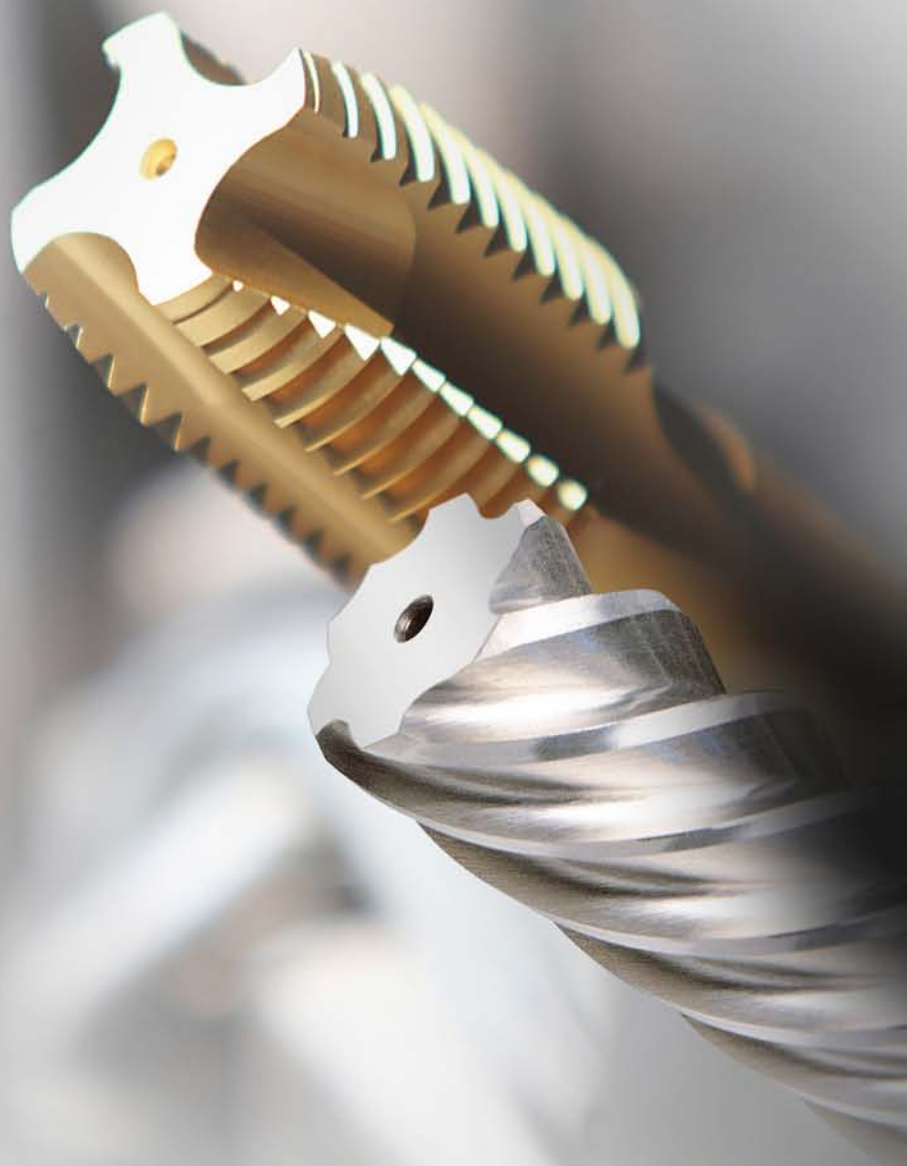
www.jmcabre.com

Catálogo *Catalogue* 7.0



Herramientas de precisión
Precision tools

JMC

José María Cabré S.A.

Empresa familiar fundada en 1947 dedica su actividad a la fabricación de herramientas de corte para la industria metalúrgica, especializandose en machos de roscar y escariadores.

Founded in 1947 Jose María Cabré S.A. is a family company devoted to the manufacture of cutting tools for the metal manufacturing industry and specialized in cutting taps and reamers.

Instalaciones / Facilities

JMC dispone de unas modernas instalaciones en Montornès del Vallès (Barcelona) desde donde exporta a todo el mundo, ofreciendo un servicio directo y personalizado.

JMC has modern manufacturing facilities located in Montornes del Valles, Barcelona, from where it gives personal and direct service all over the world.

Tradición y conocimiento, garantia de futuro
Tradition and knowledge the best future guarantee

En la actualidad JMC cuenta con una ámplia gama de herramientas de corte y complementos para el roscado, proporcionando al cliente un suministro global y de calidad.

Nowadays JMC has a very large stock on cutting tools and threading accessories thus provinding the customer of a global and high quality supply.

Principales eventos / Principal events

1947 Fundación. Instalaciones de 100 m².
JMC established with 100 m² facilities.

1954 Construcción nuevas instalaciones 700 m².
Construction of new facilities: 700 m².

1956 Producción de herramientas en HSSE.
Manufacture of HSSE tools.

1961 Primera máquina para rectificar machos.
Acquisition of the first tap grinding machine.

1969 Primera feria (Chicago), inicio de la exportación.
Ampliación gama de herramientas de corte.
First Fair (Chicago) beginning of exportation.
The range of cutting tools expands.

1972 Adquisición de Vacutrem, y del primer horno de temple al vacío. Pioneros en Europa.
Acquisition of Vacutrem, and of the first vacuum furnace for hardening.
Pioneers in Europe.

1975 Compra de HYS fabricante de escariadores.
Acquisition of HYS, manufacturer of reamers.

1975 Primera EMO París.
First EMO Paris.

1983 Nuevas instalaciones en St. Fost de Campsentelles (Barcelona).
New facilities in Sant Fost de Camp sentelles, Barcelona.

1984 Nuevas instalaciones de Vacutrem en Martorelles (Barcelona).
New facilities for Vacutrem in Martorelles, Barcelona.

1987 Implantación nuevo sistema de producción, robotizado con máquinas CNC.
Application of the new production system with CNC-machines.

1997 50 aniversario.
50th Anniversary.

1998 Producción de escariadores en MD.
Manufacture of Carbide Reamers.

2002 Nuevas instalaciones de 5.000m² en Montornes de Vallès (Barcelona).
New facilities in Montornés del Vallès, Barcelona: 5000m².

2002 Nuevos productos (machos MD, roscadores, etc.) Catálogo 6.0
New products (Carbide Taps, Tapping attachments, etc.) - Catalogue 6.0

2002 Aprobación ISO 9001.
Compliance with Quality Standards according to ISO 9001.

2007 60 aniversario.
60th Anniversary.

2008 Nuevos productos Calibres.
New products Gauges.

2011 Lanzamiento nueva gama de machos alta calidad tecnologia PROline.
New products high performance taps.

2014 Nuevo catálogo 7.0.
New cataloge 7.0.

Machos / *Taps*

C
Canal recto
Straight flute

C10
Canal R10°
Flute R10°

C35 / E35
Canal R35°
Flute R35°

C45
Canal R45°
Flute R45°

C conic
Canal recto
Straight flute

Profilrull
Sin ranuras
Without groves

C7X
Canal R7°
Flute R7°

C15
Canal R15°
Flute R15°

C40/C40X
Canal R40°
Flute R40°

PS
Entrada corregida
Split point

C15 conic
Canal R15°
Flute R15°

Rrofilrull R
Con ranuras
With groves

Cojinetes *Threading dies*

Mano
Entrada normal
Normal chamfer

HP
Materiales de alta resistencia
High resistance materials

VA
Aceros inoxidables
Stainless steels

Máquina
Entrada corregida
Spiral point

AL
Aluminios Si<10%
Aluminium Si<10%

BR
Latón
Brass

Fresas de roscar *Thread milling cutter*

N
Roscado
Threading

NR
Roscado exterior
External threading

MICRO 1
Diente parcial
Partial profile

BFA2
Rosca, avellana, taladra
Thread, countersink, drill

NTP
Roscado cónico
Taper threading

NA
Rosca, avellana
Thread, countersink

MICRO 2
Dos dientes
Two teeth

Calibres / *Gauges*

Tampón / *Plug*
Rosca cilíndrica
Cylindrical thread

Tampón / *Plug*
Rosca cónica
Taper thread

Tampón / *Plug*
Liso
Plain

Herradura / Snap
Liso
Plain

Anillo / Ring
Rosca cilíndrica
Cylindrical thread

Anillo / Ring
Rosca cónica
Taper thread

Anillo / Ring
Liso
Plain

Escariadores *Reamers*

A - C
Canal recto
Straight flute

E - C
Canal L45°
Flute L45°

E conic
Canal recto, máquina
Straight flute, machine

D conic
Canal L45°,máquina
Flute L45°,machine

D conic
Canal recto, manual
Straight flute, hand

Expandible
Canal recto, máquina
Straight flute, machine

B - D
Canal L8°
Flute L8°

Frontal
Canal recto
Straight flute

C conic
Canal L8°, máquina
Flute L8°, machine

B conic
Canal L8°, manual
Flute L8°, hand

Extensible
Canal recto manual
Straight flute, hand

Expandible
Canal L8°, manual
Flute L8°, hand

Avellanadores *Countersinking Counterbores*

C
Mango cilíndrico
Straight shank

Un corte
Un corte
Single flute

Ajuste fino
Ajuste fino
Fine adjustment

D
Mango cono morse
Morse taper shank

Rebabador
Rebabador
De-burring

Ajuste medio
Ajuste medio
Medium adjustment

Brocas / *Drills*

A
Punta 60°
Centre drill 60°

VA
Aceros inoxidables
Stainless steels

RM
Rompe Machos
Removing taps

L
Agujero Largo 5xD
Long hole 5xD

KC
Refrigeración interna
Internal coolant

N
Afilado normal
Conventional point

UF
Alta resistencia
High resistance

SPT
Puntear / *Spotting*
60°, 90°, 120°

XL
Agujero Largo 8xD
Long hole 8xD

Fresas frontales *End mills*

DF
Desbaste fino
Fine pitch

F
Plana frontal
Square type

ML
Mango largo
Long shank

CUL
Cuello largo
Long neck

B
Esférica
Ball type

UMG
Ultra micro grano
Ultra micro grain

D
Desbaste
Roughing cutter

CL
Canal recto
Straight flute

AL
Para aluminio
For aluminium

TP
Cónica
Taper

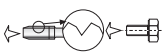
TN
Tórica
Corner radius

HRC
Para templado
For tempered

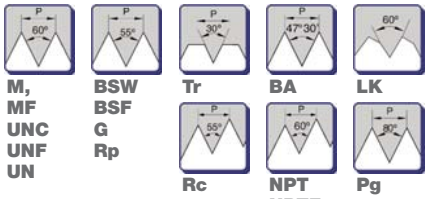
General / *General*

HSS	Acero rápido *Speed steel*
HSSE Co5	Acero rápido 5% Co *High speed steel 5% Co*
HSSE PM	Acero rápido PM 8,5% Co *High speed steel PM 8,5% Co*
X210 Cr12	Acero aleado Cr duro *Hard Cr steel alloy*
MD	Metal Duro *Carbide*
MDI	Metal Duro Integral *Solid Carbide*
UMG-MDI	Metal Duro Ultra Micro Grano *Solid Carbide Ultra Micro Grain*

LH	Rosca izquierda *Left hand threads*
KC	Refrigeración interna central *Internal axial coolant*
KL	Refrigeración interna lateral *Internal axial coolant*
TT	Para maquinas manuales *For conventional machines*
XL	Mango extra-largo *Extra long shank*
XXL	Mango extra-largo *Extra long shank*
Z	Nº de cortes *Extra long shank*
HRC	Materiales templados *Tempered material*

C. 1:16	Rosca cónica 1/16 *Taper thread 1/16*
Guia	Con guia de centraje *With cylindrical pilot*
Poligon.	Roscas por deformación en frio *Cold forming threading*
Combi	Rosca taladro *Drilling-threading*
BT	
NC	Mango 6h *Shank 6h*
CH	Cabeza MDI soldada *Brazed solid carbide heat*
CM	Cono Morse *Morse Taper*

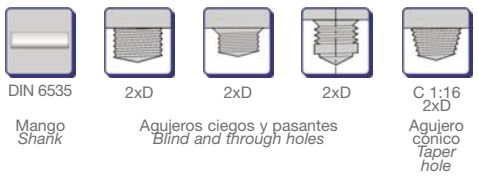
Ángulos de rosca / *Threads angles*

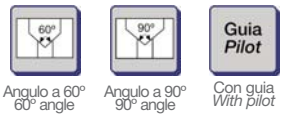


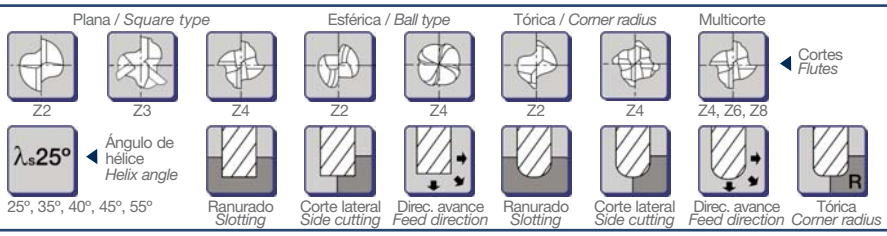
M, MF UNC UNF UN — **BSW BSF G Rp** — **Tr** — **BA** — **LK** — **Rc** — **NPT NPTF** — **Pg**

Normas/ *Norm*

DIN norma alemana / *Germany norm*
JIS norma japonesa / *Japan norm*
JMC norma JMC / *JMC norm*
ANSI/DIN normas combinadas / *JMC norm*



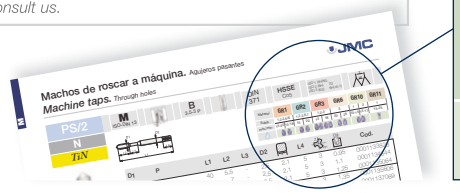




Vc - Velocidad de corte (m/min.)
Cs - *Cutting speed (m/min.)*

Las velocidades de corte son solo orientativas y dependen de las condiciones de corte, para más información consultar al fabricante.

The cutting speeds are only orientative and depend on the cutting conditions, for more information don't hesitate to consult us.



Aceites de corte *Cutting oils*	1 Inox-cut Plus
	2 Inox-cut
	3 Inox-cut green
	4 Ti-cut
	5 Ti-cut green
	6 Al-cut green
Refrigerantes *Coolants*	Emulsión / *Emulsion*
	Seco / *Dry*

Machos *Taps* — DIN 1 — Laminación/ *Roll taps* 267 — JIS 285 — ti 336
Cojinetes *Threading dies* 349 — ti 350
Fresas de roscar *Thread milling cutter* 381 — ti 395
Calibres *Gauges* 399 — ti 441
Escariadores *Reamers* 443 — ti 485
Avellanadores *Countersinks / Counterbores* 489 — ti 490
Brocas *Drills* 499 — ti 500
Fresas frontales *End mills* 531 — ti 576
Estuches y accesorios *Cases and accessories* 577
Sistemas de roscado y escariado *Tapping and reaming systems* 589

Características de los tratamientos y recubrimientos.
Surface treatments and coating characteristics.

TiN

Microdureza / *Microhardness:* HV 0,05 = 2400
Temperatura de oxidación / *Max. working temperature* = 600 ºC
Nitruro de Titanio: Recubrimiento monocapa por PVD de color oro.
Aumenta la vida de la herramienta, mejora el acabado superficial, reduce la temperatura de trabajo minimizando el riesgo de gripaje y permite el incremento de velocidad.
Titanium Nitride: *A PVD singlelayer coating. Has a gold colour.*
Lengthens the life of the tool, improves the surface finish. Has an excellent resistance to cold welding and very good abrasion resistance. Allows to increase the cutting speed.

TiCN

Microdureza / *Microhardness*: HV 0,05 = 3700
Temperatura de oxidación / *Max. working temperature* = 400 ºC
Carbonitruro de Titanio: Recubrimiento monocapa por PVD de color gris azulado.
Ofrece mayor resistencia al desgaste en materiales abrasivos y gracias a su elevada dureza permite el trabajo en materiales de alta resistencia.
Titanium Carbonitride: *A PVD singlelayer coating. Has blue grey colour.*
Reduces wear on the tool when used with abrasive materials and provides a high surface hardness for machining high strength materials.

AltPlus

Microdureza / *Microhardness* : HV 0,05 = 3800
Temperatura de oxidación / *Max. working temperature* = 900 ºC
Nitruro de Titanio Aluminio: Recubrimiento multicapa por PVD de color violeta oscuro.
Aumenta la vida de la herramienta en condiciones extremas de temperatura protegiendola contra el desgaste prematuro. Excelente resistencia a la oxidación, permite el incremento de velocidad y el mecanizado con poca refrigeración.
Titanium Aluminium Nitride: *A PVD multi-layer coating. Has a violet grey colour.*
Lengthengs tool life machining at high temperature. Excellent oxidation resistance, allows high speed and semy-dry machining operations

LubePlus

Microdureza / *Microhardness* : TiAlN HV 0,05 = 2800 + WC/C HV 0,05 = 1000
Temperatura de oxidación / *Max. working temperature* = 500 ºC
Nitruro de Titanio Aluminio + Carburo de Tungsteno: Recubrimiento multicapa por PVD de color gris oscuro brillante. Especialmente indicado para el mecanizado con poca o ninguna refrigeracíon gracias a su bajo coeficiente de fricción y su resistencia al desgaste.
Titanium Nitride + Tungsten Carbide/Carbon: *A PVD multi-layer coating. Has a black grey colour. Coating of choice for machining with high demand of friction and temperature control. Allows semidry or dry machining operations.*

CromPlus

Microdureza / *Microhardness:* HV 0,05 = 2000
Temperatura de oxidación / *Max. working temperature* = 700 ºC
Nitruro de Cromo + Carburo: Recubrimiento monocapa por PVD de color gris plata.
Especialmente indicado para el mecanizado en materiales no ferreos donde los recubrimientos con base de Titanio son incompatibles, ofrece una alta resistencia a la corrosión y a la oxidación.
Cromium Nitride: *A PVD singlelayer coating. Has silver grey colour.*
Developed to solve special applications, particularly in non ferreus materials where titanium based coatings were not succesfull. Has improved corrosion and oxidation resistance.

Nogrip

Microdureza / *Microhardness*: HV 0,1 = 800
Vaporizado: Tratamiento superficial de oxido ferroso - férrico (Fe3 Fo4) de color azul oscuro con brillo metálico.
La película de Fe3 Fo4 que se forma cristaliza formando agujas, resultando una capa porosa la cual retiene el aceite de corte o refrigerante, mejorando la lubricación en la zona de corte lo cual reduce el sobrecalentamiento, así mismo evita el gripaje y la soldadura de la viruta en el filo de la herramienta . Este tratamiento proporciona a la herramienta mayor resistencia ante la fricción y la oxidación.
Vaporized: *Surface treatment of thin oxide layer (Fe3 Fo4). Has a dark blue colour.*
The layer of Fe3 Fo4 acts as a lubricant and antiwelding surface, assits in the prevention of chip build-up on the flanks and improves the surface finish of threads. Acting as a final temper this treatment does provide a good friction and oxidation resistance.

C.D.I.®
C.D.I.®-C

Microdureza / *Microhardness:* HV 0,1 = 1100
Nitruración Iónica: Tratamiento superficial termo-químico de nitruración por plasma realizado al vacio.
Este tratamiento proporciona a la herramienta mayor resistencia al desgaste y la corrosión, especialmente indicado para el mecanizado de materiales abrasivos.
Ionic Nitruration: *Vacuum thermochemical nitruration.*
This surface treatment provides a high resistance to corrossion and wear when the tool is used in abrasive materials.

ATENCIÓN
Normas de seguridad

• Las herramientas de corte pueden fragmentarse. El uso de protección ocular es estrictamente imprescindible en la zona de trabajo.

• Es esencial que las condiciones de uso y manipulación de las herramientas sean las correctas para un trabajo seguro.

• Las herramientas de corte disponen de ángulos cortantes por lo que deben manipularse con cuidado para evitar cortes o lesiones.

• El uso de guantes no es recomendable ya que podría ocasionar estrangulaciones con el giro de las herramientas.

• Las herramientas pueden ocasionar lesiones en el caso de caida. Es recomendable el uso de calzado de seguridad.

WARNING
Safety norms

• Tools may shatter if broken. The wearing of eye protection is strongly advised in the vicinity of the working area.

• The correct using condition and handling the tools is essential to secure maximum useful life and hazard free operation.

• Cutting tools have sharp edges and care must be taken when handling to avoid cuts/lacerations to unprotected hands.

• The wearing of gloves is not recomended as the gloves may strangle with turning tools.

• Tools may hurt the user's feet when falling off. The safety shoes should be put on at all time.

Machos / *Taps*

Guia para aplicaciones de machos.
Tap application guide line.

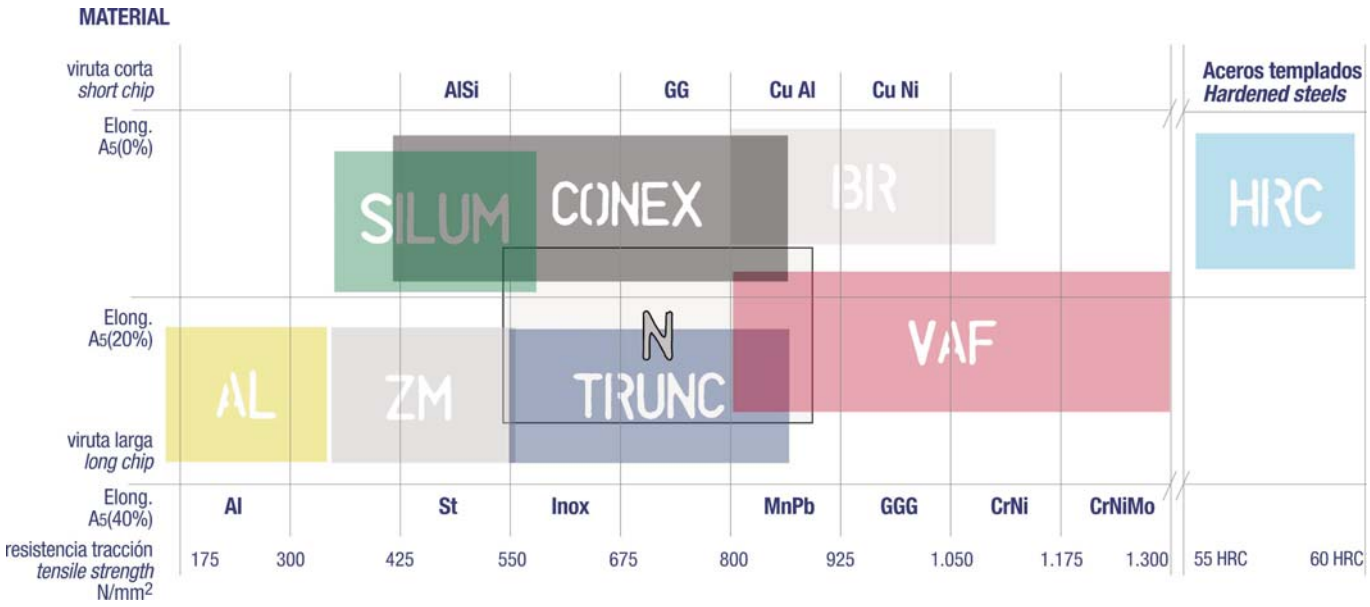
JMC le ofrece 2 lineas de producto entre las que podrá escoger el macho más adecuado a sus necesidades. Para una elección fácil de la referencia apropiada, encontrará unos índices que le ayudaran en 3 simples pasos a escoger la mejor opción.
JMC offers you two product-lines from which you can choose the tap that best suits your needs. In the index you'll find three easy steps to help you to get the right reference.

1 Localizar la geometría adecuada en función del material a trabajar.
To find the appropriate geometry based on the working material.

HSSE Co5

basicline — Geometría para uso universal / *For universal use*

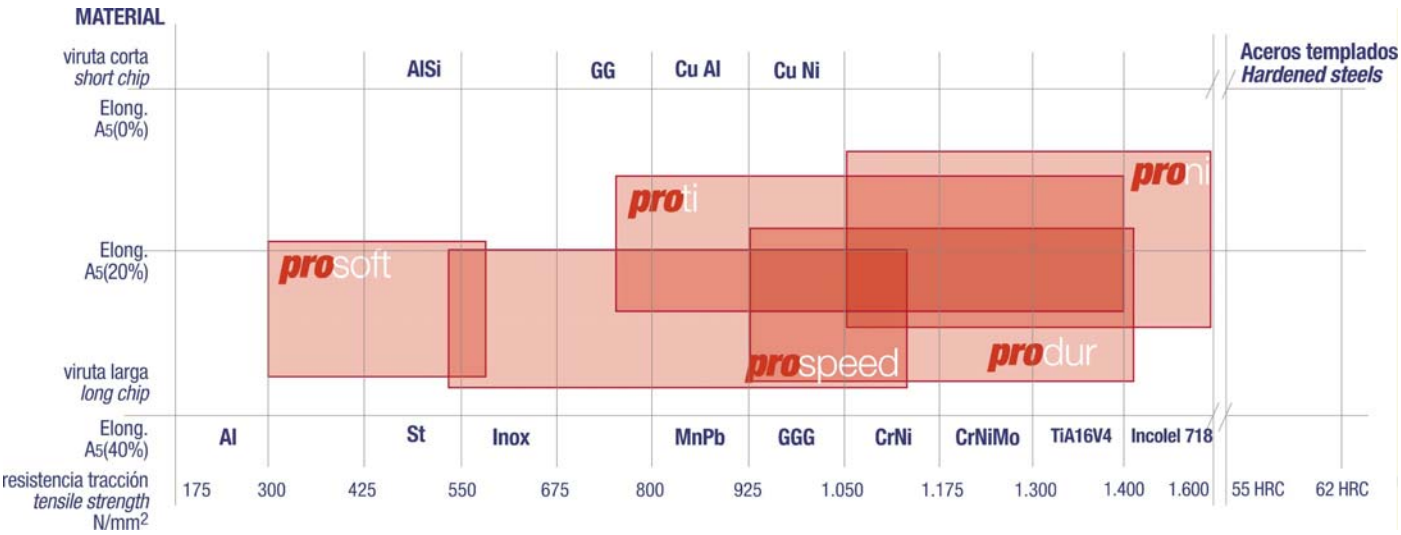
plusline — Geometría especifica según grupos de materiales
Specific geometry based on the working materials



HSSE PM

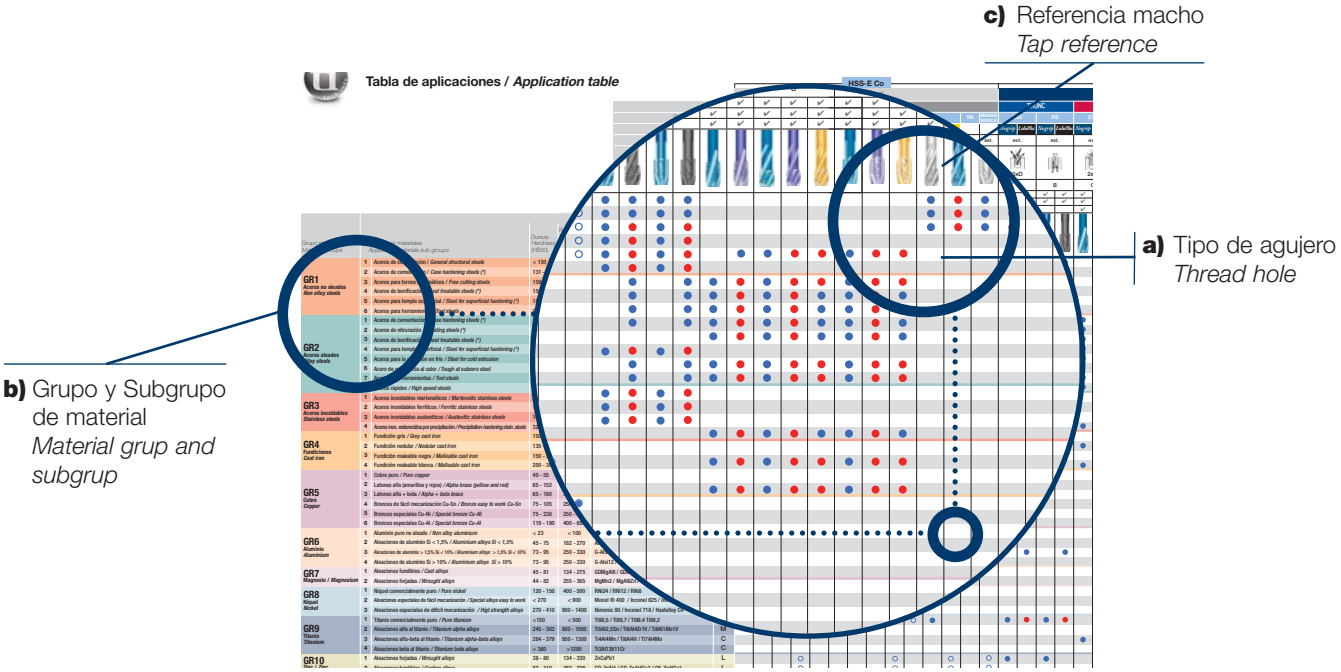
proline

Geometrías de alto rendimiento según grupos de materiales
High-performance geometries according to the group of materials.

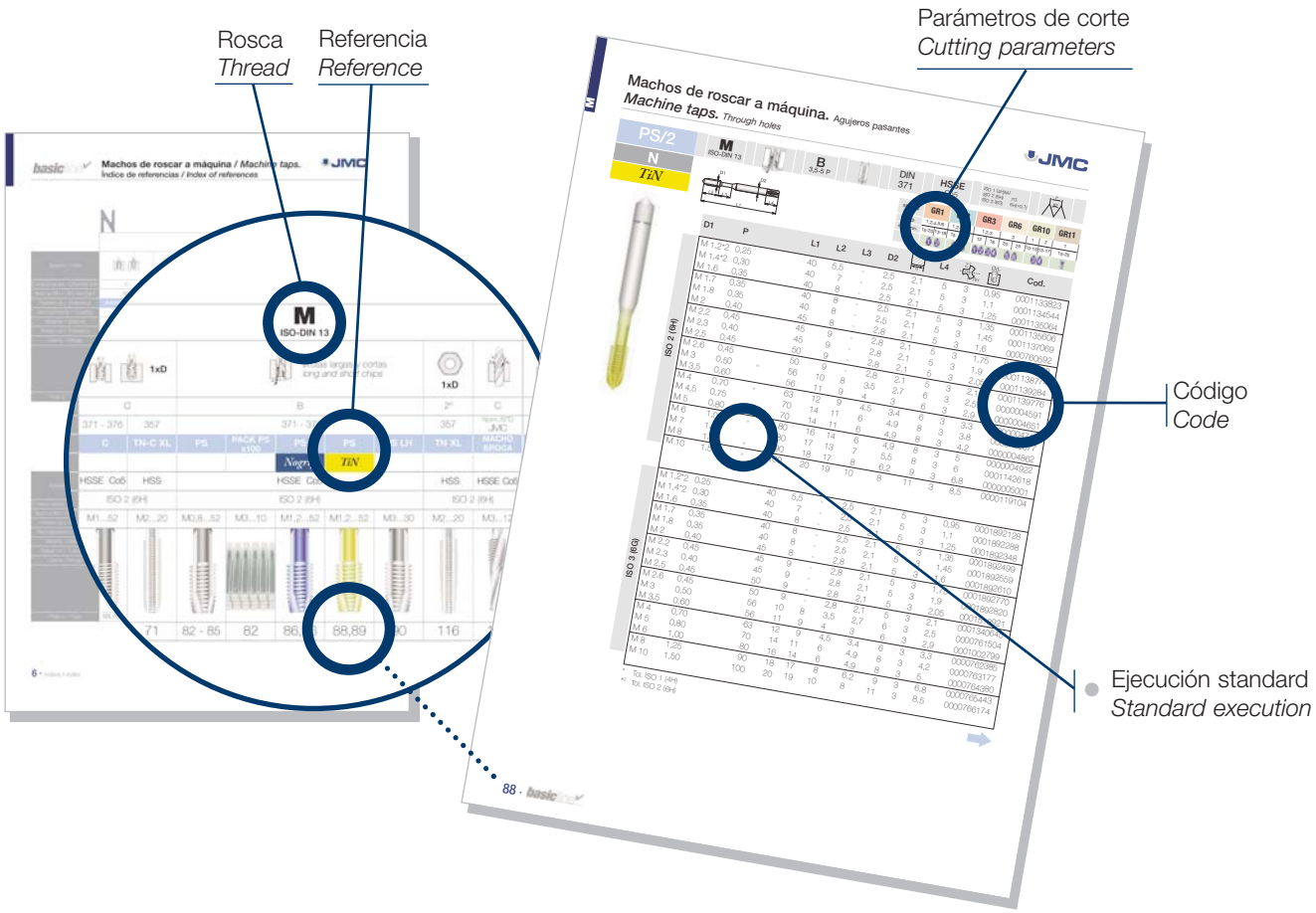


Guia para aplicaciones de machos.
Tap application guide line.

2 Con la geometría base adecuada, en función del tipo de agujero (**a)**) y del subgrupo del material a roscar (**b)**), ubicada en la solapa interior del catálogo, seleccionamos la referencia (**c)**) del macho idóneo.
Once you have selected the right geometry you can choose the tap reference (**c)**) *based on the thread hole* (**a)**) *and the material subgroup* (**b)**) *that you will find in the lapel of the catalogue.*



3 En el índice de machos correspondiente buscamos la referencia escogida según el tipo de rosca requerida. Por último localizamos la página indicada.
In the corresponding index of taps you will look for the chosen reference and on the bottom you will see the page number.



JMC

- Los valores de corte indicados son solo orientativos. En condiciones favorables es posible un aumento de las mismas mientras que en condiciones desfavorables se recomienda una reducción.
- Las herramientas con recubrimientos permiten incrementar los valores de corte, para más datos no duden en consultarnos.
- *The indicated cutting values are only approximate. Working with favorable conditions these values can be increased whereas working with unfavorable conditions we recommend to bring them down.*
- *Cutting tools coated allow increasing the cutting values. If you need more information don't hesitate to consult us.*

Tipo / *Type*
Referencia / *Reference*
Recubrimiento / *Coating*
Refrigerante / *Coolant*
Agujero / *Hole*
Entrada / *Chamfer*
CNC / *CNC*
Roscadoras paso conducido / *Drived machine*
Máquinas manuales / *Hand machines*

Grupo materiales *Materials groups*		Subgrupos materiales *Application materials sub-groups*	Dureza *Hardness* (HB30)	Resist.Tensil *Tensile strength* (N/mm²)	Ejemplos *Examples*	Viruta *Chips*
GR1 Aceros no aleados *Non alloy steels*	1	Aceros de construcción / *General structural steels*	< 150	330 - 520	St33-2 / St37-2 / St44-2 / St52-3	M
	2	Aceros de cementación / *Case hardening steels (*)*	131 - 150	640 - 880	C10 / Ck10 / C15 / C15Pb	M
	3	Aceros para tornos automáticos / *Free cutting steels*	159 - 174	560 - 800	9SMnPb28K / 9SMnPb36 / 10SPb20	M
	4	Aceros de bonificación / *Heat treatable steels (*)*	156 - 207	650 - 850	C22 / Ck22 / C25 / Ck38 / Ck40 / C45	L
	5	Aceros para temple superficial / *Steel for superficial hardening (*)*	183 - 217	760 - 1030	Cf35 / Cf45 / Cf53 / Cf70	L
	6	Aceros para herramientas / *Tool steels*	190 - 230	640 - 780	C110W2 / C45W / C110W	L
GR2 Aceros aleados *Alloy steels*	1	Aceros de cementación / *Case hardening steels (*)*	170 - 217	880 - 1120	15CrMo5 / 20MnCr5 / 39MnCrB6-2	M
	2	Aceros de nitruración / *Nitriding steels (*)*	217 - 262	780 - 1470	34CrAl6 / 39CrMoV13-9 / 41CrAlMo7	L,M
	3	Aceros de bonificación / *Heat treatable steels (*)*	200 - 255	850 - 1450	36CrNiMo4 / 41Cr4 / 42CrMo4	L,M
	4	Aceros para temple superficial / *Steel for superficial hardening (*)*	217 - 248	980 - 1450	42Cr4 / 34CrMo4 / 41CrMo4 / 37CrS4	L
	5	Aceros para la extrusión en frio / *Steel for cold extrusion*	220 - 241	1080 - 1300	41Cr4 / 42CrMo4 / 20CrMnTi / 20CrNi	L
	6	Acero de resistencia al calor / *Tough at subzero steel*	170 - 250	550 - 770	15Mo3 / 22Mo4 / 16CrMo4	L
	7	Aceros para herramientas / *Tool steels*	207 - 300	690 - 1000	X36CrMo17 / X210Cr12 / X42Cr13 / X155CrVMo12-1	L,M
	8	Aceros rápidos / *High speed steels*	235 - 300	800 - 1000	S18-1-2-10 / S6-5-2 / S18-0-1	L
GR3 Aceros inoxidables *Stainless steels*	1	Aceros inoxidables martensíticos / *Martensitic stainless steels*	160 - 285	625 - 1000	X20Cr13 / X30Cr13 / X14CrMoS17	M
	2	Aceros inoxidables ferríticos / *Ferritic stainless steels*	152 - 215	500 - 700	X6CrAl13 / X8Cr30	M
	3	Aceros inoxidables austeníticos / *Austenitic stainless steels*	165 - 250	440 - 850	X5CrNi18-10 / X8CrNiMo17-12-2	L
	4	Aceros inox. endurecidos por precipitación / *Precipitation-hardening stain. steels*	322 - 379	1070 - 1270	X5CrNiCuNb16-4	M
GR4 Fundiciones *Cast iron*	1	Fundición gris / *Grey cast iron*	150 - 250	500 - 820	GG 15 / GG 20 / GG 25 / GG 40	C
	2	Fundición nodular / *Nodular cast iron*	135 - 280	360 - 960	GGG 40 / GGG 50 / GGG 70	C,M
	3	Fundición maleable negra / *Malleable cast iron*	150 - 380	500 - 700	GTS 35-10 / GTS 45-06 / GTS55-04 / GTS 70-02	M
	4	Fundición maleable blanca / *Malleable cast iron*	200 - 300	700 - 1000	GTW 35-04 / GTW 40-05 / GTW-S 38	C
GR5 Cobre *Copper*	1	Cobre puro / *Pure copper*	40 - 55	< 210	E-Cu / SE-Cu / Cobre electrolítico	L
	2	Latones alfa (amarillos y rojos) / *Alpha brass (yellow and red)*	65 - 152	290 - 620	CuZn33 / CuZn15	C
	3	Latones alfa + beta / *Alpha + beta brass*	65 - 180	340 - 640	CuZn38Sn1 / CuZn40Pb2 / CuZn39Pb3	C
	4	Bronces de fácil mecanización Cu-Sn / *Bronze easy to work Cu-Sn*	75 - 105	250 - 350	CuSn6 / CuSn12	L
	5	Bronces especiales Cu-Ni / *Special bronze Cu-Ni*	75 - 238	250 - 800	CuNi1 / CuNi3Si	C
	6	Bronces especiales Cu-Al / *Special bronze Cu-Al*	119 - 190	400 - 650	CuAl8Fe / GCuAl11Fe4Ni4	C
GR6 Aluminio *Aluminium*	1	Aluminio puro no aleado / *Non alloy aluminium*	< 23	< 100	Al 99,98 / Al 99,7 / Al 99Cu / Al 99,5Ti	L
	2	Aleaciones de aluminio Si < 1,5% / *Aluminium alloys Si < 1,5%*	45 - 75	182 - 270	AlMgSi0,5 / AlMgSiPb / AlCuBiPb	L
	3	Aleaciones de aluminio > 1,5% Si < 10% / *Aluminium alloys > 1,5% Si < 10%*	73 - 95	250 - 330	G-AlSi6Cu / GD-AlSi9Cu3 / G-AlSi7Mg	C,M
	4	Aleaciones de aluminio Si > 10% / *Aluminium alloys Si > 10%*	73 - 95	250 - 330	G-Alsi12 / GD-AlSi13Mg	C
GR7 Magnesio / *Magnesium*	1	Aleaciones fundibles / *Cast alloys*	45 - 81	134 - 275	GDMgAl6 / GDMgAl6Zn1 / GDMgAl8Zn1	C,M
	2	Aleaciones forjadas / *Wrought alloys*	44 - 82	255 - 365	MgMn2 / MgAl6Zn / MgAl8Zn	L
GR8 Níquel *Nickel*	1	Níquel comercialmente puro / *Pure nickel*	120 - 150	400 - 500	RNi24 / RNi12 / RNi8	L
	2	Aleaciones especiales de fácil mecanización / *Special alloys easy to work*	< 270	< 900	Monel ® 400 / Inconel 625 / Invar	L
	3	Aleaciones especiales de dificil mecanización / *Higt strength alloys*	270 - 410	900 - 1400	Nimonic 80 / Inconel 718 / Hastelloy C4	C
GR9 Titanio *Titanium*	1	Titanio comercialmente puro / *Pure titanium*	<150	< 500	Ti99,5 / Ti99,7 / Ti99,4 Ti99,2	L
	2	Aleaciones alfa al titanio / *Titanium alpha alloys*	245 - 303	800 - 1000	Ti5Al2,5Sn / Ti6Al4Zr1V / Ti8Al1Mo1V	M
	3	Aleaciones alfa-beta al titanio / *Titanium alpha-beta alloys*	284 - 379	950 - 1300	Ti4Al4Mn / Ti6Al4V / Ti7Al4Mo	C
	4	Aleaciones beta al titanio / *Titanium beta alloys*	> 360	>1200	Ti3Al13V11Cr	C
GR10 Zinc / *Zinc*	1	Aleaciones forjadas / *Wrought alloys*	38 - 80	134 - 330	ZnCuPb1	L
	2	Aleaciones fundibles / *Casting alloys*	82 - 110	282 - 328	GD-ZnAl4 / GD-ZnAl4Cu3 / GK-ZnAlCu1	L
GR11 Materiales sintéticos *Synthetic materials*	1	Termoplásticos / *Thermoplastics*		80	Makrolon / Plexiglas / Hostalen	L
	2	Termoestables / *Thermosetting plastics*		110	Bakelite / Resopal / Pertinax	L
	3	Plásticos reforzados con fibra de vidrio, C, Bo / *Fibre-reinforced syntetic*	240 - 450	800 - 1500	GFK / CFK / BFK	C

(*) Propiedades después del tratamiento térmico / *Properties after heat treatment*

Larga / *Long*	L
Media / *Half*	M
Corta / *Short*	C

Tabla de aplicaciones / *Application table*

HSS-E Co

basicline ✔														plusline+									
N														TRUNC				VAF					
C15	C35			E35	C	TN C XL	C		PS			TN	MACHO BROCA	C35		PS		C15		C35		PS	
	Nogrip	TiN					TiN		Nogrip	TiN				Nogrip	LubePlus	Nogrip	LubePlus	Nogrip	TiCN	Nogrip	TiCN	Nogrip	TiCN
ext.	ext.				ext.		ext.		ext.			ext.	ext.	ext.		ext.		ext.		ext.		ext.	
2xD	2,5 - 3xD				1xD		Conic					1xD		3xD				2xD		2,5 - 3xD			
C	C			E	C		C		B			2º	C	C		B		C		C		B	
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HSS-E Co

plusline+

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		Nogrip		Nogrip			CromPlus	AltPlus			CromPlus	AltPlus		CromPlus	AltPlus		CromPlus	AltPlus	AltPlus	AltPlus	C.D.I.	AltPlus	AltPlus
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● Recomendado / *Recommended*
● Adecuado / *Suitable*
○ Alternativo / *Alternative*

Tabla de aplicaciones / *Application table*

	HSS-E Co		CARBIDE			HSSE PM																		
	plusline+ CONICAS/TAPER		MD			proline produr									proline prospeed									
	C15 AZ		C		C15	C7X	C15		C40			PS			C40			C40X		PS			
	Nogrip	TiCN	AltPlus	AltPlus	SILUM	AltPlus	AltPlus	AltPlus	Nogrip	AltPlus	AltPlus	Nogrip	AltPlus	AltPlus	Nogrip	LubePlus	LubePlus	LubePlus	LubePlus	Nogrip	LubePlus	LubePlus
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			1xD				2xD		4xD						4xD			4xD				
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● Recomendado / *Recommended*
● Adecuado / *Suitable*
○ Alternativo / *Alternative*

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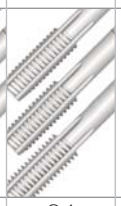
	M ISO-DIN 13								
Agujero / *Hole*			2xD	2,5 ÷ 3xD virutas largas *long chips*					
Entrada-ranura / *Chamfer-flute*	C		C	C					E
Norma DIN / *DIN Standard*	352		371 - 376	371 - 376					
Referencia / *Reference*	JUEGO	JUEGO LH	C15	C35	PACK C35 x100	C35	C35	C35 LH	E35
Recubrimiento / *Coating*						*Nogrip*	*TiN*		
Material / *Material*	HSS		HSSE Co5	HSSE Co5					HSSE Co5
Tolerancia / *Tolerance*	ISO 2 (6H)	ISO 2 (6H)	ISO 3 (6G)	ISO1 (4H) ISO 2 (6H) ISO 3 (6G)	ISO 2 (6H)	ISO 2 (6H) ISO 3 (6G)	ISO1 (4H) ISO 2 (6H) ISO 3 (6G)	ISO 2 (6H)	ISO 2 (6H)
Gama / *Range*	M1...30	M2...52	M2...30	M1,4...52	M3...10	M1,4...52	M1,4...52	M3...30	M3...16
									
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	M ISO-DIN 13									MJ ISO-DIN 5855-1	
Agujero / *Hole*	1xD		virutas largas y cortas *long and short chips*					1xD		2,5 ÷ 3xD virutas largas *long chips*	
Entrada-ranura / *Chamfer-flute*	C		B					2º	C	C	
Norma DIN / *DIN Standard*	371 - 376	357	371 - 376					357	Norm./STD JMC	371-376	
Referencia / *Reference*	C	TN-C XL	PS	PACK PS x100	PS	PS	PS LH	TN XL	MACHO BROCA	C35	C35
Recubrimiento / *Coating*					*Nogrip*	*TiN*					*TiN*
Material / *Material*	HSSE Co5	HSS	HSSE Co5					HSS	HSSE Co5	HSSE Co5	
Tolerancia / *Tolerance*	ISO 2 (6H)		ISO 2 (6H)					ISO 2 (6H)		ISO 1 (4H)	
Gama / *Range*	M1...52	M2...20	M0,8...52	M3...10	M1,2...52	M1,2...52	M3...30	M2...20	M3...12	M2...12 MF8...12	M2...12 MF8...12
Página / *Page*	69,70	71	82 - 85	82	86,86	88,89	90	116	116	120	121

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	MJ ISO-DIN 5855-1		MF ISO-DIN 13									
Agujero / *Hole*	virutas largas y cortas *long and short chips*				2xD virutas cortas *short chips*	2,5 ÷ 3xD virutas largas *long chips*			1xD	virutas largas y cortas *long and short chips*		
Entrada-ranura / *Chamfer-flute*	B		C		C	C			C	B		
Norma DIN / *DIN Standard*	371 - 376		352		374	371 - 374			371 - 374	371 - 374		
Referencia / *Reference*	PS	PS	JUEGO	JUEGO LH	C15	C35	C35	C35	C	PS	PS	PS
Recubrimiento / *Coating*		TiN					Nogrip	TiN			Nogrip	TiN
Material / *Material*			HSS		HSSE Co5				HSSE Co5	HSSE Co5		
Tolerancia / *Tolerance*	4H		ISO 2 (6H)		ISO 2 (6H)	ISO1 (4H) ISO 2 (6H) ISO 3 (6G)	ISO 2 (6H) ISO 3 (6G)	ISO1 (4H) ISO 2 (6H) ISO 3 (6G)	ISO 2 (6H)	ISO1 (4H) ISO 2 (6H) ISO 3 (6G)	ISO 2 (6H) ISO 3 (6G)	ISO1 (4H) ISO 2 (6H) ISO 3 (6G)
Gama / *Range*	MJ2...12	MJ2...12	MF1...30	MF4...30	MF4...30	MF2...30	MF2...30	MF1,4...52	MF2...52	MF2...36	M1,4...52	M3...30
Página / *Page*	122	123	124,125	126	129	133,134	135	136	146-148	154,155	156	157

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	BSW BS 84				BSF BS 84	G(BSP) ISO 228/1 DIN 259/1			
Agujero / *Hole*		2,5 ÷ 3xD	1xD		1xD			2xD virutas cortas *short chips*	
Entrada-ranura / *Chamfer-flute*	C	C	C	B	C	C		C	
Norma DIN / *DIN Standard*	352	371 - 376	376	371 - 376	376	352		5156	
Referencia / *Reference*	JUEGO	C35	C	PS	C	JUEGO	JUEGO	C15	C15
Recubrimiento / *Coating*									TiN
Material / *Material*	HSS	HSSE Co5		HSSE Co5	HSSE Co5	HSS		HSSE Co5	
Tolerancia / *Tolerance*	ISO 2 (6H)					ISO 2 (6H)			
Gama / *Range*	M1...30	W1/8...1"	W1/16...2"	W3/32...1"	BSF1/4...1"	G1/8...2"	G1/8...2"	G1/8...2"	G1/8...1"
Página / *Page*	166	167	168	169	170	171	171	172	172

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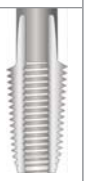
	G(BSP) ISO 228/1 DIN 259/1							Rp(BSPP) ISO 7/1 DIN 2999			Rc(BSPT) ISO 7/1 BS 21
Agujero / *Hole*	2,5 ÷ 3xD virutas largas *long chips*			1xD	virutas largas y cortas *long and short chips*			2,5 ÷ 3xD	1xD		
Entrada-ranura / *Chamfer-flute*	C			C	B			C		B	C
Norma DIN / *DIN Standard*	5156			5156	5156			5156		5156	Norm./STD JMC
Referencia / *Reference*	C35	C35	C35	C	PS	PS	PS	C35	C	PS	ÚNICO
Recubrimiento / *Coating*		Nogrip	TiN			Nogrip	TiN				
Material / *Material*	HSSE Co5			HSSE Co5	HSSE Co5			HSSE Co5			HSS
Tolerancia / *Tolerance*											C.1:16
Gama / *Range*	G1/8...2"	G1/8...2"	G1/8...2"	G1/8...2"	G1/8...2"	G1/8...2"	G1/8...2"	Rp1/8...1"	Rp1/8...1"	Rp1/8...1"	Rc1/16...2"
											
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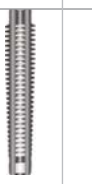
N

	Rc(BSPT) ISO 7/1 BS 21		UNC ANSI / ASME B1.1				UNF ANSI / ASME B1.1				UN ANSI / ASME B1.1	
Agujero / *Hole*				2,5 ÷ 3xD	1xD			2,5 ÷ 3xD	1xD		2,5 ÷ 3xD virutas largas *long chips*	
Entrada-ranura / *Chamfer-flute*	C		C			B	C	C		B	C	
Norma DIN / *DIN Standard*	5156		352	2184-1		2184-1	352	2184-1			2184-1	
Referencia / *Reference*	C	C	JUEGO	C35	C	PS	JUEGO	C35	C	PS	C35	C35
Recubrimiento / *Coating*		TiN										Nogrip
Material / *Material*	HSSE Co5		HSS	HSSE Co5			HSS	HSSE Co5			HSSE Co5	
Tolerancia / *Tolerance*	C.1:16		ISO 2 (6H)	2B 3B UNJC	2B	2B 3B UNJC	ISO 2 (6H)	2B 3B UNJF	2B	2B 3B UNJF	2B	
Gama / *Range*	Rc1/8...1"	Rc1/8...1"	UNC Nr1...2"	UNC Nr4...1"	UNC Nr1...1"1/2	UNC Nr1...1"	UNF Nr0...1"1/2	UNF Nr4...1"	UNF Nr1...1"1/2	UNF Nr1...1"	UN 1"1/8...1"1/2	UN 1"1/8...1"1/2
Página / *Page*	185	185	187	192	201	204	213	219	229	232	241	241

N

	UNJF ASME B1.15		NPT ANSI / ASME B1.20.1			NPTF ASMI B1.20.3	Pg DIN 40430		Tr ISO-DIN 103		Vg DIN 7756
Agujero / *Hole*	2,5 ÷ 3xD						1xD				1xD
Entrada-ranura / *Chamfer-flute*	C	B	C			C	C		2º20P		C
Norma DIN / *DIN Standard*	2184-1		Norm./STD JMC	≈374		≈374	40432	40433	Norm./STD JMC		≈371
Referencia / *Reference*	C35	PS	ÚNICO	C	C	C	ÚNICO	C	TN	TN LH	C
Recubrimiento / *Coating*					TiN						
Material / *Material*	HSSE Co5		HSS	HSS		HSSE Co5	HSS	HSSE Co5	HSSE Co5		HSSE Co5
Tolerancia / *Tolerance*	3B		C.1:16			C.1:16			7H		
Gama / *Range*	UNJF Nr4...3/4	UNJF Nr4...3/4	NPT 1/16...2"	NPT 1/16...1"	NPT 1/16...1"	NPTF 1/16...1"	Pg 7...48	Pg 7...21	Tr 8...36	Tr 8...36	Vg 5...9,6
											
Página / *Page*	249	250	252	252	253	253	258	258	263	263	264

TRUNC

	M ISO-DIN 13				MF ISO-DIN 13				G(BSP) ISO 228/1 DIN 259/1			
Agujero / *Hole*	3xD virutas largas *long chips*				3xD virutas largas *long chips*				3xD virutas largas *long chips*			
Entrada-ranura / *Chamfer-flute*	C		B		C		B		C		B	
Norma DIN / *DIN Standard*	371-376				374				5156			
Referencia / *Reference*	C35	C35	PS	PS	C35	C35	PS	PS	C35	C35	PS	PS
Tipo / *Type*	TRUNC				TRUNC							
Recubrimiento / *Coating*	*Nogrip*	*Lubeplus*	*Nogrip*	*Lubeplus*	*Nogrip*	*Lubeplus*	*Nogrip*	*Lubeplus*	*Nogrip*	*Lubeplus*	*Nogrip*	*Lubeplus*
Material / *Material*	HSSE Co5				HSSE Co5				HSSE Co5			
Tolerancia / *Tolerance*	ISO 2 (6H)				ISO 2 (6H)				-			
Gama / *Range*	M1,4...42	M1,4...42	M1,2...52	M1,2...52	MF8...30	MF8...30	MF4...36	MF4...36	G1/8...2"	G1/8...2"	G1/8...2"	G1/8...2"
Página / *Page*	45	46	91,92	93,94	137	138	158	159	175	175	181	181

