C · H

6 maschi HSS HELICO ISO529 da M3 a M10+6 punte TBX HSS E5 Blade

SET | MGHTI



6 taps GUN + 6 taps HELICO HSS ISO529 M3>M10

ESTUCHE | MGHTI



6 machos GUN + 6 machos HELICO HSS ISO529 M3>M10

CASSETTA | MGHTI

11900170027

3221910900670

QTY	PCB
12	1

AB C H

6 maschi GUN + 6 maschi HELICO HSS ISO529 da M4 a M10

SET | MGTD



6 taps HSSE GUN DiN371 M3>M10 + 6 metal drills TBX HSS E5 Blade

ESTUCHE | MGTD



6 machos HSSE GUN DiN371 M3>M10 + 6 brocas metal TBX HSS E5 Blade

CASSETTA | MGTD

11900170025

3221910900656

QTY	PCB
12	1

AB C H

6 maschi HSSE GUN DiN371 da M3 a M10 + 6 punte TBX HSS E5 Blade

SET | MHTD



6 taps HSSE HELICO DiN371 M3>M10 + 6 metal drills TBX HSS E5 Blade

ESTUCHE | MHTD



6 machos HSSE HELICO DiN371 M3>M10 + 6 brocas metal TBX HSS E5 Blade

CASSETTA | MHTD

11900170026

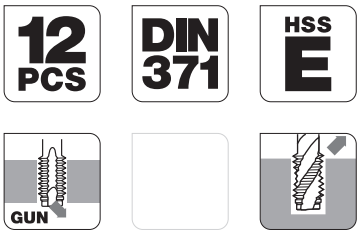
3221910900663

QTY	PCB
12	1

AB C H

6 maschi HSSE HELICO DiN371 da M3 a M10 + 6 punte TBX HSS E5 Blade

SET | MGHTD



6 taps GUN + 6 taps HELICO HSSE DIN371 M3 à M10

ESTUCHE | MGHTD



6 machos GUN + 6 machos HELICO HSSE DIN371 M3>M10

CASSETTA | MGHTD

11900170028

3221910900687

QTY	PCB
12	1

AB C H

6 maschi GUN + 6 maschi HELICO HSSE DIN371 da M3 a M10

SET | TGU



7 taps HSS E GUN M3 DiN 371/376 à M12 + 7 TBX metal drills HSSE Blade

ESTUCHE | TGU



7 machos HSS E GUN DiN 371/376 M3>M12 + 7 brocas metal TBX HSSE Blade

CASSETTA | TGU

11900170032

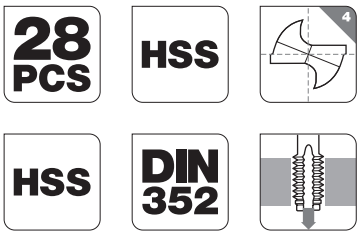
3221912056627

QTY	PCB
14	1



7 maschi HSS E GUN DiN 371/376 da M3 a M12+7 punte TBX HSS Blade

SET | TMA



7 set 3 hand taps HSS DiN 352 M3>M12+7 metal drills HSS Ø 2,5/3,3/4,2/5/6,8/8,5/10,2 mm

ESTUCHE | TMA



7 x 3 roscado manual HSS DiN 352 M3>M12+7 brocas metal HSS Ø 2,5/3,3/4,2/5/6,8/8,5/ 10,2 mm

CASSETTA | TMA

81900170019

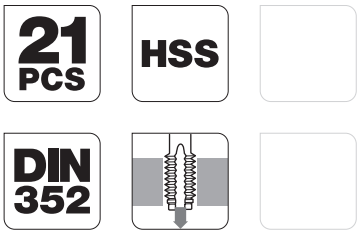
3221910852719

QTY	PCB
28	1



7 set da 3 maschi HSS DiN 352 da M3 a M12+7 punte HSS Ø 2,5/3,3/4,2/5/6,8/8,5/10,2 mm

SET | 7X3



7 sets 3 hand taps HSS DIN 352 M3 à M12

ESTUCHE | 7X3



7 x 3 roscado manual HSS DiN 352 M3>M12

CASSETTA | 7X3

80511670001

3221910876821

QTY	PCB
21	1



7 set da 3 maschi HSS DIN 352 da M3 a M12

SET | MTF23

NEW

23 PCS | DIN 352 | M | HSS | GUN

6 taps HSS DiN 352 + 6 dies HSS 25,4 M3 à M10 + 2 TW + 1 DH 25,4 + 6 metal drills HSS Cobalt + Acc

ESTUCHE | MTF23



6 machos HSS DiN 352 + 6 cojinetes HSS 25,4 M3>M10 + 2 G. + 1 P. C. 25,4 + 6 brocas HSS Cobalt + acc

CASSETTA | MTF23

11900870016

3221912113757

QTY	PCB
23	1

AB

6 maschi HSS DiN 352 + 6 trafile HSS 25,4 da M3 a M10 + 2 G + 1 PF 25,4 + 6 punte HSS Coablt + acc

SET | MTF29

NEW

29 PCS | DIN 352 | M MF | HSS | GUN

12 taps HSS DiN 352 + 12 dies HSS 25,4 M3 M4 M5 M6 MF8x100 M8 MF10x100 M10 MF12x125 M12x175 M12 + 2 TW + 1 DH 25,4 + acc

ESTUCHE | MTF29



12 machos HSS DiN 352 + 12 cojinetes HSS 25,4 M3 M4 M5 M6 MF8x100 M8 MF10x100 M10 MF12x125 M12x175 M12 + 2 G. M + 1 P. C. 25,4 + acc

CASSETTA | MTF29

11900870017

3221912113771

QTY	PCB
29	1

AB

12 maschi HSS DiN 352 + 12 trafile HSS 25,4 da M3 M4 M5 M6 MF8x100 M8 MF10x100 M10 MF12x125 M12x175 M12 + 2 G + 1 PF 25,4 + acc

SET | MTF31

31 PCS | DIN 352 | M | HSS

7 sets 3 hand taps HSS DiN 352+7 dies HSS ISO 25,4 M3 à M12+1 TW N°1,5+1 DH 25,4+1 countersink

ESTUCHE | MTF31



7 x 3 roscado manual HSS DiN 352+7 cojinetes HSS ISO 25,4 M3>M12+1 G. N°1,5+1 P. C. 25,4+1 avellanadores

CASSETTA | MTF31

11900870001

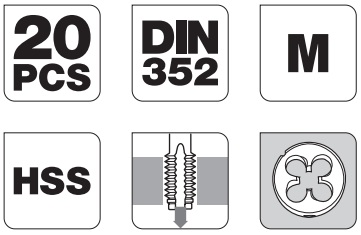
3221910300722

QTY	PCB
31	1

AB

7 set da 3 maschi HSS DiN 352+7 trafile HSS ISO 25,4 da M3 a M12+1 G N°1,5+1 PF 25,4 +1 fresa

SET | MTF20



6 sets 2 hand taps HSS DiN 352+6 dies HSS ISO 25,4 M3 à M10+1 TW N°1,5+1 DH 25,4

ESTUCHE | MTF20



6 x 2 roscado manual HSS DiN 352+6 cojinetes HSS ISO 25,4 M3>M10+1 G. N°1,5+1 P. C. 25,4

CASSETTA | MTF20

11900870004

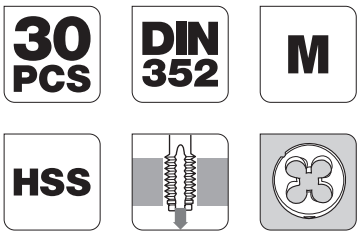
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QTY	PCB
20	1

AB

6 set da 2 maschi HSS DiN 352+6 trafile HSS ISO 25, 4 da M3 a M10+1 G N°1,5+1 PF 25,4

SET | MTF30



7 sets 2 hand taps HSS DiN 352+7 dies HSS ISO 25,4 M3 à M12+1 TW N°1,5+1 DH 25,4+7 metal drills FURIUS

ESTUCHE | MTF30



7 x 2 roscado manual HSS DiN 352+7 cojinetes HSS ISO 25,4 M3>M12+1G. N°1,5+1 P. C. 25,4+7 brocas FURIUS

CASSETTA | MTF30

11900870003

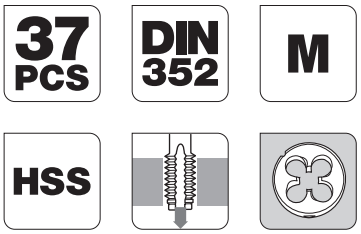
3221910547790

QTY	PCB
30	1

AB

7 set da 2 maschi HSS DiN 352+7 trafile HSS ISO 25,4 da M3 a M12+1 G N°1,5+1 PF 25,4 +7 punte FURIUS

SET | MTF37



11 sets de 2 hand taps HSS DiN 352+11 dies HSS ISO 25,4/38,1 M3 à M20+2TW N°1/3+2 DH 25,4/38,1

ESTUCHE | MTF37



11 x2 roscado manual HSS DiN 352+11 cojinetes HSS ISO 25,4/38, 1 M3>M20+2 G. N°1/3+2 P. C. 25,4/38,1

CASSETTA | MTF37

11900870006

3221910860486

QTY	PCB
37	1

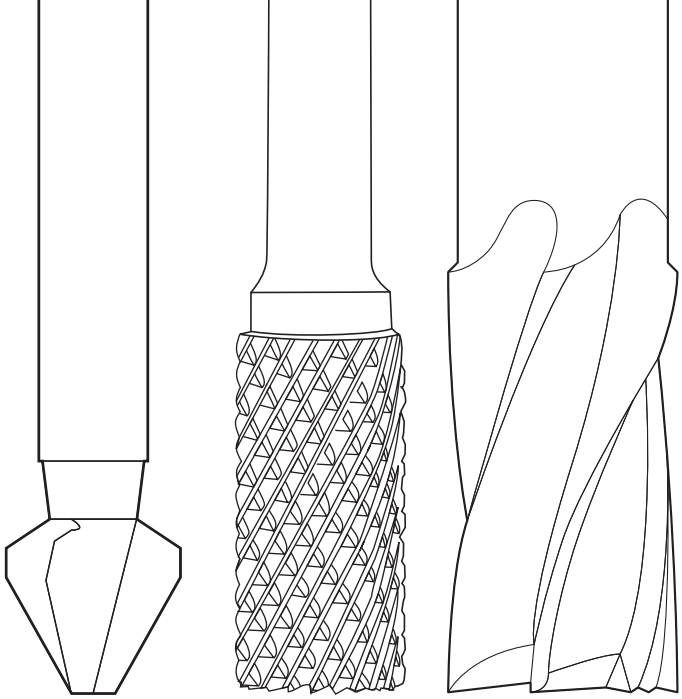
AB

11 set da 2 maschi HSS DiN 352+11 trafile HSS ISO 25,4/38,1 da M3 a M20+2 G N°1/3+2 PF 25,4/38,1

GENE-
RAL
CATALOGUE

MILLING
FRESADO
FRESATURA

#04/07



#04

MILLING
FRESADO
FRESATURA

COUNTERSINKERS 298 #04
AVELLANADOR
FRESA PER SVASATURA

ROTARY BURRS 304 #04
FRESA LIMA
LIMA ROTATIVA

HSS END MILLS 335 #04
FRESAS HSS
FRESE HSS

CARBIDE END MILLS 370 #04
FRESAS METAL DURO
FRESE CARBURE

HSS COUNTERSINKERS 60°.

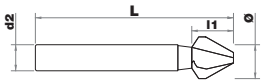
AVELLANADOR HSS 60°.

FRESA PER SVASATURA HSS A 60°.

HSS | BRIGHT UNCOATED | TIVOLY NORM | 60°



Z3



Universal application. For resistant steels.

Uso universal. Para aceros resistentes.

Uso polivalente per acciai ad alta resistenza e inossidabili.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1033151	EAN	Ø	d2	L	QTY	PCB
10331510630	3221910875794	6.3	5	47	1	1
10331510800	3221912023452	8	6	52	1	1
10331511000	3221912023476	10	6	53	1	1
10331511250	3221912023483	12.5	8	60	1	1
10331511600	3221912023490	16	10	65	1	1
10331512000	3221912023506	20	10	69	1	1
10331512500	3221910875855	25	10	75	1	1



HSS-E5 COUNTERSINKERS 90°.

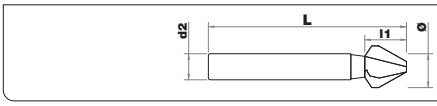
AVELLANADOR HSS-E5 90°.

FRESA PER SVASATURA HSS-E5 A 90° .

HSS E5 | BRIGHT UNCOATED | DIN 335C | 90°



Z3



Universal application. For stainless steels and resistant steels.

Uso universal. Para aceros inoxidables y resistentes.

Uso polivalente per acciai ad alta resistenza e inossidabili.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1033161	EAN	Ø	d2	L	QTY	PCB
10331610430	3221910627935	4.3	4	40	1	1
10331610530	3221910627959	5.3	4	40	1	1
10331610630	3221910627980	6.3	5	45	1	1
10331610800	3221910628017	8	6	50	1	1
10331610830	3221910628024	8.3	6	50	1	1
10331610940	3221910628031	9.4	6	50	1	1
10331611000	3221910628048	10	6	50	1	1
10331611040	3221910628055	10.4	6	50	1	1
10331611150	3221910628062	11.5	8	56	1	1*
10331611240	3221910628079	12.4	8	56	1	1
10331611340	3221910628086	13.4	8	56	1	1*
10331611500	3221910628093	15	10	60	1	1
10331611650	3221910628109	16.5	10	60	1	1
10331611900	3221910628116	19	10	63	1	1
10331612050	3221910628123	20.5	10	63	1	1
10331612300	3221910628130	23	10	57	1	1
10331612500	3221910628147	25	10	67	1	1
10331613100	3221910628161	31	12	71	1	1



HSSE5 TIALN COUNTERSINKERS 90°.

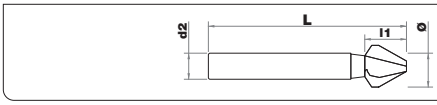
AVELLANADOR HSSE5 TIALN 90°.

FRESA PER SVASATURA HSS-E5 A 90° .

HSS E5 | TiAlN COATED | DIN 335C | 90°



Z3



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1036631	EAN	Ø	d2	L	QTY	PCB
10366310630	3221910924300	6.3	5	45	1	1
10366310830	3221910924485	8.3	6	50	1	1
10366311040	3221910924317	10.4	6	50	1	1
10366311240	3221910924324	12.4	8	56	1	1
10366311650	3221910924331	16.5	10	60	1	1
10366312050	3221910924348	20.5	10	63	1	1
10366312500	3221910924355	25	10	67	1	1



* Jusqu'à épuisement des stocks
While stocks last

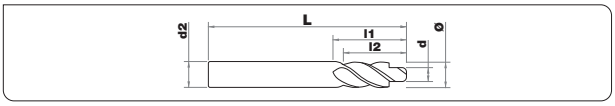
HSSE5 COUNTERBORES 180°.

AVELLANADOR HSSE5 180°.

FRESA PER ALLARGATURA HSS-E5 A 180°.

HSS E5 | BRIGHT UNCOATED | DIN 373 | 180°





Universal application. For stainless steels and resistant steels.

Uso universal. Para aceros inoxidables y resistentes.

Uso polivalente per acciai ad alta resistenza e inossidabili.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1031031	EAN	Ø	d	d2	L	S	QTY	PCB
1031031042020	3221910590079	4.2	2	4.2	56	M2	1	1
1031031043022	3221910590093	4.3	2.2	4.3	56	M2	1	1
1031031050027	3221910590109	5	2.7	5	56	M2,5	1	1
1031031052025	3221910590116	5.2	2.5	5.2	56	M2,5	1	1
1031031052030	3221910590123	5.2	3	5.2	56	M2,5	1	1
1031031060032	3221910590130	6	3.2	6	71	M3	1	1
1031031062030	3221910590147	6.2	3	6.2	71	M3	1	1
1031031065037	3221910590154	6.5	3.7	6.5	71	M3	1	1
1031031072035	3221910590161	7.2	3.5	7.2	71	M3,5	1	1
1031031072040	3221910590178	7.2	4	7.2	71	M3,5	1	1
1031031080043	3221910590185	8	4.3	8	71	M4	1	1
1031031082040	3221910590192	8.2	4	8.2	71	M4	1	1
1031031082050	3221910590208	8.2	5	8.2	71	M4	1	1
1031031092045	3221910590215	9.2	4.5	9.2	71	M4	1	1
1031031092050	3221910590222	9.2	5	9.2	71	M4	1	1
1031031100053	3221910590246	10	5.3	10	80	M5	1	1
1031031102050	3221910590253	10.2	5	10.2	80	M5	1	1
1031031102060	3221910590260	10.2	6	10.2	80	M5	1	1
1031031110064	3221910590277	11	6.4	11	80	M6	1	1
1031031142070	3221910590307	14.2	7	12.5	80	M6	1	1
1031031142080	3221910590314	14.2	8	12.5	80	M6	1	1
1031031150084	3221910590321	15	8.4	12.5	100	M8	1	1
1031031162080	3221910590338	16.2	8	12.5	100	M8	1	1
1031031162090	3221910590345	16.2	9	12.5	100	M8	1	1
1031031162100	3221910590352	16.2	10	12.5	100	M8	1	1
1031031180105	3221910590369	18	10.5	12.5	100	M10	1	1
1031031182090	3221910590376	18.2	9	12.5	100	M10	1	1
1031031182100	3221910590383	18.2	10	12.5	100	M10	1	1
1031031182120	3221910590390	18.2	12	12.5	100	M10	1	1
1031031200130	3221910590413	20	13	12.5	100	M12	1	1



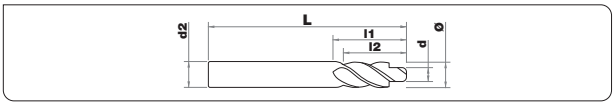
HSSE5 COUNTERBORES 90°.

AVELLANADOR HSSE5 90°.

FRESA PER ALLARGATURA HSS-E5 A 90°.

HSS E5 | BRIGHT UNCOATED | DIN 1866 | 90°





Universal application. For stainless steels and resistant steels.

Uso universal. Para aceros inoxidables y resistentes.

Uso polivalente per acciai ad alta resistenza e inossidabili.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1031041	EAN	Ø	d	d2	L	S	QTY	PCB
1031041043022	3221910591267	4.3	2.2	4.3	56	M2	1	1
1031041046024	3221910591274	4.6	2.4	4.6	56	M2	1	1
1031041060032	3221910591304	6	3.2	6	71	M3	1	1
1031041065034	3221910591328	6.5	3.4	6.5	71	M4	1	1
1031041080043	3221910591359	8	4.3	8	71	M4	1	1
1031041086045	3221910591373	8.6	4.5	8.6	71	M5	1	1
1031041100053	3221910591380	10	5.3	10	80	M5	1	1
1031041104055	3221910591403	10.4	5.5	10.4	80	M6	1	1
1031041115064	3221910591410	11.5	6.4	11.5	80	M6	1	1
1031041124066	3221910591434	12.4	6.6	12.4	80	M6	1	1
1031041150084	3221910591458	15	8.4	12.5	100	M8	1	1
1031041190105	3221910591489	19	10.5	12.5	100	M10	1	1
1031041204110	3221910591502	20.4	11	12.5	100	M10	1	1



SET | FNH06

06 PCS | HSS E5 | DIN 335C

BRIGHT UNCOATED | 90°

6 countersink 90° HSS E Ø 6,3-8,3-10,4-12,4-16,5-20,5

ESTUCHE | FNH06



6 avellanadores 90° HSS E Ø 6,3-8,3-10,4-12,4-16,5-20,5

CASSETTA | FNH06

10331670005

3221910899455

QTY	PCB
6	1

AB | FGH | KLM

6 frese per accecare 90° HSS E Ø 6,3-8,3-10,4-12,4-16,5-20,5

SET | FNH05

05 PCS | HSS E5 | DIN 335C

BRIGHT UNCOATED | 90°

5 countersink 90° HSS E Ø 10,4-16,5-20,5-25-31

ESTUCHE | FNH05



5 avellanadores 90° HSS E Ø 10,4-16,5-20,5-25-31

CASSETTA | FNH05

10331670002

3221910628178

QTY	PCB
5	1

AB | FGH | KLM

5 frese per accecare 90° HSS E Ø 10,4-16,5-20,5-25-31

SET | FNH06 | TIAIN

06 PCS | HSS E5 | DIN 335C

TiAIN COATED | 90°

6 countersink 90° HSS E TiAIN Ø 6,3-8,3-10,4-12,4-16,5-20,5 FNH6

ESTUCHE | FNH06 | TIAIN



6 avellanadores 90° HSS E TiAIN Ø 6,3-8,3-10,4-12,4-16,5-20,5 FNH6 TiAIN

CASSETTA | FNH06 | TIAIN

10366370001

3221910899448

QTY	PCB
6	1

AB | FGH | KLM

6 frese per accecare 90° HSS E TiAIN Ø 6,3-8,3-10,4-12,4-16,5-20,5 FNH6 TiAIN

SET | FLH

06 PCS | HSS E5 | DIN 373

BRIGHT UNCOATED | 180°

6 counterbore 180° HSS E, Ø 6-8-10-11-15-18 mm

ESTUCHE | FLH



6 alojamiento tornillos 180° HSS E, Ø 6-8-10-11-15-18 mm

CASSETTA | FLH

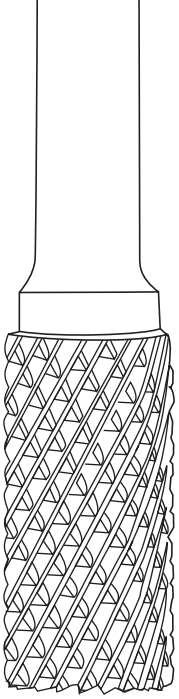
10310370002

3221910590437

QTY	PCB
6	1

AB | FGH | KLM

6 frese per lamatura 180° HSS E, Ø 6-8-10-11-15-18 mm



CARBIDE ROTARY BURRS. CYLINDRICAL.

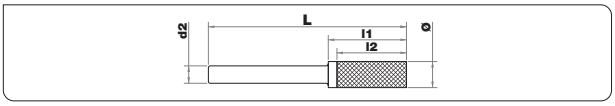
FRESA LIMA CILÍNDRICA.

LIMA ROTATIVA IN MD, CILINDRICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031601	EAN	ø	d2	L	l2	QTY	PCB
10316010400	3221910612870	4	6	50	14	1	1
10316010600	3221910612887	6	6	50	16	1	1
10316010800	3221910612894	8	6	65	20	1	1
10316011000	3221910612900	10	6	65	20	1	1
10316011200	3221910612917	12	6	70	25	1	1
10316011600	3221910612924	16	8	70	25	1	1
103160116006	3221910612931	16	6	70	25	1	1
103160120006	3221910612955	20	6	70	25	1	1



CARBIDE ROTARY BURRS. CYLINDRICAL.

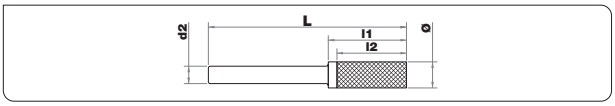
FRESA LIMA CILÍNDRICA.

LIMA ROTATIVA IN MD, CILINDRICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1031611	EAN	ø	d2	L	l2	QTY	PCB
10316110400	3221910613181	4	6	50	14	1	1
10316110600	3221910613198	6	6	50	16	1	1
10316110800	3221910613204	8	6	65	20	1	1
10316111000	3221910613211	10	6	65	20	1	1
10316111200	3221910613228	12	6	70	25	1	1
10316111600	3221910613235	16	8	70	25	1	1
103161116006	3221910613242	16	6	70	25	1	1



CARBIDE ROTARY BURRS. CYLINDRICAL END CUTTING.

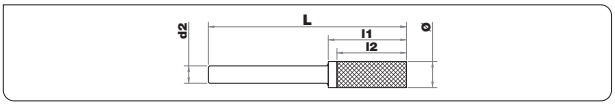
FRESA LIMA MD CILÍNDRICA. CORTE AL CENTRO.

LIMA ROTATIVA IN MD, CILINDRICA, DOPPIO TAGLIENTE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031621	EAN	Ø	d2	L	l2	QTY	PCB
10316210400	3221910613457	4	6	50	14	1	1
10316210600	3221910613464	6	6	50	16	1	1
10316210800	3221910613471	8	6	65	20	1	1
10316211000	3221910613488	10	6	65	20	1	1
10316211200	3221910613495	12	6	70	25	1	1
10316211600	3221910613518	16	8	70	25	1	1
103162116006	3221910613525	16	6	70	25	1	1



CARBIDE ROTARY BURRS. CYLINDRICAL END CUTTING | T LINE

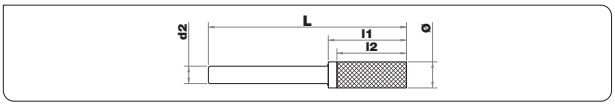
FRESA LIMA MD CILÍNDRICA. CORTE AL CENTRO | T LINE

LIMA ROTATIVA IN MD, CILINDRICA, DOPPIO TAGLIENTE | T LINE

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

1037161	EAN	Ø	d2	L	l2	QTY	PCB
10371610600	3221910882099	6	6	50	16	1	1
10371610800		8	6	65	20	1	1
10371611000	3221910882112	10	6	65	20	1	1
10371611200	3221910882129	12	6	70	25	1	1



CARBIDE ROTARY BURRS. CYLINDRICAL END CUTTING.

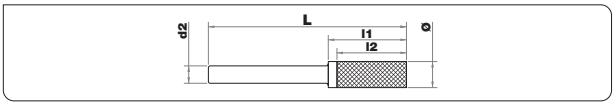
FRESA LIMA MD CILÍNDRICA. CORTE AL CENTRO.

LIMA ROTATIVA IN MD, CILINDRICA, DOPPIO TAGLIENTE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

1031631	EAN	Ø	d2	L	l2	QTY	PCB
10316310400	3221910613754	4	6	50	14	1	1
10316310600	3221910613761	6	6	50	16	1	1
10316310800	3221910613778	8	6	65	20	1	1
10316311000	3221910613785	10	6	65	20	1	1
10316311200	3221910613792	12	6	70	25	1	1
10316311600	3221910613808	16	8	70	25	1	1
103163116006	3221910613815	16	6	70	25	1	1
10316312000	3221910613822	20	6	70	25	1	1



CARBIDE ROTARY BURRS. CYLINDRICAL END CUTTING.

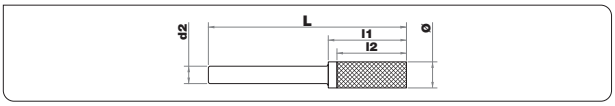
FRESA LIMA MD CILÍNDRICA. CORTE AL CENTRO.

LIMA ROTATIVA IN MD, CILINDRICA, DOPPIO TAGLIENTE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM

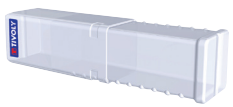


A



KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1036651	EAN	Ø	d2	L	l2	QTY	PCB
10366511200	3221910636531	12	6	70	25	1	1
10366511600	3221910636548	16	6	70	25	1	1



CARBIDE ROTARY BURRS. DOMED CYLINDRICAL.

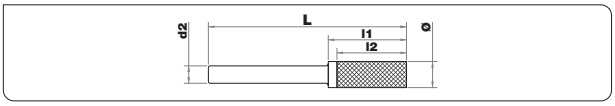
FRESA LIMA MD CILÍNDRICA CON RADIO.

LIMA ROTATIVA IN MD, CILINDRICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031641	EAN	Ø	d2	L	l2	QTY	PCB
10316410400	3221910614027	4	6	50	14	1	1
10316410600	3221910614034	6	6	50	16	1	1
10316410800	3221910614041	8	6	65	20	1	1
10316411000	3221910614058	10	6	65	20	1	1
10316411200	3221910614065	12	6	70	25	1	1
10316411600	3221910614072	16	8	70	25	1	1
103164116006	3221910614089	16	6	70	25	1	1



CARBIDE ROTARY BURRS. DOMED CYLINDRICAL | T LINE

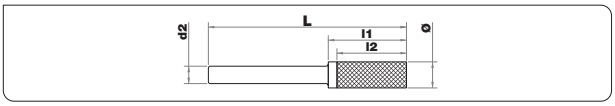
FRESA LIMA MD CILÍNDRICA CON RADIO | T LINE

LIMA ROTATIVA IN MD, CILINDRICA, CON RAGGIO | T LINE

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

1037171	EAN	Ø	d2	L	l2	QTY	PCB
10371710600	3221910882143	6	6	50	16	1	1
10371710800	3221910882150	8	6	65	20	1	1
10371711000	3221910882167	10	6	65	20	1	1
10371711200	3221910882174	12	6	70	25	1	1



CARBIDE ROTARY BURRS. DOMED CYLINDRICAL.

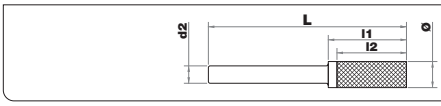
FRESA LIMA MD CILÍNDRICA CON RADIO.

LIMA ROTATIVA IN MD, CILINDRICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

1031651	EAN	Ø	d2	L	l2	QTY	PCB
10316510400	3221910614294	4	6	50	14	1	1
10316510600	3221910614300	6	6	50	16	1	1
10316510800	3221910614317	8	6	65	20	1	1
10316511000	3221910614324	10	6	65	20	1	1
10316511200	3221910614331	12	6	70	25	1	1
10316511600	3221910614348	16	8	70	25	1	1
103165116006	3221910614355	16	6	70	25	1	1
10316512000	3221910614362	20	8	70	25	1	1
103165120006	3221910614379	20	6	70	25	1	1



CARBIDE ROTARY BURRS. DOMED CYLINDRICAL.

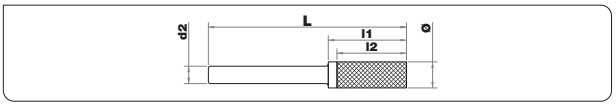
FRESA LIMA MD CILÍNDRICA CON RADIO.

LIMA ROTATIVA IN MD, CILINDRICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



A



KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1036681	EAN	Ø	d2	L	l2	QTY	PCB
10366811000	3221910636760	10	6	65	20	1	1
10366811200	3221910636777	12	6	70	25	1	1
10366811600	3221910636784	16	6	70	25	1	1



CARBIDE ROTARY BURRS. CONE.

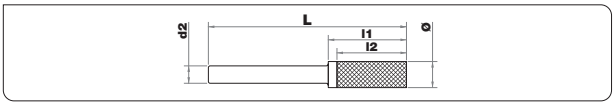
FRESA LIMA MD CILÍNDRICA PUNTA CÓNICA.

LIMA ROTATIVA IN MD, TRONCO DI CONO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031701	EAN	Ø	d2	L	l2	QTY	PCB
10317010600	3221910615567	6	6	50	16	1	1
10317010800	3221910615574	8	6	63	16	1	1
10317011000	3221910615581	10	6	65	20	1	1
10317011200	3221910615598	12	6	70	25	1	1
10317011600	3221910615604	16	8	70	25	1	1
103170116006	3221910615611	16	6	70	25	1	1
10317012000	3221910615628	20	8	70	25	1	1



CARBIDE ROTARY BURRS. CONE.

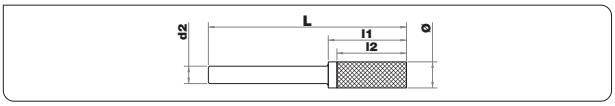
FRESA LIMA MD CILÍNDRICA PUNTA CÓNICA.

LIMA ROTATIVA IN MD, TRONCO DI CONO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ

Cast iron
Fundiciones
Ghisa

NO

Copper alloys
Aleaciones de cobre
Leghe di rame

1031711	EAN	Ø	d2	L	l2	QTY	PCB
10317110400	3221910615826	4	6	50	12	1	1
10317110600	3221910615833	6	6	50	16	1	1
10317110800	3221910615840	8	6	63	16	1	1
10317111000	3221910615857	10	6	65	20	1	1
10317111200	3221910615864	12	6	70	25	1	1
10317111600	3221910615871	16	8	70	25	1	1
103171116006	3221910615888	16	6	70	25	1	1

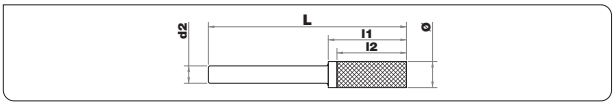


CARBIDE ROTARY BURRS. CONE. | FRESA LIMA MD PUNTA CÓNICA. | LIMA ROTATIVA IN MD, CONICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | 90°



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031721	EAN	Ø	d2	L	l2	QTY	PCB
10317210400	3221910616090	4	6	50	12	1	1
10317210600	3221910616106	6	6	50	16	1	1
10317210800	3221910616113	8	6	63	16	1	1
10317211000	3221910616120	10	6	65	20	1	1
10317211200	3221910616137	12	6	70	25	1	1
103172116006	3221910616151	16	8	70	25	1	1

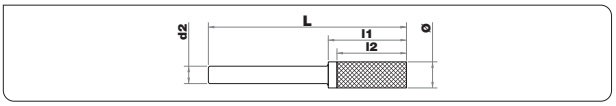


CARBIDE ROTARY BURRS. CONE. | FRESA LIMA MD PUNTA CÓNICA. | LIMA ROTATIVA IN MD, CONICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | 60°



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031741	EAN	Ø	d2	L	l2	QTY	PCB
10317410400	3221910616601	4	6	50	12	1	1
10317410600	3221910616618	6	6	50	16	1	1
10317411000	3221910616632	10	6	65	20	1	1
10317411200	3221910616649	12	6	70	25	1	1
103174116006	3221910616663	16	8	70	25	1	1



CARBIDE ROTARY BURRS. ROUNDED CONE.

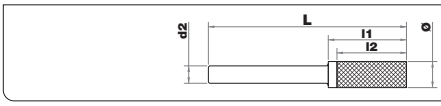
FRESA LIMA MD PUNTA CÓNICA REDONDEADA.

LIMA ROTATIVA IN MD, CONICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031761	EAN	Ø	d2	L	l2	QTY	PCB
10317610600	3221910617127	6	6	50	20	1	1
10317610800	3221910617134	8	6	65	20	1	1
10317611000	3221910617141	10	6	65	20	1	1
10317611200	3221910617158	12	6	70	25	1	1
10317611600	3221910617172	16	8	75	30	1	1
103176116006	3221910617189	16	6	70	30	1	1



CARBIDE ROTARY BURRS. ROUNDED CONE.

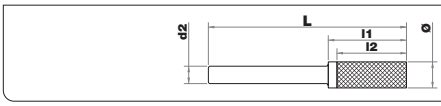
FRESA LIMA MD PUNTA CÓNICA REDONDEADA.

LIMA ROTATIVA IN MD, CONICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1031771	EAN	Ø	d2	L	l2	QTY	PCB
10317710600	3221910617424	6	6	50	20	1	1
10317710800	3221910617431	8	6	65	20	1	1
10317711000	3221910617448	10	6	65	20	1	1
10317711200	3221910617455	12	6	70	25	1	1
103177116006	3221910617479	16	6	70	30	1	1



CARBIDE ROTARY BURRS. ROUNDED CONE.

FRESA LIMA MD PUNTA CÓNICA REDONDEADA.

LIMA ROTATIVA IN MD, CONICA, CON RAGGIO.

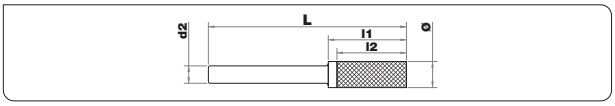
HM CARB

BRIGHT UNCOATED

TIVOLY NORM



A



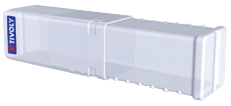
KLM

Aluminium alloys

Aleaciones de aluminio

Leghe di alluminio

1036701	EAN	ø	d2	L	l2	QTY	PCB
10367011000	3221910636920	10	6	65	20	1	1
10367011200	3221910636937	12	6	70	25	1	1
10367011600	3221910636944	16	6	70	30	1	1



CARBIDE ROTARY BURRS. TREE.

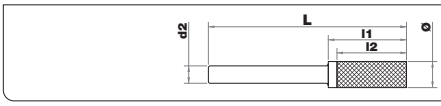
FRESA LIMA MD PUNTA OJIVA.

LIMA ROTATIVA IN MD A OGIVA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE

Steels for heat treatment
700-1400N/mm²
Aceros para tratamiento térmico
700-1400 N/mm²
Acciai per trattamento termico
700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031781	EAN	Ø	d2	L	l2	QTY	PCB
10317810400	3221910617684	4	6	50	14	1	1
10317810600	3221910617691	6	6	50	18	1	1
10317810800	3221910617707	8	6	63	18	1	1
10317811000	3221910617714	10	6	65	20	1	1
10317811200	3221910617721	12	6	70	25	1	1
10317811600	3221910617738	16	8	75	30	1	1
103178116006	3221910617745	16	6	75	30	1	1



CARBIDE ROTARY BURRS. TREE | T LINE

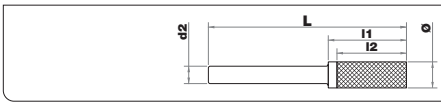
FRESA LIMA MD PUNTA OJIVA | T LINE

LIMA ROTATIVA IN MD A OGIVA | T LINE

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB

Steels for heat treatment
200-700N/mm²
Aceros para tratamiento térmico
200-700 N/mm²
Acciai per trattamento termico
200-700N/mm²

1037181	EAN	Ø	d2	L	l2	QTY	PCB
10371810600	3221910882198	6	6	50	18	1	1
10371810800	3221910882204	8	6	63	18	1	1
10371811000	3221910882211	10	6	65	20	1	1
10371811200	3221910882228	12	6	70	25	1	1

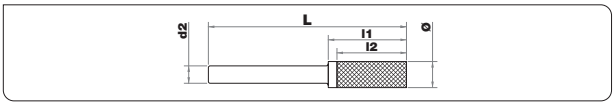


CARBIDE ROTARY BURRS. TREE. | **FRESA LIMA MD PUNTA OJIVA.** | **LIMA ROTATIVA IN MD A OGIVA.**

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D

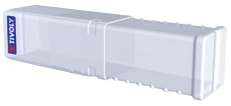


AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

1031791	EAN	ø	d2	L	l2	QTY	PCB
10317910600	3221910617967	6	6	50	18	1	1
10317910800	3221910617974	8	6	63	18	1	1
10317911000	3221910617981	10	6	65	20	1	1
10317911200	3221910617998	12	6	70	25	1	1
10317911600	3221910618001	16	8	75	30	1	1
103179116006	3221910618018	16	6	75	30	1	1



CARBIDE ROTARY BURRS. OVAL.

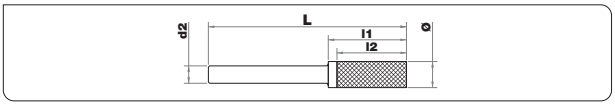
FRESA LIMA MD PUNTA OVAL.

LIMA ROTATIVA IN MD, OVALE, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031801	EAN	Ø	d2	L	l2	QTY	PCB
10318010600	3221910618230	6	6	50	10	1	1
10318010800	3221910618247	8	6	58	13	1	1
10318011000	3221910618254	10	6	61	16	1	1
10318011200	3221910618261	12	6	65	20	1	1
10318011600	3221910618285	16	8	70	25	1	1
103180116006	3221910618292	16	6	70	25	1	1



CARBIDE ROTARY BURRS. OVAL.

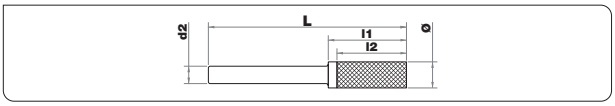
FRESA LIMA MD PUNTA OVAL.

LIMA ROTATIVA IN MD, OVALE, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D

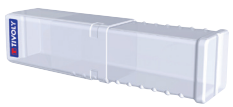


AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1031811	EAN	Ø	d2	L	l2	QTY	PCB
10318110400	3221910618520	4	6	50	6	1	1
10318110600	3221910618537	6	6	50	10	1	1
10318110800	3221910618544	8	6	58	13	1	1
10318111000	3221910618551	10	6	61	16	1	1
10318111200	3221910618568	12	6	65	20	1	1
10318111600	3221910618575	16	8	70	25	1	1
103181116006	3221910618582	16	6	70	25	1	1
10318112000	3221910618599	20	8	70	25	1	1
103181120006	3221910618605	20	6	70	25	1	1



CARBIDE ROTARY BURRS. BALL NOSED TREE.

FRESA LIMA MD PUNTA OJIVA REDONDEADA.

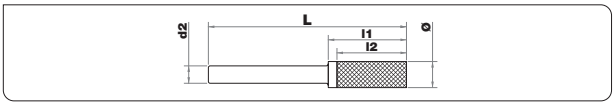
LIMA ROTATIVA IN MD A OGIVA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





C



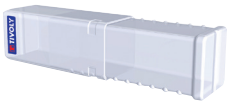
CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031821	EAN	Ø	d2	L	l2	QTY	PCB
10318210600	3221910618803	6	6	50	18	1	1
10318210800	3221910618810	8	6	63	18	1	1
10318211000	3221910618827	10	6	65	20	1	1
10318211200	3221910618834	12	6	70	25	1	1
10318211600	3221910618841	16	8	75	30	1	1
103182116006	3221910618858	16	6	75	30	1	1



CARBIDE ROTARY BURRS. BALL NOSED TREE | T LINE

FRESA LIMA MD PUNTA OJIVA REDONDEADA | T LINE

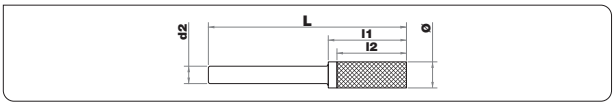
LIMA ROTATIVA IN MD A OGIVA, CON RAGGIO | T LINE

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





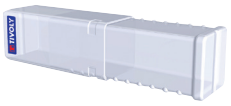
D



AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

1037191	EAN	Ø	d2	L	l2	QTY	PCB
10371910600	3221910882242	6	6	50	18	1	1
10371910800	3221910882259	8	6	63	18	1	1
10371911000	3221910882266	10	6	65	20	1	1
10371911200	3221910882273	12	6	70	25	1	1



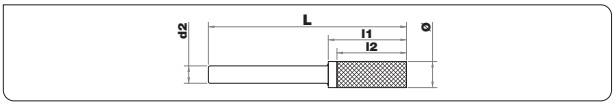
CARBIDE ROTARY BURRS. BALL NOSED TREE.

FRESA LIMA MD PUNTA OJIVA REDONDEADA.

LIMA ROTATIVA IN MD A OGIVA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1031831	EAN	Ø	d2	L	l2	QTY	PCB
10318310600	3221910619077	6	6	50	18	1	1
10318310800	3221910619084	8	6	63	18	1	1
10318311000	3221910619091	10	6	65	20	1	1
10318311200	3221910619107	12	6	70	25	1	1
10318311600	3221910619114	16	8	75	30	1	1
103183116006	3221910619121	16	6	75	30	1	1
10318312000	3221910619138	20	8	75	30	1	1
103183120006	3221910619145	20	6	75	30	1	1



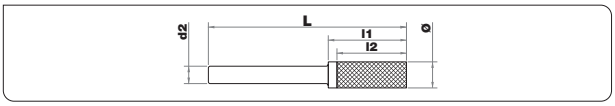
CARBIDE ROTARY BURRS. BALL NOSED TREE.

FRESA LIMA MD PUNTA OJIVA REDONDEADA.

LIMA ROTATIVA IN MD A OGIVA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1036671	EAN	Ø	d2	L	l2	QTY	PCB
10366711000	3221910636685	10	6	65	20	1	1
10366711200	3221910636692	12	6	70	25	1	1
10366711600	3221910636708	16	6	75	30	1	1

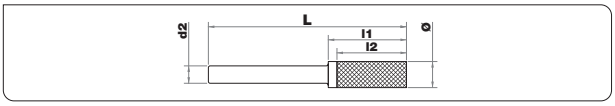


CARBIDE ROTARY BURRS. BALL. | FRESA LIMA MD PUNTA ESFÉRICA. | LIMA ROTATIVA IN MD, SFERICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



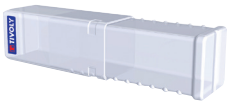
C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1031841	EAN	Ø	d2	L	l2	QTY	PCB
10318410400	3221910619336	4	6	50	18	1	1
10318410600	3221910619343	6	6	50	18	1	1
10318410800	3221910619350	8	6	63	18	1	1
10318411000	3221910619367	10	6	65	20	1	1
10318411200	3221910619374	12	6	70	25	1	1
10318411600	3221910619381	16	8	75	30	1	1
103184116006	3221910619398	16	6	75	30	1	1
103184120006	3221910619411	20	6	75	30	1	1

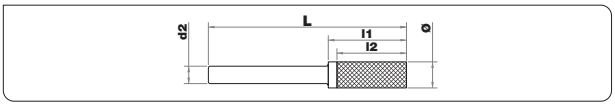


CARBIDE ROTARY BURRS. BALL | T LINE | FRESA LIMA MD PUNTA ESFÉRICA | T LINE | LIMA ROTATIVA IN MD, SFERICA | T LINE

HM CARB | BRIGHT UNCOATED | TIVOLY NORM

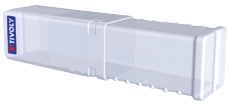


D



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

1037201	EAN	Ø	d2	L	l2	QTY	PCB
10372010600	3221910882297	6	6	50	18	1	1
10372010800	3221910882303	8	6	63	18	1	1
10372011000	3221910882310	10	6	65	20	1	1
10372011200	3221910882327	12	6	70	25	1	1

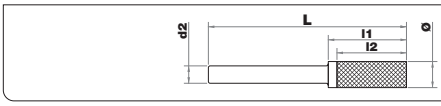


CARBIDE ROTARY BURRS. BALL. | FRESA LIMA MD PUNTA ESFÉRICA. | LIMA ROTATIVA IN MD, SFERICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1031851	EAN	ø	d2	L	l2	QTY	PCB
10318510400	3221910619602	4	6	50	18	1	1
10318510600	3221910619619	6	6	50	18	1	1
10318510800	3221910619626	8	6	63	18	1	1
10318511000	3221910619633	10	6	65	20	1	1
10318511200	3221910619640	12	6	70	25	1	1
103185116006	3221910619664	16	6	75	30	1	1
10318512000	3221910619671	20	8	75	30	1	1
103185120006	3221910619688	20	6	75	30	1	1

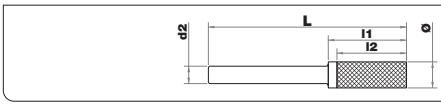


CARBIDE ROTARY BURRS. BALL. | FRESA LIMA MD PUNTA ESFÉRICA. | LIMA ROTATIVA IN MD, SFERICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



A



KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

1036691	EAN	ø	d2	L	l2	QTY	PCB
10366911000	3221910636845	10	6	65	20	1	1
10366911200	3221910636852	12	6	70	25	1	1

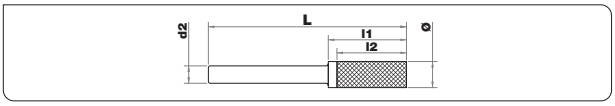


CARBIDE ROTARY BURRS. CYLINDRICAL. | **FRESA LIMA CILÍNDRICA.** | **LIMA ROTATIVA IN MD, CILINDRICA.**

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032051	EAN	Ø	d2	L	l2	QTY	PCB
10320510300	3221910620356	3	3	38	14	1	1

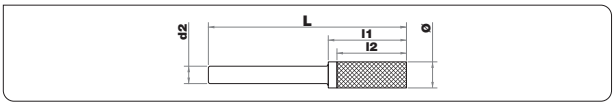


CARBIDE ROTARY BURRS. CYLINDRICAL. | **FRESA LIMA CILÍNDRICA.** | **LIMA ROTATIVA IN MD, CILINDRICA.**

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D

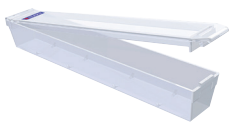


AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1032151	EAN	Ø	d2	L	l2	QTY	PCB
10321510300	3221910620653	3	3	38	14	1	1



CARBIDE ROTARY BURRS. DOMED CYLINDRICAL.

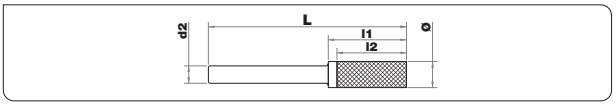
FRESA LIMA MD CILÍNDRICA CON RADIO.

LIMA ROTATIVA IN MD, CILINDRICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032061	EAN	Ø	d2	L	l2	QTY	PCB
10320610300	3221910620387	3	3	38	14	1	1



CARBIDE ROTARY BURRS. DOMED CYLINDRICAL.

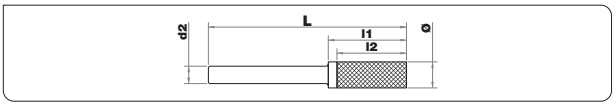
FRESA LIMA MD CILÍNDRICA CON RADIO.

LIMA ROTATIVA IN MD, CILINDRICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ

Cast iron
Fundiciones
Ghisa

NO

Copper alloys
Aleaciones de cobre
Leghe di rame

1032161	EAN	Ø	d2	L	l2	QTY	PCB
10321610300	3221910620684	3	3	38	14	1	1



CARBIDE ROTARY BURRS. CONE 90°.

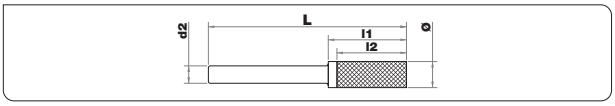
FRESA LIMA MD PUNTA CÓNICA 90°. DENTADO FINO.

LIMA ROTATIVA IN MD, CONICA, 90°.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032071	EAN	Ø	d2	L	l2	QTY	PCB
10320710300	3221910620417	3	3	38	14	1	1



CARBIDE ROTARY BURRS. CONE 90°.

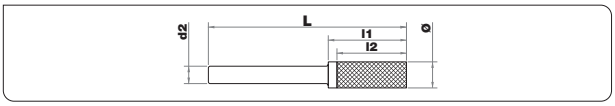
FRESA LIMA MD PUNTA CÓNICA 90°. DENTADO FINO.

LIMA ROTATIVA IN MD, CONICA, 90°.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

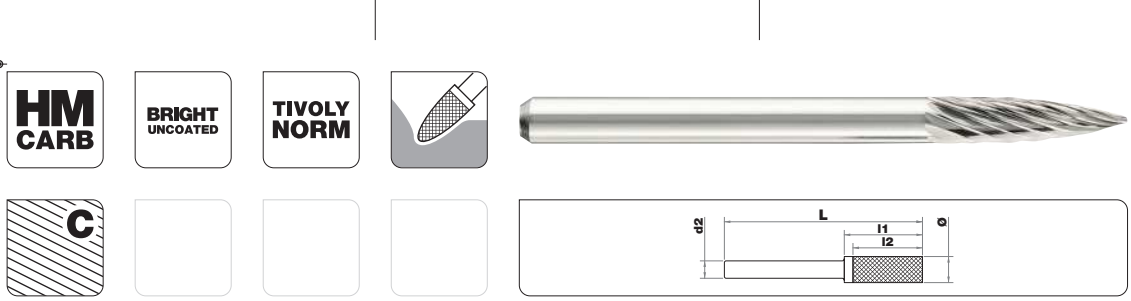
NO Copper alloys
Aleaciones de cobre
Leghe di rame

1032171	EAN	Ø	d2	L	l2	QTY	PCB
10321710300	3221910620714	3	3	38	14	1	1



CARBIDE ROTARY BURRS. TREE. | FRESA LIMA MD PUNTA OJIVA. | LIMA ROTATIVA IN MD A OGIVA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

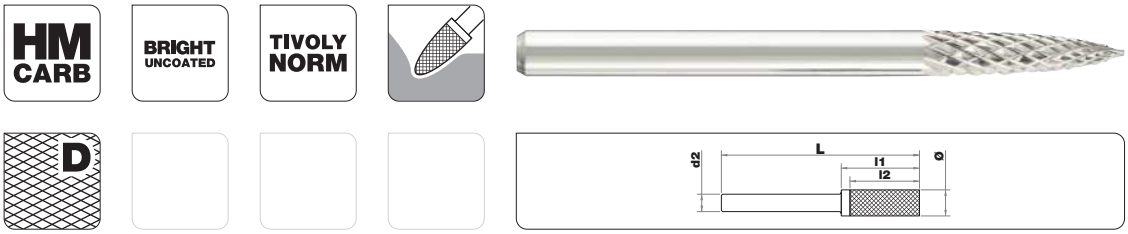
FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032081	EAN	Ø	d2	L	l2	QTY	PCB
10320810300	3221910620448	3	3	38	14	1	1



CARBIDE ROTARY BURRS. TREE. | FRESA LIMA MD PUNTA OJIVA. | LIMA ROTATIVA IN MD A OGIVA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM

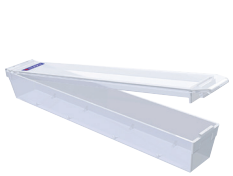


AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

1032181	EAN	Ø	d2	L	l2	QTY	PCB
10321810300	3221910620745	3	3	38	14	1	1



CARBIDE ROTARY BURRS. CONE. FINE TEETH.

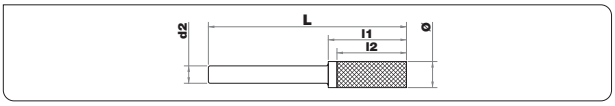
FRESA LIMA MD CILÍNDRICA PUNTA CÓNICA.

LIMA ROTATIVA IN MD, TRONCO DI CONO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



C



CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032091	EAN	Ø	d2	L	l2	QTY	PCB
10320910300	3221910620479	3	3	38	14	1	1



CARBIDE ROTARY BURRS. CONE. FINE TEETH.

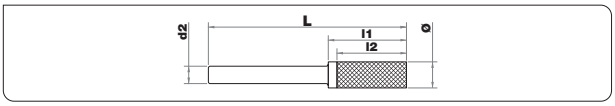
FRESA LIMA MD CILÍNDRICA PUNTA CÓNICA.

LIMA ROTATIVA IN MD, TRONCO DI CONO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



D



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1032191	EAN	Ø	d2	L	l2	QTY	PCB
10321910300	3221910620776	3	3	38	14	1	1



CARBIDE ROTARY BURRS. CONE 90°.

FRESA LIMA MD PUNTA CÓNICA 90°. DENTADO FINO.

LIMA ROTATIVA IN MD, CONICA, 90°.

HM CARB

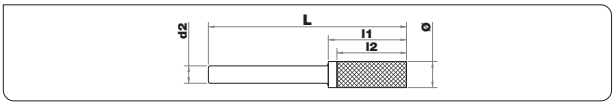
BRIGHT UNCOATED

TIVOLY NORM





C



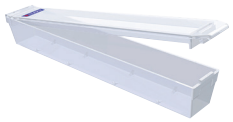
CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032101	EAN	Ø	d2	L	l2	QTY	PCB
10321010300	3221910620509	3	3	38	14	1	1

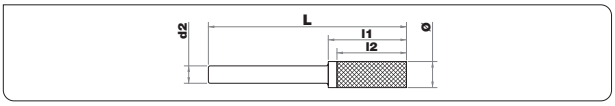


CARBIDE ROTARY BURRS. OVAL. | FRESA LIMA MD PUNTA OVAL. | LIMA ROTATIVA IN MD, OVALE, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM

C





CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032111	EAN	Ø	d2	L	l2	QTY	PCB
10321110300	3221910620530	3	3	38	14	1	1

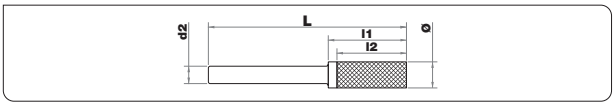


CARBIDE ROTARY BURRS. OVAL. | FRESA LIMA MD PUNTA OVAL. | LIMA ROTATIVA IN MD, OVALE, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM

D





AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

1032211	EAN	Ø	d2	L	l2	QTY	PCB
10322110300	3221910620837	3	3	38	14	1	1

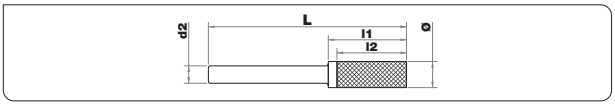


CARBIDE ROTARY BURRS. BALL. | FRESA LIMA MD PUNTA ESFÉRICA. | LIMA ROTATIVA IN MD, SFERICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM

C





CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032121	EAN	Ø	d2	L	l2	QTY	PCB
10321210300	3221910620561	3	3	38	14	1	1

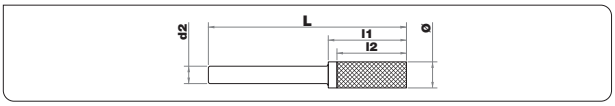


CARBIDE ROTARY BURRS. BALL. | FRESA LIMA MD PUNTA ESFÉRICA. | LIMA ROTATIVA IN MD, SFERICA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM

D



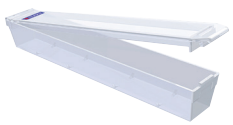


AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

1032221	EAN	Ø	d2	L	l2	QTY	PCB
10322210300	3221910620868	3	3	38	14	1	1



CARBIDE ROTARY BURRS. BALL NOSED TREE.

FRESA LIMA MD PUNTA OJIVA REDONDEADA.

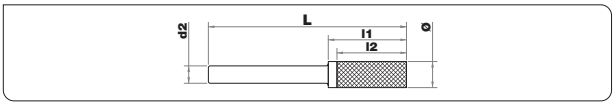
LIMA ROTATIVA IN MD A OGIVA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





C



CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032131	EAN	Ø	d2	L	l2	QTY	PCB
10321310300	3221910620592	3	3	38	14	1	1



CARBIDE ROTARY BURRS. BALL NOSED TREE.

FRESA LIMA MD PUNTA OJIVA REDONDEADA.

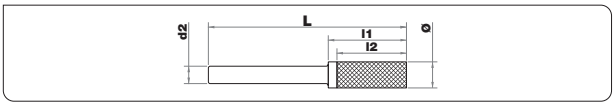
LIMA ROTATIVA IN MD A OGIVA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





D



AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

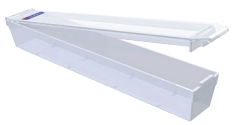
IJ

Cast iron
Fundiciones
Ghisa

NO

Copper alloys
Aleaciones de cobre
Leghe di rame

1032231	EAN	Ø	d2	L	l2	QTY	PCB
10322310300	3221910620899	3	3	38	14	1	1



CARBIDE ROTARY BURRS. ROUNDED CONE.

FRESA LIMA MD PUNTA CÓNICA REDONDEADA.

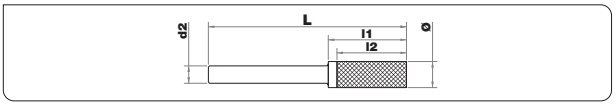
LIMA ROTATIVA IN MD, CONICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





C



CDE

Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH

Stainless Steel
Aceros inoxidables
Acciai inossidabili

1032141	EAN	Ø	d2	L	l2	QTY	PCB
10321410300	3221910620622	3	3	38	14	1	1



CARBIDE ROTARY BURRS. ROUNDED CONE.

FRESA LIMA MD PUNTA CÓNICA REDONDEADA.

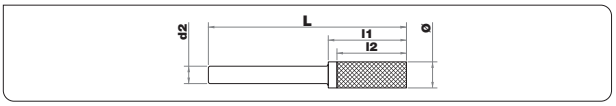
LIMA ROTATIVA IN MD, CONICA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





D



AB

Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

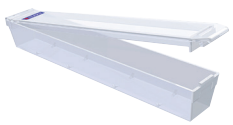
IJ

Cast iron
Fundiciones
Ghisa

NO

Copper alloys
Aleaciones de cobre
Leghe di rame

1032241	EAN	Ø	d2	L	l2	QTY	PCB
10322410300	3221910620929	3	3	38	14	1	1



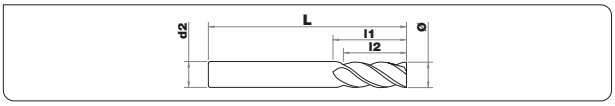
SOLID CARBIDE ROUTER END MILLS.

FRESA METAL DURO RECANTEAR PUNTA FRESA.

FRESA IN MD PER CONTORNARE CON FRESA ALL'ESTREMITÀ.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | 15





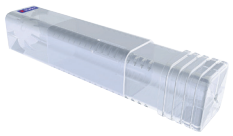
Machining cutting of composites (resin, fiberglass, carbon fibers).

para el fresado de composites (resinas, fibras de carbono/vidrio).

Taglio di materiali compositi (resine, fibre di carbonio/di vetro).

Composites
Composites Fibras
Fibre composite

8236831	EAN	Ø	d2	L	l2	QTY	PCB
82368310300	3221910882433	3	3	70	12	1	1
82368310400	3221910882440	4	4	70	16	1	1
82368310600	3221910882457	6	6	70	16	1	1
82368310800	3221910882464	8	8	70	25	1	1
82368311000	3221910882471	10	10	75	25	1	1
82368311200	3221910882488	12	12	75	25	1	1



SOLID CARBIDE ROUTER END MILLS. DRILL POINT.

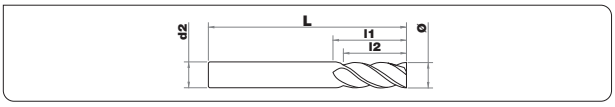
FRESA METAL DURO RECANTEAR PUNTA BROCA.

FRESA IN MD PER CONTORNARE CON PUNTA ALL'ESTREMITÀ.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | 16



135°



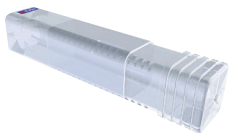
Machining cutting of composites (resin, fiberglass, carbon fibers).

Para el fresado de composites (resinas, fibras de carbono/vidrio).

Taglio di materiali compositi (resine, fibre di carbonio/di vetro).

Composites
Composites Fibras
Fibre composite

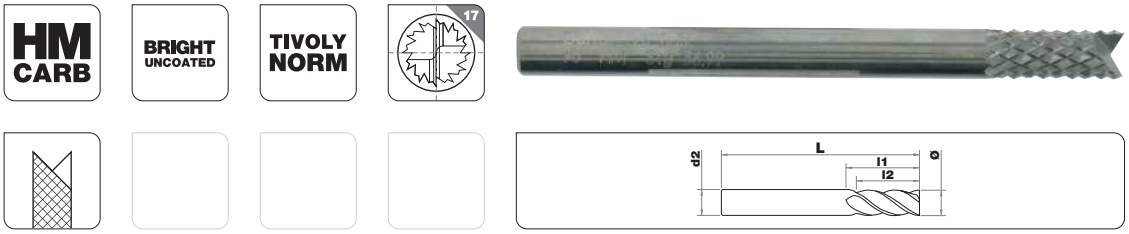
8236841	EAN	Ø	d2	L	l2	QTY	PCB
82368410300	3221910882495	3	3	70	12	1	1
82368410400	3221910882501	4	4	70	16	1	1
82368410600	3221910882518	6	6	70	16	1	1
82368410800	3221910882525	8	8	70	25	1	1
82368411000	3221910882532	10	10	75	25	1	1
82368411200	3221910882549	12	12	75	25	1	1



SOLID CARBIDE ROUTER END MILL. DRILL POINT (FISH TAIL).

FRESA METAL DURO RECANTEAR PUNTA BROCA "QUEUE DE POISSON".

FRESA IN MD PER CONTORNARE CON ESTREMITÀ "CODA DI PESCE".



Machining cutting of composites (resin, fiberglass, carb. fibers).

Para el fresado de composites (resinas, fibras de carbono/vidrio).

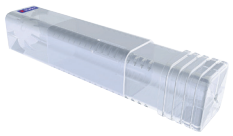
Taglio di materiali compositi (resine, fibre di carbonio/di vetro).

X Composites

Composites Fibras

Fibre composite

8236851	EAN	Ø	d2	L	l2	QTY	PCB
82368510300	3221910882556	3	3	70	12	1	1
82368510400	3221910882563	4	4	70	16	1	1
82368510600	3221910882570	6	6	70	16	1	1
82368510800	3221910882587	8	8	70	25	1	1
82368511000	3221910882594	10	10	75	25	1	1
82368511200	3221910882600	12	12	75	25	1	1



SET | FLK08

NEW

05 PCS | HM CARB | BRIGHT UNCOATED

Ø 8 mm | CYL 6mm

5 rotary burrs carbide Ø 8 shank 6 mm

ESTUCHE | FLK08



5 fresas rotativas metal duro Ø 8 mango de 6 mm

CASSETTA | FLK08

10316070008

3221912117458

QTY	PCB
5	1

AB | IJ | NO

5 frese a lima in carburo Ø 8 con attacco da 6 mm

SET | FLK05

05 PCS | HM CARB | BRIGHT UNCOATED

Ø 12 mm | CYL 6mm

5 rotary burrs carbide Ø 12 shank 6 mm

ESTUCHE | FLK05



5 fresas rotativas metal duro Ø 12 mango de 6 mm

CASSETTA | FLK05

10316070002

3221910612979

QTY	PCB
5	1

AB | IJ | NO

5 frese a lima in carburo Ø 12 con attacco da 6 mm

SET | FLK10

10 PCS | HM CARB | BRIGHT UNCOATED

Ø 6 mm | Ø 12 mm | CYL 6mm

10 rotary burrs carbide Ø 6 & Ø 12 shank 6 mm

ESTUCHE | FLK10



10 fresas rotativas metal duro Ø 6 et Ø 12 mango de 6 mm

CASSETTA | FLK10

10316070005

3221910896690

QTY	PCB
10	1

AB | IJ | NO

10 frese a lima in carburo Ø 6 e Ø 12 con attacco da 6 mm

SET | FLM

10 PCS | HM CARB | BRIGHT UNCOATED

Ø 3 mm | CYL 3mm

10 rotary burrs carbide Ø 3 mm (d1=d2=3mm)

ESTUCHE | FLM



10 fresas rotativas metal duro Ø 3 mm (d1=d2=3mm)

CASSETTA | FLM

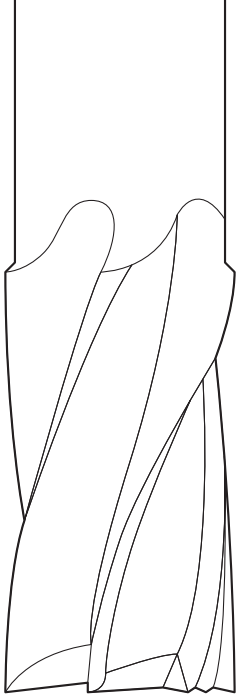
10316070003

3221910828325

QTY	PCB
10	1

AB | IJ | NO

10 frese a lima in carburo Ø 3 mm (d1=d2=3mm)





TIVOLY®

FRAISAGE
MILLING













professionnel@tivoly.com

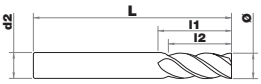
HSSE8 ROUTER END MILLS Z1. | **FRESA HSSE8 Z1.** | **FRESA PER CONTORNARE HSS-E8, Z1.**

HSS E8 | BRIGHT UNCOATED | TIVOLY NORM





Z1 | 30°



PVC and light alloys application. | PVC y aleaciones ligeras. | Scontornatura di profilati in alluminio e PVC.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

80308810	EAN	Ø	d2	L	l2	QTY	PCB
80308810406	3221910589332	4	8	60	12	1	1
80308810506	3221910589349	5	8	60	14	1	1
80308810508	3221910589356	5	8	80	14	1	1
80308810512	3221910589363	5	8	120	14	1	1
80308810606	3221910589370	6	8	60	14	1	1
80308810706	3221910589387	7	8	60	14	1	1
80308810808	3221910589394	8	8	80	14	1	1
80308810813	3221910589400	8	8	130	14	1	1
80308811008	3221910589417	10	8	80	14	1	1
80308811013	3221910589431	10	10	130	17	1	1

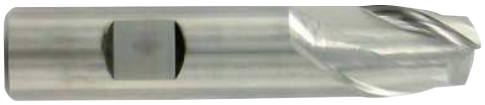


HSSE8 END MILLS Z2 SHORT SERIES SLOTTING.

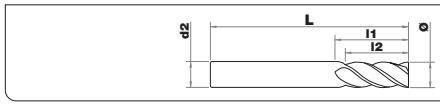
FRESA PARA RANURAR HSSE8 Z2 SERIE CORTA.

FRESA PER SCANALARE HSS-E8, Z2 CORTA.

HSS E8 | BRIGHT UNCOATED | DIN 327D



Z2 | 30° | e8



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

NO Copper alloys
Aleaciones de cobre
Leghe di rame

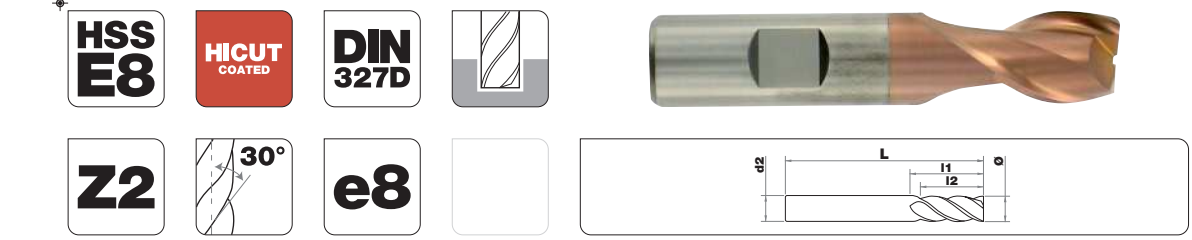
8030031	EAN	Ø	d2	L	l2	QTY	PCB
80300310100	3221910569310	1	6	47	2.5	1	1
80300310150	3221910569327	1.5	6	47	3	1	1
80300310200	3221910569334	2	6	48	4	1	1
80300310250	3221910569389	2.5	6	49	5	1	1
80300310300	3221910569433	3	6	49	5	1	1
80300310350	3221910569488	3.5	6	50	6	1	1
80300310400	3221910569532	4	6	51	7	1	1
80300310450	3221910569587	4.5	6	51	7	1	1
80300310500	3221910569631	5	6	52	8	1	1
80300310550	3221910569686	5.5	6	52	8	1	1
80300310600	3221910569730	6	6	52	8	1	1
80300310650	3221910569785	6.5	10	60	10	1	1
80300310700	3221910569839	7	10	60	10	1	1
80300310750	3221910569884	7.5	10	60	10	1	1
80300310800	3221910569938	8	10	61	11	1	1
80300310850	3221910569983	8.5	10	61	11	1	1
80300310900	3221910570033	9	10	61	11	1	1
80300310950	3221910570088	9.5	10	61	11	1	1
80300311000	3221910570132	10	10	63	13	1	1
80300311100	3221910570156	11	12	70	13	1	1
80300311200	3221910570170	12	12	73	16	1	1
80300311300	3221910570194	13	12	73	16	1	1
80300311400	3221910570217	14	12	73	16	1	1
80300311500	3221910570231	15	12	73	16	1	1
80300311600	3221910570255	16	16	79	19	1	1
80300311700	3221910570279	17	16	79	19	1	1
80300311800	3221910570293	18	16	79	19	1	1
80300311900	3221910570316	19	16	79	19	1	1
80300312000	3221910570330	20	20	88	22	1	1
80300312200	3221910570347	22	20	88	22	1	1
80300312400	3221910570354	24	25	102	26	1	1
80300312800	3221910570385	28	25	102	26	1	1
80300313000	3221910570392	30	25	102	26	1	1
80300313200	3221910570408	32	32	112	32	1	1
80300313600	3221910570415	36	32	112	32	1	1
80300314000	3221910570422	40	40	130	38	1	1



HSSE8 HIGHCUT END MILLS Z2 SHORT SERIES SLOTTING.

FRESA PARA RANURAR HSSE8 HIGHCUT Z2 SERIE CORTA.

FRESA PER SCANALARE HSS-E8, Z2 CORTA.



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8036491	EAN	Ø	d2	L	l2	QTY	PCB
80364910200	3221910635183	2	6	48	4	1	1
80364910300	3221910635190	3	6	49	5	1	1
80364910400	3221910635206	4	6	51	7	1	1
80364910500	3221910635213	5	6	52	8	1	1
80364910600	3221910635220	6	6	52	8	1	1
80364910800	3221910635237	8	10	61	11	1	1
80364911000	3221910635244	10	10	63	13	1	1
80364911200	3221910635251	12	12	73	16	1	1
80364911400	3221910635268	14	12	73	16	1	1
80364911600	3221910635275	16	16	79	19	1	1
80364911800	3221910635282	18	16	79	19	1	1
80364912000	3221910635299	20	20	88	22	1	1

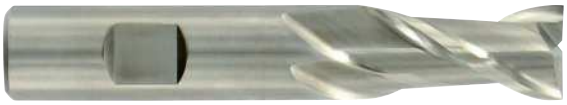


HSSE8 END MILLS Z2 SLOTTING.

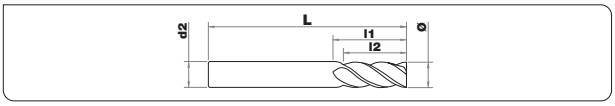
FRESAS PARA RANURAR HSSE8 Z2.

FRESA PER SCANALARE HSS-E8, Z2, NORMALE.

HSS E8 | BRIGHT UNCOATED | DIN 844BK



Z2 | 30° | e8



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

8030131	EAN	Ø	d2	L	l2	QTY	PCB
80301310200	3221910572174	2	6	51	7	1	1
80301310250	3221910572181	2.5	6	52	8	1	1
80301310300	3221910572198	3	6	52	8	1	1
80301310400	3221910572211	4	6	55	11	1	1
80301310500	3221910572228	5	6	57	13	1	1
80301310600	3221910572235	6	6	57	13	1	1
80301310700	3221910572242	7	10	66	16	1	1
80301310800	3221910572259	8	10	69	19	1	1
80301310900	3221910572266	9	10	69	19	1	1
80301311000	3221910572273	10	10	72	22	1	1
80301311100	3221910572280	11	12	79	22	1	1
80301311200	3221910572297	12	12	83	26	1	1
80301311400	3221910572310	14	12	83	26	1	1
80301311600	3221910572334	16	16	92	32	1	1
80301311800	3221910572341	18	16	92	32	1	1
80301312000	3221910572358	20	20	104	38	1	1



HSSE8 TIALN END MILLS Z3 SLOTTING.

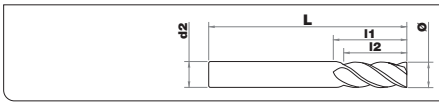
FRESAS PARA RANURAR HSSE8 TIALN Z3.

FRESA PER SCANALARE HSS-E8, TIAIN, Z3, NORMALE.

HSS E8 | TiAlN COATED | DIN 844BK



Z3 | 30° | e8



Slotting. | Ranurado. | Scanalatura.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8037131	EAN	ø	d2	L	l2	QTY	PCB
80371310400	3221910883188	4	6	55	11	1	1
80371310500	3221910883195	5	6	57	13	1	1
80371310600	3221910883201	6	6	57	13	1	1
80371310800	3221910883218	8	10	69	19	1	1
80371311000	3221910883225	10	10	72	22	1	1
80371311200	3221910883232	12	12	83	26	1	1
80371311600	3221910883249	16	16	92	32	1	1
80371312000	3221910883256	20	20	104	38	1	1

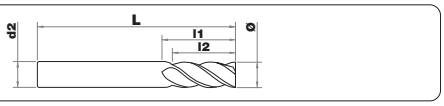


HSSE8 END MILLS Z3 SHORT SERIES SLOTTING.

FRESAS PARA RANURAR HSSE8 Z3.

FRESA PER SCANALARE HSS-E8, Z3, CORTA.





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

8030111	EAN	Ø	d2	L	l2	QTY	PCB
80301110200	3221910571467	2	6	48	4	1	1
80301110300	3221910571474	3	6	49	5	1	1
80301110400	3221910571481	4	6	51	7	1	1
80301110500	3221910571498	5	6	52	8	1	1
80301110600	3221910571504	6	10	60	10	1	1
80301110800	3221910571528	8	10	61	11	1	1
80301111000	3221910571542	10	10	63	13	1	1
80301111200	3221910571566	12	12	73	16	1	1
80301111400	3221910571580	14	12	73	16	1	1
80301111600	3221910571603	16	16	79	19	1	1
80301111800	3221910571610	18	16	79	19	1	1
80301112000	3221910571627	20	20	88	22	1	1
80301112200	3221910571634	22	20	88	22	1	1
80301112400	3221910571641	24	25	102	26	1	1
80301112800	3221910571672	28	25	102	26	1	1
80301113000	3221910571689	30	25	102	26	1	1



HSSE8 HIGHCUT END MILLS Z3 SHORT SERIES SLOTTING.

FRESAS PARA RANURAR HSSE8 (HIGHCUT) Z3.

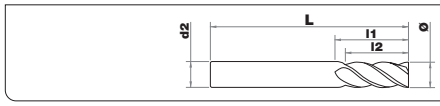
FRESA PER SCANALARE HSS-E8 HIGHCUT, Z3, CORTA.

HSS E8 | HICUT COATED | DIN 327D





Z3 | 35° | e8



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

8036171	EAN	Ø	d2	L	l2	QTY	PCB
80361710200	3221910631918	2	6	48	4	1	1
80361710300	3221910631925	3	6	49	5	1	1
80361710400	3221910631932	4	6	51	7	1	1
80361710500	3221910631949	5	6	52	8	1	1
80361710600	3221910631956	6	10	60	10	1	1
80361710800	3221910631963	8	10	61	11	1	1
80361711000	3221910631970	10	10	63	13	1	1
80361711200	3221910631987	12	12	73	16	1	1
80361711400	3221910631994	14	12	73	16	1	1
80361711600	3221910632007	16	16	79	19	1	1
80361711800	3221910632014	18	16	79	19	1	1
80361712000	3221910632021	20	20	88	22	1	1
80361712200	3221910632038	22	20	88	22	1	1
80361712500	3221910632045	25	25	102	26	1	1



HSSE8 END MILLS. Z3 SLOTTING.

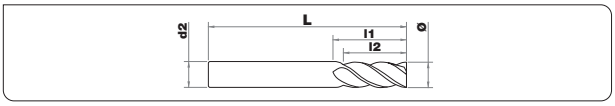
FRESAS PARA RANURAR HSSE8 Z3.

FRESA PER SCANALARE HSS-E8, Z3, NORMALE.

HSS E8 | BRIGHT UNCOATED | DIN 844BK



Z3 | 45° | e8



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8034761	EAN	Ø	d2	L	l2	QTY	PCB
80347610300	3221910630737	3	6	52	8	1	1
80347610400	3221910630751	4	6	55	11	1	1
80347610450	3221910630768	4.5	6	55	11	1	1
80347610500	3221910630775	5	6	57	13	1	1
80347610550	3221910630782	5.5	6	57	13	1	1
80347610600	3221910630799	6	6	57	13	1	1
80347610700	3221910630812	7	10	66	16	1	1
80347610800	3221910630836	8	10	69	19	1	1
80347610900	3221910630850	9	10	69	19	1	1
80347611000	3221910630874	10	10	72	22	1	1
80347611200	3221910630898	12	12	83	26	1	1
80347611400	3221910630904	14	12	83	26	1	1
80347611600	3221910630911	16	16	92	32	1	1
80347611800	3221910630928	18	16	92	32	1	1
80347612000	3221910630935	20	20	104	38	1	1
80347612200	3221910630942	22	20	104	38	1	1
80347612500	3221910630966	25	25	121	45	1	1
80347613200	3221910630973	32	25	133	53	1	1

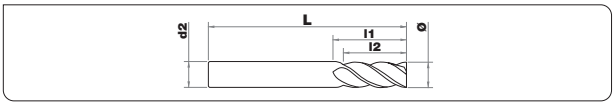


HSSE8 HIGHCUT END MILLS. Z3 SLOTTING.

FRESAS PARA RANURAR HSSE8 (HIGHCUT) Z3.

FRESA PER SCANALARE HSS-E8, Z3, NORMALE.





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

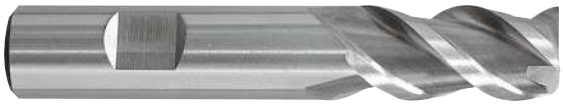
8036501	EAN	Ø	d2	L	l2	QTY	PCB
80365010300	3221910635329	3	6	52	8	1	1
80365010400	3221910635336	4	6	55	11	1	1
80365010500	3221910635343	5	6	57	13	1	1
80365010600	3221910635350	6	6	57	13	1	1
80365010800	3221910635367	8	10	69	19	1	1
80365011000	3221910635374	10	10	72	22	1	1
80365011200	3221910635381	12	12	83	26	1	1
80365011400	3221910635398	14	12	83	26	1	1
80365011600	3221910635404	16	16	92	32	1	1
80365011800	3221910635411	18	16	92	32	1	1
80365012000	3221910635428	20	20	104	38	1	1

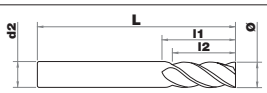


HSSE8 END MILLS Z2-3 FINISHING.

FRESA DE ACABADO HSSE8 Z2-3.

FRESA PER FINITURA HSS-E8, Z2-3, NORMALE.





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

KLM

Aluminium alloys

Aleaciones de aluminio

Leghe di alluminio

8030261	EAN	Ø	d2	L	l2	QTY	PCB
80302610300	3221910576202	3	6	52	8	1	1
80302610400	3221910576219	4	6	55	11	1	1
80302610500	3221910576226	5	6	57	13	1	1
80302610600	3221910576233	6	6	57	13	1	1
80302610800	3221910576240	8	10	69	19	1	1
80302611000	3221910576257	10	10	72	22	1	1
80302611200	3221910576264	12	12	83	26	1	1
80302611400	3221910576271	14	12	83	26	1	1
80302611600	3221910576288	16	16	92	32	1	1
80302611800	3221910576295	18	16	92	32	1	1
80302612000	3221910576301	20	20	104	38	1	1

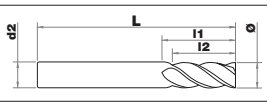


HSSE8 END MILLS Z2-3 LONG SERIES FINISHING.

FRESA DE ACABADO HSSE8 Z2-3 SERIE LARGA.

FRESA PER FINITURA HSS-E8, Z2-3, LUNGA.





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

KLM

Aluminium alloys

Aleaciones de aluminio

Leghe di alluminio

8030281	EAN	Ø	d2	L	l2	Z	QTY	PCB
80302810400	3221910576608	4	6	63	19	2	1	1
80302810600	3221910576622	6	6	68	24	2	1	1
80302810800	3221910576639	8	10	88	38	2	1	1
80302811000	3221910576646	10	10	95	45	3	1	1
80302811200	3221910576653	12	12	110	53	3	1	1
80302811400	3221910576660	14	12	110	53	3	1	1
80302811600	3221910576677	16	16	123	63	3	1	1
80302811800	3221910576684	18	16	123	63	3	1	1
80302812000	3221910576691	20	20	141	75	3	1	1

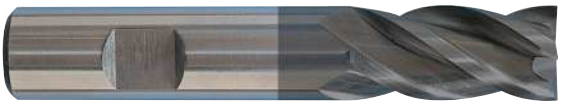


HSSE8 TIALN END MILLS Z4 FINISHING.

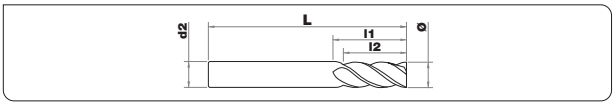
FRESA DE ACABADO HSSE8 TIALN Z4.

FRESA PER FINITURA HSS-E8, TIAIN Z4 NORMALE.

HSS E8 | TiAlN COATED | DIN 844BK



Z4 | 30°



#04

Finishing.

Acabado.

Finitura.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8037141	EAN	Ø	d2	L	l2	QTY	PCB
80371410400	3221910883263	4	6	55	11	1	1
80371410500	3221910883270	5	6	57	13	1	1
80371410600	3221910883287	6	6	57	13	1	1
80371410800	3221910883294	8	10	69	19	1	1
80371411000	3221910883300	10	10	72	22	1	1
80371411200	3221910883317	12	12	83	26	1	1
80371411600	3221910883324	16	16	92	32	1	1
80371412000	3221910883331	20	20	104	38	1	1

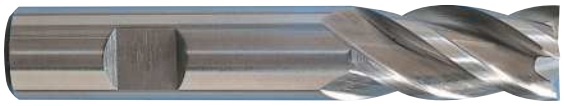


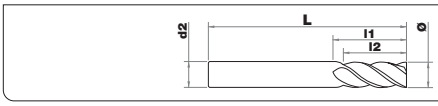
HSSE8 HIGHTCUT END MILLS. Z3-6 FINISHING.

FRESA DE ACABADO HSSE8 Z3-6.

FRESA PER FINITURA HSS-E8, Z3-6, NORMALE.

HSS E8 | BRIGHT UNCOATED | DIN 844BK | Z 3-6 | 40°





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD
Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

8030191	EAN	Ø	d2	L	l2	Z	QTY	PCB
80301910200	3221910574390	2	6	51	7	3	1	1
80301910250	3221910574406	2.5	6	52	8	3	1	1
80301910300	3221910574413	3	6	52	8	3	1	1
80301910350	3221910574420	3.5	6	54	10	3	1	1
80301910400	3221910574437	4	6	55	11	4	1	1
80301910450	3221910574444	4.5	6	55	11	4	1	1
80301910500	3221910574451	5	6	57	13	4	1	1
80301910600	3221910574468	6	6	57	13	4	1	1
80301910700	3221910574475	7	10	66	16	4	1	1
80301910800	3221910574482	8	10	69	19	4	1	1
80301910900	3221910574499	9	10	69	19	4	1	1
80301911000	3221910574505	10	10	72	22	4	1	1
80301911200	3221910574529	12	12	83	26	4	1	1
80301911400	3221910574543	14	12	83	26	4	1	1
80301911500	3221910574550	15	12	83	26	4	1	1
80301911600	3221910574567	16	16	92	32	4	1	1
80301911800	3221910574574	18	16	92	32	4	1	1
80301912000	3221910574581	20	20	104	38	4	1	1
80301912200	3221910574598	22	20	104	38	4	1	1
80301912500	3221910574611	25	25	121	45	6	1	1
80301912800	3221910574635	28	25	121	45	6	1	1
80301913000	3221910574642	30	25	121	45	6	1	1
80301913200	3221910574659	32	32	133	53	6	1	1



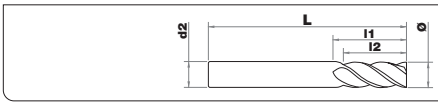
HSSE8 HIGHTCUT END MILLS. Z3-6 FINISHING.

FRESA DE ACABADO HSSE8 HIGH-CUT Z3-6.

FRESA PER FINITURA HSS-E8, Z3-6, NORMALE.

HSS E8 | HICUT COATED | DIN 844BK | Z 3-6 | 40°





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD
Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

8036221	EAN	Ø	d2	L	l2	Z	QTY	PCB
80362210200	3221910632472	2	6	51	7	3	1	1
80362210300	3221910632489	3	6	52	8	3	1	1
80362210400	3221910632496	4	6	55	11	4	1	1
80362210600	3221910632519	6	6	57	13	4	1	1
80362210800	3221910632526	8	10	69	19	4	1	1
80362211000	3221910632533	10	10	72	22	4	1	1
80362211200	3221910632540	12	12	83	26	4	1	1
80362211400	3221910632557	14	12	83	26	4	1	1
80362211600	3221910632564	16	16	92	32	4	1	1
80362211800	3221910632571	18	16	92	32	4	1	1
80362212000	3221910632588	20	20	104	38	4	1	1



HSSE8 END MILLS. Z4-6 LONG SERIES FINISHING.

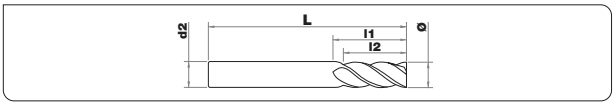
FRESA DE ACABADO HSSE8 Z4-6 SERIE LARGA.

FRESA PER FINITURA HSS-E8 Z4-6 LUNGA.

HSS E8 | BRIGHT UNCOATED | DIN 844BL



Z 4-6 | 40°



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD
Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ
Cast iron
Fundiciones
Ghisa

NO
Copper alloys
Aleaciones de cobre
Leghe di rame

8030231	EAN	Ø	d2	L	l2	Z	QTY	PCB
80302310400	3221910575571	4	6	63	19	4	1	1
80302310600	3221910575595	6	6	68	24	4	1	1
80302310800	3221910575601	8	10	88	38	4	1	1
80302311000	3221910575618	10	10	95	45	4	1	1
80302311200	3221910575625	12	12	110	53	4	1	1
80302311400	3221910575632	14	12	110	53	4	1	1
80302311600	3221910575649	16	16	123	63	4	1	1
80302311800	3221910575656	18	16	123	63	4	1	1
80302312000	3221910575663	20	20	141	75	4	1	1
80302312200	3221910575670	22	22	141	75	4	1	1
80302312500	3221910575687	25	25	166	90	6	1	1
80302312800	3221910575694	28	25	166	90	6	1	1
80302313000	3221910575700	30	25	166	90	6	1	1
80302313600	3221910575724	36	36	186	106	6	1	1



HSSE8 HIGHCUT END MILLS. Z4-6 LONG SERIES FINISHING.

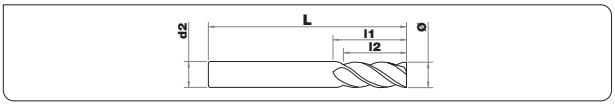
FRESA DE ACABADO HSSE8 HIGH-CUT Z4-6 SERIE LARGA.

FRESA PER FINITURA HSS-E8 HIGH-CUT Z4-6 LUNGA.

HSS E8 | HICUT COATED | DIN 844BL



Z 4-6 | 40°



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8036231	EAN	Ø	d2	L	l2	Z	QTY	PCB
80362310400	3221910632663	4	6	63	19	4	1	1
80362310500	3221910632670	5	6	68	24	4	1	1
80362310600	3221910632687	6	6	68	24	4	1	1
80362310800	3221910632694	8	10	88	38	4	1	1
80362311000	3221910632700	10	10	95	45	4	1	1
80362311200	3221910632717	12	12	110	53	4	1	1
80362311400	3221910632724	14	12	110	53	4	1	1
80362311600	3221910632731	16	16	123	63	4	1	1
80362311800	3221910632748	18	16	123	63	4	1	1
80362312000	3221910632755	20	20	414	75	4	1	1



HSSE8 END MILLS Z3 LONG SERIES FINISHING.

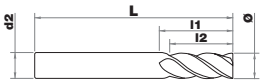
FRESA DE ACABADO HSSE8 Z3 SERIE LARGA.

FRESA PER FINITURA HSS-E8, Z3, LUNGA.

HSS E8 | BRIGHT UNCOATED | DIN 844BL



Z3 | 40°



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

8030151	EAN	Ø	d2	L	l2	QTY	PCB
80301510400	3221910572860	4	6	39	19	1	1
80301510600	3221910572884	6	6	68	24	1	1
80301510800	3221910572891	8	10	88	38	1	1
80301511000	3221910572907	10	10	95	45	1	1
80301511200	3221910572914	12	12	110	53	1	1
80301511400	3221910572921	14	12	110	53	1	1
80301511600	3221910572938	16	16	123	63	1	1
80301511800	3221910572945	18	16	123	63	1	1
80301512000	3221910572952	20	20	141	75	1	1



HSSE8 END MILLS. Z4 EXTRA LONG SERIES FINISHING.

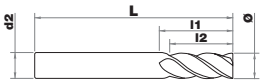
FRESA DE ACABADO HSSE8 Z4 SERIE EXTRA LARGA.

FRESA PER FINITURA HSS-E8 Z4 EXTRA LUNGA.

HSS E8 | BRIGHT UNCOATED | TIVOLY NORM



Z4 | 40°



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

8030161	EAN	Ø	d2	L	l2	QTY	PCB
80301610600	3221910573126	6	6	95	50	1	1
80301610800	3221910573133	8	10	110	60	1	1
80301611000	3221910573140	10	10	115	65	1	1
80301611200	3221910573157	12	12	130	75	1	1
80301611400	3221910573164	14	12	135	80	1	1
80301611600	3221910573171	16	16	155	95	1	1
80301611800	3221910573188	18	16	160	100	1	1
80301612000	3221910573195	20	20	175	110	1	1

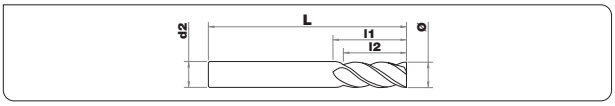


HSSE8 TIALN END MILLS Z4 ROUGHING.

FRESA PARA DESBASTAR HSSE8 TIALN Z4.

FRESA PER SGROSSATURA HSS-E8 TIAIN Z4 NORMALE.





Roughing.

Desbastar.

Operazioni per sgrossatura.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

8037151	EAN	Ø	d2	L	l2	QTY	PCB
80371510600	3221910883348	6	6	57	13	1	1
80371510800	3221910883355	8	10	69	19	1	1
80371511000	3221910883362	10	10	72	22	1	1
80371511200	3221910883379	12	12	83	26	1	1
80371511600	3221910883386	16	16	92	32	1	1
80371512000	3221910883393	20	20	104	38	1	1



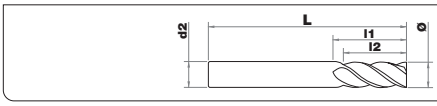
HSSE8 END MILLS Z4-6 ROUGHING.

FRESA PARA DESBASTAR HSSE8 Z4-6.

FRESA PER SGROSSATURA HSS-E8 Z4-6 NORMALE.

HSS E8 | BRIGHT UNCOATED | DIN 844BK | HR TYPE | Z 4-6 | 30°





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

8036341	EAN	Ø	d2	L	l2	Z	QTY	PCB
80363410600	3221910633684	6	6	57	13	4	1	1
80363410800	3221910633691	8	10	69	16	4	1	1
80363411000	3221910633707	10	10	72	22	4	1	1
80363411200	3221910633714	12	12	83	26	4	1	1
80363411400	3221910633721	14	12	83	26	4	1	1
80363411600	3221910633738	16	16	92	32	4	1	1
80363412000	3221910633752	20	20	104	38	4	1	1
80363412200	3221910633769	22	20	104	38	4	1	1



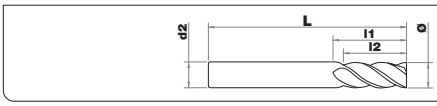
HSSE8 HIGHCUT END MILLS Z4-6 ROUGHING.

FRESA PARA DESBASTAR HSSE8 HIGHCUT Z4-6.

FRESA PER SGROSSATURA HSS-E8 Z4-6 NORMALE.

HSS E8 | HICUT COATED | DIN 844BK | HR TYPE | Z 4-6 | 30°





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

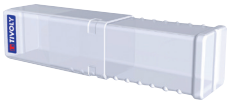
Compromesso tra flessibilità/durata di HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

8036351	EAN	Ø	d2	L	l2	Z	QTY	PCB
80363510600	3221910633806	6	6	57	13	4	1	1
80363510800	3221910633813	8	10	69	16	4	1	1
80363511000	3221910633820	10	10	72	22	4	1	1
80363511200	3221910633837	12	12	83	26	4	1	1
80363511400	3221910633844	14	12	83	26	4	1	1
80363511600	3221910633851	16	16	92	32	4	1	1
80363512000	3221910633875	20	20	104	38	4	1	1



HSS PM (ASP) HIGHCUT, END MILLS. Z4-6, ROUGHING.

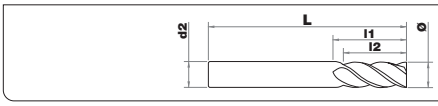
FRESA PARA DESBASTE HSS PM (ASP) HIGHCUT, Z4-6, NORMAL.

FRESA PER SGROSSATURA HSS PM HIGHCUT Z4-6 NORMALE.

HSS PM | HICUT COATED | DIN 844BK



HR TYPE | Z 4-6 | 30°



The ASP toughness, universal application, life span.

Tenacidad del acero sinterizado, polivalencia, duración de vida.

Resistenza dell'acciaio sint., polivalente, lunga durata, affidabilità.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD — Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH — Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ — Cast iron
Fundiciones
Ghisa

ARCo ARNi — Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

8036371	EAN	Ø	d2	L	l2	Z	QTY	PCB
80363710600	3221910634087	6	6	57	13	4	1	1
80363710700	3221910634094	7	10	66	16	4	1	1
80363710800	3221910634100	8	10	69	19	4	1	1
80363711000	3221910634124	10	10	72	22	4	1	1
80363711200	3221910634148	12	12	83	26	4	1	1
80363711400	3221910634155	14	12	83	26	4	1	1
80363711600	3221910634162	16	16	92	32	4	1	1
80363711800	3221910634179	18	16	92	32	4	1	1
80363712000	3221910634186	20	20	104	38	4	1	1



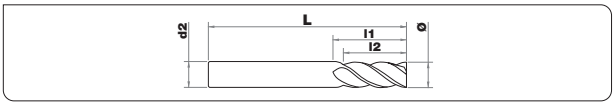
HSSPM [ASP] END MILLS. Z4-6 LONG SERIES ROUGHING.

FRESA PARA DESBASTE HSSPM (ASP) (HIGHCUT) Z4-6 SERIE LARGA.

FRESA PER SGROSSATURA HSS PM HIGHCUT Z4-6 LUNGA.

HSS PM | HICUT COATED | DIN 844BL | HR TYPE | Z 4-6 | 30°





The ASP toughness, universal application, life span, profitability.

Tenacidad del acero sinterizado, polivalencia, duración, rentabilidad.

Resistenza dell'acciaio sint., polivalente, lunga durata, affidabilità.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD
Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ
Cast iron
Fundiciones
Ghisa

ARCo ARNi
Ni / Co based special alloys
Aleaciones refractarias Co / Ni
Leghe refrattarie Co / Ni

8036411	EAN	Ø	d2	L	l2	Z	QTY	PCB
80364110800	3221910634551	8	10	88	38	4	1	1
80364111000	3221910634568	10	10	95	45	4	1	1
80364111200	3221910634575	12	12	110	53	4	1	1
80364111400	3221910634582	14	12	110	53	4	1	1
80364111600	3221910634599	16	16	123	63	4	1	1
80364111800	3221910634605	18	16	123	63	4	1	1
80364112000	3221910634612	20	20	141	75	4	1	1
80364112500	3221910634629	25	25	166	90	4	1	1
80364113000	3221910634636	30	25	166	90	6	1	1
80364113200	3221910634643	32	32	186	106	6	1	1



HSSE8 END MILLS Z2 MORSE TAPER SHANK SLOTTING.

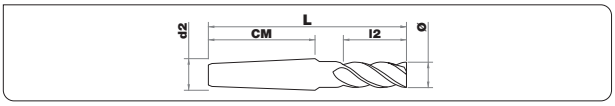
FRESA PARA RANURAR HSSE8 Z2 MANGO CÓNICO.

FRESA PER SCANALATURA HSS-E8 Z2, ATTACCO CONO MORSE.

HSS E8 | BRIGHT UNCOATED | DIN 845BK



Z2 | 30° | e8



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

8034651	EAN	Ø	L	l2	CM	QTY	PCB
803465121200	3221910630577	12	111	26	CM2	1	1
803465121400	3221910630584	14	111	26	CM2	1	1
803465121500	3221910630591	15	111	26	CM2	1	1
803465121600	3221910630607	16	117	32	CM2	1	1
803465121800	3221910630614	18	117	32	CM2	1	1
803465122000	3221910630621	20	123	38	CM2	1	1
803465122200	3221910630638	22	123	38	CM2	1	1
803465132400	3221910630645	24	147	45	CM3	1	1
803465132500	3221910630652	25	147	45	CM3	1	1
803465132600	3221910630669	26	147	45	CM3	1	1
803465132800	3221910630676	28	147	45	CM3	1	1
803465133000	3221910630683	30	147	45	CM3	1	1
803465133200	3221910630690	32	178	53	CM3	1	1
803465143600	3221910630706	36	178	53	CM4	1	1
803465144000	3221910630713	40	188	63	CM4	1	1
803465145000	3221910630720	50	200	75	CM4	1	1



HSSE8 END MILLS Z4-6 MORSE TAPER SHANK FINISHING.

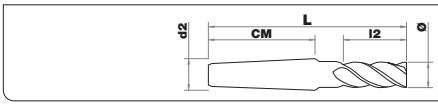
FRESA DE ACABADO HSSE8 Z4-6 MANGO CÓNICO.

FRESA PER FINITURA HSS-E8, Z4-6, ATTACCO CONO MORSE.

HSS E8 | BRIGHT UNCOATED | DIN 845BK



Z 4-6 | 40°



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

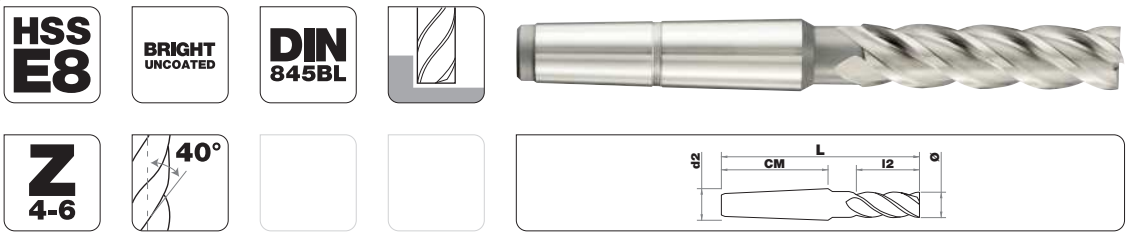
8030421	EAN	Ø	L	l2	Z	CM	QTY	PCB
803042121200	3221910579272	12	111	26	4	CM2	1	1
803042121400	3221910579289	14	111	26	4	CM2	1	1
803042121600	3221910579296	16	117	32	4	CM2	1	1
803042121800	3221910579302	18	117	32	4	CM2	1	1
803042122000	3221910579319	20	123	38	4	CM2	1	1
803042122200	3221910579326	22	123	38	4	CM2	1	1
803042132500	3221910579364	25	147	45	6	CM3	1	1
803042132800	3221910579388	28	147	45	6	CM3	1	1
803042133000	3221910579395	30	147	45	6	CM3	1	1
803042144000	3221910579449	40	188	63	6	CM4	1	1
803042145000	3221910579456	50	200	75	6	CM4	1	1



HSSE8 END MILLS Z4-6 LONG SERIES MORSE TAPER SHANK FINISHING.