VAF

	M ISO-DIN 13								MF ISO-DIN 13			
Agujero / *Hole*			2xD virutas cortas *short chips*		3xD largas y cortas *long and short*				3xD			
Entrada-ranura / *Chamfer-flute*	C		C		C		B		C		B	
Norma DIN / *DIN Standard*	352		371-376		371-376		371-376		374			
Referencia / *Reference*	JUEGO	JUEGO	C15	C15	C35A	C35A	PS	PS	C35	C35	PS	PS
Tipo / *Type*	VAF		VAF		VAF		VAF		VAF			
Recubrimiento / *Coating*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*
Material / *Material*	HSSE Co5		HSSE Co5		HSSE Co5		HSSE Co5		HSSE Co5			
Tolerancia / *Tolerance*	ISO 2X (6HX)		ISO 2 (6H)		ISO 2 (6H)		ISO 2 (6H)		ISO 2 (6H)			
Gama / *Range*	M2...20	M2...20	M2...30	M2...30	M1,4...42	M1,4...42	M1,2...42	M1,2...42	MF 8...20	MF 8...20	MF 8...20	MF 8...20
Página / *Page*	25	25	28	29	47	48	95	96	139	139	160	160

VAF

	G(BSP) ISO 228/1 DIN 259/1				UNC ANSI / ASME B1.1				UNF ANSI / ASME B1.1			
Agujero / *Hole*	3xD				3xD				3xD			
Entrada-ranura / *Chamfer-flute*	C		B		C		B		C		B	
Norma DIN / *DIN Standard*	5156		5156		2184-1		2184-1		2184-1		2184-1	
Referencia / *Reference*	C35	C35	PS	PS	C35	C35	PS	PS	C35	C35	PS	PS
Tipo / *Type*	VAF		VAF		VAF		VAF		VAF		VAF	
Recubrimiento / *Coating*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*	*Nogrip*	*TiCN*
Material / *Material*	HSSE Co5		HSSE Co5		HSSE Co5		HSSE Co5		HSSE Co5		HSSE Co5	
Tolerancia / *Tolerance*	-		-		2B		2B		2B		2B	
Gama / *Range*	G 1/8...1"	G 1/8...1"	G 1/8...1"	G 1/8...1"	UNC Nr 8...2"	UNC Nr 8...1"	UNC Nr 8...1"	UNC Nr 8...1"	UNF 1/4...1"	UNF 1/4...1"	UNF 1/4...1"	UNF 1/4...1"
Página / *Page*	176	176	182	182	193	194	205	206	220	221	233	234

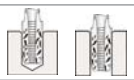
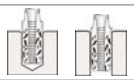
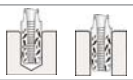
VAF

	UN ANSI/ASME B1.1	LK-M JMC Norm. / STD			
Agujero / *Hole*	3xD	3xD			
Entrada-ranura / *Chamfer-flute*	C	C		B	
Norma DIN / *DIN Standard*	2184-1	371-376		371-376	
Referencia / *Reference*	C35	C35	C35	PS	PS
Tipo / *Type*	VAF	BT+VAF			
Recubrimiento / *Coating*	*Nogrip*	*Nogrip*	*TiN*	*Nogrip*	*TiN*
Material / *Material*	HSSE Co5	HSSE Co5			
Tolerancia / *Tolerance*	2B	ISO 2 (6H)			
Gama / *Range*	UN 1"1/8...1"1/2	LK-M 4...24	LK-M 4...24	LK-M 4...24	LK-M 4...24
Página / *Page*	242	254	255	256	257

ZM

	M ISO-DIN 13											
Agujero / *Hole*	3xD virutas largas *long chips*											
Entrada-ranura / *Chamfer-flute*	C				B							
Norma DIN / *DIN Standard*	371-376		SIM. 371-376		371-376		SIM. 371-376					
Referencia / *Reference*	C35	C35	TN-C35	TN-C35	PS	PS	TN-PS	TN-PS				
Tipo / *Type*	ZM		XL-ZM		ZM		XL-ZM					
Recubrimiento / *Coating*		Nogrip		Nogrip		Nogrip		Nogrip				
Material / *Material*	HSSE Co5				HSSE Co5							
Tolerancia / *Tolerance*	ISO 2 (6H)				ISO 2 (6H)							
Gama / *Range*	M3...20	M3...20	M3...24	M3...24	M3...20	M3...20	M3...24	M3...24				
Página / *Page*	49	50	51	51	97	98	99	99				

BR

	M ISO-DIN 13	**G**(BSP) ISO 228/1 DIN 259/1	**BA** BS 93							
Agujero / *Hole*										
Entrada-ranura / *Chamfer-flute*	C	C	C							
Norma DIN / *DIN Standard*	371-376	5156	SIM. DIN 371							
Referencia / *Reference*	C	C	C							
Tipo / *Type*	BR	BR	BR							
Recubrimiento / *Coating*	-	-	-							
Material / *Material*	HSSE Co5	HSSE Co5	HSSE Co5							
Tolerancia / *Tolerance*	ISO 2 (6H)	-	-							
Gama / *Range*	M3...12	G 1/8...1"	BA 0...8							
Página / *Page*	72	177	265							

AL

	M ISO-DIN 13						
Agujero / *Hole*	3xD virutas largas *long chips*						
Entrada-ranura / *Chamfer-flute*	C				B		
Norma DIN / *DIN Standard*	371-376				371-376		
Referencia / *Reference*	C35	C35	C35	C45E	PS	PS	PS
Tipo / *Type*	AL						
Recubrimiento / *Coating*		CromPlus	AltPlus			CromPlus	AltPlus
Material / *Material*	HSSE Co5						
Tolerancia / *Tolerance*	ISO 2 (6H)						
Gama / *Range*	M3...20	M3...20	M3...20	M2,5...16	M3...20	M3...20	M3...20
Página / *Page*	52	53	54	68	100	101	102

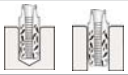
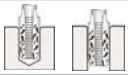
AL

	EG M DIN 8140 PART 2		EG UNC MS 33537		EG UNF MS 33537	
Agujero / *Hole*	3xD				3xD	
Entrada-ranura / *Chamfer-flute*	C	B	C	B	C	B
Norma DIN / *DIN Standard*	40435		2184-1		2184-1	
Referencia / *Reference*	C35A	PS	C35A	PS	C35A	PS
Tipo / *Type*	AL		AL		AL	
Recubrimiento / *Coating*						
Material / *Material*	HSSE Co5		HSSE Co5		HSSE Co5	
Tolerancia / *Tolerance*	6H mod.		3B		3B	
Gama / *Range*	EG M2...20	EG M2...20	EG UNC Nr.2...3/8	EG UNC Nr.2...3/8	EG UNF Nr.2...3/8	EG UNF Nr.2...3/8
Página / *Page*	259	260	261	261	262	262

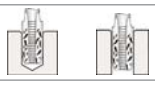
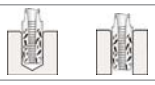
AL-AZ

	M ISO-DIN 13					
Agujero / *Hole*	3xD virutas largas *long chips*					
Entrada-ranura / *Chamfer-flute*	C			B		
Norma DIN / *DIN Standard*	371-376			371-376		
Referencia / *Reference*	C35	C35	C35	PS	PS	PS
Tipo / *Type*	AL-AZ			AL-AZ		
Recubrimiento / *Coating*		CromPlus	AltPlus		CromPlus	AltPlus
Material / *Material*	HSSE Co5			HSSE Co5		
Tolerancia / *Tolerance*	ISO 2 (6H)			ISO 2 (6H)		
Gama / *Range*	M3...16	M3...16	M3...12	M3...16	M3...16	M3...16
Página / *Page*	55	56	57	103	104	105

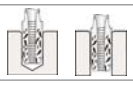
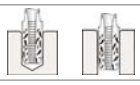
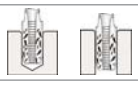
SILUM

	M ISO-DIN 13		MF ISO-DIN 13	
Agujero / *Hole*				
Entrada-ranura / *Chamfer-flute*	C		C	
Norma DIN / *DIN Standard*	371-376		374	
Referencia / *Reference*	C	C KC	C	C KC
Tipo / *Type*	SILUM		SILUM	
Recubrimiento / *Coating*	*Altplus*	*Altplus*	*Altplus*	*Altplus*
Material / *Material*	HSSE Co5		HSSE Co5	
Tolerancia / *Tolerance*	ISO 2X (6HX)		ISO 2X (6HX)	
Gama / *Range*	M3...20	M6...16	MF8...22	MF8...22
Página / *Page*	73	74	149	149

CONEX

	M ISO-DIN 13			MF ISO-DIN 13		
Agujero / *Hole*						
Entrada-ranura / *Chamfer-flute*	C			C		
Norma DIN / *DIN Standard*	371-376			374		
Referencia / *Reference*	C	C	C KC	C	C	C KC
Tipo / *Type*	CONEX			CONEX		
Recubrimiento / *Coating*	*C.D.I.®*	*Altplus*	*Altplus*	*C.D.I.®*	*Altplus*	*Altplus*
Material / *Material*	HSSE Co5			HSSE Co5		
Tolerancia / *Tolerance*	ISO 2X (6HX)			ISO 2X (6HX)		
Gama / *Range*	M3...30	M3...30	M3...30	MF8...22	MF8...22	MF8...22
Página / *Page*	75	76	77	150	150	151

CI

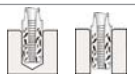
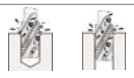
	G(BSP) ISO 228/1 DIN 259/1		UNC ANSI / ASME B1.1		UNF ANSI / ASME B1.1	
Agujero / *Hole*						
Entrada-ranura / *Chamfer-flute*	C		C		C	
Norma DIN / *DIN Standard*	5156		2184-1		2184-1	
Referencia / *Reference*	C	C	C	C	C	C
Tipo / *Type*	CI		CI		CI	
Recubrimiento / *Coating*	*C.D.I.®*	*Altplus*	*C.D.I.®*	*Altplus*	*C.D.I.®*	*Altplus*
Material / *Material*	HSSE Co5		HSSE Co5		HSSE Co5	
Tolerancia / *Tolerance*	-		2B		2B	
Gama / *Range*	G1/8...1"	G1/8...1"	UNC Nr4...1"	UNC Nr4...1"	UNF Nr4...1"	UNF Nr4...1"
Página / *Page*	178	178	202	203	230	231

AZ CÓNICAS / TAPER AZ

	Rc(BSPT) ISO 7/1 BS 21		**NPT** ANSI / ASME B1.20.1	
Agujero / *Hole*				
Entrada-ranura / *Chamfer-flute*	C		C	
Norma DIN / *DIN Standard*	5156		SIM.374	
Referencia / *Reference*	C15	C15	C15	C15
Tipo / *Type*	CÓNICAS / TAPER AZ		CÓNICAS / TAPER AZ	
Recubrimiento / *Coating*	*Nogrip*	*TiN*	*Nogrip*	*TiCN*
Material / *Material*	HSSE Co5		HSSE Co5	
Tolerancia / *Tolerance*	C.1:16		C.1:16	
Gama / *Range*	Rc1/8...1"	Rc1/8...1"	NPT 1/8...1"	NPT 1/8...1"
Página / *Page*	186	186	251	251

CARBIDE

MD

	M ISO-DIN 13		
Agujero / *Hole*			
Entrada-ranura / *Chamfer-flute*	3-4 P		3-4 P
Norma DIN / *DIN Standard*	371-376		371 - 374
Referencia / *Reference*	C	C KC	D15 KC
Tipo / *Type*	HRC		SILUM
Recubrimiento / *Coating*	*Altiplus*		
Material / *Material*	MD / *Solid carbide*		MD / *Solid carbide*
Tolerancia / *Tolerance*	ISO 2 (6H)		ISO 2 (6H)
Gama / *Range*	M 3...5	M 6...16	M6...16
Página / *Page*	81	81	35

produr

M
ISO-DIN 13

Agujero / *Hole*	virutas largas y cortas *long and short chips*			2xD virutas cortas *short chips*		4xD virutas largas y cortas *long and short chips*		
Entrada-ranura / *Chamfer-flute*	B			C-R15º		C-R40º		
Norma DIN / *DIN Standard*	371-376			371-376		371-376		
Referencia / *Reference*	PS	PS	PS KL	C15	C15 KC	C40	C40	C40 KC
Tipo / *Type*	produr			produr		produr		
Recubrimiento / *Coating*	Nogrip	AltPlus	AltPlus	AltPlus	AltPlus	Nogrip	AltPlus	AltPlus
Material / *Material*	HSSE PM			HSSE PM		HSSE PM		
Tolerancia / *Tolerance*	ISO 2 (6H)			ISO 2 (6H)		ISO 2 (6H)		
Gama / *Range*	M3...30	M3...30	M6...30	M3...16	M6...16	M3...30	M3...30	M6...20
Página / *Page*	106	107	108	30	31	58	59	60

produr

MF
ISO-DIN 13

Agujero / *Hole*	virutas largas y cortas *long and short chips*			2xD	4xD virutas largas y cortas *long and short chips*		
Entrada-ranura / *Chamfer-flute*	B			C-R7º	C-R40º		
Norma DIN / *DIN Standard*	374			≈DIN 374	374		
Referencia / *Reference*	PS	PS	PS KL	C7X KC	C40	C40	C40 KC
Tipo / *Type*	produr			produr	produr		
Recubrimiento / *Coating*	Nogrip	AltPlus	AltPlus	AltPlus	Nogrip	AltPlus	AltPlus
Material / *Material*	HSSE PM			HSSE PM	HSSE PM		
Tolerancia / *Tolerance*	ISO 2 (6H)			ISO 2 (6H)	ISO 2 (6H)		
Gama / *Range*	MF8...20	MF8...20	MF8...20	MF12...16	MF8...20	MF8...20	MF8...20
Página / *Page*	161	161	162	127	140	140	141

produr

UNC
ANSI / ASME B1.1

Agujero / *Hole*	virutas largas y cortas *long and short chips*			4xD virutas largas y cortas *long and short chips*		
Entrada-ranura / *Chamfer-flute*	B			C-R40°		
Norma DIN / *DIN Standard*	2184-1			2184-1		
Referencia / *Reference*	PS	PS	PS KL	C40	C40	C40 KC
Tipo / *Type*	produr			produr		
Recubrimiento / *Coating*	Nogrip	AltPlus	AltPlus	Nogrip	AltPlus	AltPlus
Material / *Material*	HSSE PM			HSSE PM		
Tolerancia / *Tolerance*	2B			2B		
Gama / *Range*	UNC Nr.2...5/8	UNC Nr.2...5/8	UNC1/4...5/8	UNC Nr.2...5/8	UNC Nr.2...5/8	UNC1/4...5/8
Página / *Page*	207	208	209	195	196	197

produr

UNF
ANSI / ASME B1.1

Agujero / *Hole*	2xD	virutas largas y cortas *long and short chips*			4xD virutas largas y cortas *long and short chips*		
Entrada-ranura / *Chamfer-flute*	C-R7°	B			C-R40°		
Norma DIN / *DIN Standard*	SIM. 2184-1	2184-1			2184-1		
Referencia / *Reference*	C7X KC	PS	PS	PS KL	C40	C40	C40 KC
Tipo / *Type*	produr	produr			produr		
Recubrimiento / *Coating*	AltPlus	Nogrip	AltPlus	AltPlus	Nogrip	AltPlus	AltPlus
Material / *Material*	HSSE PM	HSSE PM			HSSE PM		
Tolerancia / *Tolerance*	2B	2B			2B		
Gama / *Range*	UNF 7/16	UNF Nr.4...5/8	UNF Nr.4...5/8	UNF1/4...5/8	UNF Nr.4...5/8	UNF Nr.4...5/8	UNF1/4...5/8
Página / *Page*	214	235	236	237	222	223	224

prospeed

M
ISO-DIN 13

Agujero / *Hole*	virutas largas y cortas *long and short chips*			4xD virutas largas y cortas *long and short chips*					
Entrada-ranura / *Chamfer-flute*	B			C-R40°					
Norma DIN / *DIN Standard*	371-376			371-376					
Referencia / *Reference*	PS	PS	PS KL	C40	C40	C40 KC			
Tipo / *Type*	prospeed			prospeed					
Recubrimiento / *Coating*	Nogrip	LubePlus	LubePlus	Nogrip	LubePlus	LubePlus			
Material / *Material*	HSSE PM			HSSE PM					
Tolerancia / *Tolerance*	ISO 2 (6H)			ISO 2 (6H)					
Gama / *Range*	M3...30	M3...30	M6...30	M3...30	M3...30	M6...30			
Página / *Page*	109	110	111	61	62	63			

prospeed

MF
ISO-DIN 13

Agujero / *Hole*	virutas largas y cortas *long and short chips*			4xD virutas largas y cortas *long and short chips*					
Entrada-ranura / *Chamfer-flute*	B			C-R40°					
Norma DIN / *DIN Standard*	374			374			374		
Referencia / *Reference*	PS	PS	PS KL	C40	C40	C40 KC	C40X	C40X KC	
Tipo / *Type*	prospeed			prospeed			prospeed		
Recubrimiento / *Coating*	Nogrip	LubePlus	LubePlus	Nogrip	LubePlus	LubePlus	LubePlus	LubePlus	
Material / *Material*	HSSE PM			HSSE PM			HSSE PM		
Tolerancia / *Tolerance*	ISO 2 (6H)			ISO 2 (6H)			ISO 2 (6H)		
Gama / *Range*	MF8...20	MF8...20	MF8...20	MF8...20	MF8...20	MF8...20	MF12...16	MF12...16	
Página / *Page*	162	163	163	141	142	142	143	143	

prospeed

UNC
ANSI / ASME B1.1

Agujero / *Hole*	virutas largas y cortas *long and short chips*			**4xD** virutas largas y cortas *long and short chips*					
Entrada-ranura / *Chamfer-flute*	B			C-R40º					
Norma DIN / *DIN Standard*	2184-1			2184-1					
Referencia / *Reference*	PS	PS	PS KL	C40	C40	C40 KC			
Tipo / *Type*	prospeed			prospeed					
Recubrimiento / *Coating*	Nogrip	LubePlus	LubePlus	Nogrip	LubePlus	LubePlus			
Material / *Material*	HSSE PM			HSSE PM					
Tolerancia / *Tolerance*	2B			2B					
Gama / *Range*	UNC Nr2...5/8	UNC Nr2...5/8	UNC 1/4...5/8	UNC Nr2...5/8	UNC Nr2...5/8	UNC 1/4...5/8			
Página / *Page*	210	211	212	198	199	200			

prospeed

UNF
ANSI / ASME B1.1

Agujero / *Hole*	virutas largas y cortas *long and short chips*			**4xD** virutas largas y cortas *long and short chips*					
Entrada-ranura / *Chamfer-flute*	B			C-R40º					
Norma DIN / *DIN Standard*	2184-1			2184-1					
Referencia / *Reference*	PS	PS	PS KL	C40	C40	C40 KC	C40X	C40X KC	
Tipo / *Type*	prospeed			prospeed			prospeed		
Recubrimiento / *Coating*	Nogrip	LubePlus	LubePlus	Nogrip	LubePlus	LubePlus	LubePlus	LubePlus	
Material / *Material*	HSSE PM			HSSE PM			HSSE PM		
Tolerancia / *Tolerance*	2B			2B			2B		
Gama / *Range*	UNF Nr.4...5/8	UNF Nr.4...5/8	UNF 1/4...5/8	UNF Nr.4...5/8	UNF Nr.4...5/8	UNF Nr.4...5/8	UNF 7/16...1/2	UNF 7/16...1/2	
Página / *Page*	238	239	240	225	226	227	228	228	

prosoft

M
ISO-DIN 13

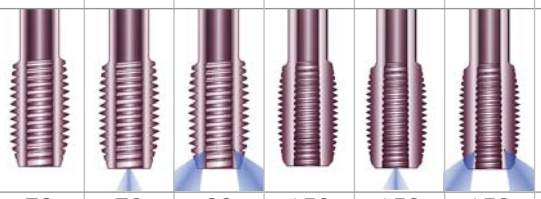
Agujero / *Hole*	virutas largas *long chips*				4xD virutas largas *long chips*			
Entrada-ranura / *Chamfer-flute*	B				C-R40°			
Norma DIN / *DIN Standard*	371-376				371-376			
Referencia / *Reference*	PS	PS	PS KL	PS KL	C40	C40	C40 KC	C40 KC
Tipo / *Type*	prosoft				prosoft			
Recubrimiento / *Coating*	LubePlus	CromPlus	LubePlus	CromPlus	LubePlus	CromPlus	LubePlus	CromPlus
Material / *Material*	HSSE PM				HSSE PM			
Tolerancia / *Tolerance*	ISO 2 (6H)				ISO 2 (6H)			
Gama / *Range*	M3...30	M3...30	M6...20	M6...20	M3...30	M3...30	M6...20	M6...20
Página / *Page*	112	113	114	115	64	65	66	67

prosoft

MF
ISO-DIN 13

Agujero / *Hole*	virutas largas *long chips*				4xD virutas largas *long chips*			
Entrada-ranura / *Chamfer-flute*	B				C-R45°			
Norma DIN / *DIN Standard*	374				374			
Referencia / *Reference*	PS	PS	PS KL	PS KL	C40	C40	C40 KC	C40 KC
Tipo / *Type*	prosoft				prosoft			
Recubrimiento / *Coating*	LubePlus	CromPlus	LubePlus	CromPlus	LubePlus	CromPlus	LubePlus	CromPlus
Material / *Material*	HSSE PM				HSSE PM			
Tolerancia / *Tolerance*	ISO 2 (6H)				ISO 2 (6H)			
Gama / *Range*	MF8...12	MF8...12	MF8...12	MF8...12	MF8...12	MF8...12	MF8...12	MF8...12
Página / *Page*	164	164	165	165	144	144	145	145

pronex

	M ISO-DIN 13			MF ISO-DIN 13		
Agujero / *Hole*	virutas cortas *short chips*			virutas cortas *short chips*		
Entrada-ranura / *Chamfer-flute*	C			C		
Norma DIN / *DIN Standard*	371-376			374		
Referencia / *Reference*	C	C KC	C KL	C	C KC	C KL
Tipo / *Type*	pronex			pronex		
Recubrimiento / *Coating*	AltPlus	AltPlus	AltPlus	AltPlus	AltPlus	AltPlus
Material / *Material*	HSSE PM			HSSE PM		
Tolerancia / *Tolerance*	ISO 2X (6HX)			ISO 2X (6HX)		
Gama / *Range*	M3...20	M3...20	M3...20	M12...20	M12...20	M12...20
						
Página / *Page*	78	79	80	152	152	153

proni

	M ISO-DIN 13	MJ DIN-ISO 5855-1	MF ISO-DIN 13	UNC ANSI/ASME B1.1	UNF ANSI/ASME B1.1	UNJC ANSI/ASME B1.15	UNJF ANSI/ASME B1.15
Agujero / *Hole*	1,5xD virutas largas y cortas / *long and short chips*						
Entrada-ranura / *Chamfer-flute*	R10º	R10º	R10º	R10º	R10º	R10º	R10º
Norma DIN / *DIN Standard*	371-376	371-376	≈371-374	2184-1	2184-1	2184-1	371-376
Referencia / *Reference*	C10	C10	C10	C10	C10	C10	C10
Tipo / *Type*	proni	proni	proni	proni	proni	proni	proni
Recubrimiento / *Coating*							
Material / *Material*	HSSE PM	HSSE PM	HSSE PM	HSSE PM	HSSE PM	HSSE PM	HSSE PM
Tolerancia / *Tolerance*	6HX	4H	6HX	2B	3B	2B	3B
Gama / *Range*	M3...12	MJ3...12	MF3...12	UNC Nr4...5/8	UNF Nr6...5/8	UNJC Nr4...5/8	UNJF Nr6...5/8
Página / *Page*	26	117	128	188	215	243	246

proti

	M ISO-DIN 13			MJ DIN-ISO 5855-1		MF ISO-DIN 13				
Agujero / *Hole*	2xD virutas largas y cortas / *long and short chips*									
Entrada-ranura / *Chamfer-flute*	C-R15º			C-R15º		C-R15º				
Norma DIN / *DIN Standard*	371-376			371-376		≈371-374				
Referencia / *Reference*	C15	C15	C15	C15	C15	C15	C15	C15		
Tipo / *Type*	proti			proti		proti				
Recubrimiento / *Coating*		TiCN	CromPlus		CromPlus		TiCN	CromPlus		
Material / *Material*	HSSE PM			HSSE PM		HSSE PM				
Tolerancia / *Tolerance*	6HX			4H		6HX				
Gama / *Range*	M3...12	M3...12	M3...12	MJ3...12	MJ3...12	MF8...20	MF8...20	MF8...20		
Página / *Page*	32	33	34	118	119	130	131	132		

proti

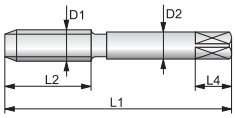
	UNC ANSI / ASME B1.1			UNF ANSI / ASME B1.1			UNJC ANSI/ASME B1.15		UNJF ANSI/ASME B1.15	
Agujero / *Hole*	2xD virutas largas y cortas / *long and short chips*									
Entrada-ranura / *Chamfer-flute*	C-R15º			C-R15º			C-R15º		C-R15º	
Norma DIN / *DIN Standard*	2184-1			2184-1			2184-1		2184-1	
Referencia / *Reference*	C15	C15	C15	C15	C15	C15	C15	C15	C15	C15
Tipo / *Type*	proti			proti			proti		proti	
Recubrimiento / *Coating*		TiCN	CromPlus		TiCN	CromPlus		CromPlus		CromPlus
Material / *Material*	HSSE PM			HSSE PM			HSSE PM		HSSE PM	
Tolerancia / *Tolerance*	2B			2B			3B		3B	
Gama / *Range*	UNC Nr4...5/8	UNC Nr4...5/8	UNC Nr4...5/8	UNF Nr4...3/4	UNF Nr4...3/4	UNF Nr4...3/4	UNC Nr4...5/8	UNC Nr4...5/8	UNF Nr4...3/4	UNF Nr4...3/4
Página / *Page*	189	190	191	216	217	218	244	245	247	249

Machos de roscar a mano. Agujeros ciegos y pasantes
Set of hand taps. Blind and through holes

JMC

M

JUEGO	M ISO-DIN 13		1° -4P 2° -3P 3° -2P (C) progresiva / progressive		DIN 352	HSS	ISO 2 (6H)	P 60°



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1*	0,25	•	32	5,5	-	2,5	2,1	5	3	0,75	0000046980
M 1,1*	0,25	•	32	5,5	-	2,5	2,1	5	3	0,85	0000047078
M 1,2*	0,25	•	32	5,5	-	2,5	2,1	5	3	0,95	0000047139
M 1,4*	0,30	•	32	7	-	2,5	2,1	5	3	1,1	0000047289
M 1,6	0,35	•	32	8	-	2,5	2,1	5	3	1,25	0000047340
M 1,7	0,35	•	32	8	-	2,5	2,1	5	3	1,3	0000047400
M 1,8	0,35	•	32	8	-	2,5	2,1	5	3	1,45	0000047560
M 2	0,40	•	36	8	-	2,8	2,1	5	3	1,6	0000047611
M 2,2	0,45	•	36	9	-	2,8	2,1	5	3	1,75	0000047771
M 2,3	0,40	•	36	9	-	2,8	2,1	5	3	1,9	0000047831
M 2,5	0,45	•	40	9	-	2,8	2,1	5	3	2,05	0000047992
M 2,6	0,45	•	40	9	-	2,8	2,1	5	3	2,1	0000048071
M 3	0,50	•	40	11	-	3,5	2,7	6	3	2,5	0000048131
M 3,5	0,60	•	45	13	-	4	3	6	3	2,9	0000048281
M 4	0,70	•	45	13	-	4,5	3,4	6	3	3,3	0000048342
M 4,5	0,75	•	50	16	-	6	4,9	8	3	3,8	0000048402
M 5	0,80	•	50	16	-	6	4,9	8	3	4,2	0000048563
M 6	1,00	•	50	19	-	6	4,9	8	3	5	0000048623
M 7	1,00	•	50	19	-	6	4,9	8	3	6	0000048773
M 8	1,25	•	56	22	-	6	4,9	8	3	6,8	0000048994
M 9	1,25	•	63	22	-	7	5,5	8	3	7,8	0000049073
M 10	1,50	•	70	24	-	7	5,5	8	3	8,5	0000049133
M 11	1,50	•	70	24	-	8	6,2	9	3	9,5	0000049294
M 12	1,75	•	75	29	-	9	7	10	4	10,2	0000049344
M 14	2,00	•	80	30	-	11	9	12	4	12	0000049404
(M 15)	2,00	•	80	30	-	12	9	12	4	13	0000503577
M 16	2,00	•	80	32	-	12	9	12	4	14	0000049565
M 18	2,50	•	95	40	-	14	11	14	4	15,5	0000049625
M 20	2,50	•	95	40	-	16	12	15	4	17,5	0000049776
M 22	2,50	•	100	40	-	18	14,5	17	4	19,5	0000049836
M 24	3,00	•	110	50	-	18	14,5	17	4	21	0000049996
M 27	3,00	•	110	50	-	20	16	19	4	24	0000222283
M 30	3,50	•	125	56	-	22	18	21	4	26,5	0000050131
M 33	3,50	•	125	56	-	25	20	23	4	29,5	0000050291
M 36	4,00	•	150	63	-	28	22	25	4	32	0000050342
M 39	4,00	•	150	63	-	32	24	27	6	35	0000050402
M 42	4,50	•	150	63	-	32	24	27	6	37,5	0000050563
M 45	4,50	•	160	70	-	36	29	32	6	40,5	0000050623
M 48	5,00	•	180	75	-	36	29	32	6	43	0000050773
M 52	5,00	•	180	75	-	40	32	35	6	47	0000050834
M 56	5,50	•	200	85	-	45	35	38	6	50,5	0000050994
M 60	5,50	•	200	85	-	45	35	38	6	54,5	0000051073
M 64	6,00	•	220	90	-	50	39	42	6	58	0000051133
M 68	6,00	•	220	90	-	50	39	42	8	62	0000051294
(M 72)	6,00	•	236	90	-	56	44	45	8	66	0000507095

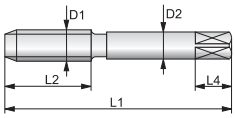
( ) JMC Norm.

* Tol. 4H

Machos de roscar a mano. Corte a izquierda. Agujeros ciegos y pasantes
Set of hands taps. Left hand cut. Blind and through holes

JMC

JUEGO	M ISO-DIN 13	1° -4P 2° -3P 3° -2P (C) progresiva / progressive	DIN 352	HSS	ISO 2 (6H)	P 60°
LH						



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

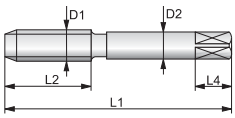
D1	P		L1	L2	L3	D2	a	L4	Z LH	Ød1	Cod.
M 2	0,40	•	36	8	-	2,8	2,1	5	3	1,6	0000060360
M 3	0,50	•	40	11	-	3,5	2,7	6	3	2,5	0000061091
M 3,5	0,60	•	45	13	-	4	3	6	3	2,9	0000061152
M 4	0,70	•	45	13	-	4,5	3,4	6	3	3,3	0000061423
M 5	0,80	•	50	16	-	6	4,9	8	3	4,2	0000061633
M 6	1,00	•	50	19	-	6	4,9	8	3	5	0000061794
M 7	1,00	•	50	19	-	6	4,9	8	3	6	0000061854
M 8	1,25	•	56	22	-	6	4,9	8	3	6,8	0000062093
M 9	1,25	•	63	22	-	7	5,5	8	3	7,8	0000062425
M 10	1,50	•	70	24	-	7	5,5	8	3	8,5	0000062585
M 11	1,50	•	70	24	-	8	6,2	9	3	9,5	0000062646
M 12	1,75	•	75	29	-	9	7	10	4	10,2	0000062796
M 14	2,00	•	80	30	-	11	9	12	4	12	0000062856
M 16	2,00	•	80	32	-	12	9	12	4	14	0000062917
M 18	2,50	•	95	40	-	14	11	14	4	15,5	0000063096
M 20	2,50	•	95	40	-	16	12	15	4	17,5	0000063156
M 22	2,50	•	100	40	-	18	14,5	17	4	19,5	0000063216
M 24	3,00	•	110	50	-	18	14,5	17	4	21	0000063367
M 27	3,00	•	110	50	-	20	16	19	4	24	0000063427
M 30	3,50	•	125	56	-	22	18	21	4	26,5	0000063588
M 33	3,50	•	125	56	-	25	20	23	4	29,5	0000063648
M 36	4,00	•	150	63	-	28	22	25	4	32	0000063708
M 39	4,00	•	150	63	-	32	24	27	6	35	0000063859
M 42	4,50	•	150	63	-	32	24	27	6	37,5	0000063919
M 45	4,50	•	160	70	-	36	29	32	6	40,5	0000064098
M 48	5,00	•	180	75	-	36	29	32	6	43	0000064158
M 52	5,00	•	180	75	-	40	32	35	6	47	0000064219

Machos de roscar a mano. Con guía de centraje. Agujeros ciegos y pasantes
Set of hands taps. With cylindrical pilots. Blind and through holes

JMC

JUEGO
VAF
Nogrip-1®

M ISO-DIN 13 | 1º -4P, 2º -3P, 3º -2P (C) progresiva / progressive | DIN 352 | HSSE Co5 | ISO 2x (6HX)



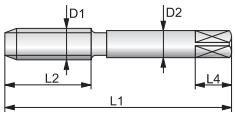
Material	GR2	GR3	GR4	GR9
Subg.	1,2,3,4,5,7/8	4	2 / 4	3
	1 2	1 2 3 4	6 1 2	4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 2	0,40	•	36	8	-	2,8	2,1	5	3	1,60	0000782312
M 3	0,50	•	40	11	-	3,5	2,7	6	3	2,50	0000080668
M 4	0,70	•	45	13	-	4,5	3,4	6	3	3,30	0000080888
M 5	0,80	•	50	16	-	6	4,9	8	3	4,20	0000080949
M 6	1,00	•	50	19	-	6	4,9	8	3	5,00	0000081188
M 8	1,25	•	56	22	-	6	4,9	8	3	6,80	0000081238
M 10	1,50	•	70	24	-	7	5,5	8	3	8,50	0000081399
M 12	1,75	•	75	29	-	9	7	10	4	10,20	0000081510
M 14	2,00	•	80	30	-	11	9	12	4	12,00	0000081660
M 16	2,00	•	80	32	-	12	9	12	4	14,00	0000081881
M 18	2,50	•	95	40	-	14	11	14	4	15,50	0000081941
M 20	2,50	•	95	40	-	16	12	15	4	17,50	0000082180

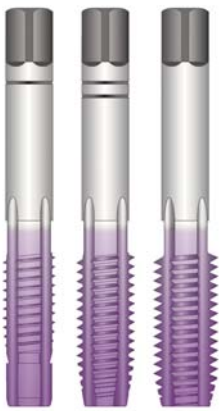
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

JUEGO
VAF
TiCN

M ISO-DIN 13 | 1º -4P, 2º -3P, 3º -2P (C) progresiva / progressive | DIN 352 | HSSE Co5 | ISO 2x (6HX)



Material	GR1	GR2	GR3	GR4	GR5	GR8	GR9
Subg.	6	1, 7	4	2 / 4	3, 4	1, 2	3
	1 2	1 2	1 2 3 4	6 1 2	5 6	3 4	3 4



D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	40	11	-	3,5	2,7	6	3	2,50	0001115891
M 4	0,70	•	45	13	-	4,5	3,4	6	3	3,30	0001116241
M 5	0,80	•	50	16	-	6	4,9	8	3	4,20	0001116672
M 6	1,00	•	50	19	-	6	4,9	8	3	5,00	0001117193
M 8	1,25	•	56	22	-	6	4,9	8	3	6,80	0001117524
M 10	1,50	•	70	24	-	7	5,5	8	3	8,50	0001117956
M 12	1,75	•	75	29	-	9	7	10	4	10,20	0001118316
M 14	2,00	•	80	30	-	11	9	12	4	12,00	0001118897
M 16	2,00	•	80	32	-	12	9	12	4	14,00	0001119257
M 18	2,50	•	95	40	-	14	11	14	4	15,50	0001119689
M 20	2,50	•	95	40	-	16	12	15	4	17,50	0001120034

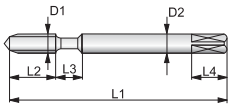
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C10/2

M ISO-DIN 13	1,5xD	C 2-3 P	R10°	DIN 371	HSSE PM	6HX	P 60°

proni



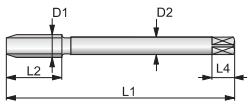
Material	GR8
Subg.	3
mts./min.	2
	2 3

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	5	3,5	2,7	6	3	2,5	0004182659
M 4	0,70	•	63	12	5	4,5	3,4	6	3	3,3	0004182719
M 5	0,80	•	70	14	5	6	4,9	8	3	4,2	0004182869
M 6	1,00	•	80	16	8	6	4,9	8	3	5	0004183019
M 8	1,25	•	90	20	11	8	6,2	9	3	6,8	0004183169
M 10	1,50	•	100	25	13	10	8	11	3	8,5	0004183229

C10/1

M ISO-DIN 13	1,5xD	C 2-3 P	R10°	DIN 376	HSSE PM	6HX	P 60°

proni



Material	GR8
Subg.	3
mts./min.	2
	2 3

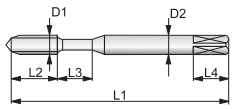
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	30	15	9	7	10	4	10,2	0004182598

Machos de roscar a máquina. Agujeros ciegos.
Machine taps. Blind holes.

C15/2

N

M ISO-DIN 13	2xD	C 2-3 P	R15°	DIN 371	HSSE Co5	ISO 2 (6H) ISO 3 (6G)	P 60°



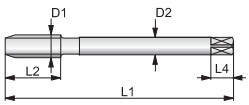
Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,4	1,2	2 3
mts./min.	10 15	15 20	6 9	15 20
	1 2	6	6	5 6

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40		45	8	-	2,8	2,1	5	3	1,6	0000012393
	M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0000012444
	M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,1	0000019891
	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000019942
	M 3,5	0,60		56	11	9	4	3	6	3	2,9	0000020036
	M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000020186
	M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000020247
	M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000020307
	M 7	1,00		80	17	13	7	5,5	8	3	6	0000020467
	M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000020518
	M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000020678
ISO 3 (6G)	M 3	0,50		56	10	8	3,5	2,7	6	3	2,5	0000020739
	M 4	0,70		63	12	9	4,5	3,4	6	3	3,3	0000020899
	M 5	0,80		70	14	11	6	4,9	8	3	4,2	0000020949
	M 6	1,00		80	16	14	6	4,9	8	3	5	0000021038
	M 8	1,25		90	18	17	8	6,2	9	3	6,8	0000021189
	M 10	1,50		100	20	19	10	8	11	3	8,5	0000021249

C15/1

N

M ISO-DIN 13	2xD	C 2-3 P	R15°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,4	1,2	2 3
mts./min.	10 15	15 20	6 9	15 20
	1 2	6	6	5 6

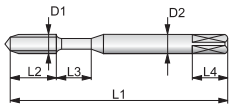
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,5	0000088957
M 4	0,70		63	12	-	2,8	2,1	5	3	3,3	0000089196
M 5	0,80		70	14	-	3,5	2,7	6	3	4,2	0000089257
M 6	1,00		80	16	-	4,5	3,4	6	3	5	0000089317
M 8	1,25		90	18	-	6	4,9	8	3	6,8	0000089528
M 10	1,50		100	20	-	7	5,5	8	3	8,5	0000089688
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000089748
M 14	2,00	•	110	25	-	11	9	12	3	12	0000089899
M 16	2,00	•	110	28	-	12	9	12	3	14	0000089959
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0000090034
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000090194
M 22	2,50	•	140	32	-	18	14,5	17	4	19,5	0000090254
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0000090315
M 27	3,00	•	160	36	-	20	16	19	4	24	0000090465
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0000090525

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C15/2 VAF Nogrip-1®

M ISO-DIN 13	2xD	C 2-3 P	R15°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°

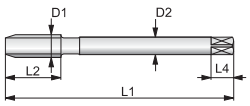


Material	GR2		GR3		GR4		GR9	
Subg.	1,2,3,4,5,7,8		4		2,4		3	
mts./min.	7	12	5	8	8	15	3	6
	1 2		1 2 3 4		6		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 2	0,40		45	8	-	2,8	2,1	5	3	1,60	0001287116
M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001287487
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0000023033
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0000023193
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0000023254
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0000023304
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0000023464
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0000023525

C15/1 VAF Nogrip-1®

M ISO-DIN 13	2xD	C 2-3 P	R15°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR2		GR3		GR4		GR9	
Subg.	1,2,3,4,5,7,8		4		2,4		3	
mts./min.	7	12	5	8	8	15	3	6
	1 2		1 2 3 4		6		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 8	1,25	•	90	18	-	6	4,9	8	3	6,80	0000092048
M 10	1,50	•	100	20	-	7	5,5	8	3	8,50	0000092198
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0000092259
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0000092319
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0000092470
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0000092520
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0000092680
M 22	2,50	•	140	32	-	18	14,5	17	4	19,50	0000707187
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0000707518
M 27	3,00	•	160	36	-	20	16	19	4	24,00	0001121529
M 30	3,50	•	180	40	-	22	18	21	4	26,50	0000708671

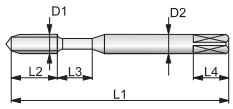
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C15/2

VAF

TiCN

M ISO-DIN 13	2xD	C 2-3 P	R15°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR2		GR3		GR4		GR9	
Subg.	5		1,2,3,4,5,7,8		4		2,4		3	
mts./min.	10	15	12-17	11-14	10	13	20	25	3	6
	1 2		1 2		1 2 3 4		6		3 4	

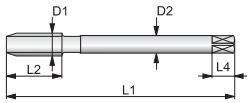
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod
M 2	0,40		45	8	-	2,8	2,1	5	3	1,60	0001287337
M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001287768
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0000023685
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0000023735
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0000023896
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0000023956
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0000024035
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0000024195

C15/1

VAF

TiCN

M ISO-DIN 13	2xD	C 2-3 P	R15°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR2		GR3		GR4		GR9	
Subg.	5		1,2,3,4,5,7,8		4		2,4		3	
mts./min.	10	15	12-17	11-14	10	13	20	25	3	6
	1 2		1 2		1 2 3 4		6		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 8	1,25	•	90	18	-	6	4,9	8	3	6,80	0000092741
M 10	1,50	•	100	20	-	7	5,5	8	3	8,50	0000092801
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0000092952
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0000093040
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0000093101
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0000093251
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0000093312
M 22	2,50	•	140	32	-	18	14,5	17	4	19,50	0001121257
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0000707678
M 27	3,00	•	160	36	-	20	16	19	4	24,00	0001121749
M 30	3,50	•	180	40	-	22	18	21	4	26,50	0000708731

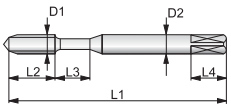
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos horizontales o verticales / *Horizontal or vertical blind holes.*

C15/2

M ISO-DIN 13	2xD	C 2-3 P	R15º	DIN 371	HSSE PM	ISO 2 6H	P 60º

produr AltPlus



Material	GR1	GR2
Subg.	5	1,2,3,4,5,7,8
mts./min.	15	20 / 12 / 3
	1 2	1 2 3

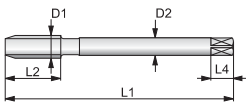
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0003189732
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0003189672
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0003189512
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0003189451
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0003189301
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0003189240

Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

C15/1

M ISO-DIN 13	2xD	C 2-3 P	R15º	DIN 376	HSSE PM	ISO 2 6H	P 60º

produr AltPlus



Material	GR1	GR2
Subg.	5	1,2,3,4,5,7,8
mts./min.	10 / 8	20 / 12 / 3
	1 2	1 2 3

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	4	10,2	0003188941
M 14	2,00	•	110	25	-	11	9	12	4	12	0003189020
M 16	2,00	•	110	28	-	12	9	12	4	14	0003189180

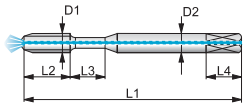
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos horizontales o verticales / *Horizontal or vertical blind holes.*

C15/2 KC

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15º KC | DIN 371 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1		GR2		
Subg.	5		1,2,3,4,5,7,8		
mts./min.	10	8	20	12	3
	1 2		1 2 3		

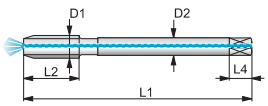
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0003209512
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0003209662
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0003209883

Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

C15/1 KC

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15º KC | DIN 376 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1		GR2		
Subg.	5		1,2,3,4,5,7,8		
mts./min.	10	8	20	12	3
	1 2		1 2 3		

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	4	10,2	0003210238
M 14	2,00	•	110	25	-	11	9	12	4	12	0003210519
M 16	2,00	•	110	28	-	12	9	12	4	14	0003210880

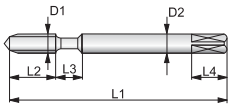
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 371 | HSSE PM | 6HX | P 60°

proti



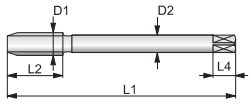
Material	GR9
Subg.	2,3,4
mts./min.	6
	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	5	3,5	2,7	6	3	2,5	0003007907
M 4	0,70	•	63	12	5	4,5	3,4	6	3	3,3	0003170854
M 5	0,80	•	70	14	5	6	4,9	8	3	4,2	0003171214
M 6	1,00	•	80	16	8	6	4,9	8	3	5	0003171645
M 8	1,25	•	90	20	11	8	6,2	9	3	6,8	0003164905
M 10	1,50	•	100	25	13	10	8	11	3	8,5	0003172005

C15/1

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 376 | HSSE PM | 6HX | P 60°

proti



Material	GR9
Subg.	2,3,4
mts./min.	6
	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	30	15	9	7	10	4	10,2	0003172377

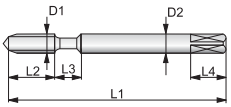
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 371 | HSSE PM | 6HX | P 60°

proti TiCN



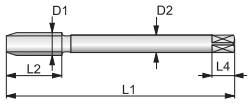
Material	GR9
Subg.	2,3,4
mts./min.	6
	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	5	3,5	2,7	6	3	2,5	0003007355
M 4	0,70	•	63	12	5	4,5	3,4	6	3	3,3	0003170643
M 5	0,80	•	70	14	5	6	4,9	8	3	4,2	0003171003
M 6	1,00	•	80	16	8	6	4,9	8	3	5	0003171435
M 8	1,25	•	90	20	11	8	6,2	9	3	6,8	0002814802
M 10	1,50	•	100	25	13	10	8	11	3	8,5	0003171866

C15/1

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 376 | HSSE PM | 6HX | P 60°

proti TiCN



Material	GR9
Subg.	2,3,4
mts./min.	6
	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	30	15	9	7	10	4	10,2	0003172156

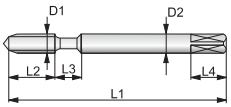
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 371 | HSSE PM | 6HX

proti CromPlus



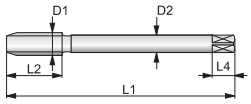
Material	GR9
Subg.	2,3,4
mts./min.	6
	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	5	3,5	2,7	6	3	2,5	0003167581
M 4	0,70	•	63	12	5	4,5	3,4	6	3	3,3	0003170704
M 5	0,80	•	70	14	5	6	4,9	8	3	4,2	0003171154
M 6	1,00	•	80	16	8	6	4,9	8	3	5	0003171585
M 8	1,25	•	90	20	11	8	6,2	9	3	6,8	0003169093
M 10	1,50	•	100	25	13	10	8	11	3	8,5	0003171917

C15/1

M ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 376 | HSSE PM | 6HX

proti CromPlus



Material	GR9
Subg.	2,3,4
mts./min.	6
	4 5

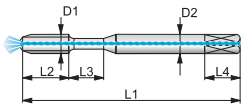
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	30	15	9	7	10	4	10,2	0003172216

Machos de metal duro helicoidales. Con refrigeración interna
Solid carbide spiral fluted taps. With internal coolant

JMC

D15/2 KC
SILUM

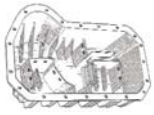
M ISO-DIN 13 | 3-4 P | R15° | DIN 371 | MD *Solid carbide* | ISO 2 (6H)



Material	GR4		GR5		GR6	
Subg.	1		2,3		4	
mts./min.	20	60	20	60	40	100

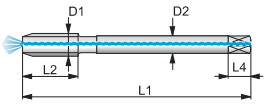
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	16	14	6	4,9	8	4	5	0002343213
M 8	1,25	•	90	18	17	8	6,2	9	4	6,8	0002315975
M 10	1,50	•	100	20	19	10	8	11	4	8,5	0002343373

Macho de alto rendimiento para el roscado en aluminio con Si>8%.
High performance tap suitable for aluminium with Si>8%.



D15/1 KC
SILUM

M ISO-DIN 13 | 3-4 P | R15° | DIN 376 | MD *Solid carbide* | ISO 2 (6H)



Material	GR4		GR5		GR6	
Subg.	1		2,3		4	
mts./min.	20	60	20	60	40	100

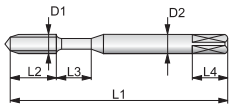
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	4	10,2	0002343434
M 16	2,00	•	110	28	-	12	9	12	4	14	0002347001

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/2 N

M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	6

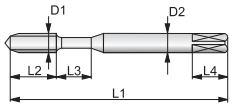
ISO 2 (6H)

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 1,4*)	0,30	•	40	3	-	2,5	2,1	5	3	1,1	0001776305
M 1,6	0,35	•	40	4	-	2,5	2,1	5	3	1,25	0001776456
M 1,7	0,35	•	40	4	-	2,5	2,1	5	3	1,3	0001776516
M 1,8	0,35	•	40	4	-	2,5	2,1	5	3	1,45	0001776676
M 2	0,40	•	45	5	5	2,8	2,1	5	3	1,6	0000024256
M 2,2	0,45	•	45	5	5	2,8	2,1	5	3	1,75	0000730065
M 2,3	0,40	•	45	5	5	2,8	2,1	5	3	1,9	0000730125
M 2,5	0,45	•	50	5	5	2,8	2,1	5	3	2,05	0000024316
M 2,6	0,45	•	50	5	5	2,8	2,1	5	3	2,1	0000024467
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000024527
M 3,5	0,60	•	56	6	14	4	3	6	3	2,9	0000024687
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000024748
M 4,5	0,75	•	70	8	15	6	4,9	8	3	3,75	0000731128
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000024898
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000024958
M 7	1,00	•	80	10	20	7	5,5	8	3	6	0000025037
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0000025198
M 9	1,25	•	100	12	27	10	8	11	3	7,75	0000732551
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0000025258

* Tol. 4H
( ) JMC norm.