FRESA DE ACABADO HSSE8 Z4-6 SERIE LARGA. MANGO CÓNICO.

FRESA PER FINITURA HSS-E8, Z4-6, ATTACCO CONO MORSE, LUNGA.



The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

8030451	EAN	Ø	L	l2	Z	CM	QTY	PCB
803045121200	3221910580315	12	138	53	4	CM2	1	1
803045121400	3221910580322	14	138	53	4	CM2	1	1
803045121600	3221910580339	16	148	63	4	CM2	1	1
803045121800	3221910580346	18	148	63	4	CM2	1	1
803045122000	3221910580353	20	160	75	4	CM2	1	1
803045132000	3221910580377	20	177	75	4	CM3	1	1
803045122200	3221910580360	22	160	75	4	CM2	1	1
803045132200	3221910580384	22	177	75	4	CM3	1	1
803045132500	3221910580391	25	192	90	6	CM3	1	1
803045132800	3221910580407	28	192	90	6	CM3	1	1
803045143000	3221910580438	30	215	90	6	CM4	1	1
803045133200	3221910580421	32	208	106	6	CM3	1	1
803045143200	3221910580445	32	231	106	6	CM4	1	1
803045143600	3221910580452	36	231	106	6	CM4	1	1
803045144000	3221910580469	40	250	125	6	CM4	1	1
803045145000	3221910580476	50	275	150	6	CM4	1	1



HSSE8 END MILLS Z4-6 EXTRA LONG SERIES MORSE TAPER SHANK FINISHING.

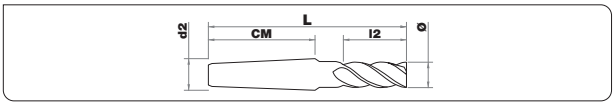
FRESA DE ACABADO HSSE8 Z4-6 SERIE EXTRA-LARGA. MANGO CÓNICO.

FRESA PER FINITURA HSS-E8, Z4-6, ATTACCO CONO MORSE, EXTRA-LUNGA.

HSS E8 | BRIGHT UNCOATED | TIVOLY NORM



Z 4-6 | 40°



The HSSE8 Flexibility / life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

8030461	EAN	Ø	L	l2	Z	CM	QTY	PCB
803046121800	3221910580735	18	185	100	4	CM2	1	1
803046132000	3221910580742	20	212	110	4	CM3	1	1
803046132200	3221910580759	22	212	110	4	CM3	1	1
803046132500	3221910580766	25	227	125	6	CM3	1	1
803046143000	3221910580780	30	265	140	6	CM4	1	1
803046143200	3221910580797	32	285	160	6	CM4	1	1
803046143600	3221910580803	36	285	160	6	CM4	1	1
803046144000	3221910580810	40	305	180	6	CM4	1	1
803046145000	3221910580834	50	325	200	6	CM4	1	1

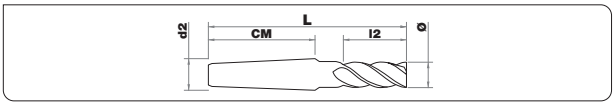


HSSE8 END MILLS Z4-6 MORSE TAPER SHANK ROUGHING.

FRESA PARA DESBASTAR HSSE8 Z4-6. MANGO CÓNICO.

FRESA PER SGROSSATURA HSS-E8, Z4-6, ATTACCO CONO MORSE.





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8036801	EAN	Ø	L	l2	Z	CM	QTY	PCB
803680121400	3221910824587	14	111	26	4	CM2	1	1
803680121600	3221910824594	16	117	32	4	CM2	1	1
803680121800	3221910824600	18	117	32	4	CM2	1	1
803680122000	3221910824617	20	123	38	4	CM2	1	1
803680132200	3221910824624	22	123	38	4	CM3	1	1
803680132500	3221910824631	25	147	45	4	CM3	1	1
803680132800	3221910824648	28	147	45	6	CM3	1	1
803680133000	3221910824655	30	147	45	6	CM3	1	1
803680143200	3221910824662	32	178	53	6	CM4	1	1
803680143600	3221910824679	36	178	53	6	CM4	1	1
803680144000	3221910824686	40	188	53	6	CM4	1	1
803680145000	3221910824693	50	200	75	6	CM4	1	1



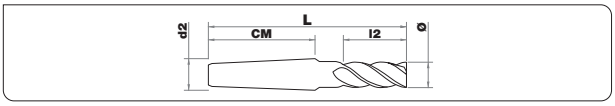
HSSE8 END MILLS Z4-6 LONG SERIES MORSE TAPER SHANK ROUGHING.

FRESA PARA DESBASTAR HSSE8 Z4-6 SERIE LARGA. MANGO CÓNICO.

FRESA PER SGROSSATURA HSS-E8, Z4-6, ATTACCO CONO MORSE, LUNGA.

HSS E8 | BRIGHT UNCOATED | DIN 845BL | NR TYPE | Z 4-6 | 25°





The HSSE8 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS-E8, uso polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

IJ Cast iron
Fundiciones
Ghisa

NO Copper alloys
Aleaciones de cobre
Leghe di rame

8036811	EAN	Ø	d2	L	Z	CM	QTY	PCB
803681121600	3221910824709	16	148	63	4	CM2	1	1
803681121800	3221910824716	18	148	63	4	CM2	1	1
803681132000	3221910824723	20	160	75	4	CM3	1	1
803681132200	3221910824730	22	177	75	4	CM3	1	1
803681132500	3221910824747	25	192	90	4	CM3	1	1
803681132800	3221910824754	28	192	90	6	CM3	1	1
803681143000	3221910824761	30	215	90	6	CM4	1	1
803681143200	3221910824778	32	231	106	6	CM4	1	1
803681143600	3221910824785	36	231	106	6	CM4	1	1
803681144000	3221910824792	40	250	125	6	CM4	1	1
803681145000	3221910824808	50	275	150	6	CM4	1	1



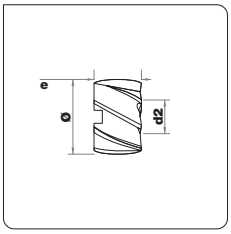
HSS SLITTING SAWS FINE TEETH.

FRESA DE SIERRA HSS DENTADO FINO.

SEGA CIRCOLARE HSS, DENTI DRITTI FINI.







The HSSE5 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS, uso polivalente.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8031511	EAN	Ø	d2	Z	e	QTY	PCB
8031511020021	3221910607012	20	5	80	0.2	1	1
8031511020031	3221910607029	20	5	64	0.3	1	1
8031511020041	3221910607036	20	5	64	0.4	1	1
8031511020051	3221910607043	20	5	48	0.5	1	1
8031511020061	3221910607050	20	5	48	0.6	1	1
8031511020081	3221910607067	20	5	48	0.8	1	1
8031511020101	3221910607074	20	5	40	1	1	1
8031511020121	3221910607081	20	5	40	1.2	1	1
8031511020161	3221910607098	20	5	80	1.6	1	1
8031511025021	3221910607104	25	8	80	0.2	1	1
8031511025031	3221910607111	25	8	80	0.3	1	1
8031511025041	3221910607128	25	8	64	0.4	1	1
8031511025051	3221910607135	25	8	64	0.5	1	1
8031511025061	3221910607142	25	8	64	0.6	1	1
8031511025081	3221910607159	25	8	48	0.8	1	1
8031511025101	3221910607166	25	8	48	1	1	1
8031511025121	3221910607173	25	8	48	1.2	1	1
8031511025161	3221910607180	25	8	40	1.6	1	1
8031511032021	3221910607197	32	8	100	0.2	1	1
8031511032031	3221910607203	32	8	80	0.3	1	1
8031511032041	3221910607210	32	8	80	0.4	1	1
8031511032051	3221910607227	32	8	80	0.5	1	1
8031511032061	3221910607234	32	8	64	0.6	1	1
8031511032081	3221910607241	32	8	64	0.8	1	1
8031511032101	3221910607258	32	8	64	1	1	1
8031511032121	3221910607265	32	8	48	1.2	1	1
8031511032161	3221910607272	32	8	48	1.6	1	1
8031511040021	3221910607289	40	10	128	0.2	1	1
8031511040031	3221910607296	40	10	100	0.3	1	1
8031511040041	3221910607302	40	10	100	0.4	1	1
8031511040051	3221910607319	40	10	80	0.5	1	1
8031511040061	3221910607326	40	10	80	0.6	1	1
8031511040081	3221910607333	40	10	80	0.8	1	1
8031511040101	3221910607340	40	10	64	1	1	1
8031511040121	3221910607357	40	10	64	1.2	1	1
8031511040161	3221910607364	40	10	64	1.6	1	1
8031511050051	3221910607371	50	13	100	0.5	1	1
8031511050061	3221910607388	50	13	100	0.6	1	1
8031511050081	3221910607395	50	13	80	0.8	1	1
8031511050101	3221910607401	50	13	80	1	1	1
8031511050121	3221910607418	50	13	80	1.2	1	1
8031511050161	3221910607425	50	13	64	1.6	1	1
8031511050201	3221910607432	50	13	64	2	1	1
8031511050251	3221910607449	50	13	64	2.5	1	1
8031511050301	3221910607456	50	13	48	3	1	1
8031511063051	3221910607463	63	16	128	0.5	1	1
8031511063061	3221910607470	63	16	100	0.6	1	1
8031511063081	3221910607487	63	16	100	0.8	1	1
8031511063101	3221910607494	63	16	100	1	1	1
8031511063121	3221910607500	63	16	80	1.2	1	1
8031511063161	3221910607517	63	16	80	1.6	1	1
8031511063201	3221910607524	63	16	80	2	1	1
8031511063251	3221910607531	63	16	64	2.5	1	1
8031511063301	3221910607548	63	16	64	3	1	1
8031511080051	3221910607555	80	27	128	0.5	1	1
8031511080061	3221910607562	80	27	128	0.6	1	1



8031511	EAN	Ø	d2	Z	e	QTY	PCB
8031511080081	3221910607579	80	27	128	0.8	1	1
8031511080101	3221910607586	80	27	100	1	1	1
8031511080121	3221910607593	80	27	100	1.2	1	1
8031511080161	3221910607609	80	27	100	1.6	1	1
8031511080201	3221910607616	80	27	80	2	1	1
8031511080251	3221910607623	80	27	80	2.5	1	1
8031511080301	3221910607630	80	27	80	3	1	1
8031511080401	3221910607647	80	27	64	4	1	1
8031511080501	3221910607654	80	27	64	5	1	1
8031511100051	3221910607661	100	27	160	0.5	1	1
8031511100061	3221910607678	100	27	160	0.6	1	1
8031511100081	3221910607685	100	27	128	0.8	1	1
8031511100101	3221910607692	100	27	128	1	1	1
8031511100121	3221910607708	100	27	128	1.2	1	1
8031511100161	3221910607715	100	27	100	1.6	1	1
8031511100201	3221910607722	100	27	100	2	1	1
8031511100251	3221910607739	100	27	100	2.5	1	1
8031511100301	3221910607746	100	27	80	3	1	1
8031511100401	3221910607753	100	27	80	4	1	1
8031511100501	3221910607760	100	27	80	5	1	1
8031511125101	3221910607777	125	27	160	1	1	1
8031511125121	3221910607784	125	27	128	1.2	1	1
8031511125161	3221910607791	125	27	128	1.6	1	1
8031511125201	3221910607807	125	27	128	2	1	1
8031511125251	3221910607814	125	27	100	2.5	1	1
8031511125301	3221910607821	125	27	100	3	1	1
8031511125401	3221910607838	125	27	100	4	1	1
8031511125501	3221910607845	125	27	80	5	1	1
8031511160101	3221910607852	160	32	160	1	1	1
8031511160161	3221910607869	160	32	128	1.6	1	1
8031511160201	3221910607876	160	32	128	2	1	1
8031511160251	3221910607883	160	32	128	2.5	1	1
8031511160301	3221910607890	160	32	100	3	1	1
8031511160401	3221910607906	160	32	100	4	1	1
8031511160501	3221910607913	160	32	100	5	1	1
8031511200101	3221910607920	200	32	200	1	1	1
8031511200161	3221910607937	200	32	160	1.6	1	1
8031511200201	3221910607944	200	32	160	2	1	1
8031511200251	3221910607951	200	32	160	2.5	1	1
8031511200301	3221910607968	200	32	128	3	1	1
8031511200401	3221910607975	200	32	128	4	1	1
8031511200501	3221910607982	200	32	128	5	1	1
8031511250201	3221910607999	250	32	200	2	1	1
8031511250251	3221910608002	250	32	160	2.5	1	1
8031511250301	3221910608019	250	32	160	3	1	1
8031511250401	3221910608026	250	32	160	4	1	1
8031511250501	3221910608033	250	32	128	5	1	1

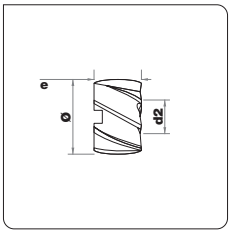
HSS SLITTING SAWS MEDIUM TEETH.

FRESA DE SIERRA HSS DENTADO GRUESO.

SEGA CIRCOLARE HSS, DENTI DRITTI GROSSI.

HSS | BRIGHT UNCOATED | DIN 1838 | Z 40-100





The HSSE5 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS, uso polivalente.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8031521	EAN	Ø	d2	Z	e	QTY	PCB
8031521050051	3221910609382	50	13	48	0.5	1	1
8031521050061	3221910609399	50	13	48	0.6	1	1
8031521050081	3221910609405	50	13	40	0.8	1	1
8031521050101	3221910609412	50	13	40	1	1	1
8031521050121	3221910609429	50	13	40	1.2	1	1
8031521050161	3221910609436	50	13	32	1.6	1	1
8031521050201	3221910609443	50	13	32	2	1	1
8031521050251	3221910609450	50	13	32	2.5	1	1
8031521050301	3221910609467	50	13	24	3	1	1
8031521063051	3221910609474	63	16	64	0.5	1	1
8031521063061	3221910609481	63	16	48	0.6	1	1
8031521063081	3221910609498	63	16	48	0.8	1	1
8031521063101	3221910609504	63	16	48	1	1	1
8031521063121	3221910609511	63	16	40	1.2	1	1
8031521063161	3221910609528	63	16	40	1.6	1	1
8031521063201	3221910609535	63	16	40	2	1	1
8031521063251	3221910609542	63	16	32	2.5	1	1
8031521063301	3221910609559	63	16	32	3	1	1
8031521080051	3221910609566	80	27	64	0.5	1	1
8031521080061	3221910609573	80	27	64	0.6	1	1
8031521080081	3221910609580	80	27	64	0.8	1	1
8031521080101	3221910609597	80	27	48	1	1	1
8031521080121	3221910609603	80	27	48	1.2	1	1
8031521080161	3221910609610	80	27	48	1.6	1	1
8031521080201	3221910609627	80	27	40	2	1	1
8031521080251	3221910609634	80	27	40	2.5	1	1
8031521080301	3221910609641	80	27	40	3	1	1
8031521080401	3221910609658	80	27	32	4	1	1
8031521080501	3221910609665	80	27	32	5	1	1
8031521100051	3221910609672	100	27	80	0.5	1	1
8031521100061	3221910609689	100	27	80	0.6	1	1
8031521100081	3221910609696	100	27	64	0.8	1	1
8031521100101	3221910609702	100	27	64	1	1	1
8031521100121	3221910609719	100	27	64	1.2	1	1
8031521100161	3221910609726	100	27	48	1.6	1	1
8031521100201	3221910609733	100	27	48	2	1	1
8031521100251	3221910609740	100	27	48	2.5	1	1
8031521100301	3221910609757	100	27	40	3	1	1
8031521100401	3221910609764	100	27	40	4	1	1
8031521100501	3221910609771	100	27	40	5	1	1
8031521125101	3221910609788	125	27	80	1	1	1
8031521125121	3221910609795	125	27	64	1.2	1	1
8031521125161	3221910609801	125	27	64	1.6	1	1
8031521125201	3221910609818	125	27	64	2	1	1
8031521125251	3221910609825	125	27	48	2.5	1	1
8031521125301	3221910609832	125	27	48	3	1	1
8031521125401	3221910609849	125	27	48	4	1	1
8031521125501	3221910609856	125	27	40	5	1	1
8031521160101	3221910609863	160	32	80	1	1	1
8031521160161	3221910609870	160	32	80	1.6	1	1
8031521160201	3221910609887	160	32	64	2	1	1
8031521160251	3221910609894	160	32	64	2.5	1	1
8031521160301	3221910609900	160	32	64	3	1	1
8031521160401	3221910609917	160	32	48	4	1	1
8031521160501	3221910609924	160	32	48	5	1	1
8031521200101	3221910609931	200	32	100	1	1	1



8031521	EAN	Ø	d2	Z	e	QTY	PCB
8031521200161	3221910609948	200	32	80	1.6	1	1
8031521200201	3221910609955	200	32	80	2	1	1
8031521200251	3221910609962	200	32	80	2.5	1	1
8031521200301	3221910609979	200	32	64	3	1	1
8031521200401	3221910609986	200	32	64	4	1	1
8031521200501	3221910609993	200	32	64	5	1	1
8031521250201	3221910610005	250	32	100	2	1	1
8031521250251	3221910610012	250	32	80	2.5	1	1
8031521250301	3221910610029	250	32	80	3	1	1
8031521250401	3221910610036	250	32	80	4	1	1
8031521250501	3221910610043	250	32	64	5	1	1

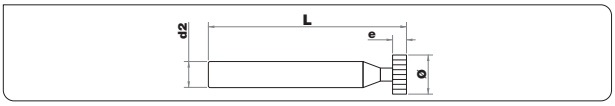
HSSE5 WOODRUFF CUTTERS.

FRESA WOODDRUFF HSSE5.

FRESA WOODRUFF HSS-E5.

HSS E5 | BRIGHT UNCOATED | DIN 850B





The HSSE5 Flexibility/life span, universal application.

Flexibilidad, duración de vida y uso polivalente.

Compromesso tra flessibilità/durata del HSS-E5, uso polivalente.

A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8031071	EAN	Ø	d2	L	e	QTY	PCB
8031071075015	3221910593278	7.5	6	50	1.5	1	1
8031071075020	3221910593285	7.5	6	50	2	1	1
8031071105025	3221910593308	10.5	12	50	2.5	1	1
8031071105030	3221910593315	10.5	12	50	3	1	1
8031071135020	3221910593322	13.5	12	56	2	1	1
8031071135040	3221910593353	13.5	12	56	4	1	1
8031071165030	3221910593377	16.5	12	56	3	1	1
8031071165040	3221910593384	16.5	12	56	4	1	1
8031071195030	3221910593407	19.5	12	56	3	1	1
8031071195040	3221910593414	19.5	12	56	4	1	1
8031071195050	3221910593421	19.5	12	56	5	1	1
8031071225040	3221910593445	22.5	12	56	4	1	1
8031071225050	3221910593452	22.5	12	56	5	1	1
8031071255050	3221910593476	25.5	12	63	5	1	1
8031071255070	3221910593490	25.5	12	63	7	1	1
8031071285060	3221910593520	28.5	12	63	6	1	1
8031071325050	3221910593551	32.5	12	63	5	1	1
8031071325060	3221910593568	32.5	12	63	6	1	1
8031071325080	3221910593582	32.5	12	63	8	1	1
8031071355060	3221910593599	35.5	12	63	6	1	1
8031071385070	3221910593636	38.5	12	63	7	1	1
8031071385080	3221910593643	38.5	12	63	8	1	1
8031071455080	3221910593667	45.5	16	63	8	1	1
8031071455100	3221910593674	45.5	16	63	10	1	1



SET | FZ03

04 PCS | HSS E8 | TiAlN COATED

Z3 | DIN 844BK

4 Finishing end mills HSS E8 Ø 8-10-12-16 mm Z3

ESTUCHE | FZ03



4 fraisas de acabado HSS E8 Ø 8-10-12-16 mm Z3

CASSETTA | FZ03

80371370001

3221910898052

QTY	PCB
4	1

AB | CD | FGH

4 frese per scanalature HSS E8 Ø 8-10-12-16 mm Z3

SET | FZ04

04 PCS | HSS E8 | TiAlN COATED

Z4 | DIN 844BK

4 Finishing end mills HSS E8 Ø 8-10-12-16 mm Z4

ESTUCHE | FZ04



4 fraisas de acabado HSS E8 Ø 8-10-12-16 mm Z4

CASSETTA | FZ04

80371470001

3221910898069

QTY	PCB
4	1

AB | CD | FGH

4 frese per rifinitura HSS E8 Ø 8-10-12-16 mm Z4

SET | FRG

04 PCS | HSS E8 | TiAlN COATED

Z4 | DIN 844BK

4 Roughing end mills HSS E8 Ø 8-10-12 -16 mm

ESTUCHE | FRG



4 fraisas debaste HSS E8 Ø 8-10-12-16 mm

CASSETTA | FRG

80371570001

3221910898076

QTY	PCB
4	1

AB | CD | FGH

4 frese per sgrossare HSS E8 Ø 8-10-12-16 mm



TIVOLY®

FRAISAGE
MILLING

Nous développons toutes les géométries et dimensions, adaptées aux caractèristiques précises de votre application.

We develop all the geometries and dimensions, adapted to the specific caracteristics of your application.



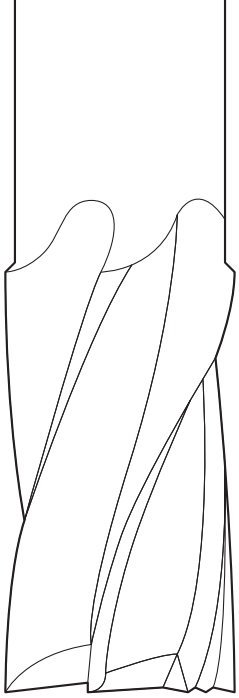








industriel@tivoly.com



SOLID CARBIDE END MILLS 25° Z1.

FRESA METAL DURO 25°. Z1.

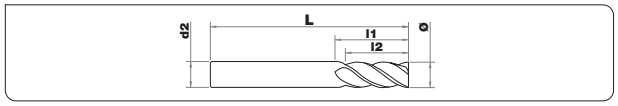
FRESA IN MD 25°. Z1.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





Z1 | 25°



Light alloys application.

Aplicación en perfiles de aluminio.

Scontornatura di profilati in alluminio.

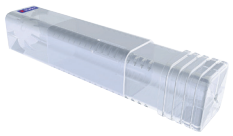
KLM

Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P

Composite Plastics
Composites plásticos
Plastiche composite

82329710	EAN	Ø	d2	L	l2	QTY	PCB
82329710200	3221910793708	2	2	38	10	1	1
82329710250	3221910793715	2.5	3	38	12	1	1
82329710300	3221910793722	3	3	38	12	1	1
82329710400	3221910793739	4	4	50	15	1	1
82329710500	3221910793746	5	5	50	16	1	1
82329710600	3221910793753	6	6	57	18	1	1
82329710800	3221910793760	8	8	63	22	1	1
82329711000	3221910793777	10	10	72	30	1	1



SOLID CARBIDE END MILLS, 25°, Z1.

FRESA METAL DURO 25°, Z1.

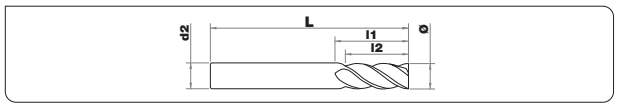
FRESA IN MD 25°. Z1.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





Z1 | 25° | h9



Designed for plastics and woods.

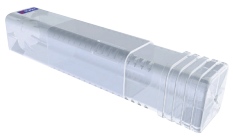
Diseñado para plásticos y maderas.

Concepita per materiali plastici e legno.

P

Composite Plastics
Composites plásticos
Plastiche composite

82366510	EAN	Ø	d2	L	l2	QTY	PCB
82366510200	3221910875367	2	2	30	8	1	1
82366510300	3221910875374	3	3	40	10	1	1
82366510400	3221910875381	4	4	50	10	1	1
82366510600	3221910875398	6	6	60	20	1	1
82366510800	3221910875404	8	8	60	22	1	1
82366511000	3221910875411	10	10	72	30	1	1
82366511200	3221910875428	12	12	76	32	1	1



SOLID CARBIDE END MILLS, 25°, Z1. LEFT HAND/RIGHT CUTTING.

FRESA METAL DURO 25°. Z1. IZQUIERDA.

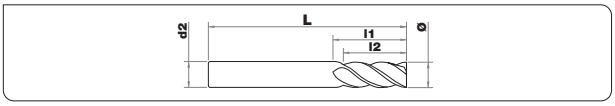
FRESA IN MD 25°. Z1. SINISTRA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





Z1 | 25° | h9



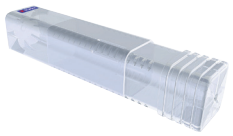
Designed for plastics and woods.

Diseñado para plásticos y maderas.

Concepita per materiali plastici e legno.

P — Composite Plastics / Composites plásticos / Plastiche composite

8236661	EAN	Ø	d2	L	l2	QTY	PCB
82366610200	3221910875558	2	2	30	8	1	1
82366610300	3221910875565	3	3	40	10	1	1
82366610400	3221910875572	4	4	50	10	1	1
82366610600	3221910875589	6	6	60	20	1	1
82366610800	3221910875596	8	8	60	22	1	1



SOLID CARBIDE END MILLS, 25°, Z2.

FRESA METAL DURO 25°, Z2.

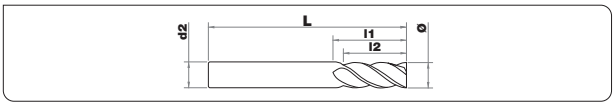
FRESA IN MD 25°. Z2.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





Z2 | 25° | h9



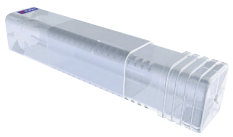
Designed for plastics and woods.

Diseñado para plásticos y maderas.

Concepita per materiali plastici e legno.

P — Composite Plastics / Composites plásticos / Plastiche composite

8236671	EAN	Ø	d2	L	l2	QTY	PCB
82366710200	3221910875602	2	2	39	8	1	1
82366710300	3221910875619	3	3	39	10	1	1
82366710400	3221910875626	4	4	50	12	1	1
82366710600	3221910875633	6	6	60	20	1	1
82366710800	3221910875640	8	8	60	22	1	1
82366711000	3221910875657	10	10	72	30	1	1
82366711200	3221910875664	12	12	76	32	1	1



SOLID CARBIDE END MILLS, 20°, Z2, RAKE ANGLE 15°.

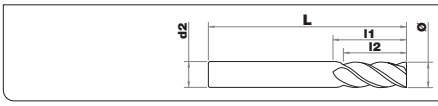
FRESA METAL DURO , 20°, Z2, ÁNGULO DE CORTE 15°.

FRESA IN MD 20°. Z2 ANGOLO DI TAGLIO 15°.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



Z2 | 20° | e8



Designed for end milling of thin partitions.

Para el mecanizado de espesores finos. Alto rendimiento.

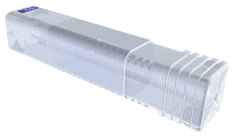
Concepito per la lavorazione di spessori sottili. Alte prestazioni.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

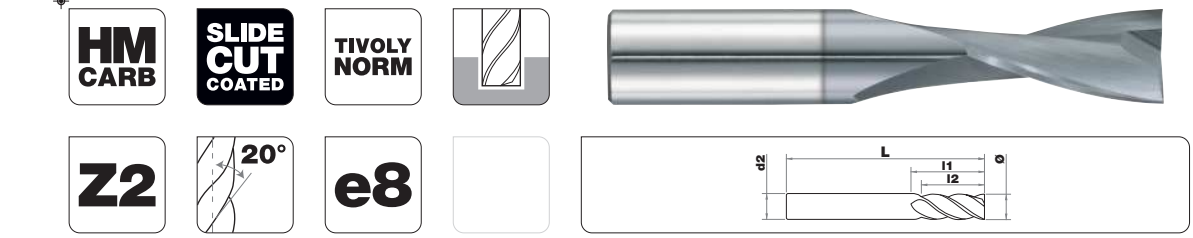
8236241	EAN	Ø	d2	L	l2	QTY	PCB
82362410300	3221910829971	3	6	8	57	1	1
82362410400	3221910829988	4	6	11	57	1	1
82362410500	3221910829995	5	6	13	57	1	1
82362410600	3221910830007	6	6	13	57	1	1
82362410800	3221910830014	8	8	19	63	1	1
82362411000	3221910830021	10	10	22	72	1	1
82362411200	3221910830038	12	12	26	83	1	1
82362411400	3221910830045	14	14	26	83	1	1
82362411600	3221910830052	16	16	32	92	1	1
82362411800	3221910830069	18	18	32	92	1	1
82362412000	3221910830076	20	20	38	104	1	1



SOLID CARBIDE SLIDECUT END MILLS, 20°, Z2, RAKE ANGLE 15°.

FRESA METAL DURO SLIDECUT, 20°, Z2, ÁNGULO DE CORTE 15°.

FRESA IN MD SLIDECUT 20°. Z2 ANGOLO DI TAGLIO 15°.



Designed for end milling of thin partitions.

Para el mecanizado de espesores finos. Alto rendimiento.

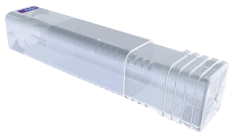
Concepito per la lavorazione di spessori sottili. Alte prestazioni.

K Fat aluminium alloys
Aleaciones de aluminio dúctil
Leghe di alluminio grasso

L Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%
Leghe di alluminio grasso Si <10%

M Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%
Leghe di alluminio Si >10%

82362510	EAN	Ø	d2	L	l2	QTY	PCB
82362510300	3221910830083	3	6	8	57	1	1
82362510400	3221910830090	4	6	11	57	1	1
82362510500	3221910830106	5	6	13	57	1	1
82362510600	3221910830113	6	6	13	57	1	1
82362510800	3221910830120	8	8	19	63	1	1
82362511000	3221910830137	10	10	22	72	1	1
82362511200	3221910830144	12	12	26	83	1	1
82362511400	3221910830151	14	14	26	83	1	1
82362511600	3221910830168	16	16	32	92	1	1
82362511800	3221910830175	18	18	32	92	1	1
82362512000	3221910830182	20	20	38	104	1	1



SOLID CARBIDE END MILLS, 45°, Z2.

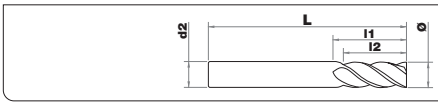
FRESA METAL DURO 45°. Z2.

FRESA IN MD 45°. Z2.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



Z2 | 45° | e8



Light alloys application.

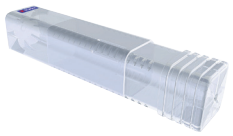
Fresado y ranurado de aluminio.

Frsatura e scanalatura di alluminio.

KLM — Aluminium alloys / Aleaciones de aluminio / Leghe di alluminio

P — Composite Plastics / Composites plásticos / Plastiche composite

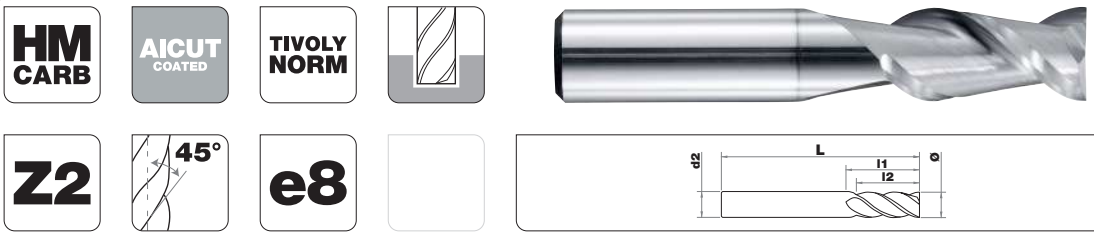
8236131	EAN	Ø	d2	L	l2	QTY	PCB
82361310100	3221910822170	1	3	39	3	1	1
82361310150	3221910822187	1.5	3	39	5	1	1
82361310200	3221910822194	2	3	39	7	1	1
82361310250	3221910822200	2.5	3	39	7	1	1
82361310300	3221910822217	3	3	39	9	1	1
82361310400	3221910822224	4	4	51	12	1	1
82361310500	3221910822231	5	5	51	16	1	1
82361310600	3221910822248	6	6	64	19	1	1
82361310700	3221910822255	7	8	64	19	1	1
82361310800	3221910822262	8	8	64	21	1	1
82361310900	3221910822279	9	10	70	22	1	1
82361311000	3221910822286	10	10	70	22	1	1
82361311200	3221910822293	12	12	76	25	1	1
82361311400	3221910822309	14	14	89	30	1	1
82361311600	3221910822316	16	16	89	32	1	1
82361311800	3221910822323	18	18	102	35	1	1
82361312000	3221910822330	20	20	102	38	1	1
82361312200	3221910822347	22	22	102	38	1	1
82361312500	3221910822354	25	25	102	38	1	1



SOLID CARBIDE ALCUT END MILLS, 45°, Z2.

FRESA METAL DURO ALCUT 45°. Z2.

FRESA IN MD ALCUT 45°. Z2.



Light alloys application.

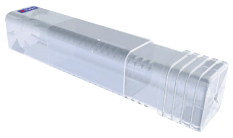
Fresado y ranurado de aluminio.

Frsatura e scanalatura di alluminio.

KLM — Aluminium alloys / Aleaciones de aluminio / Leghe di alluminio

P — Composite Plastics / Composites plásticos / Plastiche composite

8236141	EAN	Ø	d2	L	l2	QTY	PCB
82361410100	3221910822361	1	3	39	3	1	1
82361410150	3221910822378	1.5	3	39	5	1	1
82361410200	3221910822385	2	3	39	7	1	1
82361410250	3221910822392	2.5	3	39	7	1	1
82361410300	3221910822408	3	3	39	9	1	1
82361410400	3221910822415	4	4	51	12	1	1
82361410500	3221910822422	5	5	51	16	1	1
82361410600	3221910822439	6	6	64	19	1	1
82361410700	3221910822446	7	8	64	19	1	1
82361410800	3221910822453	8	8	64	21	1	1
82361410900	3221910822460	9	10	70	22	1	1
82361411000	3221910822477	10	10	70	22	1	1
82361411200	3221910822484	12	12	76	25	1	1
82361411400	3221910822491	14	14	89	30	1	1
82361411600	3221910822507	16	16	89	32	1	1
82361411800	3221910822514	18	18	102	35	1	1
82361412000	3221910822521	20	20	102	38	1	1
82361412200	3221910822538	22	22	102	38	1	1
82361412500	3221910822545	25	25	102	38	1	1



SOLID CARBIDE END MILLS, DIN, Z2 CHAMFER EDGE PROTECT.

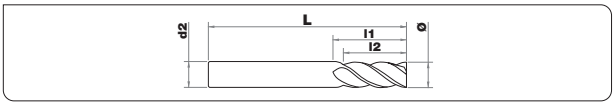
FRESA METAL DURO Z2, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD Z2 CON SMUSSI DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | Ch



Z2 | 30° | e8



Universal application.

Fresado y ranurado, uso universal.

Fresatura e scanalatura polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236021	EAN	Ø	d2	L	l2	QTY	PCB
82360210100	3221910793975	1	3	39	3	1	1
82360210150	3221910793982	1.5	3	39	5	1	1
82360210200	3221910793999	2	3	39	7	1	1
82360210250	3221910794002	2.5	3	39	7	1	1
82360210300	3221910794019	3	3	39	9	1	1
82360210350	3221910794026	3.5	4	51	12	1	1
82360210400	3221910794033	4	4	51	14	1	1
82360210450	3221910794040	4.5	5	51	14	1	1
82360210500	3221910794057	5	5	51	16	1	1
82360210600	3221910794064	6	6	64	19	1	1
82360210700	3221910794071	7	8	64	19	1	1
82360210800	3221910794088	8	8	64	21	1	1
82360210900	3221910794095	9	10	70	22	1	1
82360211000	3221910794101	10	10	70	22	1	1
82360211100	3221910794118	11	11	70	25	1	1
82360211200	3221910794125	12	12	76	25	1	1
82360211400	3221910794132	14	14	89	30	1	1
82360211600	3221910794149	16	16	89	32	1	1
82360211800	3221910794156	18	18	102	35	1	1
82360212000	3221910794163	20	20	102	38	1	1
82360212200	3221910794170	22	22	102	38	1	1
82360212500	3221910794187	25	25	102	38	1	1



SOLID CARBIDE HARDCUT END MILLS, DIN, Z2 CHAMFER EDGE PROTECT.

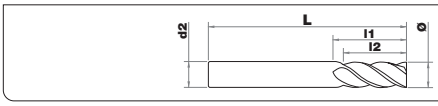
FRESA METAL DURO HARDCUT Z2, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD HARDCUT Z2 CON SMUSSI DI PROTEZIONE.

HM CARB | HARD CUT COATED | TIVOLY NORM | Ch



Z2 | 30° | e8



Universal application.

Fresado y ranurado, uso universal.

Fresatura e scanalatura polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

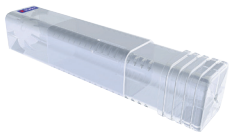
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236151	EAN	Ø	d2	L	l2	QTY	PCB
82361510100	3221910822552	1	3	39	3	1	1
82361510150	3221910822569	1.5	3	39	5	1	1
82361510200	3221910822576	2	3	39	7	1	1
82361510250	3221910822583	2.5	3	39	7	1	1
82361510300	3221910822590	3	3	39	9	1	1
82361510350	3221910822606	3.5	4	51	12	1	1
82361510400	3221910822613	4	4	51	14	1	1
82361510450	3221910822620	4.5	5	51	14	1	1
82361510500	3221910822637	5	5	51	16	1	1
82361510600	3221910822644	6	6	64	19	1	1
82361510700	3221910822651	7	8	64	19	1	1
82361510800	3221910822668	8	8	64	21	1	1
82361510900	3221910822675	9	10	70	22	1	1
82361511000	3221910822682	10	10	70	22	1	1
82361511100	3221910822699	11	11	70	25	1	1
82361511200	3221910822705	12	12	76	25	1	1
82361511400	3221910822712	14	14	89	30	1	1
82361511600	3221910822729	16	16	89	32	1	1
82361511800	3221910822736	18	18	102	35	1	1
82361512000	3221910822743	20	20	102	38	1	1
82361512200	3221910822750	22	22	102	38	1	1
82361512500	3221910822767	25	25	102	38	1	1



SOLID CARBIDE END MILLS, DIN, Z2 SHORT. CHAMFER EDGE PROTECT.

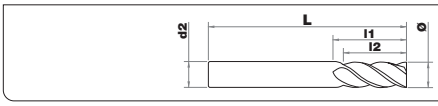
FRESA METAL DURO , DIN, Z2, CORTA.

FRESA IN MD DIN Z2 CORTA. SMUSSO DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | DIN 6527K | Ch



Z2 | 30° | e8



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236451	EAN	Ø	d2	L	l2	QTY	PCB
82364510100	3221910872649	1	3	38	3	1	1
82364510150	3221910872656	1.5	3	38	3	1	1
82364510200	3221910872663	2	3	38	3	1	1
82364510250	3221910872670	2.5	3	38	3	1	1
82364510300	3221910872687	3	3	38	4	1	1
82364510350	3221910872694	3.5	6	50	4	1	1
82364510400	3221910872700	4	6	54	5	1	1
82364510450	3221910872717	4.5	6	54	5	1	1
82364510500	3221910872724	5	6	54	6	1	1
82364510600	3221910872731	6	6	54	7	1	1
82364510700	3221910872748	7	8	58	8	1	1
82364510800	3221910872755	8	8	58	9	1	1
82364510900	3221910872762	9	10	66	10	1	1
82364511000	3221910872779	10	10	66	11	1	1
82364511200	3221910872786	12	12	73	12	1	1
82364511400	3221910872793	14	14	75	14	1	1
82364511600	3221910872809	16	16	82	16	1	1
82364511800	3221910872816	18	18	84	18	1	1
82364512000	3221910872823	20	20	92	20	1	1



SOLID CARBIDE ALCRONA END MILLS, DIN, Z2 SHORT. CHAMFER EDGE PROTECT.

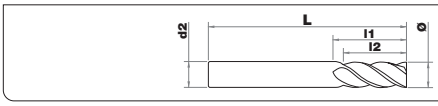
FRESA METAL DURO ALCRONA, DIN, Z2, CORTA.

FRESA IN MD DIN Z2 CORTA. SMUSSO DI PROTEZIONE.

HM CARB | AICRONA® COATED | DIN 6527K | Ch



Z2 | 30° | e8



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

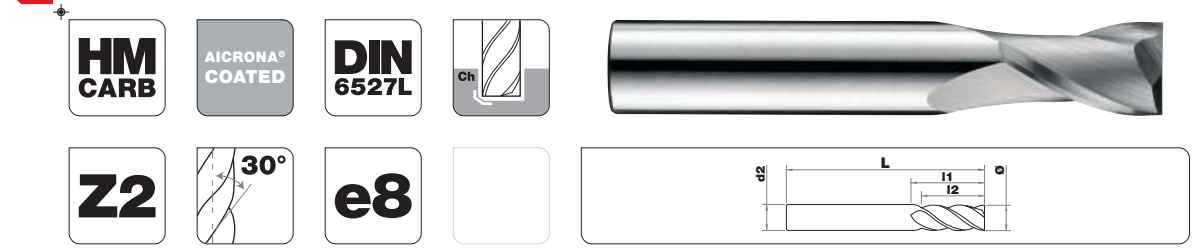
8236461	EAN	Ø	d2	L	l2	QTY	PCB
82364610100	3221910872830	1	3	38	3	1	1
82364610150	3221910872847	1.5	3	38	3	1	1
82364610200	3221910872854	2	3	38	3	1	1
82364610250	3221910872861	2.5	3	38	3	1	1
82364610300	3221910872878	3	3	38	4	1	1
82364610350	3221910872885	3.5	6	50	4	1	1
82364610400	3221910872892	4	6	54	5	1	1
82364610450	3221910872908	4.5	6	54	5	1	1
82364610500	3221910872915	5	6	54	6	1	1
82364610600	3221910872922	6	6	54	7	1	1
82364610700	3221910872939	7	8	58	8	1	1
82364610800	3221910872946	8	8	58	9	1	1
82364610900	3221910872953	9	10	66	10	1	1
82364611000	3221910872960	10	10	66	11	1	1
82364611200	3221910872977	12	12	73	12	1	1
82364611400	3221910872984	14	14	75	14	1	1
82364611600	3221910872991	16	16	82	16	1	1
82364611800	3221910873004	18	18	84	18	1	1
82364612000	3221910873011	20	20	92	20	1	1



SOLID CARBIDE END MILLS, DIN, Z2, LONG. CHAMFER EDGE PROTECT.

FRESA METAL DURO , DIN, Z2, LARGA.

FRESA IN MD DIN Z2 CORTA. SMUSSO DI PROTEZIONE.



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236511	EAN	Ø	d2	L	l2	QTY	PCB
82365110200	3221910873783	2	3	38	6	1	1
82365110250	3221910873790	2.5	3	38	7	1	1
82365110300	3221910873806	3	3	38	7	1	1
82365110350	3221910873813	3.5	6	57	7	1	1
82365110400	3221910873820	4	6	57	8	1	1
82365110450	3221910873837	4.5	6	57	8	1	1
82365110500	3221910873844	5	6	57	10	1	1
82365110600	3221910873851	6	6	57	10	1	1
82365110700	3221910873868	7	8	63	13	1	1
82365110800	3221910873875	8	8	63	16	1	1
82365110900	3221910873882	9	10	72	16	1	1
82365111000	3221910873899	10	10	72	19	1	1
82365111200	3221910873905	12	12	83	22	1	1
82365111400	3221910873912	14	14	83	22	1	1
82365111600	3221910873929	16	16	92	26	1	1
82365111800	3221910873936	18	18	92	26	1	1
82365112000	3221910873943	20	20	104	32	1	1



SOLID CARBIDE ALCRONA END MILLS, DIN, Z2, LONG. CHAMFER EDGE PROTECT.

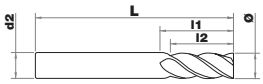
FRESA METAL DURO ALCRONA, DIN, Z2, LARGA.

FRESA IN MD DIN Z2 CORTA. SMUSSO DI PROTEZIONE.

HM CARB | AICRONA® COATED | DIN 6527L | Ch



Z2 | 30° | e8



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

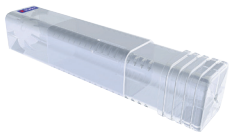
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236521	EAN	Ø	d2	L	l2	QTY	PCB
82365210200	3221910873950	2	3	38	6	1	1
82365210250	3221910873967	2.5	3	38	7	1	1
82365210300	3221910873974	3	3	38	7	1	1
82365210350	3221910873981	3.5	6	57	7	1	1
82365210400	3221910873998	4	6	57	8	1	1
82365210450	3221910874001	4.5	6	57	8	1	1
82365210500	3221910874018	5	6	57	10	1	1
82365210600	3221910874025	6	6	57	10	1	1
82365210700	3221910874032	7	8	63	13	1	1
82365210800	3221910874049	8	8	63	16	1	1
82365210900	3221910874056	9	10	72	16	1	1
82365211000	3221910874063	10	10	72	19	1	1
82365211200	3221910874070	12	12	83	22	1	1
82365211400	3221910874087	14	14	83	22	1	1
82365211600	3221910874094	16	16	92	26	1	1
82365211800	3221910874100	18	18	92	26	1	1
82365212000	3221910874117	20	20	104	32	1	1



SOLID CARBI. , END MILLS, DIN, Z,2 EXTRA LONG. CHAMFER EDGE PROT.

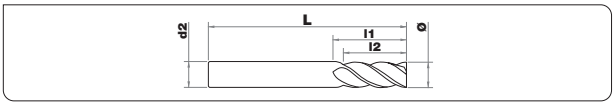
FRESA METAL DURO , DIN, Z2, EXTRA-LARGA.

FRESA IN MD Z2 EXTRA-LUNGA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | Ch



Z2 | 30° | e8



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

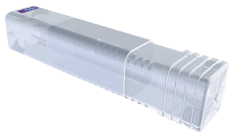
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236571	EAN	Ø	d2	L	l2	QTY	PCB
82365710300	3221910874803	3	3	75	25	1	1
82365710400	3221910874810	4	4	75	25	1	1
82365710500	3221910874827	5	5	75	25	1	1
82365710600	3221910874834	6	6	75	25	1	1
82365710800	3221910874841	8	8	75	25	1	1
82365711000	3221910874858	10	10	100	45	1	1
82365711200	3221910874865	12	12	150	75	1	1
82365711400	3221910874872	14	14	150	75	1	1
82365711600	3221910874889	16	16	150	75	1	1
82365711800	3221910874896	18	18	150	75	1	1
82365712000	3221910874902	20	20	150	75	1	1



SOLID CARBI. ALCRONA, END MILLS, DIN, Z,2 EXTRA LONG. CHAMFER EDGE PROT.

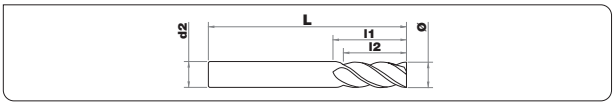
FRESA METAL DURO ALCRONA, DIN, Z2, EXTRA-LARGA.

FRESA IN MD Z2 EXTRA-LUNGA.

HM CARB | AICRONA® COATED | TIVOLY NORM | Ch



Z2 | 30° | e8



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

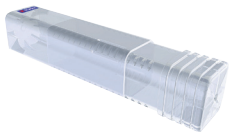
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236581	EAN	Ø	d2	L	l2	QTY	PCB
82365810300	3221910874919	3	3	75	25	1	1
82365810400	3221910874926	4	4	75	25	1	1
82365810500	3221910874933	5	5	75	25	1	1
82365810600	3221910874940	6	6	75	25	1	1
82365810800	3221910874957	8	8	75	25	1	1
82365811000	3221910874964	10	10	100	45	1	1
82365811200	3221910874971	12	12	150	75	1	1
82365811400	3221910874988	14	14	150	75	1	1
82365811600	3221910874995	16	16	150	75	1	1
82365811800	3221910875008	18	18	150	75	1	1
82365812000	3221910875015	20	20	150	75	1	1



SOLID CARBIDE END MILLS, 25°, Z3, CHAMFER EDGE PROTECT.

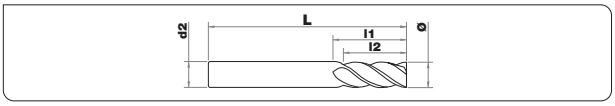
FRESA METAL DURO 25°, Z3.

FRESA IN MD 25°. Z3. SMUSSO DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | Ch



Z3 | 25° | h9



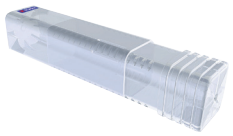
Designed for plastics and woods.

Diseñado para plásticos y maderas.

Concepito per i materiali plastici e il legno.

P Composite Plastics
Composites plásticos
Plastiche composite

8236681	EAN	Ø	d2	L	l2	QTY	PCB
82366810200	3221910875435	2	2	39	8	1	1
82366810300	3221910875442	3	3	39	10	1	1
82366810400	3221910875459	4	4	50	12	1	1
82366810600	3221910875466	6	6	60	20	1	1
82366810800	3221910875473	8	8	60	22	1	1
82366811000	3221910875480	10	10	72	30	1	1
82366811200	3221910875497	12	12	76	32	1	1



SOLID CARBIDE ULTRACUT END MILLS, Z3. CHAMFER EDGE PROTECTION.

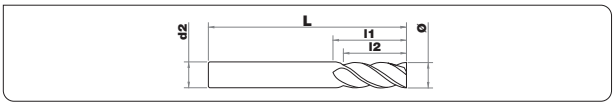
FRESA METAL DURO ULTRACUT, Z3. CHAFLÁN DE PROTECCIÓN.

FRESA IN MD ULTRACUT. Z3 CON SMUSSI DI PROTEZIONE.

HM CARB | ULTRA CUT COATED | TIVOLY NORM | Ch



Z3 | 60°



Designed for high alloyed steels and special alloys. High performance.

Diseñado para aceros muy aleados y aleaciones especiales.

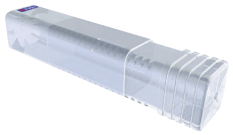
Concepito per gli acciai fortemente legati e leghe speciali.

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

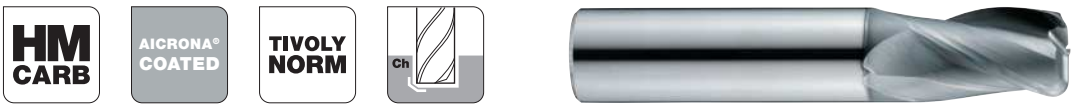
8236211	EAN	Ø	d2	L	l2	QTY	PCB
82362110300	3221910823658	3	3	39	14	1	1
82362110400	3221910823665	4	4	51	16	1	1
82362110500	3221910823672	5	5	51	16	1	1
82362110600	3221910823689	6	6	64	19	1	1
82362110800	3221910823696	8	8	64	21	1	1
82362111000	3221910823702	10	10	70	25	1	1
82362111200	3221910823719	12	12	76	25	1	1
82362111600	3221910823726	16	16	89	32	1	1
82362112000	3221910823733	20	20	102	38	1	1



SOLID CARBIDE ALCRONA END MILLS Z3 CORNER RADIUS. RAKE ANGLE 16°.

FRESA MD ALCRONA Z3 CON RADIO. CORTE A 16°.

FRESA IN MD ALCRONA Z3 CON RAGGIO, TAGLIO A 16° .



Universal application.

Fresado y ranurado, uso universal.

Fresatura e scanalatura polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

Ti Titanium alloys
Aleaciones de titanio
Leghe di titanio

8236441	EAN	Ø	d2	L	l2	R	QTY	PCB
8236441020003	3221910858926	2	3	39	7	0.3	1	1
8236441020005	3221910858933	2	3	39	7	0.5	1	1
8236441030003	3221910858940	3	3	39	7	0.3	1	1
8236441030005	3221910858957	3	3	39	7	0.5	1	1
8236441040003	3221910858964	4	4	51	14	0.3	1	1
8236441040005	3221910858971	4	4	51	14	0.5	1	1
8236441050003	3221910858988	5	4	51	16	0.3	1	1
8236441050005	3221910858995	5	4	51	16	0.5	1	1
8236441060005	3221910859008	6	6	64	19	0.5	1	1
8236441060010	3221910859015	6	6	64	19	1	1	1
8236441060015	3221910859022	6	6	64	19	1.5	1	1
8236441080005	3221910859039	8	8	64	21	0.5	1	1
8236441080010	3221910859046	8	8	64	21	1	1	1
8236441080015	3221910859053	8	8	64	21	1.5	1	1
8236441100005	3221910859060	10	10	70	22	0.5	1	1
8236441100010	3221910859077	10	10	70	22	1	1	1
8236441100015	3221910859084	10	10	70	22	1.5	1	1
8236441100020	3221910859091	10	10	70	22	2	1	1
8236441120005	3221910859107	12	12	76	25	0.5	1	1
8236441120010	3221910859114	12	12	76	25	1	1	1
8236441120015	3221910859121	12	12	76	25	1.5	1	1
8236441120020	3221910859138	12	12	76	25	2	1	1
8236441140005	3221910859145	14	14	89	30	0.5	1	1
8236441140010	3221910859152	14	14	89	30	1	1	1
8236441140015	3221910859169	14	14	89	30	1.5	1	1
8236441140020	3221910859176	14	14	89	30	2	1	1
8236441160020	3221910859183	16	16	89	32	2	1	1
8236441160025	3221910859190	16	16	89	32	2.5	1	1
8236441160030	3221910859206	16	16	89	32	3	1	1
8236441160040	3221910859213	16	16	89	32	4	1	1
8236441180020	3221910859220	18	18	102	35	2	1	1
8236441180025	3221910859237	18	18	102	35	2.5	1	1
8236441180030	3221910859244	18	18	102	35	3	1	1
8236441180040	3221910859251	18	18	102	35	4	1	1
8236441200020	3221910859268	20	20	102	38	2	1	1
8236441200025	3221910859275	20	20	102	38	2.5	1	1
8236441200030	3221910859282	20	20	102	38	3	1	1
8236441200040	3221910859299	20	20	102	38	4	1	1



SOLID CARBIDE END MILLS, Z3. CHAMFER EDGE PROTECTION.

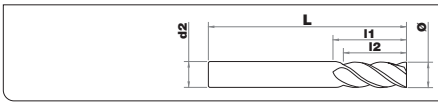
FRESA METAL DURO Z3, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD. Z3 CON SMUSSI DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | Ch



Z3 | 30° | e8



Universal application.

Fresado y ranurado, uso universal.

Fresatura e scanalatura polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P Composite Plastics
Composites plásticos
Plastiche composite

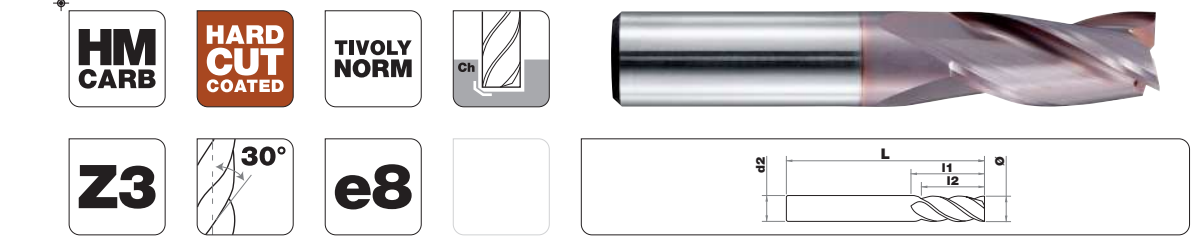
8236031	EAN	Ø	d2	L	l2	QTY	PCB
82360310100	3221910794194	1	3	39	3	1	1
82360310150	3221910794200	1.5	3	39	5	1	1
82360310200	3221910794217	2	3	39	7	1	1
82360310250	3221910794224	2.5	3	39	7	1	1
82360310300	3221910794231	3	3	39	9	1	1
82360310350	3221910794248	3.5	4	51	12	1	1
82360310400	3221910794255	4	4	51	14	1	1
82360310450	3221910794262	4.5	5	51	14	1	1
82360310500	3221910794279	5	5	51	16	1	1
82360310600	3221910794286	6	6	64	19	1	1
82360310700	3221910794293	7	8	64	19	1	1
82360310800	3221910794309	8	8	64	21	1	1
82360310900	3221910794316	9	10	70	22	1	1
82360311000	3221910794323	10	10	70	22	1	1
82360311100	3221910794330	11	11	70	25	1	1
82360311200	3221910794347	12	12	76	25	1	1
82360311400	3221910794354	14	14	89	30	1	1
82360311600	3221910794361	16	16	89	32	1	1
82360311800	3221910794378	18	18	102	35	1	1
82360312000	3221910794385	20	20	102	38	1	1
82360312200	3221910794392	22	22	102	38	1	1
82360312500	3221910794408	25	25	102	38	1	1



SOLID CARBIDE HARDCUT END MILLS, Z3. CHAMFER EDGE PROTECTION.

FRESA METAL DURO HARDCUT Z3, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD HARDCUT Z3 CON SMUSSI DI PROTEZIONE.



Universal application.

Fresado y ranurado, uso universal.

Fresatura e scanalatura polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

P Composite Plastics
Composites plásticos
Plastiche composite

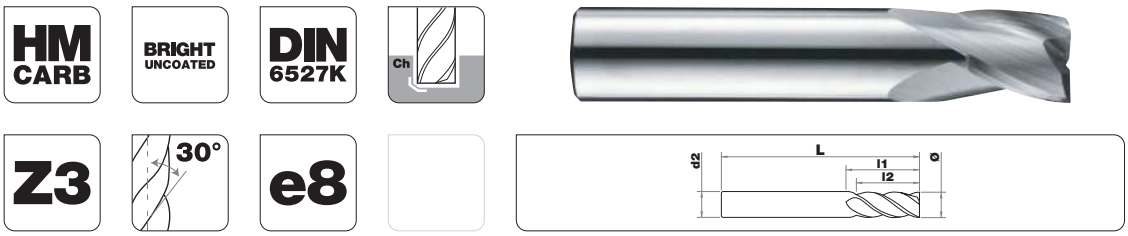
8236161	EAN	Ø	d2	L	l2	QTY	PCB
82361610100	3221910822774	1	3	39	3	1	1
82361610150	3221910822781	1.5	3	39	5	1	1
82361610200	3221910822798	2	3	39	7	1	1
82361610250	3221910822804	2.5	3	39	7	1	1
82361610300	3221910822811	3	3	39	9	1	1
82361610350	3221910822828	3.5	4	51	12	1	1
82361610400	3221910822835	4	4	51	14	1	1
82361610450	3221910822842	4.5	5	51	14	1	1
82361610500	3221910822859	5	5	51	16	1	1
82361610600	3221910822866	6	6	64	19	1	1
82361610700	3221910822873	7	8	64	19	1	1
82361610800	3221910822880	8	8	64	21	1	1
82361610900	3221910822897	9	10	70	22	1	1
82361611000	3221910822903	10	10	70	22	1	1
82361611100	3221910822910	11	11	70	25	1	1
82361611200	3221910822927	12	12	76	25	1	1
82361611400	3221910822934	14	14	89	30	1	1
82361611600	3221910822941	16	16	89	32	1	1
82361611800	3221910822958	18	18	102	35	1	1
82361612000	3221910822965	20	20	102	38	1	1
82361612200	3221910822972	22	22	102	38	1	1
82361612500	3221910822989	25	25	102	38	1	1



SOLID CARBIDE END MILLS, DIN, Z3, SHORT SERIES. CHAMFER EDGE PROTECT.

FRESA METAL DURO , DIN, Z3, CORTA, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z3 CORTA, SMUSSI DI PROTEZIONE.



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236471	EAN	Ø	d2	L	l2	QTY	PCB
82364710100	3221910873028	1	3	38	3	1	1
82364710150	3221910873035	1.5	3	38	3	1	1
82364710200	3221910873042	2	3	38	3	1	1
82364710250	3221910873059	2.5	3	38	3	1	1
82364710300	3221910873066	3	3	38	4	1	1
82364710350	3221910873073	3.5	6	50	4	1	1
82364710400	3221910873080	4	6	54	5	1	1
82364710450	3221910873097	4.5	6	54	5	1	1
82364710500	3221910873103	5	6	54	6	1	1
82364710600	3221910873110	6	6	54	7	1	1
82364710700	3221910873127	7	8	58	8	1	1
82364710800	3221910873134	8	8	58	9	1	1
82364710900	3221910873141	9	10	66	10	1	1
82364711000	3221910873158	10	10	66	11	1	1
82364711200	3221910873165	12	12	73	12	1	1
82364711400	3221910873172	14	14	75	14	1	1
82364711600	3221910873189	16	16	82	16	1	1
82364711800	3221910873196	18	18	84	18	1	1
82364712000	3221910873202	20	20	92	20	1	1



SOLID CARBIDE END MILLS, DIN, Z3, SHORT SERIES. CHAMFER EDGE PROTECT.

FRESA METAL DURO ALCRONA, DIN, Z3, CORTA, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z3 CORTA, SMUSSI DI PROTEZIONE.



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236481	EAN	Ø	d2	L	l2	QTY	PCB
82364810100	3221910873219	1	3	38	3	1	1
82364810150	3221910873226	1.5	3	38	3	1	1
82364810200	3221910873233	2	3	38	3	1	1
82364810250	3221910873240	2.5	3	38	3	1	1
82364810300	3221910873257	3	3	38	4	1	1
82364810350	3221910873264	3.5	6	50	4	1	1
82364810400	3221910873271	4	6	54	5	1	1
82364810450	3221910873288	4.5	6	54	5	1	1
82364810500	3221910873295	5	6	54	6	1	1
82364810600	3221910873301	6	6	54	7	1	1
82364810700	3221910873318	7	8	58	8	1	1
82364810800	3221910873325	8	8	58	9	1	1
82364810900	3221910873332	9	10	66	10	1	1
82364811000	3221910873349	10	10	66	11	1	1
82364811200	3221910873356	12	12	73	12	1	1
82364811400	3221910873363	14	14	75	14	1	1
82364811600	3221910873370	16	16	82	16	1	1
82364811800	3221910873387	18	18	84	18	1	1
82364812000	3221910873394	20	20	92	20	1	1



SOLID CARBIDE END MILLS, DIN, Z3, LONG SERIES. CHAMFER EDGE PROTECT.

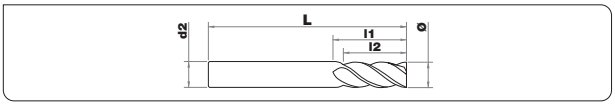
FRESA METAL DURO , DIN, Z3, LARGA, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z3 CORTA, SMUSSI DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | DIN 6527L | Ch



Z3 | 30°



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

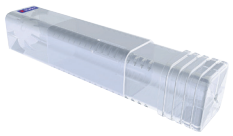
CD — Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH — Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ — Cast iron
Fundiciones
Ghisa

KLM — Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236531	EAN	Ø	d2	L	l2	QTY	PCB
82365310200	3221910874124	2	3	38	6	1	1
82365310250	3221910874131	2.5	3	38	7	1	1
82365310300	3221910874148	3	3	38	7	1	1
82365310350	3221910874155	3.5	6	57	7	1	1
82365310400	3221910874162	4	6	57	8	1	1
82365310450	3221910874179	4.5	6	57	8	1	1
82365310500	3221910874186	5	6	57	10	1	1
82365310600	3221910874193	6	6	57	10	1	1
82365310700	3221910874209	7	8	63	13	1	1
82365310800	3221910874216	8	8	63	16	1	1
82365310900	3221910874223	9	10	72	16	1	1
82365311000	3221910874230	10	10	72	19	1	1
82365311200	3221910874247	12	12	83	22	1	1
82365311400	3221910874254	14	14	83	22	1	1
82365311600	3221910874261	16	16	92	26	1	1
82365311800	3221910874278	18	18	92	26	1	1
82365312000	3221910874285	20	20	104	32	1	1



SOLID CARBIDE END MILLS, DIN, Z3, LONG SERIES. CHAMFER EDGE PROTECT.

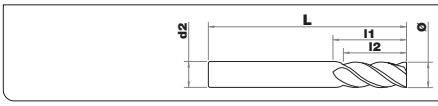
FRESA METAL DURO ALCRONA, DIN, Z3, LARGA, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z3 CORTA, SMUSSI DI PROTEZIONE.

HM CARB | AICRONA® COATED | DIN 6527L | Ch



Z3 | 30°



#04

Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

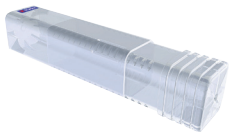
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236541	EAN	Ø	d2	L	l2	QTY	PCB
82365410200	3221910874292	2	3	38	6	1	1
82365410250	3221910874308	2.5	3	38	7	1	1
82365410300	3221910874315	3	3	38	7	1	1
82365410350	3221910874322	3.5	6	57	7	1	1
82365410400	3221910874339	4	6	57	8	1	1
82365410450	3221910874346	4.5	6	57	8	1	1
82365410500	3221910874353	5	6	57	10	1	1
82365410600	3221910874360	6	6	57	10	1	1
82365410700	3221910874377	7	8	63	13	1	1
82365410800	3221910874384	8	8	63	16	1	1
82365410900	3221910874391	9	10	72	16	1	1
82365411000	3221910874407	10	10	72	19	1	1
82365411200	3221910874414	12	12	83	22	1	1
82365411400	3221910874421	14	14	83	22	1	1
82365411600	3221910874438	16	16	92	26	1	1
82365411800	3221910874445	18	18	92	26	1	1
82365412000	3221910874452	20	20	104	32	1	1



SOLID CARBIDE END MILLS,DIN, Z3 EXTRA LONG SERIES. CHAMFER EDGE PROTECT.

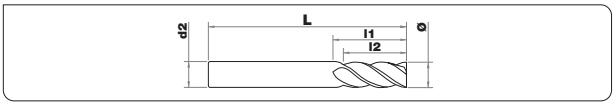
FRESA METAL DURO , DIN, Z3, EXTRA-LARGA. CHAFLÁN DE PROTECCIÓN.

FRESA IN MD Z3 EXTRA-LUNGA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | Ch



Z3 | 30°



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

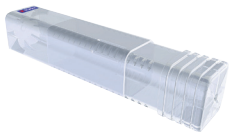
CD
Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ
Cast iron
Fundiciones
Ghisa

KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236101	EAN	Ø	d2	L	l2	QTY	PCB
82361010300075	3221910795436	3	3	75	25	1	1
82361010400075	3221910795443	4	4	75	25	1	1
82361010500075	3221910795450	5	5	75	25	1	1
82361010600075	3221910795467	6	6	75	25	1	1
82361010800075	3221910795474	8	8	75	25	1	1
82361011000100	3221910795481	10	10	100	38	1	1
82361011200150	3221910795504	12	12	150	75	1	1
82361011400150	3221910795511	14	14	150	75	1	1
82361011600150	3221910795528	16	16	150	75	1	1
82361011800150	3221910795535	18	18	150	75	1	1
82361012000150	3221910795542	20	20	150	75	1	1



SOLID CARBIDE END MILLS,DIN, Z3 EXTRA LONG SERIES. CHAMFER EDGE PROTECT.

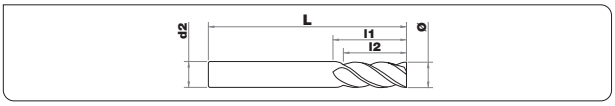
FRESA METAL DURO ALCRONA, DIN, Z3, EXTRA-LARGA. CHAFLÁN DE PROTECCIÓN.

FRESA IN MD Z3 EXTRA-LUNGA.

HM CARB | AICRONA® COATED | TIVOLY NORM | Ch



Z3 | 30°



#04

Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

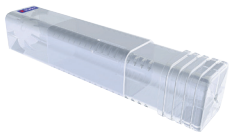
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236601	EAN	Ø	d2	L	l2	QTY	PCB
82366010300	3221910875022	3	3	75	25	1	1
82366010400	3221910875039	4	4	75	25	1	1
82366010500	3221910875046	5	5	75	25	1	1
82366010600	3221910875053	6	6	75	25	1	1
82366010800	3221910875060	8	8	75	25	1	1
82366011000	3221910875077	10	10	100	38	1	1
82366011200	3221910875084	12	12	150	75	1	1
82366011400	3221910875091	14	14	150	75	1	1
82366011600	3221910875107	16	16	150	75	1	1
82366011800	3221910875114	18	18	150	75	1	1
82366012000	3221910875121	20	20	150	75	1	1



SOLID CARBIDE ALCRONA END MILLS Z4 CORNER RADIUS.

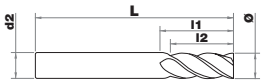
FRESA METAL DURO ALCRONA Z4 CON RADIO.

FRESA IN MD ALCRONA Z4 CON RAGGIO.

HM CARB | AICRONA® COATED | TIVOLY NORM | R



Z4 | 40° | h10



Better chip evacuation.

Mayor evacuación de viruta.

Efficace rimozione dei trucioli.

CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

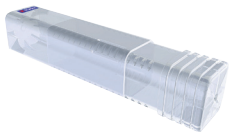
FGH
Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ
Cast iron
Fundiciones
Ghisa

KLM
Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

Ti
Titanium alloys
Aleaciones de titanio
Leghe di titanio

8236401	EAN	Ø	d2	L	l2	R	QTY	PCB
8236401060002	3221910858643	6	6	64	18	0,2	1	1
8236401060005	3221910858650	6	6	64	19	0,5	1	1
8236401080005	3221910858667	8	8	64	21	0.5	1	1
8236401080010	3221910858674	8	8	61	21	1	1	1
8236401100008	3221910858681	10	10	70	22	0.8	1	1
8236401100010	3221910858698	10	10	70	22	1	1	1
8236401120008	3221910858704	12	12	76	25	0.8	1	1
8236401120010	3221910858711	12	12	76	25	1	1	1
8236401160020	3221910858728	16	16	89	32	2	1	1
8236401160025	3221910858735	16	16	89	32	2.5	1	1
8236401160040	3221910858742	16	16	89	32	4	1	1
8236401200020	3221910858759	20	20	102	38	2	1	1
8236401200025	3221910858766	20	20	102	38	2.5	1	1
8236401200040	3221910858773	20	20	102	38	4	1	1

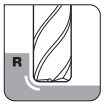


SOLID CARBIDE ALCRONA, END MILLS, Z4, CORNER RADIUS, TWIN DEPTH FLUTE.

FRESA CARBURO ALCRONA, Z4, CON RADIO CON ROPEVIRUTAS.

FRESA IN MD ALCRONA Z4 CON RAGGIO E GOLE PROFONDE.

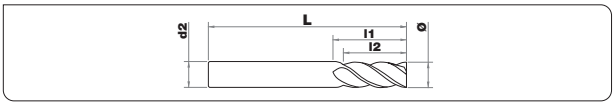
HM CARB | AICRONA® COATED | TIVOLY NORM





Z4 | 45° | h10





#04

Better chip evacuation, avoid resonance and vibrations.

Gran evacuación de viruta y reducción del fenómeno de resonancia.

Efficace rimozione dei trucioli e riduzione del fenomeno di risonanza.

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

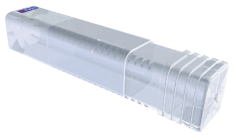
FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

Ti Titanium alloys
Aleaciones de titanio
Leghe di titanio

8236421	EAN	Ø	d2	L	l2	R	QTY	PCB
8236421080000	3221912046932	8	8	64	21	0	1	1
8236421080005	3221910858520	8	8	64	21	0.5	1	1
8236421080010	3221910858537	8	8	64	21	1	1	1
8236421100000	3221912066527	10	10	70	22	0	1	1
8236421100008	3221910858544	10	10	70	22	0.8	1	1
8236421100010	3221910858551	10	10	70	22	1	1	1
8236421120000	3221912066534	12	12	76	25	0	1	1
8236421120008	3221910858568	12	12	76	25	0.8	1	1
8236421120010	3221910858575	12	12	76	25	1	1	1
8236421160000	3221912066541	16	16	89	32	0	1	1
8236421160020	3221910858582	16	16	89	32	2	1	1
8236421160025	3221910858599	16	16	89	32	2.5	1	1
8236421160040	3221910858605	16	16	89	32	4	1	1
8236421200000	3221912066558	20	20	102	38	0	1	1
8236421200020	3221910858612	20	20	102	38	2	1	1
8236421200025	3221910858629	20	20	102	38	2.5	1	1
8236421200040	3221910858636	20	20	102	38	4	1	1



SOLID CARBIDE END MILLS Z4 CHAMFER EDGE PROTECTION.

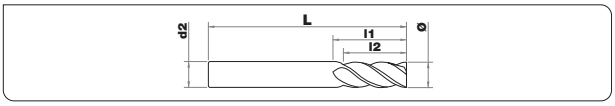
FRESA METAL DURO Z4, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD Z4 CON SMUSSI DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | Ch



Z4 | 30° | h9



Universal application.

Fresado universal.

Fresatura polivalente .

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236041	EAN	Ø	d2	L	l2	QTY	PCB
82360410100	3221910794446	1	3	39	3	1	1
82360410150	3221910794453	1.5	3	39	5	1	1
82360410200	3221910794460	2	3	39	7	1	1
82360410250	3221910794477	2.5	3	39	7	1	1
82360410300	3221910794484	3	3	39	9	1	1
82360410350	3221910794491	3.5	4	51	12	1	1
82360410400	3221910794507	4	4	51	14	1	1
82360410450	3221910794514	4.5	5	51	14	1	1
82360410500	3221910794521	5	5	51	16	1	1
82360410600	3221910794538	6	6	64	19	1	1
82360410700	3221910794545	7	8	64	19	1	1
82360410800	3221910794552	8	8	64	21	1	1
82360410900	3221910794569	9	10	70	22	1	1
82360411000	3221910794576	10	10	70	22	1	1
82360411100	3221910794583	11	11	70	25	1	1
82360411200	3221910794590	12	12	76	25	1	1
82360411400	3221910794606	14	14	89	30	1	1
82360411600	3221910794613	16	16	89	32	1	1
82360411800	3221910794620	18	18	102	35	1	1
82360412000	3221910794637	20	20	102	38	1	1
82360412200	3221910794644	22	22	102	38	1	1
82360412500	3221910794651	25	25	102	38	1	1



SOLID CARBIDE HARDCUT END MILLS Z4 CHAMFER EDGE PROTECTION.

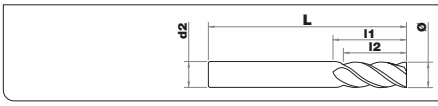
FRESA METAL DURO HARDCUT Z4, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD HARDCUT Z4 CON SMUSSI DI PROTEZIONE.

HM CARB | HARD CUT COATED | TIVOLY NORM | Ch



Z4 | 30° | h9



Universal application.

Fresado universal.

Fresatura polivalente .

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236171	EAN	Ø	d2	L	l2	QTY	PCB
82361710100	3221910822996	1	3	39	3	1	1
82361710150	3221910823009	1.5	3	39	5	1	1
82361710200	3221910823016	2	3	39	7	1	1
82361710250	3221910823023	2.5	3	39	7	1	1
82361710300	3221910823030	3	3	39	9	1	1
82361710350	3221910823047	3.5	4	51	12	1	1
82361710400	3221910823054	4	4	51	14	1	1
82361710450	3221910823061	4.5	5	51	14	1	1
82361710500	3221910823078	5	5	51	16	1	1
82361710600	3221910823085	6	6	64	19	1	1
82361710700	3221910823092	7	8	64	19	1	1
82361710800	3221910823108	8	8	64	21	1	1
82361710900	3221910823115	9	10	70	22	1	1
82361711000	3221910823122	10	10	70	22	1	1
82361711100	3221910823139	11	11	70	25	1	1
82361711200	3221910823146	12	12	76	25	1	1
82361711400	3221910823153	14	14	89	30	1	1
82361711600	3221910823160	16	16	89	32	1	1
82361711800	3221910823177	18	18	102	35	1	1
82361712000	3221910823184	20	20	102	38	1	1
82361712200	3221910823191	22	22	102	38	1	1
82361712500	3221910823207	25	25	102	38	1	1



SOLID CARB. , END MILLS, DIN, Z4, SHORT S. CHAMFER EDGE PROTECT.

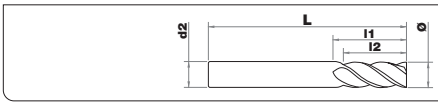
FRESA CARBURO , DIN, Z4, CORTA, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z4, CORTA, SMUSSI DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | DIN 6527K | Ch



Z4 | 30°



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

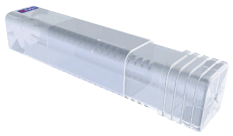
CD — Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH — Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ — Cast iron
Fundiciones
Ghisa

KLM — Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

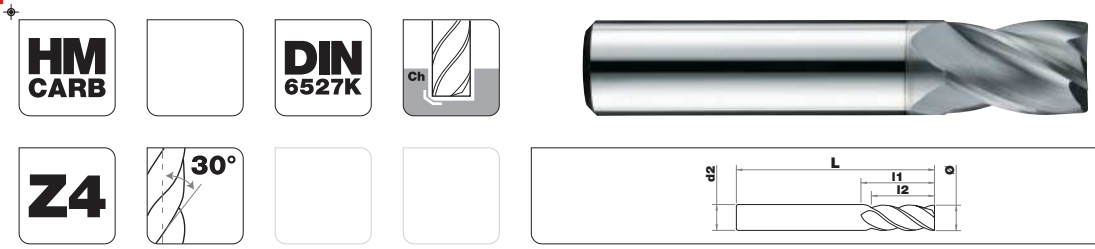
8236491	EAN	Ø	d2	L	l2	QTY	PCB
82364910100	3221910873400	1	3	38	3	1	1
82364910150	3221910873417	1.5	3	38	4	1	1
82364910200	3221910873424	2	3	38	4	1	1
82364910250	3221910873431	2.5	3	38	4	1	1
82364910300	3221910873448	3	3	38	5	1	1
82364910350	3221910873455	3.5	6	50	6	1	1
82364910400	3221910873462	4	6	54	8	1	1
82364910450	3221910873479	4.5	6	54	8	1	1
82364910500	3221910873486	5	6	54	9	1	1
82364910600	3221910873493	6	6	54	10	1	1
82364910700	3221910873509	7	8	58	11	1	1
82364910800	3221910873516	8	8	58	12	1	1
82364910900	3221910873523	9	10	66	13	1	1
82364911000	3221910873530	10	10	66	14	1	1
82364911200	3221910873547	12	12	73	26	1	1
82364911400	3221910873554	14	14	75	18	1	1
82364911600	3221910873561	16	16	82	22	1	1
82364911800	3221910873578	18	18	84	24	1	1
82364912000	3221910873585	20	20	92	26	1	1



SOLID CARB. ALCRONA, END MILLS, DIN, Z4, SHORT S. CHAMFER EDGE PROTECT.

FRESA CARBURO ALCRONA, DIN, Z4, CORTA, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z4, CORTA, SMUSSI DI PROTEZIONE.



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236501	EAN	Ø	d2	L	l2	QTY	PCB
82365010100	3221910873592	1	3	38	3	1	1
82365010150	3221910873608	1.5	3	38	4	1	1
82365010200	3221910873615	2	3	38	4	1	1
82365010250	3221910873622	2.5	3	38	4	1	1
82365010300	3221910873639	3	3	38	5	1	1
82365010350	3221910873646	3.5	6	50	6	1	1
82365010400	3221910873653	4	6	54	8	1	1
82365010450	3221910873660	4.5	6	54	8	1	1
82365010500	3221910873677	5	6	54	9	1	1
82365010600	3221910873684	6	6	54	10	1	1
82365010700	3221910873691	7	8	58	11	1	1
82365010800	3221910873707	8	8	58	12	1	1
82365010900	3221910873714	9	10	66	13	1	1
82365011000	3221910873721	10	10	66	14	1	1
82365011200	3221910873738	12	12	73	26	1	1
82365011400	3221910873745	14	14	75	18	1	1
82365011600	3221910873752	16	16	82	22	1	1
82365011800	3221910873769	18	18	84	24	1	1
82365012000	3221910873776	20	20	92	26	1	1



SOLID CARB. , END MILLS, DIN, Z4, LONG S. CHAMFER EDGE PROTECT.

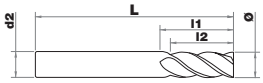
FRESA METAL DURO , DIN, Z4, LARGA. CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z4, LUNGA, SMUSSI DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | DIN 6527L | Ch



Z4 | 30°



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

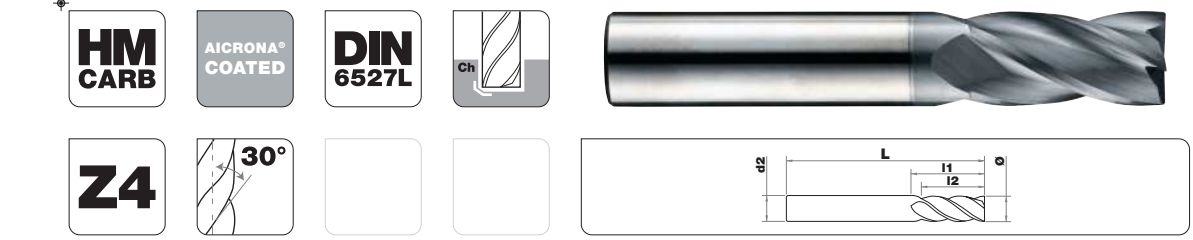
8236551	EAN	Ø	d2	L	l2	QTY	PCB
82365510200	3221910874469	2	3	38	7	1	1
82365510250	3221910874476	2.5	3	38	8	1	1
82365510300	3221910874483	3	3	38	8	1	1
82365510350	3221910874490	3.5	6	57	10	1	1
82365510400	3221910874506	4	6	57	11	1	1
82365510450	3221910874513	4.5	6	57	11	1	1
82365510500	3221910874520	5	6	57	13	1	1
82365510600	3221910874537	6	6	57	13	1	1
82365510700	3221910874544	7	8	63	16	1	1
82365510800	3221910874551	8	8	63	19	1	1
82365510900	3221910874568	9	10	72	19	1	1
82365511000	3221910874575	10	10	72	22	1	1
82365511200	3221910874582	12	12	83	26	1	1
82365511400	3221910874599	14	14	83	26	1	1
82365511600	3221910874605	16	16	92	32	1	1
82365511800	3221910874612	18	18	92	32	1	1
82365512000	3221910874629	20	20	104	38	1	1



SOLID CARB. ALCRONA, END MILLS, DIN, Z4, LONG S. CHAMFER EDGE PROTECT.

FRESA METAL DURO ALCRONA, DIN, Z4, LARGA. CHAFLÁN DE PROTECCIÓN.

FRESA IN MD DIN Z4, LUNGA, SMUSSI DI PROTEZIONE.



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

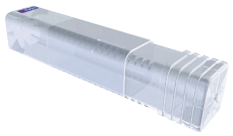
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236561	EAN	Ø	d2	L	l2	QTY	PCB
82365610200	3221910874636	2	3	38	7	1	1
82365610250	3221910874643	2.5	3	38	8	1	1
82365610300	3221910874650	3	3	38	8	1	1
82365610350	3221910874667	3.5	6	57	10	1	1
82365610400	3221910874674	4	6	57	11	1	1
82365610450	3221910874681	4.5	6	57	11	1	1
82365610500	3221910874698	5	6	57	13	1	1
82365610600	3221910874704	6	6	57	13	1	1
82365610700	3221910874711	7	8	63	16	1	1
82365610800	3221910874728	8	8	63	19	1	1
82365610900	3221910874735	9	10	72	19	1	1
82365611000	3221910874742	10	10	72	22	1	1
82365611200	3221910874759	12	12	83	26	1	1
82365611400	3221910874766	14	14	83	26	1	1
82365611600	3221910874773	16	16	92	32	1	1
82365611800	3221910874780	18	18	92	32	1	1
82365612000	3221910874797	20	20	104	38	1	1



SOLID CARB. , END MILLS, DIN, Z4, EXTRA LO. CHAMFER EDGE PROTECT.

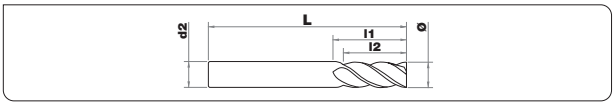
FRESA METAL DURO , DIN, Z4, EXTRA-LARGA. CHAFLÁN DE PROTECCIÓN.

FRESA IN MD Z4 EXTRA-LUNGA, SMUSSI DI PROTEZIONE.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM | Ch



Z4 | 30°



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

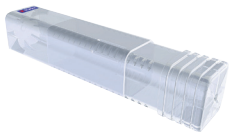
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236611	EAN	Ø	d2	L	l2	QTY	PCB
82366110300	3221910875138	3	3	75	25	1	1
82366110400	3221910875145	4	4	75	25	1	1
82366110500	3221910875152	5	5	75	25	1	1
82366110600	3221910875169	6	6	75	25	1	1
82366110800	3221910875176	8	8	75	25	1	1
82366111000	3221910875183	10	10	100	38	1	1
82366111200	3221910875190	12	12	150	75	1	1
82366111400	3221910875206	14	14	150	75	1	1
82366111600	3221910875213	16	16	150	75	1	1
82366111800	3221910875220	18	18	150	75	1	1
82366112000	3221910875237	20	20	150	75	1	1



SOLID CARB. ALCRONA, END MILLS, DIN, Z4, EXTRA LO. CHAMFER EDGE PROTECT.

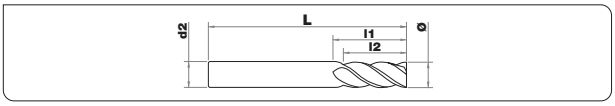
FRESA METAL DURO ALCRONA, DIN, Z4, EXTRA-LARGA. CHAFLÁN DE PROTECCIÓN.

FRESA IN MD Z4 EXTRA-LUNGA, SMUSSI DI PROTEZIONE.

HM CARB | AICRONA® COATED | TIVOLY NORM | Ch



Z4 | 30°



Universal application, life span, profitability.

Polivalencia, duración de vida, rentabilidad.

Polivalente, lunga durata, redditività.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

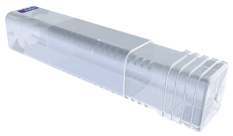
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

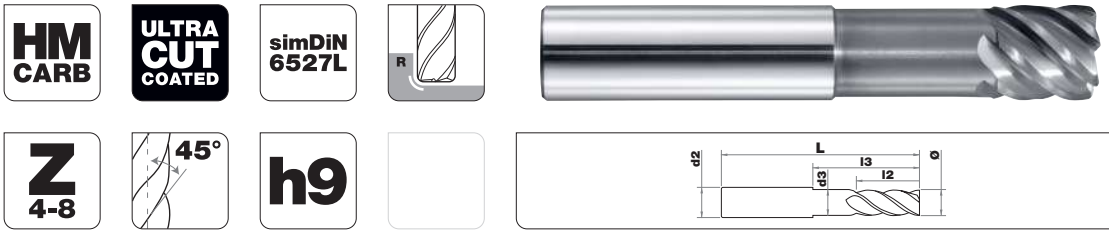
8236621	EAN	Ø	d2	L	l2	QTY	PCB
82366210300	3221910875244	3	3	75	25	1	1
82366210400	3221910875251	4	4	75	25	1	1
82366210500	3221910875268	5	5	75	25	1	1
82366210600	3221910875275	6	6	75	25	1	1
82366210800	3221910875282	8	8	75	25	1	1
82366211000	3221910875299	10	10	100	38	1	1
82366211200	3221910875305	12	12	150	75	1	1
82366211400	3221910875312	14	14	150	75	1	1
82366211600	3221910875329	16	16	150	75	1	1
82366211800	3221910875336	18	18	150	75	1	1
82366212000	3221910875343	20	20	150	75	1	1



SOLID CARBIDE ULTRACUT Z4-8 CORNER RADIUS RAKE ANGLE 5°.

FRESA METAL DURO ULTRACUT Z4-8 CON RADIO, CORTE A 5°.

FRESA IN MD ULTRACUT Z4-8 CON RAGGIO, TAGLIO A 5°.



Designed for finishing in heat treatable steels > 50 Hrc.

Diseñado para el acabado de aceros tratados > 50 Hrc.

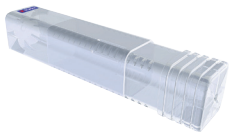
Concepita per la finitura degli acciai trattati.

D Heat Treatable Steels <1200N/mm²
Aceros aleados y tratados < 1200N/mm²
Acciai per trattamento termico <1200N/mm²

E Heat Treatable Steels <1400N/mm²
Aceros aleados y tratados < 1400N/mm²
Acciai per trattamento termico <1400N/mm²

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8236341	EAN	Ø	d2	L	l2	l3	R	QTY	PCB
8236341030005	3221910824365	3	6	57	4	14	0.5	1	1
8236341040005	3221910824372	4	6	57	5	16	0.5	1	1
8236341050005	3221910824389	5	6	57	6	18	0.5	1	1
8236341060005	3221910824396	6	6	57	7	20	0.5	1	1
8236341060008	3221910824402	6	6	57	7	20	0.8	1	1
8236341080005	3221910824419	8	8	63	9	26	0.5	1	1
8236341080010	3221910824426	8	8	63	9	26	1	1	1
8236341100005	3221910824433	10	10	72	11	31	0.5	1	1
8236341100010	3221910824440	10	10	72	11	31	1	1	1
8236341120005	3221910824457	12	12	83	12	37	0.5	1	1
8236341160015	3221910824464	16	16	92	16	43	1.5	1	1
8236341200020	3221910824471	20	20	104	20	53	2	1	1



SOLID CARBIDE ULTRACUT END MILLS, Z6. CHAMFER EDGE PROTECT.

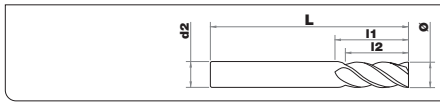
FRESA METAL DURO ULTRACUT, Z6, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD ULTRACUT Z6, SMUSSI DI PROTEZIONE.

HM CARB | ULTRA CUT COATED | TIVOLY NORM | Ch



Z6 | 55° | h9



Designed for finishing in stainless steels.

Diseñado para el acabado de los aceros inoxidables.

Concepita per la finitura degli acciai inossidabili.

AB — Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD — Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

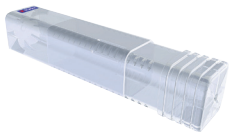
FGH — Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ — Cast iron
Fundiciones
Ghisa

KLM — Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

Ti — Titanium alloys
Aleaciones de titanio
Leghe di titanio

8236231	EAN	Ø	d2	L	l2	QTY	PCB
82362310600	3221910823740	6	6	64	19	1	1
82362310800	3221910823757	8	8	64	21	1	1
82362311000	3221910823764	10	10	64	25	1	1
82362311200	3221910823771	12	12	76	25	1	1
82362311600	3221910823788	16	16	89	32	1	1
82362312000	3221910823795	20	20	102	38	1	1



SOLID CARBIDE ULTRACUT ZMAX RAKE ANGLE 0°, CHAMFER EDGE PROTECT.

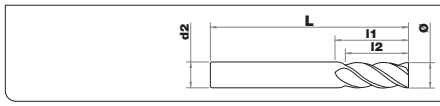
FRESA METAL DURO ULTRACUT ZMAX, CORTE A 0°, CHAFLÁN DE PROTECCIÓN.

FRESA IN MD ULTRACUT Z6, SMUSSI DI PROTEZIONE.

HM CARB | ULTRA CUT COATED | simDiN 6527L | Ch



Z 8-12 | 55° | h9



Designed for super finishing in heat treatable steels > 50 Hrc.

Diseñado para el super acabado de los aceros tratados > 50 Hrc.

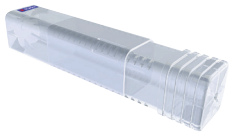
Concepita per la finitura degli acciai inossidabili.

D — Heat Treatable Steels <1200N/mm²
Aceros aleados y tratados < 1200N/mm²
Acciai per trattamento termico <1200N/mm²

E — Heat Treatable Steels <1400N/mm²
Aceros aleados y tratados < 1400N/mm²
Acciai per trattamento termico <1400N/mm²

ARCo ARNi Ti — Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

8236361	EAN	Ø	d2	L	l2	Z	QTY	PCB
82363610600	3221910824488	6	6	57	13	8	1	1
82363610800	3221910824495	8	8	63	19	10	1	1
82363611000	3221910824501	10	10	72	22	10	1	1
82363611200	3221910824518	12	12	83	26	12	1	1
82363611400	3221910824525	14	14	83	26	12	1	1
82363611600	3221910824532	16	16	92	32	12	1	1

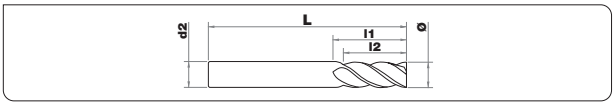


SOLID CARBIDE Z2 BALL NOSED. | **FRESA METAL DURO Z2 PUNTA ESFÉRICA.** | **FRESA IN MD Z2, SEMISFERICA.**

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



Z2 | 30° | e8



Universal application. | Uso universal. | Fresatura e scanalatura,polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

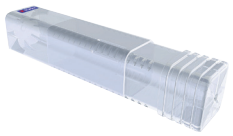
FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

Ti Titanium alloys
Aleaciones de titanio
Leghe di titanio

8236061	EAN	Ø	d2	L	l2	QTY	PCB
82360610100	3221910794798	1	3	39	3	1	1
82360610150	3221910794804	1.5	3	39	5	1	1
82360610200	3221910794811	2	3	39	7	1	1
82360610250	3221910794828	2.5	3	39	7	1	1
82360610300	3221910794835	3	3	39	9	1	1
82360610350	3221910794842	3.5	4	51	12	1	1
82360610400	3221910794859	4	4	51	14	1	1
82360610450	3221910794866	4.5	5	51	14	1	1
82360610500	3221910794873	5	5	51	16	1	1
82360610600	3221910794880	6	6	64	19	1	1
82360610700	3221910794897	7	8	64	19	1	1
82360610800	3221910794903	8	8	64	21	1	1
82360610900	3221910794910	9	10	70	22	1	1
82360611000	3221910794927	10	10	70	22	1	1
82360611100	3221910794934	11	11	70	25	1	1
82360611200	3221910794941	12	12	76	25	1	1
82360611400	3221910794958	14	14	89	30	1	1
82360611600	3221910794965	16	16	89	32	1	1
82360611800	3221910794972	18	18	102	35	1	1
82360612000	3221910794989	20	20	102	38	1	1
82360612200	3221910794996	22	22	102	38	1	1
82360612500	3221910795009	25	25	102	38	1	1



SOLID CARBIDE HARDCUT Z2 BALL NOSED.

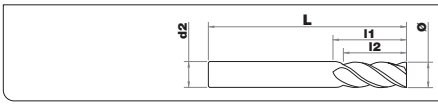
FRESA METAL DURO HARDCUT Z2 PUNTA ESFÉRICA.

FRESA IN MD Z2, SEMISFERICA.

HM CARB | HARD CUT COATED | TIVOLY NORM



Z2 | 30° | e8



#04

Universal application.

Uso universal.

Fresatura e scanalatura,polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

Ti Titanium alloys
Aleaciones de titanio
Leghe di titanio

8236181	EAN	Ø	d2	L	l2	QTY	PCB
82361810100	3221910823214	1	3	39	3	1	1
82361810150	3221910823221	1.5	3	39	5	1	1
82361810200	3221910823238	2	3	39	7	1	1
82361810250	3221910823245	2.5	3	39	7	1	1
82361810300	3221910823252	3	3	39	9	1	1
82361810350	3221910823269	3.5	4	51	12	1	1
82361810400	3221910823276	4	4	51	14	1	1
82361810450	3221910823283	4.5	5	51	14	1	1
82361810500	3221910823290	5	5	51	16	1	1
82361810600	3221910823306	6	6	64	19	1	1
82361810700	3221910823313	7	8	64	19	1	1
82361810800	3221910823320	8	8	64	21	1	1
82361810900	3221910823337	9	10	70	22	1	1
82361811000	3221910823344	10	10	70	22	1	1
82361811100	3221910823351	11	11	70	25	1	1
82361811200	3221910823368	12	12	76	25	1	1
82361811400	3221910823375	14	14	89	30	1	1
82361811600	3221910823382	16	16	89	32	1	1
82361811800	3221910823399	18	18	102	35	1	1
82361812000	3221910823405	20	20	102	38	1	1
82361812200	3221910823412	22	22	102	38	1	1
82361812500	3221910823429	25	25	102	38	1	1

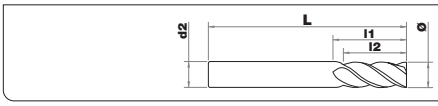


SOLID CARBIDE Z3 BALL NOSED. | **FRESA METAL DURO Z2 PUNTA ESFÉRICA.** | **FRESA IN MD, Z3, SEMISFERICA.**

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



Z3 | 30° | e8



Universal application. | Uso universal. | Fresatura e scanalatura, polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

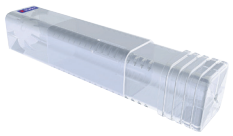
CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236711	EAN	Ø	d2	L	l2	QTY	PCB
82367110100	3221910795825	1	3	39	3	1	1
82367110150	3221910795832	1.5	3	39	5	1	1
82367110200	3221910795849	2	3	39	7	1	1
82367110250	3221910795856	2.5	3	39	7	1	1
82367110300	3221910795863	3	3	39	9	1	1
82367110350	3221910795870	3.5	4	51	12	1	1
82367110400	3221910795887	4	4	51	14	1	1
82367110450	3221910795894	4.5	5	51	14	1	1
82367110500	3221910795900	5	5	51	16	1	1
82367110600	3221910795917	6	6	64	19	1	1
82367110700	3221910795924	7	8	64	19	1	1
82367110800	3221910795931	8	8	64	21	1	1
82367110900	3221910795948	9	10	70	22	1	1
82367111000	3221910795955	10	10	70	22	1	1
82367111100	3221910795962	11	11	70	25	1	1
82367111200	3221910795979	12	12	76	25	1	1
82367111400	3221910795986	14	14	89	30	1	1
82367111600	3221910795993	16	16	89	32	1	1
82367111800	3221910796006	18	18	102	35	1	1
82367112000	3221910796013	20	20	102	38	1	1
82367112200	3221910796020	22	22	102	38	1	1
82367112500	3221910796037	25	25	102	38	1	1



SOLID CARBIDE HARDCUT Z3 BALL NOSED.

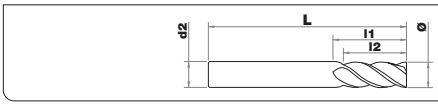
FRESA METAL DURO HARDCUT Z2 PUNTA ESFÉRICA.

FRESA IN MD, Z3, SEMISFERICA.

HM CARB | HARD CUT COATED | TIVOLY NORM



Z3 | 30° | e8



Universal application.

Uso universal.

Fresatura e scanalatura, polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236261	EAN	ø	d2	L	l2	QTY	PCB
82362610100	3221910823801	1	3	39	3	1	1
82362610150	3221910823818	1.5	3	39	5	1	1
82362610200	3221910823825	2	3	39	7	1	1
82362610250	3221910823832	2.5	3	39	7	1	1
82362610300	3221910823849	3	3	39	9	1	1
82362610350	3221910823856	3.5	4	51	12	1	1
82362610400	3221910823863	4	4	51	14	1	1
82362610450	3221910823870	4.5	5	51	14	1	1
82362610500	3221910823887	5	5	51	16	1	1
82362610600	3221910823894	6	6	64	19	1	1
82362610700	3221910823900	7	8	64	19	1	1
82362610800	3221910823917	8	8	64	21	1	1
82362610900	3221910823924	9	10	70	22	1	1
82362611000	3221910823931	10	10	70	22	1	1
82362611100	3221910823948	11	11	70	25	1	1
82362611200	3221910823955	12	12	76	25	1	1
82362611400	3221910823962	14	14	89	30	1	1
82362611600	3221910823979	16	16	89	32	1	1
82362611800	3221910823986	18	18	102	35	1	1
82362612000	3221910823993	20	20	102	38	1	1
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82362612500	3221910824013	25	25	102	38	1	1

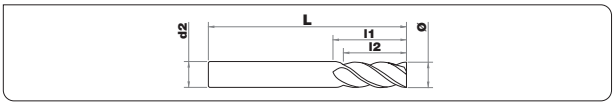


SOLID CARBIDE Z4 BALL NOSED. | **FRESA METAL DURO Z2 PUNTA ESFÉRICA.** | **FRESA IN MD Z4, SEMISFERICA.**

HM CARB | BRIGHT UNCOATED | TIVOLY NORM



Z4 | 30° | h9



Universal application. | Uso universal. | Fresatura polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236071	EAN	Ø	d2	L	l2	QTY	PCB
82360710100	3221910795016	1	3	39	3	1	1
82360710150	3221910795023	1.5	3	39	5	1	1
82360710200	3221910795030	2	3	39	7	1	1
82360710250	3221910795047	2.5	3	39	7	1	1
82360710300	3221910795054	3	3	39	9	1	1
82360710350	3221910795061	3.5	4	51	12	1	1
82360710400	3221910795078	4	4	51	14	1	1
82360710450	3221910795085	4.5	5	51	14	1	1
82360710500	3221910795092	5	5	51	16	1	1
82360710600	3221910795108	6	6	64	19	1	1
82360710700	3221910795115	7	8	64	19	1	1
82360710800	3221910795122	8	8	64	21	1	1
82360710900	3221910795139	9	10	70	22	1	1
82360711000	3221910795146	10	10	70	22	1	1
82360711100	3221910795153	11	11	70	25	1	1
82360711200	3221910795160	12	12	76	25	1	1
82360711400	3221910795177	14	14	89	30	1	1
82360711600	3221910795184	16	16	89	32	1	1
82360711800	3221910795191	18	18	102	35	1	1
82360712000	3221910795207	20	20	102	38	1	1
82360712200	3221910795214	22	22	102	38	1	1
82360712500	3221910795221	25	25	102	38	1	1



SOLID CARBIDE HARDCUT Z4 BALL NOSED.