PACK C35 x100

M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2x (6HX)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0002081434
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0002081595
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0002081655
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0002081866
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0002081926
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0002082005

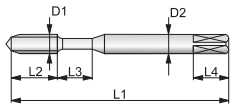
Pack económico - *Economic pack*

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/2 | **N**

M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5 6	

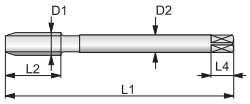
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 3 (6G)	M 2	0,40	•	45	5	5	2,8	2,1	5	3	1,6	0000729981
	M 2,3	0,40	•	45	5	5	2,8	2,1	5	3	1,9	0001872894
	M 2,5	0,45	•	50	5	5	2,8	2,1	5	3	2,05	0000730276
	M 2,6	0,45	•	50	5	5	2,8	2,1	5	3	2,1	0000730496
	M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000025318
	M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000025469
	M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000025529
	M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000025680
	M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0000025740
	M 10	1,50	•	100	12	27	10	8	11	3	8,5	0000025800
7G	M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000730557
	M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000730988
	M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000731499
	M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000731981
	M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0000793272
	M 10	1,50	•	100	12	27	10	8	11	3	8,5	0000733122
ISO 1 (4H) MJ	M 2	0,40	•	45	5	5	2,8	2,1	5	3	1,6	0001879047
	M 2,5	0,45	•	50	5	5	2,8	2,1	5	3	2,05	0001879107
	M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000997705
	M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000997584
	M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000998165
	M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000995429
	M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001000363
	M 10	1,50	•	100	12	27	10	8	11	3	8,5	0001000424
6H (+0,1)	M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000997644
	M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000997433
	M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000997373
	M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000997213
	M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001000574
	M 10	1,50	•	100	12	27	10	8	11	3	8,5	0001000795

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/1

N

M ISO-DIN 13	2,5÷3xD	**C** 2-3 P	R35°	DIN 376	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5 6	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	(M 3)	0,50		56	6	-	2,2	1,8	4	3	2,5	0000093472
	M 3,5	0,60		56	6	-	2,5	2,1	5	3	2,9	0000093532
	M 4	0,70		63	7	-	2,8	2,1	5	3	3,3	0000093683
	M 5	0,80		70	8	-	3,5	2,7	6	3	4,2	0000093743
	M 6	1,00	•	80	9	-	4,5	3,4	6	3	5	0000093803
	M 8	1,25	•	90	11	-	6	4,9	8	3	6,8	0000094043
	M 10	1,50	•	100	12	-	7	5,5	8	3	8,5	0000094253
	M 12	1,75	•	110	14	-	9	7	10	3	10,2	0000094314
	M 14	2,00	•	110	18	-	11	9	12	3	12	0000094474
	M 16	2,00	•	110	18	-	12	9	12	3	14	0000094535
	M 18	2,50	•	125	22	-	14	11	14	4	15,5	0000094685
	M 20	2,50	•	140	22	-	16	12	15	4	17,5	0000094745
	M 22	2,50	•	140	22	-	18	14,5	17	4	19,5	0000094806
	M 24	3,00	•	160	28	-	18	14,5	17	4	21	0000094966
	M 27	3,00	•	160	28	-	20	16	19	4	24	0000095045
	M 30	3,50	•	180	32	-	22	18	21	4	26,5	0000095105
	M 33	3,50	•	180	32	-	25	20	23	4	29,5	0000095266
	M 36	4,00	•	200	36	-	28	22	25	4	32	0000095476
	M 39	4,00	•	200	36	-	32	24	27	4	35	0000726482
	M 42	4,50	•	200	45	-	32	24	27	4	37,5	0000992091
	M 45	4,50	•	220	45	-	36	29	32	6	40,5	0001675658
	M 48	5,00	•	250	50	-	36	29	32	6	43	0000726974
	M 52	5,00	•	250	50	-	40	32	35	6	47	0001777739
ISO 3 (6G)	M 8	1,25		90	11	-	6	4,9	8	3	6,8	0000095537
	M 10	1,50		100	12	-	7	5,5	8	3	8,5	0000095748
	M 12	1,75	•	110	14	-	9	7	10	3	10,2	0000096328
	M 14	2,00	•	110	18	-	11	9	12	3	12	0000096539
	M 16	2,00	•	110	18	-	12	9	12	3	14	0000096690
	M 18	2,50	•	125	22	-	14	11	14	4	15,5	0001795751
	M 20	2,50	•	140	22	-	16	12	15	4	17,5	0000723606
	M 22	2,50	•	140	22	-	18	14,5	17	4	19,5	0001795811
	M 24	3,00	•	160	28	-	18	14,5	17	4	21	0001795972
7G	M 12	1,75	•	110	14	-	9	7	10	3	10,2	0000995097
ISO 1 (4H) MJ	M 12	1,75	•	110	14	-	9	7	10	3	10,2	0000993795
6H (+0,1)	M 12	1,75	•	110	14	-	9	7	10	3	10,2	0001000855
	M 14	2,00	•	110	18	-	11	9	12	3	12	0001880697
	M 16	2,00	•	110	18	-	12	9	12	3	14	0001880757
	M 18	2,50	•	125	22	-	14	11	14	4	15,5	0001880818
	M 20	2,50	•	140	22	-	16	12	15	4	17,5	0001880968

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

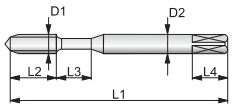
JMC

M

C35A/2	M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H) ISO 3 (6G)	P 60°

N

Nogrip-1®



Material	GR1		GR2		GR3		GR9	
Subg.	1,2,3,4,6		6		1,2,3		1	
mts./min.	8	13	8	13	5	8	7	12
	1 2		1 2		1 2 3 4		3 4	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 1,4*	0,30		40	3	-	2,5	2,1	5	3	1,1	0001776737
	M 1,6	0,35		40	4	-	2,5	2,1	5	3	1,25	0001776887
	M 1,7	0,35		40	4	-	2,5	2,1	5	3	1,3	0001776948
	M 1,8	0,35		40	4	-	2,5	2,1	5	3	1,45	0001777026
	M 2	0,40		45	5	5	2,8	2,1	5	3	1,6	0001122109
	M 2,2	0,45		45	5	5	2,8	2,1	5	3	1,75	0001122531
	M 2,3	0,40		45	5	5	2,8	2,1	5	3	1,9	0001777187
	M 2,5	0,45		50	5	5	2,8	2,1	5	3	2,05	0001123804
	M 2,6	0,45		50	5	5	2,8	2,1	5	3	2,1	0001124044
	M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000025951
	M 3,5	0,60		56	6	14	4	3	6	3	2,9	0001124696
	M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000026040
	M 4,5	0,75		70	8	15	6	4,9	8	3	3,75	0001125106
	M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000026190
	M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000026250
	M 7	1,00		80	10	20	7	5,5	8	3	6	0001125758
	M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0000026311
	M 9	1,25		100	12	27	10	8	11	3	7,75	0001126048
	M 10	1,50	•	100	12	27	10	8	11	3	8,5	0000026471
ISO 3 (6G)	M 2	0,40		45	5	5	2,8	2,1	5	3	1,6	0001887603
	M 2,3	0,40		45	5	5	2,8	2,1	5	3	1,9	0001887763
	M 2,5	0,45		50	5	5	2,8	2,1	5	3	2,05	0001887824
	M 2,6	0,45		50	5	5	2,8	2,1	5	3	2,1	0001887974
	M 3	0,50		56	6	12	3,5	2,7	6	3	2,5	0001651281
	M 4	0,70		63	7	14	4,5	3,4	6	3	3,3	0001361894
	M 5	0,80		70	8	17	6	4,9	8	3	4,2	0001651342
	M 6	1,00		80	9	21	6	4,9	8	3	5	0001047764
	M 8	1,25		90	11	24	8	6,2	9	3	6,8	0001217329
	M 10	1,50		100	12	27	10	8	11	3	8,5	0001217058

* Tol. 4H

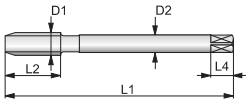
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/1 | **M** ISO-DIN 13 | 2,5÷3xD | **C** 2-3 P | R35° | DIN 376 | HSSE Co5 | ISO 2 (6H) ISO 3 (6G) | P 60°

N

Nogrip-1®



Material	GR1		GR2		GR3		GR9	
Subg.	1,2,3,4,6		6		1,2,3		1	
mts./min.	8	13	8	13	5	8	7	12
	1 2		1 2		1 2 3 4		3 4	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	(M 3)	0,50		56	6	-	2,2	1,8	4	3	2,5	0000096750
	M 4	0,70		63	7	-	2,8	2,1	5	3	3,3	0000096800
	M 5	0,80		70	8	-	3,5	2,7	6	3	4,2	0000097040
	M 6	1,00		80	9	-	4,5	3,4	6	3	5	0000097100
	M 8	1,25		90	11	-	6	4,9	8	3	6,8	0000097260
	M 10	1,50		100	12	-	7	5,5	8	3	8,5	0000097531
	M 12	1,75	•	110	14	-	9	7	10	3	10,2	0000098694
	M 14	2,00	•	110	18	-	11	9	12	3	12	0000098754
	M 16	2,00	•	110	18	-	12	9	12	3	14	0000098965
	M 18	2,50	•	125	22	-	14	11	14	4	15,5	0000099054
	M 20	2,50	•	140	22	-	16	12	15	4	17,5	0000099265
	M 22	2,50	•	140	22	-	18	14,5	17	4	19,5	0001288068
	M 24	3,00	•	160	28	-	18	14,5	17	4	21	0000724116
	M 27	3,00	•	160	28	-	20	16	19	4	24	0001036964
	M 30	3,50	•	180	32	-	22	18	21	4	26,5	0000725540
	M 33	3,50		180	32	-	25	20	23	4	29,5	0001410134
	M 36	4,00		200	36	-	28	22	25	4	32	0001580218
	M 39	4,00		200	36	-	32	24	27	4	35	0001873314
	M 42	4,50		200	45	-	32	24	27	4	37,5	0001645764
	M 45	4,50		220	45	-	36	29	32	6	40,5	0001675719
	M 48	5,00		250	50	-	36	29	32	6	43	0001727979
	M 52	5,00		250	50	-	40	32	35	6	47	0001777940
ISO 3 (6G)	M 8	1,25		90	11	-	6	4,9	8	3	6,8	0001888063
	M 10	1,50		100	12	-	7	5,5	8	3	8,5	0001888123
	M 12	1,75		110	14	-	9	7	10	3	10,2	0001072436
	M 14	2,00		110	18	-	11	9	12	3	12	0001217269
	M 16	2,00		110	18	-	12	9	12	3	14	0001698742
	M 18	2,50		125	22	-	14	11	14	4	15,5	0001888274
	M 20	2,50		140	22	-	16	12	15	4	17,5	0001888334
	M 22	2,50		140	22	-	18	14,5	17	4	19,5	0001888494
	M 24	3,00		160	28	-	18	14,5	17	4	21	0001888555

( ) JMC Norm. sim. DIN 376

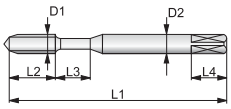
Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A/2	M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	P 60°

N

TiN



Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,3,4,5,6		1,2,3,6,7		1,2,3		3		1	2	1
mts./min.	13-18	11-14	13	18	10	13	20	25	7-12	10-15	15-20
	1 2		1 2		1 2 3 4		5 6		5 6		

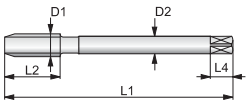
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 1,4*	0,30		40	3	-	2,5	2,1	5	3	1,1	0001777247
	M 1,6	0,35		40	4	-	2,5	2,1	5	3	1,25	0001777308
	M 1,7	0,35		40	4	-	2,5	2,1	5	3	1,35	0001777458
	M 1,8	0,35		40	4	-	2,5	2,1	5	3	1,45	0001777518
	M 2	0,40		45	5	5	2,8	2,1	5	3	1,6	0001122250
	M 2,2	0,45		45	5	5	2,8	2,1	5	3	1,75	0001122681
	M 2,3	0,40		45	5	5	2,8	2,1	5	3	1,9	0001777679
	M 2,5	0,45		50	5	5	2,8	2,1	5	3	2,05	0001123965
	M 2,6	0,45		50	5	5	2,8	2,1	5	3	2,1	0001124104
	M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000026522
	M 3,5	0,60		56	6	14	4	3	6	3	2,9	0000026682
	M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000026742
	M 4,5	0,75		70	8	15	6	4,9	8	3	3,75	0001125267
	M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000026803
	M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000026953
	M 7	1,00		80	10	20	7	5,5	8	3	6	0001125969
	M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0000027042
	M 9	1,25		100	12	27	10	8	11	3	7,75	0001126108
	M 10	1,50	•	100	12	27	10	8	11	3	8,5	0000027102
ISO 3 (6G)	M 2	0,40		45	5	5	2,8	2,1	5	3	1,6	0001794327
	M 2,3	0,40		45	5	5	2,8	2,1	5	3	1,9	0001794488
	M 2,5	0,45		50	5	5	2,8	2,1	5	3	2,05	0001794548
	M 2,6	0,45		50	5	5	2,8	2,1	5	3	2,1	0001794608
	M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0001444027
	M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0001444188
	M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000731338
	M 6	1,00	•	80	9	21	6	4,9	8	3	5	0001397792
	M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001444248
	M 10	1,50	•	100	12	27	10	8	11	3	8,5	0001217118

* Tol. 4H

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/1 | **N** | ***TiN***

M ISO-DIN 13	2,5÷3xD	**C** 2-3 P	R35°	DIN 376	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	P 60°



Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3		3		1	2	1
mts./min.	13-18	11-14	13	18	10	13	20	25	7-12	10-15	15-20
	1 2		1 2		1 2 3 4		5 6		5 6		

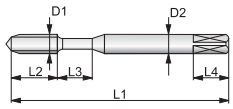
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	(M 3)	0,50		56	6	-	2,2	1,8	4	3	2,5	0001127322
	M 4	0,70		63	7	-	2,8	2,1	5	3	3,3	0001127482
	M 5	0,80		70	8	-	3,5	2,7	6	3	4,2	0001127532
	M 6	1,00		80	9	-	4,5	3,4	6	3	5	0000099546
	M 8	1,25		90	11	-	6	4,9	8	3	6,8	0000101660
	M 10	1,50		100	12	-	7	5,5	8	3	8,5	0000101720
	M 12	1,75	•	110	14	-	9	7	10	3	10,2	0000101871
	M 14	2,00	•	110	18	-	11	9	12	3	12	0000101931
	M 16	2,00	•	110	18	-	12	9	12	3	14	0000102020
	M 18	2,50	•	125	22	-	14	11	14	4	15,5	0000102170
	M 20	2,50	•	140	22	-	16	12	15	4	17,5	0000102231
	M 22	2,50	•	140	22	-	18	14,5	17	4	19,5	0001288118
	M 24	3,00	•	160	28	-	18	14,5	17	4	21	0000989149
	M 27	3,00	•	160	28	-	20	16	19	4	24	0001288279
	M 30	3,50	•	180	32	-	22	18	21	4	26,5	0001288339
	M 33	3,50		180	32	-	25	20	23	4	29,5	0001873194
	M 36	4,00		200	36	-	28	22	25	4	32	0001873254
	M 39	4,00		200	36	-	32	24	27	4	35	0001873465
	M 42	4,50		200	45	-	32	24	27	4	37,5	0001873525
	M 45	4,50		220	45	-	36	29	32	6	40,5	0001778039
	M 48	5,00		250	50	-	36	29	32	6	43	0001778189
	M 52	5,00		250	50	-	40	32	35	6	47	0001778240
ISO 3 (6G)	M 8	1,25		90	11	-	6	4,9	8	3	6,8	0001796051
	M 10	1,50		100	12	-	7	5,5	8	3	8,5	0001390997
	M 12	1,75		110	14	-	9	7	10	3	10,2	0001364048
	M 14	2,00		110	18	-	11	9	12	3	12	0001796111
	M 16	2,00		110	18	-	12	9	12	3	14	0001797826
	M 18	2,50		125	22	-	14	11	14	4	15,5	0001796332
	M 20	2,50		140	22	-	16	12	15	4	17,5	0001796482
	M 22	2,50		140	22	-	18	14,5	17	4	19,5	0001796543
	M 24	3,00		160	28	-	18	14,5	17	4	21	0001796603
7G	M 12	1,75		110	14	-	9	7	10	3	10,2	0001797334
ISO 1 (4H) MJ	M 12	1,75		110	14	-	9	7	10	3	10,2	0001880045
6H (+0,1)	M 12	1,75		110	14	-	9	7	10	3	10,2	0001435172
	M 14	2,00		110	18	-	11	9	12	3	12	0001881057
	M 16	2,00		110	18	-	12	9	12	3	14	0001881107
	M 18	2,50		125	22	-	14	11	14	4	15,5	0001881268
	M 20	2,50		140	22	-	16	12	15	4	17,5	0001881328

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Corte a izquierda. Agujeros ciegos
Machine taps. Left hand cut. Blind holes

C35A/2 LH N

M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°

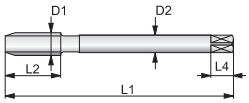


Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5 6	

D1	P		L1	L2	L3	D2	a	L4	Z LH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000730617
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000730768
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0001592933
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0000731820
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0000732341
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0000733062

C35A/1 LH N

M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5 6	

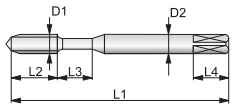
D1	P		L1	L2	L3	D2	a	L4	Z LH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,2	0000994918
M 14	2,00	•	110	18	-	11	9	12	3	12	0000721752
M 16	2,00	•	110	18	-	12	9	12	3	14	0000722754
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0000723545
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0000724277
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0000725600

Machos de roscar a máquina. Con entrada corta. Agujeros ciegos
Machine taps. With short lead. Blind holes

E35A/2

N

M ISO-DIN 13	2,5÷3xD	E 1,5-2 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



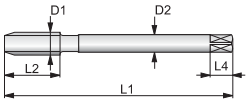
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0001567077
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0001567297
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0001567418
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0001337643
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001219976
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0001567789

E35A/1

N

M ISO-DIN 13	2,5÷3xD	E 1,5-2 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

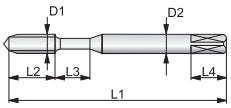
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,2	0001547101
M 14	2,00	•	110	18	-	11	9	12	3	12	0001547261
M 16	2,00	•	110	18	-	12	9	12	3	14	0001547321

Machos de roscar a máquina / *Machine taps*

Para roscado sincronizado. Agujeros ciegos / *For rigid tapping. Blind holes*

C35A/2 TRUNC Nogrip-1®

M ISO-DIN 13 | 3xD | **C** 2-3 P | R35° | DIN 371 | HSSE Co5 | ISO 2 (6H)



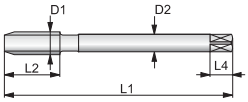
Material	GR1		GR2		GR3		GR8		GR9		GR10
Subg.	1,2,3,4,6		6		1,2,3		1		1		1
mts./min.	8	13	8	13	5	8	3	6	7	12	
	1 2		1 2		1 2 3 4		3 4		3 4		

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,4*	0,30		40	3	-	2,5	2,1	5	3	1,10	0001882110
M 1,6	0,35		40	4	-	2,5	2,1	5	3	1,25	0001882260
M 1,7	0,35		40	4	-	2,5	2,1	5	3	1,35	0001882320
M 1,8	0,35		40	4	-	2,5	2,1	5	3	1,45	0001882481
M 2	0,40		45	5	5	2,8	2,1	5	3	1,60	0000460544
M 2,3	0,40		45	5	5	2,8	2,1	5	3	1,90	0001882541
M 2,5	0,45		50	5	5	2,8	2,1	5	3	2,05	0000460825
M 2,6	0,45		50	5	5	2,8	2,1	5	3	2,10	0000461115
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,50	0000461496
M 3,5	0,60		56	6	14	4	3	6	3	2,90	0000461767
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,30	0000462067
M 5	0,80	•	70	8	17	6	4,9	8	3	4,20	0000462338
M 6	1,00	•	80	9	21	6	4,9	8	3	5,00	0000462609
M 7	1,00		80	10	20	7	5,5	8	3	6,00	0000462980
M 8	1,25	•	90	11	24	8	6,2	9	3	6,80	0000463270
M 10	1,50	•	100	12	27	10	8	11	3	8,50	0000463551

* Tol. 4H

C35A/1 TRUNC Nogrip-1®

M ISO-DIN 13 | 3xD | **C** 2-3 P | R35° | DIN 376 | HSSE Co5 | ISO 2 (6H)



Material	GR1		GR2		GR3		GR8		GR9		GR10
Subg.	1,2,3,4,6		6		1,2,3		1		1		1
mts./min.	8	13	8	13	5	8	3	6	7	12	
	1 2		1 2		1 2 3 4		3 4		3 4		

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	6	-	2,2	1,8	4	3	2,50	0000456058
M 4	0,70		63	7	-	2,8	2,1	5	3	3,30	0000456750
M 5	0,80		70	8	-	3,5	2,7	6	3	4,20	0000457050
M 6	1,00		80	9	-	4,5	3,4	6	3	5,00	0000457271
M 8	1,25		90	11	-	6	4,9	8	3	6,80	0000457813
M 10	1,50		100	12	-	7	5,5	8	3	8,50	0000458765
M 12	1,75	•	110	14	-	9	7	10	3	10,20	0000459054
M 14	2,00	•	110	18	-	11	9	12	3	12,00	0000459336
M 16	2,00	•	110	18	-	12	9	12	3	14,00	0000459607
M 18	2,50	•	125	22	-	14	11	14	4	15,50	0000459978
M 20	2,50	•	140	22	-	16	12	15	4	17,50	0000460273
M 22	2,50		140	22	-	18	14,5	17	4	19,50	0001127964
M 24	3,00		160	28	-	18	14,5	17	4	21,00	0001128113
M 27	3,00		160	28	-	20	16	19	4	24,00	0001128484
M 30	3,50		180	32	-	22	18	21	4	26,50	0001128755
M 33	3,50		180	32	-	25	20	23	4	29,50	0001129055
M 36	4,00		200	36	-	28	22	25	4	32,00	0001129326
M 39	4,00		200	36	-	32	24	27	4	35,00	0001129607
M 42	4,50		200	45	-	32	24	27	4	37,50	0001129978

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina / *Machine taps*

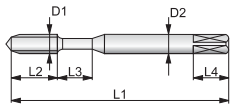
Para roscado sincronizado. Agujeros ciegos / *For rigid tapping. Blind holes*

C35A/2

TRUNC

LubePlus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1	GR2	GR3	GR6	GR8
Subg.	1,2,3,4,5,6	6,7,8	1,2,3	3	1
mts./min.	13-8 / 11-14	13-8 / 11-14	10 / 13	15 / 25	8 / 11
	1 2	1 2	1 2 3 4	5 6	3 4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,4*	0,30		40	3	-	2,5	2,1	5	3	1,10	0001883112
M 1,6	0,35		40	4	-	2,5	2,1	5	3	1,25	0001883262
M 1,7	0,35		40	4	-	2,5	2,1	5	3	1,35	0001883323
M 1,8	0,35		40	4	-	2,5	2,1	5	3	1,45	0001883483
M 2	0,40		45	5	5	2,8	2,1	5	3	1,60	0001883543
M 2,3	0,40		45	5	5	2,8	2,1	5	3	1,90	0001883604
M 2,5	0,45		50	5	5	2,8	2,1	5	3	2,05	0001477782
M 2,6	0,45		50	5	5	2,8	2,1	5	3	2,10	0001883754
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,50	0001883814
M 3,5	0,60		56	6	14	4	3	6	3	2,90	0001883975
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,30	0001673593
M 5	0,80	•	70	8	17	6	4,9	8	3	4,20	0001673654
M 6	1,00	•	80	9	21	6	4,9	8	3	5,00	0001646335
M 8	1,25	•	90	11	24	8	6,2	9	3	6,80	0001884054
M 10	1,50	•	100	12	27	10	8	11	3	8,50	0001477832

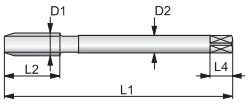
* Tol. 4H

C35A/1

TRUNC

LubePlus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1	GR2	GR3	GR6	GR8
Subg.	1,2,3,4,5,6	6,7,8	1,2,3	3	1
mts./min.	13-8 / 11-14	13-8 / 11-14	10 / 13	15 / 25	8 / 11
	1 2	1 2	1 2 3 4	5 6	3 4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	6	-	2,2	1,8	4	3	2,50	0001884114
M 4	0,70		63	7	-	2,8	2,1	5	3	3,30	0001884274
M 5	0,80		70	8	-	3,5	2,7	6	3	4,20	0001884325
M 6	1,00		80	9	-	4,5	3,4	6	3	5,00	0001884485
M 8	1,25		90	11	-	6	4,9	8	3	6,80	0001884546
M 10	1,50		100	12	-	7	5,5	8	3	8,50	0001884756
M 12	1,75	•	110	14	-	9	7	10	3	10,20	0001731110
M 14	2,00		110	18	-	11	9	12	3	12,00	0001884817
M 16	2,00		110	18	-	12	9	12	3	14,00	0001732825
M 18	2,50		125	22	-	14	11	14	4	15,50	0001885056
M 20	2,50		140	22	-	16	12	15	4	17,50	0001629957
M 22	2,50		140	22	-	18	14,5	17	4	19,50	0001885116
M 24	3,00		160	28	-	18	14,5	17	4	21,00	0001885277
M 27	3,00		160	28	-	20	16	19	4	24,00	0001885337
M 30	3,50		180	32	-	22	18	21	4	26,50	0001885487
M 33	3,50		180	32	-	25	20	23	4	29,50	0001885548
M 36	4,00		200	36	-	28	22	25	4	32,00	0001885608
M 39	4,00		200	36	-	32	24	27	4	35,00	0001885769
M 42	4,50		200	45	-	32	24	27	4	37,50	0001885819

( ) JMC Norm. sim. DIN 376

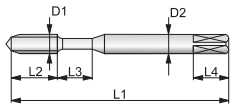
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

VAF

Nogrip-1®

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,4*	0,30	•	40	3	-	2,5	2,1	5	3	1,10	0001867897
M 1,6	0,35	•	40	4	-	2,5	2,1	5	3	1,25	0001497437
M 1,7	0,35	•	40	4	-	2,5	2,1	5	3	1,35	0001688945
M 1,8	0,35	•	40	4	-	2,5	2,1	5	3	1,45	0001688453
M 2	0,40	•	45	5	5	2,8	2,1	6	3	1,60	0000027253
M 2,3	0,40	•	45	5	5	2,8	2,1	5	3	1,90	0001687942
M 2,5	0,45	•	50	5	5	2,8	2,1	5	3	2,05	0000730336
M 2,6	0,45	•	50	5	5	2,8	2,1	5	3	2,10	0001124315
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,50	0000027313
M 3,5	0,60	•	56	6	14	4	3	6	3	2,90	0001124746
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,30	0000027473
M 5	0,80	•	70	8	17	6	4,9	8	3	4,20	0000027534
M 6	1,00	•	80	9	21	6	4,9	8	3	5,00	0000027684
M 8	1,25	•	90	11	24	8	6,2	9	3	6,80	0000027745
M 10	1,50	•	100	12	27	10	8	11	3	8,50	0000027805

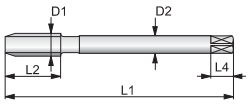
* Tol. (4H)

C35A/1

VAF

Nogrip-1®

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 4	0,70		63	7	-	2,8	2,1	5	3	3,30	0000102391
M 5	0,80		70	8	-	3,5	2,7	6	3	4,20	0000102451
M 6	1,00		80	9	-	4,5	3,4	6	3	5,00	0000102502
M 8	1,25	•	90	11	-	6	4,9	8	3	6,80	0000102662
M 10	1,50	•	100	12	-	7	5,5	8	3	8,50	0000102723
M 12	1,75	•	110	14	-	9	7	10	3	10,20	0000102883
M 14	2,00	•	110	18	-	11	9	12	3	12,00	0000102933
M 16	2,00	•	110	18	-	12	9	12	3	14,00	0000103022
M 18	2,50	•	125	22	-	14	11	14	4	15,50	0000103173
M 20	2,50	•	140	22	-	16	12	15	4	17,50	0000103233
M 22	2,50	•	140	22	-	18	14,5	17	4	19,50	0000103393
M 24	3,00	•	160	28	-	18	14,5	17	4	21,00	0000103454
M 27	3,00	•	160	28	-	20	16	19	4	24,00	0000103514
M 30	3,50	•	180	32	-	22	18	21	4	26,50	0000103664
M 33	3,50	•	180	32	-	25	20	23	4	29,50	0000103725
M 36	4,00	•	200	36	-	28	22	25	4	32,00	0000726332
M 39	4,00	•	200	36	-	32	24	27	4	35,00	0000726542
M 42	4,50	•	200	45	-	32	24	27	4	37,50	0000726823

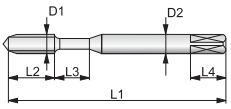
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

VAF

TiCN

M	3xD	C	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°
ISO-DIN 13		2-3 P					



Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,4*	0,35	•	40	3	-	2,5	2,1	5	3	1,10	0001868036
M 1,6	0,35	•	40	4	-	2,5	2,1	5	3	1,25	0001689465
M 1,7	0,35	•	40	4	-	2,5	2,1	5	3	1,35	0001689184
M 1,8	0,35	•	40	4	-	2,5	2,1	5	3	1,45	0001688673
M 2	0,40	•	45	5	5	2,8	2,1	6	3	1,60	0001122471
M 2,3	0,40	•	45	5	5	2,8	2,1	5	3	1,90	0001688182
M 2,5	0,45	•	50	5	5	2,8	2,1	5	3	2,05	0001123041
M 2,6	0,45	•	50	5	5	2,8	2,1	5	3	2,10	0001124535
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,50	0000028536
M 3,5	0,60	•	56	6	14	4	3	6	3	2,90	0001124967
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,30	0000028686
M 5	0,80	•	70	8	17	6	4,9	8	3	4,20	0000028747
M 6	1,00	•	80	9	21	6	4,9	8	3	5,00	0000028807
M 8	1,25	•	90	11	24	8	6,2	9	3	6,80	0000028968
M 10	1,50	•	100	12	27	10	8	11	3	8,50	0000029046

* Tol. (4H)

Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

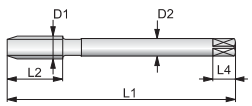
Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C35A/1

VAF

TiCN

M	3xD	C	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°
ISO-DIN 13		2-3 P					



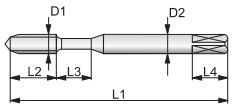
Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 4	0,70		63	7	-	2,8	2,1	5	3	3,30	0001130263
M 5	0,80		70	8	-	3,5	2,7	6	3	4,20	0001130605
M 6	1,00		80	9	-	4,5	3,4	6	3	5,00	0000105398
M 8	1,25	•	90	11	-	6	4,9	8	3	6,80	0000105458
M 10	1,50	•	100	12	-	7	5,5	8	3	8,50	0000105519
M 12	1,75	•	110	14	-	9	7	10	3	10,20	0000105679
M 14	2,00	•	110	18	-	11	9	12	3	12,00	0000105729
M 16	2,00	•	110	18	-	12	9	12	3	14,00	0000106029
M 18	2,50	•	125	22	-	14	11	14	4	15,50	0000106240
M 20	2,50	•	140	22	-	16	12	15	4	17,50	0000106300
M 22	2,50	•	140	22	-	18	14,5	17	4	19,50	0001130816
M 24	3,00	•	160	28	-	18	14,5	17	4	21,00	0001131055
M 27	3,00	•	160	28	-	20	16	19	4	24,00	0001131276
M 30	3,50	•	180	32	-	22	18	21	4	26,50	0001131486
M 33	3,50		180	32	-	25	20	23	4	29,50	0001131607
M 36	4,00		200	36	-	28	22	25	4	32,00	0001131978
M 39	4,00		200	36	-	32	24	27	4	35,00	0001686679
M 42	4,50		200	45	-	32	24	27	4	37,50	0001686398

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2
ZM

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°

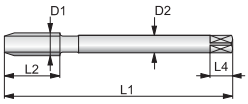


Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0003783663
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0003783724
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0003783884
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0003783934
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0003784023
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0003784174

C35A/1
ZM

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,2	0003784234
M 14	2,00	•	110	18	-	11	9	12	3	12	0003784394
M 16	2,00	•	110	18	-	12	9	12	3	14	0003784455
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003784515
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003784665

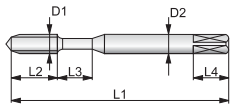
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

ZM

Nogrip-1®

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

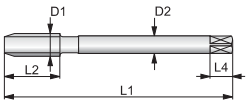
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0002152137
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0002152297
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0002152357
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0001739128
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0002127043
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0002152418

C35A/1

ZM

Nogrip-1®

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

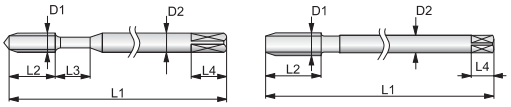
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,2	0002152568
M 14	2,00	•	110	18	-	11	9	12	3	12	0003195741
M 16	2,00	•	110	18	-	12	9	12	3	14	0003195892
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003195952
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0002436167

Machos de roscar a máquina. Con mango extralargo. Agujeros ciegos
Machine taps. With extra long shank. Blind holes

JMC

TN-C35
ZM

M ISO-DIN 13	3xD	C 2-3 P	R35°	≈DIN 371 M6	≈DIN 376 M8	HSSE Co5	ISO 2 (6H)	P 60°

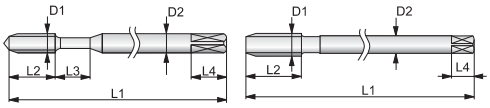


Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	100	11	8	3,5	2,7	6	3	2,5	0001744296
M 4	0,70	•	120	13	9	4,5	3,4	6	3	3,3	0001744356
M 5	0,80	•	140	15	11	6	4,9	8	3	4,2	0001744406
M 6	1,00	•	160	17	14	6	4,9	8	3	5	0001744567
M 8	1,25	•	180	20	-	6	4,9	9	3	6,8	0001744627
M 10	1,50	•	200	22	-	7	5,5	8	3	8,5	0001744788
M 12	1,75	•	224	24	-	9	7	10	3	10,2	0001744838
M 14	2,00	•	224	26	-	11	9	12	3	12	0001790539
M 16	2,00	•	224	27	-	12	9	12	3	14	0001790699
M 18	2,50	•	250	30	-	14	11	14	4	15,5	0001790750
M 20	2,50	•	280	32	-	16	12	15	4	17,5	0001790800
M 22	2,50	•	250	32	-	18	14,5	17	4	19,5	0001790960
M 24	3,00	•	250	36	-	18	14,5	17	4	21	0001791049

TN-C35
ZM
Nogrip-1®

M ISO-DIN 13	3xD	C 2-3 P	R35°	≈DIN 371 M6	≈DIN 376 M8	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

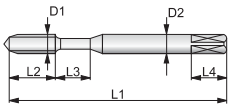
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	100	11	8	3,5	2,7	6	3	2,5	0003433203
M 4	0,70	•	120	13	9	4,5	3,4	6	3	3,3	0003433363
M 5	0,80	•	140	15	11	6	4,9	8	3	4,2	0003433424
M 6	1,00	•	160	17	14	6	4,9	8	3	5	0003433584
M 8	1,25	•	180	20	-	6	4,9	9	3	6,8	0003433635
M 10	1,50	•	200	22	-	7	5,5	8	3	8,5	0003433795
M 12	1,75	•	224	24	-	9	7	10	3	10,2	0002794260
M 14	2,00	•	224	26	-	11	9	12	3	12	0003433855
M 16	2,00	•	224	27	-	12	9	12	3	14	0002757575
M 18	2,50	•	250	30	-	14	11	14	4	15,5	0003433916
M 20	2,50	•	280	32	-	16	12	15	4	17,5	0003434095
M 22	2,50	•	250	32	-	18	14,5	17	4	19,5	0002711879
M 24	3,00	•	250	36	-	18	14,5	17	4	21	0003434155

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/2 AL

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°

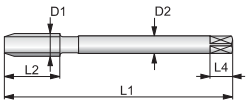


Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,50	0001437016
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,30	0001437176
M 5	0,80	•	70	8	17	6	4,9	8	3	4,20	0001437237
M 6	1,00	•	80	9	21	6	4,9	8	3	5,00	0001437387
M 8	1,25	•	90	11	24	8	6,2	9	3	6,80	0001437448
M 10	1,50	•	100	12	27	10	8	11	3	8,50	0001437508

C35A/1 AL

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,20	0001443949
M 14	2,00	•	110	18	-	11	9	12	3	12,00	0001471778
M 16	2,00	•	110	18	-	12	9	12	3	14,00	0001471989
M 18	2,50	•	125	22	-	14	11	14	4	15,50	0001842147
M 20	2,50	•	140	22	-	16	12	15	4	17,50	0001842207

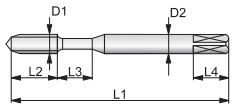
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

AL

CromPlus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30
	5 6		1 2	

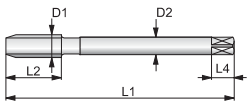
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,50	0001816051
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,30	0001816111
M 5	0,80	•	70	8	17	6	4,9	8	3	4,20	0001789471
M 6	1,00	•	80	9	21	6	4,9	8	3	5,00	0001816261
M 8	1,25	•	90	11	24	8	6,2	9	3	6,80	0001816322
M 10	1,50	•	100	12	27	10	8	11	3	8,50	0001816482

C35A/1

AL

CromPlus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30
	5 6		1 2	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,20	0001789692
M 14	2,00	•	110	18	-	11	9	12	3	12,00	0001867466
M 16	2,00	•	110	18	-	12	9	12	3	14,00	0001867516
M 18	2,50	•	125	22	-	14	11	14	4	15,50	0001867676
M 20	2,50	•	140	22	-	16	12	15	4	17,50	0001867737

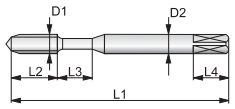
Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A/2

M	3xD	C	R35°	DIN	HSSE	ISO 2 (6H)
ISO-DIN 13		2-3 P		371	Co5	

AL
Altplus



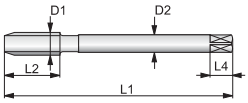
Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	15	20
	5	6	5	6	6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,50	0001437668
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,30	0001437729
M 5	0,80	•	70	8	17	6	4,9	8	3	4,20	0001437879
M 6	1,00	•	80	9	21	6	4,9	8	3	5,00	0001437930
M 8	1,25	•	90	11	24	8	6,2	9	3	6,80	0001438018
M 10	1,50	•	100	12	27	10	8	11	3	8,50	0001438179

C35A/1

M	3xD	C	R35°	DIN	HSSE	ISO 2 (6H)
ISO-DIN 13		2-3 P		376	Co5	

AL
Altplus



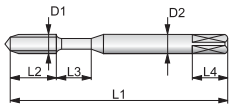
Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	15	20
	5	6	5	6	6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,20	0001443888
M 14	2,00	•	110	18	-	11	9	12	3	12,00	0001471618
M 16	2,00	•	110	18	-	12	9	12	3	14,00	0001471828
M 18	2,50	•	125	22	-	14	11	14	4	15,50	0001842367
M 20	2,50	•	140	22	-	16	12	15	4	17,50	0001842428

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2
AL-AZ

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°

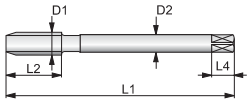


Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0001821489
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0001821549
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0001821600
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0001497387
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001821760
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0001821821

C35A/1
AL-AZ

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,2	0001821971

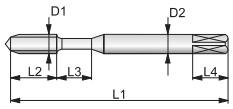
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

AL-AZ

Cromplus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30
	5 6		5 6	

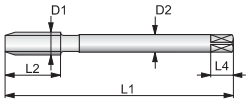
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0001822602
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0001822762
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0001822823
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0001822973
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001823062
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0001823122

C35A/1

AL-AZ

Cromplus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



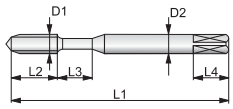
Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30
	5 6		5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,2	0001823333

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2 AL-AZ Altplus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°

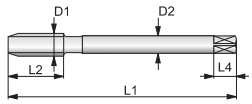


Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	25	30	15	20
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0001822060
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0001822110
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0001822271
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0001822331
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001822491
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0001822542

C35A/1 AL-AZ Altplus

M ISO-DIN 13	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	25	30	15	20
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	3	10,2	0001823273

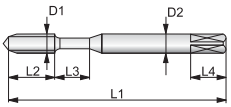
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos profundos / *Deep blind holes.*

C40A/2

M ISO-DIN 13 | 4xD | **C** 2-3 P | R40º | DIN 371 | HSSE PM | ISO 2 6H

produr Nogrip-1®



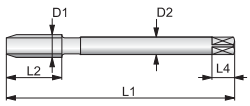
Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	8	3,5	2,7	6	3	2,5	0004064611
M 4	0,70	•	63	7	9	4,5	3,4	6	3	3,3	0004064761
M 5	0,80	•	70	8	11	6	4,9	8	3	4,2	0004064822
M 6	1,00	•	80	9	14	6	4,9	8	3	5	0004064982
M 8	1,25	•	90	11	17	8	6,2	9	3	6,8	0004025379
M 10	1,50	•	100	12	19	10	8	11	3	8,5	0004065061

C40A/1

M ISO-DIN 13 | 4xD | **C** 2-3 P | R40º | DIN 376 | HSSE PM | ISO 2 6H

produr Nogrip-1®



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0004065121
M 14	2,00	•	110	18	-	11	9	12	4	12	0004065984
M 16	2,00	•	110	18	-	12	9	12	4	14	0004066063
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0004192396
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0004192456
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0004192516
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0004192667

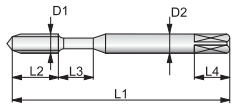
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos profundos / *Deep blind holes.*

C40A/2

M ISO-DIN 13 | 4xD | **C** 2-3 P | R40º | DIN 371 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	8	3,5	2,7	6	3	2,5	0003187677
M 4	0,70	•	63	7	9	4,5	3,4	6	3	3,3	0003187517
M 5	0,80	•	70	8	11	6	4,9	8	3	4,2	0003187457
M 6	1,00	•	80	9	14	6	4,9	8	3	5	0003017002
M 8	1,25	•	90	11	17	8	6,2	9	3	6,8	0002947438
M 10	1,50	•	100	12	19	10	8	11	3	8,5	0003187396

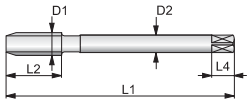
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C40A/1

M ISO-DIN 13 | 4xD | **C** 2-3 P | R40º | DIN 376 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0002947598
M 14	2,00	•	110	18	-	11	9	12	4	12	0003187728
M 16	2,00	•	110	18	-	12	9	12	4	14	0003187888
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003188188
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003188459
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0003188730
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0003187948

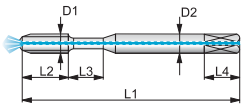
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos profundos / *Deep blind holes.*

C40A/2 KC

M ISO-DIN 13 | 4xD | **C** 2-3 P | R40º KC | DIN 371 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	9	14	6	4,9	8	3	5	0003212243
M 8	1,25	•	90	11	17	8	6,2	9	3	6,8	0003212453
M 10	1,50	•	100	12	19	10	8	11	3	8,5	0003212674

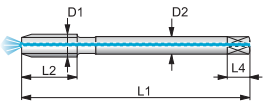
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C40A/1 KC

M ISO-DIN 13 | 4xD | **C** 2-3 P | R40º KC | DIN 376 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003122516
M 14	2,00	•	110	18	-	11	9	12	4	12	0003212022
M 16	2,00	•	110	18	-	12	9	12	4	14	0003212182
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003211240
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003211722

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

JMC

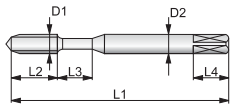
M

C40A/2

M ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 371 | HSSE PM | ISO 2 6H

prospeed

Nogrip-1®



Material	GR1	GR2	GR3	GR8	GR9
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2	1
mts./min.	25	25	10 8	25	6

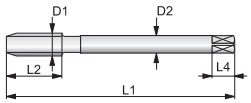
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0004026432
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0004026592
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0004026653
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0004026713
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0004025229
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0004026863

C40A/1

M ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 376 | HSSE PM | ISO 2 6H

prospeed

Nogrip-1®



Material	GR1	GR2	GR3	GR8	GR9
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2	1
mts./min.	25	25	10 8	25	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0004026924
M 14	2,00	•	110	18	-	11	9	12	4	12	0004066124
M 16	2,00	•	110	18	-	12	9	12	4	14	0003651056
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0004191454
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0004027003
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0004192727
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0004192888

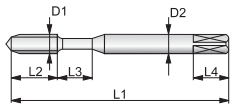
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos / *Blind holes.*

JMC

C40A/2

M ISO-DIN 13	4xD viruta larga *long chip*	C 2-3 P	R40°	DIN 371	HSSE PM	ISO 2 6H	P 60°

prospeed
LubePlus



Material	GR1	GR2	GR3		GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3		2
mts./min.	25	25	10	8	25
	2 3	2 3	2 3		3

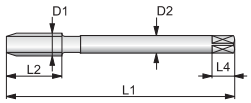
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0002787529
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0002766430
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0002751842
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0002787730
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0002787951
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0002787037

Macho adecuado para el roscado en aceros inoxidables.
For machining stainless steels.

C40A/1

M ISO-DIN 13	4xD viruta larga *long chip*	C 2-3 P	R40°	DIN 376	HSSE PM	ISO 2 6H	P 60°

prospeed
LubePlus



Material	GR1	GR2	GR3		GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3		2
mts./min.	25	25	10	8	25
	2 3	2 3	2 3		3

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0002751992
M 14	2,00	•	110	18	-	11	9	12	4	12	0002788190
M 16	2,00	•	110	18	-	12	9	12	4	14	0002786958
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0002788461
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0002788742
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0002788953
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0002789192

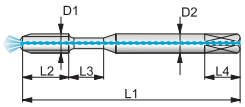
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

C40A/2KC

M ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° KC | DIN 371 | HSSE PM | ISO 2 6H

prospeed LubePlus



Material	GR1	GR2	GR3	GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2
mts./min.	25	25	10 / 8	25

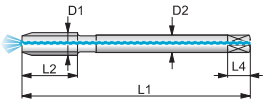
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	9	21	6	4,9	8	3	5	0002795101
M 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0002795322
M 10	1,50	•	100	12	27	10	8	11	3	8,5	0002795533

Macho adecuado para el roscado en aceros inoxidables.
For machining stainless steels.

C40A/1KC

M ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° KC | DIN 376 | HSSE PM | ISO 2 6H

prospeed LubePlus



Material	GR1	GR2	GR3	GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2
mts./min.	25	25	10 / 8	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0002795754
M 14	2,00	•	110	18	-	11	9	12	4	12	0002795964
M 16	2,00	•	110	18	-	12	9	12	4	14	0002796104
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0002796264
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0002796475
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0002796696
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0002796816

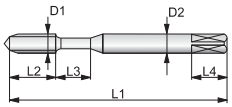
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos / *Blind holes.*

JMC

C40A/2

M ISO-DIN 13 | **C** 2-3 P | C R40° | DIN 371 | HSSE PM | ISO 2 6H

prosoft
LubePlus



Material	GR1
Subg.	1
mts./min.	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	8	3,5	2,7	6	3	2,5	0003144768
M 4	0,70	•	63	7	9	4,5	3,4	6	3	3,3	0003145068
M 5	0,80	•	70	8	11	6	4,9	8	3	4,2	0003145339
M 6	1,00	•	80	9	14	6	4,9	8	3	5	0003145600
M 8	1,25	•	90	11	17	8	6,2	9	3	6,8	0003145971
M 10	1,50	•	100	12	19	10	8	11	3	8,5	0003146271

C40A/1

M ISO-DIN 13 | **C** 2-3 P | C R40° | DIN 376 | HSSE PM | ISO 2 6H

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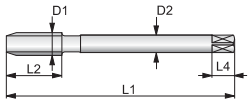


Material	GR1
Subg.	1
mts./min.	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003146552
M 14	2,00	•	110	18	-	11	9	12	4	12	0003146823
M 16	2,00	•	110	18	-	12	9	12	4	14	0003147123
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003147494
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003148064
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0003148285
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0003148617

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

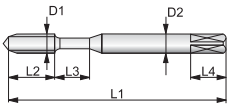
JMC

C40A/2

M	C	C R40°	DIN	HSSE	ISO 2
ISO-DIN 13	2-3 P		371	PM	6H

prosoft

CromPlus



Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	8	3,5	2,7	6	3	2,5	0003144828
M 4	0,70	•	63	7	9	4,5	3,4	6	3	3,3	0003145118
M 5	0,80	•	70	8	11	6	4,9	8	3	4,2	0003145499
M 6	1,00	•	80	9	14	6	4,9	8	3	5	0003145760
M 8	1,25	•	90	11	17	8	6,2	9	3	6,8	0003146060
M 10	1,50	•	100	12	19	10	8	11	3	8,5	0003146331

C40A/1

M	C	C R40°	DIN	HSSE	ISO 2
ISO-DIN 13	2-3 P		376	PM	6H

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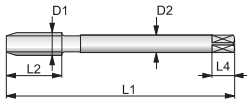


Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003146602
M 14	2,00	•	110	18	-	11	9	12	4	12	0003146983
M 16	2,00	•	110	18	-	12	9	12	4	14	0003147273
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003147765
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003148125
M 24	3,00	•	160	28	-	18	14,5	17	4	21	0003148336
M 30	3,50	•	180	32	-	22	18	21	4	26,5	0003148767

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos / *Blind holes.*

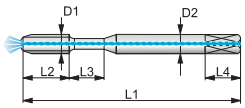
JMC

C40A/2 KC

M	C	R40º KC	DIN 371	HSSE PM	ISO 2 6H
ISO-DIN 13	2-3 P				

prosoft

LubePlus



Material	GR1
Subg.	1
mts./min.	25

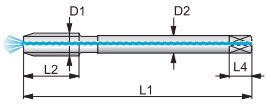
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	9	14	6	4,9	8	3	5	0003236339
M 8	1,25	•	90	11	17	8	6,2	9	3	6,8	0003236559
M 10	1,50	•	100	12	19	10	8	11	3	8,5	0003236760

C40A/1 KC

M	C	R40º KC	DIN 371	HSSE PM	ISO 2 6H
ISO-DIN 13	2-3 P				

prosoft

LubePlus



Material	GR1
Subg.	1
mts./min.	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003236981
M 14	2,00	•	110	18	-	11	9	12	4	12	0003237120
M 16	2,00	•	110	18	-	12	9	12	4	14	0003237331
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003237552
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003237762

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

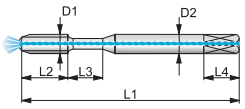
Agujeros ciegos / *Blind holes.*

C40A/2 KC

M ISO-DIN 13 | **C** 2-3 P | R40° KC | DIN 371 | HSSE PM | ISO 2 6H

prosoft

CromPlus



Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

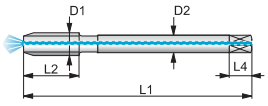
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	9	14	6	4,9	8	3	5	0003236499
M 8	1,25	•	90	11	17	8	6,2	9	3	6,8	0003236610
M 10	1,50	•	100	12	19	10	8	11	3	8,5	0003236821

C40A/1 KC

M ISO-DIN 13 | **C** 2-3 P | R40° KC | DIN 376 | HSSE PM | ISO 2 6H

prosoft

CromPlus



Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

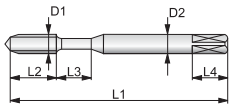
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003237060
M 14	2,00	•	110	18	-	11	9	12	4	12	0003237281
M 16	2,00	•	110	18	-	12	9	12	4	14	0003237491
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003237612
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003237823

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C45E/2

AL

M ISO-DIN 13	3xD	C 2-3 P	R45°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



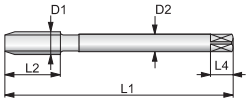
Material	GR5	GR6
Subg.	1	1,2
mts./min.	6 11	10 20
	6	5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 2,5	0,45	•	50	5	5	2,8	2,1	5	2	2,05	0000029107
M 3	0,50	•	56	6	12	3,5	2,7	6	2	2,50	0000029267
M 4	0,70	•	63	7	14	4,5	3,4	6	2	3,30	0000029318
M 5	0,80	•	70	8	17	6	4,9	8	2	4,20	0000029478
M 6	1,00	•	80	9	21	6	4,9	8	2	5,00	0000029538
M 7	1,00	•	80	10	20	7	5,5	8	2	6,00	0000029699
M 8	1,25	•	90	11	24	8	6,2	9	2	6,80	0000029749
M 10	1,50	•	100	12	27	10	8	11	2	8,50	0000029800

C45E/1

AL

M ISO-DIN 13	3xD	C 2-3 P	R45°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR5	GR6
Subg.	1	1,2
mts./min.	6 11	10 20
	6	5

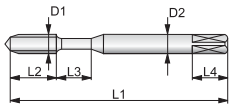
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	15	-	9	7	10	3	10,20	0000717747
M 14	2,00	•	110	18	-	11	9	12	3	12,00	0000106511
M 16	2,00	•	110	18	-	12	9	12	3	14,00	0000106671

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2

N

M ISO-DIN 13	1xD	C 2-3 P	DIN 371	HSSE Co5	ISO 2 (6H)



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

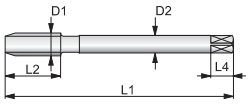
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1*	0,25	•	40	5	-	2,5	2,1	5	3	0,75	0001627732
M 1,1*	0,25	•	40	5	-	2,5	2,1	5	3	0,85	0000468402
M 1,2*	0,25	•	40	5	-	2,5	2,1	5	3	0,95	0000009873
M 1,4*	0,30	•	40	7	-	2,5	2,1	5	3	1,1	0000009933
M 1,6	0,35	•	40	8	-	2,5	2,1	5	3	1,25	0000010018
M 1,7	0,35	•	40	8	-	2,5	2,1	5	3	1,3	0000010178
M 1,8	0,35	•	40	8	-	2,5	2,1	5	3	1,45	0000010238
M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,6	0000010389
M 2,2	0,45	•	45	9	-	2,8	2,1	5	3	1,75	0000010449
M 2,3	0,40	•	45	9	-	2,8	2,1	5	3	1,9	0000010500
M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,05	0000010660
M 2,6	0,45	•	50	9	-	2,8	2,1	5	3	2,1	0000010710
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000010871
M 3,5	0,60	•	56	11	9	4	3	6	3	2,9	0000010931
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000011010
M 4,5	0,75	•	7	14	11	6	4,9	8	3	3,8	0000011170
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000011231
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000011381
M 7	1,00	•	80	17	13	7	5,5	8	3	6	0000011442
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000011502
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000011662

* Tol. 4H

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/1	M ISO-DIN 13	1xD	C 2-3 P	DIN 376	HSSE Co5	ISO 2 (6H)
N						



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

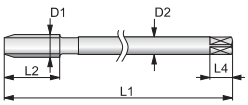
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,5	0000084306
M 4	0,70		63	12	-	2,8	2,1	5	3	3,3	0000084456
M 5	0,80		70	14	-	3,5	2,7	6	3	4,2	0000084516
M 6	1,00	•	80	16	-	4,5	3,4	6	3	5	0000084677
M 8	1,25	•	90	18	-	6	4,9	8	3	6,8	0000084887
M 10	1,50	•	100	20	-	7	5,5	8	3	8,5	0000085037
M 11	1,50		100	20	-	8	6,2	9	3	9,5	0000085187
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000085247
M 13	1,75		110	25	-	11	9	12	3	11,2	0000682306
M 14	2,00	•	110	25	-	11	9	12	3	12	0000085308
M 16	2,00	•	110	28	-	12	9	12	3	14	0000085468
M 18	2,50	•	125	32	-	14	11	14	3	15,5	0000085519
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000085679
M 22	2,50	•	140	32	-	18	14,5	17	4	19,5	0000085739
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0000085890
M 27	3,00	•	160	36	-	20	16	19	4	24	0000085940
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0000086039
M 33	3,50	•	180	40	-	25	20	23	4	29,5	0000086189
M 36	4,00	•	200	45	-	28	22	25	4	32	0000086240
M 39	4,00	•	200	45	-	32	24	27	6	35	0000086300
M 42	4,50	•	200	50	-	32	24	27	6	37,5	0000086461
M 45	4,50	•	220	50	-	36	29	32	6	40,5	0000086521
M 48	5,00	•	250	60	-	36	29	32	6	43	0000086671
M 52	5,00	•	250	60	-	40	32	35	6	47	0000691683

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

TN-C
XL
N

M ISO-DIN 13 | 1xD | **C** 2-3 P | ≈DIN 357 | HSS | ISO 2 (6H)



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

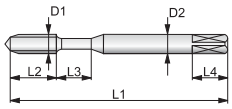
D1	P		L1	L2	L3	D2	a	L4	Z / LH	Ød1	Cod.
(M 2)	0,40		70	14	-	1,4	–	–	3	1,6	0001887271
(M 2,5)	0,45		70	22	-	1,8	–	–	3	2,05	0000489651
M 3	0,50	•	70	22	-	2,2	–	–	3	2,5	0000489923
M 3,5	0,60		80	25	-	2,5	2,1	5	3	2,9	0001887332
M 4	0,70	•	90	25	-	2,8	2,1	5	3	3,3	0000490228
M 5	0,80	•	100	28	-	3,5	2,7	6	3	4,2	0000490700
M 6	1,00	•	110	32	-	4,5	3,4	6	3	5	0000491220
M 7	1,00		110	36	-	5,5	4,3	7	3	6	0000491431
M 8	1,25	•	125	40	-	6	4,9	8	3	6,8	0000491712
M 9	1,25		140	40	-	7	5,5	8	3	7,8	0000491923
M 10	1,50	•	140	45	-	7	5,5	8	3	8,5	0000492383
M 12	1,75	•	180	50	-	9	7	10	3	10,2	0000492593
M 14	2,00	•	200	56	-	11	9	12	3	12	0000492925
M 16	2,00	•	200	63	-	12	9	12	3	14	0000493164
M 18	2,50		220	63	-	14	11	14	3	15,5	0001887492
M 20	2,50		250	70	-	16	12	15	4	17,5	0000514658

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2 BR

M ISO-DIN 13	C 2-3 P	DIN 371	HSSE Co5	ISO 2 (6H)

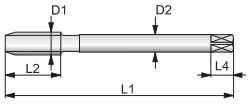


Material	GR5
Subg.	2,3
mts./min.	15 / 20

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0001088026
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0001079653
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0001554604
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0001515704
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0001554764
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0001685395

C/1 BR

M ISO-DIN 13	C 2-3 P	DIN 376	HSSE Co5	ISO 2 (6H)



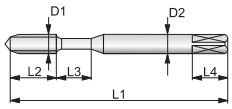
Material	GR5
Subg.	2,3
	15 / 20

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0001684945

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. *Blind and through holes*

C/2 SILUM AltPlus

M ISO-DIN 13	C 2-3 P	DIN 371	HSSE Co5	ISO 2x (6HX)

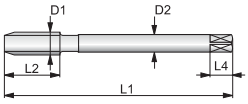


Material	GR4		GR6	
Subg.	3		3	4
mts./min.	30	35	20-25	30-35
	1 2 6		5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0001760926
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0001761005
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0001761165
M 6	1,00	•	80	16	14	6	4,9	8	4	5	0001761215
M 8	1,25	•	90	18	17	8	6,2	9	4	6,8	0001761376
M 10	1,50	•	100	20	19	10	8	11	4	8,5	0001761436

C/1 SILUM AltPlus

M ISO-DIN 13	C 2-3 P	DIN 376	HSSE Co5	ISO 2x (6HX)



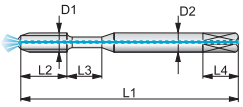
Material	GR4		GR6	
Subg.	3		3	4
mts./min.	30	35	20-25	30-35
	1 2 6		5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	4	10,2	0001765385
M 14	2,00	•	110	25	-	11	9	12	4	12	0001698250
M 16	2,00	•	110	28	-	12	9	12	4	14	0001765596
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0001765656
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0001765716

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2 KC
SILUM
AltPlus

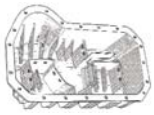
M ISO-DIN 13	C 2-3 P	KC	DIN 371	HSSE Co5	ISO 2x (6HX)



Material	GR4		GR6	
Subg.	3		3	4
mts./min.	30	35	20-25	30-35
	1 2 6		5 6	

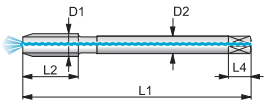
D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	80	16	14	6	4,9	8	4	5	0002728472
M 8	1,25	90	18	17	8	6,2	9	4	6,8	0003005902
M 10	1,50	100	20	19	10	8	11	4	8,5	0003459735

Macho de alto rendimiento para el roscado en aluminio con Si>8%.
High performance tap suitable for aluminium with Si>8%.



C/1 KC
SILUM
AltPlus

M ISO-DIN 13	C 2-3 P	KC	DIN 376	HSSE Co5	ISO 2x (6HX)



Material	GR4		GR6	
Subg.	3		3	4
mts./min.	30	35	20-25	30-35
	1 2 6		5 6	

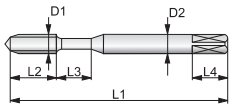
D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	110	22	-	9	7	10	4	10,2	0003459895
M 14	2,00	110	25	-	11	9	12	4	12	0003460191
M 16	2,00	110	28	-	12	9	12	4	14	0003460030

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2

CONEX
C.D.I.®

M ISO-DIN 13	C 2-3 P	DIN 371	HSSE Co5	ISO 2x (6HX)



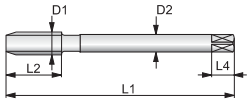
Material	GR4
Subg.	1 2 3
mts./min.	30-35 25-30 20-25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000005222
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000005382
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000005432
M 6	1,00	•	80	16	14	6	4,9	8	4	5	0000005593
M 7	1,00	•	80	17	13	7	5,5	8	4	6	0000699601
M 8	1,25	•	90	18	17	8	6,2	9	4	6,8	0000005653
M 10	1,50	•	100	20	19	10	8	11	4	8,5	0000005714

C/1

CONEX
C.D.I.®

M ISO-DIN 13	C 2-3 P	DIN 376	HSSE Co5	ISO 2x (6HX)



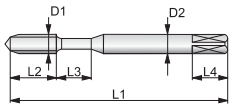
Material	GR4
Subg.	1 2 3
mts./min.	30-35 25-30 20-25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	16	-	4,5	3,4	6	4	5	0000087894
M 8	1,25	•	90	18	-	6	4,9	8	4	6,8	0000087955
M 10	1,50	•	100	20	-	7	5,5	8	4	8,5	0000088034
M 12	1,75	•	110	22	-	9	7	10	4	10,2	0000088194
M 14	2,00	•	110	25	-	11	9	12	4	12	0000088254
M 16	2,00	•	110	28	-	12	9	12	4	14	0000088305
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0000088465
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000088525
M 22	2,50	•	140	32	-	18	14,5	17	4	21	0001582433
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0001555064
M 27	3,00	•	160	36	-	20	16	19	4	24	0001582644
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0001240147

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2 CONEX AltPlus

M ISO-DIN 13	C 2-3 P	DIN 371	HSSE Co5	ISO 2x (6HX)



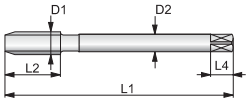
Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000696815
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000697536
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000698117
M 6	1,00	•	80	16	14	6	4,9	8	4	5	0000699059
M 7	1,00	•	80	17	13	7	5,5	8	4	6	0001775945
M 8	1,25	•	90	18	17	8	6,2	9	4	6,8	0000700873
M 10	1,50	•	100	20	19	10	8	11	4	8,5	0000701665

Macho de alto rendimiento para el roscado en fundición gris y nodular.
High performance tap suitable for nodular as well as grey cast iron.

C/1 CONEX AltPlus

M ISO-DIN 13	C 2-3 P	DIN 376	HSSE Co5	ISO 2x (6HX)



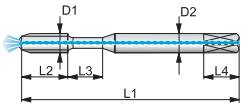
Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00		80	16	-	4,5	3,4	6	4	5	0000677239
M 8	1,25		90	18	-	6	4,9	8	4	6,8	0000678512
M 10	1,50		100	20	-	7	5,5	8	4	8,5	0000680512
M 12	1,75	•	110	22	-	9	7	10	4	10,2	0000682246
M 14	2,00	•	110	25	-	11	9	12	4	12	0000683308
M 16	2,00	•	110	28	-	12	9	12	4	14	0000685303
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0000686305
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000688681
M 22	2,50	•	140	32	-	18	14,5	17	4	19,5	0001776024
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0001555114
M 27	3,00	•	160	36	-	20	16	19	4	24	0001776185
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0001867305

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2 KC
CONEX
AltPlus

M ISO-DIN 13 | C 2-3 P | KC | DIN 371 | HSSE Co5 | ISO 2x (6HX)



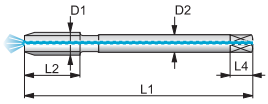
Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40

D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 5	0,80	70	14	11	6	4,9	8	3	4,2	0002361947
M 6	1,00	80	16	14	6	4,9	8	4	5	0002362026
M 8	1,25	90	18	17	8	6,2	9	4	6,8	0002233349
M 10	1,50	100	20	19	10	8	11	4	8,5	0002233610

Macho de alto rendimiento para el roscado en fundición gris y nodular.
High performance tap suitable for nodular as well as grey cast iron.

C/1 KC
CONEX
AltPlus

M ISO-DIN 13 | C 2-3 P | KC | DIN 376 | HSSE Co5 | ISO 2x (6HX)



Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40

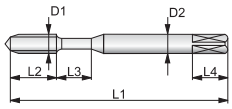
D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	110	22	-	9	7	10	4	10,2	0002012158
M 14	2,00	110	25	-	11	9	12	4	12	0002012379
M 16	2,00	110	28	-	12	9	12	4	14	0002012580
M 18	2,50	125	32	-	14	11	14	4	15,5	0002012700
M 20	2,50	140	32	-	16	12	15	4	17,5	0002012921
M 22	2,50	140	32	-	18	14,5	17	4	19,5	0003468801
M 24	3,00	160	36	-	18	14,5	17	4	21	0002500064
M 27	3,00	160	36	-	20	16	19	4	24	0003468962
M 30	3,50	180	40	-	22	18	21	4	26,5	0003469041

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

C/2

M ISO-DIN 13	C 2-3 P	DIN 371	HSSE PM	ISO 2X 6HX

pronex AltPlus



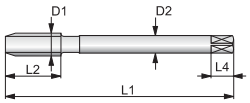
Material	GR4
Subg.	1,2,3
mts./min.	25 / 18

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0003190519
M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0003190730
M 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0003190941
M 6	1,00	•	80	9	21	6	4,9	8	4	5	0003191180
M 8	1,25	•	90	11	24	8	6,2	9	4	6,8	0003191301
M 10	1,50	•	100	12	27	10	8	11	4	8,5	0003191512

C/1

M ISO-DIN 13	C 2-3 P	DIN 376	HSSE PM	ISO 2X 6HX

pronex AltPlus



Material	GR4
Subg.	1,2,3
mts./min.	25 / 18

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003191732
M 14	2,00	•	110	18	-	11	9	12	4	12	0003191943
M 16	2,00	•	110	18	-	12	9	12	4	14	0003192182
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003192303
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003192524

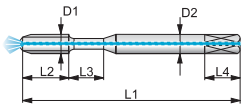
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C/2 KC

M ISO-DIN 13 | **C** 2-3 P | KC | DIN 371 | HSSE PM | ISO 2X 6HX

pronex AltPlus



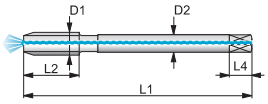
Material	GR4
Subg.	1,2,3
mts./min.	25 | 18

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	9	21	6	4,9	8	4	5	0003195039
M 8	1,25	•	90	11	24	8	6,2	9	4	6,8	0003195250
M 10	1,50	•	100	12	27	10	8	11	4	8,5	0003202716

C/1 KC

M ISO-DIN 13 | **C** 2-3 P | KC | DIN 376 | HSSE PM | ISO 2X 6HX

pronex AltPlus



Material	GR4
Subg.	1,2,3
mts./min.	25 | 18

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003202937
M 14	2,00	•	110	18	-	11	9	12	4	12	0003203176
M 16	2,00	•	110	18	-	12	9	12	4	14	0003203387
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003203508
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003203879

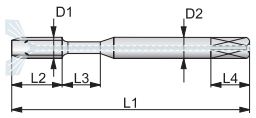
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C/2 KL

M ISO-DIN 13 | C 2-3 P | KL | DIN 371 | HSSE PM | ISO 2X 6HX

pronex AltPlus



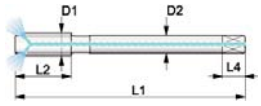
Material	GR4
Subg.	1,2,3
mts./min.	25 | 18

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	9	21	6	4,9	8	4	5	0003195199
M 8	1,25	•	90	11	24	8	6,2	9	4	6,8	0003195310
M 10	1,50	•	100	12	27	10	8	11	4	8,5	0003202877

C/1 KL

M ISO-DIN 13 | C 2-3 P | KL | DIN 376 | HSSE PM | ISO 2X 6HX

pronex AltPlus



Material	GR4
Subg.	1,2,3
mts./min.	25 | 18

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	14	-	9	7	10	4	10,2	0003203016
M 14	2,00	•	110	18	-	11	9	12	4	12	0003203227
M 16	2,00	•	110	18	-	12	9	12	4	14	0003203447
M 18	2,50	•	125	22	-	14	11	14	4	15,5	0003203658
M 20	2,50	•	140	22	-	16	12	15	4	17,5	0003204018

Machos de metal duro / *Solid carbide cutting taps*

Para aceros templados 55-60 HRC. Agujeros ciegos y pasantes.
For tempered steels, 55-60 HRC. Blind and through holes.

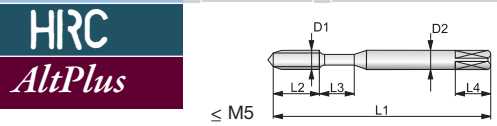
JMC

M

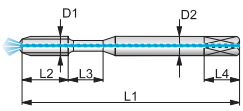
C/2 HRC AltPlus

M ISO-DIN 13	3-4 P	KC	DIN 371	MD *Solid carbide*	ISO 2 (6H)

≤ M5



≥ M6



Material	GR2 Aceros templados / *Tempered steels* HRC 55	HRC 60
Subg.	9	9
mts./mint.	2 / 3	1

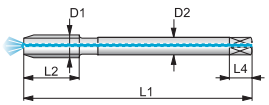
≤ M5 ≥ M6

	D1	P		L1	L2	L3	D2 h6	a	L4	Z RH	Ød1	Cod.
C/2 HRC	M 3*	0,5	•	56	10	8	3,5	2,7	6	3	2,5	0002691518
	M 4*	0,7	•	63	12	9	4,5	3,4	6	4	3,4	0002691729
	M 5*	0,8	•	70	14	11	6	4,9	8	4	4,3	0002691940
C/2 HRC KC	M 6	1	•	80	16	14	6	4,9	8	5	5	0002324610
	M 8	1,25	•	90	18	17	8	6,2	9	5	6,9	0002324771
	M 10	1,5	•	100	20	19	10	8	11	5	8,6	0002324831

* sin refrigeración interna / *without internal coolant*

C/1 KC HRC AltPlus

M ISO-DIN 13	3-4 P	KC	DIN 376	MD *Solid carbide*	ISO 2 (6H)



Material	GR2 Aceros templados / *Tempered steels* HRC 55	HRC 60
Subg.	9	9
mts./mint.	2 / 3	1

D1	P		L1	L2	L3	D2 h6	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	5	10,4	0002324981
M 16	2	•	110	28	-	12	9	12	5	14,2	0002346922

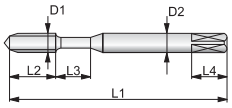
Verificar que el macho esté perfectamente alineado al agujero previo.	*The tap has to be perfectly aligned with the previous hole.*
En ciclo de roscado eliminar la taladrina de la máquina.	*Do not use emulsion during the threading operation.*
Aplicar acaite INOX-CUT PLUS directamente al agujero hasta su saturación.	*Fill the prehole with INOX-CUT PLUS.*
Roscar a la velocidad de corte indicada, observando que el macho no excede la capacidad de evacuación de las virutas generadas en el proceso.	*Thread with the indicated speed and take care the chips are evacuated.*
Si es preciso, realizar la operación de roscado en más de una profundidad, eliminando el exceso de virutas.	*If necessaty, repeat the threading operation in different depths. Remove the chips.*

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/2
N

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

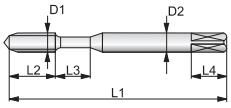
ISO 2 (6H)

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 0,8*	0,20	•	27	5	-	1,9	-	-	3	0,6	0001350442
M 1*	0,25	•	40	5,5	-	2,5	2,1	5	3	0,75	0001353881
M 1,2*	0,25	•	40	5,5	-	2,5	2,1	5	3	0,95	0000482856
M 1,4*	0,30	•	40	7	-	2,5	2,1	5	3	1,1	0000000863
M 1,6	0,35	•	40	8	-	2,5	2,1	5	3	1,25	0000000913
M 1,7	0,35	•	40	8	-	2,5	2,1	5	3	1,35	0000001002
M 1,8	0,35	•	40	8	-	2,5	2,1	5	3	1,45	0000001152
M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,6	0000001213
M 2,2	0,45	•	45	9	-	2,8	2,1	5	3	1,75	0000001373
M 2,3	0,40	•	45	9	-	2,8	2,1	5	3	1,9	0000001433
M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,05	0000001584
M 2,6	0,45	•	50	9	-	2,8	2,1	5	3	2,1	0000001644
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000001704
M 3,5	0,60	•	56	11	9	4	3	6	3	2,9	0000001865
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000001925
M 4,5	0,75	•	70	14	11	6	4,9	8	3	3,8	0000002004
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000002164
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000002215
M 7	1,00	•	80	17	13	7	5,5	8	3	6	0000002375
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000002436
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000002596

* Tol. ISO 1 (4H)

PACK PS
x100

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0002080864
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0002080924
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0002081003
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0002081163
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0002081224
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0002081374

Pack económico
Economic pack

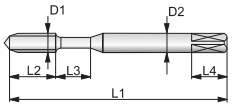
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

M

PS/2

N

M ISO-DIN 13		**B** 3,5-5 P		DIN 371	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 3 (6G)	M 1,2*	0,25	•	40	5,5	-	2,5	2,1	5	3	0,95	0001680665
	M 1,4*	0,30	•	40	7	-	2,5	2,1	5	3	1,1	0001889828
	M 1,6	0,35	•	40	8	-	2,5	2,1	5	3	1,25	0001893772
	M 1,7	0,35	•	40	8	-	2,5	2,1	5	3	1,35	0000760160
	M 1,8	0,35	•	40	8	-	2,5	2,1	5	3	1,45	0001889988
	M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,6	0000002646
	M 2,2	0,45	•	45	9	-	2,8	2,1	5	3	1,75	0001890063
	M 2,3	0,40	•	45	9	-	2,8	2,1	5	3	1,9	0000002707
	M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,05	0000002867
	M 2,6	0,45	•	50	9	-	2,8	2,1	5	3	2,1	0000002927
	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000003006
	M 3,5	0,60	•	56	11	9	4	3	6	3	2,9	0000003167
	M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000003227
	M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000003377
	M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000003438
	M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000003598
	M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000003659
7G	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000761654
	M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000762446
	M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000763237
	M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000764501
	M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000765503
	M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000766234
ISO 1 (4H) MJ	M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,6	0001137490
	M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,05	0000990909
	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000991098
	M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000991369
	M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000991420
	M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000999227
	M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000999378
	M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000999659
6H (+0,1)	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000999709
	M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000999860
	M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000991570
	M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000990207
	M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000999438
	M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000999598

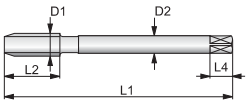
* Tol. ISO 2 (6H)

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/1

N

M ISO-DIN 13		**B** 3,5-5 P		DIN 376	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5 5 6	

ISO 2 (6H)

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,5	0000114033
M 3,5	0,60		56	11	-	2,5	2,1	5	3	2,9	0000114193
M 4	0,70		63	12	-	2,8	2,1	5	3	3,3	0000131825
M 5	0,80		70	14	-	3,5	2,7	6	3	4,2	0000114314
M 6	1,00	•	80	16	-	4,5	3,4	6	3	5	0000114464
M 8	1,25	•	90	18	-	6	4,9	8	3	6,8	0000114685
M 10	1,50	•	100	20	-	7	5,5	8	3	8,5	0000114806
M 11	1,50	•	100	20	-	8	6,2	9	3	9,5	0000114956
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000115045
M 14	2,00	•	110	25	-	11	9	12	3	12	0000115195
M 16	2,00	•	110	28	-	12	9	12	3	14	0000115256
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0000115316
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000115476
M 22	2,50	•	140	32	-	18	14,5	17	4	19,5	0000115527
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0000115687
M 27	3,00	•	160	36	-	20	16	19	4	24	0000115748
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0000115808
M 33	3,50	•	180	40	-	25	20	23	4	29,5	0000115958
M 36	4,00	•	200	45	-	28	22	25	4	32	0000116047
M 39	4,00	•	200	45	-	32	24	27	6	35	0000116108
M 42	4,50	•	200	50	-	32	24	27	6	37,5	0000116258
M 45	4,50	•	220	50	-	36	29	32	6	40,5	0000756376
M 48	5,00	•	250	60	-	36	29	32	6	43	0000756597
M 52	5,00	•	250	60	-	40	32	35	6	47	0001888826

( ) JMC Norm. sim. DIN 376

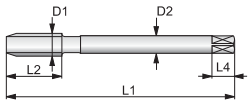
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/1

N

M ISO-DIN 13		**B** 3,5-5 P		DIN 376	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 3 (6G)	M 6	1,00		80	16	-	4,5	3,4	6	3	5	0000116318
	M 8	1,25		90	18	-	6	4,9	8	3	6,8	0000116479
	M 10	1,50		100	20	-	7	5,5	8	3	8,5	0000116539
	M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000116680
	M 14	2,00	•	110	25	-	11	9	12	3	12	0000116740
	M 16	2,00	•	110	28	-	12	9	12	3	14	0000116800
	M 18	2,50	•	125	32	-	14	11	14	4	15,5	0000116961
	M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000117040
	M 22	2,50	•	140	32	-	18	14,5	17	4	19,5	0000753701
	M 24	3,00	•	160	36	-	18	14,5	17	4	21	0001395206
7G	M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000750583
ISO 1 (4H) MJ	M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000750363
6H (+0,1)	M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000999920
	M 14	2,00	•	110	25	-	11	9	12	3	12	0001894283
	M 16	2,00	•	110	28	-	12	9	12	3	14	0001017448
	M 18	2,50	•	125	32	-	14	11	14	4	15,5	0001894403
	M 20	2,50	•	140	32	-	16	12	15	4	17,5	0001894554

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

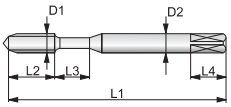
JMC

PS/2

N

Nogrip-1®

M ISO-DIN 13		B 3,5-5 P		DIN 371	HSSE Co5	ISO 2 (6H) ISO 3 (6G)	



Material	GR1		GR2		GR3		GR9	
Subg.	1,2,3,4,6		6		1,2,3		1	
mts./min.	10	15	10	15	8	13	7	12
	1 2		1 2		1 2 3 4		3 4	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 1,2*2	0,25		40	5,5	-	2,5	2,1	5	3	0,95	0001133762
	M 1,4*2	0,30		40	7	-	2,5	2,1	5	3	1,1	0001134493
	M 1,6	0,35		40	8	-	2,5	2,1	5	3	1,25	0001134975
	M 1,7	0,35		40	8	-	2,5	2,1	5	3	1,35	0001135556
	M 1,8	0,35		40	8	-	2,5	2,1	5	3	1,45	0001136980
	M 2	0,40		45	8	-	2,8	2,1	5	3	1,6	0001137551
	M 2,2	0,45		45	9	-	2,8	2,1	5	3	1,75	0001138121
	M 2,3	0,40		45	9	-	2,8	2,1	5	3	1,9	0001138613
	M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001139124
	M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,1	0001139615
	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000003709
	M 3,5	0,60		56	11	9	4	3	6	3	2,9	0000003869
	M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000003920
	M 4,5	0,75		70	14	11	6	4,9	8	3	3,8	0001141555
	M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000004009
	M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000004169
	M 7	1,00		80	17	13	7	5,5	8	3	6	0000004370
	M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000117682
	M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000004430
ISO 3 (6G)	M 1,2*2	0,25		40	5,5	-	2,5	2,1	5	3	0,95	0001890123
	M 1,4*2	0,30		40	7	-	2,5	2,1	5	3	1,1	0001893833
	M 1,6	0,35		40	8	-	2,5	2,1	5	3	1,25	0001890334
	M 1,7	0,35		40	8	-	2,5	2,1	5	3	1,35	0001890494
	M 1,8	0,35		40	8	-	2,5	2,1	5	3	1,45	0001890555
	M 2	0,40		45	8	-	2,8	2,1	5	3	1,6	0001890615
	M 2,2	0,45		45	9	-	2,8	2,1	5	3	1,75	0001890765
	M 2,3	0,40		45	9	-	2,8	2,1	5	3	1,9	0001890826
	M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001890986
	M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,1	0001891065
	M 3	0,50		56	10	8	3,5	2,7	6	3	2,5	0001650982
	M 3,5	0,60		56	11	9	4	3	6	3	2,9	0001891336
	M 4	0,70		63	12	9	4,5	3,4	6	3	3,3	0001044486
	M 5	0,80		70	14	11	6	4,9	8	3	4,2	0001145404
	M 6	1,00		80	16	14	6	4,9	8	3	5	0001377063
	M 8	1,25		90	18	17	8	6,2	9	3	6,8	0001049778
	M 10	1,50		100	20	19	10	8	11	3	8,5	0001052349

* Tol. ISO 1 (4H)
*2 Tol. ISO 2 (6H)

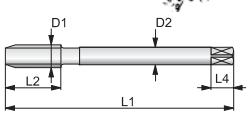
Machos de roscar a máquina. Agujeros pasantes
Machine taps. *Through holes*

PS/1

N

Nogrip-1®

M ISO-DIN 13		**B** 3,5-5 P		DIN 376	HSSE Co5	ISO 2 (6H) ISO 3 (6G)	



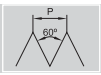
Material	GR1		GR2		GR3		GR9	
Subg.	1,2,3,4,6		6		1,2,3		1	
mts./min.	10	15	10	15	8	13	7	12
	1 2		1 2		1 2 3 4		3 4	

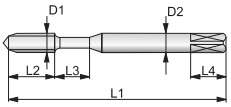
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,5	0000117100
	M 3,5	0,60		56	11	-	2,5	2,1	5	3	2,9	0000117250
	M 4	0,70		63	12	-	2,8	2,1	5	3	3,3	0000117311
	M 5	0,80		70	14	-	3,5	2,7	6	3	4,2	0000117471
	M 6	1,00		80	16	-	4,5	3,4	6	3	5	0000117531
	M 8	1,25		90	18	-	6	4,9	8	3	6,8	0000117742
	M 10	1,50		100	20	-	7	5,5	8	3	8,5	0000117803
	M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000117963
	M 14	2,00	•	110	25	-	11	9	12	3	12	0000118042
	M 16	2,00	•	110	28	-	12	9	12	3	14	0000118102
	M 18	2,50	•	125	32	-	14	11	14	4	15,5	0000118263
	M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000118313
	M 22	2,50	•	140	32	-	18	14,5	17	4	19,5	0000118473
	M 24	3,00	•	160	36	-	18	14,5	17	4	21	0001010432
	M 27	3,00	•	160	36	-	20	16	19	4	24	0001037043
	M 30	3,50	•	180	40	-	22	18	21	4	26,5	0001037103
	M 33	3,50		180	40	-	25	20	23	4	29,5	0001152204
	M 36	4,00		200	45	-	28	22	25	4	32	0001153367
	M 39	4,00		200	45	-	32	24	27	6	35	0001154209
	M 42	4,50		200	50	-	32	24	27	6	37,5	0001155151
	M 45	4,50		220	50	-	36	29	32	6	40,5	0001156093
	M 48	5,00		250	60	-	36	29	32	6	43	0001156585
	M 52	5,00		250	60	-	40	32	35	6	47	0001888986
ISO 3 (6G)	M 6	1,00		80	16	-	4,5	3,4	6	3	5	0001093675
	M 8	1,25		90	18	-	6	4,9	8	3	6,8	0001891497
	M 10	1,50		100	20	-	7	5,5	8	3	8,5	0001891557
	M 12	1,75		110	22	-	9	7	10	3	10,2	0001891617
	M 14	2,00		110	25	-	11	9	12	3	12	0001891768
	M 16	2,00		110	28	-	12	9	12	3	14	0001891828
	M 18	2,50		125	32	-	14	11	14	4	15,5	0001891988
	M 20	2,50		140	32	-	16	12	15	4	17,5	0001892067
	M 22	2,50		140	32	-	18	14,5	17	4	19,5	0001895074
	M 24	3,00		160	36	-	18	14,5	17	4	21	0001895135

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 | **N** | ***TiN***

M ISO-DIN 13		**B** 3,5-5 P		DIN 371	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	



Material	GR1	GR2	GR3	GR6	GR10	GR11
Subg.	1,2,4,5/6	1,2,3,6,7	1,2,3	3	1 2	1
mts./min.	15-20 13-18	15 20	13 18	20 25	10-15 13-17	15-25
	1 2	1 2	1 2 3 4	5 6	3 4	

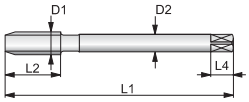
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 1,2*2	0,25		40	5,5	-	2,5	2,1	5	3	0,95	0001133823
	M 1,4*2	0,30		40	7	-	2,5	2,1	5	3	1,1	0001134544
	M 1,6	0,35		40	8	-	2,5	2,1	5	3	1,25	0001135064
	M 1,7	0,35		40	8	-	2,5	2,1	5	3	1,35	0001135606
	M 1,8	0,35		40	8	-	2,5	2,1	5	3	1,45	0001137069
	M 2	0,40		45	8	-	2,8	2,1	5	3	1,6	0000760592
	M 2,2	0,45		45	9	-	2,8	2,1	5	3	1,75	0001138282
	M 2,3	0,40		45	9	-	2,8	2,1	5	3	1,9	0001138774
	M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001139284
	M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,1	0001139776
	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000004591
	M 3,5	0,60		56	11	9	4	3	6	3	2,9	0000004651
	M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000004711
	M 4,5	0,75		70	14	11	6	4,9	8	3	3,8	0000762877
	M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000004862
	M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000004922
	M 7	1,00		80	17	13	7	5,5	8	3	6	0001142618
	M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000005001
	M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000119104
ISO 3 (6G)	M 1,2*2	0,25		40	5,5	-	2,5	2,1	5	3	0,95	0001892128
	M 1,4*2	0,30		40	7	-	2,5	2,1	5	3	1,1	0001892288
	M 1,6	0,35		40	8	-	2,5	2,1	5	3	1,25	0001892348
	M 1,7	0,35		40	8	-	2,5	2,1	5	3	1,35	0001892499
	M 1,8	0,35		40	8	-	2,5	2,1	5	3	1,45	0001892559
	M 2	0,40		45	8	-	2,8	2,1	5	3	1,6	0001892610
	M 2,2	0,45		45	9	-	2,8	2,1	5	3	1,75	0001892770
	M 2,3	0,40		45	9	-	2,8	2,1	5	3	1,9	0001892820
	M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001518921
	M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,1	0001340645
	M 3	0,50		56	10	8	3,5	2,7	6	3	2,5	0000761504
	M 3,5	0,60		56	11	9	4	3	6	3	2,9	0001002799
	M 4	0,70		63	12	9	4,5	3,4	6	3	3,3	0000762385
	M 5	0,80		70	14	11	6	4,9	8	3	4,2	0000763177
	M 6	1,00		80	16	14	6	4,9	8	3	5	0000764380
	M 8	1,25		90	18	17	8	6,2	9	3	6,8	0000765443
	M 10	1,50		100	20	19	10	8	11	3	8,5	0000766174

* Tol. ISO 1 (4H)
*2 Tol. ISO 2 (6H)

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/1 | **N** | ***TiN***

M ISO-DIN 13		**B** 3,5-5 P		DIN 376	HSSE Co5	ISO 1 (4H)MJ ISO 2 (6H) 7G ISO 3 (6G) 6H(+0,1)	



Material	GR1	GR2	GR3	GR6	GR10	GR11
Subg.	1,2,4,5/6	1,2,3,6,7	1,2,3	3	1 2	1
mts./min.	15-20 13-18	15 20	13 18	20 25	10-15 13-17	15-25
	1 2	1 2	1 2 3 4	5 6	3 4	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	$Ød_1$	Cod.
ISO 2 (6H)	(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,5	0000118534
	M 3,5	0,60		56	11	-	2,5	2,1	5	3	2,9	0000118694
	M 4	0,70		63	12	-	2,8	2,1	5	3	3,3	0000118744
	M 5	0,80		70	14	-	3,5	2,7	6	3	4,2	0000118805
	M 6	1,00		80	16	-	4,5	3,4	6	3	5	0000118965
	M 8	1,25		90	18	-	6	4,9	8	3	6,8	0000119044
	M 10	1,50		100	20	-	7	5,5	8	3	8,5	0000119265
	M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000119325
	M 14	2,00	•	110	25	-	11	9	12	3	12	0000119476
	M 16	2,00	•	110	28	-	12	9	12	3	14	0000119536
	M 18	2,50	•	125	32	-	14	11	14	4	15,5	0000119696
	M 20	2,50	•	140	32	-	16	12	15	4	17,5	0000119757
	M 22	2,50	•	140	32	-	18	14,5	17	4	19,5	0001149634
	M 24	3,00	•	160	36	-	18	14,5	17	4	21	0001150200
	M 27	3,00	•	160	36	-	20	16	19	4	24	0001150631
	M 30	3,50	•	180	40	-	22	18	21	4	26,5	0001151413
	M 33	3,50		180	40	-	25	20	23	4	29,5	0001152365
	M 36	4,00		200	45	-	28	22	25	4	32	0001153427
	M 39	4,00		200	45	-	32	24	27	6	35	0001154369
	M 42	4,50		200	50	-	32	24	27	6	37,5	0001155201
	M 45	4,50		220	50	-	36	29	32	6	40,5	0001156153
	M 48	5,00		250	60	-	36	29	32	6	43	0001156645
	M 52	5,00		250	60	-	40	32	35	6	47	0001889065
ISO 3 (6G)	M 6	1,00		80	16	-	4,5	3,4	6	3	5	0001892981
	M 8	1,25		90	18	-	6	4,9	8	3	6,8	0001002097
	M 10	1,50		100	20	-	7	5,5	8	3	8,5	0000749425
	M 12	1,75		110	22	-	9	7	10	3	10,2	0000750423
	M 14	2,00		110	25	-	11	9	12	3	12	0001098968
	M 16	2,00		110	28	-	12	9	12	3	14	0001893060
	M 18	2,50		125	32	-	14	11	14	4	15,5	0001893120
	M 20	2,50		140	32	-	16	12	15	4	17,5	0001893280
	M 22	2,50		140	32	-	18	14,5	17	4	19,5	0001889125
	M 24	3,00		160	36	-	18	14,5	17	4	21	0001889276

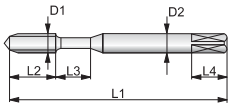
( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Corte a izquierda. Agujeros pasantes
Machine taps. Left hand cut. Through holes

JMC

PS/2 LH N

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)

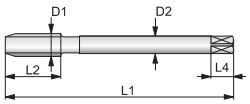


Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z LH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0001889336
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0001592662
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0001592723
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000764230
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0001569784
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0001592873

PS/1 LH N

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE Co5	ISO 2 (6H)



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z LH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000750212
M 14	2,00	•	110	25	-	11	9	12	3	12	0001889497
M 16	2,00	•	110	28	-	12	9	12	3	14	0000751917
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0001889557
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0000754211
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0001889617

Machos de roscar a máquina / *Machine taps*

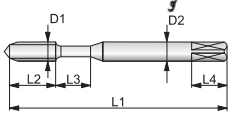
Para roscado sincronizado. Agujeros pasantes / *For rigid tapping. Through holes*

PS/2

TRUNC

Nogrip-1®

M ISO-DIN 13		**B** 3,5-5 P		DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1	GR2	GR3	GR8	GR9	GR10
Subg.	1,2,3,4,6	6	1,2,3	1	1	1
mts./min.	8 13	8 13	5 8	3 6	7 12	
	1 2	1 2	1 2 3 4	3 4	3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,2*	0,25		40	5,5	-	2,5	2,1	5	3	0,95	0001134112
M 1,4*	0,30		40	7	-	2,5	2,1	5	3	1,10	0001134764
M 1,6	0,35		40	8	-	2,5	2,1	5	3	1,25	0001135275
M 1,7	0,35		40	8	-	2,5	2,1	5	3	1,35	0001135827
M 1,8	0,35		40	8	-	2,5	2,1	5	3	1,45	0001137289
M 2	0,40		45	8	-	2,8	2,1	5	3	1,60	0001137761
M 2,2	0,45		45	9	-	2,8	2,1	5	3	1,75	0001138492
M 2,3	0,40		45	9	-	2,8	2,1	5	3	1,90	0001138984
M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001139405
M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,10	0001139987
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0001140282
M 3,5	0,60		56	11	9	4	3	6	3	2,90	0001140613
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0001141344
M 4,5	0,75		70	14	11	6	4,9	8	3	3,80	0001141776
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0001142075
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0001142347
M 7	1,00		80	17	13	7	5,5	8	3	6,00	0001142838
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0001142999
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0001143770

* Tol. 4H

Machos de roscar a máquina / *Machine taps*

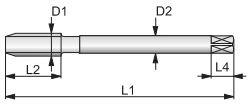
Para roscado sincronizado. Agujeros pasantes / *For rigid tapping. Through holes*

PS/1

TRUNC

Nogrip-1®

M ISO-DIN 13		**B** 3,5-5 P		DIN 376	HSSE Co5	ISO 2 (6H)	



Material	GR1		GR2		GR3		GR8		GR9		GR10
Subg.	1,2,3,4,6		6		1,2,3		1		1		1
mts./min.	8	13	8	13	5	8	3	6	7	12	
	1 2		1 2		1 2 3 4		3 4		3 4		

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,50	0001144341
M 3,5	0,60		56	11	-	2,5	2,1	5	3	2,90	0001144622
M 4	0,70		63	12	-	2,8	2,1	5	3	3,30	0001144993
M 5	0,80		70	14	-	3,5	2,7	6	3	4,20	0001145293
M 6	1,00		80	16	-	4,5	3,4	6	3	5,00	0001145625
M 8	1,25		90	18	-	6	4,9	8	3	6,80	0001146566
M 10	1,50		100	20	-	7	5,5	8	3	8,50	0001147900
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0001148350
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0001148621
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0001148903
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0001149202
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0001149413
M 22	2,50		140	32	-	18	14,5	17	4	19,50	0001149844
M 24	3,00		160	36	-	18	14,5	17	4	21,00	0001150411
M 27	3,00		160	36	-	20	16	19	4	24,00	0001151202
M 30	3,50		180	40	-	22	18	21	4	26,50	0001151634
M 33	3,50		180	40	-	25	20	23	4	29,50	0001152576
M 36	4,00		200	45	-	28	22	25	4	32,00	0001153638
M 39	4,00		200	45	-	32	24	27	6	35,00	0001154570
M 42	4,50		200	50	-	32	24	27	6	37,50	0001155422
M 45	4,50		220	50	-	36	29	32	6	40,50	0001156364
M 48	5,00		250	60	-	36	29	32	6	43,00	0001156856
M 52	5,00		250	60	-	40	32	35	6	47,00	0001904325

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina / *Machine taps*

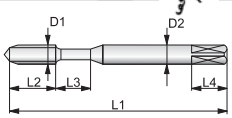
Para roscado sincronizado. Agujeros pasantes / *For rigid tapping. Through holes*

PS/2

TRUNC

LubePlus

M ISO-DIN 13		**B** 3,5-5 P		DIN 371	HSSE Co5	ISO 2 (6H)	



Material	GR1		GR2		GR3		GR6		GR8	
Subg.	1,2,3,4,5,6		6,7,8		1,2,3		3		1	
mts./min.	13-8	11-14	13-8	11-14	10	13	15	25	8	11
	1 2		1 2		1 2 3 4		5 6		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,2*	0,25		40	5,5	-	2,5	2,1	5	3	0,95	0001902963
M 1,4*	0,30		40	7	-	2,5	2,1	5	3	1,10	0001903041
M 1,6	0,35		40	8	-	2,5	2,1	5	3	1,25	0001903102
M 1,7	0,35		40	8	-	2,5	2,1	5	3	1,35	0001905698
M 1,8	0,35		40	8	-	2,5	2,1	5	3	1,45	0001906972
M 2	0,40		45	8	-	2,8	2,1	5	3	1,60	0001903473
M 2,2	0,45		45	9	-	2,8	2,1	5	3	1,75	0001903533
M 2,3	0,40		45	9	-	2,8	2,1	5	3	1,90	0001903694
M 2,5	0,45		50	9	-	2,8	2,1	5	3	2,05	0001553270
M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,10	0001903754
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0001477992
M 3,5	0,60		56	11	9	4	3	6	3	2,90	0001905759
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0001478071
M 4,5	0,75		70	14	11	6	4,9	8	3	3,80	0001903754
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0001478132
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0001646274
M 7	1,00		80	17	13	7	5,5	8	3	6,00	0001905548
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0001904054
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0001904104

* Tol. 4H

Machos de roscar a máquina / *Machine taps*

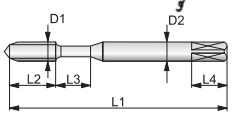
Para roscado sincronizado. Agujeros pasantes / *For rigid tapping. Through holes*

PS/1

TRUNC

LubePlus

M ISO-DIN 13		**B** 3,5-5 P		DIN 371	HSSE Co5	ISO 2 (6H)	



Material	GR1		GR2		GR3		GR6		GR8	
Subg.	1,2,3,4,5,6		6,7,8		1,2,3		3		1	
mts./min.	13-8	11-14	13-8	11-14	10	13	15	25	8	11
	1 2		1 2		1 2 3 4		5 6		3 4	

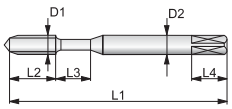
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,50	0001904696
M 3,5	0,60		56	11	-	2,5	2,1	5	3	2,90	0001904756
M 4	0,70		63	12	-	2,8	2,1	5	3	3,30	0001904817
M 5	0,80		70	14	-	3,5	2,7	6	3	4,20	0001905056
M 6	1,00		80	16	-	4,5	3,4	6	3	5,00	0001905116
M 8	1,25		90	18	-	6	4,9	8	3	6,80	0001905327
M 10	1,50		100	20	-	7	5,5	8	3	8,50	0001905979
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0001906058
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0001906119
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0001906269
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0001906329
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0001629807
M 22	2,50		140	32	-	18	14,5	17	4	19,50	0001906540
M 24	3,00		160	36	-	18	14,5	17	4	21,00	0001906601
M 27	3,00		160	36	-	20	16	19	4	24,00	0001906751
M 30	3,50		180	40	-	22	18	21	4	26,50	0001906811
M 33	3,50		180	40	-	25	20	23	4	29,50	0001907051
M 36	4,00		200	45	-	28	22	25	4	32,00	0001907111
M 39	4,00		200	45	-	32	24	27	6	35,00	0001907271
M 42	4,50		200	50	-	32	24	27	6	37,50	0001907322
M 45	4,50		220	50	-	36	29	32	6	40,50	0001907482
M 48	5,00		250	60	-	36	29	32	6	43,00	0001907542
M 52	5,00		250	60	-	40	32	35	6	47,00	0001904536

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 VAF Nogrip-1®

M ISO-DIN 13 | **B** 3,5-5 P | DIN 371 | HSSE Co5 | ISO 2 (6H)



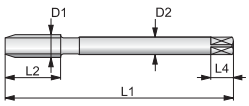
Material	GR1	GR2	GR3	GR4
Subg.	5	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	8 13	5 10	15 20
	1 2	1 2	1 2 3 4	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,2*	0,25	•	40	5,5	-	2,5	2,1	5	3	0,95	0001896779
M 1,4*	0,30	•	40	7	-	2,5	2,1	5	3	1,10	0001896830
M 1,6	0,35	•	40	8	-	2,5	2,1	5	3	1,25	0001896990
M 1,7	0,35	•	40	8	-	2,5	2,1	5	3	1,35	0001897079
M 1,8	0,35	•	40	8	-	2,5	2,1	5	3	1,45	0001897139
M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,60	0000452320
M 2,2	0,45	•	45	9	-	2,8	2,1	5	3	1,75	0001589931
M 2,3	0,40	•	45	9	-	2,8	2,1	5	3	1,90	0001897290
M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,05	0000452751
M 2,6	0,45	•	50	9	-	2,8	2,1	5	3	2,10	0000453101
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0000005864
M 3,5	0,60	•	56	11	9	4	3	6	3	2,90	0001140984
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0000005924
M 4,5	0,75		70	14	11	6	4,9	8	3	3,80	0001573798
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0000006013
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0000006164
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0000006224
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0000006384

* Tol. (4H)

PS/1 VAF Nogrip-1®

M ISO-DIN 13 | **B** 3,5-5 P | DIN 376 | HSSE Co5 | ISO 2 (6H)



Material	GR1	GR2	GR3	GR4
Subg.	5	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	8 13	5 10	15 20
	1 2	1 2	1 2 3 4	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,50	0000413209
M 4	0,70		63	12	-	2,8	2,1	5	3	3,30	0000120694
M 5	0,80		70	14	-	3,5	2,7	6	3	4,20	0000131765
M 6	1,00		80	16	-	4,5	3,4	6	3	5,00	0000120805
M 8	1,25	•	90	18	-	6	4,9	8	3	6,80	0000120965
M 10	1,50	•	100	20	-	7	5,5	8	3	8,50	0000121044
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0000121104
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0000121265
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0000121325
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0000121476
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0000121536
M 22	2,50	•	140	32	-	18	14,5	17	4	19,50	0000449538
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0000449960
M 27	3,00	•	160	36	-	20	16	19	4	24,00	0001150842
M 30	3,50	•	180	40	-	22	18	21	4	26,50	0001151905
M 33	3,50	•	180	40	-	25	20	23	4	29,50	0001152847
M 36	4,00	•	200	45	-	28	22	25	4	32,00	0001153909
M 39	4,00	•	200	45	-	32	24	27	6	35,00	0001154851
M 42	4,50	•	200	50	-	32	24	27	6	37,50	0001155793

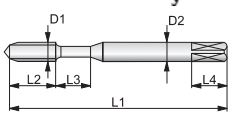
( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/2
VAF
TiCN

M ISO-DIN 13 | **B** 3,5-5 P | DIN 371 | HSSE Co5 | ISO 2 (6H)



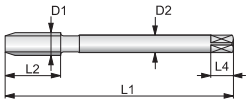
Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	8	13	5	10	15	20
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 1,2*	0,25	•	40	5,5	-	2,5	2,1	5	3	0,95	0001897992
M 1,4*	0,30	•	40	7	-	2,5	2,1	5	3	1,10	0001898071
M 1,6	0,35	•	40	8	-	2,5	2,1	5	3	1,25	0001898131
M 1,7	0,35	•	40	8	-	2,5	2,1	5	3	1,35	0001898292
M 1,8	0,35	•	40	8	-	2,5	2,1	5	3	1,45	0001898352
M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,60	0000452530
M 2,2	0,45	•	45	9	-	2,8	2,1	5	3	1,75	0001693198
M 2,3	0,40	•	45	9	-	2,8	2,1	5	3	1,90	0001898403
M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,05	0000452962
M 2,6	0,45	•	50	9	-	2,8	2,1	5	3	2,10	0000453472
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0000007015
M 3,5	0,60	•	56	11	9	4	3	6	3	2,90	0001141124
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0000007166
M 4,5	0,75		70	14	11	6	4,9	8	3	3,80	0001696316
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0000007226
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0000007387
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0000007447
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0000007507

* Tol. (4H)

PS/1
VAF
TiCN

M ISO-DIN 13 | **B** 3,5-5 P | DIN 376 | HSSE Co5 | ISO 2 (6H)



Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	8	13	5	10	15	20
	1 2		1 2		1 2 3 4		6	

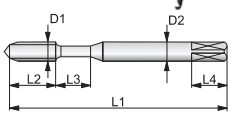
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 3)	0,50		56	10	-	2,2	1,8	4	3	2,50	0000413570
M 4	0,70		63	12	-	2,8	2,1	5	3	3,30	0000445469
M 5	0,80		70	14	-	3,5	2,7	6	3	4,20	0000445689
M 6	1,00		80	16	-	4,5	3,4	6	3	5,00	0000446250
M 8	1,25	•	90	18	-	6	4,9	8	3	6,80	0000122327
M 10	1,50	•	100	20	-	7	5,5	8	3	8,50	0000122488
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0000122538
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0000122699
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0000122759
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0000122819
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0000122960
M 22	2,50	•	140	32	-	18	14,5	17	4	19,50	0000449809
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0000450255
M 27	3,00	•	160	36	-	20	16	19	4	24,00	0001151081
M 30	3,50	•	180	40	-	22	18	21	4	26,50	0001152144
M 33	3,50		180	40	-	25	20	23	4	29,50	0001153086
M 36	4,00		200	45	-	28	22	25	4	32,00	0001154149
M 39	4,00		200	45	-	32	24	27	6	35,00	0001155091
M 42	4,50		200	50	-	32	24	27	6	37,50	0001155914

( ) JMC Norm. sim. DIN 376

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 ZM

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)

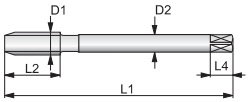


Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0001438239
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0003786399
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0003785025
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0003785186
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0003785236
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0003786459

PS/1 ZM

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE Co5	ISO 2 (6H)



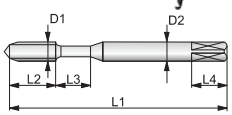
Material	GR1
Subg.	1,2,3
mts./min.	8 / 13
	1 2

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0003786248
M 14	2,00	•	110	25	-	11	9	12	3	12	0003785397
M 16	2,00	•	110	28	-	12	9	12	3	14	0003785457
M 18	2,50	•	125	32	-	14	11	14	3	15,5	0003785517
M 20	2,50	•	140	32	-	16	12	15	3	17,5	0003785668

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 ZM Nogrip-1®

M ISO-DIN 13 | **B** 3,5-5 P | DIN 371 | **HSSE** Co5 | ISO 2 (6H)

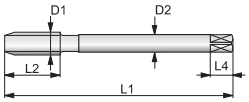


Material	GR1
Subg.	1,2,3
mts./min.	8 / 13

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0003194308
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0003194468
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0003194528
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0001833070
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0002436227
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0003194689

PS/1 ZM Nogrip-1®

M ISO-DIN 13 | **B** 3,5-5 P | DIN 376 | **HSSE** Co5 | ISO 2 (6H)



Material	GR1
Subg.	1,2,3
mts./min.	8 / 13

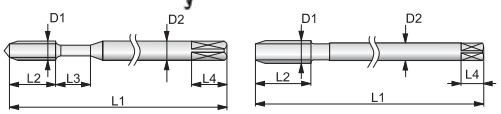
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0001337000
M 14	2,00	•	110	25	-	11	9	12	3	12	0003194739
M 16	2,00	•	110	28	-	12	9	12	3	14	0002175933
M 18	2,50	•	125	32	-	14	11	14	3	15,5	0003194890
M 20	2,50	•	140	32	-	16	12	15	3	17,5	0002436006

Machos de roscar a máquina. Con mango extralargo. Agujeros pasantes
Machine taps. With extra long shank. Through holes.