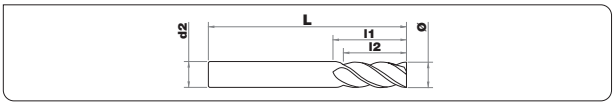
FRESA METAL DURO HARDCUT Z2 PUNTA ESFÉRICA.

FRESA IN MD Z4, SEMISFERICA.

HM CARB | HARD CUT COATED | TIVOLY NORM



Z4 | 30° | h9



Universal application.

Uso universal.

Fresatura polivalente.

AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

KLM Aluminium alloys
Aleaciones de aluminio
Leghe di alluminio

8236191	EAN	Ø	d2	L	l2	QTY	PCB
82361910100	3221910823436	1	3	39	3	1	1
82361910150	3221910823443	1.5	3	39	5	1	1
82361910200	3221910823450	2	3	39	7	1	1
82361910250	3221910823467	2.5	3	39	7	1	1
82361910300	3221910823474	3	3	39	9	1	1
82361910350	3221910823481	3.5	4	51	12	1	1
82361910400	3221910823498	4	4	51	14	1	1
82361910450	3221910823504	4.5	5	51	14	1	1
82361910500	3221910823511	5	5	51	16	1	1
82361910600	3221910823528	6	6	64	19	1	1
82361910700	3221910823535	7	8	64	19	1	1
82361910800	3221910823542	8	8	64	21	1	1
82361910900	3221910823559	9	10	70	22	1	1
82361911000	3221910823566	10	10	70	22	1	1
82361911100	3221910823573	11	11	70	25	1	1
82361911200	3221910823580	12	12	76	25	1	1
82361911400	3221910823597	14	14	89	30	1	1
82361911600	3221910823603	16	16	89	32	1	1
82361911800	3221910823610	18	18	102	35	1	1
82361912000	3221910823627	20	20	102	38	1	1
82361912200	3221910823634	22	22	102	38	1	1
82361912500	3221910823641	25	25	102	38	1	1



SOLID CARBIDE ULTRACUT END MILLS Z2 RAKE ANGLE 16° OVER-SIZE SHANK.

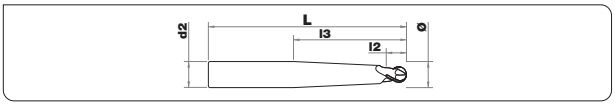
FRESA MD ULTRACUT Z2 CORTE A 16°, MANGO REFORZADO.

FRESA IN MD ULTRACUT Z2 TAGLIO A 16° CODOLO RINFORZATO.

HM CARB | ULTRA CUT COATED | TIVOLY NORM



Z2 | 30° | h9



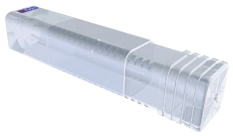
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CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

82362810	EAN	Ø	d2	L	l2	l3	R	QTY	PCB
82362810300	3221910824020	3	6	80	3	37	1.5	1	1
82362810400	3221910824037	4	8	90	4	50	2	1	1
82362810500	3221910824044	5	8	100	5	49	2.5	1	1
82362810600	3221910824051	6	10	100	6	52	3	1	1
82362810800	3221910824068	8	12	100	8	53	4	1	1
82362811000	3221910824075	10	14	125	10	53	4	1	1
82362811200	3221910824082	12	16	140	12	58	6	1	1

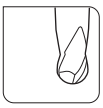


SOLID CARBIDE ULTRACUT END MILLS Z2 RAKE ANGLE 16°.

FRESA MD ULTRACUT Z2 COTE A 16°.

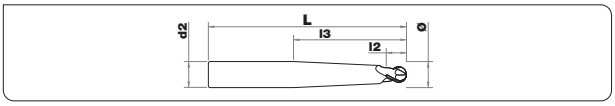
FRESA IN MD ULTRACUT Z2 TAGLIO A 16°.

HM CARB | ULTRA CUT COATED | TIVOLY NORM





Z2 | 30° | h9



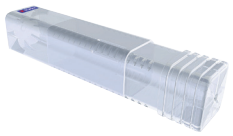
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CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

ARCo ARNi Ti Ni / Co based special alloys & Titanium
Aleaciones refractarias Co / Ni y Titanio
Leghe refrattarie Co / Ni i titanio

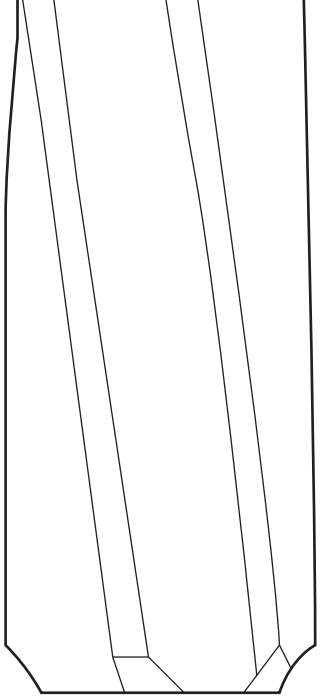
8236311	EAN	Ø	d2	L	l2	R	QTY	PCB
82363110300	3221910824167	3	6	57	4	1.5	1	1
82363110400	3221910824174	4	6	80	5	2	1	1
82363110500	3221910824181	5	6	80	6	2.5	1	1
82363110600	3221910824198	6	6	80	10	3	1	1
82363110700	3221910824204	7	8	100	13	3.5	1	1
82363110800	3221910824211	8	8	100	16	4	1	1
82363110900	3221910824228	9	10	100	16	4.5	1	1
82363111000	3221910824235	10	10	100	19	5	1	1
82363111200	3221910824242	12	12	100	22	6	1	1
82363111600	3221910824259	16	16	125	32	8	1	1



GENE-
RAL
CATALOGUE

REAMING
ESCARIADO
ALESATURA

#05/07



REAMING
ESCARIADO
ALESATURA

HAND REAMERS ESCARIADOR DE MANO ALESATORE A MANO	**416**	#05
MACHINE REAMERS ESCARIADOR DE MAQUINA ALESATORE A MACCHINA	**424**	#05

HSS PARIS HAND REAMERS PARIS.

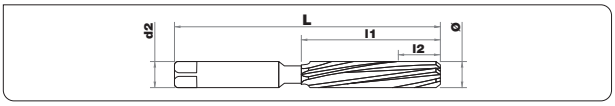
ESCARIADOR DE MANO HSS TIPO PARIS.

ALESATORE A MANO HSS TIPO FRANCESE.

HSS | BRIGHT UNCOATED | NFE 74112 | 0°

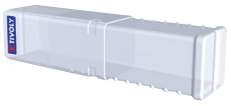


k7



A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²



1040011	EAN	Ø	d2	L	l1	l2	QTY	PCB
10400110200	3221910637408	2	2	65	35	14	1	1
10400110250	3221910637415	2.5	2,5	65	35	14	1	1
10400110300	3221910637422	3	3	85	50	17	1	1
10400110350	3221910637439	3.5	3,5	95	56	19	1	1
10400110400	3221910637446	4	4	100	60	20	1	1
10400110450	3221910637453	4.5	4,5	106	63	21	1	1
10400110500	3221910637460	5	5	112	67	22	1	1
10400110550	3221910637477	5.5	5,5	118	71	24	1	1
10400110600	3221910637484	6	6	118	71	24	1	1
10400110650	3221910637491	6.5	6,5	125	75	25	1	1
10400110700	3221910637507	7	7	132	80	26	1	1
10400110750	3221910637514	7.5	7,5	132	80	26	1	1
10400110800	3221910637521	8	8	140	85	28	1	1
10400110850	3221910637538	8.5	8,5	140	85	28	1	1
10400110900	3221910637545	9	9	150	90	30	1	1
10400110950	3221910637552	9.5	9,5	150	90	30	1	1
10400111000	3221910637569	10	10	160	95	32	1	1
10400111050	3221910637576	10.5	10,5	160	95	32	1	1
10400111100	3221910637583	11	11	170	100	34	1	1
10400111150	3221910637590	11.5	11,5	170	100	34	1	1
10400111200	3221910637606	12	12	180	106	36	1	1
10400111250	3221910637613	12.5	12,5	180	106	36	1	1
10400111300	3221910637620	13	13	180	106	36	1	1
10400111350	3221910637637	13.5	13,5	190	112	38	1	1
10400111400	3221910637644	14	14	190	112	38	1	1
10400111450	3221910637651	14.5	14,5	190	112	38	1	1
10400111500	3221910637668	15	15	190	112	38	1	1
10400111550	3221910637675	15.5	15,5	200	118	40	1	1
10400111600	3221910637682	16	16	200	118	40	1	1
10400111650	3221910637699	16.5	16,5	200	118	40	1	1
10400111700	3221910637705	17	17	200	118	40	1	1
10400111750	3221910637712	17.5	17,5	212	125	42	1	1
10400111800	3221910637729	18	18	212	125	42	1	1
10400111850	3221910637736	18.5	18,5	212	125	42	1	1
10400111900	3221910637743	19	19	212	125	42	1	1
10400111950	3221910637750	19.5	19,5	224	132	45	1	1
10400112000	3221910637767	20	20	224	132	45	1	1
10400112050	3221910637774	20.5	20,5	224	132	45	1	1
10400112100	3221910637781	21	21	224	132	45	1	1
10400112150	3221910637798	21.5	21,5	236	140	48	1	1
10400112200	3221910637804	22	22	236	140	48	1	1
10400112250	3221910637811	22.5	22,5	236	140	48	1	1
10400112300	3221910637828	23	23	236	140	48	1	1
10400112350	3221910637835	23.5	23,5	236	140	48	1	1
10400112400	3221910637842	24	24	250	150	50	1	1
10400112450	3221910637859	24.5	24,5	250	150	50	1	1
10400112500	3221910637866	25	25	250	150	50	1	1
10400112550	3221910637873	25.5	25,5	250	150	50	1	1
10400112600	3221910637880	26	26	250	150	50	1	1
10400112650	3221910637897	26.5	26,5	250	150	50	1	1
10400112700	3221910637903	27	27	265	160	63	1	1
10400112750	3221910637910	27.5	27,5	265	160	63	1	1
10400112800	3221910637927	28	28	265	160	63	1	1
10400112850	3221910637934	28.5	28,5	265	160	63	1	1
10400112900	3221910637941	29	29	265	160	63	1	1
10400112950	3221910637958	29.5	29,5	265	160	63	1	1
10400113000	3221910637965	30	30	265	160	63	1	1
10400113100	3221910637972	31	31	280	170	56	1	1
10400113200	3221910637989	32	32	280	170	56	1	1
10400113300	3221910637996	33	33	280	170	56	1	1

1040011	EAN	Ø	d2	L	l1	l2	QTY	PCB
10400113400	3221910638009	34	34	300	180	60	1	1
10400113500	3221910638016	35	35	300	180	60	1	1
10400113600	3221910638023	36	36	300	180	60	1	1
10400113700	3221910638030	37	37	300	180	60	1	1
10400113800	3221910638047	38	38	315	190	63	1	1
10400113900	3221910638054	39	39	315	190	63	1	1
10400114000	3221910638061	40	40	315	190	63	1	1
10400114200	3221910638078	42	42	315	190	63	1	1
10400114500	3221910638085	45	45	335	200	67	1	1
10400114800	3221910638092	48	48	355	212	71	1	1
10400115000	3221910638108	50	50	355	212	71	1	1

HSS AMERICAN HAND REAMERS.

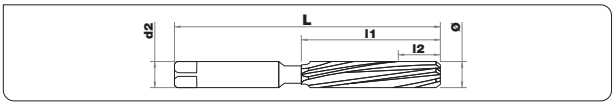
ESCARIADOR DE MANO HSS TIPO AMERICANO.

ALESATORE A MANO HSS TIPO AMERICANO.

HSS | BRIGHT UNCOATED | NFE 66019 | 10°



m5



A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

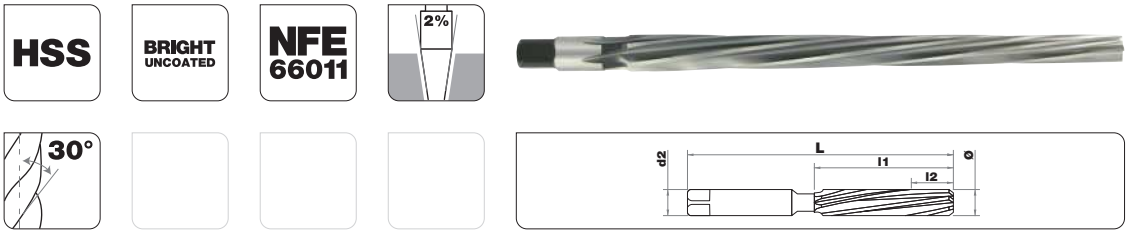


1040021	EAN	ø	d2	L	l2	QTY	PCB
10400210200	3221910639532	2	2	50	25	1	1
10400210250	3221910639549	2.5	2,5	58	29	1	1
10400210300	3221910639556	3	3	62	31	1	1
10400210350	3221910639563	3.5	3,5	70	35	1	1
10400210400	3221910639570	4	4	76	38	1	1
10400210450	3221910639587	4.5	4,5	81	41	1	1
10400210500	3221910639594	5	5	87	44	1	1
10400210550	3221910639600	5.5	5,5	93	47	1	1
10400210600	3221910639617	6	6	93	47	1	1
10400210650	3221910639624	6.5	6,5	100	50	1	1
10400210700	3221910639631	7	7	107	54	1	1
10400210750	3221910639648	7.5	7,5	107	54	1	1
10400210800	3221910639655	8	8	115	58	1	1
10400210850	3221910639662	8.5	8,5	115	58	1	1
10400210900	3221910639679	9	9	124	62	1	1
10400210950	3221910639686	9.5	9,5	124	62	1	1
10400211000	3221910639693	10	10	133	60	1	1
10400211100	3221910639709	11	11	142	71	1	1
10400211200	3221910639716	12	12	152	76	1	1
10400211300	3221910639723	13	13	152	76	1	1
10400211400	3221910639730	14	14	163	81	1	1
10400211500	3221910639747	15	15	163	81	1	1
10400211600	3221910639754	16	16	175	87	1	1
10400211700	3221910639761	17	17	175	87	1	1
10400211800	3221910639778	18	18	188	93	1	1
10400211900	3221910639785	19	19	188	96	1	1
10400212000	3221910639792	20	20	201	100	1	1
10400212100	3221910639808	21	21	201	100	1	1
10400212200	3221910639815	22	22	215	107	1	1
10400212300	3221910639822	23	23	215	107	1	1
10400212400	3221910639839	24	24	231	115	1	1
10400212500	3221910639846	25	25	231	115	1	1
10400212600	3221910639853	26	26	231	115	1	1
10400212700	3221910639860	27	27	247	124	1	1
10400212800	3221910639877	28	28	247	124	1	1
10400212900	3221910639884	29	29	247	124	1	1
10400213000	3221910639891	30	30	247	124	1	1
10400213100	3221910639907	31	31	265	133	1	1
10400213200	3221910639914	32	32	265	133	1	1

HSS PIN HAND REAMERS.

ESCARIADOR DE MANO HSS.

ALESATORE A MANO HSS PER SPINE CONICHE 2%.



A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

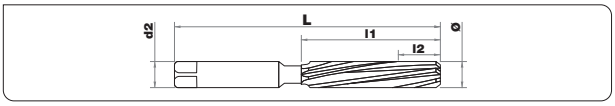
1040061	EAN	N°Ø	-	+	d2	L	l2	QTY	PCB
10400610100	3221910641368	1	0,9	1.4	1,5	46	28	1	1
10400610120	3221910641375	1,2	1,1	1.7	1,8	50	32	1	1
10400610150	3221910641382	1,5	1,4	2.1	2,2	57	37	1	1
10400610200	3221910641399	2	1,9	2.8	3,1	72	48	1	1
10400610250	3221910641405	2,5	2,4	3.3	3,1	72	48	1	1
10400610300	3221910641412	3	2,9	4	4	80	58	1	1
10400610400	3221910641429	4	3,9	5.2	5	93	68	1	1
10400610500	3221910641436	5	4,9	6.3	6,3	105	73	1	1
10400610600	3221910641443	6	5,9	8	8	140	105	1	1
10400610700	3221910641450	7	6,9	9	9	140	105	1	1
10400610800	3221910641467	8	7,9	10.8	10	185	145	1	1
10400610900	3221910641474	9	8,9	11.8	11,8	190	145	1	1
10400611000	3221910641481	10	9,9	13.4	12,5	220	175	1	1
10400611200	3221910641498	12	11,8	16	14	260	210	1	1
10400611400	3221910641504	14	13,8	18	18	260	210	1	1
10400611600	3221910641511	16	15,8	20.4	18	280	230	1	1
10400611800	3221910641528	18	17,8	22.4	22,4	290	230	1	1
10400612000	3221910641535	20	19,8	24.8	22,4	310	250	1	1
10400612200	3221910641542	22	21,8	26.8	26,8	320	250	1	1
10400612500	3221910641559	25	24,7	30.7	28	370	300	1	1



HSS ADJUSTABLE HAND REAMERS. | **ESCARIADOR DE MANO HSS REGULABLE.** | **ALESATORE A MANO HSS ESPANSIBILE.**

HSS | BRIGHT UNCOATED | TIVOLY NORM | 0°

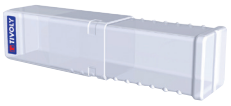




A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1040091	EAN	min	-	d2	L	l2	QTY	PCB
10400910809	3221910897789	8	9	4	111	32	1	1
10400910910	3221910643195	9	10	4	115	32	1	1
10400911011	3221910897796	10	11	4	120	35	1	1
10400911112	3221910897802	11	12	6	125	35	1	1
10400911213	3221910897819	12	13,5	6,2	130	42	1	1
10400911315	3221910897826	13.5	15,5	7	145	50	1	1
10400911518	3221910897833	15.5	18	8	165	60	1	1
10400911821	3221910897840	18	21	9	180	65	1	1
10400912124	3221910897857	21	24	10	190	70	1	1
10400912427	3221910897864	24	27,5	11	205	75	1	1
10400912731	3221910897871	27.5	31,5	12	225	80	1	1
10400913137	3221910897888	31.5	37	14,5	240	90	1	1
10400913745	3221910897895	37	45	16	285	100	1	1
10400914555	3221910897901	45	55	20	320	109	1	1



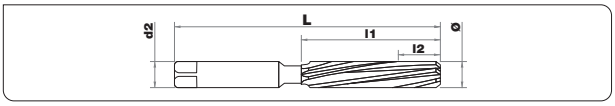
HSS JET HAND REAMERS.

ESCARIADOR DE MANO HSS, SURTIDOR.

ALESATORE A MANO HSS PER UGELLO.

HSS | BRIGHT UNCOATED | TIVOLY NORM | 0° | +− 0,01mm





A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1040071	EAN	min	d2	L	l2	QTY	PCB
10400710030	3221910641962	0.3	1.5	25	2.1	1	1
10400710035	3221910641979	0.35	1.5	25	2.8	1	1
10400710040	3221910641986	0.4	1.5	25	2.9	1	1
10400710045	3221910641993	0.45	1.5	25	3.2	1	1
10400710050	3221910642006	0.5	1.5	27	3.5	1	1
10400710055	3221910642013	0.55	1.5	27	4	1	1
10400710060	3221910642020	0.6	1.5	27	4.5	1	1
10400710065	3221910642037	0.65	1.5	27	4.5	1	1
10400710070	3221910642044	0.7	1.5	27	5	1	1
10400710075	3221910642051	0.75	1.5	27	5	1	1
10400710080	3221910642068	0.8	1.5	27	5.5	1	1
10400710085	3221910642075	0.85	1.5	27	5.5	1	1
10400710090	3221910642082	0.9	1.5	27	6	1	1
10400710095	3221910642099	0.95	1.5	27	6	1	1
10400710100	3221910642105	1	1.5	27	6.5	1	1
10400710105	3221910642112	1.05	1.5	27	6.5	1	1
10400710110	3221910642129	1.1	1.5	27	7	1	1
10400710115	3221910642136	1.15	1.5	27	7	1	1
10400710120	3221910642143	1.2	1.5	27	7.5	1	1
10400710125	3221910642150	1.25	1.5	27	7.5	1	1
10400710130	3221910642167	1.3	1.5	27	7.5	1	1
10400710135	3221910642174	1.35	1.5	27	7.5	1	1
10400710140	3221910642181	1.4	1.5	27	8	1	1
10400710145	3221910642198	1.45	1.5	27	8	1	1
10400710150	3221910642204	1.5	1.5	27	8	1	1
10400710155	3221910642211	1.55	2	35	9.5	1	1
10400710160	3221910642228	1.6	2	35	9.5	1	1
10400710165	3221910642235	1.65	2	35	9.5	1	1
10400710170	3221910642242	1.7	2	35	11	1	1
10400710175	3221910642259	1.75	2	35	11	1	1
10400710180	3221910642266	1.8	2	35	11	1	1
10400710185	3221910642273	1.85	2	35	12	1	1
10400710190	3221910642280	1.9	2	35	12	1	1



SET | JET

21 PCS | HSS | BRIGHT UNCOATED | 0° | +− 0,01mm

21 reamers jet +1 pincer, Ø 0,35 à 1,35 mm

ESTUCHE | JET



21 escariadoras surtidor +1 P Ø 0,35>1,35 mm

CASSETTA | JET

10400770001
3221910642297

QTY	PCB
21	1

AB

21 alesatori per getti +1 pinza, Ø da 0,35 a 1,35 mm

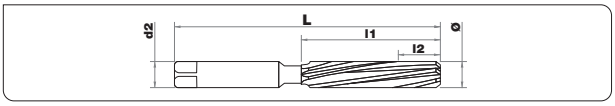
HSS CENTER ADJUSTABLE HAND REAMERS.

ESCARIADOR DE MANO HSS EXTENSIBLE.

ALESATORE A MANO HSS A PICCOLA ESPANSIONE.

HSS | BRIGHT UNCOATED | NFE 66003 | 0°

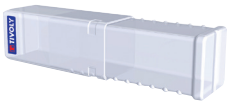




A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

1040101	EAN	ø	d2	L	l2	QTY	PCB
10401010500	3221910643553	5	5	85	32	1	1
10401010550	3221910643560	5.5	5.5	85	32	1	1
10401010600	3221910643577	6	6	90	32	1	1
10401010650	3221910643584	6.5	6.5	100	37	1	1
10401010700	3221910643591	7	7	100	37	1	1
10401010750	3221910643607	7.5	7.5	110	42	1	1
10401010800	3221910643614	8	8	110	42	1	1
10401010850	3221910643621	8.5	8.5	120	47	1	1
10401010900	3221910643638	9	9	120	47	1	1
10401010950	3221910643645	9.5	9.5	130	49	1	1
10401011000	3221910643652	10	10	130	49	1	1
10401011050	3221910643669	10.5	10.5	140	54	1	1
10401011100	3221910643676	11	11	140	54	1	1
10401011150	3221910643683	11.5	11.5	150	59	1	1
10401011200	3221910643690	12	12	150	59	1	1
10401011250	3221910643706	12.5	12.5	160	60	1	1
10401011300	3221910643713	13	13	160	60	1	1
10401011350	3221910643720	13.5	13.5	170	65	1	1
10401011400	3221910643737	14	14	170	65	1	1
10401011450	3221910643744	14.5	14.5	180	70	1	1
10401011500	3221910643751	15	15	180	70	1	1
10401011550	3221910643768	15.5	15.5	180	75	1	1
10401011600	3221910643775	16	16	185	75	1	1
10401011650	3221910643782	16.5	16.5	190	75	1	1
10401011700	3221910643799	17	17	190	75	1	1
10401011750	3221910643805	17.5	17.5	200	77	1	1
10401011800	3221910643812	18	18	200	77	1	1
10401011850	3221910643829	18.5	18.5	205	77	1	1
10401011900	3221910643836	19	19	205	77	1	1
10401011950	3221910643843	19.5	19.5	210	82	1	1
10401012000	3221910643850	20	20	210	82	1	1
10401012100	3221910643867	21	21	215	87	1	1
10401012200	3221910643874	22	22	220	87	1	1
10401012300	3221910643881	23	23	230	89	1	1
10401012400	3221910643898	24	24	235	89	1	1
10401012500	3221910643904	25	25	240	94	1	1
10401012600	3221910643911	26	26	245	95	1	1
10401012700	3221910643928	27	27	260	100	1	1
10401012800	3221910643935	28	28	260	100	1	1
10401012900	3221910643942	29	29	270	102	1	1
10401013000	3221910643959	30	30	270	102	1	1
10401013100	3221910643966	31	31	280	107	1	1
10401013200	3221910643973	32	32	280	107	1	1



TIVOLY

ALÉSAGE
REAMING



industriel@tivoly.com

HSSE MACHINE REAMERS.
STRAIGHT.

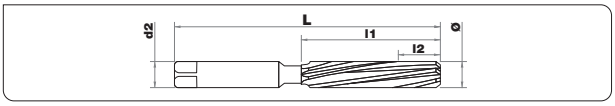
ESCARIADOR DE MÁQUINA HSSE5
RECTO.

ALESATORE A MACCHINA HSS-E5
TAGLI DIRITTI.

HSS E5 | BRIGHT UNCOATED | NFE 66014 | Z 4-8



0° | m5



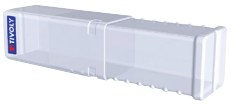
AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

8040121	EAN	Ø	d2	L	l1	l2	Z	QTY	PCB
80401210200	3221910646769	2	2	49	31	19	6	1	1
80401210300	3221910646783	3	3	57	38	20	6	1	1
80401210400	3221910646806	4	4	75	50	24	6	1	1
80401210500	3221910646820	5	5	86	59	26	6	1	1
80401210600	3221910646844	6	6	101	71	28	6	1	1
80401210700	3221910646868	7	7	109	78	31	6	1	1
80401210800	3221910646882	8	8	117	84	33	6	1	1
80401210900	3221910646905	9	9	125	88	36	6	1	1
80401211000	3221910646929	10	10	133	97	38	6	1	1
80401211100	3221910646936	11	11	133	97	38	6	1	1
80401211200	3221910646943	12	12	151	110	44	6	1	1
80401211400	3221910646967	14	14	160	114	47	8	1	1
80401211600	3221910646981	16	16	170	120	52	8	1	1
80401211800	3221910647001	18	18	182	132	56	8	1	1
80401212000	3221910647025	20	20	195	150	60	8	1	1



HSSE MACHINE REAMERS. SPIRAL FLUTE 10°.

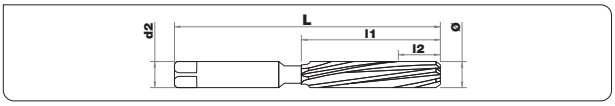
ESCARIADOR DE MÁQUINA HSSE5 HELICOIDAL 10°/

ALESATORE A MACCHINA HSS-E5 ELICOIDALE 10°.

HSS E5 | BRIGHT UNCOATED | NFE 66014 | Z 4-8



10° | m5



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CD Steels for heat treatment 700-1200N/mm²
Aceros para tratamiento térmico 700-1200 N/mm²
Acciai per trattamento termico 700-1200N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

IJ Cast iron
Fundiciones
Ghisa

8040131	EAN	ø	d2	L	l1	l2	Z	QTY	PCB
80401310100	3221910647612	1	1	38	15	12	4	1	1
80401310150	3221910647629	1.5	1,5	43	26	18	4	1	1
80401310200	3221910647636	2	2	49	31	19	6	1	1
80401310250	3221910647643	2.5	2,5	57	38	20	6	1	1
80401310300	3221910647650	3	3	57	38	20	6	1	1
80401310400	3221910647674	4	4	75	50	24	6	1	1
80401310500	3221910647698	5	5	86	59	26	6	1	1
80401310550	3221910647704	5.5	5,5	93	65	27	6	1	1
80401310600	3221910647711	6	6	101	71	28	6	1	1
80401310650	3221910647728	6.5	6,5	101	71	28	6	1	1
80401310700	3221910647735	7	7	109	78	31	6	1	1
80401310800	3221910647759	8	8	117	84	33	6	1	1
80401310900	3221910647773	9	9	125	88	36	6	1	1
80401310950	3221910647780	9.5	9,5	125	88	36	6	1	1
80401311000	3221910647797	10	10	133	97	38	6	1	1
80401311100	3221910647803	11	11	133	97	38	6	1	1
80401311200	3221910647810	12	12	151	110	44	6	1	1
80401311300	3221910647827	13	13	151	110	44	8	1	1
80401311400	3221910647834	14	14	160	114	47	8	1	1
80401311500	3221910647841	15	15	162	115	50	8	1	1
80401311600	3221910647858	16	16	170	120	52	8	1	1
80401311700	3221910647865	17	17	175	123	54	8	1	1
80401311800	3221910647872	18	18	182	132	56	8	1	1
80401311900	3221910647889	19	19	159	140	58	8	1	1
80401312000	3221910647896	20	20	195	150	60	8	1	1



HSSE5 HIGH PRECISION MACHINE REAMERS 1/100.

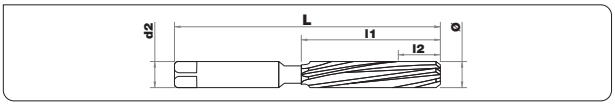
ESCARIADOR DE MÁQUINA HSSE5 GRAN PRECISIÓN 1/100.

ALESATORE CENTESIMALE A MACCHINA HSS-E5.

HSS E5 | BRIGHT UNCOATED | NFE 66014 | Z 4-8



10° | SPECIAL

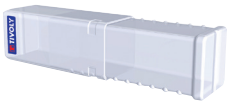


AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

IJ Cast iron
Fundiciones
Ghisa

8040231	EAN	Ø > Ø	d2	L	l1	l2	Z	QTY	PCB
0,7 - 0,79		Ø	=Ø	33	10	7	4	1	1
0,8 - 1,05		Ø	=Ø	38	14	12	4	1	1
1,06 - 1,55		Ø	=Ø	40	24	15	6	1	1
1,32 - 1,44		Ø	=Ø	40	24	15	6	1	1
1,45 - 1,50		Ø	=Ø	43	26	18	6	1	1
1,51 - 1,7		Ø	=Ø	43	26	18	6	1	1
1,71 - 1,79		Ø	=Ø	43	26	18	6	1	1
1,8 - 1,89		Ø	=Ø	49	31	19	6	1	1
1,9 - 2,12		Ø	=Ø	49	31	19	6	1	1
2,13 - 2,36		Ø	=Ø	49	31	19	6	1	1
2,37 - 2,94		Ø	=Ø	57	38	20	6	1	1
2,95 - 3,35		Ø	=Ø	57	38	20	6	1	1
3,36 - 3,75		Ø	=Ø	70	47	20	6	1	1
3,76 - 4,25		Ø	4	75	50	24	6	1	1
4,26 - 4,75		Ø	4,5	80	54	25	6	1	1
4,76 - 5,3		Ø	5	86	59	26	6	1	1
5,31 - 5,8		Ø	5,5	93	65	27	6	1	1
5,81 - 6,01		Ø	6	101	71	28	6	1	1
6,02 - 6,7		Ø	6	101	71	28	6	1	1
6,71 - 7,55		Ø	7	109	78	31	6	1	1
7,56 - 8,5		Ø	8	117	84	33	6	1	1
8,51 - 8,55		Ø	8	117	84	33	6	1	1
8,56 - 9,5		Ø	9	125	88	36	6	1	1
9,51 - 9,55		Ø	9	125	88	36	6	1	1
9,56 - 10,6		Ø	10	133	97	38	6	1	1
10,61 - 11,3		Ø	10	133	97	38	6	1	1
11,31 - 11,8		Ø	12	151	110	44	6	1	1
11,81 - 12,5		Ø	12	151	110	44	6	1	1
12,51 - 13,2		Ø	12	151	110	44	8	1	1
13,97 - 14,05		Ø	14	160	114	47	8	1	1
14,97 - 15,05		Ø	14	162	115	50	8	1	1
15,10 - 15,20		Ø	16	170	120	52	8	1	1
15,97 - 16,05		Ø	16	170	120	52	8	1	1
16,10 - 16,20		Ø	16	170	120	52	8	1	1
16,97 - 17,05		Ø	16	182	132	56	8	1	1
17,97 - 18,05		Ø	16	182	132	56	8	1	1
18,97 - 19,05		Ø	16	195	150	60	8	1	1
19,97 - 20,05		Ø	16	195	150	60	8	1	1



HSS BRIDGE REAMERS. 5 FLUTE. MORSE TAPER SHANK.

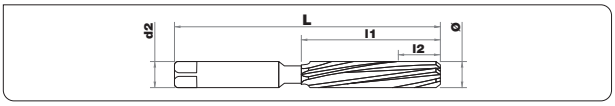
ESCARIADOR DE MÁQUINA HSS. 5 CORTES. MANGO CÓNICO.

ALESATORE A MACCHINA HSS PER LAMIERA, 5 TAGLI, CONO MORSE.

HSS | BRIGHT UNCOATED | NFE 66016 | Z5



20° | k11



A Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²
Acciai per trattamento termico <400N/mm²

B Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²
Acciai per trattamento termico <700N/mm²

8040151	EAN	Ø	L	l1	l2	CM	QTY	PCB
804015110600	3221910648701	6	151	75	30	CM1	1	1
804015110800	3221910648718	8	161	85	34	CM1	1	1
804015111000	3221910648732	10	171	95	38	CM1	1	1
804015111200	3221910648756	12	181	105	42	CM1	1	1
804015121200	3221910648770	12	105	105	42	CM2	1	1
804015121400	3221910648794	14	209	125	46	CM2	1	1
804015121500	3221910648800	15	219	125	50	CM2	1	1
804015121600	3221910648817	16	229	135	54	CM2	1	1
804015121800	3221910648831	18	239	145	58	CM2	1	1
804015122000	3221910648855	20	249	155	62	CM2	1	1
804015122100	3221910648862	21	249	155	62	CM2	1	1
804015132000	3221910648886	20	271	155	62	CM3	1	1
804015132100	3221910648893	21	271	155	62	CM3	1	1
804015132200	3221910648909	22	281	165	66	CM3	1	1
804015132300	3221910648916	23	281	165	66	CM3	1	1
804015132400	3221910648923	24	296	180	72	CM3	1	1
804015132500	3221910648930	25	296	180	72	CM3	1	1
804015132600	3221910648947	26	296	180	72	CM3	1	1
804015132700	3221910648954	27	311	195	78	CM3	1	1
804015132800	3221910648961	28	311	195	78	CM3	1	1
804015142800	3221910648985	28	339	195	78	CM4	1	1
804015142900	3221910648992	29	339	195	78	CM4	1	1
804015143000	3221910649005	30	354	195	78	CM4	1	1
804015143100	3221910649012	31	354	210	84	CM4	1	1
804015143200	3221910649029	32	354	210	84	CM4	1	1
804015143300	3221910649036	33	364	210	84	CM4	1	1
804015143400	3221910649043	34	364	210	88	CM4	1	1
804015143500	3221910649050	35	364	220	88	CM4	1	1
804015143600	3221910649067	36	364	220	88	CM4	1	1
804015143700	3221910649074	37	364	220	88	CM4	1	1
804015143800	3221910649081	38	374	230	92	CM4	1	1
804015144000	3221910649098	40	374	230	92	CM4	1	1



HSSE5 MACHINE REAMERS.
STRAIGHT. MORSE TAPER SHANK.

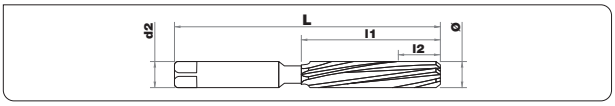
ESCARIADOR DE MÁQUINA HSS
RECTO. MANGO CÓNICO.

ALESATORE A MACCHINA HSS-E5,
TAGLI DIRITTI, CONO MORSE.

HSS E5 | BRIGHT UNCOATED | NFE 66015 | 0°



m5

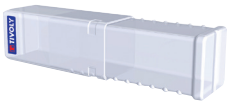


AB
Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE
Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

IJ
Cast iron
Fundiciones
Ghisa

8040161	EAN	Ø	L	l1	l2	CM	QTY	PCB
80401610600	3221910649722	6	138	72	28	CM1	1	1
80401610800	3221910649746	8	156	90	33	CM1	1	1
80401611000	3221910649777	10	168	102	38	CM1	1	1
80401611200	3221910649791	12	182	116	44	CM1	1	1
80401611300	3221910649807	13	182	116	44	CM1	1	1
80401611400	3221910649814	14	189	123	47	CM1	1	1
80401611600	3221910649838	16	210	130	52	CM2	1	1
80401611700	3221910649845	17	214	134	54	CM2	1	1
80401611800	3221910649852	18	219	139	56	CM2	1	1
80401612000	3221910649876	20	228	148	60	CM2	1	1
80401612100	3221910649883	21	232	152	62	CM2	1	1
80401612200	3221910649890	22	237	157	64	CM2	1	1
80401612400	3221910649913	24	268	169	68	CM2	1	1
80401612500	3221910649920	25	268	169	68	CM3	1	1
80401612600	3221910649937	26	273	174	70	CM3	1	1
80401612800	3221910649951	28	277	178	71	CM3	1	1
80401613000	3221910649975	30	281	182	73	CM3	1	1



HSSE5 MACHINE REAMERS. SPIRAL FLUTE. MORSE TAPER SHANK.

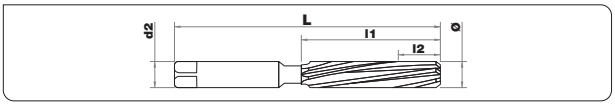
ESCARIADOR DE MÁQUINA HSS HELICOIDAL. MANGO CÓNICO.

ALESATORE A MACCHINA HSS-E5, ELICOIDALE, CONO MORSE.

HSS E5 | BRIGHT UNCOATED | NFE 66015 | 10°



m5



AB Steels for heat treatment 200-700N/mm²
Aceros para tratamiento térmico 200-700 N/mm²
Acciai per trattamento termico 200-700N/mm²

CDE Steels for heat treatment 700-1400N/mm²
Aceros para tratamiento térmico 700-1400 N/mm²
Acciai per trattamento termico 700-1400N/mm²

FGH Stainless Steel
Aceros inoxidables
Acciai inossidabili

8040171	EAN	Ø	L	l1	l2	CM	QTY	PCB
80401710600	3221910650636	6	138	72	28	CM1	1	1
80401710700	3221910650643	7	150	84	31	CM1	1	1
80401710800	3221910650650	8	156	90	33	CM1	1	1
80401710900	3221910650667	9	162	96	36	CM1	1	1
80401711000	3221910650674	10	168	102	38	CM1	1	1
80401711100	3221910650681	11	175	109	41	CM1	1	1
80401711200	3221910650698	12	182	116	44	CM1	1	1
80401711300	3221910650704	13	182	116	44	CM1	1	1
80401711400	3221910650711	14	189	123	47	CM1	1	1
80401711500	3221910650728	15	204	124	50	CM2	1	1
80401711600	3221910650735	16	210	130	52	CM2	1	1
80401711700	3221910650742	17	214	134	54	CM2	1	1
80401711800	3221910650759	18	219	139	56	CM2	1	1
80401711900	3221910650766	19	223	143	58	CM2	1	1
80401712000	3221910650773	20	228	148	60	CM2	1	1
80401712100	3221910650780	21	232	152	62	CM2	1	1
80401712200	3221910650797	22	237	157	64	CM2	1	1
80401712300	3221910650803	23	241	161	66	CM2	1	1
80401712400	3221910650810	24	268	169	68	CM2	1	1
80401712500	3221910650827	25	268	169	68	CM3	1	1
80401712600	3221910650834	26	273	174	70	CM3	1	1
80401712700	3221910650841	27	277	178	71	CM3	1	1
80401712800	3221910650858	28	277	178	71	CM3	1	1
80401712900	3221910650865	29	281	181	73	CM3	1	1
80401713000	3221910650872	30	281	182	73	CM3	1	1
80401713200	3221910650889	32	317	193	77	CM4	1	1
80401713500	3221910650896	35	321	197	78	CM4	1	1
80401714000	3221910650902	40	329	205	81	CM4	1	1
80401714500	3221910650919	45	336	212	83	CM4	1	1
80401715000	3221910650926	50	344	220	86	CM4	1	1



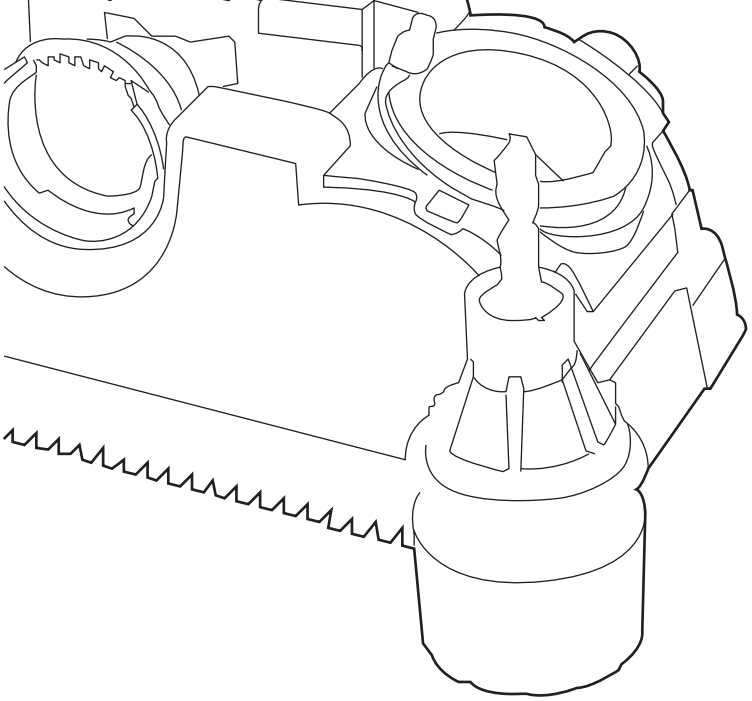
GENE-
RAL
CATALOGUE

SHARPENING

AFILADORES

AFFILATORE

#06/07



SHARPENING
AFILADORES
AFFILATORE

DRILL DOCTOR & ACCESSORIES
DRILL DOCTOR & ACCESORIOS
DRILL DOCTOR & ACCESSORI

DRILL DOCTOR 400

DRILL DOCTOR 400 Ø 2,5>13 mm 118° Convential and split point-lip relief angle ajustable

DRILL DOCTOR 400



DRILL DOCTOR 400 Ø 2,5>13 mm 118° Punta convential & en cruz-angulo de destalonado extensible

DRILL DOCTOR 400

1111177400B

3221912009913

QTY	PCB
1	1

DRILL DOCTOR 400 Ø 2,5>13 mm 118° Spoglia conica & affilatura a croce - Angolo di spoglia regolabile

DRILL DOCTOR 500

DRILL DOCTOR 500 Ø 2,5>13 mm 118°>135° Convential and split point-lip relief angle ajustable

DRILL DOCTOR 500



DRILL DOCTOR 500 Ø 2,5>13 mm 118°>135° Punta convential & en cruz-angulo de destalonado extensible

DRILL DOCTOR 500

1111177500M

3221910864699

QTY	PCB
1	1

DRILL DOCTOR 500 Ø 2,5>13 mm 118°>135° Spoglia conica & affilatura a croce - Angolo di spoglia regolabile

DRILL DOCTOR 750

DRILL DOCTOR 750 Ø 2,5>19 mm 118°>135° Convential and split point-lip relief angle and grinding deeph ajustable

DRILL DOCTOR 750



DRILL DOCTOR 750 Ø 2,5>19 mm 118°>135° Punta convential & en cruz-angulo de destalonado & profondidiad de amolado extensible

DRILL DOCTOR 750

1111177750M

3221910866655

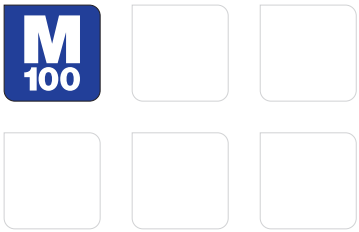
QTY	PCB
1	1

DRILL DOCTOR 750 Ø 2,5>19 mm 118°>135° Spoglia conica & affilatura a croce - Angolo di spoglia regolabile

DRILL DOCTOR WHEEL

MUELA PAR DRILL DOCTOR

RUOTA PER DRILL DOCTOR





11111720004

3221910879723

QTY	PCB
1	1

DRILL DOCTOR 400, 500, 750 grinder, grit 100

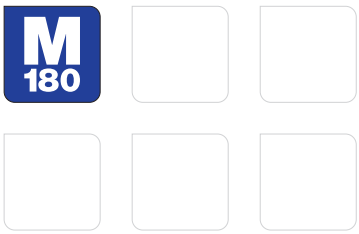
Muela par DRILL DOCTOR 400, 500, 750 Gr. 100

Ruota per DRILL DOCTOR 400, 500, 750 Gr. 100

DRILL DOCTOR WHEEL

MUELA PAR DRILL DOCTOR

RUOTA PER DRILL DOCTOR





11111720001

3221910857806

QTY	PCB
1	1

DRILL DOCTOR 400, 500, 750 grinder, grit 180

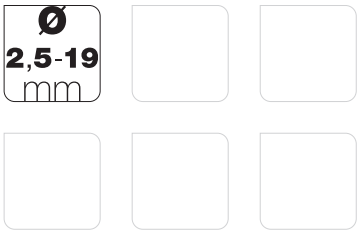
Muela par DRILL DOCTOR 400, 500, 750 Gr. 180

Ruota per DRILL DOCTOR 400, 500, 750 Gr. 180

DRILL DOCTOR CHUCK

PORTABROCAS PAR DRILL DOCTOR

MANDRINO PER DRILL DOCTOR





11111720002

3221910857813

QTY	PCB
1	1

DRILL DOCTOR 400, 500, 750 chuck Ø 2,5>19 mm

Portabrocas par DRILL DOCTOR 400, 500, 750 rango Ø 2,5> 19 mm

Mandrino per DRILL DOCTOR 400, 500, 750 rango Ø 2,5> 19 mm

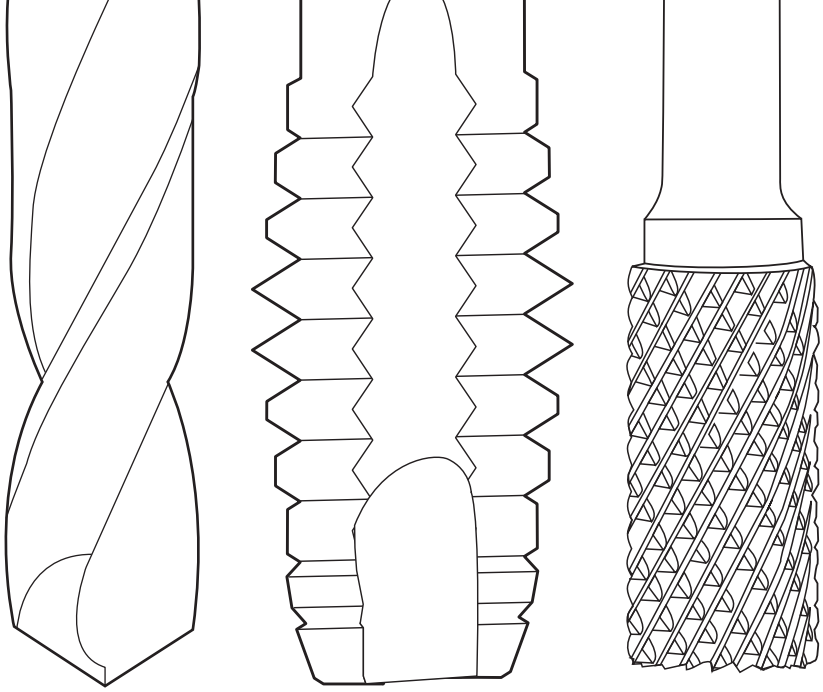
GENE-
RAL
CATALOGUE

SELF-SERVICE / METAL

SELF-SERVICE / METAL

SELF-SERVICE / METALLO

#07/07



SELF-SERVICE / METAL
SELF-SERVICE / METAL
SELF-SERVICE / METALLO

DRILLING 436 #07
TALADRADO
FORATURA

TAPPING & THREADING 453 #07
COJINETES
FILETTATURA

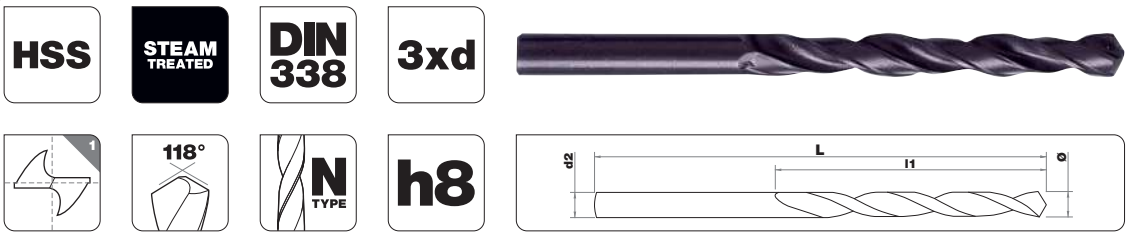
MILLING 458 #07
FREDADO
FRESATURA

SETS 463 #07
ESTUCHES
COFANETTI

HSS ROLL FORGED JOBBER LENGTH DRILL.

BROCA HSS LAMINADA CILÍNDRICA. SERIE CORTA.

PUNTA LAMINATA CILINDRICA CORTA.



Standard HSS roll forged bits - perfect for light occasional use

Producto de gama estándar ideal para uso ocasional. Broca HSS laminada.

Prodotto della gamma standard ideale per un utilizzo occasionale. Punta HSS laminata.