JMC

TN-PS
ZM

M ISO-DIN 13 | **B** 3,5-5 P | ≈DIN 371 M6 | ≈DIN 376 M8 | HSSE Co5 | ISO 2 (6H)

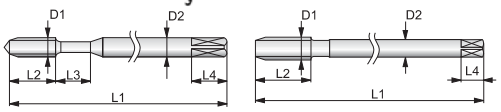


Material	GR1
Subg.	1,2,3
mts./min.	8 / 13

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	100	11	8	3,5	2,7	6	3	2,5	0001742131
M 4	0,70	•	120	13	9	4,5	3,4	6	3	3,3	0001742281
M 5	0,80	•	140	15	11	6	4,9	8	3	4,2	0001742342
M 6	1,00	•	160	17	14	6	4,9	8	3	5	0001742402
M 8	1,25	•	180	20	-	6	4,9	9	3	6,8	0001742562
M 10	1,50	•	200	22	-	7	5,5	8	3	8,5	0001742623
M 12	1,75	•	224	24	-	9	7	10	3	10,2	0001742773
M 14	2,00	•	224	26	-	11	9	12	3	12	0001911547
M 16	2,00	•	224	27	-	12	9	12	3	14	0001911607
M 18	2,50	•	250	30	-	14	11	14	3	15,5	0001911768
M 20	2,50	•	280	32	-	16	12	15	3	17,5	0004036028
M 22	2,50	•	250	32	-	18	14,5	17	4	19,5	0001911978
M 24	3,00	•	250	36	-	18	14,5	17	4	21	0001912067

TN-PS
ZM
Nogrip-1®

M ISO-DIN 13 | **B** 3,5-5 P | ≈DIN 371 M6 | ≈DIN 376 M8 | HSSE Co5 | ISO 2 (6H)



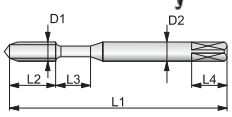
Material	GR1
Subg.	1,2,3
mts./min.	8 / 13

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	100	11	8	3,5	2,7	6	3	2,5	0003434215
M 4	0,70	•	120	13	9	4,5	3,4	6	3	3,3	0003434366
M 5	0,80	•	140	15	11	6	4,9	8	3	4,2	0003434426
M 6	1,00	•	160	17	14	6	4,9	8	3	5	0003434586
M 8	1,25	•	180	20	17	6	4,9	9	3	6,8	0003434647
M 10	1,50	•	200	22	-	7	5,5	8	3	8,5	0002775386
M 12	1,75	•	224	24	-	9	7	10	3	10,2	0003434797
M 14	2,00	•	224	26	-	11	9	12	3	12	0003435097
M 16	2,00	•	224	27	-	12	9	12	3	14	0003434858
M 18	2,50	•	250	30	-	14	11	14	3	15,5	0003434918
M 20	2,50	•	280	32	-	16	12	15	3	17,5	0003435218
M 22	2,50	•	250	32	-	18	14,5	17	4	19,5	0003435368
M 24	3,00	•	250	36	-	18	14,5	17	4	21	0003435428

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 AL

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)

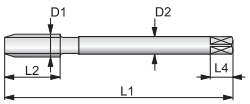


Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0003784886
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0001431434
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0001438500
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0001438721
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0001438932
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0001439021

PS/1 AL

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE Co5	ISO 2 (6H)



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0001401278
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0001472128
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0001472349
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0001649773
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0001917079

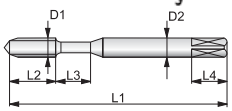
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2

AL

CromPlus

M ISO-DIN 13 | **B** 3,5-5 P | DIN 371 | HSSE Co5 | ISO 2 (6H)



Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30
	5 6		1 2	

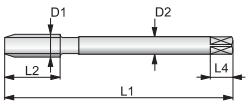
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0001690182
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0001815691
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0001789320
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0001815751
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0001815811
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0001815962

PS/1

AL

CromPlus

M ISO-DIN 13 | **B** 3,5-5 P | DIN 376 | HSSE Co5 | ISO 2 (6H)



Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30
	5 6		1 2	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0001789531
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0001916779
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0001916830
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0001916980
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0001917280

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

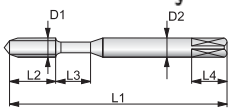
JMC

PS/2

AL

Altplus

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)



Material	GR5	GR6		GR11
Subg.	1	1,2	3	1,2
mts./min.	12 17	20-25	17-23	17 22
	5 6	5 6		6

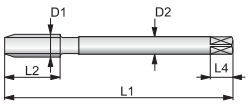
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0001438390
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0001438440
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0001438661
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0001438871
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0001436216
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0001366685

PS/1

AL

Altplus

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE Co5	ISO 2 (6H)



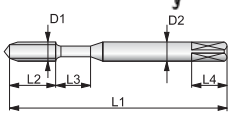
Material	GR5	GR6		GR11
Subg.	1	1,2	3	1,2
mts./min.	12 17	20-25	17-23	17 22
	5 6	5 6		6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0001443728
M 14	2,00	•	110	25	-	11	9	12	3	12,00	0001472068
M 16	2,00	•	110	28	-	12	9	12	3	14,00	0001472288
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0001649834
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0001917129

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 AL-AZ

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)

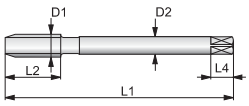


Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	7	12	15-20	12-17	12	17
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0000029960
M 3,5	0,60	•	56	11	9	4	3	6	3	2,9	0000030044
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0000030105
M 4,5	0,75	•	70	14	11	6	4,9	8	3	3,8	0000030265
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0000030315
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0000030476
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0000030536
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0000030696

PS/1 AL-AZ

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE Co5	ISO 2 (6H)



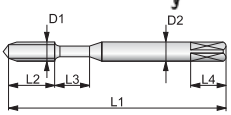
Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	7	12	15-20	12-17	12	17
	5 6		5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 4	0,70	•	63	12	-	2,8	2,1	5	3	3,3	0000119807
M 5	0,80	•	70	14	-	3,5	2,7	6	3	4,2	0000119967
M 6	1,00	•	80	16	-	4,5	3,4	6	3	5	0000120042
M 8	1,25	•	90	18	-	6	4,9	8	3	6,8	0000120102
M 10	1,50	•	100	20	-	7	5,5	8	3	8,5	0000120263
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0000120323
M 14	2,00	•	110	25	-	11	9	12	3	12	0000120473
M 16	2,00	•	110	28	-	12	9	12	3	14	0000120534

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2
AL-AZ
Cromplus

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)

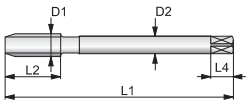


Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0001917400
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0001917551
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0001917771
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0001917832
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0001775514
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0001775674

PS/1
AL-AZ
Cromplus

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE Co5	ISO 2 (6H)



Material	GR5		GR6	
Subg.	1		1,2	3
mts./min.	15	20	25	30

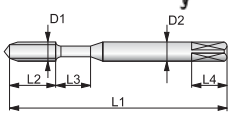
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0001917982
M 14	2,00	•	110	25	-	11	9	12	3	12	0001918071
M 16	2,00	•	110	28	-	12	9	12	3	14	0001918131

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/2
AL-AZ
Altplus

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE Co5	ISO 2 (6H)

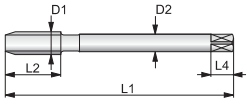


Material	GR5	GR6		GR11	
Subg.	1	1,2	3	1,2	
mts./min.	12	17	20-25	17-23	17	22
	5 6	5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0001918282
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0001918342
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0001918403
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0001918563
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0001918613
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0001918774

PS/1
AL-AZ
Altplus

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE Co5	ISO 2 (6H)



Material	GR5	GR6		GR11	
Subg.	1	1,2	3	1,2	
mts./min.	12	17	20-25	17-23	17	22
	5 6	5 6		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0001918834
M 14	2,00	•	110	25	-	11	9	12	3	12	0001918994
M 16	2,00	•	110	28	-	12	9	12	3	14	0001919073

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

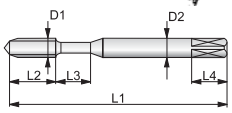
Agujeros pasantes / *Through holes.*

JMC

PS/2

M ISO-DIN 13 | **B** 3,5-5 P | DIN 371 | HSSE PM | ISO 2 6H

produr Nogrip-1®



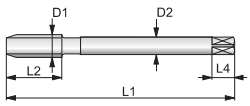
Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0004065282
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0004065332
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0004065492
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0004065553
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0004065613
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0004065764

PS/1

M ISO-DIN 13 | **B** 3,5-5 P | DIN 376 | HSSE PM | ISO 2 6H

produr Nogrip-1®



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0004065824
M 14	2,00	•	110	25	-	11	9	12	4	12	0004066284
M 16	2,00	•	110	28	-	12	9	12	4	14	0004066344
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0004192948
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0004193027
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0004193187
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0004193248

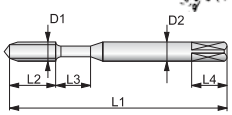
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2

M ISO-DIN 13 | **B** 3,5-5 P | DIN 371 | HSSE PM | ISO 2 6H

produr AltPlus



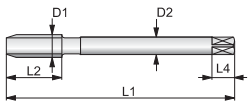
Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,5	0003105215
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,3	0003105587
M 5	0,80	•	70	14	11	6	4,9	8	3	4,2	0003105868
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0003106157
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0003106438
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0003106700

PS/1

M ISO-DIN 13 | **B** 3,5-5 P | DIN 376 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0003104916
M 14	2,00	•	110	25	-	11	9	12	4	12	0003104645
M 16	2,00	•	110	28	-	12	9	12	4	14	0003104374
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0003104092
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0003103703
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0003103211
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0003103422

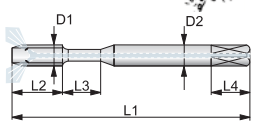
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2 KL

M ISO-DIN 13 | **B** 3,5-5 P | KL | DIN 371 | HSSE PM | ISO 2 6H

produr AltPlus



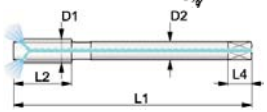
Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	16	14	6	4,9	8	3	5	0003229488
M 8	1,25	•	90	18	17	8	6,2	9	3	6,8	0003229608
M 10	1,50	•	100	20	19	10	8	11	3	8,5	0003229819

PS/1 KL

M ISO-DIN 13 | **B** 3,5-5 P | KL | DIN 376 | HSSE PM | ISO 2 6H

produr AltPlus



Material	GR1	GR2	GR3
Subg.	5	1,2,3,4,5,7,8	1,4
mts./min.	25	20 | 12 | 3	10 | 8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,2	0003230054
M 14	2,00	•	110	25	-	11	9	12	4	12	0003230265
M 16	2,00	•	110	28	-	12	9	12	4	14	0003230485
M 18	2,50	•	125	32	-	14	11	14	4	15,5	0003230606
M 20	2,50	•	140	32	-	16	12	15	4	17,5	0003230817
M 24	3,00	•	160	36	-	18	14,5	17	4	21	0003231056
M 30	3,50	•	180	40	-	22	18	21	4	26,5	0003231277

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

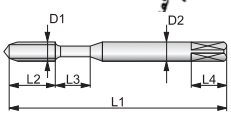
Agujeros pasantes / *Through holes.*

JMC

PS/2

prospeed
Nogrip-1®

M ISO-DIN 13	viruta larga *long chip*	B 3,5-5 P	DIN 371	HSSE PM	ISO 2 6H



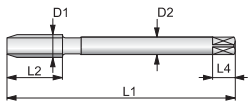
Material	GR1	GR2	GR3	GR8	GR9
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2	1
mts./min.	25	25	10 8	25	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0004025430
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0004025590
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0004026221
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0004025650
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0004025701
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0004025861

PS/1

prospeed
Nogrip-1®

M ISO-DIN 13	viruta larga *long chip*	B 3,5-5 P	DIN 376	HSSE PM	ISO 2 6H



Material	GR1	GR2	GR3	GR8	GR9
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2	1
mts./min.	25	25	10 8	25	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0004025921
M 14	2,00	•	110	25	-	11	9	12	4	12,00	0004066495
M 16	2,00	•	110	28	-	12	9	12	4	14,00	0004026161
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0004193398
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0004026000
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0004193458
M 30	3,50	•	180	40	-	22	18	21	4	26,50	0004193519

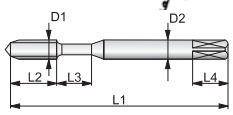
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2

M ISO-DIN 13 | viruta larga *long chip* | **B** 3,5-5 P | DIN 371 | HSSE PM | ISO 2 6H

prospeed LubePlus



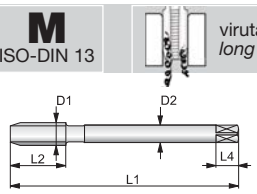
Material	GR1	GR2	GR3		GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3		2
mts./min.	25	25	10	8	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0003099945
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0003100204
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0003100575
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0002868661
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0003100917
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0003081427

PS/1

M ISO-DIN 13 | viruta larga *long chip* | **B** 3,5-5 P | DIN 376 | HSSE PM | ISO 2 6H

prospeed LubePlus



Material	GR1	GR2	GR3		GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3		2
mts./min.	25	25	10	8	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0002823115
M 14	2,00	•	110	25	-	11	9	12	4	12,00	0003101427
M 16	2,00	•	110	28	-	12	9	12	4	14,00	0003101798
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0003102098
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0003102369
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0003102640
M 30	3,50	•	180	40	-	22	18	21	4	26,50	0003102911

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

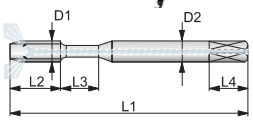
Agujeros pasantes / *Through holes.*

JMC

PS/2 KL

prospeed
LubePlus

M ISO-DIN 13	viruta larga *long chip*	B 3,5-5 P	KL	DIN 371	HSSE PM	ISO 2 6H



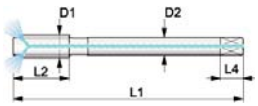
Material	GR1	GR2	GR3	GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2
mts./min.	25	25	10 / 8	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0003220317
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0003220527
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0003076571

PS/1 KL

prospeed
LubePlus

M ISO-DIN 13	viruta larga *long chip*	B 3,5-5 P	KL	DIN 376	HSSE PM	ISO 2 6H



Material	GR1	GR2	GR3	GR8
Subg.	2,3,4,5,6	1,6,7,8	1,2,3	2
mts./min.	25	25	10 / 8	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0003220748
M 14	2,00	•	110	25	-	11	9	12	4	12,00	0003220959
M 16	2,00	•	110	28	-	12	9	12	4	14,00	0003221198
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0003221319
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0003226471
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0003226752
M 30	3,50	•	180	40	-	22	18	21	4	26,50	0003226963

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

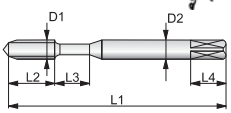
Agujeros pasantes / *Through holes.*

JMC

PS/2

prosoft
LubePlus

M	B		DIN	HSSE	ISO 2	
ISO-DIN 13	3,5-5 P		371	PM	6H	60° P



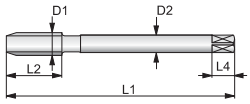
Material	GR1
Subg.	1
mts./min.	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0003140970
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0003141269
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0003141540
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0003141972
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0003142322
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0003142603

PS/1

prosoft
LubePlus

M	B		DIN	HSSE	ISO 2	
ISO-DIN 13	3,5-5 P		376	PM	6H	60° P



Material	GR1
Subg.	1
mts./min.	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0003142974
M 14	2,00	•	110	25	-	11	9	12	4	12,00	0003143274
M 16	2,00	•	110	28	-	12	9	12	4	14,00	0003143545
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0003143816
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0003144116
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0003144487
M 30	3,50	•	180	32	-	22	18	21	4	26,50	0003137757

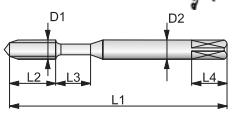
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2

prosoft
CromPlus

M ISO-DIN 13	B 3,5-5 P	DIN 371	HSSE PM	ISO 2 6H



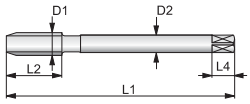
Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0003141058
M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0003141320
M 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0003141601
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0003142051
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0003142482
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0003142753

PS/1

prosoft
CromPlus

M ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE PM	ISO 2 6H



Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0003143053
M 14	2,00	•	110	25	-	11	9	12	4	12,00	0003143334
M 16	2,00	•	110	28	-	12	9	12	4	14,00	0003143605
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0003143976
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0003144276
M 24	3,00	•	160	36	-	18	14,5	17	4	21,00	0003144547
M 30	3,50	•	180	32	-	22	18	21	4	26,50	0003137817

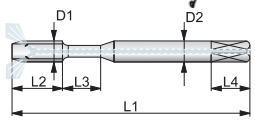
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/2 KL

prosoft
LubePlus

M ISO-DIN 13	B 3,5-5 P	KL	DIN 371	HSSE PM	ISO 2 6H



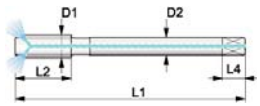
Material	GR1
Subg.	1
mts./min.	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0003233482
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0003233603
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0003233824

PS/1 KL

prosoft
LubePlus

M ISO-DIN 13	B 3,5-5 P	KL	DIN 376	HSSE PM	ISO 2 6H



Material	GR1
Subg.	1
mts./min.	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0003234063
M 14	2,00	•	110	25	-	11	9	12	4	12,00	0003234274
M 16	2,00	•	110	28	-	12	9	12	4	14,00	0003234545
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0003234766
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0003234976

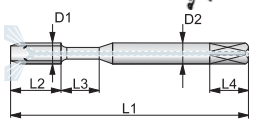
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/2 KL

prosoft
CromPlus

M ISO-DIN 13	B 3,5-5 P	KL	DIN 371	HSSE PM	ISO 2 6H



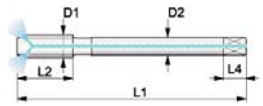
Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0003233543
M 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0003233763
M 10	1,50	•	100	20	19	10	8	11	3	8,50	0003233974

PS/1 KL

prosoft
CromPlus

M ISO-DIN 13	B 3,5-5 P	KL	DIN 376	HSSE PM	ISO 2 6H



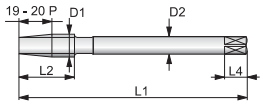
Material	GR5	GR6	
Subg.	2	1,2,3	
mts./min.	25	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 12	1,75	•	110	22	-	9	7	10	3	10,20	0003234113
M 14	2,00	•	110	25	-	11	9	12	4	12,00	0003234494
M 16	2,00	•	110	28	-	12	9	12	4	14,00	0003234605
M 18	2,50	•	125	32	-	14	11	14	4	15,50	0003234826
M 20	2,50	•	140	32	-	16	12	15	4	17,50	0003235065

Machos de roscar a máquina. Para tuercas. Agujeros pasantes
Machine taps. For nuts. Through holes

JMC

TN / XL / N	M ISO-DIN 13	2° 19-20 P	DIN 357	HSS	ISO 2 (6H)



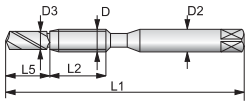
Material	GR1		GR4		GR5	GR6	
Subg.	1,2,3,4,5		2,4		1,2	2,3	
mts./min.	15-20	10-15	12	17	6-9	20	25
	1 2		6		6	5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
(M 2)	0,40		70	14	-	1,4	-	-	3	1,6	0000489591
(M 2,5)	0,45		70	22	-	1,8	-	-	3	2,05	0000489702
M 3	0,50	•	70	22	-	2,2	-	-	3	2,5	0000128823
M 3,5	0,60		80	25	-	2,5	2,1	5	3	2,9	0000128973
M 4	0,70	•	90	25	-	2,8	2,1	5	3	3,3	0000129062
M 5	0,80	•	100	28	-	3,5	2,7	6	3	4,2	0000129123
M 6	1,00	•	110	32	-	4,5	3,4	6	3	5	0000129273
M 7	1,00		110	36	-	5,5	4,3	7	3	6	0000129333
M 8	1,25	•	125	40	-	6	4,9	8	3	6,8	0000129494
M 9	1,25		140	40	-	7	5,5	8	3	7,8	0000492001
M 10	1,50	•	140	45	-	7	5,5	8	3	8,5	0000129554
M 12	1,75	•	180	50	-	9	7	10	3	10,2	0000129605
M 14	2,00	•	200	56	-	11	9	12	3	12	0000129765
M 16	2,00	•	200	63	-	12	9	12	3	14	0000129825
M 18	2,50		220	63	-	14	11	14	3	15,5	0000129986
M 20	2,50		250	70	-	16	12	15	4	17,5	0000130060

( ) JMC Norm. sim. DIN 357

Machos de roscar a máquina. Macho-Broca combi. Agujeros pasantes
Machine taps. Drill-Tap Combi. Through holes

MACHO-BROCA COMBI / N	M ISO-DIN 13	C 2-3 P	R35°	Norm./STD JMC	HSSE Co5	ISO 2 (6H)



Material	GR1		GR5	GR6		GR10	GR11
Subg.	1,2,3,4,5		1,2	1,2	3	1,2	1
mts./min.	8	13	6-9	10	15	6-9	6-9
	1 2		6	5 5 6			

D1	P		L1	L2	L5	D2	a	D3	Z RH	Z	Cod.
M 3	0,50	•	62	12,5	9	3,5	2,7	2,55	2	2	0000549975
M 4	0,70	•	66	16	10	4,5	3,4	3,36	2	2	0000550060
M 5	0,80	•	75,5	18	12,5	6	4,9	4,26	2	2	0000550110
M 6	1,00	•	81	20	14	6	4,9	5,05	2	2	0000550331
M 8	1,25	•	91	14	20	6	4,9	6,8	4	2	0000550491
M 10	1,50	•	105	18	25	7	5,5	8,55	4	2	0000550602
M 12	1,75	•	118	20	28	9	7	10,3	4	2	0000550762

Nota. El avance ha de corresponder al 100% del paso de rosca.
Recomendable para máquinas CNC.

Note. The feed must be 100% of the thread pitch.
Recomended for CNC machines.

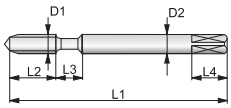
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C10/2

proni

MJ DIN-ISO 5855-1	1,5xD	C 2-3 P	R10º	DIN 371	HSSE PM	4H



Material	GR8
Subg.	3
mts./min.	2
	2 3

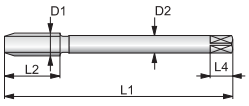
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 3	0,50	•	56	10	5	3,5	2,7	6	3	2,5	0004194451
MJ 4	0,70	•	63	12	5	4,5	3,4	6	3	3,3	0004194511
MJ 5	0,80	•	70	14	5	6	4,9	8	3	4,2	0004194671
MJ 6	1,00	•	80	16	8	6	4,9	8	3	5	0004194732
MJ 8	1,25	•	90	20	11	8	6,2	9	3	6,8	0004194882
MJ 10	1,50	•	100	25	13	10	8	11	3	8,5	0004194943

Macho con tolerancia ajustada para el roscado de aleaciones de Niquel.
Tap with adjusted tolerance for machining Nickel alloys.

C10/1

proni

MJ DIN-ISO 5855-1	1,5xD	C 2-3 P	R10º	DIN 376	HSSE PM	4H



Material	GR8
Subg.	3
mts./min.	2
	2 3

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 12	1,75	•	110	30	15	9	7	10	4	10,2	0004195021

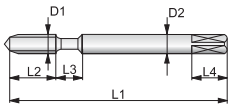
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

MJ DIN-ISO 5855-1 | 2xD | **C** 2-3 P | R15º | DIN 371 | HSSE PM | 4H

proti



Material	GR9
Subg.	2
mts./min.	4

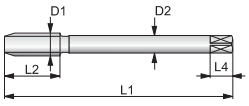
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 3	0,50	•	56	10	5	3,5	2,7	6	3	2,5	0003805728
MJ 4	0,70	•	63	12	5	4,5	3,4	6	3	3,3	0003805878
MJ 5	0,80	•	70	14	5	6	4,9	8	3	4,2	0003805939
MJ 6	1,00	•	80	16	8	6	4,9	8	3	5	0003774657
MJ 8	1,25	•	90	20	11	8	6,2	9	3	6,8	0003774868
MJ 10	1,50	•	100	25	13	10	8	11	3	8,5	0003806028

Macho con tolerancia ajustada para el roscado de aleaciones de Titanio.
Tap with adjusted tolerance for machining Titanium alloys.

C15/1

MJ DIN-ISO 5855-1 | 2xD | **C** 2-3 P | R15º | DIN 376 | HSSE PM | 4H

proti



Material	GR9
Subg.	2
mts./min.	4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 12	1,75	•	110	30	15	9	7	10	4	10,2	0004089378

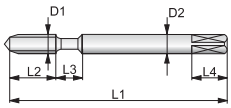
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

MJ DIN-ISO 5855-1 | 2xD | **C** 2-3 P | R15º | DIN 371 | HSSE PM | 4H

proti CromPlus



Material	GR9
Subg.	2
mts./min.	4

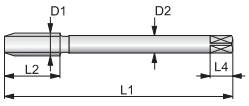
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 3	0,50	•	56	10	5	3,5	2,7	6	3	2,5	0003167641
MJ 4	0,70	•	63	12	5	4,5	3,4	6	3	3,3	0003170914
MJ 5	0,80	•	70	14	5	6	4,9	8	3	4,2	0003171374
MJ 6	1,00	•	80	16	8	6	4,9	8	3	5	0003239125
MJ 8	1,25	•	90	20	11	8	6,2	9	3	6,8	0003169154
MJ 10	1,50	•	100	25	13	10	8	11	3	8,5	0003239285

Macho con tolerancia ajustada para el roscado de aleaciones de Titanio.
Tap with adjusted tolerance for machining Titanium alloys.

C15/1

MJ DIN-ISO 5855-1 | 2xD | **C** 2-3 P | R15º | DIN 376 | HSSE PM | 4H

proti CromPlus



Material	GR9
Subg.	2
mts./min.	4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 12	1,75	•	110	30	15	9	7	10	4	10,2	0003239345

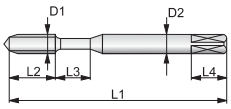
Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A/2

N

MJ DIN ISO 5855-1	2,5÷3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	4H	P 60°



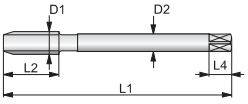
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 2	0,40	•	45	5	5	2,8	2,1	5	3	1,6	0001879047
MJ 2,5	0,45	•	50	5	5	2,8	2,1	5	3	2,05	0001879107
MJ 3	0,50	•	56	6	12	3,5	2,7	6	3	2,5	0000997705
MJ 4	0,70	•	63	7	14	4,5	3,4	6	3	3,3	0000997584
MJ 5	0,80	•	70	8	17	6	4,9	8	3	4,2	0000998165
MJ 6	1,00	•	80	9	21	6	4,9	8	3	5	0000995429
MJ 8	1,25	•	90	11	24	8	6,2	9	3	6,8	0001000363
MJ 10	1,50	•	100	12	27	10	8	11	3	8,5	0001000424

C35A/1

N

MJ DIN ISO 5855-1	2,5÷3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	4H	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 8	1,00	•	90	11	-	6	4,9	8	3	7	0001931573
MJ 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0001618395
MJ 12	1,25	•	100	14	-	9	7	10	3	10,75	0001746903
MJ 12	1,75	•	110	14	-	9	7	10	3	10,2	0000993795

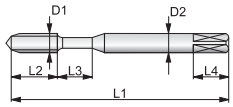
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

MJ DIN ISO 5855-1 | 2,5÷3xD | **C** 2-3 P | R35° | DIN 371 | HSSE Co5 | 4H

N

TiN



Material	GR1		GR2		GR3				GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3				3		1	2	1
mts./min.	13-18	11-14	13	18	10	13			20	25	7-12	10-15	15-20
	1 2		1 2		1 2 3 4				5 6		5 6		

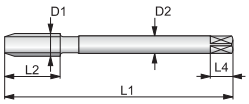
D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 2	0,40	45	5	5	2,8	2,1	5	3	1,6	0001879268
MJ 2,5	0,45	50	5	5	2,8	2,1	5	3	2,05	0001879328
MJ 3	0,50	56	6	12	3,5	2,7	6	3	2,5	0001879478
MJ 4	0,70	63	7	14	4,5	3,4	6	3	3,3	0000730828
MJ 5	0,80	70	8	17	6	4,9	8	3	4,2	0001879699
MJ 6	1,00	80	9	21	6	4,9	8	3	5	0001879750
MJ 8	1,25	90	11	24	8	6,2	9	3	6,8	0001879810
MJ 10	1,50	100	12	27	10	8	11	3	8,5	0001879960

C35A/1

MJ DIN ISO 5855-1 | 2,5÷3xD | **C** 2-3 P | R35° | DIN 376 | HSSE Co5 | 4H

N

TiN



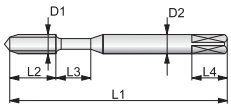
Material	GR1		GR2		GR3				GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3				3		1	2	1
mts./min.	13-18	11-14	13	18	10	13			20	25	7-12	10-15	15-20
	1 2		1 2		1 2 3 4				5 6		5 6		

D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 8	1,00	90	11	-	6	4,9	8	3	7	0001931634
MJ 10	1,25	100	12	-	7	5,5	8	3	8,75	0001931794
MJ 12	1,25	100	14	-	9	7	10	3	10,75	0001931855
MJ 12	1,75	110	14	-	9	7	10	3	10,2	0001880045

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 — N

MJ DIN ISO 5855-1	B 3,5-5 P	DIN 371	HSSE Co5	4H

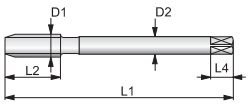


Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 2	0,40	•	45	8	-	2,8	2,1	5	3	1,60	0001137490
MJ 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,05	0000990909
MJ 3	0,50	•	56	10	8	3,5	2,7	6	3	2,50	0000991098
MJ 4	0,70	•	63	12	9	4,5	3,4	6	3	3,30	0000991369
MJ 5	0,80	•	70	14	11	6	4,9	8	3	4,20	0000991420
MJ 6	1,00	•	80	16	14	6	4,9	8	3	5,00	0000999227
MJ 8	1,25	•	90	18	17	8	6,2	9	3	6,80	0000999378
MJ 10	1,50	•	100	20	19	10	8	11	3	8,50	0000999659

PS/1 — N

MJ DIN ISO 5855-1	B 3,5-5 P	DIN 376	HSSE Co5	4H



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 8	1,00	•	90	16	-	6	4,9	8	3	7,00	0001937216
MJ 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0001029521
MJ 12	1,25	•	100	22	-	9	7	10	3	10,75	0001029681
MJ 12	1,75	•	110	22	-	9	7	10	3	10,20	0000750363

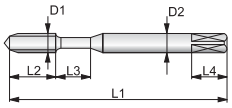
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2

N

TiN

MJ DIN ISO 5855-1 | **B** 3,5-5 P | DIN 371 | HSSE Co5 | 4H



Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3		3		1	2	1
mts./min.	15-20	13-18	15	20	13	18	20	25	10-15	13-17	15-25
	1 2		1 2		1 2 3 4		5 6		3 4		

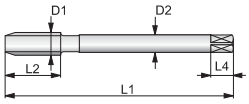
D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 2	0,40	45	8	-	2,8	2,1	5	3	1,60	0000760652
MJ 2,5	0,45	50	9	-	2,8	2,1	5	3	2,05	0001893401
MJ 3	0,50	56	10	8	3,5	2,7	6	3	2,50	0000761443
MJ 4	0,70	63	12	9	4,5	3,4	6	3	3,30	0000762225
MJ 5	0,80	70	14	11	6	4,9	8	3	4,20	0001893552
MJ 6	1,00	80	16	14	6	4,9	8	3	5,00	0001893612
MJ 8	1,25	90	18	17	8	6,2	9	3	6,80	0001893983
MJ 10	1,50	100	20	19	10	8	11	3	8,50	0001894072

PS/1

N

TiN

MJ DIN ISO 5855-1 | **B** 3,5-5 P | DIN 376 | HSSE Co5 | 4H

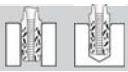


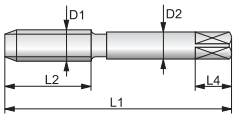
Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3		3		1	2	1
mts./min.	15-20	13-18	15	20	13	18	20	25	10-15	13-17	15-25
	1 2		1 2		1 2 3 4		5 6		3 4		

D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 8	1,00	90	16	-	6	4,9	8	3	7,00	0001937587
MJ 10	1,25	100	20	-	7	5,5	8	3	8,75	0001937708
MJ 12	1,25	100	22	-	9	7	10	3	10,75	0001937868
MJ 12	1,75	110	22	-	9	7	10	3	10,20	0001894122

Machos de roscar a mano. Agujeros ciegos y pasantes
Set of hand taps. Blind and through holes

JMC

JUEGO	MF ISO-DIN 13		1º -4P 2º -2P } progresiva / progressive		DIN 2181	HSS	ISO 2 (6H)	

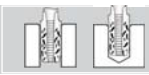


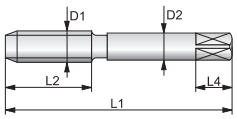
Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 2,5	0,35	•	40	9	-	2,8	2,1	5	3	2,15	0000203741
MF 3	0,35	•	40	9	-	3,5	2,7	6	3	2,65	0000203951
MF 3,5	0,35	•	45	10	-	4	3	6	3	3,15	0000204040
MF 4	0,35	•	45	13	-	4,5	3,4	6	3	3,65	0000204191
MF 4	0,50	•	45	13	-	4,5	3,4	6	3	3,50	0000204251
MF 5	0,50	•	50	12	-	6	4,9	8	3	4,50	0000204311
MF 5	0,75	•	50	14	-	6	4,9	8	3	4,25	0000204472
MF 6	0,50	•	50	14	-	6	4,9	8	3	5,50	0000204522
MF 6	0,75	•	50	14	-	6	4,9	8	3	5,25	0000204683
MF 7	0,75	•	50	14	-	6	4,9	8	3	6,25	0000204743
MF 8	0,50	•	50	16	-	6	4,9	8	3	7,50	0000204803
MF 8	0,75	•	50	16	-	6	4,9	8	3	7,25	0000204954
MF 8	1,00	•	56	18	-	6	4,9	8	3	7,00	0000205043
MF 9	0,75	•	63	18	-	7	5,5	8	3	8,25	0000205103
MF 9	1,00	•	63	18	-	7	5,5	8	3	8,00	0000205253
MF 10	0,75	•	63	18	-	7	5,5	8	3	9,25	0000205314
MF 10	1,00	•	63	18	-	7	5,5	8	3	9,00	0000205474
MF 10	1,25	•	70	24	-	7	5,5	8	3	8,75	0000205534
MF 11	1,00	•	63	18	-	8	6,2	9	3	10,00	0000205685
MF 11	1,25	•	63	20	-	8	6,2	9	3	9,75	0000205745
MF 12	0,75	•	70	20	-	9	7	10	4	11,25	0000205806
MF 12	1,00	•	70	20	-	9	7	10	4	11,00	0000205966
MF 12	1,25	•	70	20	-	9	7	10	4	10,75	0000206045
MF 12	1,50	•	70	20	-	9	7	10	4	10,50	0000206105
MF 13	1,00	•	70	20	-	11	9	12	4	12,00	0000206256
MF 13	1,25	•	70	20	-	11	9	12	4	11,75	0000206316
MF 13	1,50	•	70	20	-	11	9	12	4	11,50	0000206476
MF 14	1,00	•	70	20	-	11	9	12	4	13,00	0000206537
MF 14	1,25	•	70	20	-	11	9	12	4	12,75	0000206687
MF 14	1,50	•	70	20	-	11	9	12	4	12,50	0000206747
MF 15	1,00	•	70	20	-	12	9	12	4	14,00	0000206808
MF 15	1,25	•	70	20	-	12	9	12	4	13,75	0000206968
MF 15	1,50	•	70	20	-	12	9	12	4	13,50	0000207047
MF 16	1,00	•	70	20	-	12	9	12	4	15,00	0000207107
MF 16	1,25	•	70	20	-	12	9	12	4	14,75	0000207268
MF 16	1,50	•	70	20	-	12	9	12	4	14,50	0000207318
MF 18	1,00	•	80	22	-	14	11	14	4	17,00	0000209323
MF 18	1,25	•	80	22	-	14	11	14	4	16,75	0000209473
MF 18	1,50	•	80	22	-	14	11	14	4	16,50	0000209534
MF 18	2,00	•	80	22	-	14	11	14	4	16,00	0000209694
MF 20	1,00	•	80	22	-	16	12	15	4	19,00	0000209754
MF 20	1,25	•	80	22	-	16	12	15	4	18,75	0000209815
MF 20	1,50	•	80	22	-	16	12	15	4	18,50	0000209965
MF 20	2,00	•	80	22	-	16	12	15	4	18,00	0000210049
MF 21	1,50	•	80	22	-	16	12	15	4	19,50	0000210100
MF 22	1,00	•	80	22	-	18	14,5	17	4	21,00	0000210260
MF 22	1,25	•	80	22	-	18	14,5	17	4	20,75	0000210321
MF 22	1,50	•	80	22	-	18	14,5	17	4	20,50	0000210471

Machos de roscar a mano. Agujeros ciegos y pasantes
Set of hand taps. Blind and through holes

JMC

JUEGO	MF ISO-DIN 13		1º -4P 2º -2P } progresiva / progressive		DIN 2181	HSS	ISO 2 (6H)	



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 22	2,00	•	80	22	-	18	14,5	17	4	20,00	0000210531
MF 24	1,00	•	90	22	-	18	14,5	17	4	23,00	0000210963
MF 24	1,50	•	90	22	-	18	14,5	17	4	22,50	0000211483
MF 24	2,00	•	90	22	-	18	14,5	17	4	22,00	0000211694
MF 25	1,00	•	90	22	-	18	14,5	17	4	24,00	0000211754
MF 25	1,50	•	90	22	-	18	14,5	17	4	23,50	0000211815
MF 26	1,00	•	90	22	-	18	14,5	17	4	25,00	0001203031
MF 26	1,50	•	90	22	-	18	14,5	17	4	24,50	0000212054
MF 27	1,00	•	90	22	-	20	16	19	4	26,00	0000212265
MF 27	1,50	•	90	22	-	20	16	19	4	25,50	0000050071
MF 27	2,00	•	90	22	-	20	16	19	4	25,00	0000212757
MF 28	1,50	•	90	22	-	20	16	19	4	26,50	0000213117
MF 28	2,00	•	90	22	-	20	16	19	4	26,00	0000213488
MF 30	1,00	•	90	22	-	22	18	21	4	29,00	0000213759
MF 30	1,50	•	90	22	-	22	18	21	4	28,50	0000214058
MF 30	2,00	•	90	22	-	22	18	21	4	28,00	0000217979
MF 32	1,50	•	90	22	-	22	18	21	4	30,50	0000218499
MF 33	1,50	•	100	25	-	25	20	23	4	31,50	0000218550
MF 33	2,00	•	100	25	-	25	20	23	4	31,00	0000218600
MF 34	1,50	•	100	25	-	28	22	25	4	32,50	0000218760
MF 35	1,50	•	100	25	-	28	22	25	4	33,50	0000218821
MF 36	1,50	•	100	25	-	28	22	25	4	34,50	0000218981
MF 36	2,00	•	125	40	-	28	22	25	4	34,00	0000219060
MF 36	3,00	•	125	40	-	28	22	25	4	33,00	0000219120
MF 38	1,50	•	100	25	-	28	22	25	6	36,50	0000219271
MF 39	1,50	•	110	25	-	32	24	27	6	37,50	0000219331
MF 39	2,00	•	125	40	-	32	24	27	6	37,00	0000219552
MF 39	3,00	•	125	40	-	32	24	27	6	36,00	0000219763
MF 40	1,50	•	110	25	-	32	24	27	6	38,50	0000220068
MF 40	2,00	•	125	40	-	32	24	27	6	38,00	0000220128
MF 42	1,50	•	110	25	-	32	24	27	6	40,50	0000220278
MF 42	2,00	•	125	40	-	32	24	27	6	40,00	0000220339
MF 42	3,00	•	125	40	-	32	24	27	6	39,00	0000220499
MF 45	1,50	•	110	25	-	36	29	32	6	43,50	0000220550
MF 45	2,00	•	125	40	-	36	29	32	6	43,00	0000220760
MF 45	3,00	•	125	40	-	36	29	32	6	42,00	0000506584
MF 48	1,50	•	140	25	-	36	29	32	6	46,50	0000220981
MF 48	2,00	•	140	30	-	36	29	32	6	46,00	0000221120
MF 48	3,00	•	140	40	-	36	29	32	6	45,00	0000221331
MF 50	1,50	•	140	25	-	36	29	32	6	48,50	0000221491
MF 52	1,50	•	140	25	-	40	32	35	6	50,50	0000221552
MF 52	2,00	•	140	40	-	40	32	35	6	50,00	0000221763
MF 52	3,00	•	140	40	-	40	32	35	6	49,00	0000221823

* Tol. 4H

• Producción automática

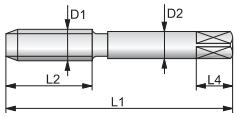
Machos de roscar a mano. Corte a isquierda. Agujeros ciegos y pasantes
Set of hand taps. Left hand cut. Blind and through holes

JMC

JUEGO

LH

MF ISO-DIN 13 | 1º -4P, 2º -2P progresiva / progressive | DIN 2181 | HSS | ISO 2 (6H)



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z / LH	Ød1	Cod.
MF 6	0,75	•	50	14	-	6	4,9	8	3	5,25	0000268681
MF 8	0,75	•	50	16	-	6	4,9	8	3	7,25	0000268741
MF 8	1,00	•	56	18	-	6	4,9	8	3	7	0000268802
MF 10	1,00	•	63	18	-	7	5,5	8	3	9	0000268952
MF 12	1,00	•	70	20	-	9	7	10	4	11	0000269041
MF 12	1,25	•	70	20	-	9	7	10	4	10,75	0000269191
MF 12	1,50	•	70	20	-	9	7	10	4	10,5	0000269252
MF 13	1,00	•	70	20	-	11	9	12	4	12	0000269312
MF 14	1,00	•	70	20	-	11	9	12	4	13	0000269473
MF 14	1,25	•	70	20	-	11	9	12	4	12,75	0000269523
MF 14	1,50	•	70	20	-	11	9	12	4	12,5	0000269683
MF 16	1,00	•	70	20	-	12	9	12	4	15	0000269744
MF 16	1,50	•	70	20	-	12	9	12	4	14,5	0000269804
MF 18	1,50	•	80	22	-	14	11	14	4	16,5	0000269954
MF 20	1,50	•	80	22	-	16	12	15	4	18,5	0000270049
MF 22	1,00	•	80	22	-	18	14,5	17	4	21	0000270199
MF 22	1,50	•	80	22	-	18	14,5	17	4	20,5	0000270250
MF 24	1,50	•	90	22	-	18	14,5	17	4	22,5	0000270310
MF 24	2,00	•	90	22	-	18	14,5	17	4	22	0000270470
MF 26	1,50	•	90	22	-	18	14,5	17	4	24,5	0001749789
MF 27	1,50	•	90	22	-	20	16	19	4	25,5	0000505150
MF 28	1,50	•	90	22	-	20	16	19	4	26,5	0001750084
MF 30	1,50	•	90	22	-	22	18	21	4	28,5	0001750144
MF 32	1,50	•	90	22	-	22	18	21	4	30,5	0000505201
MF 35	1,50	•	100	25	-	28	22	25	4	33,5	0001750416
MF 38	1,50	•	100	25	-	28	22	25	6	36,5	0001750576
MF 39	3,00	•	125	40	-	32	24	27	6	36	0001750636
MF 40	1,50	•	110	25	-	32	24	27	6	38,5	0001750787
MF 42	1,50	•	110	25	-	32	24	27	6	40,5	0001750847
MF 45	1,50	•	110	25	-	36	29	32	6	43,5	0001750907
MF 48	1,50	•	140	25	-	36	29	32	6	46,5	0001751086
MF 50	1,50	•	140	25	-	36	29	32	6	48,5	0001751147
MF 52	1,50	•	140	25	-	40	32	35	6	50,5	0001751207

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

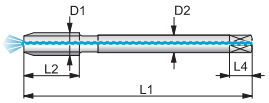
Agujeros ciegos horizontales / *Horizontal blind holes.*

JMC

C7X KC

MF ISO-DIN 13 | 2xD | **C** 2-3 P | R7° KC | ≈DIN 374 | **HSSE** PM | ISO 2 **6H** | P 60°

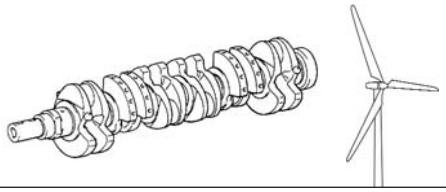
produr
AltPlus



Material	GR1	GR2
Subg.	5	1,2,3,4,5,7,8
mts./min.	12 10	22 15 4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,5	•	125	22	-	9	7	10	4	10,5	0003213516
MF 14	1,5	•	125	22	-	11	9	12	4	12,5	0003213948
MF 16	1,5	•	125	22	-	12	9	12	4	14,5	0003214187

Macho extra-largo para roscados horizontales en aceros de viruta larga, soluciona el problema de evacuación de virutas en agujeros profundos.
Extra-long tap for horizontal working on long-chipping steels, solves the chip evacuation problem in deep holes.

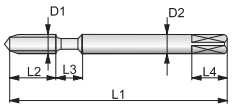


Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

C10/2

MF ISO-DIN 13	1,5xD	C 2-3 P	R10º	DIN 371	HSSE PM	6HX

proni



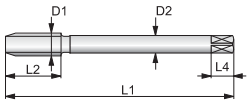
Material	GR8
Subg.	3
mts./min.	2

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	8	6,2	8	3	7,00	0004195242
MF 10	1,00	•	90	16	-	10	8	8	3	9,00	0004195303
MF 10	1,25	•	100	20	-	10	8	8	3	8,75	0004195453

C10/1

MF ISO-DIN 13	1,5xD	C 2-3 P	R10º	DIN 374	HSSE PM	6HX

proni



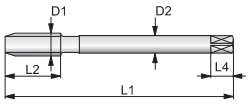
Material	GR8
Subg.	3
mts./min.	2

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,00	•	100	20	-	9	7	10	4	11,00	0004195513
MF 12	1,25	•	100	20	-	9	7	10	4	10,75	0004195674
MF 12	1,50	•	100	20	-	9	7	10	4	10,50	0004195734

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C15/1	MF ISO-DIN 13	2xD	C 2-3P	R15°	DIN 374	HSSE Co5	ISO 2 (6H)	P 60°
N								



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
mts./min.	10-15	15-20	6-9	20	25
	1 2	6	6	5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50		63	10	-	2,8	2,1	5	3	3,50	0000471073
MF 5	0,50		70	12	-	3,5	2,7	6	3	4,50	0000174895
MF 6	0,75		80	12	-	4,5	3,4	6	3	5,50	0000703027
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0000174945
MF 10	0,75		90	16	-	7	5,5	8	3	9,25	0001195977
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0000175034
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000175185
MF 11	1,00		100	20	-	8	6	10	3	10,00	0000703880
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0000175245
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0000175305
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0000175466
MF 14	1,00		100	22	-	11	9	12	4	13,00	0000471344
MF 14	1,25	•	100	22	-	11	9	12	4	12,75	0000704943
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0000175526
MF 16	1,00		100	22	-	12	9	12	4	15,00	0000705303
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0000175677
MF 18	1,00		110	22	-	14	11	14	4	17,00	0001186801
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0000175737
MF 18	2,00		125	22	-	14	11	14	4	16,00	0001196116
MF 20	1,00		125	22	-	16	12	15	4	19,00	0000706245
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0000175897
MF 20	2,00		140	28	-	16	12	15	4	18,00	0001196276
MF 22	1,00		125	25	-	18	14,5	17	4	21,00	0000175958
MF 22	1,50	•	125	25	-	18	14,5	17	4	20,50	0000176037
MF 22	2,00		140	34	-	18	14,5	17	4	20,00	0001196327
MF 24	1,00		140	25	-	18	14,5	17	4	23,00	0000707247
MF 24	1,50	•	140	25	-	18	14,5	17	4	22,50	0000176197
MF 24	2,00		140	28	-	18	14,5	17	4	22,00	0001196487
MF 25	1,50		140	28	-	18	14,5	17	4	23,50	0001196608
MF 26	1,50		140	28	-	18	14,5	17	4	24,50	0000176247
MF 27	1,50		140	28	-	20	16	19	4	25,50	0000708038
MF 27	2,00		140	28	-	20	16	19	4	25,00	0000708189
MF 28	1,50		140	28	-	20	16	19	5	26,50	0000708249
MF 28	2,00		140	28	-	20	16	19	5	26,00	0001196758
MF 30	1,50		150	28	-	22	18	21	5	28,50	0000708460
MF 30	2,00		150	28	-	22	18	21	5	28,00	0001196819

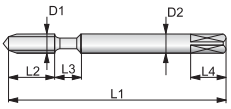
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

MF ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | ≈DIN 371 | HSSE PM | 6HX

proti



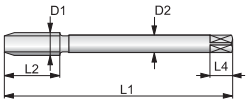
Material	GR2	GR9
Subg.	3	2
mts./min.	4	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	16	-	8	6,2	8	3	7	0004201927
MF 10	1,00	•	90	16	-	10	8	8	3	9	0004202006
MF 10	1,25	•	100	20	-	10	8	8	3	8,75	0004202167

C15/1

MF ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 374 | HSSE PM | 6HX

proti



Material	GR2	GR9
Subg.	3	2
mts./min.	4	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,00	•	100	22	-	9	7	10	4	11	0003184399
MF 12	1,25	•	100	22	-	9	7	10	4	10,75	0003185512
MF 12	1,50	•	100	22	-	9	7	10	4	10,5	0003185944
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0003186394
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0003186665
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003186946
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003187246

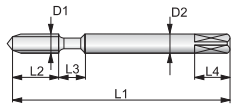
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

MF ISO-DIN 13	2xD	C 2-3 P	R15°	≈DIN 371	HSSE PM	6HX	P 60°

proti TiCN



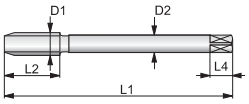
Material	GR2	GR9
Subg.	3	2
mts./min.	4	6
	1	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	16	-	8	6,2	8	3	7	0004202217
MF 10	1,00	•	90	16	-	10	8	8	3	9	0004202869
MF 10	1,25	•	100	20	-	10	8	8	3	8,75	0004202649

C15/1

MF ISO-DIN 13	2xD	C 2-3 P	R15°	DIN 374	HSSE PM	6HX	P 60°

proti TiCN



Material	GR2	GR9
Subg.	3	2
mts./min.	4	6
	1	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	16	-	6	4,9	8	3	7	0003172437
MF 10	1,00	•	90	16	-	7	5,5	8	3	9	0003183729
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003184932
MF 12	1,00	•	100	22	-	9	7	10	4	11	0003184179
MF 12	1,25	•	100	22	-	9	7	10	4	10,75	0003185392
MF 12	1,50	•	100	22	-	9	7	10	4	10,5	0003185723
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0003186183
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0003186454
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003186725
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003187025

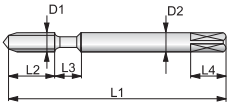
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

MF ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | ≈DIN 371 | HSSE PM | 6HX

proti CromPlus



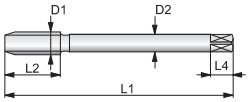
Material	GR2	GR9
Subg.	3	2
mts./min.	4	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	16	-	8	6,2	8	3	7	0004202377
MF 10	1,00	•	90	16	-	10	8	8	3	9	0004202598
MF 10	1,25	•	100	20	-	10	8	8	3	8,75	0004202709

C15/1

MF ISO-DIN 13 | 2xD | **C** 2-3 P | R15° | DIN 374 | HSSE PM | 6HX

proti CromPlus



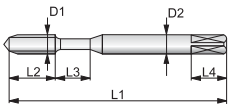
Material	GR9
Subg.	2
mts./min.	4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	16	-	6	4,9	8	3	7	0003172587
MF 10	1,00	•	90	16	-	7	5,5	8	3	9	0003183879
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003185021
MF 12	1,00	•	100	22	-	9	7	10	3	11	0003184239
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003185452
MF 12	1,50	•	100	22	-	9	7	10	3	10,5	0003185884
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0003186234
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0003186515
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003186886
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003187185

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/2	MF ISO-DIN 13	2,5÷3xD	C 2-3P	R35°	≈DIN 371	HSSE PMV3	ISO 2 (6H)	P 60°
N								



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		1,2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

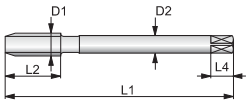
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 2*	0,25	•	45	5	5	2,8	2,1	5	3	1,75	0001415908
MF 2,2*	0,25	•	45	5	5	2,8	2,1	5	3	1,95	0001921134
MF 2,5	0,35	•	50	5	5	2,8	2,1	5	3	2,15	0001921344
MF 3	0,35	•	56	6	12	3,5	2,7	6	3	2,65	0000473569
MF 3,5	0,35	•	56	6	14	4	3	6	3	3,15	0001921405
MF 4	0,35	•	63	7	14	4,5	3,4	6	3	3,65	0001921565
MF 4	0,50	•	63	7	14	4,5	3,4	6	3	3,50	0001415848
MF 5	0,50	•	70	14	11	6	4,9	8	3	4,50	0001011595
MF 6	0,50	•	80	16	14	6	4,9	8	3	5,50	0000731559
MF 6	0,75	•	80	16	14	6	4,9	8	3	5,25	0000731610

* Tol. 4H

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/1	MF ISO-DIN 13	2,5÷3xD	C 2-3P	R35°	DIN 374	HSSE Co5	ISO 1 (4H) MJ ISO 2 (6H) ISO 3 (6G)	P 60°
N								



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		1,2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0000176308
	MF 10	0,75	•	90	12	-	7	5,5	8	3	9,25	0000720328
	MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0000176468
	MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0000176528
	MF 11	1,00		100	12	-	8	6	10	3	10,00	0000472627
	MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0000176679
	MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0000176739
	MF 12	1,50	•	100	14	-	9	7	10	3	10,50	0000176890
	MF 14	1,00	•	100	18	-	11	9	12	4	13,00	0000986353
	MF 14	1,25	•	100	18	-	11	9	12	4	12,75	0000176950
	MF 14	1,50	•	100	18	-	11	9	12	4	12,50	0000177039
	MF 16	1,00	•	100	18	-	12	9	12	4	15,00	0000722112
	MF 16	1,50	•	100	18	-	12	9	12	4	14,50	0000177199
	MF 18	1,00	•	110	22	-	14	11	14	4	17,00	0000722975
	MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0000177250
	MF 18	2,00	•	125	22	-	14	11	14	4	16,00	0000723054
	MF 20	1,00	•	125	22	-	16	12	15	4	19,00	0000723114
	MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0000177300
	MF 20	2,00	•	140	22	-	16	12	15	4	18,00	0000991851
	MF 22	1,00	•	125	22	-	18	14,5	17	4	21,00	0000723756
	MF 22	1,50	•	125	22	-	18	14,5	17	4	20,50	0000177460
	MF 22	2,00	•	140	25	-	18	14,5	17	4	20,00	0000992793
	MF 24	1,00	•	140	25	-	18	14,5	17	4	23,00	0001190805
	MF 24	1,50	•	140	25	-	18	14,5	17	4	22,50	0000177521
	MF 24	2,00	•	140	25	-	18	14,5	17	4	22,00	0000723977
	MF 25	1,50	•	140	25	-	18	14,5	17	4	23,50	0000724327
	MF 26	1,50	•	140	25	-	18	14,5	17	4	24,50	0000724487
	MF 27	1,50	•	140	25	-	20	16	19	4	25,50	0000724608
	MF 27	2,00	•	140	25	-	20	16	19	4	25,00	0000724758
	MF 28	1,50	•	140	25	-	20	16	19	5	26,50	0000725058
	MF 28	2,00	•	140	25	-	20	16	19	5	26,00	0001194693
	MF 30	1,50	•	150	28	-	22	18	21	5	28,50	0000725118
	MF 30	2,00	•	150	28	-	22	18	21	5	28,00	0000725279
ISO 3 (6G)	MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0000719812
	MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0000720478
	MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0001800450
	MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0000720810
	MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0001800511
	MF 12	1,50	•	100	14	-	9	7	10	3	10,50	0001748084
ISO 1 (4H) MJ	MF 8	1,00		90	11	-	6	4,9	8	3	7,00	0001931573
	MF 10	1,25		100	12	-	7	5,5	8	3	8,75	0001618395
	MF 12	1,25		100	14	-	9	7	10	3	10,75	0001746903

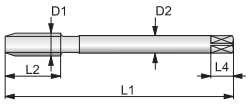
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/1 | **MF** ISO-DIN 13 | 2,5÷3xD | **C** 2-3P | R35° | DIN 374 | **HSSE** Co5 | ISO 2 (6H) ISO 3 (6G)

N

Nogrip-1®



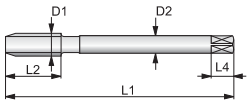
Material	GR1		GR2		GR3		GR9	
Subg.	1,2,4,5		6		1,2,3		1	
mts./min.	8	13	8	13	5	8	7	12
	1 2		1 2		1 2 3 4		3 4	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0001375541
	MF 10	0,75		90	12	-	7	5,5	8	3	9,25	0001926908
	MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0000985903
	MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0000986081
	MF 11	1,00		100	12	-	8	6	10	3	10,00	0001927087
	MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0001694251
	MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0000986142
	MF 12	1,50	•	100	14	-	9	7	10	3	10,50	0000986202
	MF 14	1,00		100	18	-	11	9	12	4	13,00	0000986413
	MF 14	1,25	•	100	18	-	11	9	12	4	12,75	0000986573
	MF 14	1,50	•	100	18	-	11	9	12	4	12,50	0001343862
	MF 16	1,00		100	18	-	12	9	12	4	15,00	0001927147
	MF 16	1,50	•	100	18	-	12	9	12	4	14,50	0000986784
	MF 18	1,00		110	22	-	14	11	14	4	17,00	0001927208
	MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001375761
	MF 18	2,00		125	22	-	14	11	14	4	16,00	0001927358
	MF 20	1,00		125	22	-	16	12	15	4	19,00	0001927418
	MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001357739
	MF 20	2,00		140	22	-	16	12	15	4	18,00	0001927579
	MF 22	1,00		125	22	-	18	14,5	17	4	21,00	0001927639
	MF 22	1,50	•	125	22	-	18	14,5	17	4	20,50	0001375812
	MF 22	2,00		140	25	-	18	14,5	17	4	20,00	0001927780
	MF 24	1,00		140	25	-	18	14,5	17	4	23,00	0001927840
	MF 24	1,50	•	140	25	-	18	14,5	17	4	22,50	0001375972
	MF 24	2,00		140	25	-	18	14,5	17	4	22,00	0001927900
	MF 25	1,50		140	25	-	18	14,5	17	4	23,50	0001928089
	MF 26	1,50		140	25	-	18	14,5	17	4	24,50	0001375812
	MF 27	1,50		140	25	-	20	16	19	4	25,50	0001928140
	MF 27	2,00		140	25	-	20	16	19	4	25,00	0001655130
	MF 28	1,50		140	25	-	20	16	19	5	26,50	0001631807
	MF 28	2,00		140	25	-	20	16	19	5	26,00	0001928200
	MF 30	1,50		150	28	-	22	18	21	5	28,50	0001377114
	MF 30	2,00		150	28	-	22	18	21	5	28,00	0001928360
ISO 3 (6G)	MF 8	1,00		90	11	-	6	4,9	8	3	7,00	0001930421
	MF 10	1,00		90	12	-	7	5,5	8	3	9,00	0001930571
	MF 10	1,25		100	12	-	7	5,5	8	3	8,75	0001930632
	MF 12	1,00		100	14	-	9	7	10	3	11,00	0001930792
	MF 12	1,25		100	14	-	9	7	10	3	10,75	0001930852
	MF 12	1,50		100	14	-	9	7	10	3	10,50	0001930903