Metal

Metal

Metallo

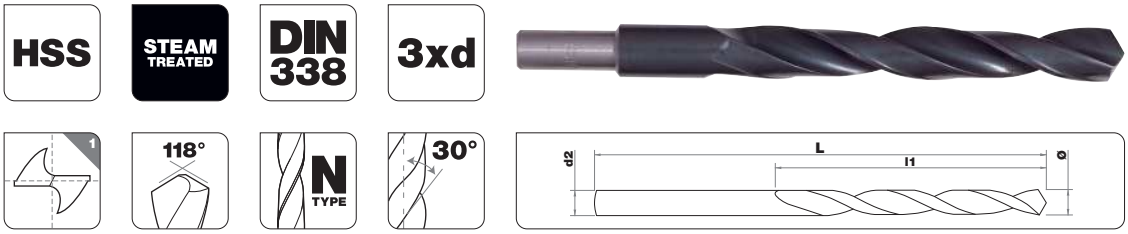
5020014	EAN	ø	L	l	QTY	PCB
50200140100	3221910556327	1	34	12	2	6
50200140150	3221910556273	1.5	40	18	2	6
50200140200	3221910025113	2	49	24	2	6
50200140250	3221910025120	2.5	57	30	2	6
50200140300	3221910025137	3	61	33	2	6
50200140330	3221910025144	3.3	65	36	2	6
50200140350	3221910025151	3.5	70	39	2	6
50200140400	3221910025168	4	75	43	2	6
50200140420	3221910025175	4.2	75	43	2	6
50200140450	3221910025182	4.5	80	47	2	6
50200140500	3221910025199	5	86	52	2	6
50200140550	3221910025205	5.5	93	57	1	6
50200140600	3221910025212	6	93	57	1	6
50200140650	3221910025229	6.5	101	63	1	6
50200140700	3221910025236	7	109	69	1	6
50200140750	3221910025243	7.5	109	69	1	6
50200140800	3221910025250	8	117	75	1	6
50200140850	3221910025267	8.5	117	75	1	6
50200140900	3221910025274	9	125	81	1	6
50200140950	3221910025281	9.5	125	81	1	6
50200141000	3221910025298	10	133	87	1	6
50200141050	3221910025304	10.5	133	87	1	1
50200141100	3221910025311	11	142	94	1	1
50200141200	3221910025335	12	151	101	1	1
50200141250	3221910025342	12.5	151	101	1	1
50200141300	3221910025359	13	151	101	1	1



HSS METAL DRILL BIT | ROLL FORGED REDUCED SHANK | LIGHT USAGE

HSS BROCA METAL | LAMIN. MANGO CILÍNDRICO REDUCIDO | USO OCASIONAL

PUNTA METAL HSS | LAMIN. CODOLO CILINDRICO RIDOTTO | USO OCCASIONALE



Standard HSS roll forged bits - perfect for light occasional use

Producto de gama estándar ideal para uso ocasional. Broca HSS laminada.

Prodotto della gamma standard ideale per un utilizzo occasionale. Punta HSS laminata.



Metal
Metal
Metallo

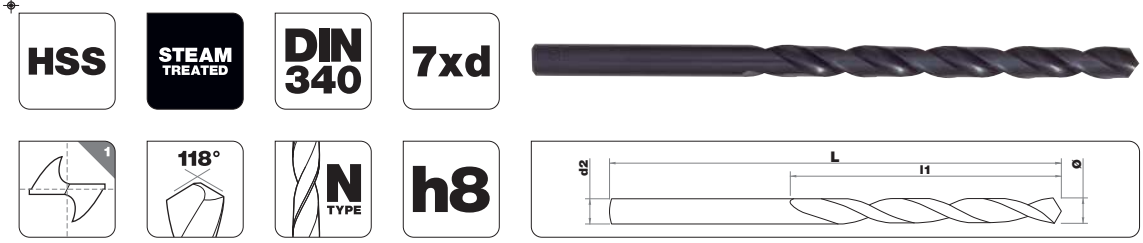
5020024	EAN	Ø	L	l	QTY	PCB
50200241400	3221910555900	14	160	108	1	1
50200241500	3221910555917	15	169	114	1	1
50200241600	3221910555924	16	178	120	1	1
50200241800	3221910555931	18	191	130	1	1
50200242000	3221910555948	20	205	140	1	1



HSS ROLL FORGED LONG SERIES DRILL.

BROCA HSS LAMINADA CILÍN-DRICA. SERIE LARGA.

PUNTA HSS LAMINATA CILINDRICA LUNGA.



Standard HSS roll forged bits - perfect for light occasional use

Producto de gama estándar ideal para uso ocasional. Broca HSS laminada.

Prodotto della gamma standard ideale per un utilizzo occasionale. Punta HSS laminata.



Metal
Metal
Metallo

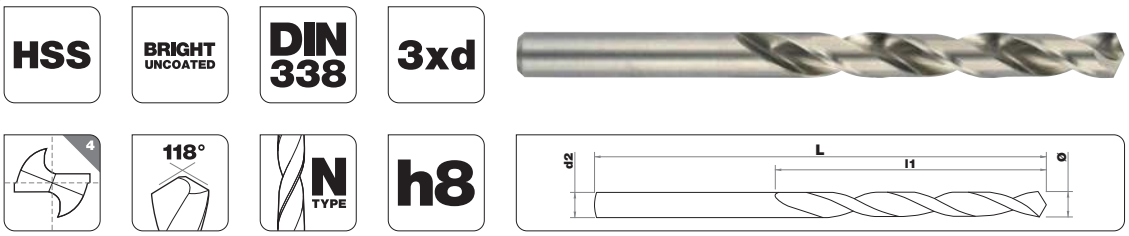
5020034	EAN	Ø	L	l	QTY	PCB
50200340200	3221910555955	2	85	56	1	1
50200340250	3221910555962	2.5	95	62	1	1
50200340300	3221910555979	3	100	66	1	1
50200340350	3221910555986	3.5	112	73	1	1
50200340400	3221910555993	4	119	78	1	1
50200340450	3221910556006	4.5	126	82	1	1
50200340500	3221910556013	5	132	87	1	1
50200340550	3221910556020	5.5	139	91	1	1
50200340600	3221910556037	6	139	91	1	1
50200340800	3221910556051	8	165	109	1	1
50200341000	3221910556068	10	184	121	1	1
50200341200	3221910556075	12	205	134	1	1



T | HSS FULLY GROUND JOBBER LENGTH DRILL | T LINE

T | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA | T LINE

T | PUNTA HSS CILINDRICA CORTA | T LINE



For steels and cast irons.

Para aceros y fundiciones.

Foratura di acciai <950 N/mm² e ghise.



Metal

Metal

Metallo



Aluminium Profiles

Perfiles aluminio

Profilo d'alluminio

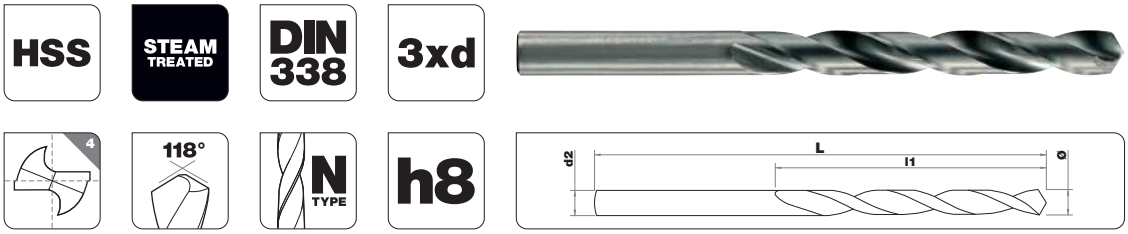
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11437740150	3221910205911	1.5	40	18	2	6
11437740200	3221910205928	2	49	24	2	6
11437740250	3221910205935	2.5	57	30	2	6
11437740300	3221910205942	3	61	33	2	6
11437740320	3221910205959	3.2	65	36	2	6
11437740350	3221910205966	3.5	70	39	2	6
11437740400	3221910205973	4	75	43	2	6
11437740420	3221910205980	4.2	75	43	2	6
11437740450	3221910205997	4.5	80	47	2	6
11437740480	3221910852931	4.8	86	52	2	6
11437740500	3221910206000	5	86	52	2	6
11437740520	3221910852948	5.2	86	52	2	6
11437740550	3221910206017	5.5	93	57	1	6
11437740600	3221910206024	6	93	57	1	6
11437740620	3221910852955	6.2	101	63	1	6
11437740650	3221910206031	6.5	101	63	1	6
11437740700	3221910206048	7	109	69	1	6
11437740750	3221910206055	7.5	109	69	1	3
11437740800	3221910206062	8	117	75	1	3
11437740850	3221910206079	8.5	117	75	1	3
11437740900	3221910206086	9	125	81	1	3
11437740950	3221910206093	9.5	125	81	1	3
11437741000	3221910206109	10	133	87	1	3
11437741050	3221910206116	10.5	133	87	1	1
11437741100	3221910206123	11	142	94	1	1
11437741200	3221910206147	12	151	101	1	1
11437741300	3221910206161	13	151	101	1	1



TSX | HSS FULLY GROUND JOBBER LENGTH DRILL

TSX | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA

TSX | PUNTA HSS CILINDRICA CORTA. TIPO N



For steels and cast irons. Comfort, accuracy.

Para aceros y fundiciones. Confort, precisión.

Foratura di acciai e ghise. Comfort e precisione.



Metal

Metal

Metallo



Aluminium Profiles

Perfiles aluminio

Profilo d'alluminio

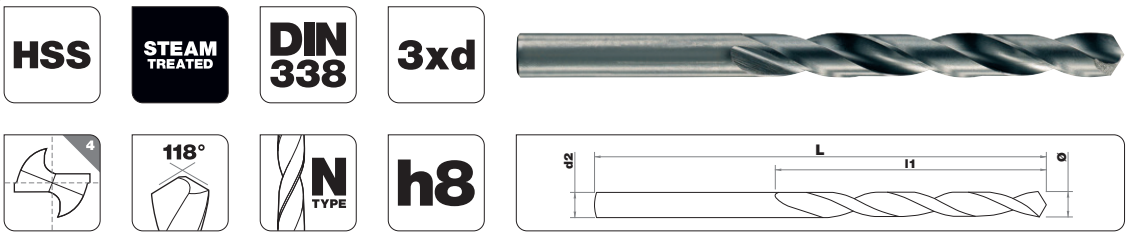
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11436740150	3221910082215	1.5	40	18	2	6
11436740200	3221910025366	2	49	24	2	6
11436740220	3221910025373	2.2	53	27	2	6
11436740250	3221910025380	2.5	57	30	2	6
11436740280	3221910082222	2.8	61	33	2	6
11436740300	3221910025397	3	61	33	2	6
11436740320	3221910025403	3.2	65	36	2	6
11436740350	3221910025427	3.5	70	39	2	6
11436740380	3221910082239	3.8	75	43	2	6
11436740400	3221910025434	4	75	43	2	6
11436740420	3221910025441	4.2	75	43	2	6
11436740450	3221910025458	4.5	80	47	2	6
11436740480	3221910025465	4.8	86	52	2	6
11436740500	3221910025472	5	86	52	2	6
11436740520	3221910025489	5.2	86	52	1	6
11436740550	3221910025496	5.5	93	57	1	6
11436740600	3221910025519	6	93	57	1	6
11436740620	3221910025526	6.2	101	63	1	6
11436740650	3221910025533	6.5	101	63	1	6
11436740680	3221910025540	6.8	109	69	1	6
11436740700	3221910025557	7	109	69	1	6
11436740750	3221910025564	7.5	109	69	1	3
11436740800	3221910025571	8	117	75	1	3
11436740850	3221910025588	8.5	117	75	1	3
11436740900	3221910025595	9	125	81	1	3
11436740950	3221910025601	9.5	125	81	1	3
11436741000	3221910025618	10	133	87	1	3
11436741020	3221910082246	10.2	133	87	1	1
11436741050	3221910025632	10.5	133	87	1	1
11436741100	3221910025649	11	142	94	1	1
11436741150	3221910025656	11.5	142	94	1	1
11436741200	3221910025663	12	151	101	1	1
11436741250	3221910025670	12.5	151	101	1	1
11436741300	3221910025687	13	151	101	1	1



TSX | HSS FULLY GROUND JOBBER LENGTH DRILL

TSX | BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA

TSX | PUNTA HSS CILINDRICA CORTA. TIPO N



For steels and cast irons. Comfort, accuracy.

Para aceros y fundiciones. Confort, precisión.

Foratura di acciai e ghise. Comfort e precisione.



Metal
Metal
Metallo



Aluminium Profiles
Perfiles aluminio
Profilo d'alluminio

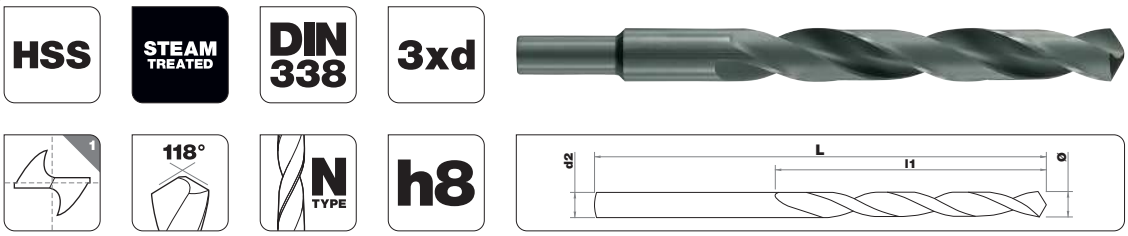
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11436720150	3221910005689	1.5	40	18	2	6
11436720180	3221910005719	1.8	46	22	2	1
11436720200	3221910005733	2	49	24	2	6
11436720220	3221910005757	2.2	53	27	2	1
11436720250	3221910005788	2.5	57	30	2	6
11436720280	3221910005818	2.8	61	33	2	1
11436720300	3221910005832	3	61	33	2	6
11436720320	3221910005856	3.2	65	36	2	6
11436720330	3221910005863	3.3	65	36	2	1
11436720350	3221910005887	3.5	70	39	2	6
11436720380	3221910005917	3.8	75	43	2	1
11436720400	3221910005931	4	75	43	2	6
11436720420	3221910005955	4.2	75	43	2	6
11436720450	3221910005986	4.5	80	47	2	6
11436720480	3221910006013	4.8	86	52	2	1
11436720500	3221910006037	5	86	52	2	6
11436720520	3221910006051	5.2	86	52	2	1
11436720550	3221910006082	5.5	93	57	2	6
11436720600	3221910006136	6	93	57	2	6
11436720620	3221910006150	6.2	101	63	1	1
11436720650	3221910006181	6.5	101	63	1	6
11436720680	3221910006211	6.8	109	69	1	1
11436720700	3221910006235	7	109	69	1	6
11436720750	3221910006280	7.5	109	69	1	3
11436720800	3221910006334	8	117	75	1	3
11436720850	3221910006389	8.5	117	75	1	3
11436720900	3221910006433	9	125	81	1	3
11436720950	3221910006488	9.5	125	81	1	1
11436721000	3221910006532	10	133	87	1	3
11436721020	3221910006556	10.2	133	87	1	1
11436721050	3221910006570	10.5	133	87	1	1
11436721100	3221910006587	11	142	94	1	1
11436721150	3221910006594	11.5	142	94	1	1
11436721200	3221910006600	12	151	101	1	1
11436721250	3221910006617	12.5	151	101	1	1
11436721300	3221910006624	13	151	101	1	1



HSS FULLY GROUND JOBBER LENGTH DRILL. REDUCED SHANK

BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA. MANGO REDUCIDO.

PUNTA HSS CILINDRICA CORTA. TIPO N | GAMBO RIDOTTO.



For steels and cast irons. Robustness, accuracy.

Para Aceros y fundiciones. Robustez, precisión.

Foratura di acciai <950 N/mm² e ghise. Robustezza e precisione.



Metal
Metal
Metallo



Aluminium Profiles
Perfiles aluminio
Profilo d'alluminio

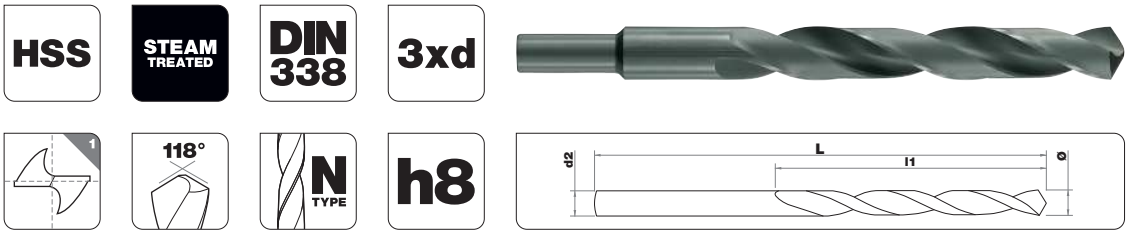
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11436841400	3221910025762	14	160	108	1	1
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11436841500	3221910025786	15	169	114	1	1
11436841550	3221910025793	15.5	178	120	1	1
11436841600	3221910025809	16	178	120	1	1
11436841650	3221910025816	16.5	184	125	1	1
11436841700	3221910025823	17	184	125	1	1
11436841750	3221910025830	17.5	191	130	1	1
11436841800	3221910025847	18	191	130	1	1
11436841850	3221910025854	18.5	198	135	1	1
11436841900	3221910025861	19	198	135	1	1
11436841950	3221910025878	19.5	205	140	1	1
11436842000	3221910025885	20	205	140	1	1



HSS FULLY GROUND JOBBER LENGTH DRILL. REDUCED SHANK

BROCA HSS RECTIFICADA CILÍNDRICA. SERIE CORTA. MANGO REDUCIDO.

PUNTA HSS CILINDRICA CORTA. TIPO N | GAMBO RIDOTTO.



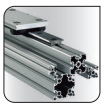
HSS ground bit. Split point tip geometry ensures durability as well as accurate drilling. Reduced shank.

Rapidez, precisión y confort de taladrado gracias a su afilado en cruz. Broca Mango reducido HSS rectificada.

Velocità, precisione e comfort grazie alla sua affilatura a croce. Punta a codolo ridotto HSS tagliato e molato.



Metal
Metal
Metallo



Aluminium Profiles
Perfiles aluminio
Profilo d'alluminio

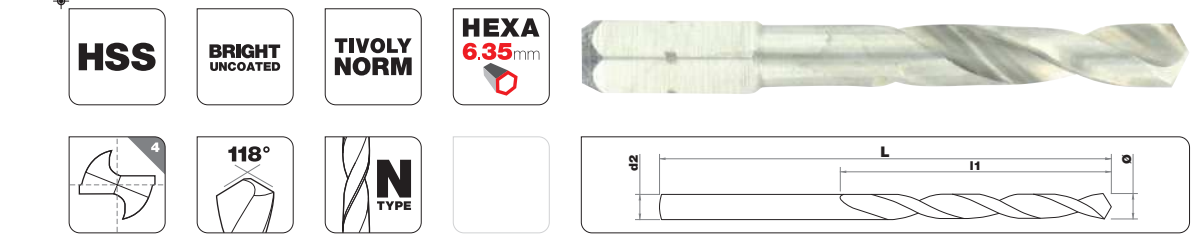
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11436821600	3221910005498	16	178	120	1	1
11436821800	3221910005535	18	191	130	1	1
11436822000	3221910005573	20	205	140	1	1



EXTRA SHORT | HSS METAL DRILL BIT | FULLY GROUND, HEXAGONAL SHANK DRILL. SPLIT POINT.

EXTRA SHORT | 'BROCA METAL HSS / RECTIFICADA, MANGO HEXAGONAL, PUNTA EN CRUZ.

EXTRA CORTA | PUNTA METALLO HSS | CODOLO ESAGONALE, AFFILATURA A CROCE.



Split point for easier drilling. Hex shank 1/4"

Confort de taladrado gracias a su afilado en cruz. Mango hexagonal 1/4"

Comfort di foratura grazie alla sua affilatura a croce.Codolo esagonale 1/4"



Metal

Metal

Metallo



Aluminium Profiles

Perfiles aluminio

Profilo d'alluminio

1143704	EAN	Ø	d2	L	l	QTY	PCB
11437040300	3221910881450	3	6.35	38	16	1	1
11437040350	3221910881467	3.5	6.35	40	18	1	1
11437040400	3221910881474	4	6.35	44	20	1	1
11437040450	3221910881481	4.5	6.35	46	24	1	1
11437040500	3221910881498	5	6.35	50	26	1	1
11437040550	3221910881504	5.5	6.35	50	26	1	1
11437040600	3221910881511	6	6.35	50	26	1	1
11437040650	3221910881528	6.5	6.35	50	30	1	1
11437040700	3221910881535	7	6.35	50	30	1	1
11437040800	3221910881542	8	6.35	51	32	1	1
11437040850	3221910881559	8.5	6.35	53	33	1	1
11437040900	3221910881566	9	6.35	53	33	1	1
11437041000	3221910881573	10	6.35	54	38	1	1

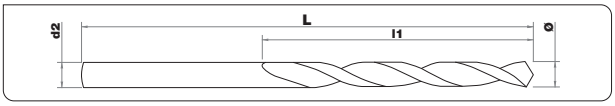


TECHNIC | HSS METAL DRILL BIT | FULLY GROUND, HEXAGONAL SHANK DRILL.

TECHNIC | 'BROCA METAL HSS / RECTIFICADA MANGO HEXAGONAL CORTA.

TECHNIC | PUNTA METALLO HSS | CODOLO ESAGONALE.





Special point for easier drilling. Quick change Hex shank

Confort de taladrado gracias a su afilado especial. Mango hexagonal con amarre rápido.

Comfort di foratura grazie alla sua affilatura especial.Codolo esagonale per attacco rapido.



Sheet Steel
Chapas
Lamiera



Metal
Metal
Metallo

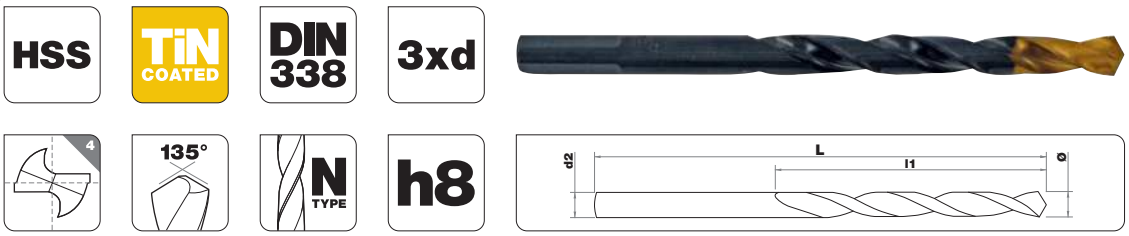
1143432	EAN	Ø	L	l	QTY	PCB
11434320100	3221910835705	1	61	12	1	1
11434320150	3221910835712	1.5	65	18	1	1
11434320200	3221910835729	2	68	24	1	1
11434320220	3221910835736	2.2	72	27	1	1
11434320250	3221910835743	2.5	76	30	1	1
11434320300	3221910024642	3	80	33	1	1
11434320320	3221910024659	3.2	84	36	1	1
11434320350	3221910024666	3.5	89	39	1	1
11434320400	3221910024673	4	94	43	1	1
11434320420	3221910024680	4.2	94	43	1	1
11434320450	3221910024697	4.5	99	47	1	1
11434320500	3221910024703	5	105	52	1	1
11434320600	3221910024734	6	112	57	1	1
11434320650	3221910835859	6.5	112	57	1	1
11434320800	3221910835873	8	117	75	1	1
11434321000	3221910835880	10	133	87	1	1



TECHNIC STEAM TIN | HSS METAL DRILL BIT | FULLY GROUND JOBBER LENGTH DRILL. SPLIT POINT.

TECHNIC STEAM TIN | BROCA METAL HSS / RECTIFICADA CILÍNDRICA CORTA.PUNTA EN CRUZ.

TECHNIC STEAM TIN | PUNTA METALLO HSS | CILINDRICA CORTA, AFFILATURA A CROCE.



TITANIUM coated HSS bit. Split point tip geometry ensures durability as well as fast accurate drilling.

Gran duración de vida gracias a su recubrimiento TITANIO. Rapidez, precisión y confort de taladrado.

Grande durata grazie al suo rivestimento in TITANIO. Velocità / precisione e comfort.



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

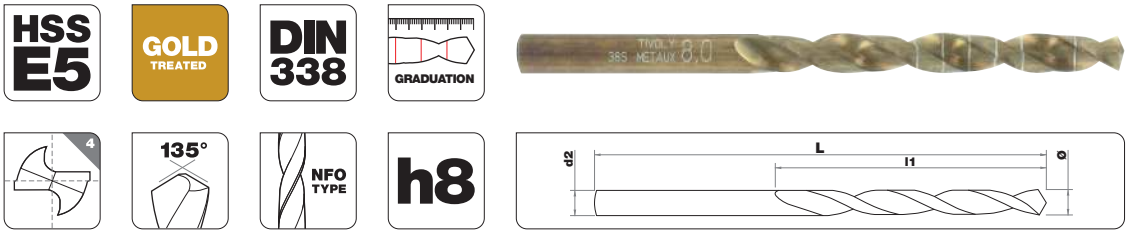
1145312	EAN	Ø	L	l	QTY	PCB
11453120100	3221912096104	1	34	12	1	3
11453120150	3221912096111	1.5	40	18	1	3
11453120200	3221912096128	2	49	24	1	3
11453120250	3221912096135	2.5	57	30	1	3
11453120300	3221912096142	3	61	33	1	3
11453120320	3221912096159	3.2	65	36	1	3
11453120350	3221912096166	3.5	70	39	1	3
11453120400	3221912096173	4	75	43	1	3
11453120420	3221912096180	4.2	75	43	1	3
11453120450	3221912096197	4.5	80	47	1	3
11453120480	3221912096203	4.8	86	52	1	3
11453120500	3221912096210	5	86	52	1	3
11453120520	3221912096227	5.2	86	52	1	3
11453120550	3221912096234	5.5	93	57	1	3
11453120600	3221912096241	6	93	57	1	3
11453120620	3221912096258	6.2	101	63	1	3
11453120650	3221912096265	6.5	101	63	1	1
11453120700	3221912096272	7	109	69	1	1
11453120750	3221912096289	7.5	109	69	1	1
11453120800	3221912096296	8	117	75	1	1
11453120850	3221912096302	8.5	117	75	1	1
11453120900	3221912096319	9	125	81	1	1
11453120950	3221912096326	9.5	125	81	1	1
11453121000	3221912096333	10	133	87	1	1
11453121050	3221912096340	10.5	133	87	1	1
11453121100	3221912096357	11	142	94	1	1
11453121200	3221912096364	12	151	101	1	1
11453121300	3221912096371	13	151	101	1	1



TECHNIC COBALT | HSSE5 METAL DRILL BIT | ROUND SHANK | LONG LIFE

TECHNIC COBALT | BROCA METAL HSSE5 | MANGO CILÍNDRICO

TECHNIC COBALT | PUNTA METALLO HSSE5 | CODOLO CILINDRICO | USO INTENSIVO



20% Faster drilling 20% greater drilling life. Easier drilling = less energy. Depth Markings = greater precision

Rapidez: +20%. Duración de vida: +20%. Mayor confort con menos energía. Graduación= profundidad controlada.

Rapidità : +20%. Durata di vita: +20%. Più confort con meno energia .Graduato = per verificare la profondità.



Stainless Steel
Aceros inoxidables
Acciai inossidabili



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

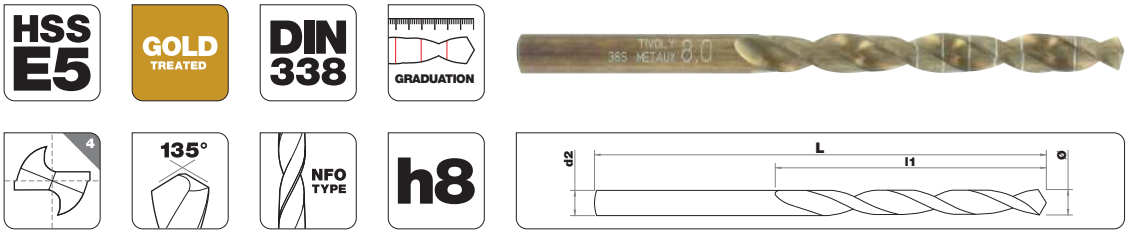
1146854	EAN	Ø	L	l	QTY	PCB
11468540100	3221912030054	1	34	12	1	3
11468540150	3221912030061	1.5	40	18	1	3
11468540200	3221912030085	2	49	24	1	3
11468540250	3221912030092	2.5	57	30	1	3
11468540300	3221912030047	3	61	33	1	3
11468540320	3221912030160	3.2	65	36	1	3
11468540350	3221912030177	3.5	70	39	1	3
11468540400	3221912030184	4	75	43	1	3
11468540420	3221912030191	4.2	75	43	1	3
11468540450	3221912030207	4.5	80	47	1	3
11468540500	3221912030214	5	86	52	1	3
11468540520	3221912030221	5.2	86	52	1	3
11468540550	3221912030238	5.5	93	57	1	3
11468540600	3221912030245	6	93	57	1	3
11468540650	3221912030252	6.5	101	63	1	3
11468540700	3221912030269	7	109	69	1	1
11468540750	3221912030276	7.5	109	69	1	1
11468540800	3221912030283	8	117	75	1	1
11468540850	3221912030290	8.5	117	75	1	1
11468540900	3221912030306	9	125	81	1	1
11468540950	3221912030313	9.5	125	81	1	1
11468541000	3221912030320	10	133	87	1	1
11468541050	3221912030337	10.5	133	87	1	1
11468541100	3221912030344	11	142	94	1	1
11468541200	3221912030351	12	151	101	1	1
11468541300	3221912030368	13	151	101	1	1



TECHNIC COBALT | HSSE5 METAL DRILL BIT | ROUND SHANK | LONG LIFE

TECHNIC COBALT | BROCA METAL HSSE5 | MANGO CILÍNDRICO

TECHNIC COBALT | PUNTA METALLO HSSE5 | CODOLO CILINDRICO | USO INTENSIVO



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Rapidità : +20%. Durata di vita: +20%. Più confort con meno energia .Graduato = per verificare la profondità.



Stainless Steel
Aceros inoxidables
Acciai inossidabili



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1146852	EAN	Ø	L	l	QTY	PCB
11468520080	3221912086976	0.8	30	10	1	3
11468520100	3221912020543	1	34	12	1	3
11468520120	3221912087089	1.2	38	16	1	3
11468520150	3221912021021	1.5	40	18	1	3
11468520180	3221912087096	1.8	46	22	1	3
11468520200	3221912021038	2	49	24	1	3
11468520220	3221912087102	2.2	53	27	1	3
11468520250	3221912021045	2.5	57	30	1	3
11468520280	3221912087119	2.8	61	33	1	3
11468520300	3221912021052	3	61	33	1	3
11468520320	3221912021069	3.2	65	36	1	3
11468520330	3221912021076	3.3	65	36	1	1
11468520350	3221912021083	3.5	70	39	1	3
11468520380	3221912087126	3.8	75	43	1	3
11468520400	3221912021090	4	75	43	1	3
11468520420	3221912021106	4.2	75	43	1	3
11468520450	3221912021113	4.5	80	47	1	3
11468520480	3221912021120	4.8	86	52	1	1
11468520500	3221912021137	5	86	52	1	3
11468520520	3221912021144	5.2	86	52	1	1
11468520550	3221912021151	5.5	93	57	1	3
11468520600	3221912021168	6	93	57	1	3
11468520620	3221912087133	6.2	101	63	1	3
11468520650	3221912021175	6.5	101	63	1	3
11468520680	3221912021182	6.8	109	69	1	1
11468520700	3221912021199	7	109	69	1	1
11468520750	3221912021205	7.5	109	69	1	1
11468520800	3221912021212	8	117	75	1	1
11468520850	3221912021229	8.5	117	75	1	1
11468520900	3221912021236	9	125	81	1	1
11468520950	3221912021243	9.5	125	81	1	1
11468521000	3221912021250	10	133	87	1	1
11468521020	3221912087140	10.2	133	87	1	1
11468521050	3221912021267	10.5	133	87	1	1
11468521100	3221912021274	11	142	94	1	1
11468521200	3221912021281	12	151	101	1	1
11468521300	3221912021298	13	151	101	1	1



TECHNIC COBALT SL | HSSE5 METAL DRILL BIT | ROUND SHANK | LONG LIFE

TECHNIC COBALT SL | BROCA METAL HSSE5 | MANGO CILÍNDRICO | USO INTENSIVO

TECHNIC COBALT SL | PUNTA METALLO HSSE5 | CODOLO CILINDRICO | USO INTENSIVO



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Stainless Steel
Aceros inoxidables
Acciai inossidabili



Metal
Metal
Metallo

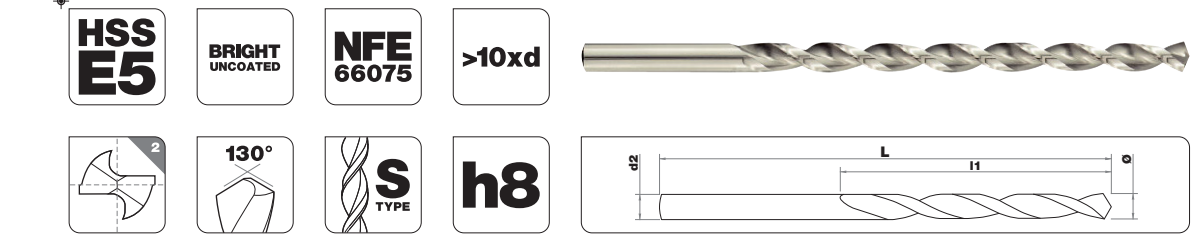
1140572	EAN	Ø	L	l	QTY	PCB
11405720200	3221912087164	2	85	56	1	3
11405720250	3221912087171	2.5	95	62	1	3
11405720300	3221912087188	3	100	66	1	3
11405720350	3221912087195	3.5	112	73	1	3
11405720400	3221912087201	4	119	78	1	3
11405720450	3221912087218	4.5	126	82	1	3
11405720500	3221912087225	5	132	87	1	3
11405720600	3221912087232	6	139	91	1	3
11405720800	3221912087249	8	165	109	1	1



TECHNIC XL | HSS E5 METAL DRILL BIT | ROUND SHANK | LONG LIFE

TECHNIC XL | BROCA METAL HSS E5 / MANGO CILÍNDRICO / USO INTENSIVO

TECHNIC XL | PUNTA METALLO HSS E5 | CODOLO CILINDRICO | USO INTENSIVO



Extra long HSS ground bit. Grind geometry ensures durability as well as accurate drilling.

Resistencia, precisión y rendimiento de taladrado gracias a su afilado. Broca extra-larga HSS rectificada

Resistenza, precisione e prestazioni di foraturagrazie alla sua affilatura. Punta Extra Long HSS tagliata e molata.



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1140622	EAN	Ø	L	l	QTY	PCB
11406220400	3221910005290	4	160	120	1	1
11406220500	3221910005306	5	160	120	1	1



1140632	EAN	Ø	L	l	QTY	PCB
11406320600	3221910005313	6	200	150	1	1
11406320800	3221910005337	8	200	150	1	1



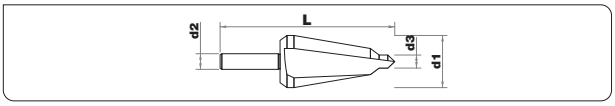
PROGRESSIVE SHANK HSS METAL DRILL BIT | RND SHANK | T LINE

BROCA ESCALONADA HSS | MANGO CILÍNDRICO | T LINE

PUNTA CONICA HSS | CODOLO CILINDRICO | T LINE

HSS | BRIGHT UNCOATED | TIVOLY NORM





Conical HSS bit - Ideal for drilling & enlarging holes in sheet metal & plastic

Herramienta cónica, ideal para taladrar y ampliar agujeros en chapas y plástico.

Punta conica, ideale per allargare fori in in lamiera e plastica.



Metal
Metal
Metallo

XT60212	EAN	Ø	QTY	PCB
XT60672000634	3128820006341	6>20	1	1



HSS SHEET DRILL.

BROCA HSS CÓNICA LISA.

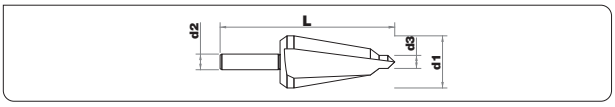
PUNTA HSS CONICA LISCIA ALLARGA FORI.

HSS | BRIGHT UNCOATED | TIVOLY NORM









Drilling and enlarging sheet metal and plastics.

Para chapas y plásticos.

Foratura e allargatura lamiere e materiali plastici.



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1143862	EAN	d1	d2	d3	L	QTY	PCB
11438620314	3221910223038	14	6	3	58	1	1
11438620520	3221910223045	20	8	5	71	1	1
11438620531	3221910223052	31	8	5	103	1	1
11438621630	3221910223069	30.5	9	16	76	1	1
11438622440	3221910223076	40	10	24	89	1	1



HSS STEP DRILL. STRAIGHT FLUTE | T LINE

BROCA HSS ESCALONADA. CANAL RECTO | T LINE

PUNTA HSS CONICA SCALINATA | SCANALATURE DRITTE | T LINE



For sheet and plastic.

Para chapas y plásticos.

Foratura lamiere e materiali plastici.



Metal

Metal

Metallo

1144881	EAN	d1	d2	d3	L	QTY	PCB
11448810412	3221910856496	12	6	4	65	1	1
11448810420	3221910856502	20	8	4	75	1	1
11448810430	3221910856519	30	10	4	100	1	1
11448810637	3221910856526	37	10	6	100	1	1



1144862	EAN	Ø	L	QTY	PCB
11448620412	3221910856533	4>12	65	1	1
11448620420	3221910856540	4>20	75	1	1
11448620430	3221910856557	4>30	100	1	1
11448620637	3221910856564	6>37	100	1	1



HSS STEP DRILL. HELICOÏDAL FLUTE.

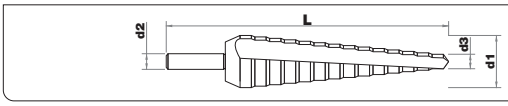
BROCA HSS ESCALONADA. CANAL HELICOIDAL.

PUNTA HSS CONICA SCALINATA | SCANALATURE ELICOIDALI.

HSS | BRIGHT UNCOATED | TIVOLY NORM | 4



100°



For sheet and plastic. Comfort, accuracy.

Para chapas y plásticos. Confort, precisión.

Foratura lamiere e materiali plastici. Comfort e precisione.



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1144852	EAN	d1	d2	d3	L	QTY	PCB
11448520412	3221910899134	12	6	4	65	1	1
11448520420	3221910899141	20	8	4	75	1	1
11448520430	3221910899158	30	10	4	100	1	1
11448520637	3221910899165	37	10	6	100	1	1



HI PERF | HSS STEP DRILL TIALN. HELICOIDAL FLUTE

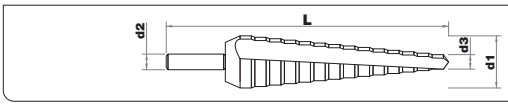
HI PERF | BROCA HSS ESCALONADA TIALN. CANAL HELICOIDAL.

HI PERF | PUNTA HSS TIAIN CONICA SCALINATA | SCANALATURE ELICOIDALI.

HSS | TiAIN COATED | TIVOLY NORM | 4



100°



For sheet and plastic. Speed, life span.

Para chapas y plásticos. Rapidez, duración de vida.

Foratura lamiere e mat. plast. resistenti. Velocità. Lunga durata.



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

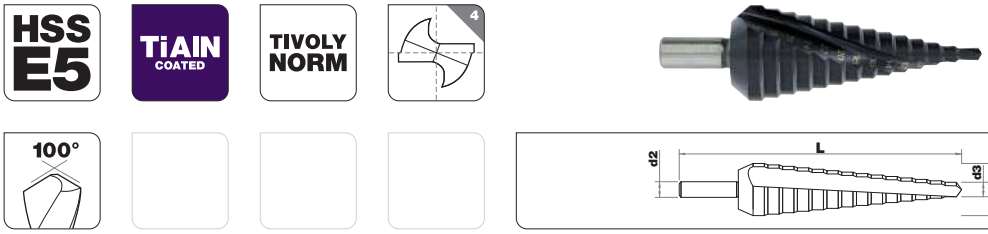
1143872	EAN	d1	d2	d3	L	QTY	PCB
11438720412	3221910223083	12	6	4	65	1	1
11438720420	3221910223090	20	8	4	75	1	1
11438720430	3221910223106	30	10	4	100	1	1
11438720637	3221910223113	37	10	6	100	1	1



HI PERF | HSSE5 STEP DRILL TIALN. HELICOÏDAL FLUTE.

HI PERF | BROCA HSSE5 ESCALONADA TIALN. CANAL HELICOIDAL.

HI PERF | PUNTA HSSE5 TIAIN CONICA SCALINATA | SCANALATURE ELICOIDALI.



For stainless steels sheet and resistant material. Speed, life span

Para chapas de aceros inox. Y resistentes. Rapidez, duración de vida.

Foratura acciai inossidabili, mat. resistenti. Velocità. Lunga durata.



Stainless Steel
Aceros inoxidables
Acciai inossidabili



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1144872	EAN	d1	d2	d3	L	QTY	PCB
11448720412	3221910843250	12	6	4	65	1	1
11448720420	3221910843267	20	8	4	75	1	1
11448720430	3221910843274	30	10	4	100	1	1
11448720637	3221910843281	37	10	6	100	1	1



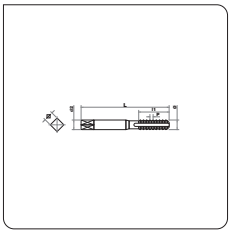
EXTRA | HAND TAP - CHROME STEEL | METRIC

EXTRA | MACHO DE MANO ACERO AL CARBONO / MÉTRICO

EXTRA | MASCHO A MANO ACCIAIO AL CROMO | METRICO

CRV | BRIGHT UNCOATED | DIN 352 | x3 SET | C FORM | M





Set of 3 hand taps -Chrome steel - use in three stages with wrench

Juego de 3 machos de mano al CARBONO. Utilización en 3 etapas sucesivas con un porta-machos.

Gioco di 3 Maschi a mano CROMO. Utilizzare in 3 passaggi con giramaschi.

Metal
Metal
Metallo

1050012	EAN	Ø	L	l	QTY	PCB
1050012030050	3221910004439	3*50	48	11	3	1
1050012040070	3221910004453	4*70	53	13	3	1
1050012050080	3221910004477	5*80	58	16	3	1
1050012060100	3221910004491	6*100	66	19	3	1
1050012080125	3221910004514	8*125	72	22	3	1
1050012100150	3221910004538	10*150	80	24	3	1
1050012120175	3221910004552	12*175	89	29	3	1



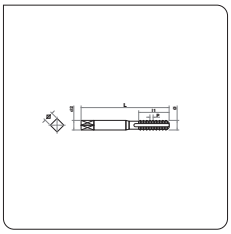
TECHNIC | SET OF 3 HSS DIN HAND TAPS

TECHNIC | JUEGO DE 3 MACHOS DE MANO HSS DIN

TECHNIC | SERIE DI 3 MASCHI A MANO HSS ISO

HSS | BRIGHT UNCOATED | DIN 352 | x3 SET | C FORM | 6H | M





Steels hand tapping.

Roscado manual de aceros.

Filettatura manuale degli acciai.

Metal
Metal
Metallo

Cast iron
Fundiciones
Ghisa

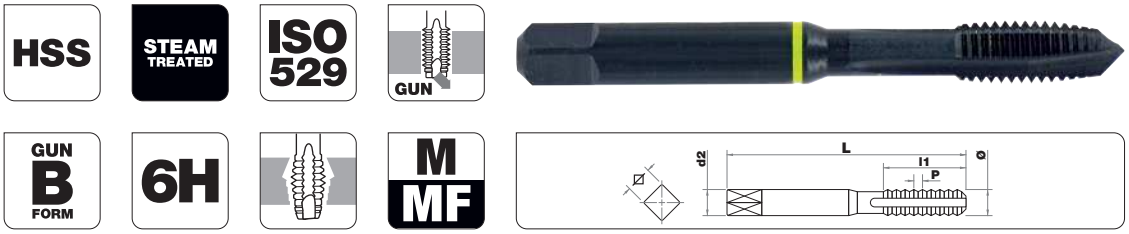
1050052	EAN	Ø	L	l	QTY	PCB
1050052030050	3221910004583	3*50	48	11	3	1
1050052040070	3221910004606	4*70	53	13	3	1
1050052050080	3221910004620	5*80	58	16	3	1
1050052060100	3221910004644	6*100	66	19	3	1
1050052080125	3221910004668	8*125	72	22	3	1
1050052100150	3221910004682	10*150	80	24	3	1
1050052120175	3221910004705	12*175	89	29	3	1



TECHNIC | HSS ISO MACHINE TAP GUN BACK CHAMFER.

TECHNIC | MACHO MÁQUINA GUN CONI. INVERSA.

TECHNIC | MASCHIO A MACCHINA HSS ISO GUN.



Multi-application machine tapping. Comfort, accuracy.

Multi-aplicación. Confort, precisión.

Filettatura a macchina multiapplicazione. Comfort e precisione.



Stainless Steel
Aceros inoxidables
Acciai inossidabili



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1050074	EAN	Ø	L	l	QTY	PCB
1050074030050	3221910079659	3*50	48	11	1	1
1050074040070	3221910079666	4*70	53	13	1	1
1050074050080	3221910079673	5*80	58	16	1	1
1050074060100	3221910079680	6*100	66	19	1	1
1050074080125	3221910079703	8*125	72	22	1	1
1050074100150	3221910079710	10*150	80	24	1	1
1050074120175	3221910079727	12*175	89	29	1	1



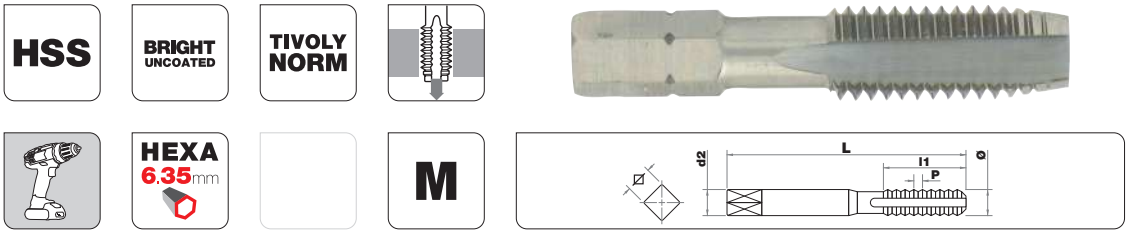
1050072	EAN	Ø	L	l	QTY	PCB
1050072030050	3221910035020	3*50	48	11	1	1
1050072040070	3221910035037	4*70	53	13	1	1
1050072050080	3221910035044	5*80	58	16	1	1
1050072060100	3221910035051	6*100	66	19	1	1
1050072080125	3221910035075	8*125	72	22	1	1
1050072100150	3221910035082	10*150	80	24	1	1
1050072120175	3221910035099	12*175	89	29	1	1



EXTRA | HSS MACHINE TAP BIT | HEX SHANK

EXTRA | MACHOS HSS. MANGO HEXAGONAL 1/4”.

EXTRA | MASCHIO HSS DRITTO. CODOLO ESAGONALE 1/4”.



For steel tapping using a screw gun and 1/4” bit tip holder.

Roscado de aceros para atornillador y portapuntas 1/4”.

Filettatura acciai su avvitatrice e porta punte 1/4”.



Sheet Steel
Chapas
Lamiera

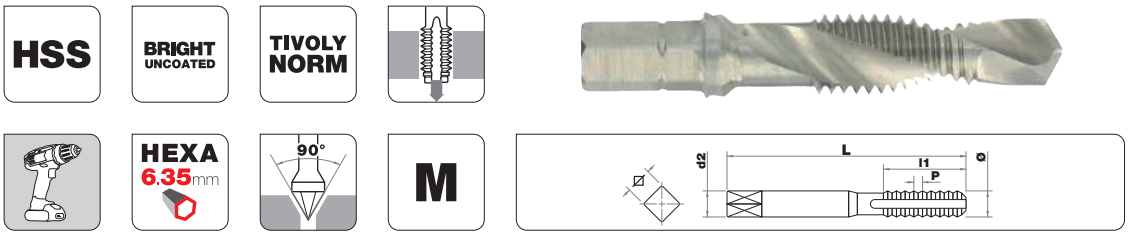
1050304	EAN	Ø	L	QTY	PCB
1050304030050	3221910881788	3x50	36	1	1
1050304040070	3221910881795	4x70	39	1	1
1050304050080	3221910881801	5x80	41	1	1
1050304060100	3221910881818	6x100	44	1	1
1050304080125	3221910881825	8x125	49	1	1
1050304100150	3221910881832	10x150	52	1	1



EXTRA | HSS TAPPING DRILL BIT | HEX SHANK

EXTRA | BROCA ROSCADORA Y FRESADORA HSS | MANGO HEXAGONAL

EXTRA | PUNTA MASCHIATRICE & FRESA HSS | CODOLO ESAGONALE



Drill , Tap & Deburr in one operation. Use in one step with drill - low speed

Taladrar, roscar y desbarbar en una sola operación. Utilización en 1 etapa, a baja velocidad de rotación.

Forare, maschiare e sbavare in una sola operazione. Utilizzare in un solo passaggio su un trapano a bassa velocità di rotazione.



Sheet Steel
Chapas
Lamiera

1050294	EAN	Ø	L	QTY	PCB
1050294030050	3221910881597	3x50	36	1	1
1050294040070	3221910881993	4x70	39	1	1
1050294050080	3221910882006	5x80	41	1	1
1050294060100	3221910881627	6x100	44	1	1
1050294080125	3221910881634	8x125	49	1	1
1050294100150	3221910881641	10x150	52	1	1



1050292	EAN	Ø	L	QTY	PCB
1050292040070	3221910879860	4x70	39	1	1
1050292050080	3221910879877	5x80	41	1	1
1050292060100	3221910881986	6x100	44	1	1



EXTRA | EXTENDING DIES CHROME STEEL | 25,4

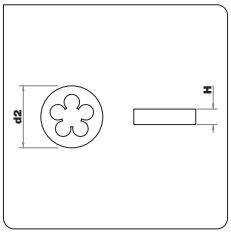
EXTRA | COJINETE ACERO AL CARBONO / DIAM. 25,4

EXTRA | FILIERA ACCIAIO AL CROMO | 25,4

CRV | BRIGHT UNCOATED | NFE 74001 | 25,4 38,1

C FORM | M





Extending die. For use with Holder. Holds die straight & secure

Cojinete extensible. Utilizar el porta-cojinetes para realizar el roscado. Mantener la herramienta perpendicularmente.

Filiera estendibile. Utilizzare il girafiliere per effettuare la filettatura. Tenere l'utensile in modo perpendicore.



Metal

Metal

Metallo

1100012	EAN	Ø	QTY	PCB
1100012030050	3221910003661	3*50	1	1
1100012040070	3221910003685	4*70	1	1
1100012050080	3221910003708	5*80	1	1
1100012060100	3221910003722	6*100	1	1
1100012070100	3221910003739	7*100	1	1
1100012080125	3221910003746	8*125	1	1
1100012100150	3221910003760	10*150	1	1



TAP WRENCH

PORTA-MACHOS

GIRA MASCHI



Tap wrench - essential for hand tapping tasks. Holds tap in straight & secure position

Porta-Machos indispensable para realizar el roscado manual. Mantener la herramienta perpendicularmente.