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/1	MF ISO-DIN 13	2,5÷3xD	C 2-3P	R35°	DIN 374	HSSE Co5	ISO 1 (4H) MJ ISO 2 (6H) ISO 3 (6G)	P 60°
N								
TiN								



Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3		2,3		1	2	1
mts./min.	13-18	11-14	13	18	10	13	20	25	7-12	10-15	15-20
	1 2		1 2		1 2 3 4		5 6		5 6		

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0000981130
	MF 10	0,75		90	12	-	7	5,5	8	3	9,25	0001928411
	MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0001099800
	MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0001224822
	MF 11	1,00		100	12	-	8	6	10	3	10,00	0001928571
	MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0001568842
	MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0001895837
	MF 12	1,50		100	14	-	9	7	10	3	10,50	0001013870
	MF 14	1,00		100	18	-	11	9	12	4	13,00	0001928632
	MF 14	1,25	•	100	18	-	11	9	12	4	12,75	0001895998
	MF 14	1,50	•	100	18	-	11	9	12	4	12,50	0001073860
	MF 16	1,00		100	18	-	12	9	12	4	15,00	0001013931
	MF 16	1,50	•	100	18	-	12	9	12	4	14,50	0001224762
	MF 18	1,00		110	22	-	14	11	14	4	17,00	0001928792
	MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001179899
	MF 18	2,00		125	22	-	14	11	14	4	16,00	0001928842
	MF 20	1,00		125	22	-	16	12	15	4	19,00	0001928903
	MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0000991791
	MF 20	2,00		140	22	-	16	12	15	4	18,00	0001929082
	MF 22	1,00		125	22	-	18	14,5	17	4	21,00	0001929142
	MF 22	1,50	•	125	22	-	18	14,5	17	4	20,50	0001476077
	MF 22	2,00		140	25	-	18	14,5	17	4	20,00	0001929202
	MF 24	1,00		140	25	-	18	14,5	17	4	23,00	0001929363
	MF 24	1,50	•	140	25	-	18	14,5	17	4	22,50	0001929423
	MF 24	2,00		140	25	-	18	14,5	17	4	22,00	0001929573
	MF 25	1,50		140	25	-	18	14,5	17	4	23,50	0001929634
	MF 26	1,50		140	25	-	18	14,5	17	4	24,50	0001929794
	MF 27	1,50		140	25	-	20	16	19	4	25,50	0001929855
	MF 27	2,00		140	25	-	20	16	19	4	25,00	0001929905
	MF 28	1,50		140	25	-	20	16	19	5	26,50	0001930089
	MF 28	2,00		140	25	-	20	16	19	5	26,00	0001930140
	MF 30	1,50		150	28	-	22	18	21	5	28,50	0001930200
	MF 30	2,00		150	28	-	22	18	21	5	28,00	0001930360
ISO 3 (6G)	MF 8	1,00		90	11	-	6	4,9	8	3	7,00	0001931092
	MF 10	1,00		90	12	-	7	5,5	8	3	9,00	0001931142
	MF 10	1,25		100	12	-	7	5,5	8	3	8,75	0001931202
	MF 12	1,00		100	14	-	9	7	10	3	11,00	0001810047
	MF 12	1,25		100	14	-	9	7	10	3	10,75	0001931363
	MF 12	1,50		100	14	-	9	7	10	3	10,50	0001931423
ISO 1 (4H) MJ	MF 8	1,00		90	11	-	6	4,9	8	3	7,00	0001931634
	MF 10	1,25		100	12	-	7	5,5	8	3	8,75	0001931794
	MF 12	1,25		100	14	-	9	7	10	3	10,75	0001931855

Machos de roscar a máquina / *Machine taps*

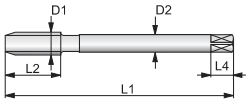
Para roscado sincronizado. Agujeros ciegos / *For rigid tapping. Blind holes*

C35A/1

TRUNC

Nogrip-1®

MF ISO-DIN 13	3xD	**C** 2-3P	R35°	DIN 374	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1		GR2		GR3		GR6		GR8	
Subg.	1,2,3,4,5,6		1,2,3,4,5,6,7,8		1,2,3		3		1	
mts./min.	13-8	11-14	13-8	11-14	10	13	15	25	8	11
	1 2		1 2		1 2 3 4		5 6		3 4	

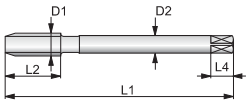
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0001180516
MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0001180947
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0001181468
MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0001181899
MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0001182249
MF 12	1,50	•	100	14	-	9	7	10	3	10,50	0001182671
MF 14	1,00		100	18	-	11	9	12	4	13,00	0001182952
MF 14	1,25		100	18	-	11	9	12	4	12,75	0001183251
MF 14	1,50	•	100	18	-	11	9	12	4	12,50	0001183523
MF 16	1,00		100	18	-	12	9	12	4	15,00	0001185748
MF 16	1,50	•	100	18	-	12	9	12	4	14,50	0001186680
MF 18	1,00		110	22	-	14	11	14	4	17,00	0001187040
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001188102
MF 18	2,00		125	22	-	14	11	14	4	16,00	0001188474
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001189044
MF 20	2,00		140	22	-	16	12	15	4	18,00	0001189536
MF 22	1,00		125	22	-	18	14,5	17	4	21,00	0001189807
MF 22	1,50		125	22	-	18	14,5	17	4	20,50	0001190102
MF 22	2,00		140	25	-	18	14,5	17	4	20,00	0001190694
MF 24	1,00		140	25	-	18	14,5	17	4	23,00	0001191044
MF 24	1,50		140	25	-	18	14,5	17	4	22,50	0001191325
MF 24	2,00		140	25	-	18	14,5	17	4	22,00	0001191807
MF 25	1,50		140	25	-	18	14,5	17	4	23,50	0001192699
MF 26	1,50		140	25	-	18	14,5	17	4	24,50	0001192960
MF 27	1,50		140	25	-	20	16	19	4	25,50	0001193812
MF 27	2,00		140	25	-	20	16	19	4	25,00	0001194112
MF 28	1,50		140	25	-	20	16	19	5	26,50	0001194483
MF 28	2,00		140	25	-	20	16	19	5	26,00	0001194814
MF 30	1,50		150	28	-	22	18	21	5	28,50	0001195485
MF 30	2,00		150	28	-	22	18	21	5	28,00	0001195756

Machos de roscar a máquina / *Machine taps*

Para roscado sincronizado. Agujeros ciegos / *For rigid tapping. Blind holes*

JMC

C35A/1	MF ISO-DIN 13	3xD	C 2-3P	R35°	DIN 374	HSSE Co5	ISO 2 (6H)	P 60°
TRUNC								
LubePlus								



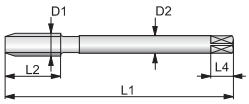
Material	GR1		GR2		GR3		GR6		GR8	
Subg.	1,2,3,4,5,6		1,2,3,4,5,6,7,8		1,2,3		3		1	
mts./min.	13-8	11-14	13-8	11-14	10	13	15	25	8	11
	1 2		1 2		1 2 3 4		5 6		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0001939702
MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0001703231
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0001675869
MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0001946443
MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0001939923
MF 12	1,50		100	14	-	9	7	10	3	10,50	0001671649
MF 14	1,00		100	18	-	11	9	12	4	13,00	0001940007
MF 14	1,25		100	18	-	11	9	12	4	12,75	0001940168
MF 14	1,50	•	100	18	-	11	9	12	4	12,50	0001940228
MF 16	1,00		100	18	-	12	9	12	4	15,00	0001940379
MF 16	1,50	•	100	18	-	12	9	12	4	14,50	0001940439
MF 18	1,00		110	22	-	14	11	14	4	17,00	0001940599
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001732765
MF 18	2,00		125	22	-	14	11	14	4	16,00	0001940650
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001940700
MF 20	2,00		140	22	-	16	12	15	4	18,00	0001940861
MF 22	1,00		125	22	-	18	14,5	17	4	21,00	0001940921
MF 22	1,50		125	22	-	18	14,5	17	4	20,50	0001941000
MF 22	2,00		140	25	-	18	14,5	17	4	20,00	0001941160
MF 24	1,00		140	25	-	18	14,5	17	4	23,00	0001941221
MF 24	1,50		140	25	-	18	14,5	17	4	22,50	0001941371
MF 24	2,00		140	25	-	18	14,5	17	4	22,00	0001941431
MF 25	1,50		140	25	-	18	14,5	17	4	23,50	0001941592
MF 26	1,50		140	25	-	18	14,5	17	4	24,50	0001941652
MF 27	1,50		140	25	-	20	16	19	4	25,50	0001941712
MF 27	2,00		140	25	-	20	16	19	4	25,00	0001941863
MF 28	1,50		140	25	-	20	16	19	5	26,50	0001941923
MF 28	2,00		140	25	-	20	16	19	5	26,00	0001942002
MF 30	1,50		150	28	-	22	18	21	5	28,50	0001942162
MF 30	2,00		150	28	-	22	18	21	5	28,00	0001942223

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/1 | **VAF** | ***Nogrip-1®***

MF ISO-DIN 13	3xD	C 2-3P	R35°	DIN 374	HSSE Co5	ISO 2 (6H)	P 60°

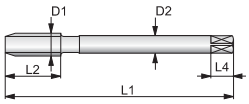


Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	7 12	5 8	8 15
	1 2	1 2	1 2 3 4	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0001180305
MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0000992422
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0000720539
MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0000994587
MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0000993424
MF 12	1,50	•	100	14	-	9	7	10	3	10,50	0000994708
MF 14	1,50	•	100	18	-	11	9	12	4	12,50	0000988909
MF 16	1,50	•	100	18	-	12	9	12	4	14,50	0000722543
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001187803
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0000723485

C35A/1 | **VAF** | ***TiCN***

MF ISO-DIN 13		C 2-3P	R35°	DIN 374	HSSE Co5	ISO 2 (6H)	P 60°



Material	GR1	GR2	GR3	GR4	GR5	GR9
Subg.	6	1,2,3,4,5,7,8	4	2,4	4	2
mts./min.	10 15	12-17 11-14	8 10	20 25	10 20	4 6
	1 2	1 2	1 2 3 4	6	5 6	3 4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7,00	0001512797
MF 10	1,00	•	90	12	-	7	5,5	8	3	9,00	0001629315
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0001700595
MF 12	1,00	•	100	14	-	9	7	10	3	11,00	0001813967
MF 12	1,25	•	100	14	-	9	7	10	3	10,75	0001814106
MF 12	1,50	•	100	14	-	9	7	10	3	10,50	0001814327
MF 14	1,50	•	100	18	-	11	9	12	4	12,50	0001814538
MF 16	1,50	•	100	18	-	12	9	12	4	14,50	0001704725
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0003458181
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001834414

Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

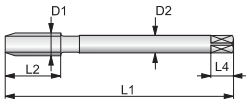
Agujeros ciegos profundos / *Deep blind holes.*

JMC

C40A/1

MF ISO-DIN 13	4xD	C 2-3 P	R40º	DIN 374	HSSE PM	ISO 2 6H

produr
Nogrip-1®



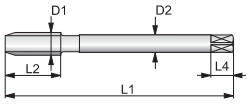
Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	3
mts./min.	20	12	3	10	8	20
	1 2			1 2		3

D1	P		L1	L2	L3	D2	a	L4	Z	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0004214943
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0004214029
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0004214170
MF 12	1,00	•	100	14	-	9	7	10	4	11	0004214230
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0004214390
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0004214451
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0004214511
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0004214661
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0004214722
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0004214882

C40A/1

MF ISO-DIN 13	4xD	C 2-3 P	R40º	DIN 374	HSSE PM	ISO 2 6H

produr
AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	3
mts./min.	20	12	3	10	8	20
	1 2			1 2		3

D1	P		L1	L2	L3	D2	a	L4	Z	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0003157412
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0003157783
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0003158354
MF 12	1,00	•	100	14	-	9	7	10	4	11	0003158083
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0003158625
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0003158906
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0003032027
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0003115665
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003115876
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003115384

Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

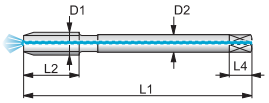
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos profundos / *Deep blind holes.*

C40A/1 KC

MF ISO-DIN 13 | 4xD | **C** 2-3 P | R40° KC | DIN 374 | HSSE PM | ISO 2 6H

produr *AltPlus*



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0003215039
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0003215240
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0003215460
MF 12	1,00	•	100	14	-	9	7	10	4	11	0003215731
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0003216954
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0003217194
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0003217304
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0003217525
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003217957
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003218196

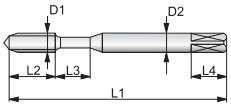
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C40A/1

MF ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 374 | HSSE PM | ISO 2 6H

prospeed *Nogrip-1®*



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0004215945
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0004215021
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0004215182
MF 12	1,00	•	100	14	-	9	7	10	4	11	0004215232
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0004215393
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0004215453
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0004215513
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0004215664
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0004215724
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0004215884

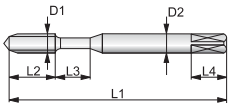
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

C40A/1

MF ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 374 | HSSE PM | ISO 2 6H

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

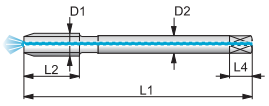
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0002790682
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0002790953
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0003150777
MF 12	1,00	•	100	14	-	9	7	10	4	11	0003150125
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0002791253
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0002791524
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0002791805
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0002792105
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0002792536
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0002792807

Macho adecuado para el roscado en aceros inoxidables.
For machining stainless steels.

C40A/1KC

MF ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° KC | DIN 374 | HSSE PM | ISO 2 6H

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0002797056
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0002797266
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0003167099
MF 12	1,00	•	100	14	-	9	7	10	4	11	0003167219
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0002797487
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0002797698
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0002797819
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0002798058
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0002798269
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0002798489

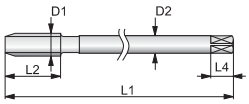
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

C40AX

MF ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | SIM. DIN 374 | HSSE PM | ISO 2 **6H**

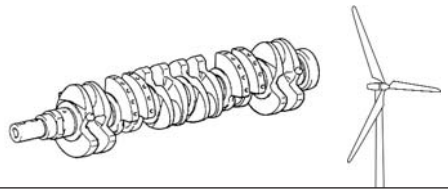
prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,50	•	125	14	-	9	7	10	4	10,5	0003189943
MF 14	1,50	•	125	18	-	11	9	12	4	12,5	0003125734
MF 16	1,50	•	125	18	-	12	9	12	4	14,5	0003190248

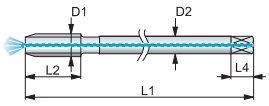
Macho extra-largo para roscados horizontales en aceros de viruta larga, soluciona el problema de evacuación de virutas en agujeros profundos.
Extra-long tap for horizontal working on long-chipping steels, solves the chip evacuation problem in deep holes.



C40AX KC

MF ISO-DIN 13 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° KC | SIM. DIN 374 | HSSE PM | ISO 2 **6H**

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

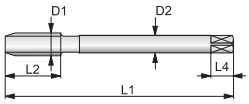
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,50	•	125	14	-	9	7	10	4	10,5	0003207396
MF 14	1,50	•	125	18	-	11	9	12	4	12,5	0003208941
MF 16	1,50	•	125	18	-	12	9	12	4	14,5	0003209180

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos / *Blind holes.*

JMC

C40A/1 | **MF** ISO-DIN 13 | **C** 2-3 P | C R40° | DIN 374 | HSSE PM | ISO 2 6H

prosoft
LubePlus

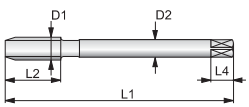


Material	GR1	GR2	GR5	GR6	
Subg.	1	1	1	1	2
mts./min.	25	25	25	20	30

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0003163080
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0003163361
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0003164082
MF 12	1,00	•	100	14	-	9	7	10	4	11	0003163632
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0003164363
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0003164634

C40A/1 | **MF** ISO-DIN 13 | **C** 2-3 P | C R40° | DIN 374 | HSSE PM | ISO 2 6H

prosoft
CromPlus



Material	GR5	GR6	
Subg.	1	1	2
mts./min.	30	20	30

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	11	-	6	4,9	8	3	7	0003163140
MF 10	1,00	•	90	12	-	7	5,5	8	3	9	0003163411
MF 10	1,25	•	100	12	-	7	5,5	8	3	8,75	0003164142
MF 12	1,00	•	100	14	-	9	7	10	4	11	0003163903
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0003164423
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0003164794

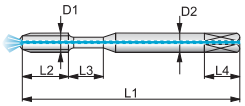
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

JMC

C40/1 KC | **MF** ISO-DIN 13 | **C** 2-3 P | R40° KC | DIN 374 | HSSE PM | ISO 2 6H

prosoft LubePlus

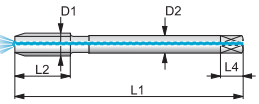


Material	GR1	GR2	GR5	GR6	
Subg.	1	1	1	1	2
mts./min.	25	25	25	20	30

D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	90	16	-	6	4,9	8	3	7	0003237983
MF 10	1,00	90	16	-	7	5,5	8	3	9	0003238122
MF 10	1,25	100	20	-	7	5,5	8	3	8,75	0003238343
MF 12	1,00	100	22	-	9	7	10	4	11	0003238554
MF 12	1,25	100	22	-	9	7	10	4	10,75	0003238775
MF 12	1,50	100	22	-	9	7	10	4	10,5	0003238985

C40/1 KC | **MF** ISO-DIN 13 | **C** 2-3 P | R40° KC | DIN 374 | HSSE PM | ISO 2 6H

prosoft CromPlus

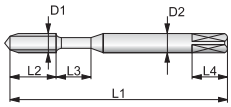


Material	GR5	GR6	
Subg.	1	1	2
mts./min.	30	20	30

D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	90	16	-	6	4,9	8	3	7	0003238062
MF 10	1,00	90	16	-	7	5,5	8	3	9	0003238283
MF 10	1,25	100	20	-	7	5,5	8	3	8,75	0003238494
MF 12	1,00	100	22	-	9	7	10	4	11	0003238614
MF 12	1,25	100	22	-	9	7	10	4	10,75	0003238825
MF 12	1,50	100	22	-	9	7	10	4	10,5	0003239064

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2	MF ISO-DIN 13	1xD	C 2-3P	≈DIN 371	HSSE Co5	ISO 2 (6H)
N						



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

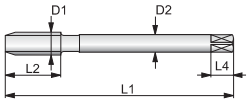
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 2*	0,25	•	45	8	-	2,8	2,1	5	3	1,75	0000696474
MF 2,2*	0,25	•	45	9	-	2,8	2,1	5	3	1,95	0001920282
MF 2,5	0,35	•	50	9	-	2,8	2,1	5	3	2,15	0000696534
MF 3	0,35	•	56	10	8	3,5	2,7	6	3	2,65	0001920342
MF 3,5	0,35	•	56	11	9	4	3	6	3	3,15	0000469073
MF 4	0,35	•	63	12	9	4,5	3,4	6	3	3,65	0001920403
MF 4	0,50	•	63	12	9	4,5	3,4	6	3	3,50	0000697486

* Tol. 4H

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/1	MF ISO-DIN 13	1xD	C 2-3P	DIN 374	HSSE Co5	ISO 2 (6H)	P 60°
N							



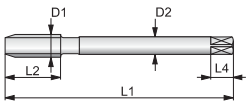
Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50		63	12	-	2,8	2,1	5	3	3,50	0000160225
MF 5	0,50	•	70	12	-	3,5	2,7	6	3	4,50	0000160436
MF 6	0,50	•	80	12	-	4,5	3,4	6	3	5,50	0000160657
MF 6	0,75	•	80	12	-	4,5	3,4	6	3	5,25	0000160717
MF 8	0,50	•	80	19	-	6	4,9	8	3	7,50	0000161448
MF 8	0,75	•	80	14	-	6	4,9	8	3	7,25	0000161659
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0000161870
MF 9	1,00	•	90	16	-	7	5,5	8	3	8,00	0000162220
MF 10	0,75	•	90	16	-	7	5,5	8	3	9,25	0000162441
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0000162652
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000162712
MF 11	1,00	•	100	20	-	8	6	10	3	10,00	0000680723
MF 11	1,25	•	100	20	-	8	6	10	3	9,75	0000680883
MF 12	0,75	•	100	22	-	9	7	10	3	11,25	0000163222
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0000163383
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0000163503
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0000163654
MF 14	1,00	•	100	22	-	11	9	12	4	13,00	0000163875
MF 14	1,25	•	100	22	-	11	9	12	4	12,75	0000163935
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0000164174
MF 15	1,00	•	100	22	-	12	9	12	4	14,00	0000164235
MF 15	1,50	•	100	22	-	12	9	12	4	13,50	0000164506
MF 16	1,00	•	100	22	-	12	9	12	4	15,00	0000164877
MF 16	1,25	•	100	22	-	12	9	12	4	14,75	0000164937
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0000165176
MF 18	1,00	•	110	22	-	14	11	14	4	17,00	0000165387
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0000165668
MF 18	2,00	•	125	28	-	14	11	14	4	16,00	0000165879
MF 20	1,00	•	125	22	-	16	12	15	4	19,00	0000165930
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0000166179
MF 20	2,00	•	140	28	-	16	12	15	4	18,00	0000166390
MF 22	1,00	•	125	25	-	18	14,5	17	4	21,00	0000166661
MF 22	1,50	•	125	25	-	18	14,5	17	4	20,50	0000166721
MF 22	2,00	•	140	34	-	18	14,5	17	4	20,00	0000166932
MF 24	1,00	•	140	28	-	18	14,5	17	4	23,00	0000167021

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/1	MF ISO-DIN 13	1xD	C 2-3P	DIN 374	HSSE Co5	ISO 2 (6H)	P 60°
N							



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

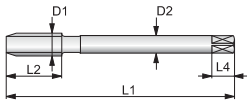
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 24	1,50	•	140	28	-	18	14,5	17	4	22,50	0000167231
MF 24	2,00	•	140	28	-	18	14,5	17	4	22,00	0000167392
MF 25	1,00	•	140	28	-	18	14,5	17	4	24,00	0000170946
MF 25	1,50	•	140	28	-	18	14,5	17	4	23,50	0000171025
MF 26	1,50	•	140	28	-	18	14,5	17	4	24,50	0000171186
MF 27	1,00	•	140	28	-	20	16	19	4	26,00	0000171246
MF 27	1,50	•	140	28	-	20	16	19	4	25,50	0000171396
MF 27	2,00	•	140	28	-	20	16	19	4	25,00	0000171457
MF 28	1,50	•	140	28	-	20	16	19	5	26,50	0000171517
MF 28	2,00	•	140	28	-	20	16	19	5	26,00	0000171677
MF 30	1,00	•	150	28	-	22	18	21	5	29,00	0000171728
MF 30	1,50	•	150	28	-	22	18	21	5	28,50	0000171888
MF 30	2,00	•	150	28	-	22	18	21	5	28,00	0000171949
MF 32	1,50	•	150	28	-	22	18	21	5	30,50	0000172027
MF 33	1,50	•	160	30	-	25	20	23	5	31,50	0000172188
MF 33	2,00	•	160	30	-	25	20	23	5	31,00	0000172248
MF 34	1,50	•	170	28	-	28	22	25	5	32,50	0000172309
MF 35	1,50	•	170	28	-	28	22	25	5	33,50	0000172459
MF 36	1,50	•	170	30	-	28	22	25	5	34,50	0000172519
MF 36	2,00	•	170	30	-	28	22	25	5	34,00	0000172670
MF 36	3,00	•	200	45	-	28	22	25	5	33,00	0000172730
MF 38	1,50	•	170	30	-	28	22	25	5	36,50	0000172881
MF 39	2,00	•	170	30	-	32	24	27	5	37,00	0000173020
MF 40	1,50	•	170	30	-	32	24	27	5	38,50	0000173241
MF 40	2,00	•	170	30	-	32	24	27	5	38,00	0000173301
MF 40	3,00	•	200	45	-	32	24	27	5	37,00	0000691472
MF 42	1,50	•	170	30	-	32	24	27	6	40,50	0000173451
MF 42	2,00	•	170	30	-	32	24	27	6	40,00	0000173512
MF 42	3,00	•	200	45	-	32	24	27	6	39,00	0000173672
MF 45	1,50	•	180	32	-	36	29	32	6	43,50	0000173732
MF 45	2,00	•	180	32	-	36	29	32	6	43,00	0000173883
MF 45	3,00	•	200	45	-	36	29	32	6	42,00	0000173943
MF 48	1,50	•	190	32	-	36	29	32	6	46,50	0000174032
MF 48	2,00	•	190	32	-	36	29	32	6	46,00	0000174182
MF 48	3,00	•	225	45	-	36	29	32	6	45,00	0000174243
MF 50	1,50	•	190	32	-	36	29	32	6	48,50	0000174303
MF 52	1,50	•	190	32	-	40	32	35	6	50,50	0000174514

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/1 | **SILUM** | ***AltPlus***

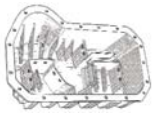
MF ISO-DIN 13 | **C** 2-3P | DIN 374 | HSSE Co5 | ISO 2x (6HX)



Material	GR4		GR6	
Subg.	3		3	4
mts./min.	30	35	20-25	30-35
	1 2 6		5 6	

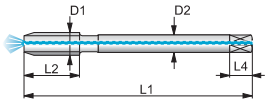
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	4	7	0001925845
MF 10	1,00	•	90	16	-	7	5,5	8	4	9	0001925906
MF 10	1,25	•	100	20	-	7	5,5	8	4	8,75	0001926085
MF 12	1,00	•	100	22	-	9	7	10	4	11	0001926145
MF 12	1,25	•	100	22	-	9	7	10	4	10,75	0001926205
MF 12	1,50	•	100	22	-	9	7	10	4	10,5	0001926356
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0001926416
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0001926577
MF 18	1,50		110	22	-	14	11	14	4	16,5	0001926637
MF 20	1,50		125	22	-	16	12	15	4	18,5	0001926787
MF 22	1,50		125	25	-	18	14,5	17	4	20,5	0001926848

Macho de alto rendimiento para el roscado en aluminio con Si>8%.
High performance tap suitable for aluminium with Si>8%.



C/1 KC | **SILUM** | ***AltPlus***

MF ISO-DIN 13 | **C** 2-3P | KC | DIN 374 | HSSE Co5 | ISO 2x (6HX)



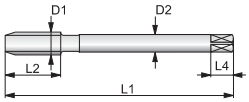
Material	GR4		GR6	
Subg.	3		3	4
mts./min.	30	35	20-25	30-35
	1 2 6		5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	4	7	0003469693
MF 10	1,00	•	90	16	-	7	5,5	8	4	9	0003469753
MF 10	1,25	•	100	20	-	7	5,5	8	4	8,75	0003469814
MF 12	1,00	•	100	22	-	9	7	10	4	11	0003469964
MF 12	1,25	•	100	22	-	9	7	10	4	10,75	0003470048
MF 12	1,50	•	100	22	-	9	7	10	4	10,5	0003470109
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0003470269
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0003470320
MF 18	1,50		110	22	-	14	11	14	4	16,5	0003470470
MF 20	1,50		125	22	-	16	12	15	4	18,5	0003470530
MF 22	1,50		125	25	-	18	14,5	17	4	20,5	0003470691

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

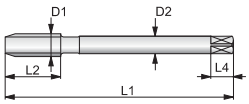
C/1 | **CONEX** | ***C.D.I.®*** | **MF** ISO-DIN 13 | **C** 2-3P | DIN 374 | **HSSE** Co5 | ISO 2x (6HX)



Material	GR4
Subg.	1 2 3
mts./min.	30-35 25-30 20-25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	4	7	0001285483
MF 10	1,00	•	90	16	-	7	5,5	8	4	9	0001158850
MF 10	1,25	•	100	20	-	7	5,5	8	4	8,75	0000679725
MF 12	1,00	•	100	22	-	9	7	10	4	11	0001285543
MF 12	1,25	•	100	22	-	9	7	10	4	10,75	0001074009
MF 12	1,50	•	100	22	-	9	7	10	4	10,5	0001021944
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0000682948
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0000684732
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0001285603
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0001833351
MF 22	1,50	•	125	25	-	18	14,5	17	4	20,5	0001551486

C/1 | **CONEX** | ***AltPlus*** | **MF** ISO-DIN 13 | **C** 2-3P | DIN 374 | **HSSE** Co5 | ISO 2x (6HX)



Material	GR4	GR5	GR6
Subg.	1 2 3	2 6	4
mts./min.	30-35 25-30 20-25	20-25 15-20	30-40

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	4	7	0001285974
MF 10	1,00	•	90	16	-	7	5,5	8	4	9	0001286053
MF 10	1,25	•	100	20	-	7	5,5	8	4	8,75	0001286274
MF 12	1,00	•	100	22	-	9	7	10	4	11	0001286485
MF 12	1,25	•	100	22	-	9	7	10	4	10,75	0001286545
MF 12	1,50	•	100	22	-	9	7	10	4	10,5	0001198111
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0000682888
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0001286606
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0001286977
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0001984561
MF 22	1,50	•	125	25	-	18	14,5	17	4	20,5	0001551547

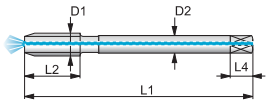
Macho de alto rendimiento para el roscado en fundición gris y nodular.
High performance tap suitable for nodular as well as grey cast iron.

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/1 KC	MF ISO-DIN 13	C 2-3P	KC	DIN 374	HSSE Co5	ISO 2x (6HX)	P 60°

CONEX
AltPlus



Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40
	6			6		5 6

D1	P	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	90	18	-	6	4,9	8	4	7	0003469101
MF 10	1,00	90	16	-	7	5,5	8	4	9	0003469261
MF 10	1,25	100	20	-	7	5,5	8	4	8,75	0002334418
MF 12	1,00	100	22	-	9	7	10	4	11	0003469322
MF 12	1,25	100	22	-	9	7	10	4	10,75	0003469472
MF 12	1,50	100	22	-	9	7	10	4	10,5	0002013160
MF 14	1,50	100	22	-	11	9	12	4	12,5	0002013371
MF 16	1,50	100	22	-	12	9	12	4	14,5	0002013592
MF 18	1,50	110	22	-	14	11	14	4	16,5	0002013703
MF 20	1,50	125	22	-	16	12	15	4	18,5	0002013923
MF 22	1,50	125	25	-	18	14,5	17	4	20,5	0003469533

Macho de alto rendimiento para el roscado en fundición gris y nodular.
High performance tap suitable for nodular as well as grey cast iron.

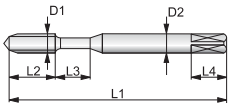
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C/1

MF ISO-DIN 13 | **C** 2-3 P | DIN 374 | HSSE PM | ISO 2X 6HX

pronex AltPlus



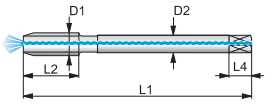
Material	GR4
Subg.	1 3
mts./min.	25 18

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0003192735
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0003192955
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0003193195
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0003193466
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003193676
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003193897

C/1 KC

MF ISO-DIN 13 | **C** 2-3 P | **KC** | DIN 374 | HSSE PM | ISO 2X 6HX

pronex AltPlus



Material	GR4
Subg.	1 3
mts./min.	25 18

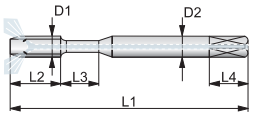
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0003204389
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0003204711
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0003205231
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0003205874
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003206394
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003206936

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C/1 KL | **MF** ISO-DIN 13 | | **C** 2-3 P | **KL** | DIN 374 | HSSE PM | ISO 2X 6HX |

pronex
AltPlus



Material	GR4	
Subg.	1	3
mts./min.	25	18

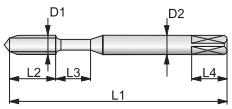
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 12	1,25	•	100	14	-	9	7	10	4	10,75	0003204500
MF 12	1,50	•	100	14	-	9	7	10	4	10,5	0003204932
MF 14	1,50	•	100	18	-	11	9	12	4	12,5	0003205502
MF 16	1,50	•	100	18	-	12	9	12	4	14,5	0003206013
MF 18	1,50	•	110	22	-	14	11	14	4	16,5	0003206725
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003207025

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/2
N

MF ISO-DIN 13	B 3,5-5 P	≈DIN 371	HSSE Co5	ISO 2 (6H)



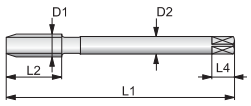
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 2*	0,25	•	45	8	-	2,8	2,1	5	3	1,75	0001386130
MF 2,2*	0,25	•	45	9	-	2,8	2,1	5	3	1,95	0001920131
MF 2,5	0,35	•	50	9	-	2,8	2,1	5	3	2,15	0000760923
MF 3	0,35	•	56	10	8	3,5	2,7	6	3	2,65	0000761223
MF 3,5	0,35	•	56	11	9	4	3	6	3	3,15	0000761715
MF 4	0,35	•	63	12	9	4,5	3,4	6	3	3,65	0001920071
MF 4	0,50	•	63	12	9	4,5	3,4	6	3	3,50	0000762175
MF 5	0,50	•	70	14	11	6	4,9	8	3	4,50	0000762938
MF 6	0,50	•	80	16	14	6	4,9	8	3	5,50	0000763508
MF 6	0,75	•	80	16	14	6	4,9	8	3	5,25	0000764019

* Tol. 4H

PS/1
N

MF ISO-DIN 13	B 3,5-5 P	DIN 374	HSSE Co5	ISO 1 (4H) ISO 2 (6H) ISO 3 (6G)



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

ISO 2 (6H)

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50		63	12	-	2,8	2,1	5	3	3,50	0001198763
MF 5	0,50		70	12	-	3,5	2,7	6	3	4,50	0000177681
MF 6	0,50		80	12	-	4,5	3,4	6	3	5,50	0000177732
MF 6	0,75		80	12	-	4,5	3,4	6	3	5,50	0000746900
MF 8	0,75	•	80	14	-	6	4,9	8	3	7,50	0000747631
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0000177952
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0000178031
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000178192
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0000178252
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0000178312
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0000178463
MF 14	1,00	•	100	22	-	11	9	12	4	13,00	0000178523
MF 14	1,25	•	100	22	-	11	9	12	4	12,75	0000178683
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0000178744
MF 15	1,50	•	100	22	-	12	9	12	4	13,50	0000178894

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/1

N

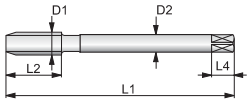
MF ISO-DIN 13

B 3,5-5 P

DIN 374

HSSE Co5

ISO 1 (4H) MJ
ISO 2 (6H)
ISO 3 (6G)



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	MF 16	1,00	•	100	22	-	12	9	12	4	15,00	0000751586
	MF 16	1,25	•	100	22	-	12	9	12	4	14,75	0001204183
	MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0000178955
	MF 18	1,00	•	110	22	-	14	11	14	4	17,00	0000179033
	MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0000179194
	MF 18	2,00	•	125	28	-	14	11	14	4	16,00	0000179254
	MF 20	1,00	•	125	22	-	16	12	15	4	19,00	0000179315
	MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0000179465
	MF 20	2,00	•	140	28	-	16	12	15	4	18,00	0000179525
	MF 22	1,00	•	125	25	-	18	14,5	17	4	21,00	0001197540
	MF 22	1,50	•	125	25	-	18	14,5	17	4	20,50	0000179686
	MF 22	2,00	•	140	34	-	18	14,5	17	4	20,00	0000179746
	MF 24	1,00	•	140	28	-	18	14,5	17	4	23,00	0001197600
	MF 24	1,50	•	140	28	-	18	14,5	17	4	22,50	0000179806
	MF 24	2,00	•	140	28	-	18	14,5	17	4	22,00	0000179957
	MF 26	1,50	•	140	28	-	18	14,5	17	4	24,50	0000180031
	MF 27	1,50	•	140	28	-	20	16	19	4	25,50	0000754643
	MF 27	2,00	•	140	28	-	20	16	19	4	25,00	0000180192
	MF 28	1,50	•	140	28	-	20	16	19	5	26,50	0000180252
	MF 30	1,50	•	150	28	-	22	18	21	5	28,50	0000180312
	MF 30	2,00	•	150	28	-	22	18	21	5	28,50	0001288499
	MF 32	1,50	•	150	28	-	22	18	21	5	30,50	0000180463
	MF 33	1,50	•	160	30	-	25	20	23	5	31,50	0000180523
	MF 33	2,00	•	160	30	-	25	20	23	5	31,00	0000180683
	MF 36	1,50	•	170	30	-	28	22	25	5	34,50	0000180804
ISO 3 (6G)	MF 8	1,00	•	90	16	-	6	4,9	8	3	7,00	0001034969
	MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0000748794
	MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000749365
	MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0001800189
	MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0001648068
	MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0001799981
ISO 1 (4H) MJ	MF 8	1,00		90	16	-	6	4,9	8	3	7,00	0001937216
	MF 10	1,25		100	20	-	7	5,5	8	3	8,75	0001029521
	MF 12	1,25		100	22	-	9	7	10	3	10,75	0001029681

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

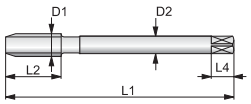
JMC

PS/1

N

Nogrip-1®

MF ISO-DIN 13	**B** 3,5-5 P	DIN 374	HSSE Co5	ISO 2 (6H) ISO 3 (6G)



Material	GR1		GR2		GR3		GR9	
Subg.	1,2,4,5		6		1,2,3		1	
mts./min.	10	15	10	15	8	13	7	12
	1 2		1 2		1 2 3 4		3 4	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	MF 4	0,50		63	12	-	2,8	2,1	5	3	3,50	0001529661
	MF 5	0,50		70	12	-	3,5	2,7	6	3	4,50	0001385770
	MF 6	0,50		80	12	-	4,5	3,4	6	3	5,50	0001931915
	MF 6	0,75		80	12	-	4,5	3,4	6	3	5,50	0001932094
	MF 8	0,75		80	14	-	6	4,9	8	3	7,50	0001932154
	MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0001376051
	MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0000748363
	MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000749094
	MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0001566627
	MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0000985290
	MF 12	1,50		100	22	-	9	7	10	3	10,50	0000749917
	MF 14	1,00		100	22	-	11	9	12	4	13,00	0000985350
	MF 14	1,25	•	100	22	-	11	9	12	4	12,75	0000985411
	MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0001175238
	MF 15	1,50		100	22	-	12	9	12	4	13,50	0000985571
	MF 16	1,00		100	22	-	12	9	12	4	15,00	0001932205
	MF 16	1,25		100	22	-	12	9	12	4	14,75	0001513859
	MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0000985621
	MF 18	1,00		110	22	-	14	11	14	4	17,00	0001725964
	MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0000985782
	MF 18	2,00		125	28	-	14	11	14	4	16,00	0000985842
	MF 20	1,00		125	22	-	16	12	15	4	19,00	0001726053
	MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001932365
	MF 20	2,00		140	28	-	16	12	15	4	18,00	0001932425
	MF 22	1,00		125	25	-	18	14,5	17	4	21,00	0000753379
	MF 22	1,50	•	125	25	-	18	14,5	17	4	20,50	0001528668
	MF 22	2,00		140	34	-	18	14,5	17	4	20,00	0001932586
	MF 24	1,00		140	28	-	18	14,5	17	4	23,00	0001932636
	MF 24	1,50	•	140	28	-	18	14,5	17	4	22,50	0001528729
	MF 24	2,00		140	28	-	18	14,5	17	4	22,00	0001932796
	MF 26	1,50		140	28	-	18	14,5	17	4	24,50	0001528889
	MF 27	1,50		140	28	-	20	16	19	4	25,50	0001933428
	MF 27	2,00		140	28	-	20	16	19	4	25,00	0001933588
	MF 28	1,50		140	28	-	20	16	19	5	26,50	0001933648
	MF 30	1,50		150	28	-	22	18	21	5	28,50	0001528939
	MF 30	2,00		150	28	-	22	18	21	5	28,50	0001933799
	MF 32	1,50		150	28	-	22	18	21	5	30,50	0001933859
	MF 33	1,50		160	30	-	25	20	23	5	31,50	0001933910
	MF 33	2,00		160	30	-	25	20	23	5	31,00	0001934098
	MF 36	1,50		170	30	-	28	22	25	5	34,50	0001934159
ISO 3 (6G)	MF 8	1,00		90	18	-	6	4,9	8	3	7,00	0001035269
	MF 10	1,00		90	16	-	7	5,5	8	3	9,00	0001936645
	MF 10	1,25		100	20	-	7	5,5	8	3	8,75	0001936706
	MF 12	1,00		100	22	-	9	7	10	3	11,00	0001936866
	MF 12	1,25		100	22	-	9	7	10	3	10,75	0001936916
	MF 12	1,50		100	22	-	9	7	10	3	10,50	0001937005

Machos de roscar a máquina. Agujeros pasantes
Machine taps. *Through holes*

JMC

PS/1

N

TiN

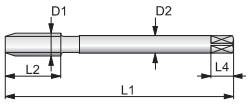
MF ISO-DIN 13

B 3,5-5 P

DIN 374

HSSE Co5

ISO 2 (6H)



Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3		3		1	2	1
mts./min.	15-20	13-18	15	20	13	18	20	25	10-15	13-17	15-25
	1 2		1 2		1 2 3 4		5 6		3 4		

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50		63	12	-	2,8	2,1	5	3	3,50	0001934219
MF 5	0,50		70	12	-	3,5	2,7	6	3	4,50	0001934360
MF 6	0,50		80	12	-	4,5	3,4	6	3	5,50	0001934420
MF 6	0,75		80	12	-	4,5	3,4	6	3	5,50	0000747099
MF 8	0,75		80	14	-	6	4,9	8	3	7,50	0001389417
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0000747913
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0001085170
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000749154
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0001566566
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0001169500
MF 12	1,50		100	22	-	9	7	10	3	10,50	0001021663
MF 14	1,00		100	22	-	11	9	12	4	13,00	0001934580
MF 14	1,25	•	100	22	-	11	9	12	4	12,75	0001934641
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0001107727
MF 15	1,50		100	22	-	12	9	12	4	13,50	0001934701
MF 16	1,00		100	22	-	12	9	12	4	15,00	0001934851
MF 16	1,25		100	22	-	12	9	12	4	14,75	0001934912
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0001037474
MF 18	1,00		110	22	-	14	11	14	4	17,00	0001935091
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001726816
MF 18	2,00		125	28	-	14	11	14	4	16,00	0001935151
MF 20	1,00		125	22	-	16	12	15	4	19,00	0001344012
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001225825
MF 20	2,00		140	28	-	16	12	15	4	18,00	0001935211
MF 22	1,00		125	25	-	18	14,5	17	4	21,00	0001935372
MF 22	1,50	•	125	25	-	18	14,5	17	4	20,50	0001546530
MF 22	2,00		140	34	-	18	14,5	17	4	20,00	0001935422
MF 24	1,00		140	28	-	18	14,5	17	4	23,00	0001935583
MF 24	1,50	•	140	28	-	18	14,5	17	4	22,50	0001937647
MF 24	2,00		140	28	-	18	14,5	17	4	22,00	0001935643
MF 26	1,50		140	28	-	18	14,5	17	4	24,50	0001935703
MF 27	1,50		140	28	-	20	16	19	4	25,50	0001935854
MF 27	2,00		140	28	-	20	16	19	4	25,00	0001935914
MF 28	1,50		140	28	-	20	16	19	5	26,50	0001936003
MF 30	1,50		150	28	-	22	18	21	5	28,50	0001335156
MF 30	2,00		150	28	-	22	18	21	5	28,50	0001936153
MF 32	1,50		150	28	-	22	18	21	5	30,50	0001936214
MF 33	1,50		160	30	-	25	20	23	5	31,50	0001936374
MF 33	2,00		160	30	-	25	20	23	5	31,00	0001936434
MF 36	1,50		170	30	-	28	22	25	5	34,50	0001936585

Machos de roscar a máquina / *Machine taps*

Para roscado sincronizado. Agujeros pasantes / *For rigid tapping. Through holes*

PS/1

TRUNC

Nogrip-1®

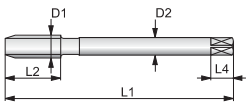
MF ISO-DIN 13

B 3,5-5 P

DIN 374

HSSE Co5

ISO 2 (6H)



Material	GR1		GR2		GR3		GR8		GR9	
Subg.	1,2,3,4,5		4,5,6,7		1,2,3		1		1	
mts./min.	8	13	8	13	5	8	3	6	7	12
	1 2		1 2		1 2 3 4		3 4		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50		63	12	-	2,8	2,1	5	3	3,50	0001198974
MF 5	0,50		70	12	-	3,5	2,7	6	3	4,50	0001199273
MF 6	0,50		80	12	-	4,5	3,4	6	3	5,50	0001199544
MF 6	0,75		80	12	-	4,5	3,4	6	3	5,50	0001199826
MF 8	0,75		80	14	-	6	4,9	8	3	7,50	0001200184
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0001200455
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0001200726
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0001201026
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0001201458
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0001201739
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0001202028
MF 14	1,00		100	22	-	11	9	12	4	13,00	0001202300
MF 14	1,25		100	22	-	11	9	12	4	12,75	0001202671
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0001203302
MF 15	1,50		100	22	-	12	9	12	4	13,50	0001203673
MF 16	1,00		100	22	-	12	9	12	4	15,00	0001203944
MF 16	1,25		100	22	-	12	9	12	4	14,75	0001204304
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0001204675
MF 18	1,00		110	22	-	14	11	14	4	17,00	0001205035
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001205306
MF 18	2,00		125	28	-	14	11	14	4	16,00	0001205738
MF 20	1,00		125	22	-	16	12	15	4	19,00	0001206037
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001206309
MF 20	2,00		140	28	-	16	12	15	4	18,00	0001206680
MF 22	1,00		125	25	-	18	14,5	17	4	21,00	0001206951
MF 22	1,50		125	25	-	18	14,5	17	4	20,50	0001207251
MF 22	2,00		140	34	-	18	14,5	17	4	20,00	0001207522
MF 24	1,00		140	28	-	18	14,5	17	4	23,00	0001207893
MF 24	1,50		140	28	-	18	14,5	17	4	22,50	0001208192
MF 24	2,00		140	28	-	18	14,5	17	4	22,00	0001208464
MF 26	1,50		140	28	-	18	14,5	17	4	24,50	0001208745
MF 27	1,50		140	28	-	20	16	19	4	25,50	0001209044
MF 27	2,00		140	28	-	20	16	19	4	25,00	0001209255
MF 28	1,50		140	28	-	20	16	19	5	26,50	0001209687
MF 30	1,50		150	28	-	22	18	21	5	28,50	0001209958
MF 32	1,50		150	28	-	22	18	21	5	30,50	0001210253
MF 33	1,50		160	30	-	25	20	23	5	31,50	0001210524
MF 33	2,00		160	30	-	25	20	23	5	31,00	0001210805
MF 36	1,50		170	30	-	28	22	25	5	34,50	0001211105

Machos de roscar a máquina / *Machine taps*

Para roscado sincronizado. Agujeros pasantes / *For rigid tapping. Through holes*

PS/1

TRUNC

LubePlus

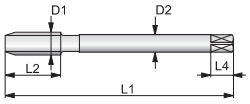
MF ISO-DIN 13

B 3,5-5 P

DIN 374

HSSE Co5

ISO 2 (6H)



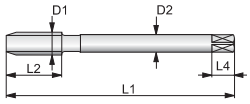
Material	GR1		GR2		GR3				GR6		GR8	
Subg.	1,2,3,4,5,6		1,2,3,4,5,6,7,8		1,2,3				3		1	
mts./min.	13-8	11-14	13-8	11-14	10		13		15	25	8	11
	1 2		1 2		1 2 3 4				5 6		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50		63	12	-	2,8	2,1	5	3	3,50	0001946663
MF 5	0,50		70	12	-	3,5	2,7	6	3	4,50	0001946714
MF 6	0,50		80	12	-	4,5	3,4	6	3	5,50	0001946874
MF 6	0,75		80	12	-	4,5	3,4	6	3	5,50	0001946935
MF 8	0,75		80	14	-	6	4,9	8	3	7,50	0001947013
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0001942383
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0001552488
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0001942434
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0001942594
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0001942654
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0001943446
MF 14	1,00		100	22	-	11	9	12	4	13,00	0001943596
MF 14	1,25		100	22	-	11	9	12	4	12,75	0001943657
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0001943717
MF 15	1,50		100	22	-	12	9	12	4	13,50	0001943165
MF 16	1,00		100	22	-	12	9	12	4	15,00	0001943877
MF 16	1,25		100	22	-	12	9	12	4	14,75	0001943928
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0001944017
MF 18	1,00		110	22	-	14	11	14	4	17,00	0001944167
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001944227
MF 18	2,00		125	28	-	14	11	14	4	16,00	0001944388
MF 20	1,00		125	22	-	16	12	15	4	19,00	0001944448
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001944508
MF 20	2,00		140	28	-	16	12	15	4	18,00	0001944659
MF 22	1,00		125	25	-	18	14,5	17	4	21,00	0001944719
MF 22	1,50		125	25	-	18	14,5	17	4	20,50	0001944870
MF 22	2,00		140	34	-	18	14,5	17	4	20,00	0001947174
MF 24	1,00		140	28	-	18	14,5	17	4	23,00	0001945019
MF 24	1,50		140	28	-	18	14,5	17	4	22,50	0001945179
MF 24	2,00		140	28	-	18	14,5	17	4	22,00	0001945220
MF 26	1,50		140	28	-	18	14,5	17	4	24,50	0001945380
MF 27	1,50		140	28	-	20	16	19	4	25,50	0001945440
MF 27	2,00		140	28	-	20	16	19	4	25,00	0001945501
MF 28	1,50		140	28	-	20	16	19	5	26,50	0001945651
MF 30	1,50		150	28	-	22	18	21	5	28,50	0001945712
MF 32	1,50		150	28	-	22	18	21	5	30,50	0001945872
MF 33	1,50		160	28	-	25	20	23	5	31,50	0001945932
MF 33	2,00		160	30	-	25	20	23	5	31,00	0001947385
MF 36	1,50		170	30	-	28	22	25	5	34,50	0001947234

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/1 | **VAF** | ***Nogrip-1®***

MF ISO-DIN 13 | **B** 3,5-5 P | DIN 374 | HSSE Co5 | ISO 2 (6H)

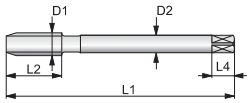


Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	8	13	5	10	15	20
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0000446311
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0000446742
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000447192
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0000447524
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0000447955
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0000448315
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0000448747
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0000449107
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0001197058
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0001197339

PS/1 | **VAF** | ***TiCN***

MF ISO-DIN 13 | **B** 3,5-5 P | DIN 374 | HSSE Co5 | ISO 2 (6H)



Material	GR1		GR2		GR3		GR4		GR5		GR9	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4		2	
mts./min.	13	18	15-20	13-18	9	11	20	25	10	20	4	6
	1 2		1 2		1 2 3 4		6		5 6		3 4	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0000446682
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0000447042
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0000447473
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0000447805
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0000448255
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0000448686
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0000449046
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0000449478
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0003458522
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0003458672

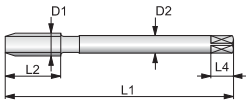
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

JMC

PS/1	MF ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE PM	ISO 2 6H

produr **Nogrip-1®**

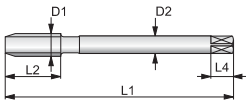


Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4
	1 2 3			1 2		3	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	22	-	16	12	15	3	18,5	0004216947
MF 10	1,00	•	90	18	-	6	4,9	8	3	7	0004216024
MF 10	1,25	•	100	16	-	7	5,5	8	3	9	0004216184
MF 12	1,00	•	100	20	-	7	5,5	8	3	8,75	0004216244
MF 12	1,25	•	100	22	-	9	7	10	3	11	0004216395
MF 12	1,50	•	100	22	-	9	7	10	3	10,75	0004216455
MF 14	1,50	•	100	22	-	9	7	10	4	10,5	0004216516
MF 16	1,50	•	100	22	-	11	9	12	4	12,5	0004216676
MF 18	1,50	•	110	22	-	12	9	12	4	14,5	0004216726
MF 20	1,50	•	125	22	-	14	11	14	4	16,5	0004216887

PS/1	MF ISO-DIN 13	B 3,5-5 P	DIN 376	HSSE PM	ISO 2 6H

produr **AltPlus**



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4
	1 2 3			1 2		3	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	22	-	16	12	15	3	18,5	0003154345
MF 10	1,00	•	90	18	-	6	4,9	8	3	7	0003154626
MF 10	1,25	•	100	16	-	7	5,5	8	3	9	0003155297
MF 12	1,00	•	100	20	-	7	5,5	8	3	8,75	0003154997
MF 12	1,25	•	100	22	-	9	7	10	3	11	0003155568
MF 12	1,50	•	100	22	-	9	7	10	3	10,75	0003155839
MF 14	1,50	•	100	22	-	9	7	10	4	10,5	0003156138
MF 16	1,50	•	100	22	-	11	9	12	4	12,5	0003156400
MF 18	1,50	•	110	22	-	12	9	12	4	14,5	0003156831
MF 20	1,50	•	125	22	-	14	11	14	4	16,5	0003157131

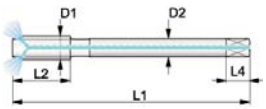
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/1 KL

MF ISO-DIN 13 | **B** 3,5-5 P | KL | DIN 374 | HSSE PM | ISO 2 6H

produr
AltPlus



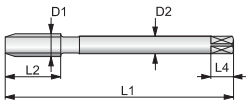
Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	22	15	4	12	10	25	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7	0003231548
MF 10	1,00	•	90	16	-	7	5,5	8	3	9	0003231759
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003231970
MF 12	1,00	•	100	22	-	9	7	10	3	11	0003232119
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003232330
MF 12	1,50	•	100	22	-	9	7	10	3	10,5	0003232540
MF 14	1,50	•	100	22	-	11	9	12	4	12,5	0003232761
MF 16	1,50	•	100	22	-	12	9	12	4	14,5	0003232972
MF 18	1,50	•	100	22	-	12	9	12	4	14,5	0003233111
MF 20	1,50	•	125	22	-	16	12	15	4	18,5	0003233332

PS/1

MF ISO-DIN 13 | viruta larga *long chip* | **B** 3,5-5 P | DIN 374 | HSSE PM | ISO 2 6H

prospeed
Nogrip-1®



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0004217949
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0004217026
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0004217186
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0004217247
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0004217307
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0004217457
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0004217518
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0004217678
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0004217739
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0004217889

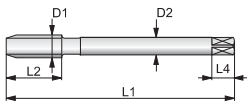
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/1

prospeed
LubePlus

MF ISO-DIN 13 | viruta larga *long chip* | **B** 3,5-5 P | DIN 374 | HSSE PM | ISO 2 6H



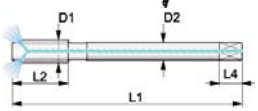
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0003151127
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0003151408
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003152079
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0003151779
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003152340
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0003152611
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0003152982
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0003153342
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0003153614
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0003153995

PS/1 KL

prospeed
LubePlus

MF ISO-DIN 13 | viruta larga *long chip* | **B** 3,5-5 P | KL | DIN 374 | HSSE PM | ISO 2 6H



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0003227102
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0003227323
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003227533
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0003227754
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003228054
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0003228265
MF 14	1,50	•	100	22	-	11	9	12	4	12,50	0003228485
MF 16	1,50	•	100	22	-	12	9	12	4	14,50	0003228696
MF 18	1,50	•	110	22	-	14	11	14	4	16,50	0003228817
MF 20	1,50	•	125	22	-	16	12	15	4	18,50	0003229056

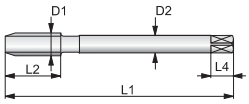
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/1 | **MF** ISO-DIN 13 | **B** 3,5-5 P | DIN 374 | HSSE PM | ISO 2 6H

prosoft

LubePlus



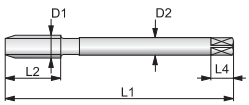
Material	GR1	GR2	GR5	GR6	
Subg.	1	1	1	1	2
mts./min.	25	25	20	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0003159145
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0003159416
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003160846
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0003160083
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003161145
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0003162087

PS/1 | **MF** ISO-DIN 13 | **B** 3,5-5 P | DIN 374 | HSSE PM | ISO 2 6H

prosoft

CromPlus



Material	GR5	GR6	
Subg.	1	1	2
mts./min.	25	18	25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0003159296
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0003159577
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003160906
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0003160293
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003161416
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0003162208

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

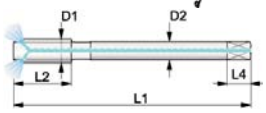
Agujeros pasantes / *Through holes.*

JMC

PS/1 KL

prosoft
LubePlus

MF ISO-DIN 13 | **B** 3,5-5 P | KL | DIN 374 | HSSE PM | ISO 2 6H



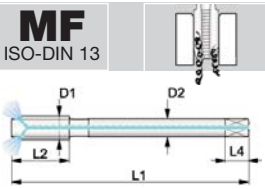
Material	GR1	GR2	GR5	GR6	
Subg.	1	1	1	1	2
mts./min.	30	30	25	20	30

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0003235126
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0003235336
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003235557
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0003235768
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003235989
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0003236128

PS/1 KL

prosoft
CromPlus

MF ISO-DIN 13 | **B** 3,5-5 P | KL | DIN 374 | HSSE PM | ISO 2 6H

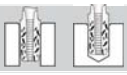


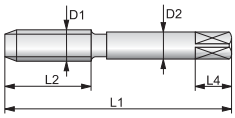
Material	GR5	GR6	
Subg.	1	1	2
mts./min.	30	20	30

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 8	1,00	•	90	18	-	6	4,9	8	3	7,00	0003235276
MF 10	1,00	•	90	16	-	7	5,5	8	3	9,00	0003235497
MF 10	1,25	•	100	20	-	7	5,5	8	3	8,75	0003235607
MF 12	1,00	•	100	22	-	9	7	10	3	11,00	0003235828
MF 12	1,25	•	100	22	-	9	7	10	3	10,75	0003236067
MF 12	1,50	•	100	22	-	9	7	10	3	10,50	0003236278

Machos de roscar a mano. Agujeros ciegos y pasantes
Set of hand taps. Blind and through holes

JMC

JUEGO	BSW BS 84		1° -4P 2° -3P 3° -2P (C) progresiva / progressive		DIN 352	HSS	ISO 2 (6H)	



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

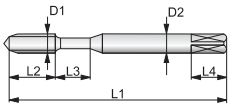
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
W 3/32	48	•	40	9	-	2,8	2,1	5	3	1,8	0000254011
W 1/8	40	•	40	11	-	3,5	2,7	6	3	2,5	0000254172
W 5/32	32	•	45	13	-	4,5	3,4	6	3	3,1	0000254232
W 3/16	24	•	50	16	-	5,5	4,3	7	3	3,7	0000254383
W 7/32	24	•	50	17	-	6	4,9	8	3	4,5	0000254443
W 1/4	20	•	56	19	-	6	4,9	8	3	5,1	0000254503
W 5/16	18	•	63	22	-	6	4,9	8	3	6,5	0000254664
W 3/8	16	•	70	22	-	7	5,5	8	3	7,9	0000254724
W 7/16	14	•	70	24	-	8	6,2	9	3	9,2	0000254874
W 1/2	12	•	80	29	-	9	7	10	4	10,4	0000254935
W 9/16	12	•	80	30	-	11	9	12	4	12	0000255014
W 5/8	11	•	80	32	-	12	9	12	4	13,4	0000255174
W 3/4	10	•	105	35	-	14	11	14	4	16,25	0000255395
W 7/8	9	•	110	40	-	18	14,5	17	4	19,25	0000255445
W 1"	8	•	110	50	-	20	16	19	4	22	0000255506
W 1"1/8	7	•	132	56	-	22	18	21	4	24,5	0000255666
W 1"1/4	7	•	132	56	-	25	20	23	4	27,75	0000255726
W 1"3/8	6	•	150	63	-	28	22	25	4	30,5	0000255877
W 1"1/2	6	•	150	63	-	32	24	27	4	33,5	0000255937
W 1"5/8	5	•	160	70	-	32	24	27	4	35,5	0000256026
W 1"3/4	5	•	160	70	-	36	29	32	4	38,5	0000256176
W 1"7/8	4,5	•	190	80	-	36	29	32	4	41,5	0000256237
W 2"	4,5	•	190	80	-	40	32	35	6	44,5	0000256397
W 2" 1/4	4	•	200	85	-	45	35	38	6	50	0001754154
W 2" 1/2	4	•	220	85	-	50	39	42	8	56,5	0000981993
W 2" 3/4	3,5	•	220	90	-	56	44	47	8	62	0001754585
W 3"	3,5	•	236	90	-	56	44	47	8	68	0001754917

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

N

BSW BS 84	2,5÷3xD	C 2-3P	R35°	≈DIN 371	HSSE Co5	P 55°



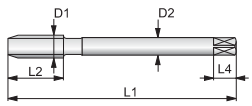
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
W 1/8	40	•	56	6	12	3,5	2,7	6	3	2,50	0000187268
W 5/32	32	•	63	7	13	4,5	3,4	6	3	3,10	0000187328
W 3/16	24	•	70	8	15	6	4,9	8	3	3,70	0000187489
W 1/4	20	•	80	10	19	6	4,9	8	3	5,10	0000187539
W 5/16	18	•	90	11	22	8	6,2	9	3	6,50	0000187699
W 3/8	16	•	100	12	26	10	8	11	3	7,90	0000187750

C35A/1

N

BSW BS 84	2,5÷3xD	C 2-3P	R35°	≈DIN 376	HSSE Co5	P 55°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

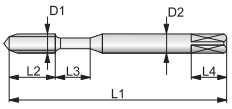
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
W 1/4	20		80	10	-	4,5	3,4	6	3	5,10	0000187810
W 5/16	18		90	11	-	6	4,9	8	3	6,50	0000187961
W 3/8	16		100	12	-	7	5,5	8	3	7,90	0000188059
W 7/16	14	•	100	13	-	8	6,2	9	3	9,20	0000188110
W 1/2	12	•	110	18	-	9	7	10	3	10,40	0000188260
W 9/16	12	•	110	18	-	11	9	12	3	12,00	0000188321
W 5/8	11	•	110	18	-	12	9	12	3	13,40	0000188481
W 3/4	10	•	125	22	-	14	11	14	4	16,25	0000188541
W 7/8	9	•	140	22	-	18	14,5	17	4	19,25	0001312544
W 1"	8	•	160	28	-	20	16	19	4	22,00	0000188692

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/2 — N

BSW BS 84 | 1xD | C 2-3P | ≈DIN 371 | HSSE Co5

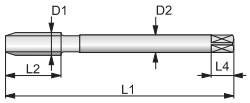


Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
W 1/16	60	•	45	8	-	2,5	2,1	5	3	1,15	0000183530
W 3/32	48	•	50	10	-	2,8	2,1	5	3	1,80	0000183680
W 1/8	40	•	56	10	8	3,5	2,7	6	3	2,50	0000183741
W 5/32	32	•	63	12	8	4,5	3,4	6	3	3,10	0000183801
W 3/16	24	•	70	14	9	6	4,9	8	3	3,70	0000183961
W 7/32	24	•	80	14	12	6	4,9	8	3	4,50	0000184040
W 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0000184101
W 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0000975121
W 3/8	16	•	100	20	18	10	8	11	3	7,90	0000184311

C/1 — N

BSW BS 84 | 1xD | C 2-3P | ≈DIN 376 | HSSE Co5



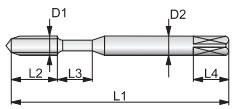
Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
W 5/16	18		90	18	-	6	4,9	8	3	6,50	0000184532
W 3/8	16		100	20	-	7	5,5	8	3	7,90	0000184693
W 7/16	14	•	100	20	-	8	6,2	9	3	9,20	0000184743
W 1/2	12	•	110	22	-	9	7	10	3	10,40	0000184803
W 9/16	12	•	110	23	-	11	9	12	3	12,00	0000184964
W 5/8	11	•	110	28	-	12	9	12	3	13,40	0000185043
W 3/4	10	•	125	32	-	14	11	14	4	16,25	0000185103
W 7/8	9	•	140	34	-	18	14,5	17	4	19,25	0000185263
W 1"	8	•	160	36	-	20	16	19	4	22,00	0000185324
W 1"1/8	7	•	180	40	-	22	18	21	4	24,50	0000185474
W 1"1/4	7	•	180	40	-	25	20	23	4	27,75	0000185534
W 1"3/8	6	•	200	45	-	28	22	25	4	30,50	0000185695
W 1"1/2	6	•	200	45	-	32	24	27	4	33,50	0000185755
W 1"5/8	5	•	220	58	-	32	24	27	6	35,50	0000185806
W 1"3/4	5	•	220	58	-	36	29	32	6	39,00	0001314559
W 1"7/8	4	•	250	60	-	36	29	32	6	41,50	0000185966
W 2"	4	•	250	65	-	40	32	35	6	44,50	0001312494

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2 N

BSW BS 84	B 3,5-5 P	≈DIN 371	HSSE Co5

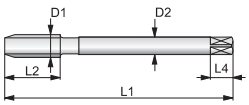


Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
W 3/32	48	•	50	10	-	2,8	2,1	5	3	1,80	0000188752
W 1/8	40	•	56	10	8	3,5	2,7	6	3	2,50	0000188812
W 5/32	32	•	63	12	8	4,5	3,4	6	3	3,10	0000188973
W 3/16	24	•	70	14	9	6	4,3	7	3	3,70	0000189052
W 7/32	24	•	80	14	12	6	4,9	8	3	4,50	0000189112
W 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0000596307
W 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0000189323
W 3/8	16	•	100	20	18	10	8	11	3	7,90	0000189483

PS/1 N

BSW BS 84	B 3,5-5 P	≈DIN 376	HSSE Co5

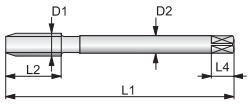


Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
W 1/4	20		80	16	-	4,5	3,4	6	3	5,10	0000189544
W 5/16	18		90	18	-	6	4,9	8	3	6,50	0000189604
W 3/8	16		100	20	-	7	5,5	8	3	7,90	0000189754
W 7/16	14	•	100	20	-	8	6,2	9	3	9,20	0000189815
W 1/2	12	•	110	22	-	9	7	10	3	10,40	0000189975
W 9/16	12	•	110	23	-	11	9	12	3	12,00	0000757650
W 5/8	11	•	110	28	-	12	9	12	3	13,40	0000190059
W 3/4	10	•	125	32	-	14	11	14	4	16,25	0000190110
W 7/8	9	•	140	34	-	18	14,5	17	4	19,25	0000190260
W 1"	8	•	160	36	-	20	16	19	4	22,00	0000190321

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. *Blind and through holes*

C/1	BSF BS 84	1xD	C 2-3P	≈DIN 376	HSSE Co5	P 55°
N						



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	10	15	10	20	7	12	15	20
	1 2		6		6		5	5 6

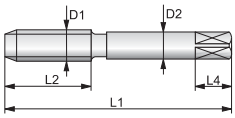
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
BSF 1/4	26	•	80	16	-	4,5	3,4	6	3	5,30	0000192485
BSF 5/16	22	•	90	18	-	6	4,9	8	3	6,80	0000192546
BSF 3/8	20	•	100	20	-	7	5,5	8	3	8,30	0000192606
BSF 7/16	18	•	100	20	-	8	6,2	9	3	9,70	0000192767
BSF 1/2	16	•	110	22	-	9	7	10	3	11,10	0000192817
BSF 9/16	16	•	110	23	-	11	9	12	4	12,70	0000192977
BSF 5/8	14	•	110	28	-	12	9	12	4	14,00	0000193056
BSF 3/4	12	•	125	32	-	14	11	14	4	16,75	0000193117
BSF 7/8	11	•	140	34	-	18	14,5	17	4	19,75	0000193277
BSF 1”	10	•	160	36	-	20	16	19	4	22,75	0000193337

Machos de roscar a mano. Agujeros ciegos y pasantes
Set of hand taps. Blind and through holes

JMC

JUEGO

G(BSP) ISO 228/1 DIN 259/1 | 1º -4P 2º -2P progresiva / *progressive* | DIN 5157 | HSS | ISO 2 (6H)

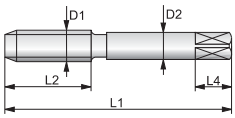


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	63	18	-	7	5,5	8	3	8,70	0000263037
G 1/4	19	•	70	20	-	11	9	12	4	11,70	0000263188
G 3/8	19	•	70	20	-	12	9	12	4	15,25	0000263248
G 1/2	14	•	80	22	-	16	12	15	4	19,00	0000263308
G 5/8	14	•	80	22	-	18	14,5	17	4	21,00	0000263469
G 3/4	14	•	90	22	-	20	16	19	4	24,50	0000263519
G 7/8	14	•	90	22	-	22	18	21	4	28,00	0000263670
G 1"	11	•	100	25	-	25	20	23	4	30,50	0000263730
G 1"1/8	11	•	125	30	-	28	22	25	6	35,50	0000263890
G 1"1/4	11	•	125	30	-	32	24	27	6	39,50	0000263941
G 1"3/8	11	•	125	30	-	36	29	32	6	42,00	0000264030
G 1"1/2	11	•	140	30	-	36	29	32	6	45,00	0000264180
G 1"3/4	11	•	140	36	-	40	32	35	6	51,00	0000264240
G 2"	11	•	160	36	-	45	35	38	6	57,00	0000264301
G 2"1/4	11	•	160	36	-	50	39	42	6	63,00	0000264461
G 2"1/2	11	•	160	36	-	50	39	42	6	73,00	0000264522
G 2"3/4	11	•	160	40	-	50	39	42	8	79,00	0000264672
G 3"	11	•	160	40	-	50	39	42	8	85,50	0000264732

JUEGO LH

G(BSP) ISO 228/1 DIN 259/1 | 1º -4P 2º -2P progresiva / *progressive* | DIN 5157 | HSS | ISO 2 (6H)



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

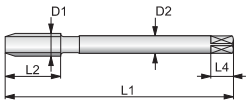
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	63	18	-	7	5,5	8	3	8,70	0000509702
G 1/4	19	•	70	20	-	11	9	12	4	11,70	0000509862
G 3/8	19	•	70	20	-	12	9	12	4	15,25	0000509913
G 1/2	14	•	80	22	-	16	12	15	4	19,00	0000510007
G 5/8	14	•	80	22	-	18	14,5	17	4	21,00	0000510157
G 3/4	14	•	90	22	-	20	16	19	4	24,50	0000510218
G 7/8	14	•	90	22	-	22	18	21	4	28,00	0000510378
G 1"	11	•	100	25	-	25	20	23	4	30,50	0000510438
G 1"1/8	11	•	125	30	-	28	22	25	6	35,50	0001755919
G 1"1/4	11	•	125	30	-	32	24	27	6	39,50	0001756098
G 1"3/8	11	•	125	30	-	36	29	32	6	42,00	0001756158
G 1"1/2	11	•	140	30	-	36	29	32	6	45,00	0001756218
G 1"3/4	11	•	140	36	-	40	32	35	6	51,00	0001756369
G 2"	11	•	160	36	-	45	35	38	6	57,00	0001756429

Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C15/1 | **G**(BSP) ISO 228/1 DIN 259/1 | 2xD | **C** 2-3P | R15° | DIN 5156 | HSSE Co5 | P 55°

N



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
mts./min.	10-15	15-20	6-9	10	15
	1 2	6	6	5 6	

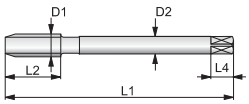
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0000207479
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0000207539
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0000207699
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0000207740
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0000207800
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0000207961
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0000710520
G 1”	11	•	160	30	-	25	20	23	5	30,50	0000208049
G 1”1/8	11	•	170	30	-	28	22	25	5	35,50	0001295772
G 1”1/4	11	•	170	30	-	32	24	27	5	39,50	0000208100
G 1”3/8*	11	•	180	32	-	36	29	32	6	42,00	0000710892
G 1”1/2	11	•	190	32	-	36	29	32	6	45,00	0000208260
G 1”3/4	11	•	190	32	-	40	32	35	6	51,00	0000711031
G 2”	11	•	220	36	-	45	35	38	6	57,00	0000711252

* JMC Norm.

C15/1 | **G**(BSP) ISO 228/1 DIN 259/1 | 2xD | **C** 2-3P | R15° | DIN 5156 | HSSE Co5 | P 55°

N

TiN



Material	GR1		GR2		GR3		GR4		GR6		GR10		GR11
Subg.	1,2,3,4,5/6		6		1,2,3,4		2,4		3		1	2	1
mts./min.	15-20	10-15	13	18	10	13	12	17	20	25	7-12	10-15	15-20
	1 2		1 2		1 2 3 4		6		5 6		5 6		

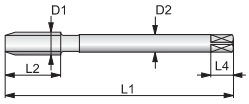
D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	90	16	-	7	5,5	8	3	8,70	0001962802
G 1/4	19	100	20	-	11	9	12	4	11,70	0001962952
G 3/8	19	100	20	-	12	9	12	4	15,25	0000710249
G 1/2	14	125	22	-	16	12	15	4	19,00	0000710300
G 5/8	14	125	28	-	18	14,5	17	4	21,00	0001963252
G 3/4	14	140	28	-	20	16	19	4	24,50	0001963312
G 7/8	14	150	28	-	22	18	21	5	28,00	0001963472
G 1”	11	160	30	-	25	20	23	5	30,50	0001963523

Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Through holes*

JMC

C35A/1 | **G**(BSP) ISO 228/1 DIN 259/1 | 2,5÷3xD | **C** 2-3P | R35° | DIN 5156 | HSSE Co5 | P 55°

N



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	5 6

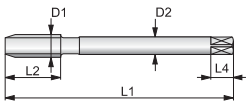
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	3	8,70	0000208963
G 1/4	19	•	100	16	-	11	9	12	4	11,70	0000209042
G 3/8	19	•	100	16	-	12	9	12	4	15,25	0000209102
G 1/2	14	•	125	18	-	16	12	15	4	19,00	0000209262
G 5/8	14	•	125	20	-	18	14,5	17	4	21,00	0000210692
G 3/4	14	•	140	22	-	20	16	19	4	24,50	0000210812
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0000727605
G 1”	11	•	160	26	-	25	20	23	5	30,50	0000211052
G 1”1/8	11	•	170	26	-	28	22	25	5	35,50	0001231994
G 1”1/4	11	•	170	26	-	32	24	27	5	39,50	0000211102
G 1”3/8*	11	•	180	29	-	36	29	32	6	42,00	0001229834
G 1”1/2	11	•	190	29	-	36	29	32	6	45,00	0000211323
G 1”3/4	11	•	190	32	-	40	32	35	6	51,00	0001230340
G 2”	11	•	220	32	-	45	35	38	6	57,00	0000728125

* JMC Norm.

C35A/1 | **G**(BSP) ISO 228/1 DIN 259/1 | 2,5÷3xD | **C** 2-3P | R35° | DIN 5156 | HSSE Co5 | P 55°

N

Nogrip-1®



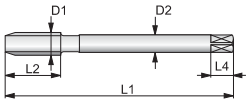
Material	GR1		GR2		GR3		GR9	
Subg.	1,2,4,5		6		1,2,3		1	
mts./min.	8	13	8	13	5	8	7	12
	1	2	1	2	1 2 3 4		3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	3	8,70	0000211534
G 1/4	19	•	100	16	-	11	9	12	4	11,70	0000211965
G 3/8	19	•	100	16	-	12	9	12	4	15,25	0000212114
G 1/2	14	•	125	18	-	16	12	15	4	19,00	0000212325
G 5/8	14	•	125	20	-	18	14,5	17	4	21,00	0000727545
G 3/4	14	•	140	22	-	20	16	19	4	24,50	0000212485
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0000727765
G 1”	11	•	160	26	-	25	20	23	5	30,50	0000212546
G 1”1/8	11		170	26	-	28	22	25	5	35,50	0001232073
G 1”1/4	11		170	26	-	32	24	27	5	39,50	0000727826
G 1”3/8*	11		180	29	-	36	29	32	6	42,00	0001229984
G 1”1/2	11		190	29	-	36	29	32	6	45,00	0001230129
G 1”3/4	11		190	32	-	40	32	35	6	51,00	0001230400
G 2”	11		220	32	-	45	35	38	6	57,00	0000728276

* JMC Norm.

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Through holes

C35A/1	**G**(BSP) ISO 228/1 DIN 259/1	2,5÷3xD	C 2-3P	R35°	DIN 5156	HSSE Co5	P 55°
N							
TiN							



Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,4,5/6		1,2,3,6,7		1,2,3		3		1	2	1
mts./min.	13-18	11-14	13	18	10	13	20	25	7-12	10-15	15-20
	1 2		1 2		1 2 3 4		5 6		5 6		

D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	90	13	-	7	5,5	8	3	8,70	0001191536
G 1/4	19	100	16	-	11	9	12	4	11,70	0000994155
G 3/8	19	100	16	-	12	9	12	4	15,25	0001191697
G 1/2	14	125	18	-	16	12	15	4	19,00	0001231834
G 5/8	14	125	20	-	18	14,5	17	4	21,00	0001231613
G 3/4	14	140	22	-	20	16	19	4	24,50	0001231773
G 7/8	14	150	28	-	22	18	21	5	28,00	0001230982
G 1"	11	160	26	-	25	20	23	5	30,50	0001230832
G 1"1/8	11	170	26	-	28	22	25	5	35,50	0001232133
G 1"1/4	11	170	26	-	32	24	27	5	39,50	0001230771
G 1"3/8*	11	180	29	-	36	29	32	6	42,00	0001230078
G 1"1/2	11	190	29	-	36	29	32	6	45,00	0001230289
G 1"3/4	11	190	32	-	40	32	35	6	51,00	0001230550
G 2"	11	220	32	-	45	35	38	6	57,00	0001230611

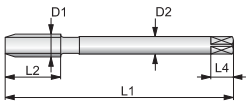
* JMC Norm.

Machos de roscar a máquina / *Machine taps*

Para roscado sincronizado. Agujeros ciegos / *For rigid tapping. Blind holes*

C35A/1 | **TRUNC** | ***Nogrip-1®***

G(BSP) ISO 228/1 DIN 259/1 | 3xD | **C** 2-3P | R35° | DIN 5156 | HSSE Co5



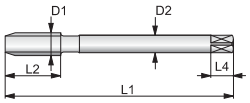
Material	GR1		GR2		GR3		GR8		GR9	
Subg.	1,2,3,4,5		4,5,6,7		1,2,3		1		1	
mts./min.	8	13	8	13	5	8	3	6	7	12
	1 2		1 2		1 2 3 4		3 4		3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	3	8,70	0001232344
G 1/4	19	•	100	16	-	11	9	12	4	11,70	0001232625
G 3/8	19	•	100	16	-	12	9	12	4	15,25	0001233075
G 1/2	14	•	125	18	-	16	12	15	4	19,00	0001233407
G 5/8	14	•	125	20	-	18	14,5	17	4	21,00	0001234560
G 3/4	14	•	140	22	-	20	16	19	4	24,50	0001234831
G 7/8	14		150	28	-	22	18	21	5	28,00	0001235130
G 1"	11		160	26	-	25	20	23	5	30,50	0001235411
G 1"1/8	11		170	26	-	28	22	25	5	35,50	0001235783
G 1"1/4	11		170	26	-	32	24	27	5	39,50	0001236082
G 1"3/8*	11		180	29	-	36	29	32	6	42,00	0001236353
G 1"1/2	11		190	29	-	36	29	32	6	45,00	0001236624
G 1"3/4	11		190	32	-	40	32	35	6	51,00	0001236906
G 2"	11		220	32	-	45	35	38	6	57,00	0001237295

* JMC Norm.

C35A/1 | **TRUNC** | ***LubePlus***

G(BSP) ISO 228/1 DIN 259/1 | 3xD | **C** 2-3P | R35° | DIN 5156 | HSSE Co5



Material	GR1		GR2		GR3		GR6		GR8	
Subg.	1,2,3,4,5,6		1,2,3,4,5,6,7,8		1,2,3		3		1	
mts./min.	13-8	11-14	13-8	11-14	10	13	15	25	8	11
	1 2		1 2		1 2 3 4		5 6		3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	3	8,70	0001957734
G 1/4	19	•	100	16	-	11	9	12	4	11,70	0001957955
G 3/8	19	•	100	16	-	12	9	12	4	15,25	0001958034
G 1/2	14	•	125	18	-	16	12	15	4	19,00	0001958194
G 5/8	14	•	125	20	-	18	14,5	17	4	21,00	0001958245
G 3/4	14	•	140	22	-	20	16	19	4	24,50	0001958465
G 7/8	14		150	28	-	22	18	21	5	28,00	0001958526
G 1"	11		160	26	-	25	20	23	5	30,50	0001958676
G 1"1/8	11		170	26	-	28	22	25	5	35,50	0001958737
G 1"1/4	11		170	26	-	32	24	27	5	39,50	0001958897
G 1"3/8*	11		180	29	-	36	29	32	6	42,00	0001958957
G 1"1/2	11		190	29	-	36	29	32	6	45,00	0001959036
G 1"3/4	11		190	32	-	40	32	35	6	51,00	0001959197
G 2"	11		220	32	-	45	35	38	6	57,00	0001959257

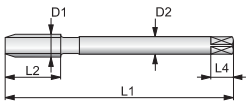
* JMC Norm.

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/1 | **VAF** | ***Nogrip-1®***

G(BSP) ISO 228/1 DIN 259/1 | 3xD | **C** 2-3P | R35° | DIN 5156 | HSSE Co5

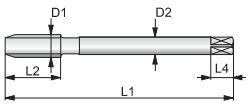


Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	3	8,70	0000212696
G 1/4	19	•	100	16	-	11	9	12	4	11,70	0000212817
G 3/8	19	•	100	16	-	12	9	12	4	15,25	0000213056
G 1/2	14	•	125	18	-	16	12	15	4	19,00	0000213267
G 5/8	14	•	125	20	-	18	14,5	17	4	21,00	0001237576
G 3/4	14	•	140	22	-	20	16	19	4	24,50	0000213327
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0001237787
G 1"	11	•	160	26	-	25	20	23	5	30,50	0000213548

C35A/1 | **VAF** | ***TiCN***

G(BSP) ISO 228/1 DIN 259/1 | 3xD | **C** 2-3P | R35° | DIN 5156 | HSSE Co5



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	10	15	12-17	11-14	8	10	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	3	8,70	0001956943
G 1/4	19	•	100	16	-	11	9	12	4	11,70	0001707390
G 3/8	19	•	100	16	-	12	9	12	4	15,25	0001957182
G 1/2	14	•	125	18	-	16	12	15	4	19,00	0001957242
G 5/8	14	•	125	20	-	18	14,5	17	4	21,00	0001957303
G 3/4	14	•	140	22	-	20	16	19	4	24,50	0001957463
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0001957524
G 1"	11	•	160	26	-	25	20	23	5	30,50	0001957674

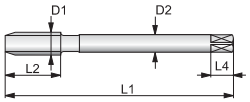
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/1	G(BSP) ISO 228/1 DIN 259/1	1xD	C 2-3P	DIN 5156	HSSE Co5	P 55°
N						

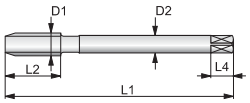


Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0000193829
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0000193970
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0000194068
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0000194119
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0000194279
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0000215051
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0000194490
G 1"	11	•	160	30	-	25	20	23	5	30,50	0000194540
G 1"1/8	11	•	170	30	-	28	22	25	5	35,50	0000194601
G 1"1/4	11	•	170	30	-	32	24	27	5	39,50	0000194761
G 1"3/8*	11	•	180	32	-	36	29	32	6	42,00	0001295612
G 1"1/2	11	•	190	32	-	36	29	32	6	45,00	0000194822
G 1"3/4	11	•	190	32	-	40	32	35	6	51,00	0000194972
G 2"	11	•	220	36	-	45	35	38	6	57,00	0000195061

* JMC Norm.

C/1	G(BSP) ISO 228/1 DIN 259/1	C 2-3P	DIN 5156	HSSE Co5	P 55°
BR					



Material	GR5	
Subg.	2,3	
mts./min.	15	20
	5	6

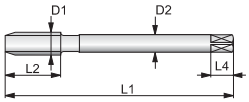
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,7	0001667364
G 1/4	19	•	100	20	-	11	9	12	4	11,7	0001732333
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0001590226
G 1/2	14	•	125	22	-	16	12	15	4	19	0001954888
G 5/8	14	•	125	28	-	18	14,5	17	4	21	0001954948
G 3/4	14	•	140	28	-	20	16	19	4	24,5	0001955027
G 7/8	14	•	150	28	-	22	18	21	5	28	0001955187
G 1"	11	•	160	30	-	25	20	23	5	30,5	0001747142

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/1 | G(BSP) ISO 228/1 DIN 259/1 | C 2-3P | DIN 5156 | HSSE Co5

CI
C.D.I.®

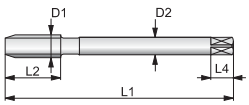


Material	GR4		
Subg.	1	2	3
mts./min.	30-35	25-30	20-25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,7	0001421857
G 1/4	19	•	100	20	-	11	9	12	4	11,7	0001507579
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0001047272
G 1/2	14	•	125	22	-	16	12	15	4	19	0001527234
G 5/8	14	•	125	28	-	18	14,5	17	4	21	0001954677
G 3/4	14	•	140	28	-	20	16	19	4	24,5	0001527666
G 7/8	14	•	150	28	-	22	18	21	5	28	0001527395
G 1"	11	•	160	30	-	25	20	23	5	30,5	0001098316

C/1 | G(BSP) ISO 228/1 DIN 259/1 | C 2-3P | DIN 5156 | HSSE Co5

CI
AltPlus



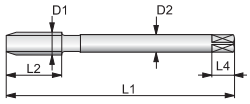
Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40

D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	90	16	-	7	5,5	8	3	8,7	0001334093
G 1/4	19	100	20	-	11	9	12	4	11,7	0001333915
G 3/8	19	100	20	-	12	9	12	4	15,25	0001333854
G 1/2	14	125	22	-	16	12	15	4	19	0001355022
G 5/8	14	125	28	-	18	14,5	17	4	21	0001954737
G 3/4	14	140	28	-	20	16	19	4	24,5	0001527726
G 7/8	14	150	28	-	22	18	21	5	28	0001527445
G 1"	11	160	30	-	25	20	23	5	30,5	0001527506

Macho de alto rendimiento para el roscado en fundición gris y nodular.
High performance tap suitable for nodular as well as grey cast iron.

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/1 | **N** | **G**(BSP) ISO 228/1 DIN 259/1 | **B** 3,5-5 P | DIN 5156 | HSSE Co5

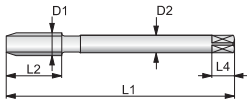


Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5 5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0000214540
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0000214601
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0000214751
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0000214812
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0000214972
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0000215111
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0000758712
G 1"	11	•	160	30	-	25	20	23	5	30,50	0000215272
G 1"1/8	11	•	170	30	-	28	22	25	5	35,50	0001241631
G 1"1/4	11	•	170	30	-	32	24	27	5	39,50	0000215332
G 1"3/8*	11	•	180	32	-	36	29	32	6	42,00	0000482585
G 1"1/2	11	•	190	32	-	36	29	32	6	45,00	0000215482
G 1"3/4	11	•	190	32	-	40	32	35	6	51,00	0001243857
G 2"	11	•	220	36	-	45	35	38	6	57,00	0001244427

* JMC Norm.

PS/1 | **N** | ***Nogrip-1®*** | **G**(BSP) ISO 228/1 DIN 259/1 | **B** 3,5-5 P | DIN 5156 | HSSE Co5



Material	GR1		GR2		GR3		GR9	
Subg.	1,2,4,5		6		1,2,3		1	
mts./min.	10	15	10	15	8	13	7	12
	1 2		1 2		1 2 3 4		3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0000215543
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0000215603
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0000215763
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0000215814
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0000758652
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0000215974
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0000758863
G 1"	11	•	160	30	-	25	20	23	5	30,50	0000216053
G 1"1/8	11		170	30	-	28	22	25	5	35,50	0001241792
G 1"1/4	11		170	30	-	32	24	27	5	39,50	0000758923
G 1"3/8*	11		180	32	-	36	29	32	6	42,00	0001242905
G 1"1/2	11		190	32	-	36	29	32	6	45,00	0000759012
G 1"3/4	11		190	32	-	40	32	35	6	51,00	0001243917
G 2"	11		220	36	-	45	35	38	6	57,00	0001244588

* JMC Norm.

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/1

N

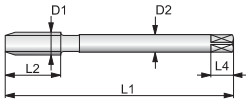
TiN

G(BSP)
ISO 228/1 DIN 259/1

B
3,5-5 P

DIN
5156

HSSE
Co5



Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,4,5,6		4,5,6		1,2,3		3		1	2	1
mts./min.	15-20	13-18	15	20	13	18	20	25	10-15	13-17	15-25
	1 2		1 2		1 2 3 4		5 6		3 4		

D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	90	16	-	7	5,5	8	3	8,70	0001237847
G 1/4	19	100	20	-	11	9	12	4	11,70	0001238207
G 3/8	19	100	20	-	12	9	12	4	15,25	0001238789
G 1/2	14	125	22	-	16	12	15	4	19,00	0001239149
G 5/8	14	125	28	-	18	14,5	17	4	21,00	0001239571
G 3/4	14	140	28	-	20	16	19	4	24,50	0001240207
G 7/8	14	150	28	-	22	18	21	5	28,00	0001240639
G 1"	11	160	30	-	25	20	23	5	30,50	0001241571
G 1"1/8	11	170	30	-	28	22	25	5	35,50	0001241842
G 1"1/4	11	170	30	-	32	24	27	5	39,50	0001242202
G 1"3/8*	11	180	32	-	36	29	32	6	42,00	0001243094
G 1"1/2	11	190	32	-	36	29	32	6	45,00	0001243425
G 1"3/4	11	190	32	-	40	32	35	6	51,00	0001244096
G 2"	11	220	36	-	45	35	38	6	57,00	0001244638

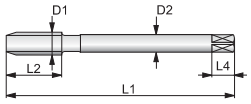
* JMC Norm.

Machos de roscar a máquina / *Machine taps*

Para roscado sincronizado. Agujeros pasantes / *For rigid tapping. Through holes*

PS/1 TRUNC *Nogrip-1®*

G (BSP) ISO 228/1 DIN 259/1 | **B** 3,5-5 P | DIN 5156 | HSSE Co5



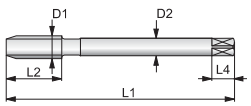
Material	GR1		GR2		GR3		GR8		GR9	
Subg.	1,2,3,4,5		4,5,6,7		1,2,3		1		1	
mts./min.	8	13	8	13	5	8	3	6	7	12
	1 2		1 2		1 2 3 4		3 4		3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0001238087
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0001238418
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0001238900
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0001239350
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0001239782
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0001240418
G 7/8	14		150	28	-	22	18	21	5	28,00	0001240840
G 1"	11		160	30	-	25	20	23	5	30,50	0001241360
G 1"1/8	11		170	30	-	28	22	25	5	35,50	0001242081
G 1"1/4	11		170	30	-	32	24	27	5	39,50	0001242423
G 1"3/8*	11		180	32	-	36	29	32	6	42,00	0001243204
G 1"1/2	11		190	32	-	36	29	32	6	45,00	0001243636
G 1"3/4	11		190	32	-	40	32	35	6	51,00	0001244207
G 2"	11		220	36	-	45	35	38	6	57,00	0001244859

* JMC Norm.

PS/1 TRUNC *LubePlus*

G (BSP) ISO 228/1 DIN 259/1 | **B** 3,5-5 P | DIN 5156 | HSSE Co5



Material	GR1		GR2		GR3		GR6		GR8	
Subg.	1,2,3,4,5,6		1,2,3,4,5,6,7		1,2,3		3		1	
mts./min.	15-20	13-18	15-20	13-18	13	18	20	30	10	13
	1 2		1 2		1 2 3 4		5 6		3 4	

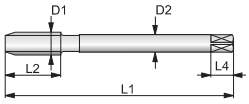
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0001961528
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0001961688
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0001961749
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0001961468
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0001961899
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0001961950
G 7/8	14		150	28	-	22	18	21	5	28,00	0001962038
G 1"	11		160	30	-	25	20	23	5	30,50	0001962199
G 1"1/8	11		170	30	-	28	22	25	5	35,50	0001962259
G 1"1/4	11		170	30	-	32	24	27	5	39,50	0001962310
G 1"3/8*	11		180	32	-	36	29	32	6	42,00	0001962460
G 1"1/2	11		190	32	-	36	29	32	6	45,00	0001962520
G 1"3/4	11		190	32	-	40	32	35	6	51,00	0001962681
G 2"	11		220	36	-	45	35	38	6	57,00	0001962741

* JMC Norm.

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/1 | **VAF** | ***Nogrip-1®***

G (BSP) ISO 228/1 DIN 259/1 | **B** 3,5-5 P | DIN 5156 | HSSE Co5

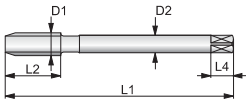


Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 – 9	8 – 13	5 – 10	15 – 20
	1 2	1 2	1 2 3 4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0000216113
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0000216274
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0000216334
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0000216485
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0001240087
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0000216545
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0001241149
G 1"	11	•	160	30	-	25	20	23	5	30,50	0000216605

PS/1 | **VAF** | ***TiCN***

G (BSP) ISO 228/1 DIN 259/1 | **B** 3,5-5 P | DIN 5156 | HSSE Co5



Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7,8	4	2,4	4
mts./min.	13 – 18	15-20 – 13-18	9 – 11	20 – 25	10 – 20
	1 2	1 2	1 2 3 4	6	5 6

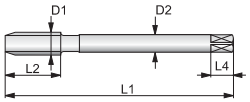
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	16	-	7	5,5	8	3	8,70	0001960465
G 1/4	19	•	100	20	-	11	9	12	4	11,70	0001960526
G 3/8	19	•	100	20	-	12	9	12	4	15,25	0001960686
G 1/2	14	•	125	22	-	16	12	15	4	19,00	0001084931
G 5/8	14	•	125	28	-	18	14,5	17	4	21,00	0001960737
G 3/4	14	•	140	28	-	20	16	19	4	24,50	0001960897
G 7/8	14	•	150	28	-	22	18	21	5	28,00	0001960957
G 1"	11	•	160	30	-	25	20	23	5	30,50	0001961036

Machos de roscar a maquina / *Machine taps*

Para roscas cilindricas estancas. Agujeros ciegos / *For presure tight joints. Blind holes*

C35A/1 | **Rp** (BSPP) ISO 7/1 DIN 2999 | 2,5÷3xD | C 2-3P | R35° | DIN 5156 | HSSE Co5 | P 55°

N



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5 5 6	

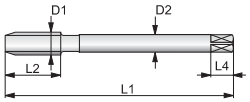
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rp 1/8	28	•	90	13	-	7	5,5	8	3	8,55	0001965316
Rp 1/4	19	•	100	16	-	11	9	12	4	11,40	0001965477
Rp 3/8	19	•	100	16	-	12	9	12	4	14,90	0001965537
Rp 1/2	14	•	125	18	-	16	12	15	4	18,60	0001965688
Rp 3/4	14	•	140	22	-	20	16	19	4	24,10	0001965748
Rp 1"	11	•	160	26	-	25	20	23	5	30,25	0001965808

Machos de roscar a maquina / *Machine taps*

Para roscas cilindricas estancas. Agujeros ciegos y pasantes / *For presure tight joints. Blind holes and through*

C/1 | **Rp** (BSPP) ISO 7/1 DIN 2999 | 1xD | C 2-3P | DIN 5156 | HSSE Co5 | P 55°

N



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,3		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rp 1/8	28	•	90	13	-	7	5,5	8	3	8,55	0001964746
Rp 1/4	19	•	100	16	-	11	9	12	4	11,40	0001964806
Rp 3/8	19	•	100	16	-	12	9	12	4	14,90	0001964966
Rp 1/2	14	•	125	18	-	16	12	15	4	18,60	0001965045
Rp 3/4	14	•	140	22	-	20	16	19	4	24,10	0001965106
Rp 1"	11	•	160	26	-	25	20	23	5	30,25	0001965256

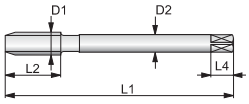
Machos de roscar a maquina / *Machine taps*

Para roscas cilindricas estancas. Agujeros pasantes / *For presure tight joints. Through holes*

JMC

PS/1 | **Rp** (BSPP) ISO 7/1 DIN 2999 | | **B** 3,5-5 P | | DIN 5156 | HSSE Co5 |

N

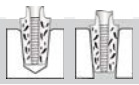


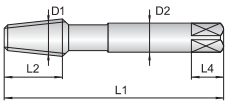
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rp 1/8	28	•	90	16	-	7	5,5	8	3	8,55	0001965969
Rp 1/4	19	•	100	20	-	11	9	12	4	11,40	0001966048
Rp 3/8	19	•	100	20	-	12	9	12	4	14,90	0001966108
Rp 1/2	14	•	125	22	-	16	12	15	4	18,60	0001966268
Rp 3/4	14	•	140	28	-	20	16	19	4	24,10	0001966319
Rp 1"	11	•	160	30	-	25	20	23	5	30,25	0001966479

Machos de roscar a mano / *Bottoming hand taps*

Para roscas gas cónicas. Agujeros ciegos y pasantes / *For tapered pipe threads. Blind and through holes*

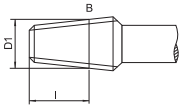
ÚNICO | **Rc** (BSPT) ISO 7/1 BS 21 |  | **C** 2-3 P | | JMC NORM./ STD | HSS | C.1:16 |



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		3		1,5		3,4	
mts./min.	3	6	3	6	3	6	3	6
	1 2		6		6		5	

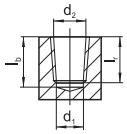
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rc 1/16	28	•	56	14	-	6	4,9	8	3	6,3	0000270521
Rc 1/8	28	•	63	15	-	7	5,5	8	4	8,3	0000270681
Rc 1/4	19	•	70	19	-	11	9	12	4	11	0000270741
Rc 3/8	19	•	70	21	-	12	9	12	4	14,5	0000270802
Rc 1/2	14	•	80	26	-	16	12	15	5	18,1	0000270952
Rc 3/4	14	•	90	28	-	20	16	19	5	23,5	0000271041
Rc 1"	11	•	100	33	-	25	20	23	5	29,6	0000271101
Rc 1"1/4	11	•	125	36	-	32	24	27	5	38,1	0000271252
Rc 1"1/2	11	•	140	37	-	36	29	32	6	44	0000271312
Rc 2"	11	•	160	41	-	45	35	38	6	55,6	0000271473

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal *Nominal Ø*	L2 mm	D_1 mm	l mm
Rc 1/16	14	7,72	10,1
Rc 1/8	15	9,73	10,1
Rc 1/4	19	13,16	15
Rc 3/8	21	16,66	15,4
Rc 1/2	26	20,95	20,5
Rc 3/4	28	26,44	21,8
Rc 1"	33	33,25	26
Rc 1" 1/4	36	41,91	28,3
Rc 1" 1/2	37	47,8	28,3
Rc 2"	41	59,61	32,7

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.



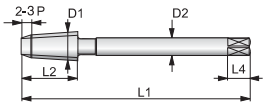
Ø nominal *Nominal Ø*	d_2 mm	l_r mm	l_b mm
Rc 1/16	6,49	8,31	10,1
Rc 1/8	8,5	8,31	10,1
Rc 1/4	11,35	12,37	15
Rc 3/8	14,85	12,77	15,4
Rc 1/2	18,49	16,83	20,5
Rc 3/4	23,98	18,13	21,8
Rc 1"	30,11	21,42	26
Rc 1" 1/4	38,78	23,72	28,3
Rc 1" 1/2	44,67	23,72	28,3
Rc 2"	56,48	28,02	32,6

Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores
Taper reamers for taper holes 1:16. See reamers programme

Machos de roscar a máquina / *Machine taps*

Para roscas gas cónicas. Agujeros ciegos y pasantes / *For tapered pipe threads. Blind and through holes*

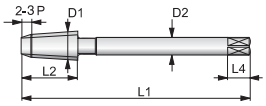
C/1 | **N** | **Rc** (BSPT) ISO 7/1 BS 21 | **C** 2-3 P | ≈DIN 5156 | HSSE Co5 | C.1:16



Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,4	1,2	2,3
mts./min.	3 6	3 6	3 6	3 6
	1 2	6	6	5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rc 1/8	28	•	90	15	-	7	5,5	8	4	8,30	0000692475
Rc 1/4	19	•	100	19	-	11	9	12	4	11,00	0000692535
Rc 3/8	19	•	100	21	-	12	9	12	4	14,50	0000692685
Rc 1/2	14	•	125	26	-	16	12	15	5	18,10	0000692746
Rc 3/4	14	•	140	28	-	20	16	19	5	23,50	0000692806
Rc 1"	11	•	160	33	-	25	20	23	5	29,60	0000692966

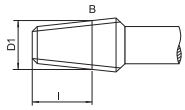
C/1 | **N** | ***TiN*** | **Rc** (BSPT) ISO 7/1 BS 21 | **C** 2-3 P | ≈DIN 5156 | HSSE Co5 | C.1:16



Material	GR1	GR2	GR3	GR4	GR6	GR10	GR11
Subg.	1,2,3,4,5	1,2,3,6,7,8	1,2,3,4	2,4	3	1 2	1
mts./min.	5 8	5 8	5 8	5 8	5 8	5 8	5 8
	1 2	1 2	1 2 3 4	6	5 5 6	2 3	

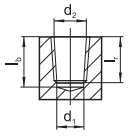
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rc 1/8	28	•	90	15	-	7	5,5	8	4	8,30	0002123686
Rc 1/4	19	•	100	19	-	11	9	12	4	11,00	0002123737
Rc 3/8	19	•	100	21	-	12	9	12	4	14,50	0002123897
Rc 1/2	14	•	125	26	-	16	12	15	5	18,10	0002123957
Rc 3/4	14	•	140	28	-	20	16	19	5	23,50	0002124036
Rc 1"	11	•	160	33	-	25	20	23	5	29,60	0002124197

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal / *Nominal Ø*	L2 mm	D_1 mm	l mm
Rc 1/16	14	7,72	10,1
Rc 1/8	15	9,73	10,1
Rc 1/4	19	13,16	15
Rc 3/8	21	16,66	15,4
Rc 1/2	26	20,95	20,5
Rc 3/4	28	26,44	21,8
Rc 1"	33	33,25	26
Rc 1" 1/4	36	41,91	28,3
Rc 1" 1/2	37	47,8	28,3
Rc 2"	41	59,61	32,7

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.



Ø nominal / *Nominal Ø*	d_2 mm	l_r mm	l_b mm
Rc 1/16	6,49	8,31	10,1
Rc 1/8	8,5	8,31	10,1
Rc 1/4	11,35	12,37	15
Rc 3/8	14,85	12,77	15,4
Rc 1/2	18,49	16,83	20,5
Rc 3/4	23,98	18,13	21,8
Rc 1"	30,11	21,42	26
Rc 1" 1/4	38,78	23,72	28,3
Rc 1" 1/2	44,67	23,72	28,3
Rc 2"	56,48	28,02	32,6

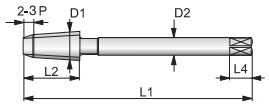
Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores
Taper reamers for taper holes 1:16. See reamers programme

Machos de roscar a máquina / *Machine taps*

Para roscas gas cónicas. Agujeros ciegos / *For tapered pipe thread. Blind holes*

JMC

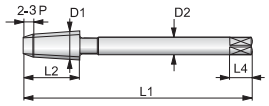
C15/1	Rc(BSPT) ISO 7/1 BS 21	C 2-3 P	R15°	≈DIN 5156	HSSE Co5	C.1:16
AZ						
Nogrip-1®						



Material	GR1	GR2	GR3	GR9
Subg.	2,4,5	1,2,3,4,5,6,7,8	1,2,3,4	1
mts./min.	3 6	3 6	12 15	12 17
	1 2	1 2	1 2 3 4	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rc 1/8	28	•	90	15	-	7	5,5	8	5	8,3	0000711462
Rc 1/4	19	•	100	19	-	11	9	12	5	11	0000711523
Rc 3/8	19	•	100	21	-	12	9	12	5	14,5	0000711733
Rc 1/2	14	•	125	26	-	16	12	15	5	18,1	0000711894
Rc 3/4	14	•	140	28	-	20	16	19	5	23,5	0000711954
Rc 1"	11	•	160	33	-	25	20	23	5	29,6	0000712033

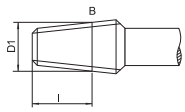
C15/1	Rc(BSPT) ISO 7/1 BS 21	C 2-3 P	R15°	≈DIN 5156	HSSE Co5	C.1:16
AZ						
TiN						



Material	GR1	GR2	GR3	GR8	GR10
Subg.	1,2,3,4,5,6	1,2,3,4,5,7,8	1,2,3	2	2
mts./min.	5 8	5 8	5 8	5 8	5 8
	1 2	1 2	1 2 3 4	3 4	3 4

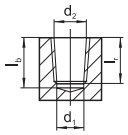
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rc 1/8	28	•	90	15	-	7	5,5	8	5	8,3	0002123194
Rc 1/4	19	•	100	19	-	11	9	12	5	11	0000711683
Rc 3/8	19	•	100	21	-	12	9	12	5	14,5	0002123255
Rc 1/2	14	•	125	26	-	16	12	15	5	18,1	0002123305
Rc 3/4	14	•	140	28	-	20	16	19	5	23,5	0002123465
Rc 1"	11	•	160	33	-	25	20	23	5	29,6	0002123526

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal *Nominal Ø*	L2 mm	D_1 mm	l mm
Rc 1/16	14	7,72	10,1
Rc 1/8	15	9,73	10,1
Rc 1/4	19	13,16	15
Rc 3/8	21	16,66	15,4
Rc 1/2	26	20,95	20,5
Rc 3/4	28	26,44	21,8
Rc 1"	33	33,25	26
Rc 1" 1/4	36	41,91	28,3
Rc 1" 1/2	37	47,8	28,3
Rc 2"	41	59,61	32,7

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.