Giramaschi, indispensabile per effettuare filettature a mano. Tenere l'utensili in modo perpendicolare

1110012	EAN	Ø	QTY	PCB
11100120110	3221910007492	N°1	1	1
11100120412	3221910007508	N°2	1	1



TAP WRENCH

PORTA-MACHOS

GIRA MASCHI



11100120001
3221910880415

QTY	PCB
1	1

Click fit Tap wrench - essential for hand tapping tasks. Holds tap in straight & secure position

Porta-Machos con carraca indispensable para realizar el roscado manual. Mantener la herramienta perpendicularmente.

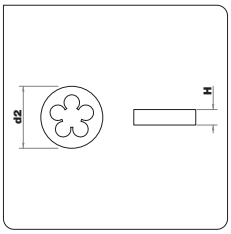
Giramaschi a cricchetto, indispensabile per effettuare filettature a mano. Tenere l'utensili in modo perpendicolare

EXTRA | DIE HOLDER

EXTRA | PORTA-COJINETES

EXTRA | GIRA-FILIERA





Die Holder - essential for hand die applications. Holds die straight & secure

Porta-cojinetes, indispensable para realizar el roscado manual. Mantener la herramienta perpendicularmente

Girafiliera, indispensabile per realizzare filettature in manuale. Tenere l'utensile in modo perpendicore.

1110042	EAN	Ø	QTY	PCB
11100420254	3221910004392	25.4	1	1
11100420381	3221910004408	38.1	1	1



COUNTERSINK HSS - 90° | ROUND SHANK | T LINE

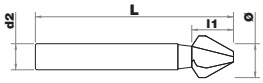
AVELLANADOR HSS 90° | MANGO CILÍNDRICO | T LINE

FRESA A SMUSSO HSS 90° | CODOLO CILINDRICO | T LINE

HSS | TIVOLY NORM | 90° | HEXA 6,35 mm



Z3



Use on a screw gun and 1/4" bit tip holder for steels and plastics.

Uso en atornilladores y portapuntas 1/4" en aceros y plasticos.

Utilizzo su avvitatrici e porta punte 1/4" per acciai e plastiche.



Metal
Metal
Metallo

XT60122	EAN	Ø	L	QTY	PCB
XT60612045217	3128820452179	12	40	1	3
XT60612045218	3128820452186	20	42	1	3



HSS COUNTERSINKER BITS 90°. HEXA SHANK 1/4"

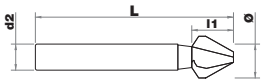
AVELLANADOR HSS A 90°. MANGO HEXAGONAL 1/4".

FRESA PER SVASATURA HSS A 90°, CODA ESAGONALE 1/4.

HSS | TIVOLY NORM | 90° | HEXA 6.35 mm



Z3



Use on a screw gun and 1/4" bit tip holder for steels and plastics.

Uso en atornilladores y portapuntas 1/4" en aceros y plasticos.

Utilizzo su avvitatrici e porta punte 1/4" per acciai e plastiche.



Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1033234	EAN	Ø	d2	L	QTY	PCB
10332340630	3221910881917	6.3	6,35	31	1	1
10332340830	3221910881924	8.3	6,35	31	1	1
10332341040	3221910881931	10.4	6,35	35	1	1
10332341240	3221910881948	12.4	6,35	35	1	1
10332341650	3221910881955	16.5	6,35	40	1	1
10332342050	3221910881962	20.5	6,35	40	1	1



HI PERF | HSSE5 COUNTERSINKERS 90°.

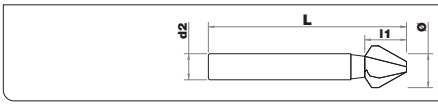
HI PERF | AVELLANADOR HSSE5 90°.

HI PERF | FRESA PER SVASATURA HSSE5 A 90° .

HSS E5 | BRIGHT UNCOATED | DIN 335C | 90°



Z3



Universal application. For stainless steels and resistant steels.

Uso universal. Para aceros inoxidables y resistentes.

Uso polivalente per acciai ad alta resistenza e inossidabili.



Stainless Steel
Aceros inoxidables
Acciai inossidabili



Metal
Metal
Metallo

1033162	EAN	Ø	L	QTY	PCB
10331620630	3221910222918	6.3	45	1	1
10331620800	3221910222925	8	50	1	1
10331620830	3221910222932	8.3	50	1	1
10331621000	3221910222949	10	50	1	1
10331621040	3221910222956	10.4	50	1	1
10331621150	3221910222963	11.5	56	1	1
10331621240	3221910222970	12.4	56	1	1
10331621500	3221910222987	15	60	1	1
10331621650	3221910222994	16.5	60	1	1
10331621900	3221910223007	19	63	1	1
10331622050	3221910223014	20.5	63	1	1
10331622500	3221910223021	25	67	1	1



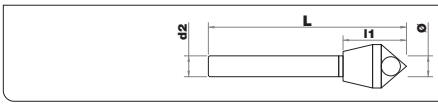
HI PERF | HSSE5 DEBURRING TOOLS WITH HOLE 90°.

HI PERF | AVELLANADOR CON AGUJERO HSSE5 90°.

HI PERF | FRESA PER SBAVATURA E FORATURA HSSE5 A 90°.

HSS E5 | BRIGHT UNCOATED | TIVOLY NORM | 90°





Universal application. For stainless steels and resistant steels.

Uso universal. Para aceros inoxidables y resistentes.

Uso polivalente per acciai ad alta resistenza e inossidabili.



Stainless Steel
Aceros inoxidables
Acciai inossidabili



Metal
Metal
Metallo

1036132	EAN	Ø	L	QTY	PCB
10361320205	3221910222871	2-5	45	1	1
10361320510	3221910222888	5-10	48	1	1
10361321015	3221910222895	10-15	65	1	1
10361321520	3221910222901	15-20	85	1	1

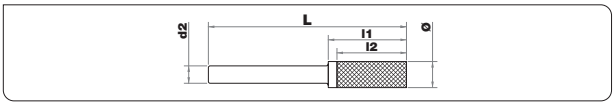


HI PERF | CARBIDE ROTARY BURRS. CYLINDRICAL END CUTTING.

HI PERF | FRESA LIMA MD CILÍNDRICA. CORTE AL CENTRO.

HI PERF | LIMA ROTATIVA IN MD, CILINDRICA, DOPPIO TAGLIENTE.







Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1031632	EAN	Ø	d2	L	l2	QTY	PCB
10316320600	3221910837242	6	6	50	16	1	1
10316320800	3221910837259	8	6	65	20	1	1
10316321000	3221910837266	10	6	65	20	1	1
10316321200	3221910837273	12	6	70	25	1	1

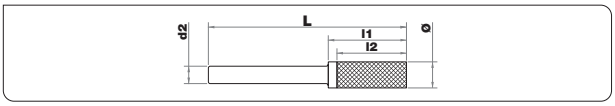


HI PERF | CARBIDE ROTARY BURRS. DOMED CYLINDRICAL.

HI PERF | FRESA LIMA MD CILÍNDRICA CON RADIO.

HI PERF | LIMA ROTATIVA IN MD, CILINDRICA, CON RAGGIO.







Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1031652	EAN	Ø	d2	L	l2	QTY	PCB
10316520600	3221910837280	6	6	50	16	1	1
10316520800	3221910837297	8	6	65	20	1	1
10316521000	3221910837303	10	6	65	20	1	1
10316521200	3221910837310	12	6	70	25	1	1



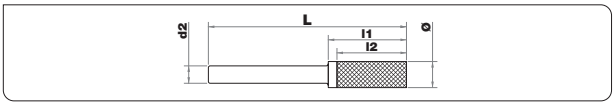
HI PERF | CARBIDE ROTARY BURRS. TREE.

HI PERF | FRESA LIMA MD PUNTA OJIVA.

HI PERF | LIMA ROTATIVA IN MD A OGIVA.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





Metal
Metal
Metallo

Cast iron
Fundiciones
Ghisa

1031792	EAN	Ø	d2	L	l2	QTY	PCB
10317920600	3221910837327	6	6	50	18	1	1
10317920800	3221910837334	8	6	63	18	1	1
10317921000	3221910837341	10	6	65	20	1	1
10317921200	3221910837358	12	6	70	25	1	1



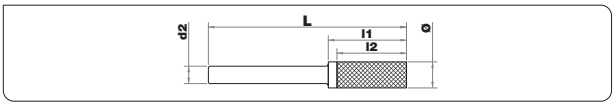
HI PERF | CARBIDE ROTARY BURRS. BALL NOSED TREE.

HI PERF | FRESA LIMA MD PUNTA OJIVA REDONDEADA.

HI PERF | LIMA ROTATIVA IN MD A OGIVA, CON RAGGIO.

HM CARB | BRIGHT UNCOATED | TIVOLY NORM





Metal
Metal
Metallo

Cast iron
Fundiciones
Ghisa

1031832	EAN	Ø	d2	L	l2	QTY	PCB
10318320600	3221910837365	6	6	50	18	1	1
10318320800	3221910837372	8	6	63	18	1	1
10318321000	3221910837389	10	6	65	20	1	1
10318321200	3221910837396	12	6	70	25	1	1



HI PERF | CARBIDE ROTARY BURRS. BALL.

HI PERF | FRESA LIMA MD PUNTA ESFÉRICA.

HI PERF | LIMA ROTATIVA IN MD, SFERICA.

HM CARB

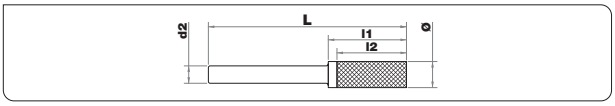
BRIGHT UNCOATED

TIVOLY NORM





D





Metal
Metal
Metallo



Cast iron
Fundiciones
Ghisa

1031852	EAN	ø	d2	L	l2	QTY	PCB
10318520600	3221910837402	6	6	50	18	1	1
10318520800	3221910837419	8	6	63	18	1	1
10318521000	3221910837426	10	6	70	20	1	1
10318521200	3221910837433	12	6	75	25	1	1



#07

6 STD METAL SET



STANDARD METAL bits ø 2 > 6 par mm + 8 mm

EST. STD 6 PZS



Brocas METAL ESTÁNDAR ø 2 > 6 por 1 mm + 8 mm

COF. STD 6 PZ

50200170010

3221910018023

QTY	PCB
6	1



Punte METALLO STANDARD ø 2 > 6 per mm + 8 mm

13 STD METAL SET



STANDARD METAL bits ø 1,5 > 6,5 mm

EST. STD 13 PZS



Brocas METAL ESTÁNDAR ø 1,5 > 6,5 mm

COF. STD 13 PZ

50200170008

3221910018047

QTY	PCB
13	1



Punte METALLO STANDARD ø 1,5 > 6,5 mm

19 STD METAL SET



STANDARD METAL bits ø 1 > 10 mm par 1/2 mm

EST. STD 19 PZS



Brocas METAL ESTÁNDAR ø 1 > 10 mm por 1/2 mm

COF. STD 19 PZ

50200170009

3221910018009

QTY	PCB
19	1



Punte METALLO STANDARD ø 1 > 10 mm per 1/2 mm

13 STD METAL SET TIN

13 PCS | TiN COATED | HSS

118° | N TYPE

STD METAL TIN bits ø 1,5 > 6,5 mm + 3,3 + 4,2

EST. STD 13 PZS TIN



Brocas METAL TIN ESTÁNDAR ø 1,5 > 6,5 mm + 3,3 + 4,2

COF. STD 13 PZ TIN

50200170005

3221910850845

QTY	PCB
13	1



Punte METALLO TIN STANDARD ø 1,5 > 6,5 mm + 3,3 + 4,2

14 STD METAL SET TIN

14 PCS | TiN COATED | HSS

118° | N TYPE

STD METAL TIN bits ø 1,5 > 6,5 mm+Countersink

EST. STD 14 PZS TIN



Brocas METAL TIN ESTÁNDAR ø 1,5 > 6,5 mm+broca fresa

COF. STD 14 PZ TIN

50200170011

3221910847913

QTY	PCB
14	1



Punte METALLO TIN STANDARD ø 1,5 > 6,5 mm+ punta fresa

CLIPSTER A61 T

06 PCS | HSS | BRIGHT UNCOATED

DIN 338 | 118°

Metal Bits PRO ø 2 > 6 par mm +8mm

CLIPSTER A61 T



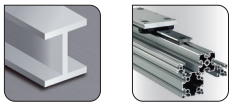
Brocas METAL PRO ø 2 > 6 mm par mm + 8 mm

CLIPSTER A61 T

11437770005

3221912072092

QTY	PCB
6	1



Punte METALLO PRO ø 2 > 6 mm per mm + 8 mm

CLIPSTER AP63 T

10 PCS | HSS | BRIGHT UNCOATED

DIN 338 | 118°

Metal Bits PRO ø 1 > 10 par mm

CLIPSTER AP63 T



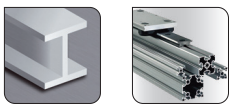
Brocas METAL PRO ø 1 > 10 mm par mm

CLIPSTER AP63 T

11437770004

3221912072085

QTY	PCB
10	1



Punte METALLO PRO ø 1 > 10 mm per mm

CLIPSTER A11 TX

06 PCS | HSS | STEAM TREATED | DIN 338 | 4 | 118°

Metal Bits TX ø 2 > 6 par mm +8mm

CLIPSTER A11 TX



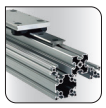
Brocas METAL TX ø 2 > 6 mm par mm + 8 mm

CLIPSTER A11 TX

11436770047

3221910050535

QTY	PCB
6	1

Punte METALLO TX ø 2 > 6 mm per mm + 8 mm

CLIPSTER AP13 TX

10 PCS | HSS | STEAM TREATED | DIN 338 | 4 | 118°

Metal Bits TX ø 1 > 10 par mm

CLIPSTER AP13 TX



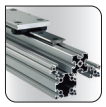
Brocas METAL TX ø 1 > 10 mm par mm

CLIPSTER AP13 TX

11436770049

3221910050559

QTY	PCB
10	1

Punte METALLO TX ø 1 > 10 mm per mm

CLIPSTER A21 TECHNIC STEAM TIN

06 PCS | HSS | TiN COATED | DIN 338 | 4 | 135°

METAL "TIN TIP" bits ø 2-3-4-5-6 mm + 8 mm

CLIPSTER A21 TECHNIC STEAM TIN



Brocas METAL "TIN TIP" ø 2-3-4-5-6 mm + 8 mm

CLIPSTER A21 TECHNIC STEAM TIN

11453170002

3221912072610

QTY	PCB
6	1




Punte Metallo "TIN TIP" ø 2-3-4-5-6 mm + 8 mm

CLIPSTER A23 TECHNIC STEAM TIN

10 PCS | HSS | TiN COATED | DIN 338 | 4 | 135°

METAL "TIN TIP" bits ø 1-2-3-4-5-6-7-8-9-10 mm

CLIPSTER A23 TECHNIC STEAM TIN



Brocas METAL "TIN TIP" ø 1-2-3-4-5-6-7-8-9-10 mm

CLIPSTER A23 TECHNIC STEAM TIN

11453170001

3221912072603

QTY	PCB
10	1




Punte Metallo "TIN TIP" ø 1-2-3-4-5-6-7-8-9-10 mm

SET | E | TECHNIC STEAM TIN

NEW

19 PCS

HSS

TiN COATED

DIN 338

135°

19 METAL "TIN TIP" bits ø 1 > 10 / 0,5 mm

ESTUCHE | E | TECHNIC STEAM TIN



19 Brocas METAL "TIN TIP" ø 1 > 10 / 0,5 mm

CASSETTA | E | TECHNIC STEAM TIN

11453170015

3221912092892

QTY	PCB
19	1



19 Punte Metallo "TIN TIP" ø 1 > 10 / 0,5 mm

SET | G | TECHNIC STEAM TIN

NEW

25 PCS

HSS

TiN COATED

DIN 338

135°

25 METAL "TIN TIP" bits ø 1 > 13 / 0,5 mm

ESTUCHE | G | TECHNIC STEAM TIN



25 Brocas METAL "TIN TIP" ø 1 > 13 / 0,5 mm

CASSETTA | G | TECHNIC STEAM TIN

11453170017

3221912092915

QTY	PCB
25	1



25 Punte Metallo "TIN TIP" ø 1 > 13 / 0,5 mm

A30 TECHNIC COBALT SET

05 PCS

HSS E5

GOLD TREATED

GRADUATION

135°

Depth marked METAL TECHNIC bits Ø 1-1,5-2-2,5-3 mm

EST. A30 TECHNIC COBALT



Brocas METAL TECHNIC GRADUADAS Ø 1-1,5-2-2,5-3 mm

COF. A30 TECHNIC COBALT

11468570003

3221912061317

QTY	PCB
5	1



Punte METALLO TECHNIC GRADUATA Ø 1-1,5-2-2,5-3 mm

CLIPSTER A31 TECHNIC COBALT

06 PCS

HSS E5

GOLD TREATED

GRADUATION

135°

Depth marked METAL TECHNIC bits ø 2-3-4-5-6mm+8mm

CLIPSTER A31 TECHNIC COBALT



Brocas METAL TECHNIC GRADUADAS ø 2-3-4-5-6 mm + 8 mm

CLIPSTER A31 TECHNIC COBALT

11468570002

3221912021397

QTY	PCB
6	1



Punte METALLO TECHNIC GRADUATA ø 2-3-4-5-6 mm + 8 mm

CLIPSTER A33 TECHNIC COBALT



Depth marked METAL TECHNIC bits ø 1-2-3-4-5-6-7-8-9-10mm

CLIPSTER A33 TECHNIC COBALT



Brocas METAL TECHNIC GRADUADAS ø 1-2-3-4-5-6-7-8-9-10 mm

CLIPSTER A33 TECHNIC COBALT

11468570001

3221912021403

QTY	PCB
10	1



Punte METALLO TECHNIC GRADUATA ø 1-2-3-4-5-6-7-8-9-10 mm

CLIPSTER PRO A34

NEW



Depth marked METAL TECHNIC bits ø 1,5 > 6,5 / 0,5 + 3,3 + 4,2 mm

CLIPSTER PRO A34



Brocas METAL TECHNIC GRADUADAS ø 1,5 > 6,5 / 0,5 + 3,3 + 4,2 mm

CLIPSTER PRO A34

11468570006

3221912112545

QTY	PCB
13	1



Punte METALLO TECHNIC GRADUATA ø 1,5 > 6,5 / 0,5 + 3,3 + 4,2 mm

SET | E | TECHNIC COBALT

NEW



Depth marked METAL TECHNIC bits ø 1 > 10 / 0,5 mm

ESTUCHE | E | TECHNIC COBALT



Brocas METAL TECHNIC GRADUADAS ø 1 > 10 / 0,5 mm

CASSETTA | E | TECHNIC COBALT

11468570015

3221912112347

QTY	PCB
19	1



Punte METALLO TECHNIC GRADUATA ø 1 > 10 / 0,5 mm

A15 METAL HEXA SET

05 PCS | HSS | STEAM TREATED | TIVOLY NORM | 4 | HEXA 6.35 mm

Metal Bits TX ø 2 > 6 par mm

EST. A15 HEXA



Brocas METAL TX ø2 > 6 por mm

COF. A15 ESAGONALE

11434370001

3221910866594

QTY	PCB
5	1




Punte METALLO TX ø 2 > 6 per mm

SET | FHX6 HEXA

NEW | 07 PCS | HSS | BRIGHT UNCOATED | HEXA 6.35 mm | 4 | 118°

6 metal drills HSS hexa shank 1/4" Ø 3-4-5-6-8-10 mm + 1 BH

ESTUCHE | FHX6 HEXA



6 metal drills HSS hexa shank 1/4" Ø 3-4-5-6-8-10 mm + 1 BH

CASSETTA | FHX6 HEXA

11437070002

3221912117496

QTY	PCB
13	1




6 punte HSS con attacco esagonale 1/4" Ø 3-4-5-6-8-10 mm + 1 BH

SET | FHX12 HEXA

12 PCS | HSS | BRIGHT UNCOATED | HEXA 6.35 mm | 4 | 118°

12 metal drills HSS hexa shank 1/4" Ø 3>7 mm 1/2+8+9+10 mm

ESTUCHE | FHX12 HEXA



12 metal drills HSS hexa shank 1/4" Ø 3>7 mm 1/2+8+9+10 mm

CASSETTA | FHX12 HEXA

11437070001

3221910881580

QTY	PCB
12	1




12 punte HSS con attacco esagonale 1/4" Ø da 3 a 7 mm in incrementi da 1/2+8+9+10 mm

SET | FCL330

03 PCS | HSS | BRIGHT UNCOATED | TIVOLY NORM | 4 | 100°

3 conical drill bits HSS 3-14 5-20 16-30,5

ESTUCHE | FCL330



3 brocas conicas HSS 3-14 5-20 16-30,5

CASSETTA | FCL330

11438670001

3221912056566

QTY	PCB
3	1




3 frese conice HSS 3-14 5-20 16-30,5

SET | FCE430

03 PCS | HSS | TiAlN COATED | TIVOLY NORM | 4 | 100°

3 step drills HSS TiAlN 4-12 4-20 4-30

ESTUCHE | FCE430



3 brocas escanoladas HSS TiAlN 4-12 4-20 4-30

CASSETTA | FCE430

11438770001

3221910285937

QTY	PCB
3	1




3 punte multidiametro HSS TiAlN 4-12 4-20 4-30

SET | FCE637

03 PCS | HSS | TiAlN COATED | TIVOLY NORM | 4 | 100°

3 step drills HSS TiAlN 4-12 4-20 6-37

ESTUCHE | FCE637



3 brocas escanoladas HSS TiAlN 4-12 4-20 6-37

CASSETTA | FCE637

11438770002

3221910780517

QTY	PCB
3	1




3 punte multidiametro HSS TiAlN 4-12 4-20 6-37

SET | FCE430 COBALT

03 PCS | HSS E5 | TiAlN COATED | TIVOLY NORM | 4 | 100°

3 step drills HSS E TiAlN 4-12 4-20 4-30

ESTUCHE | FCE430 COBALT



3 brocas escanoladas HSS E TiAlN 4-12 4-20 4-30

CASSETTA | FCE430 COBALT

11448770001

3221910843298

QTY	PCB
3	1





3 punte multidiametro HSS E TiAlN 4-12 4-20 4-30

SET | FCE637 COBALT

03 PCS | HSS E5 | TiAlN COATED | TIVOLY NORM | 4 | 100°

3 step drills HSS E TiAlN 4-12 4-20 6-37

ESTUCHE | FCE637 COBALT



3 brocas escanoladas HSS E TiAlN 4-12 4-20 6-37

CASSETTA | FCE637 COBALT

11448770002

3221910843304

QTY	PCB
3	1





3 punte multidiametro HSS E TiAlN 4-12 4-20 6-37

SET | MTF21 | STANDARD

21 PCS | M MF | CRV

9 Taps M3 to M12 +9 extending dies M3 to M12+I s/driver+1 die holder + 1 holder for ext dies

ESTUCHE | MTF21 | STANDARD



11 Machos M3 a M12 + 9 Cojinetes M3 a M12 + 1 destornillador + 1 Porta-machos + 1 Portacojinetes.

CASSETTA | MTF21 | STANDARD

11900970013

3221910017651

QTY	PCB
21	1

9 Maschi M3 a M12 + 9 filiere M3 a M12 + 1 cacciavite + 1 giramaschi + 1 girafiliere

SET | MTF39 | STANDARD

39 PCS | M MF | CRV

17 Taps M3 to M12 +17 extending dies M3 to M12+1 thread gauge +I s/driver+2 die holders + 1 holder for ext dies

ESTUCHE | MTF39 | STANDARD



19 Machos M3 a M12 + 17 Cojinetes M3a M12 + 1 juego de galgas + 1 destornillador + 2 Porta-machos + 1 Porta-cojinetes

CASSETTA | MTF39 | STANDARD

11900970014

3221910017668

QTY	PCB
39	1

17 Maschi M3 a M12 + 17 filiere M3 a M12 + 1 calibro + 1 cacciavite + 2 giramaschi + 1 girafiliere

SET | MTF19

19 PCS | DIN 352 | M MF | CRV | GUN

6 GUN taps DiN 352+6 dies Hexa M3 - M10+1 TW T BAR+6 HSS TiN metal drills

ESTUCHE | MTF19



6 roscado HSS GUN DiN 352+6 cojinetes Hexa M3>M10+1G. T BAR+6 brocas HSS TiN

CASSETTA | MTF19

11900970015

3221912057563

QTY	PCB
19	1

6 maschi GUN DiN 352+6 trafile Hexa da M3 a M10+1 G T BAR +6 punte HSS TiN

SET | MTF29 | TECHNIC

NEW | 29 PCS | M MF | CRV

12 taps DiN 352 + 12 dies 25,4 M3 M4 M5 M6 MF8x100 M8 MF10x100 M10 MF12x125 M12x175 M12 + 2 TW + 1 DH 25,4 + acc

ESTUCHE | MTF29 | TECHNIC



12 machos DiN 352 + 12 cojinetes 25,4 M3 M4 M5 M6 MF8x100 M8 MF10x100 M10 MF12x125 M12x175 M12 + 2 G. M + 1 P. C. 25,4 + acc

CASSETTA | MTF29 | TECHNIC

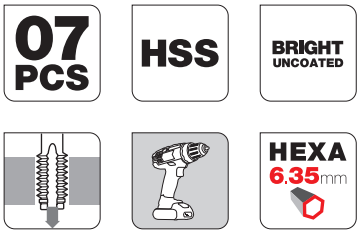
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3221912113764

QTY	PCB
29	1

12 maschi DiN 352 + 12 trafile 25,4 da M3 M4 M5 M6 MF8x100 M8 MF10x100 M10 MF12x125 M12x175 M12 + 2 G + 1 PF 25,4 + acc

SET | THD HEXA



6 taps HSS M3 M4 M5 M6 M8 M10 hexa shank 1/4”+1 BH

ESTUCHE | THD HEXA



6 machos HSS M3 M4 M5 M6 M8 M10 mango hexa 1/4”+1 PP

CASSETTA | THD HEXA

10503070001

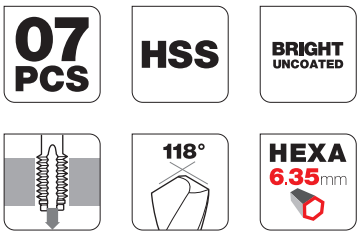
3221910881849

QTY	PCB
7	1



6 maschi HSS M3 M4 M5 M6 M8 M10 con attacco esagonale 1/4”+1 PE

SET | FTH HEXA



6 drills taps combi HSS M3 M4 M5 M6 M8 M10 hexa shank 1/4”+1 BH

ESTUCHE | FTH HEXA



6 brocas-machos avellanador HSS M3 M4 M5 M6 M8 M10 mango hexa 1/4”+1 PP

CASSETTA | FTH

10502970001

3221910881658

QTY	PCB
7	1



6 punte filettanti combinate HSS M3 M4 M5 M6 M8 M10 con attacco esagonale 1/4”+1 PE

SET | FNH04 | HEXA

NEW

04 PCS | HSS | HEXA 6.35mm

BRIGHT UNCOATED | 90°

4 countersink 90° HSS, Ø 8,3-10,4-12,4-16,5 mm hexa shank 1/4” + 1 BH

ESTUCHE | FNH04 | HEXA



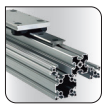
4 avellanadores 90° HSS, Ø 8,3-10,4-12,4-16,5 mm mango hexa 1/4” + 1 PP

CASSETTA | FNH04 | HEXA

10332370002

3221912117434

QTY	PCB
7	1

4 frese per accecare 90° HSS E Ø 8,3-10,4-12,4-16,5 mm con attacco esagonale 1/4’ + & PI

SET | FNH06 | HEXA

06 PCS | HSS | HEXA 6.35mm

BRIGHT UNCOATED | 90°

6 countersink 90° HSS, Ø 6,3-8,3-10,4-12,4-16,5-20, 5 mm hexa shank 1/4” + 1 BH

ESTUCHE | FNH06 | HEXA



6 avellanadores 90° HSS, Ø 6,3-8,3-10,4-12,4-16,5-20,5 mm mango hexa 1/4” + 1 PP

CASSETTA | FNH06 | HEXA

10332370001

3221910881979

QTY	PCB
6	1



6 frese per accecare 90° HSS E Ø 6,3-8,3-10,4-12,4-16,5-20,5 mm con attacco esagonale 1/4’ + & PI

SET | FNH04 COBALT

NEW

04 PCS | HSS E5 | DIN 335C

BRIGHT UNCOATED | 90°

4 countersink 90° HSS E Ø 8,3-10,4-12,4-16,5 _+_5>10

ESTUCHE | FNH04 COBALT



4 avellanadores 90° HSS E Ø 8,3-10,4-12,4-16,5 _+_5>10

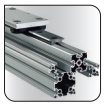
CASSETTA | FNH04 COBALT

10331670006

3221912117441

QTY	PCB
5	1





4 frese per accecare 90° HSS E Ø 8,3-10,4-12,4-16,5 _+_5>10

SET | E EMPTY

NEW

19 PCS

HSS

DIN 338

19 metal drills HSS Ø 1>10 mm 1/2

ESTUCHE | E VACÍA



19 brocas metal HSS Ø 1>10 mm x 1/2

CASSETTA | E VUOTO

11300470015

3221912112323

QTY	PCB
1	1

19 punte HSS Ø da 1 a 10 mm in incrementi da 1/2

SET | G EMPTY

NEW

25 PCS

HSS

DIN 338

25 metal drills HSS Ø 1>13 mm 1/2

ESTUCHE | G VACÍA



25 brocas metal HSS Ø 1>13 mm 1/2

CASSETTA | G VUOTO

11300470017

3221912112330

QTY	PCB
1	1

25 punte Ø da 1 a 13 mm in incrementi da 1/2

GENE-
RAL
CATALOGUE

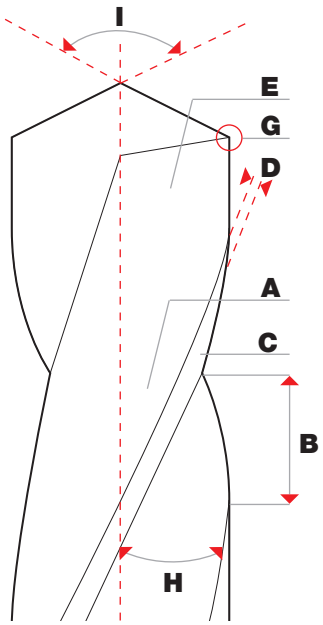
TECHNICAL INFORMATION
INFORMACIÓN TÉCNICA
INFORMAZIONI TECNICHE

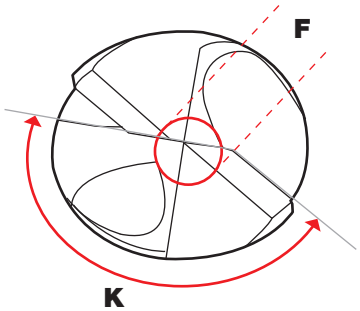
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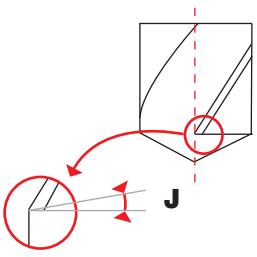
TECHNICAL INFORMATION
INFORMACIÓN TÉCNICA
INFORMAZIONI TECNICHE

INFORMATIONS TECHNIQUES. TECHNISCHE GEGEVENS. TECHNISCHE DATEN. TECHNICAL INFORMATION. INFORMACIONS TECNICAS. INFORMAZIONI TECNICHE.

N	$\frac{Vc \times 1000}{ø \times \pi}$	Vitesse de rotation. Rotatie-snelheid. Drehzahl. Revolution per minute. Velocidad de giro. Velocita' di rotazione.
Vc	$\frac{ø \times \pi \times N}{1000}$	Vitesse de coupe. Snij-snelheid. Schnittgeschwindigkeit. Cutting speed. Velocidad de corte. Velocita' di taglio.
Fz	$\frac{Vf}{Z \times N}$	Avance par dent. Vooruitgang per tand. Vorschub pro Zahn. Fed per tooth. Avance por diente. Avanzamento per dente.
F	$Fz \times Z$	Avance par tour. Vooruitang per toer. Vorschub pro Umdrehung. Feed per revolution. Avance por vuelta. Avanzamento per giro.
Vf	$Fz \times Z \times N$	Vitesse d'avance. Vooruitgangssnelheid. Vorschubgeschwindigkeit. Feed speed. Velocidad de avance. Velocita' d'avanzamento.







A. Goujure. Spaangroef. Spannut. Flute. Canal. Scanaluta.

B. Lèvres. Rand. Steg. Lip. Labio.Dorso.

C. Listel. Afschuining. Fase. Margin. Faja guia. Bordino cinlindrico.

D. Largeur de listel. Afschuiningsbreedte. Fasenbreite. Margin Width. Ancho de la faja guia. Larghezza dal bordino cilindrico.

E. Dégagement. Afvoer. Rücken. Relief. Superficie destalonada. Scarico.

F. Ame. Kern. Kern. Web. Nucleo. Nucleo.

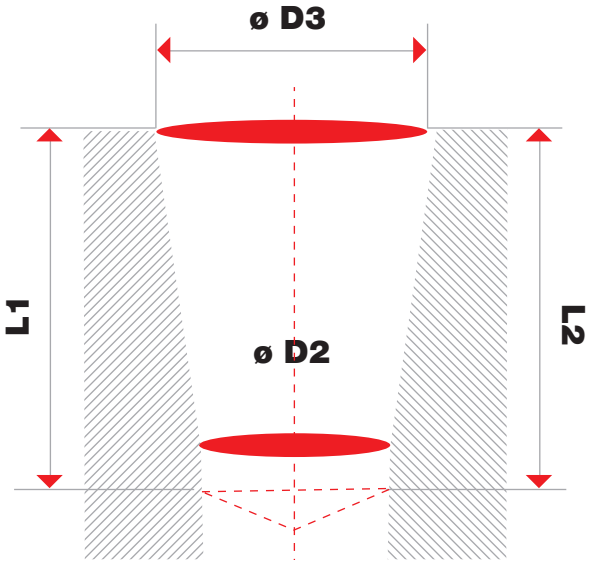
G. Bec. Snijhoek. Schneidenecke. Corner. Punta externa. Punta Externa.

H. Angle d'hélice. Aanslijpingshoek. Drallwinkel. Helix Angle. Angulo de la helice. Angolo dell'elica.

I. Angle au sommet. Hoek van de punt. Spitzenwinkel. Point Angle. Angulo de la punta. Angolo tra i tagliente principale.

J. Angle de dépouille de l'arête principale. Vrijloophoek. Hinterschneidungswinkel der hauptschneide. Lip relief angle. Angulo de incidencia de la artista principal. Angolo di spoglia del taglientte principale.

K. Angle de l'arête centrale. Hoek van de centrale kam. Querschneidenwinkel. Chisel edget angle. Angulo del filo transversal. Angolo del tagliente centrale.



CUTTING CONDITIONS
TAPPING

RC (Conical)



ø	P	D2	D3	L1 MMIN.
RC 1/16	28	**6**	6,5	10,1
RC 1/8	28	**8**	8,5	10,1
RC 1/4	19	**10,7**	11,35	15
RC 3/8	19	**14,15**	14,85	15,4
RC 1/2	14	**17,6**	18,5	20,5
RC 3/4	14	**23**	24	21,8
RC 1	11	**29**	30,2	26
RC 1,1/4	11	**37,5**	38,8	28,3
RC 1,1/2	11	**43,35**	44,7	28,3
RC 2	11	**54,9**	56,5	32,7

NPT (Conical)

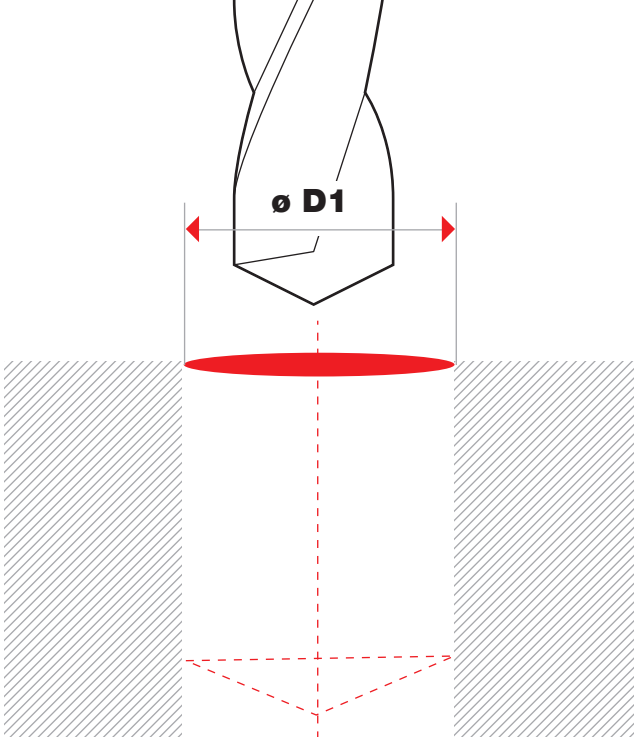


ø	P	D2	D3	L1 MMIN.
NPT 1/16	27	**6**	6,41	12
NPT 1/8	27	**8,3**	8,76	12
NPT 1/4	18	**10,7**	11,4	17,5
NPT 3/8	18	**14,2**	14,84	17,6
NPT 1/2	14	**17,4**	18,33	22,8
NPT 3/4	14	**22,8**	23,68	23
NPT 1	11,5	**28,6**	29,72	27,4
NPT 1,1/4	11,5	**37,4**	38,48	28,1
NPT 1,1/2	11,5	**43,4**	44,55	28,4
NPT 2	11,5	**55,5**	56,59	28

NPTF (Conical)



ø	P	D2	D3	L1 MMIN.
NPTF 1/16	27	**6**	6,41	12
NPTF 1/8	27	**8,3**	8,76	12
NPTF 1/4	18	**10,7**	11,4	17,5
NPTF 3/8	18	**14,2**	14,84	17,6
NPTF 1/2	14	**17,4**	18,33	22,8
NPTF 3/4	14	**22,8**	23,68	23
NPTF 1	11,5	**28,6**	29,72	27,4
NPTF 1,1/4	11,5	**37,4**	38,48	28,1
NPTF 1,1/2	11,5	**43,4**	44,55	28,4
NPTF 2	11,5	**55,5**	56,59	28



CUTTING CONDITIONS
TAPPING

M

ø	P	PRE-HOLE (ISO)
M 1	0,25	**0,75**
M 1,1	0,25	**0,85**
M 1,2	0,25	**0,95**
M 1,4	0,3	**1,1**
M 1,6	0,35	**1,25**
M 1,7	0,35	**-**
M 1,8	0,35	**1,45**
M 2	0,4	**1,6**
M 2,2	0,45	**1,75**
M 2,3	0,4	**-**
M 2,5	45	**2,05**
M 2,6	0,45	**-**
M 3	0,5	**2,5**
M 3,5	0,6	**2,9**
M 4	0,7	**3,3**
M 4,5	0,75	**3,7**
M 5	0,8	**4,2**
M 5,5	0,9	**-**
M 6	1	**5**
M 7	1	**6**
M 8	1,25	**6,8**
M 9	1,25	**7,8**
M 10	1,5	**8,5**
M 11	1,5	**9,5**
M 12	1,75	**10,2**
M 14	2	**12**
M 16	2	**14**
M 18	2,5	**15,5**
M 20	2,5	**17,5**
M 22	2,5	**19,5**
M 24	3	**21**
M 27	3	**24**
M 30	3,5	**26,5**
M 33	3,5	**29,5**
M 36	4	**32**
M 39	4	**35**
M 42	4,5	**37,5**
M 45	4,5	**40,5**
M 48	5	**43**
M 52	5	**47**
M 56	5,5	**50,5**
M 60	5,5	**24,5**
M 64	6	**58**
M 68	6	**62**

MF

ø	P	PRE-HOLE (ISO)
MF 2	0,25	**1,75**
MF 2,2	0,25	**1,95**
MF 2,25	0,25	**2**
MF 3	0,35	**2,65**
MF 3,5	0,35	**3,15**
MF 4	0,5	**3,5**
MF 4,5	0,5	**4**
MF 5	0,5	**4,5**
MF 6	0,5	**5,5**
MF 6	0,75	**5,2**
MF 8	0,75	**7,2**
MF 10	0,75	**9,2**
MF 8	1	**7**
MF 10	1	**9**
MF 12	1	**11**
MF 16	1	**15**
MF 20	1	**19**
MF 10	1,25	**8,8**
MF 14	1,25	**12,8**
MF 12	1,5	**10,5**
MF 16	1,5	**14,5**
MF 20	1,5	**18,5**
MF 24	1,5	**22,5**
MF 36	1,5	**34,5**
MF 48	1,5	**46,5**
MF 56	1,5	**54,5**
MF 20	2	**18**
MF 30	2	**28**
MF 42	2	**40**
MF 56	2	**54**
MF 36	3	**33**
MF 48	3	**45**
MF 56	3	**53**
MF 64	3	**61**
MF 48	4	**44**
MF 56	4	**52**
MF 64	4	**60**
MF 72	4	**68**
MF 80	6	**74**
MF 95	6	**89**
MF 110	6	**104**

BSW

ø	P	PRE-HOLE (ISO)
BSW (1/16)	60	**1,15**
BSW (3/32)	48	**1,85**
BSW (1/8)	40	**2,55**
BSW (5/32)	32	**3,2**
BSW (3/16)	24	**3,7**
BSW (7/32)	24	**4,5**
BSW 1/4	20	**5,1**
BSW 5/16	18	**6,5**
BSW 3/8	16	**7,9**
BSW 7/16	14	**9,25**
BSW 1/2	12	**10,5**
BSW 9/16	12	**12**
BSW 5/8	11	**13,5**
BSW 3/4	10	**16,5**
BSW 7/8	9	**19,25**
BSW 1"	8	**22**
BSW 1,1/8	7	**24,75**
BSW 1,1/4	7	**27,75**
BSW 1,3/8	6	**30,5**
BSW 1,1/2	6	**33,5**
BSW 1,5/8	5	**35,5**
BSW 1,374	5	**39**
BSW 1,7/8	4,1/2	**41,5**
BSW 2"	4,1/2	**44,5**
BSW 2,1/4	4	**50**
BSW 2,1/2	4	**56,5**
BSW 2,3/4	3,1/2	**62**
BSW 3"	2,1/2	**68**

BSF

ø	P	PRE-HOLE (ISO)
BSF 3/16	32	**4**
BSF 7/32	28	**4,6**
BSF 1,4	26	**5,3**
BSF 9/32	26	**60,1**
BSF 5716	22	**6,8**
BSF 3/8	20	**8,3**
BSF 7/16	18	**9,7**
BSF 1/2	16	**11,1**
BSF 9716	16	**12,7**
BSF 5/8	14	**14**
BSF 11/16	14	**15,5**
BSF 3/4	12	**16,75**
BSF (13/16)	12	**18,5**
BSF 7/8	11	**19,75**
BSF 1"	10	**22,75**
BSF 1,1/8	9	**25,5**
BSF 1,3/8	8	**31,5**
BSF 1,1/2	8	**34,8**
BSF 1,5/8	8	**38**
BSF 1,3/4	7	**40,5**
BSF 2"	7	**47**
BSF 2,1/4	6	**52,5**
BSF 2,1/2	6	**50**
BSF 2,3/4	6	**65,4**
BSF 3"	5	**70,5**

BSPG



ø	P	PRE-HOLE (ISO)
BSPG 1/8	28	**8,8**
BSPG 1/4	19	**11,8**
BSPG 3/8	19	**15,25**
BSPG 1/2	14	**19**
BSPG 5/8	14	**21**
BSPG 3/4	14	**24,5**
BSPG 7/8	14	**28,25**
BSPG 1"	11	**30,75**
BSPG 1,1/8	11	**35,5**
BSPG 1,1/4	11	**39,5**
BSPG (1,3/8)	11	**42**
BSPG 1,1/2	11	**45,5**
BSPG (1,5/8)	11	**49,6**
BSPG 1,3/4	11	**51,4**
BSPG 2"	11	**57,2**
BSPG 2,1/4	11	**63,3**
BSPG (2,3/8)	11	**67**
BSPG (2,1/2)	11	**72,8**
BSPG 2,3/4	11	**79,1**
BSPG 3"	11	**85,5**
BSPG 3,1/4	11	**91,5**
BSPG 3,1/2	11	**98**
BSPG 3,3/4	11	**104**
BSPG 4"	11	**110,5**

UNC



ø	P	PRE-HOLE (ISO)
UNC 1	64	**1,5**
UNC 2	56	**1,8**
UNC 3	48	**2,1**
UNC 4	40	**2,3**
UNC 5	40	**2,6**
UNC 6	32	**2,85**
UNC 8	32	**3,5**
UNC 10	24	**3,9**
UNC 12	24	**4,5**
UNC 1/4	20	**5,2**
UNC 5/16	18	**6,6**
UNC 3/8	16	**8**
UNC 7/16	14	**9,4**
UNC 1/2	13	**10,75**
UNC 9/16	12	**12,26**
UNC 5/8	11	**13,5**
UNC 3/4	10	**16,5**
UNC 7/8	9	**19,5**
UNC 1"	8	**22,25**
UNC 1,1/8	7	**25**
UNC 1,1/4	7	**28,25**
UNC 1,3/8	6	**30,75**
UNC 1,1/2	6	**34**
UNC 1,3/4	5	**39,5**
UNC 2"	4,1/2	**45**
UNC 2,1/4	4,1/2	**51,5**
UNC 2,1/2	4	**57,5**
UNC 2,3/4	4	**63,5**
UNC 3"	4	**70**

UNF



ø	P	PRE-HOLE (ISO)
UNF 0	80	**1,25**
UNF 1	72	**1,55**
UNF 2	64	**1,85**
UNF 3	56	**2,1**
UNF 4	48	**2,4**
UNF 5	44	**2,75**
UNF 6	40	**3**
UNF 8	36	**3,5**
UNF 10	32	**4,1**
UNF 12	28	**4,65**
UNF 1/4	28	**5,5**
UNF 5/16	24	**6,9**
UNF 3/8	20	**8,5**
UNF 7/16	20	**9,9**
UNF 1/2	20	**11,5**
UNF 9/16	18	**12,9**
UNF 5/8	18	**14,5**
UNF 3/4	16	**17,5**
UNF 7/8	14	**20,5**
UNF 1"	12	**23,25**
UNF 1,1/8	12	**26,5**
UNF 1,1/4	12	**29,75**
UNF 1,3/8	12	**32,75**
UNF 1,1/2	12	**36**

PG



ø	-	PRE-HOLE (ISO)
PG 7	-	**11,4**
PG 9	-	**14**
PG 11	-	**17,25**
PG 13,5	-	**19**
PG 16	-	**21,25**
PG 21	-	**26,75**
PG 29	-	**35,5**
PG 36	-	**45,5**
PG 42	-	**62,6**
PG 48	-	**57,7**

RC



ø	P	PRE-HOLE (ISO)	L1 MMIN.
RC 1/16	28	**6,3**	10,1
RC 1/8	28	**8,3**	10,1
RC 1/4	19	**11**	15
RC 3/8	19	**14,5**	15,4
RC 1/2	14	**18,1**	20,5
RC 3/4	14	**23,5**	21,8
RC 1	11	**29,6**	26
RC 1,1/4	11	**38,1**	28,3
RC 1,1/2	11	**44**	28,3
RC 2	11	**55,6**	32,7

NPT

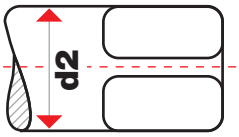


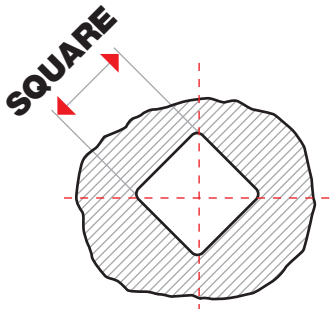
ø	P	PRE-HOLE (ISO)	L1 MMIN.
NPT 1/16	27	**6,2**	12
NPT 1/8	27	**8,5**	12
NPT 1/4	18	**11**	17,5
NPT 3/8	18	**14,5**	17,6
NPT 1/2	14	**17,8**	22,8
NPT 3/4	14	**23**	23
NPT 1	11,5	**29**	27,4
NPT 1,1/4	11,5	**37,5**	28,1
NPT 1,1/2	11,5	**44**	28,4
NPT 2	11,5	**56**	28

NPTF



ø	P	PRE-HOLE (ISO)	L1 MMIN.
NPTF 1/16	27	**6,2**	12
NPTF 1/8	27	**8,5**	12
NPTF 1/4	18	**11**	17,5
NPTF 3/8	18	**14,5**	17,6
NPTF 1/2	14	**17,8**	22,8
NPTF 3/4	14	**23**	23
NPTF 1	11,5	**29**	27,4
NPTF 1,1/4	11,5	**37,5**	28,1
NPTF 1,1/2	11,5	**44**	28,4
NPTF 2	11,5	**56**	28





CUTTING CONDITIONS
TAPPING

SQUARE ISO 529

ø	P	d2	SQUARE
M2	0,4	2,5	**2**
M2,5	0,45	2,8	**2,24**
M3	0,5	3,15	**2,5**
M3,5	0,6	3,55	**2,8**
M4	0,7	4	**3,15**
M4	0,75	4	**3,15**
M5	0,8	5	**4**
M5	0,9	5	**4**
M6	1	6,3	**5**
M7	1	7,1	**5,6**
M8	1,25	8	**6,3**
M9	1,25	8	**6,3**
M10	1,5	10	**8**
M11	1,5	8	**6,3**
M12	1,75	9	**7,1**
M14	2	11,2	**9**
M16	2	12,5	**10**
M18	2,5	14	**11,2**
M20	2,5	14	**11,2**
M22	2,5	16	**12,5**
M24	3	18	**14**
M27	3	20	**16**
M30	3,5	20	**16**
MF3	0,6	3,15	**2,5**
MF8	1	8	**6,3**
MF9	1	9	**7,1**
MF10	1	10	**8**
MF10	1,25	10	**8**
MF12	1	9	**7,1**
MF12	1,25	9	**7,1**
MF12	1,5	9	**7,1**
MF14	1,25	11,2	**9**
MF14	1,5	11,2	**9**
MF16	1,5	12,5	**10**
MF18	1,5	14	**11,2**
MF20	1,5	14	**11,2**
MF22	1,5	16	**12,5**
MF24	1,5	18	**14**

SQUARE DIN 352

ø	P	d2	SQUARE
M2	0,4	2,8	**2,1**
M2,5	0,45	2,8	**2,1**
M3	0,5	3,5	**2,7**
M3,5	0,6	4	**3**
M4	0,7	4,5	**3,4**
M4,5	0,75	6	**4,9**
M5	0,8	6	**4,9**
M6	1	6	**4,9**
M7	1	6	**4,9**
M8	1,25	6	**4,9**
M9	1,25	6	**4,9**
M10	1,5	7	**5,5**
M11	1,5	8	**6,2**
M12	1,75	9	**7**
M14	2	11	**9**
M16	2	12	**9**
M18	2,5	14	**11**
M20	2,5	16	**12**
M22	2,5	18	**14,5**
M24	3	18	**14,5**
M27	3	20	**16**
M30	3,5	22	**18**
M33	3,5	25	**20**
M36	4	28	**22**
M39	4	32	**24**
M42	4,5	32	**24**
M45	4,5	36	**29**
M52	5	40	**32**

SQUARE DIN 352 UNC

ø	P	d2	SQUARE
N°2	56	2,8	**2,1**
N°3	48	3,5	**2,7**
N°4	40	3,5	**2,7**
N°5	40	3,5	**2,7**
N°6	32	4	**3**
N°8	32	4	**3**
N°10	24	6	**4,9**
N°12	24	6	**4,9**
1/4	20	6	**4,9**
5/16	18	6	**4,9**
3/8	16	7	**5,5**
7/16	14	8	**6,2**
1/2	13	9	**7**
9/16	12	11	**9**
5/8	11	12	**9**
3/4	10	14	**11**
7/8	9	18	**14,5**
1"	8	20	**16**

SQUARE DIN 352 BSW

ø	P	d2	SQUARE
1/8	40	3,5	**2,7**
5/32	32	4,5	**3,4**
3/16	24	6	**4,9**
7/32	24	6	**4,9**
1/4	20	6	**4,9**
5/16	18	6	**4,9**
3/8	16	7	**5,5**
7/16	14	8	**6,2**
1/2	12	9	**7**
9/16	12	9	**7**
5/18	0	0	**-**
3/4	10	14	**11**
7/8	9	18	**14,5**
1"	8	20	**16**
1"1/4	7	25	**20**

SQUARE DIN 374 / 376 M & MF

ø	P	d2	SQUARE
M3	0,5	2,7	**2,2**
M4	0,7	2,8	**2,1**
M5	0,8	3,5	**2,7**
M6	1	4,5	**3,4**
M8	1,25	6	**4,9**
M10	1,5	7	**5,5**
M12	1,75	9	**7**
M14	2	11	**9**
M16	2	12	**9**
M18	2,5	14	**11**
M20	2,5	16	**12**
M22	2,5	18	**14,5**
M24	3	18	**14,5**
M27	3	20	**16**
M30	3,5	22	**18**
M33	3,5	25	**20**
M36	4	28	**22**
M42	4,5	32	**24**
M48	5	36	**29**
MF8	1	6	**4,9**
MF10	1	7	**5,5**
MF10	1,25	7	**5,5**
MF11	1,25	7	**5,5+7**
MF12	1	9	**7**
MF12	1,25	9	**7**
MF12	1,5	9	**9**
MF14	1	11	**9**
MF14	1,25	11	**9**
MF14	1,5	11	**9**
MF15	1,5	11	**9**
MF16	1	12	**9**
MF16	1,25	12	**9**
MF18	1	14	**11**
MF18	1,5	14	**11**
MF18	2	14	**11**
MF20	1	16	**12**
MF20	1,5	16	**12**
MF20	2	16	**12**
MF22	1,5	18	**14,5**
MF22	2	18	**14,5**
MF24	1,5	18	**14,5**
MF24	2	18	**14,5**
MF25	1,5	18	**14,5**
MF26	1,5	18	**14,5**
MF27	1,5	18	**14,5**
MF28	1,5	20	**16**
MF30	1,5	22	**18**
MF30	2	22	**18**
MF32	1,5	22	**18**
MF36	1,5	28	**22**
MF36	2	28	**22**
MF36	3	28	**22**

SQUARE DIN 371 M & MF

ø	P	d2	SQUARE
M2	0,4	2,8	**2,1**
M2,5	0,45	2,8	**2,1**
M3	0,5	3,5	**2,7**
M3,5	0,6	4	**3**
M4	0,7	4,5	**3,4**
M5	0,8	6	**4,9**
M6	1	6	**4,9**
M7	1	6	**5,5**
M8	1,25	8	**6,2**
M10	1,5	10	**8**
MF8	1	8	**6,2**
MF10	1	10	**8**

SQUARE NFE 66112

ø	P	d2	SQUARE
M3	0,5	2,1	**1,6**
M4	0,7	2,9	**2,3**
M5	0,8	3,7	**3**
M6	1	4,5	**3,5**
M8	1,25	6,2	**5**
M10	1,5	7,6	**6**
M12	1,75	9	**7**
M14	2	10,5	**8**
M16	2	12,5	**10**

SQUARE DIN 2181

ø	P	d2	SQUARE
MF4	0,5	6	**4,9**
MF5	0,5	6	**4,9**
MF5	0,75	6	**4,9**
MF6	0,75	6	**4,9**
MF7	0,75	6	**4,9**
MF8	0,75	6	**4,9**
MF8	1	6	**4,9**
MF9	1	7	**5,5**
MF10	1	7	**5,5**
MF10	1,25	7	**5,5**
MF11	1	8	**6,2**
MF11	1,25	8	**6,2**
MF12	1	9	**7**
MF12	1,25	9	**7**
MF12	1,5	9	**7**
MF13	1,25	11	**9**
MF14	1	11	**9**
MF14	1,25	11	**9**
MF14	1,5	11	**9**
MF15	1,5	12	**9**
MF16	1	12	**9**
MF16	1,25	12	**9**
MF16	1,5	12	**9**
MF18	1	14	**11**
MF18	1,25	14	**11**
MF18	1,5	14	**11**
MF18	2	14	**11**
MF20	1	16	**12**
MF20	1,5	16	**12**
MF20	2	16	**12**
MF22	1,5	18	**14,5**
MF22	2	18	**14,5**
MF24	1	18	**14,5**
MF24	1,5	18	**14,5**
MF24	2	18	**14,5**
MF26	1,5	20	**16**
MF26	2	18	**14,5**
MF27	1,5	20	**16**
MF27	2	18	**14,5**
MF30	1,5	22	**18**
MF30	2	22	**18**
MF33	2	25	**20**

SQUARE DIN 66101

ø	P	d2	SQUARE
M3	0,5	2,3	**2,3**
M4	0,7	2,9	**2,9**
M5	0,8	3,8	**3,8**
M6	1	4,5	**4,5**
M7	1	5,5	**5,5**
M8	1,25	6,1	**6,1**
M10	1,5	7,7	**7,7**
M12	1,75	9,3	**9,3**
M14	2	10,9	**10,9**
M16	2	12,9	**12,9**
M18	2,5	14,1	**14,1**
M20	2,5	16,1	**16,1**
M22	2,5	18	**18**
M24	3	19,3	**19,3**
MF6	0,75	4,5	**4,5**
MF8	1	6,1	**6,1**
MF10	1	7,7	**7,7**
MF12	1,25	10,1	**10,1**
MF12	1,5	9,6	**9,6**
MF14	1,5	11,8	**11,8**
MF20	1,5	17,8	**17,8**
MF22	1,5	19,8	**19,8**
MF24	1,5	21,8	**21,8**

SQUARE DIN 2181 UNF

ø	P	d2	SQUARE
N°3	56	3,5	**2,7**
N°4	48	3,5	**2,7**
N°5	44	3,5	**2,7**
N°6	40	4	**3**
N°8	36	4	**3**
N°10	32	6	**4,9**
N°12	28	6	**4,9**
1/4	28	6	**4,9**
5/16	24	6	**4,9**
3/8	24	7	**5,5**
7/16	20	8	**6,2**
1/2	20	9	**7**
9/16	18	12	**9**
5/8	18	12	**9**
3/4	16	14	**11**
7/8	14	18	**14,5**
1"	12	20	**16**

SQUARE DIN 2181 BSF

ø	P	d2	SQUARE
1/4	26	6	
3/8	20	7	**5,5**
7/16	18	8	**6,2**
1/2	16	9	**7**
9/16	16	11	**9**
7/8	19,5	14,5	**-**
1"	10	20	**16**

SQUARE DIN 5156 BSPG

ø	P	d2	SQUARE
G1/8	28	7	**5,5**
G1/4	19	11	**9**
G3/8	19	12	**9**
G1/2	14	16	**12**
G7/8	14	18	**14,5**
G3/4	14	18	**16**
G1"	14	20	**20**
G1"1/4	11	25	**20**
G1"1/2	11	36	**29**

SQUARE sin DIN 5156 NPT

ø	P	d2	SQUARE
T 1/16	27	6	**4,9**
T 1/8	27	8	**6,2**
T 1/4	18	11	**9**
T 3/8	18	14	**11**
T 1/2	14	18	**14,5**
T 3/4	14	22	**18**
T 1"	11,5	25	**20**
T 1"1/4	11,5	32	**24**

SQUARE sin DIN 5156 RC

ø	P	d2	SQUARE
Rc 1/8	27	8	**6,2**
Rc 1/4	18	11	**9**
Rc 3/8	18	14	**11**
Rc 1/2	14	18	**14,5**
Rc 5/8	14	22	**18**
Rc 3/4	11,5	25	**20**

SQUARE sin DIN 40433 Pg

ø	P	d2	SQUARE
PG 16	18	18	**14,5**
PG 21	16	20	**16**
PG 29	16	28	**22**

Conditions de Coupe. Werkomstandigheden. Schnittbedingungen. Cutting conditions. Condiciones de corte. Condizioni d'impiego

Forets. Spiraalboren. Spiralbohrer. Drills. Brocas. Punte.

Vc (M/min)
f (mm/tr)

		HSS to HSCo						CARBIDE											
								Standard						Hight performance					
		Vc	f:	Ø2	Ø5	Ø10	Ø15	**Vc**	f:	Ø2	Ø5	Ø10	Ø15	**Vc**	f:	Ø2	Ø5	Ø10	Ø15
A	Aciers non alliés / faiblement alliés Niet-of licht gelegeerd Staal Unligierte oder schwachlegierte unalloyed & low alloyed steels Aceros de construccion o aceros poco aleados Acciai non legati o poco legati **<400N/mm²**	**32**	f:	0,06	0,12	0,3	0,4	**100**	f:	0,03	0,05	0,08	0,12	**140**	f:	0,07	0,13	0,25	0,4
B	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 700 N/mm²**	**28**	f:	0,06	0,12	0,3	0,4	**100**	f:	0,03	0,04	0,07	0,1	**140**	f:	0,06	0,12	0,25	0,4
C	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 950 N/mm²**	**20**	f:	0,03	0,07	0,18	0,24	**80**	f:	0,02	0,03	0,06	0,08	**120**	f:	0,06	0,12	0,25	0,4
D	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1200 N/mm²**	**16**	f:	0,04	0,09	0,18	0,28	**60**	f:	0,02	0,03	0,06	0,08	**100**	f:	0,06	0,12	0,25	0,4
E	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1400 N/mm²**	**NC**	f:	-	-	-	-	**-**	f:	-	-	-	-	**-**	f:	-	-	-	-
F	Aciers inoxydables, Ferritiques Roestvrij Ferriestaal Rostfreies Stähle, Ferritisch Stainless Steels, Ferritic Aceros inoxidables, Ferriticos Acciai inossidabili, Ferritici	**16**	f:	0,04	0,09	0,21	0,28	**60**	f:	0,01	0,05	0,08	0,1	**70**	f:	0,04	0,08	0,15	0,25
G	Aciers inoxydables, Martensitiques Roestvrij Marttensietstaal Rostfreies Stähle, Martensitisch Stainless Steels, Martensitic Aceros inoxidables, Martensiticos Acciai inossidabili, Martensitici	**14**	f:	0,03	0,07	0,18	0,28	**60**	f:	0,01	0,05	0,08	0,1	**60**	f:	0,03	0,06	0,13	0,2
H	Aciers inoxydables, Austénitiques Roestvrij Austenietstaal Rostfreies Stähle, Austenitisch Stainless Steels, Austenitic Aceros inoxidables, Austeniticos Acciai inossidabili, Austenitici	**12**	f:	0,04	0,09	0,21	0,28	**40**	f:	0,01	0,05	0,08	0,1	**60**	f:	0,03	0,06	0,13	0,2
I	Fontes grises Graw gietijzer Grauguss Cast Iron Fundicion gris Ghisa grigia	**30**	f:	0,06	0,12	0,3	0,4	**80**	f:	0,01	0,05	0,08	0,1	**100**	f:	0,08	0,16	0,24	0,3

Conditions de Coupe. Werkomstandigheden. Schnittbedingungen. Cutting conditions. Condiciones de corte. Condizioni d'impiego

Forets. Spiraalboren. Spiralbohrer. Drills. Brocas. Punte.

Vc (M/min) *f (mm/tr)*		HSS to HSCo						CARBIDE											
								Standard						Hight performance					
		Vc	f:	Ø2	Ø5	Ø10	Ø15	**Vc**	f:	Ø2	Ø5	Ø10	Ø15	**Vc**	f:	Ø2	Ø5	Ø10	Ø15
J	Fontes GS Gietijzer SG SG Guss SG Iron Fundicion gris con grafito laminar Ghisa a Grafite Sferoidale	**16**	f:	0,04	0,09	0,21	0,28	**50**	f:	0,01	0,05	0,08	0,1	**90**	f:	0,04	0,08	0,16	0,25
K	Alliages d'aluminium gras Zuivere aluminiumlegeringen Reinaluminium Aluminium Forgings Aleaciones de aluminio Laminato (Al)	**80**	f:	0,05	0,1	0,24	0,32	**150**	f:	0,03	0,08	0,13	0,16	**400**	f:	0,03	0,06	0,14	0,24
L	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si < 10%**	**60**	f:	0,04	0,09	0,21	0,28	**150**	f:	0,03	0,08	0,13	0,16	**350**	f:	0,02	0,05	0,12	0,2
M	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si > 10%**	**40**	f:	0,04	0,09	0,21	0,28	**80**	f:	0,01	0,06	0,09	0,12	**300**	f:	0,02	0,05	0,12	0,2
N	Laiton Messing Messing Brass Laton Ottone	**60**	f:	0,05	0,1	0,24	0,32	**100**	f:	0,03	0,06	0,1	0,15	**nc**	f:	nc	nc	nc	nc
O	Bronze Brons Bronze Bronze Bronce Bronzo	**60**	f:	0,04	0,09	0,21	0,28	**100**	f:	0,02	0,05	0,09	0,12	**nc**	f:	nc	nc	nc	nc
ARCO/ AR Ni	Aciers réfractaires base Co Ni Hittebestendige legerinen op basis van Co Ni Hitzebeständige Legierungen, Co Ni base Special Alloys based Co Ni Aleaciones refractarias, base Co Ni Leghe refrattarie, Co Ni base	**10**	f:	0,02	0,04	0,1	0,17	**20**	f:	0,01	0,03	0,05	0,08	**30**	f:	0,02	0,05	0,1	0,16
Ti	Alliages de Titane Titaanlegeringen Titaniegierungen Titan alloys Aleaciones de titanio Titanio	**10**	f:	0,02	0,04	0,1	0,17	**20**	f:	0,01	0,03	0,05	0,08	**30**	f:	0,02	0,05	0,1	0,16

Conditions de Coupe. Werkomstandigheden. Schnittbedingungen. Cutting conditions. Condiciones de corte. Condizioni d'impiego.

Tarauds. Draadsnijtappen. Gewindebohrer. Taps. Machos. Maschio.



	Vc (M/min) Revêtement / coating = Vc + 20 => 50%					
A	Aciers non alliés / faiblement alliés Niet-of licht gelegeerd Staal Unligierte oder schwachlegierte unalloyed & low alloyed steels Aceros de construccion o aceros poco aleados Acciai non legati o poco legati **<400N/mm²**	25-30	18-20	18-20	15-18	15-18
B	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 700 N/mm²**	20-30	15-18	15-18	15-18	20-25
C	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 950 N/mm²**		6-8	6-8	6-8	5-8
D	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1200 N/mm²**		4-6	4-6	4-6	2-5
E	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1400 N/mm²**			3-5		3-5
F	Aciers inoxydables, ferritiques Roestvrij ferriestaal Rostfreies Stähle, ferritisch Stainless Steels, Ferritic Aceros inoxidables, ferriticos Acciai inossidabili, ferritici	10-20		6-8		6-8
G	Aciers inoxydables, Martensitiques Roestvrij Marttensietstaal Rostfreies Stähle, Martensitisch Stainless Steels, Martensitic Aceros inoxidables, Martensiticos Acciai inossidabili, Martensitici			4-6		4-6
H	Aciers inoxydables, Austénitiques Roestvrij Austenietstaal Rostfreies Stähle, Austenitisch Stainless Steels, Austenitic Aceros inoxidables, Austeniticos Acciai inossidabili, Austenitici			5-7		5-7
I	Fontes grises Graw gietijzer Grauguss Cast Iron Fundicion gris Ghisa grigia		15-20			

Conditions de Coupe. Werkomstandigheden. Schnittbedingungen. Cutting conditions. Condiciones de corte. Condizioni d'impiego.

Tarauds. Draadsnijtappen. Gewindebohrer. Taps. Machos. Maschio.



	Vc (M/min) Revêtement / coating = Vc + 20 => 50%					
J	Fontes GS Gietijzer SG SG Guss SG Iron Fundicion gris con grafito laminar Ghisa a Grafite Sferoidale		10-15			
K	Alliages d'aluminium gras Zuivere aluminiumlegeringen Reinaluminium Aluminium Forgings Aleaciones de aluminio Laminato (Al)	30-40		15-25		15-25
L	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si < 10%**	12-20		12-18		12-18
M	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si > 10%**	12-20		12-18		12-18
N	Laiton Messing Messing Brass Laton Ottone	25-30	18-20	18-20	15-18	15-18
O	Bronze Brons Bronze Bronze Bronce Bronzo		5-10	5-10	5-10	4-8
ARCO/ AR Ni	Aciers réfractaires base Co Ni Hittebestendige legerinen op basis van Co Ni Hitzebeständige Legierungen, Co Ni base Special Alloys based Co Ni Aleaciones refractarias, base Co Ni Leghe refrattarie, Co Ni base		2-4	2-4	2-4	2-4
Ti	Alliages de Titane Titaanlegeringen Titaniegierungen Titan alloys Aleaciones de titanio Titanio			3-5		3-5

Conditions de Coupe. Werkomstandigheden. Schnittbedingungen. Cutting conditions. Condiciones de corte. Condizioni d'impiego.

Fraises Limes. Stiftrees. Frässtifte. Rotary burrs. Fresas limas. Frese lima.

Vc (M/min)	Revêtement / coating = Vc + 20 => 50%	A	C	D
A	Aciers non alliés / faiblement alliés Niet-of licht gelegeerd Staal Unligierte oder schwachlegierte unalloyed & low alloyed steels Aceros de construccion o aceros poco aleados Acciai non legati o poco legati **<400N/mm²**			400>800 m/min
B	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 700 N/mm²**			400>800 m/min
C	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 950 N/mm²**		400>800 m/min	
D	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1200 N/mm²**		**300>700 m/min**	
E	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1400 N/mm²**		**300>600 m/min**	
F	Aciers inoxydables, ferritiques Roestvrij ferriestaal Rostfreies Stähle, ferritisch Stainless Steels, Ferritic Aceros inoxidables, ferriticos Acciai inossidabili, ferritici		**600>1000 m/min**	
G	Aciers inoxydables, Martensitiques Roestvrij Marttensietstaal Rostfreies Stähle, Martensitisch Stainless Steels, Martensitic Aceros inoxidables, Martensiticos Acciai inossidabili, Martensitici		**600>1000 m/min**	
H	Aciers inoxydables, Austénitiques Roestvrij Austenietstaal Rostfreies Stähle, Austenitisch Stainless Steels, Austenitic Aceros inoxidables, Austeniticos Acciai inossidabili, Austenitici		**600>1000 m/min**	
I	Fontes grises Graw gietijzer Grauguss Cast Iron Fundicion gris Ghisa grigia			**500>800 m/min**

Conditions de Coupe. Werkomstandigheden. Schnittbedingungen. Cutting conditions. Condiciones de corte. Condizioni d'impiego.

Fraises Limes. Stiftrees. Frässtifte. Rotary burrs. Fresas limas. Frese lima.

Vc (M/min)	Revêtement / coating = Vc + 20 => 50%	A	C	D
J	Fontes GS Gietijzer SG SG Guss SG Iron Fundicion gris con grafito laminar Ghisa a Grafite Sferoidale		500>800 m/min	
K	Alliages d'aluminium gras Zuivere aluminiumlegeringen Reinaluminium Aluminium Forgings Aleaciones de aluminio Laminato (Al)	400>1000 m/min		
L	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si < 10%**	400>1000 m/min		
M	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si > 10%**	300>7000 m/min		
N	Laiton Messing Messing Brass Laton Ottone			400>800 m/min
O	Bronze Brons Bronze Bronze Bronce Bronzo			400>800 m/min
ARCO/ AR Ni	Aciers réfractaires base Co Ni Hittebestendige legerinen op basis van Co Ni Hitzebeständige Legierungen, Co Ni base Special Alloys based Co Ni Aleaciones refractarias, base Co Ni Leghe refrattarie, Co Ni base		400>800 m/min	400>800 m/min
Ti	Alliages de Titane Titaanlegeringen Titaniegierungen Titan alloys Aleaciones de titanio Titanio		400>1000 m/min	

Fraisage **Conditions** de **coupe** End milling Cutting conditions Fresado Condiciones de corte (Part.A)

Vc and **Vc'**(**C**oated) = **m/min**
fz = **m/tr**

Class	Material	Ø	Vc/fz	HSS to HSSPM			HM carbide regular			HM carbide high perf. (23621, 23623, 23640, 23642, 23634, 23636)		
				0,5d / d	d / 0,5d	d / 0,1d	0,5d / d	d / 0,5d	d / 0,1d	0,5d / d	d / 0,5d	d / 0,1d
A	Aciers non alliés / faiblement alliés Niet-of licht gelegeerd Staal Unligierte oder schwachlegierte unalloyed & low alloyed steels Aceros de construccion o aceros poco aleados Acciai non legati o poco legati **<400N/mm²**		Vc	**38** to **44** m/min			**80** to **120** m/min					
			Vc(C)	**65** to **75** m/min (coated/revêtu)			**96** to **144** m/min (coated/revêtu)			**145** to **190** m/min (coated/revêtu)		
		4	fz	0,017	0,015	0,022	0,017	0,015	0,022	0,013	0,015	0,038
		6	fz	0,023	0,021	0,029	0,023	0,021	0,029	0,027	0,031	0,077
		8	fz	0,037	0,350	0,049	0,037	0,350	0,049	0,038	0,043	0,108
		10	fz	0,041	0,038	0,054	0,041	0,038	0,054	0,047	0,054	0,134
		12	fz	0,050	0,046	0,065	0,050	0,046	0,065	0,062	0,071	0,178
		16	fz	0,057	0,053	0,075	0,057	0,053	0,075	0,082	0,094	0,235
		20	fz	0,067	0,062	0,088	0,067	0,062	0,088	0,102	0,117	0,293
B	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 700 N/mm²**		Vc	**32** to **38** m/min			**60** to **100** m/min					
			Vc(C)	**55** to **70** m min (coated/revêtu)			**72** to **120** m/min (coated/revêtu)			**120** to **170** m/min (coated/revêtu)		
		4	fz	0,018	0,016	0,023	0,018	0,016	0,023	0,012	0,014	0,035
		6	fz	0,027	0,024	0,035	0,027	0,024	0,035	0,025	0,028	0,070
		8	fz	0,039	0,036	0,051	0,039	0,036	0,051	0,035	0,040	0,099
		10	fz	0,044	0,041	0,058	0,044	0,041	0,058	0,043	0,049	0,123
		12	fz	0,053	0,049	0,069	0,053	0,049	0,069	0,057	0,065	0,163
		16	fz	0,060	0,055	0,079	0,060	0,055	0,079	0,075	0,086	0,216
		20	fz	0,070	0,065	0,092	0,070	0,065	0,092	0,094	0,107	0,268
C	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 950 N/mm²**		Vc	**30** to **36** m/min			**60** to **80** m/min					
			Vc(C)	**50** to **65** m/min (coated/revêtu)			**75** to **95** m/min (coated/revêtu)			**100** to **130** m/min (coated/revêtu)		
		4	fz	0,017	0,016	0,022	0,017	0,016	0,022	0,011	0,013	0,032
		6	fz	0,025	0,023	0,033	0,025	0,023	0,033	0,022	0,026	0,064
		8	fz	0,039	0,036	0,052	0,039	0,036	0,052	0,032	0,036	0,090
		10	fz	0,047	0,043	0,061	0,047	0,043	0,061	0,039	0,045	0,112
		12	fz	0,050	0,047	0,066	0,050	0,047	0,066	0,052	0,059	0,148
		16	fz	0,060	0,055	0,079	0,060	0,055	0,079	0,069	0,078	0,196
		20	fz	0,070	0,065	0,092	0,070	0,065	0,092	0,085	0,098	0,244
D	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1200 N/mm²**		Vc	**22** to **28** m/min			**40** to **60** m/min					
			Vc(C)	**42** to **50** m/min (coated/revêtu)			**55** to **75** m/min (coated/revêtu)			**75** to **100** m/min (coated/revêtu)		
		4	fz	0,014	0,012	0,017	0,014	0,012	0,017	0,010	0,012	0,029
		6	fz	0,021	0,018	0,026	0,021	0,018	0,026	0,020	0,023	0,058
		8	fz	0,033	0,029	0,041	0,033	0,029	0,041	0,028	0,032	0,081
		10	fz	0,038	0,033	0,047	0,038	0,033	0,047	0,035	0,040	0,101
		12	fz	0,041	0,036	0,052	0,041	0,036	0,052	0,047	0,053	0,133
		16	fz	0,050	0,044	0,063	0,050	0,044	0,063	0,062	0,071	0,176
		20	fz	0,057	0,050	0,071	0,057	0,050	0,071	0,077	0,088	0,220
E	Acier pour traitement thermique Staal voor thermische behandeling Vergütungsstäle Heat Treatable Steels Aceros aleados y tratados Acciai per trattamento termico **< 1400 N/mm²**		Vc	**16** to **22** m/min			**25** to **40** m/min					
			Vc(C)	**30** to **36** m/min (coated/revêtu)			**40** to **55** m/min (coated/revêtu)			**55** to **75** m/min (coated/revêtu)		
		4	fz	0,014	0,012	0,017	0,014	0,012	0,017	0,008	0,009	0,022
		6	fz	0,021	0,018	0,026	0,021	0,018	0,026	0,016	0,018	0,045
		8	fz	0,033	0,029	0,041	0,033	0,029	0,041	0,022	0,025	0,063
		10	fz	0,038	0,033	0,047	0,038	0,033	0,047	0,027	0,031	0,078
		12	fz	0,041	0,036	0,052	0,041	0,036	0,052	0,036	0,041	0,104
		16	fz	0,050	0,044	0,063	0,050	0,044	0,063	0,048	0,055	0,137
		20	fz	0,057	0,050	0,071	0,057	0,050	0,071	0,060	0,068	0,171
F	Aciers inoxydables, ferritiques Roestvrij ferriestaal Rostfreies Stähle, ferritisch Stainless Steels, Ferritic Aceros inoxidables, ferriticos Acciai inossidabili, ferritici		Vc	**18** to **24** m/min			**60** to **80** m/min					
			Vc(C)	**30** to **36** m/min (coated/revêtu)			**75** to **95** m/min (coated/revêtu)			**95** to **125** m/min (coated/revêtu)		
		4	fz	0,010	0,009	0,013	0,010	0,009	0,013	0,011	0,013	0,032
		6	fz	0,022	0,019	0,027	0,022	0,019	0,027	0,022	0,026	0,064
		8	fz	0,033	0,029	0,042	0,033	0,029	0,042	0,032	0,036	0,090
		10	fz	0,043	0,038	0,054	0,043	0,038	0,054	0,039	0,045	0,112
		12	fz	0,054	0,047	0,067	0,054	0,047	0,067	0,052	0,059	0,148
		16	fz	0,067	0,059	0,084	0,067	0,059	0,084	0,069	0,078	0,196
		20	fz	0,075	0,066	0,093	0,075	0,066	0,093	0,085	0,098	0,244
G	Aciers inoxydables, Martensitiques Roestvrij Marttensietstaal Rostfreies Stähle, Martensitisch Stainless Steels, Martensitic Aceros inoxidables, Martensiticos Acciai inossidabili, Martensitici		Vc	**16** to **22** m/min			**40** to **60** m/min					
			Vc(C)	**28** to **34** m/min (coated/revêtu)			**55** to **75** m/min (coated/revêtu)			**75** to **105** m/min (coated/revêtu)		
		4	fz	0,010	0,009	0,013	0,010	0,009	0,013	0,010	0,012	0,029
		6	fz	0,022	0,019	0,027	0,022	0,019	0,027	0,020	0,023	0,058
		8	fz	0,033	0,029	0,042	0,033	0,029	0,042	0,028	0,032	0,081
		10	fz	0,043	0,038	0,054	0,043	0,038	0,054	0,035	0,040	0,101
		12	fz	0,054	0,047	0,067	0,054	0,047	0,067	0,047	0,053	0,133
		16	fz	0,067	0,059	0,084	0,067	0,059	0,084	0,062	0,071	0,176
		20	fz	0,075	0,066	0,093	0,075	0,066	0,093	0,077	0,088	0,220
H	Aciers inoxydables, Austénitiques Roestvrij Austenietstaal Rostfreies Stähle, Austenitisch Stainless Steels, Austenitic Aceros inoxidables, Austeniticos Acciai inossidabili, Austenitici		Vc	**14** to **18** m/min			**25** to **40** m/min					
			Vc(C)	**22** to **26** m/min (coated/revêtu)			**40** to **55** m/min (coated/revêtu)			**55** to **75** m/min (coated/revêtu)		
		4	fz	0,010	0,009	0,013	0,010	0,009	0,013	0,009	0,010	0,026
		6	fz	0,022	0,019	0,027	0,022	0,019	0,027	0,018	0,020	0,051
		8	fz	0,033	0,029	0,042	0,033	0,029	0,042	0,025	0,029	0,072
		10	fz	0,043	0,038	0,054	0,043	0,038	0,054	0,031	0,036	0,090
		12	fz	0,054	0,047	0,067	0,054	0,047	0,067	0,041	0,047	0,118
		16	fz	0,067	0,059	0,084	0,067	0,059	0,084	0,055	0,063	0,157
		20	fz	0,075	0,066	0,093	0,075	0,066	0,093	0,068	0,078	0,195

Fraisage **Conditions** de **coupe** End milling Cutting conditions Fresado Condiciones de corte (Part.B)

Vc and **Vc'**(**C**oated) = **m/min**
fz = **m/tr**

Class	Material	Ø	Vc/fz	HSS to HSSPM			HM carbide regular			HM carbide high perf. (23621, 23623, 23640, 23642, 23634, 23636)		
				0,5d / d	d / 0,5d	d / 0,1d	0,5d / d	d / 0,5d	d / 0,1d	0,5d / d	d / 0,5d	d / 0,1d
I	Fontes grises Graw gietijzer Grauguss Cast Iron Fundicion gris Ghisa grigia		Vc	**34** to **40** m/min			**80** to **100** m/min					
			Vc(C)	**60** to **70** m/min (coated/revêtu)			**100** to **130** m/min (coated/revêtu)			**130** to**160** m/min (coated/revêtu)		
		4	fz	0,020	0,017	0,025	0,020	0,017	0,025	0,013	0,015	0,038
		6	fz	0,034	0,030	0,042	0,034	0,030	0,042	0,027	0,031	0,077
		8	fz	0,045	0,039	0,056	0,045	0,039	0,056	0,038	0,043	0,108
		10	fz	0,054	0,047	0,067	0,054	0,047	0,067	0,047	0,054	0,134
		12	fz	0,059	0,052	0,074	0,059	0,052	0,074	0,062	0,071	0,178
		16	fz	0,068	0,060	0,085	0,068	0,060	0,085	0,082	0,094	0,235
		20	fz	0,081	0,071	0,101	0,081	0,071	0,101	0,102	0,117	0,293
J	Fontes GS Gietijzer SG SG Guss SG Iron Fundicion gris con grafito laminar Ghisa a Grafite Sferoidale		Vc	**20** to **24** m/min			**50** to **70** m/min					
			Vc(C)	**38** to **44** m/min (coated/revêtu)			**75** to **100** m/min (coated/revêtu)			**100** to **130** m/min (coated/revêtu)		
		4	fz	0,020	0,017	0,025	0,020	0,017	0,025	0,012	0,014	0,035
		6	fz	0,034	0,030	0,042	0,034	0,030	0,042	0,025	0,028	0,070
		8	fz	0,045	0,039	0,056	0,045	0,039	0,056	0,035	0,040	0,099
		10	fz	0,054	0,047	0,067	0,054	0,047	0,067	0,043	0,049	0,123
		12	fz	0,059	0,052	0,074	0,059	0,052	0,074	0,057	0,065	0,163
		16	fz	0,068	0,060	0,085	0,068	0,060	0,085	0,075	0,086	0,216
		20	fz	0,081	0,071	0,101	0,081	0,071	0,101	0,094	0,107	0,268
K	Alliages d'aluminium gras Zuivere aluminiumlegeringen Reinaluminium Aluminium Forgings Aleaciones de aluminio Laminato (Al)		Vc	**150** to **250** m/min			**350** to **500** m/min					
			Vc(C)	**200** to **300** m/min (coated/revêtu)			**450** to **650** m/min (coated/revêtu)			**600** to **800** m/min (coated/revêtu)		
		4	fz	0,025	0,022	0,031	0,025	0,022	0,031	0,016	0,018	0,045
		6	fz	0,038	0,033	0,047	0,038	0,033	0,047	0,031	0,036	0,090
		8	fz	0,052	0,046	0,065	0,052	0,046	0,065	0,044	0,050	0,126
		10	fz	0,059	0,052	0,074	0,059	0,052	0,074	0,055	0,063	0,157
		12	fz	0,066	0,058	0,082	0,066	0,058	0,082	0,073	0,083	0,207
		16	fz	0,850	0,075	0,106	0,850	0,075	0,106	0,096	0,110	0,274
		20	fz	0,091	0,080	0,114	0,091	0,080	0,114	0,120	0,137	0,342
L	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si < 10%**		Vc	**100** to **150** m/min			**250** to **400** m/min					
			Vc(C)	**150** to **200** m/min (coated/revêtu)			**300** to **550** m/min (coated/revêtu)			**500** to **700** m/min (coated/revêtu)		
		4	fz	0,028	0,024	0,035	0,028	0,024	0,035	0,015	0,017	0,042
		6	fz	0,041	0,036	0,052	0,041	0,036	0,052	0,029	0,033	0,083
		8	fz	0,057	0,050	0,071	0,057	0,050	0,071	0,041	0,047	0,117
		10	fz	0,065	0,057	0,081	0,065	0,057	0,081	0,051	0,058	0,146
		12	fz	0,073	0,064	0,091	0,073	0,064	0,091	0,067	0,077	0,192
		16	fz	0,093	0,082	0,117	0,093	0,082	0,117	0,089	0,102	0,255
		20	fz	0,100	0,088	0,125	0,100	0,088	0,125	0,111	0,127	0,317
M	Alliages d'aluminium Aluminiumleggeringen Aluminium-legierungen Cast Aluminium Aleaciones de aluminio Stampate Al **Si > 10%**		Vc	**60** to **100** m/min			**150** to **300** m/min					
			Vc (C)	**80** to **120** m/min (coated/revêtu)			**200** to **400** m/min (coated/revêtu)			**350** to **500** m/min (coated/revêtu)		
		4	fz	0,030	0,027	0,038	0,030	0,027	0,038	0,013	0,015	0,038
		6	fz	0,046	0,040	0,057	0,046	0,040	0,057	0,027	0,031	0,077
		8	fz	0,063	0,055	0,078	0,063	0,055	0,078	0,038	0,043	0,108
		10	fz	0,071	0,063	0,089	0,071	0,063	0,089	0,047	0,054	0,134
		12	fz	0,080	0,070	0,100	0,080	0,070	0,100	0,062	0,071	0,178
		16	fz	0,103	0,090	0,128	0,103	0,090	0,128	0,082	0,094	0,235
		20	fz	0,110	0,097	0,138	0,110	0,097	0,138	0,102	0,117	0,293
N	Laiton Messing Messing Brass Laton Ottone		Vc	**70** to **95** m/min			**100** to **200** m/min					
			Vc (C)	**100** to **180** m/min (coated/revêtu)			**120** to **240** m/min (coated/revêtu))			**150** to **250** m/min (coated/revêtu)		
		4	fz	0,011	0,009	0,013	0,011	0,009	0,013	0,011	0,013	0,032
		6	fz	0,019	0,017	0,024	0,019	0,017	0,024	0,022	0,026	0,064
		8	fz	0,031	0,028	0,039	0,031	0,028	0,039	0,032	0,036	0,090
		10	fz	0,039	0,035	0,049	0,039	0,035	0,049	0,039	0,045	0,112
		12	fz	0,053	0,047	0,066	0,053	0,047	0,066	0,052	0,059	0,148
		16	fz	0,071	0,062	0,088	0,071	0,062	0,088	0,069	0,078	0,196
		20	fz	0,079	0,069	0,980	0,079	0,069	0,980	0,085	0,098	0,244
O	Bronze Brons Bronze Bronze Bronce Bronzo		Vc	**50** to **75** m/min			**75** to **125** m/min					
			Vc(C)	**80** to **120** m/min (coated/revêtu)			**110** to **160** m/min (coated/revêtu)			**130** to **180** m/min (coated/revêtu)		
		4	fz	0,011	0,009	0,013	0,011	0,009	0,013	0,011	0,013	0,032
		6	fz	0,019	0,017	0,024	0,019	0,017	0,024	0,022	0,026	0,064
		8	fz	0,031	0,028	0,039	0,031	0,028	0,039	0,032	0,036	0,090
		10	fz	0,039	0,035	0,049	0,039	0,035	0,049	0,039	0,045	0,112
		12	fz	0,053	0,047	0,066	0,053	0,047	0,066	0,052	0,059	0,148
		16	fz	0,071	0,062	0,088	0,071	0,062	0,088	0,069	0,078	0,196
		20	fz	0,079	0,069	0,980	0,079	0,069	0,980	0,085	0,098	0,244
AIR ARFe	Aciers réfractaires base Co Ni Hittebestendige legerinen op basis van Co Ni Hitzebeständige Legierungen, Co Ni base Special Alloys based Co Ni Aleaciones refractarias, base Co Ni Leghe refrattarie, Co Ni base		Vc	**12** to **18** m/min			**30** to **45** m/min					
			Vc(C)	**18** to **24** m/min (coated/revêtu)			**35** to **50** m/min (coated/revêtu)			**45** to **65** m/min (coated/revêtu)		
		4	fz	0,009	0,008	0,012	0,009	0,008	0,012	0,008	0,009	0,022
		6	fz	0,019	0,017	0,024	0,019	0,017	0,024	0,016	0,018	0,045
		8	fz	0,030	0,027	0,038	0,030	0,027	0,038	0,022	0,025	0,063
		10	fz	0,039	0,034	0,049	0,039	0,034	0,049	0,027	0,031	0,078
		12	fz	0,048	0,043	0,061	0,048	0,043	0,061	0,036	0,041	0,104
		16	fz	0,060	0,053	0,075	0,060	0,053	0,075	0,048	0,055	0,137
		20	fz	0,067	0,059	0,084	0,067	0,059	0,084	0,060	0,068	0,171

Fraisage **Conditions** de **coupe** End milling Cutting conditions Fresado Condiciones de corte (Part.C)

Vc and **Vc'**(**C**oated) = **m/min**
fz = **m/tr**

Class	Material	Ø	Vc/fz	HSS to HSSPM			HM carbide regular			HM carbide high perf. (23621, 23623, 23640, 23642, 23634, 23636)		
				0,5d / d	d / 0,5d	d / 0,1d	0,5d / d	d / 0,5d	d / 0,1d	0,5d / d	d / 0,5d	d / 0,1d
ARCo ARNi	Aciers réfractaires base Co Ni Hittebestendige legerinen op basis van Co Ni Hitzebeständige Legierungen, Co Ni base Special Alloys based Co Ni Aleaciones refractarias, base Co Ni Leghe refrattarie, Co Ni base		Vc	**10** to **16** m/min			**25** to **40** m/min					
			Vc(C)	**20** to **26** m/min (coated/revêtu)			**30** to **45** m/min (coated/revêtu)			**40** to **60** m/min (coated/revêtu)		
		4	fz	0,013	0,012	0,016	0,013	0,012	0,016	0,007	0,008	0,019
		6	fz	0,022	0,019	0,027	0,022	0,019	0,027	0,013	0,015	0,038
		8	fz	0,033	0,029	0,042	0,033	0,029	0,042	0,019	0,022	0,054
		10	fz	0,044	0,039	0,056	0,044	0,039	0,056	0,024	0,027	0,067
		12	fz	0,057	0,050	0,071	0,057	0,050	0,071	0,031	0,036	0,089
		16	fz	0,067	0,059	0,084	0,067	0,059	0,084	0,041	0,047	0,118
		20	fz	0,079	0,069	0,098	0,079	0,069	0,098	0,051	0,059	0,146
ARCo ARNi	Aciers réfractaires base Co Ni Hittebestendige legerinen op basis van Co Ni Hitzebeständige Legierungen, Co Ni base Special Alloys based Co Ni Aleaciones refractarias, base Co Ni Leghe refrattarie, Co Ni base		Vc	**8** to **12** m/min			**20** to **35** m/min					
			Vc(C)	**14** to **16** m/min (coated/revêtu)			**25** to **40** m/min (coated/revêtu)			**35** to **55** m/min (coated/revêtu)		
		4	fz	0,011	0,010	0,014	0,011	0,010	0,014	0,007	0,008	0,019
		6	fz	0,018	0,016	0,023	0,018	0,016	0,023	0,013	0,015	0,038
		8	fz	0,029	0,025	0,036	0,029	0,025	0,036	0,019	0,022	0,054
		10	fz	0,038	0,034	0,048	0,038	0,034	0,048	0,024	0,027	0,067
		12	fz	0,048	0,043	0,061	0,048	0,043	0,061	0,031	0,036	0,089
		16	fz	0,057	0,051	0,072	0,057	0,051	0,072	0,041	0,047	0,118
		20	fz	0,067	0,059	0,084	0,067	0,059	0,084	0,051	0,059	0,146
Ti	Alliages de Titane Titaanlegeringen Titaniegierungen Titan alloys Aleaciones de titanio Titanio		Vc	**12** to **18** m/min			**20** to **40** m/min					
			Vc(C)	**22** to **28** m/min (coated/revêtu)			**24** to **48** m/min (coated/revêtu)			**45** to **65** m/min	**55** to **75** m/min	**75** to **85** m/min
		4	fz	0,011	0,010	0,014	0,011	0,010	0,014	0,008	0,009	0,022
		6	fz	0,017	0,016	0,023	0,017	0,016	0,023	0,016	0,018	0,045
		8	fz	0,027	0,025	0,036	0,027	0,025	0,036	0,022	0,025	0,063
		10	fz	0,036	0,034	0,048	0,036	0,034	0,048	0,027	0,031	0,078
		12	fz	0,046	0,043	0,061	0,046	0,043	0,061	0,036	0,041	0,104
		16	fz	0,055	0,051	0,072	0,055	0,051	0,072	0,048	0,055	0,137
		20	fz	0,064	0,059	0,084	0,064	0,059	0,084	0,060	0,068	0,171

Information

HM CARB — Carbure monobloc / Solid Carbide

HSS E5 — Hss + Cobalt / Hss + Cobalt

HSS PM — Acier fritté ASP / Powder mettalurgy ASP

BRIGHT UNCOATED — Non revêtu / Uncoated

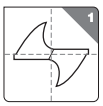
FL AM COATED — Revêtement / Coating

ST EAM TREATED — Oxyda. à la vapeur SH / Steam oxidinzing SH

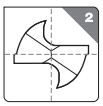
DIN 333A — Norme / Norm

simDiN 338 — Similaire à la norme / Similar to the standard

2xd — Profondeur de perçage / Depth Drilling



Dépouille conique / Conventional point



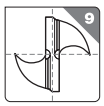
1/3 2/3



Pointe en croix / Split point



4 faces / 4 facet point



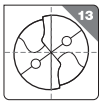
Plaquette carb. rapportée / Carbide tip



Affutage standard carb. / Standard solid carbide



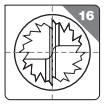
Tivoly Sirius+



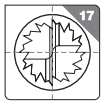
Tivoly Sirius+ (trous d'huile) / Tivoly Sirius+ (coolent feed)



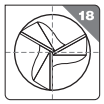
Bout fraise lime / Rotary burr end cutting



Bout foret / Drill end cutting



Bout Queue de poisson / Fish tail end cutting



3 lèvres / 3 flutes

MERCHANDISING

Présentoirs et materiels de PLV

Pour dynamiser les ventes et animer les rayons, Tivoly propose des solutions de mise en avant, promotions, cross-marketing sur mesure.
Pour des installations pérennes ou temporaires, Tivoly conçoit du matériel de présentation et de communication sur lieu de vente, adapté à chaque gamme de produits.

Pour chaque gamme, Tivoly propose l'assortiment et l'implantation des produits adaptés à vos surfaces de vente. Nos commerciaux et conseillers sont à votre écoute pour définir avec vous l'offre et l'organisation du rayon pour optimiser vos ventes.

Displays, communication and promotional materials

To drive sales and animate the shelves, Tivoly offers customized highlighted solutions for promotions, cross-marketing etc....

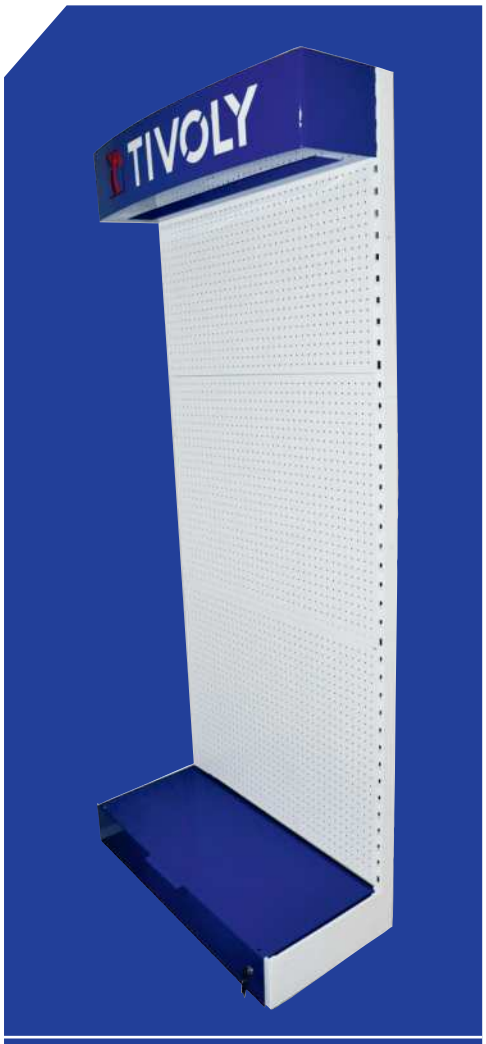
For each product line, Tivoly offers the implantation of an assortment of products adapted to your sales floor needs. Our sales representatives and consultants will listen to you to define the way you want to organize the product range for maximum sales.





PRÉSENTOIRS ET MATERIELS DE PLV

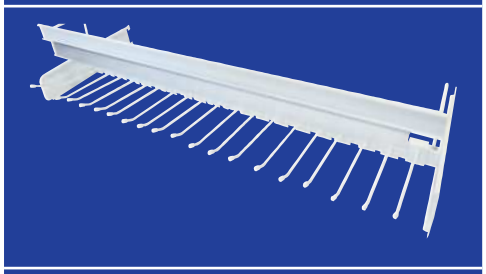
DISPLAYS, COMMUNICATION AND PROMOTIONAL MATERIALS



9130100 0414
Gondole
Display
220 x 100 cm





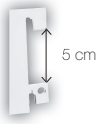


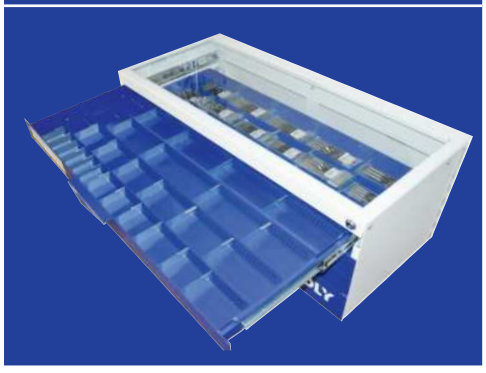
9130100 0417
Rack + 20 broches
Rack + 20 pins
100 x 32 x 18 cm



9130100 0415
Vitrine
Showcase
100 x 37 x 30 cm







9130100 0416
Bloc 4 tiroirs
4 drawers block
100 x 43 x 35 cm





Notes

Notes

Notes

Notes

Notes



Aciers non alliés/faiblement alliés <400N/mm²
Heat Treatable Steels <400N/mm²
Aceros aleados y tratados < 400N/mm²



Aciers pour traitement thermique <700N/mm²
Heat Treatable Steels <700N/mm²
Aceros aleados y tratados < 700N/mm²



Aciers non alliés/faiblement alliés <950N/mm²
Heat Treatable Steels <950N/mm²
Aceros aleados y tratados < 950N/mm²



Aciers pour traitement thermique <1200N/mm²
Heat Treatable Steels <1200N/mm²
Aceros aleados y tratados < 1200N/mm²



Aciers pour traitement thermique <1400N/mm²
Heat Treatable Steels <1400N/mm²
Aceros aleados y tratados < 1400N/mm²



Aciers inoxydables ferritiques
Ferrititic stainless steels
Aceros inoxidables ferríticos



Aciers inoxydables martensitiques
Martensitic stainless steels
Aceros inoxidables martensíticos



Aciers inoxydables austénitiques
Austenitic stainless steels
Aceros inoxidables austeníticos



Fontes grises
Grey cast iron
Fundición gris



Fontes
Cast iron
Fundiciones



Fontes GS
SG iron
Fundición nodular



Alliages d'aluminium gras
Fat aluminium alloys
Aleaciones de aluminio dúctil



Alliages d'aluminium Si<10%
Aluminium alloys Si<10%
Aleaciones de aluminio Si<10%



Alliages d'aluminium Si>10%
Aluminium alloys Si>10%
Aleaciones de aluminio Si>10%



Laiton
Brass
Latón



Bronze
Bronze
Bronce



Composites Plastiques
Composite Plastics
Composites plásticos



Alliages de titane
Titanium alloys
Aleaciones de titanio



Alliages réfractaires base Ni/Co
Ni / Co based special alloys
Aleaciones refractarias Co / Ni



Composites Fibres
Composites CFRP
Composites Fibras

TIVOLY

CUTTING TOOLS
CATALOGUE

HERRAMIENTAS DE CORTE
CATÁLOGO

UTENSILI DA TAGLIO
CATALOGO

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www.tivoly.com

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