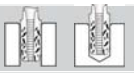


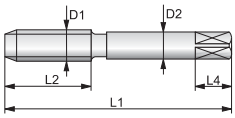
Ø nominal *Nominal Ø*	d_2 mm	l_r mm	l_b mm
Rc 1/16	6,49	8,31	10,1
Rc 1/8	8,5	8,31	10,1
Rc 1/4	11,35	12,37	15
Rc 3/8	14,85	12,77	15,4
Rc 1/2	18,49	16,83	20,5
Rc 3/4	23,98	18,13	21,8
Rc 1"	30,11	21,42	26
Rc 1" 1/4	38,78	23,72	28,3
Rc 1" 1/2	44,67	23,72	28,3
Rc 2"	56,48	28,02	32,6

Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores
Taper reamers for taper holes 1:16. See reamers programme

Machos de roscar a mano. Agujeros ciegos y pasantes
Set of hand taps. Blind and through holes

JMC

JUEGO	UNC ANSI / ASME B1.1		1°-4P 2°-3P 3°-2P progresiva progressive		DIN 352	HSS	ISO 2 (6H)	



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

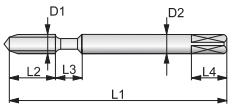
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr1	64	•	36	9	-	2,5	2,1	5	3	1,55	0000279059
UNC Nr2	56	•	36	9	-	2,8	2,1	5	3	1,85	0000279110
UNC Nr3	48	•	40	9	-	2,8	2,1	5	3	2,10	0000279270
UNC Nr4	40	•	40	11	-	3,5	2,7	6	3	2,30	0000279320
UNC Nr5	40	•	40	11	-	3,5	2,7	6	3	2,60	0000279481
UNC Nr6	32	•	45	13	-	4	3	6	3	2,75	0000279541
UNC Nr8	32	•	45	13	-	4,5	3,4	6	3	3,50	0000279602
UNC Nr10	24	•	50	16	-	6	4,9	8	3	3,80	0000279752
UNC Nr12	24	•	50	19	-	6	4,9	8	3	4,50	0000279812
UNC 1/4	20	•	56	19	-	6	4,9	8	3	5,10	0000279973
UNC 5/16	18	•	63	22	-	6	4,9	8	3	6,50	0000280057
UNC 3/8	16	•	70	22	-	7	5,5	8	3	7,90	0000280117
UNC 7/16	14	•	70	24	-	8	6,2	9	4	9,30	0000280278
UNC 1/2	13	•	80	29	-	9	7	10	4	10,80	0000280328
UNC 9/16	12	•	80	30	-	11	9	12	4	12,20	0000280488
UNC 5/8	11	•	90	32	-	12	9	12	4	13,50	0000280549
UNC 3/4	10	•	105	35	-	14	11	14	4	16,50	0000280609
UNC 7/8	9	•	110	40	-	18	14,5	17	4	19,50	0000280750
UNC 1"	8	•	110	50	-	20	16	19	4	22,25	0000280810
UNC 1"1/8	7	•	132	56	-	22	18	21	4	25,00	0000280970
UNC 1"1/4	7	•	132	56	-	25	20	23	4	28,00	0000281059
UNC 1"3/8	6	•	150	63	-	28	22	25	4	31,00	0000281110
UNC 1"1/2	6	•	150	63	-	32	24	27	4	34,50	0000281270
UNC 1"3/4	5	•	160	70	-	36	29	32	4	39,00	0000281330
UNC 2"	4,5	•	190	80	-	40	32	35	6	45,00	0000281481

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

C10/2

UNC ANSI / ASME B1.1	1,5xD	C 2-3 P	R10º	DIN 2184-1	HSSE PM	2B

proni



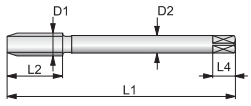
Material	GR8
Subg.	3
mts./min.	2
	2 3

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0004195884
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0004195945
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0004196034
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0004196184
UNC Nr 12	24	•	70	14	9	6	4,9	8	3	3,8	0004196244
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0004196465
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0004196516
UNC 3/8	16	•	100	20	18	10	8	11	4	7,9	0004196676

C10/1

UNC ANSI / ASME B1.1	1,5xD	C 2-3 P	R10º	DIN 2184-1	HSSE PM	2B

proni



Material	GR8
Subg.	3
mts./min.	2
	2 3

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	18	-	6	4,9	8	4	6,5	0004196736
UNC 1/2	13	•	110	22	-	9	7	10	4	10,8	0004196947
UNC 5/8	11	•	110	28	-	12	9	12	4	13,5	0004196897

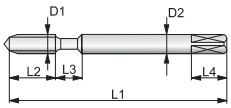
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

UNC ANSI / ASME B1.1 | 2xD | **C** 2-3 P | R15° | DIN 2184-1 | HSSE PM | 2B

proti



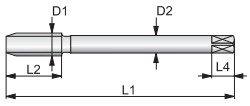
Material	GR2	GR9
Subg.	3	2
mts./min.	4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0003332406
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0003332837
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0003340901
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0003341361
UNC Nr 12	24	•	70	14	9	6	4,9	8	3	3,8	0003341793
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0003342143
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0003342574
UNC 3/8	16	•	100	20	18	10	8	11	4	7,9	0003342906

C15/1

UNC ANSI / ASME B1.1 | 2xD | **C** 2-3 P | R15° | DIN 2184-1 | HSSE PM | 2B

proti



Material	GR2	GR9
Subg.	3	2
mts./min.	4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	18	-	6	4,9	8	4	6,5	0003343858
UNC 1/2	13	•	110	22	-	9	7	10	4	10,8	0003344157
UNC 5/8	11	•	110	28	-	12	9	12	4	13,5	0003344589

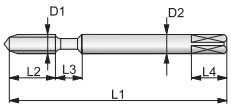
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

UNC ANSI / ASME B1.1 | 2xD | C 2-3 P | R15° | DIN 2184-1 | HSSE PM | 2B

proti TiCN



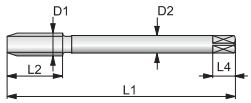
Material	GR2	GR9
Subg.	3	2
mts./min.	4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0003332285
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0003332998
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0003340781
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0003341141
UNC Nr 12	24	•	70	14	9	6	4,9	8	3	3,8	0003341572
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0003341904
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0003342364
UNC 3/8	16	•	100	20	18	10	8	11	4	7,9	0003342795

C15/1

UNC ANSI / ASME B1.1 | 2xD | C 2-3 P | R15° | DIN 2184-1 | HSSE PM | 2B

proti TiCN



Material	GR2	GR9
Subg.	3	2
mts./min.	4	6

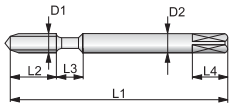
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	18	-	6	4,9	8	4	6,5	0003343145
UNC 1/2	13	•	110	22	-	9	7	10	4	10,8	0003343918
UNC 5/8	11	•	110	28	-	12	9	12	4	13,5	0003344368

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

UNC ANSI / ASME B1.1	2xD	C 2-3 P	R15°	DIN 2184-1	HSSE PM	2B

proti CromPlus



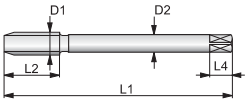
Material	GR9
Subg.	2
mts./min.	4
	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0003332345
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0003332777
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0003340841
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0003341201
UNC Nr 12	24	•	70	14	9	6	4,9	8	3	3,8	0003341632
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0003342082
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0003342424
UNC 3/8	16	•	100	20	18	10	8	11	3	7,9	0003342855

C15/1

UNC ANSI / ASME B1.1	2xD	C 2-3 P	R15°	DIN 2184-1	HSSE PM	2B

proti CromPlus



Material	GR9
Subg.	2
mts./min.	4
	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	18	-	6	4,9	8	4	6,5	0003343205
UNC 1/2	13	•	110	22	-	9	7	10	4	10,8	0003344097
UNC 5/8	11	•	110	28	-	12	9	12	4	13,5	0003344428

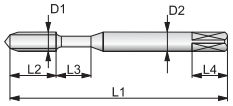
Machos de roscar a máquina. Agujeros ciegos.
Machine taps. *Blind holes.*

JMC

C35A/2

N

UNC ANSI / ASME B1.1	2,5÷3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B 3B UNJC	P 60°



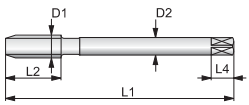
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	5 6

	D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
2B	UNC Nr 2	56	•	45	5	5	2,8	2,1	5	3	1,80	0000734124
	UNC Nr 3	48	•	50	5	5	2,8	2,1	5	3	2,10	0001715304
	UNC Nr 4	40	•	56	6	12	3,5	2,7	6	3	2,30	0000734285
	UNC Nr 5	40	•	56	6	12	3,5	2,7	6	3	2,60	0000995378
	UNC Nr 6	32	•	56	7	13	4	3	6	3	2,75	0000423709
	UNC Nr 8	32	•	63	7	13	4,5	3,4	6	3	3,50	0000423869
	UNC Nr 10	24	•	70	9	13	6	4,9	8	3	3,80	0000423920
	UNC Nr 12	24	•	80	9	19	6	4,9	8	3	4,50	0000424008
	UNC 1/4	20	•	80	11	19	6	4,9	8	3	5,10	0000424169
	UNC 5/16	18	•	90	11	22	8	6,2	9	3	6,50	0000424229
	UNC 3/8	16	•	100	12	26	10	8	11	3	7,90	0000424370
3B UNJC	UNC Nr 6	40	•	56	7	13	4	3	6	3	2,90	0003692382
	UNC Nr 8	36	•	63	7	13	4,5	3,4	6	3	3,50	0002386062
	UNC Nr 10	32	•	70	9	13	6	4,9	8	3	4,10	0003692663
	UNC 1/4	28	•	80	11	19	6	4,9	8	3	5,50	0003692874
	UNC 5/16	24	•	90	11	22	8	6,2	9	3	6,90	0003693013
	UNC 3/8	24	•	100	12	-	7	5,5	8	3	8,50	0003693234

C35A/1

N

UNC ANSI / ASME B1.1	2,5÷3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B	P 60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 5/16	18		90	11	-	6	4,9	8	3	6,50	0000424430
UNC 3/8	16		100	12	-	7	5,5	8	3	7,90	0000424590
UNC 7/16	14	•	100	14	-	8	6,2	9	3	9,30	0000424651
UNC 1/2	13	•	110	18	-	9	7	10	3	10,80	0000424701
UNC 9/16	12	•	110	18	-	11	9	12	3	12,20	0000424861
UNC 5/8	11	•	110	20	-	12	9	12	3	13,50	0000424922
UNC 3/4	10	•	125	22	-	14	11	14	4	16,50	0000425001
UNC 7/8	9	•	140	26	-	18	14,5	17	4	19,50	0000425161
UNC 1”	8	•	160	28	-	20	16	19	4	22,25	0000425221

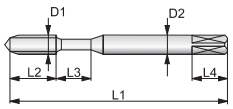
Machos de roscar a máquina. Agujeros ciegos.
Machine taps. Blind holes.

C35A/2

VAF

Nogrip-1®

UNC ANSI / ASME B1.1	3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B



Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	7 12	5 8	8 15
	1 2	1 2	1 2 3 4	6

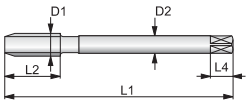
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 8	32	•	63	7	13	4,5	3,4	6	3	3,50	0001970755
UNC Nr 10	24	•	70	9	13	6	4,9	8	3	3,80	0001970815
UNC Nr 12	24	•	80	9	19	6	4,9	8	3	4,50	0001970966
UNC 1/4	20	•	80	11	19	6	4,9	8	3	5,10	0000996000
UNC 5/16	18	•	90	11	22	8	6,2	9	3	6,50	0000995911
UNC 3/8	16	•	100	12	26	10	8	11	3	7,90	0001248155

C35A/1

VAF

Nogrip-1®

UNC ANSI / ASME B1.1	3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B



Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	7 12	5 8	8 15
	1 2	1 2	1 2 3 4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	14	-	8	6,2	9	3	9,30	0001249700
UNC 1/2	13	•	110	18	-	9	7	10	3	10,80	0000729128
UNC 5/8	11	•	110	20	-	12	9	12	3	13,50	0001250155
UNC 3/4	10	•	125	22	-	14	11	14	4	16,50	0001250436
UNC 1"	8	•	160	28	-	20	16	19	4	22,25	0001250647
UNC 1"1/8	7	•	180	40	-	22	18	21	4	25,00	0002849426
UNC 1"1/4	7	•	180	40	-	25	20	23	4	28,00	0002849366
UNC 1"3/8	6	•	200	45	-	28	22	25	4	31,00	0003118933
UNC 1"1/2	6	•	200	45	-	32	24	27	4	34,50	0003119022
UNC 1"3/4	5		220	50	-	36	29	32	4	39,00	0003119172
UNC 2"	4,5		250	60	-	40	32	35	6	45,00	0003119233

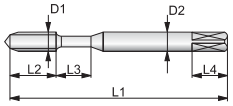
Machos de roscar a máquina. Agujeros ciegos.
Machine taps. Blind holes.

C35A/2

VAF

TiCN

UNC ANSI / ASME B1.1	3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	10	15	12-17	11-14	8	10	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 8	32	•	63	7	13	4,5	3,4	6	3	3,50	0001971326
UNC Nr 10	24	•	70	9	13	6	4,9	8	3	3,80	0001971486
UNC Nr 12	24	•	80	9	19	6	4,9	8	3	4,50	0001971546
UNC 1/4	20	•	80	11	19	6	4,9	8	3	5,10	0001971697
UNC 5/16	18	•	90	11	22	8	6,2	9	3	6,50	0001971817
UNC 3/8	16	•	100	12	26	10	8	11	3	7,90	0001971978

Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

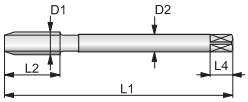
Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C35A/1

VAF

TiCN

UNC ANSI / ASME B1.1	3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	10	15	12-17	11-14	8	10	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	14	-	8	6,2	9	3	9,30	0001972609
UNC 1/2	13	•	110	18	-	9	7	10	3	10,80	0001972759
UNC 5/8	11	•	110	20	-	12	9	12	3	13,50	0001972810
UNC 3/4	10	•	125	22	-	14	11	14	4	16,50	0001972970
UNC 1"	8	•	160	28	-	20	16	19	4	22,25	0001973059

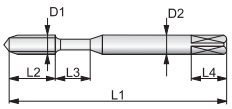
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos profundos / *Deep blind holes.*

JMC

C40A/2

UNC ANSI / ASME B1.1	4xD	C 2-3 P	R40º	DIN 2184-1	HSSE PM	ISO 2 6H

produr Nogrip



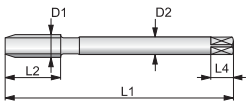
Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	5	-	2,8	2,1	5	3	1,8	0004205927
UNC Nr 4	40	•	56	6	8	3,5	2,7	6	3	2,3	0004206015
UNC Nr 6	32	•	56	7	8	4	3	6	3	2,75	0004206166
UNC Nr 8	32	•	63	7	9	4,5	3,4	6	3	3,5	0004206226
UNC Nr 10	24	•	70	9	9	6	4,9	8	3	3,8	0004205866
UNC 1/4	20	•	80	11	12	6	4,9	8	3	5,1	0004205595
UNC 5/16	18	•	90	11	15	8	6,2	9	3	6,5	0004205716
UNC 3/8	16	•	100	12	18	10	8	11	3	7,9	0004205655

C40A/1

UNC ANSI / ASME B1.1	4xD	C 2-3 P	R40º	DIN 2184-1	HSSE PM	ISO 2 6H

produr Nogrip



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	14	-	8	6,2	9	3	9,3	0004206597
UNC 1/2	13	•	110	18	-	9	7	10	4	10,8	0004206387
UNC 5/8	11	•	110	20	-	12	9	12	4	13,5	0004206447

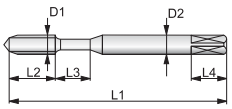
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos profundos / *Deep blind holes.*

C40A/2

UNC ANSI / ASME B1.1	4xD	C 2-3 P	R40º	DIN 2184-1	HSSE PM	ISO 2 6H	P 60º

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	5	-	2,8	2,1	5	3	1,8	0003239988
UNC Nr 4	40	•	56	6	8	3,5	2,7	6	3	2,3	0003240554
UNC Nr 6	32	•	56	7	8	4	3	6	3	2,75	0003241125
UNC Nr 8	32	•	63	7	9	4,5	3,4	6	3	3,5	0003241777
UNC Nr 10	24	•	70	9	9	6	4,9	8	3	3,8	0003242348
UNC 1/4	20	•	80	11	12	6	4,9	8	3	5,1	0003260370
UNC 5/16	18	•	90	11	15	8	6,2	9	3	6,5	0003260862
UNC 3/8	16	•	100	12	18	10	8	11	3	7,9	0003261583

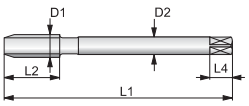
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C40A/1

UNC ANSI / ASME B1.1	4xD	C 2-3 P	R40º	DIN 2184-1	HSSE PM	ISO 2 6H	P 60º

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	14	-	8	6,2	9	3	9,3	0003263658
UNC 1/2	13	•	110	18	-	9	7	10	4	10,8	0003265652
UNC 5/8	11	•	110	20	-	12	9	12	4	13,5	0003267225

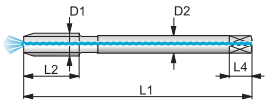
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos profundos / *Deep blind holes.*

C40A/2 KC

UNC ANSI / ASME B1.1	4xD	C 2-3 P	R40° KC	DIN 2184-1	HSSE PM	ISO 2 6H

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 1/4	20	•	80	11	12	6	4,9	8	3	5,1	0003260641
UNC 5/16	18	•	90	11	15	8	6,2	9	3	6,5	0003261001
UNC 3/8	16	•	100	12	18	10	8	11	3	7,9	0003261372

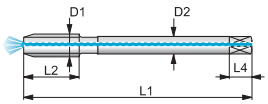
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C40A/1 KC

UNC ANSI / ASME B1.1	4xD	C 2-3 P	R40° KC	DIN 2184-1	HSSE PM	ISO 2 6H

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

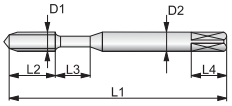
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	14	-	8	6,2	9	3	9,3	0003263868
UNC 1/2	13	•	110	18	-	9	7	10	4	10,8	0003265863
UNC 5/8	11	•	110	20	-	12	9	12	4	13,5	0003267446

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos / *Blind holes.*

C40A/2

UNC ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 2184-1 | HSSE PM | 2B

prospeed Nogrip



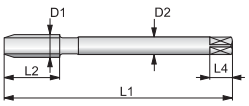
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	5	-	2,8	2,1	5	3	1,8	0004207018
UNC Nr 4	40	•	56	6	8	3,5	2,7	6	3	2,3	0004207168
UNC Nr 6	32	•	56	7	8	4	3	6	3	2,75	0004207228
UNC Nr 8	32	•	63	7	9	4,5	3,4	6	3	3,5	0004207389
UNC Nr 10	24	•	70	9	9	6	4,9	8	3	3,8	0004206929
UNC 1/4	20	•	80	11	12	6	4,9	8	3	5,1	0004206658
UNC 5/16	18	•	90	11	15	8	6,2	9	3	6,5	0004206878
UNC 3/8	16	•	100	12	18	10	8	11	3	7,9	0004206718

C40A/1

UNC ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 2184-1 | HSSE PM | 2B

prospeed Nogrip



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	90	14	-	6	4,9	8	3	6,5	0004207650
UNC 1/2	13	•	110	18	-	9	7	10	4	10,8	0004207449
UNC 5/8	11	•	110	20	-	12	9	12	4	13,5	0004207500

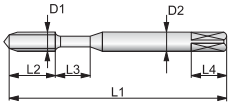
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

C40A/2

UNC ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

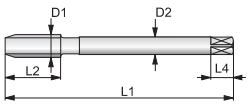
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	5	-	2,8	2,1	5	3	1,8	0003279037
UNC Nr 4	40	•	56	6	8	3,5	2,7	6	3	2,3	0003279308
UNC Nr 6	32	•	56	7	8	4	3	6	3	2,75	0003279670
UNC Nr 8	32	•	63	7	9	4,5	3,4	6	3	3,5	0003279941
UNC Nr 10	24	•	70	9	9	6	4,9	8	3	3,8	0003280246
UNC 1/4	20	•	80	11	12	6	4,9	8	3	5,1	0003283463
UNC 5/16	18	•	90	11	15	8	6,2	9	3	6,5	0003284034
UNC 3/8	16	•	100	12	18	10	8	11	3	7,9	0003284686

Macho adecuado para el roscado en aceros inoxidables.
For machining stainless steels.

C40A/1

UNC ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	90	14	-	6	4,9	8	3	6,5	0003318975
UNC 1/2	13	•	110	18	-	9	7	10	4	10,8	0003320051
UNC 5/8	11	•	110	20	-	12	9	12	4	13,5	0003321114

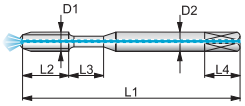
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos / *Blind holes.*

JMC

C40A/2 KC

UNC ANSI / ASME B1.1 | 4xD viruta larga *long chip* | C 2-3 P | R40° KC | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

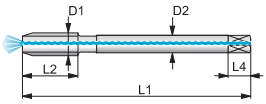
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 1/4	20	•	80	11	12	6	4,9	8	3	5,1	0003283684
UNC 5/16	18	•	90	11	15	8	6,2	9	3	6,5	0003284255
UNC 3/8	16	•	100	12	18	10	8	11	3	7,9	0003317541

Macho adecuado para el roscado en aceros inoxidables.
For machining stainless steels.

C40A/1 KC

UNC ANSI / ASME B1.1 | 4xD viruta larga *long chip* | C 2-3 P | R40° KC | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



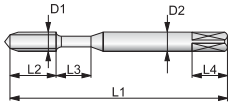
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	90	14	-	6	4,9	8	3	6,5	0003319114
UNC 1/2	13	•	110	18	-	9	7	10	4	10,8	0003320272
UNC 5/8	11	•	110	20	-	12	9	12	4	13,5	0003321335

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2 — N

UNC ANSI / ASME B1.1	1xD	C 2-3P	DIN 2184-1	HSSE Co5	2B

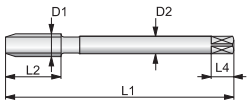


Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 1	64	•	45	8	-	2,8	2,1	5	3	1,50	0001715896
UNC Nr 2	56	•	45	9	-	2,8	2,1	5	3	1,80	0000419583
UNC Nr 3	48	•	50	9	-	2,8	2,1	5	3	2,10	0000419644
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,30	0000419704
UNC Nr 5	40	•	56	10	8	3,5	2,7	6	3	2,60	0000419855
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0000419915
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,50	0000420099
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,80	0000420150
UNC Nr 12	24	•	80	16	12	6	4,9	8	3	4,50	0000420210
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0000420370
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0000420421
UNC 3/8	16	•	100	20	18	10	8	11	3	7,90	0000420581

C/1 — N

UNC ANSI / ASME B1.1	1xD	C 2-3P	DIN 2184-1	HSSE Co5	2B



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 5/16	18		90	18	-	6	4,9	8	3	6,50	0000420642
UNC 3/8	16		100	20	-	7	5,5	8	3	7,90	0000420702
UNC 7/16	14	•	100	20	-	8	6,2	9	3	9,30	0000420852
UNC 1/2	13	•	110	22	-	9	7	10	3	10,80	0000420913
UNC 9/16	12	•	110	25	-	11	9	12	3	12,20	0000421002
UNC 5/8	11	•	110	28	-	12	9	12	3	13,50	0000421152
UNC 3/4	10	•	125	32	-	14	11	14	4	16,50	0000421212
UNC 7/8	9	•	140	34	-	18	14,5	17	4	19,50	0000421373
UNC 1"	8	•	160	36	-	20	16	19	4	22,25	0000421433
UNC 1"1/8	7	•	180	38	-	22	18	21	4	25,00	0000421583
UNC 1"1/4	7	•	180	38	-	25	20	23	4	28,00	0000421644
UNC 1"3/8	6	•	200	56	-	28	22	25	4	31,00	0000421704
UNC 1"1/2	6	•	200	56	-	32	24	27	4	34,50	0000421865

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

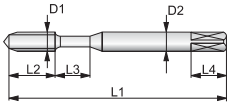
JMC

C/2

CI

C.D.I.®

UNC ANSI / ASME B1.1 | **C** 2-3P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR4		
Subg.	1	2	3
mts./min.	30-35	25-30	20-25

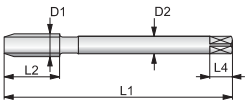
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0001966690
UNC Nr 5	40	•	56	10	8	3,5	2,7	6	3	2,6	0001966740
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0001966801
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0001966961
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0001967040
UNC Nr 12	24	•	80	16	12	6	4,9	8	3	4,5	0001967100
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0001566787
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0001473281
UNC 3/8	16	•	100	20	18	10	8	11	3	7,9	0001136337

C/1

CI

C.D.I.®

UNC ANSI / ASME B1.1 | **C** 2-3P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR4		
Subg.	1	2	3
mts./min.	30-35	25-30	20-25

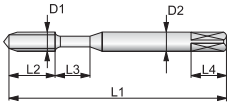
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 5/16	18		90	18	-	6	4,9	8	3	6,5	0001968103
UNC 3/8	16		100	20	-	7	5,5	8	3	7,9	0001968263
UNC 7/16	14	•	100	20	-	8	6,2	9	3	9,3	0001421918
UNC 1/2	13	•	110	22	-	9	7	10	3	10,8	0001422096
UNC 9/16	12	•	110	25	-	11	9	12	3	12,2	0001968323
UNC 5/8	11	•	110	28	-	12	9	12	3	13,5	0001968474
UNC 3/4	10	•	125	32	-	14	11	14	4	16,5	0001968534
UNC 7/8	9	•	140	34	-	18	14,5	17	4	19,5	0001968694
UNC 1"	8	•	160	36	-	20	16	19	4	22,25	0001968755

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. *Blind and through holes*

JMC

C/2	UNC ANSI / ASME B1.1	C 2-3P	2B	DIN 2184-1	HSSE Co5

CI
AltPlus



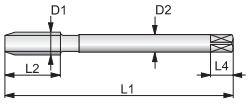
Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40
	6			6		5 6

D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 4	40	56	10	8	3,5	2,7	6	3	2,3	0001967261
UNC Nr 5	40	56	10	8	3,5	2,7	6	3	2,6	0001967321
UNC Nr 6	32	56	11	8	4	3	6	3	2,75	0001967471
UNC Nr 8	32	63	12	9	4,5	3,4	6	3	3,5	0001967532
UNC Nr 10	24	70	14	9	6	4,9	8	3	3,8	0001967692
UNC Nr 12	24	80	16	12	6	4,9	8	3	4,5	0001967753
UNC 1/4	20	80	16	12	6	4,9	8	3	5,1	0001967803
UNC 5/16	18	90	18	15	8	6,2	9	3	6,5	0001967963
UNC 3/8	16	100	20	18	10	8	11	3	7,9	0001968042

Macho de alto rendimiento para el roscado en fundición gris y nodular.
High performance tap suitable for nodular as well as grey cast iron.

C/1	UNC ANSI / ASME B1.1	C 2-3P	2B	DIN 2184-1	HSSE Co5

CI
AltPlus



Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40
	6			6		5 6

D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 5/16	18	90	18	-	6	4,9	8	3	6,5	0001968815
UNC 3/8	16	100	20	-	7	5,5	8	3	7,9	0001968966
UNC 7/16	14	100	20	-	8	6,2	9	3	9,3	0001969054
UNC 1/2	13	110	22	-	9	7	10	3	10,8	0001969105
UNC 9/16	12	110	25	-	11	9	12	3	12,2	0001969265
UNC 5/8	11	110	28	-	12	9	12	3	13,5	0001969326
UNC 3/4	10	125	32	-	14	11	14	4	16,5	0001969486
UNC 7/8	9	140	34	-	18	14,5	17	4	19,5	0001969536
UNC 1"	8	160	36	-	20	16	19	4	22,25	0001969697

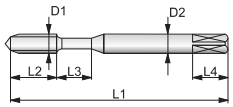
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/2

N

UNC ANSI / ASME B1.1	B 3,5-5 P	DIN 2184-1	HSSE Co5	2B 3B UNJC



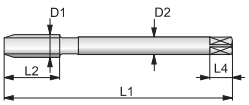
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

	D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
2B	UNC Nr 1	64	•	45	8	-	2,8	2,1	5	3	1,50	0000767889
	UNC Nr 2	56	•	45	9	-	2,8	2,1	5	3	1,80	0000767949
	UNC Nr 3	48	•	50	9	-	2,8	2,1	5	3	2,10	0000425372
	UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,30	0000425432
	UNC Nr 5	40	•	56	10	8	3,5	2,7	6	3	2,60	0000425593
	UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0000425653
	UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,50	0000425713
	UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,80	0000425864
	UNC Nr 12	24	•	80	16	12	6	4,9	8	3	4,50	0000425924
	UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0000426003
	UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0000426163
	UNC 3/8	16	•	100	20	18	10	8	11	3	7,90	0000426224
3B UNJC	UNC Nr 6	40	•	56	7	13	4	3	6	3	2,90	0003693445
	UNC Nr 8	36	•	63	7	13	4,5	3,4	6	3	3,50	0002783510
	UNC Nr 10	32	•	70	9	13	6	4,9	8	3	4,10	0002514142
	UNC 1/4	28	•	80	11	19	6	4,9	8	3	5,50	0003693876
	UNC 5/16	24	•	90	11	22	8	6,2	9	3	6,90	0003694026
	UNC 3/8	24	•	100	12	-	7	5,5	8	3	8,50	0003694236

PS/1

N

UNC ANSI / ASME B1.1	B 3,5-5 P	DIN 2184-1	HSSE Co5	2B



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 5/16	18		90	18	-	6	4,9	8	3	6,50	0000426384
UNC 3/8	16		100	20	-	7	5,5	8	3	7,90	0000426434
UNC 7/16	14	•	100	20	-	8	6,2	9	3	9,30	0000426655
UNC 1/2	13	•	110	22	-	9	7	10	3	10,80	0000426716
UNC 9/16	12	•	110	25	-	11	9	12	3	12,20	0000426866
UNC 5/8	11	•	110	28	-	12	9	12	3	13,50	0000426926
UNC 3/4	10	•	125	32	-	14	11	14	4	16,50	0000427015
UNC 7/8	9	•	140	34	-	18	14,5	17	4	19,50	0000427166
UNC 1"	8	•	160	38	-	20	16	19	4	22,25	0000427226

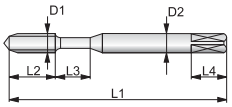
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2

VAF

Nogrip-1®

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	8 13	5 10	15 20
	1 2	1 2	1 2 3 4	6

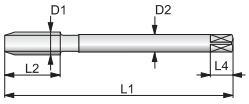
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,50	0001006377
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,80	0001981615
UNC Nr 12	24	•	80	16	12	6	4,9	8	3	4,50	0001981775
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0001314820
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0001315120
UNC 3/8	16	•	100	20	18	10	8	11	3	7,90	0001315491

PS/1

VAF

Nogrip-1®

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B



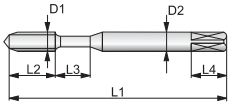
Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	8 13	5 10	15 20
	1 2	1 2	1 2 3 4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	20	-	8	6,2	9	3	9,30	0001315762
UNC 1/2	13	•	110	22	-	9	7	10	3	10,80	0001316062
UNC 5/8	11	•	110	28	-	12	9	12	3	13,50	0001316282
UNC 3/4	10	•	125	32	-	14	11	14	4	16,50	0001316343
UNC 7/8	9	•	140	34	-	18	14,5	17	4	19,50	0001316553
UNC 1"	8	•	160	36	-	20	16	19	4	22,25	0001316825

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2
VAF
TiCN

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B

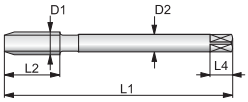


Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	13	18	15-20	13-18	9	11	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,50	0001987629
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,80	0001982406
UNC Nr 12	24	•	80	16	12	6	4,9	8	3	4,50	0001982557
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0001982617
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0001982778
UNC 3/8	16	•	100	20	18	10	8	11	3	7,90	0001982838

PS/1
VAF
TiCN

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	13	18	15-20	13-18	9	11	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	20	-	8	6,2	9	3	9,30	0001982988
UNC 1/2	13	•	110	22	-	9	7	10	3	10,80	0001983077
UNC 5/8	11	•	110	28	-	12	9	12	3	13,50	0001983128
UNC 3/4	10	•	125	32	-	14	11	14	4	16,50	0001983288
UNC 7/8	9	•	140	34	-	18	14,5	17	4	19,50	0001987568
UNC 1"	8	•	160	36	-	20	16	19	4	22,25	0001983348

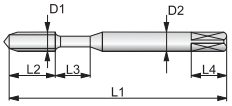
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/2

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

produr
Nogrip



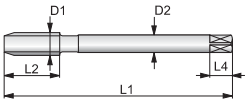
Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4
	1 2 3			1 2		3	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56,00	•	45	9	-	2,8	2,1	5	3	1,8	0004210170
UNC Nr 4	40,00	•	56	10	8	3,5	2,7	6	3	2,3	0004210231
UNC Nr 6	32,00	•	56	11	8	4	3	6	3	2,75	0004210381
UNC Nr 8	32,00	•	63	12	9	4,5	3,4	6	3	3,5	0004210442
UNC Nr 10	24,00	•	70	14	9	6	4,9	8	3	3,8	0004210010
UNC 1/4	20,00	•	80	16	12	7	4,5	8	3	5,1	0004209715
UNC 5/16	18,00	•	90	18	15	8	6,2	9	3	6,5	0004209936
UNC 3/8	16,00	•	100	20	18	10	8	11	3	7,9	0004209875

PS/1

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

produr
Nogrip



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4
	1 2 3			1 2		3	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14,00	•	100	20	-	8	6,2	9	3	9,3	0004210713
UNC 1/2	13,00	•	110	22	-	9	7	10	3	10,8	0004210502
UNC 5/8	11,00	•	110	28	-	12	9	12	4	13,5	0004210873

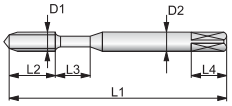
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/2

UNC	B	DIN	HSSE	2B
ANSI / ASME B1.1	3,5-5 P	2184-1	PM	

produr AltPlus



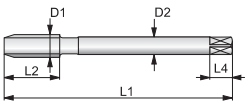
Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	9	-	2,8	2,1	5	3	1,8	0003239556
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0003240283
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0003240835
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0003241406
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0003242077
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0003261864
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0003262374
UNC 3/8	16	•	100	20	18	10	8	11	3	7,9	0003262866

PS/1

UNC	B	DIN	HSSE	2B
ANSI / ASME B1.1	3,5-5 P	2184-1	PM	

produr AltPlus



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	20	-	8	6,2	9	3	9,3	0003264650
UNC 1/2	13	•	110	22	-	9	7	10	3	10,8	0003265160
UNC 5/8	11	•	110	28	-	12	9	12	4	13,5	0003266163

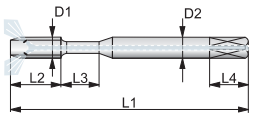
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2 KL

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B

produr AltPlus



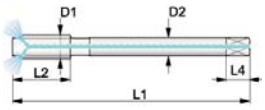
Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	22	15	4	12	10	25	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0003262003
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0003262595
UNC 3/8	16	•	100	20	18	10	8	11	3	7,9	0003263005

PS/1 KL

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B

produr AltPlus



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	22	15	4	12	10	25	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	20	-	8	6,2	9	3	9,3	0003264861
UNC 1/2	13	•	110	22	-	9	7	10	3	10,8	0003265381
UNC 5/8	11	•	110	28	-	12	9	12	4	13,5	0003266383

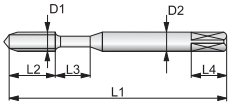
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/2

prospeed Nogrip

UNC ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B



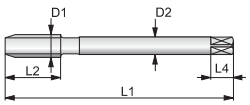
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	9	-	2,8	2,1	5	3	1,80	0004211383
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,30	0004211444
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0004211504
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,50	0004211665
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,80	0004211233
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0004210933
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0004211173
UNC 3/8	16	•	100	20	18	10	8	11	3	7,90	0004211012

PS/1

prospeed Nogrip

UNC ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	90	18	-	6	4,9	8	3	6,50	0004211936
UNC 1/2	13	•	110	22	-	9	7	10	3	10,80	0004211725
UNC 5/8	11	•	110	28	-	12	9	12	4	13,50	0004211875

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2

prospeed
LubePlus

UNC
ANSI / ASME B1.1

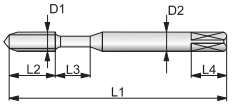
viruta larga
long chip

B
3,5-5 P

DIN
2184-1

HSSE
PM

2B



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	9	-	2,8	2,1	5	3	1,80	0003277515
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,30	0003277886
UNC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0003278025
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,50	0003278456
UNC Nr 10	24	•	70	14	9	6	4,9	8	3	3,80	0003278677
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0003281308
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0003281890
UNC 3/8	16	•	100	20	18	10	8	11	3	7,90	0003317812

PS/1

prospeed
LubePlus

UNC
ANSI / ASME B1.1

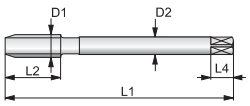
viruta larga
long chip

B
3,5-5 P

DIN
2184-1

HSSE
PM

2B



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	90	18	-	6	4,9	8	3	6,50	0003319546
UNC 1/2	13	•	110	22	-	9	7	10	3	10,80	0003320604
UNC 5/8	11	•	110	28	-	12	9	12	4	13,50	0003321766

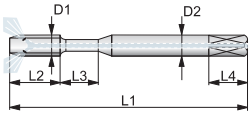
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2 KL

prospeed LubePlus

UNC ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B



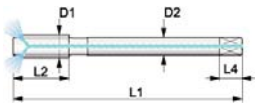
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0003281529
UNC 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0003282030
UNC 3/8	16	•	100	20	18	10	8	11	3	7,90	0003318051

PS/1 KL

prospeed LubePlus

UNC ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B

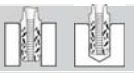


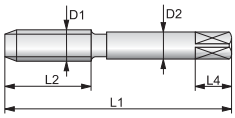
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	90	18	-	6	4,9	8	3	6,50	0003319756
UNC 1/2	13	•	110	22	-	9	7	10	3	10,80	0003320814
UNC 5/8	11	•	110	28	-	12	9	12	4	13,50	0003321977

Machos de roscar a mano. Agujeros ciegos y pasantes
Set of hand taps. Blind and through holes

JMC

JUEGO	UNF ANSI / ASME B1.1		1°-4P 2°-3P 3°-2P progresiva progressive		DIN 352	HSS	ISO 2 (6H)	



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr0	80	•	32	8	-	2,5	2,1	5	3	1,25	0000286332
UNF Nr1	72	•	36	8	-	2,8	2,1	5	3	1,50	0000286492
UNF Nr2	64	•	36	9	-	2,8	2,1	5	3	1,80	0000286553
UNF Nr3	56	•	40	10	-	2,8	2,1	5	3	2,10	0000286613
UNF Nr4	48	•	40	11	-	3,5	2,7	6	3	2,40	0000286763
UNF Nr5	44	•	40	11	-	3,5	2,7	6	3	2,65	0000286824
UNF Nr6	40	•	45	13	-	4	3	6	3	2,90	0000286984
UNF Nr8	36	•	45	14	-	4,5	3,4	6	3	3,50	0000287063
UNF Nr10	32	•	50	16	-	6	4,9	8	3	4,10	0000287123
UNF Nr12	28	•	50	18	-	6	4,9	8	3	4,60	0000287284
UNF 1/4	28	•	56	18	-	6	4,9	8	3	5,50	0000287344
UNF 5/16	24	•	56	18	-	6	4,9	8	3	6,90	0000287494
UNF 3/8	24	•	63	18	-	7	5,5	8	3	8,50	0000287555
UNF 7/16	20	•	63	20	-	8	6,2	9	4	9,90	0000284615
UNF 1/2	20	•	70	20	-	9	7	10	4	11,50	0000287776
UNF 9/16	18	•	70	20	-	11	9	12	4	12,80	0000287826
UNF 5/8	18	•	70	20	-	12	9	12	4	14,50	0000287986
UNF 3/4	16	•	80	22	-	14	11	14	4	17,50	0000288065
UNF 7/8	14	•	90	22	-	18	14,5	17	4	20,50	0000288126
UNF 1"	12	•	90	22	-	20	16	19	4	23,50	0000288286
UNF 1"1/8	12	•	90	22	-	22	18	21	4	26,50	0000288346
UNF 1"1/4	12	•	100	24	-	25	20	23	4	29,50	0000288407
UNF 1"1/2	12	•	110	30	-	28	22	25	6	36,00	0000288617

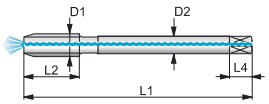
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos horizontales / *Horizontal blind holes.*

JMC

C7X KC	UNF ANSI / ASME B1.1	2xD	C 2-3 P	R7° KC	SIM. DIN 2184-1	HSSE PM	2B	P 60°

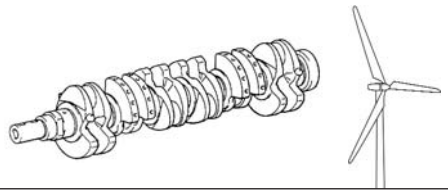
produr AltPlus



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	22	15	4	12	10	25	6
	2 3			2 3		3	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	125	20	-	9	7	10	3	10,5	0003275660

Macho extra-largo para roscados horizontales en aceros de viruta larga, soluciona el problema de evacuación de virutas en agujeros profundos.
Extra-long tap for horizontal working on long-chipping steels, solves the chip evacuation problem in deep holes.



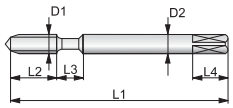
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C10/2

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R10º	DIN 2184-1	HSSE PM	2B

proni



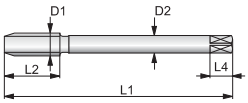
Material	GR8
Subg.	3
mts./min.	2
	2 3

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0004198309
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0004198460
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0004198520
UNF Nr 12	28	•	70	14	9	6	4,9	8	3	3,8	0004198671
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0004198731
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0004144058
UNF 3/8	24	•	100	20	18	10	8	11	3	7,9	0004198952

C10/1

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R10º	DIN 2184-1	HSSE PM	2B

proni



Material	GR8
Subg.	3
mts./min.	2
	2 3

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	8	6,2	9	4	9,9	0004199191
UNF 1/2	20	•	110	18	-	9	7	10	4	11,5	0004199251
UNF 5/8	18	•	110	20	-	12	9	12	4	14,5	0004199462

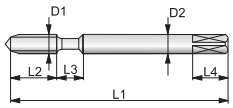
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

JMC

C15/2

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	2B	P 60º

proti



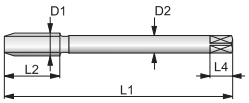
Material	GR2	GR9
Subg.	3	2
mts./min.	4	6
	1	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,3	0003344910
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0003345360
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0003346092
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0003346583
UNF Nr 12	28	•	70	14	9	6	4,9	8	3	3,8	0003346915
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0003347646
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0003347917
UNF 3/8	24	•	100	20	18	10	8	11	3	7,9	0003348377

C15/1

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	2B	P 60º

proti



Material	GR2	GR9
Subg.	3	2
mts./min.	4	6
	1	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	8	6,2	9	4	9,9	0003349159
UNF 1/2	20	•	110	18	-	9	7	10	4	11,5	0003349580
UNF 9/16	18	•	110	18	-	11	9	12	4	12,8	0003350377
UNF 5/8	18	•	110	20	-	12	9	12	4	14,5	0003350920
UNF 3/4	16	•	125	22	-	14	11	14	4	17,5	0003351370

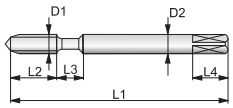
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

proti TiCN

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	2B



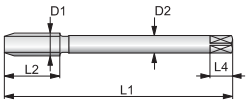
Material	GR2	GR9
Subg.	3	2
mts./min.	4	6
	1	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,3	0003344790
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0003345150
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0003345642
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0003346363
UNF Nr 12	28	•	70	14	9	6	4,9	8	3	3,8	0003346704
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0003347215
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0003347706
UNF 3/8	24	•	100	20	18	10	8	11	3	7,9	0003348156

C15/1

proti TiCN

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	2B



Material	GR2	GR9
Subg.	3	2
mts./min.	4	6
	1	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	8	6,2	9	4	9,9	0003348869
UNF 1/2	20	•	110	18	-	9	7	10	4	11,5	0003349430
UNF 9/16	18	•	110	18	-	11	9	12	4	12,8	0003350006
UNF 5/8	18	•	110	20	-	12	9	12	4	14,5	0003350709
UNF 3/4	16	•	125	22	-	14	11	14	4	17,5	0003351169

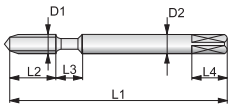
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R15°	DIN 2184-1	HSSE PM	2B

proti CromPlus



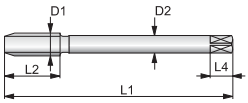
Material	GR9
Subg.	2
mts./min.	4

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,3	0003344850
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0003345210
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0003345792
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0003346423
UNF Nr 12	28	•	70	14	9	6	4,9	8	3	3,8	0003346855
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0003347586
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0003347857
UNF 3/8	24	•	100	20	18	10	8	11	3	7,9	0003348217

C15/1

UNF ANSI / ASME B1.1	2xD	C 2-3 P	R15°	DIN 2184-1	HSSE PM	2B

proti CromPlus



Material	GR9
Subg.	2
mts./min.	4

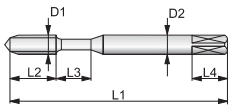
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	8	6,2	9	4	9,9	0003349008
UNF 1/2	20	•	110	18	-	9	7	10	4	11,5	0003349701
UNF 9/16	18	•	110	18	-	11	9	12	4	12,8	0003350217
UNF 5/8	18	•	110	20	-	12	9	12	4	14,5	0003350869
UNF 3/4	16	•	125	22	-	14	11	14	4	17,5	0003351219

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

N

UNF ANSI / ASME B1.1	2,5÷3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B 3B UNJF	60°



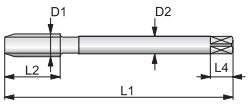
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

	D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
2B	UNF Nr 2	64	•	45	5	5	2,8	2,1	5	3	1,85	0001990350
	UNF Nr 3	56	•	50	5	5	2,8	2,1	5	3	2,10	0001990410
	UNF Nr 4	48	•	56	6	12	3,5	2,7	6	3	2,40	0000474351
	UNF Nr 5	44	•	56	6	13	3,5	2,7	6	3	2,65	0000431662
	UNF Nr 6	40	•	56	7	13	4	3	6	3	2,90	0000431712
	UNF Nr 8	36	•	63	7	13	4,5	3,4	6	3	3,50	0000431873
	UNF Nr 10	32	•	70	9	13	6	4,9	8	3	4,10	0000431933
	UNF Nr 12	28	•	80	9	19	6	4,9	8	3	4,60	0000432012
	UNF 1/4	28	•	80	11	19	6	4,9	8	3	5,50	0000432172
	UNF 5/16	24	•	90	11	22	8	6,2	9	3	6,90	0000432233
	UNF 3/8	24	•	100	12	26	10	8	11	3	8,50	0000432383
3B UNJF	UNF Nr 4	48	•	56	6	12	3,5	2,7	6	3	2,40	0001991844
	UNF Nr 5	44	•	56	6	13	3,5	2,7	6	3	2,65	0001991904
	UNF Nr 6	40	•	56	7	13	4	3	6	3	2,90	0001992083
	UNF Nr 8	36	•	63	7	13	4,5	3,4	6	3	3,50	0001992144
	UNF Nr 10	32	•	70	9	13	6	4,9	8	3	4,10	0001992204
	UNF Nr 12	28	•	80	9	19	6	4,9	8	3	4,60	0001992354
	UNF 1/4	28	•	80	11	19	6	4,9	8	3	5,50	0001992415
	UNF 5/16	24	•	90	11	22	8	6,2	9	3	6,90	0001992575

C35A/1

N

UNF ANSI / ASME B1.1	2,5÷3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B 3B UNJF	60°



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

	D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
2B	UNF 5/16	24		90	11	-	6	4,9	8	3	6,90	0000784697
	UNF 3/8	24		100	12	-	7	5,5	8	3	8,50	0000432504
	UNF 7/16	20	•	100	14	-	8	6,2	9	3	9,90	0000432664
	UNF 1/2	20	•	110	18	-	9	7	10	3	11,50	0000432725
	UNF 9/16	18	•	110	18	-	11	9	12	4	12,80	0000432875
	UNF 5/8	18	•	110	20	-	12	9	12	4	14,50	0000432935
	UNF 3/4	16	•	125	22	-	14	11	14	4	17,50	0000433014
	UNF 7/8	14	•	140	26	-	18	14,5	17	4	20,50	0000433175
	UNF 1"	12	•	140	28	-	20	16	19	4	23,50	0000433235
	UNF 1"1/8	12	•	180	28	-	22	18	21	4	26,50	0001990902
	UNF 1"1/4	12	•	180	28	-	25	20	23	4	29,50	0001991081
	UNF 1"3/8	12	•	200	30	-	28	22	25	4	33,00	0001991141
	UNF 1"1/2	12	•	200	30	-	28	22	25	4	36,00	0001991292
3B UNJF	UNF 3/8	24		100	12	-	7	5,5	8	3	8,50	0001992635
	UNF 7/16	20	•	100	14	-	8	6,2	9	3	9,90	0001992786
	UNF 1/2	20	•	110	18	-	9	7	10	3	11,50	0001992846
	UNF 9/16	18	•	110	18	-	11	9	12	4	12,80	0001992907
	UNF 5/8	18	•	110	20	-	12	9	12	4	14,50	0001993085
	UNF 3/4	16	•	125	22	-	14	11	14	4	17,50	0001993146

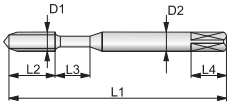
Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A/2	UNF ANSI / ASME B1.1	3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B	P 60°

VAF

Nogrip-1®



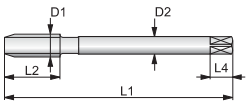
Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	28	•	80	11	19	6	4,9	8	3	5,50	0001320408
UNF 5/16	24	•	90	11	22	8	6,2	9	3	6,90	0001320839
UNF 3/8	24	•	100	12	26	10	8	11	3	8,50	0001321139

C35A/1	UNF ANSI / ASME B1.1	3xD	C 2-3P	R35°	DIN 2184-1	HSSE Co5	2B	P 60°

VAF

Nogrip-1®



Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	8	6,2	9	3	9,90	0000728988
UNF 1/2	20	•	110	18	-	9	7	10	3	11,50	0001267451
UNF 9/16	18	•	110	18	-	11	9	12	4	12,80	0001267180
UNF 5/8	18	•	110	20	-	12	9	12	4	14,50	0001267029
UNF 3/4	16	•	125	22	-	14	11	14	4	17,50	0000729610
UNF 7/8	14	•	140	26	-	18	14,5	17	4	20,50	0000993916
UNF 1"	12	•	160	28	-	20	16	19	4	23,50	0001266248

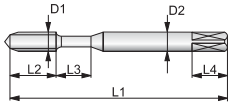
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

VAF

TiCN

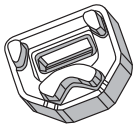
UNF ANSI / ASME B1.1 | 3xD | **C** 2-3P | R35° | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	10	15	12-17	11-14	8	10	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	28	•	80	11	19	6	4,9	8	3	5,50	0002009216
UNF 5/16	24	•	90	11	22	8	6,2	9	3	6,90	0002009376
UNF 3/8	24	•	100	12	26	10	8	11	3	8,50	0002009427

Macho adecuado para la fabricación de moldes.
Taps.



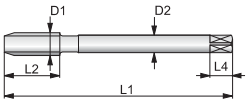
Macho adecuado para el roscado en valvulas y bombas.
Tap

C35A/1

VAF

TiCN

UNF ANSI / ASME B1.1 | 3xD | **C** 2-3P | R35° | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	10	15	12-17	11-14	8	10	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	8	6,2	9	3	9,90	0002014002
UNF 1/2	20	•	110	18	-	9	7	10	3	11,50	0002014163
UNF 9/16	18	•	110	18	-	11	9	12	4	12,80	0002014223
UNF 5/8	18	•	110	20	-	12	9	12	4	14,50	0002014373
UNF 3/4	16	•	125	22	-	14	11	14	4	17,50	0002014434
UNF 7/8	14	•	140	26	-	18	14,5	17	4	20,50	0002014594
UNF 1"	12	•	160	28	-	20	16	19	4	23,50	0002014654

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

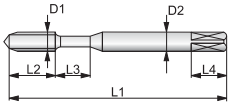
Agujeros ciegos profundos / *Deep blind holes.*

JMC

C40A/2

UNF ANSI / ASME B1.1	4xD	C 2-3 P	R40°	DIN 2184-1	HSSE PM	ISO 2 6H

produr Nogrip



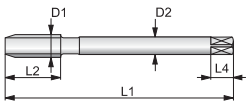
Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	3
mts./min.	20	12	3	10	8	20
	1 2			1 2		3

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	6	8	3,5	2,7	6	3	2,3	0004208170
UNF Nr 6	40	•	56	7	8	4	3	6	3	2,75	0004208221
UNF Nr 8	36	•	63	7	9	4,5	3,4	6	3	3,5	0004208381
UNF Nr 10	32	•	70	9	9	6	4,9	8	3	3,8	0004208010
UNF 1/4	28	•	80	11	12	6	4,9	8	3	5,1	0004207710
UNF 5/16	24	•	90	11	15	8	6,2	9	3	6,5	0004207931
UNF 3/8	24	•	100	12	18	10	8	11	3	7,9	0004207871

C40A/1

UNF ANSI / ASME B1.1	4xD	C 2-3 P	R40°	DIN 2184-1	HSSE PM	ISO 2 6H

produr Nogrip



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	3
mts./min.	20	12	3	10	8	20
	1 2			1 2		3

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	9	7	10	3	10,5	0004208652
UNF 1/2	20	•	110	16	-	9	7	10	4	10,8	0004208442
UNF 5/8	18	•	110	26	-	12	9	12	4	13,5	0004208502

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

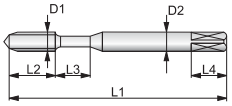
Agujeros ciegos profundos / *Deep blind holes.*

JMC

C40A/2

UNF ANSI / ASME B1.1	4xD	C 2-3 P	R40º	DIN 2184-1	HSSE PM	ISO 2 6H

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	6	8	3,5	2,7	6	3	2,3	0003269179
UNF Nr 6	40	•	56	7	8	4	3	6	3	2,75	0003269441
UNF Nr 8	36	•	63	7	9	4,5	3,4	6	3	3,5	0003269712
UNF Nr 10	32	•	70	9	9	6	4,9	8	3	3,8	0003270509
UNF 1/4	28	•	80	11	12	6	4,9	8	3	5,1	0003272232
UNF 5/16	24	•	90	11	15	8	6,2	9	3	6,5	0003272724
UNF 3/8	24	•	100	12	18	10	8	11	3	7,9	0003273234

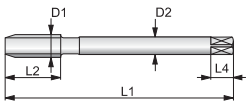
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C40A/1

UNF ANSI / ASME B1.1	4xD	C 2-3 P	R40º	DIN 2184-1	HSSE PM	ISO 2 6H

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	9	7	10	3	10,5	0003273726
UNF 1/2	20	•	110	18	-	9	7	10	4	10,8	0003274237
UNF 5/8	18	•	110	26	-	12	9	12	4	13,5	0003274728

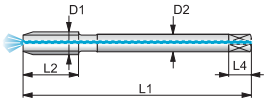
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos profundos / *Deep blind holes.*

JMC

C40A/2 KC

UNF ANSI / ASME B1.1	4xD	C 2-3 P	R40° KC	DIN 2184-1	HSSE PM	ISO 2 6H

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	20	•	80	11	12	6	4,9	8	3	5,1	0003272443
UNF 5/16	18	•	90	11	15	8	6,2	9	3	6,5	0003272935
UNF 3/8	16	•	100	12	18	10	8	11	3	7,9	0003273455

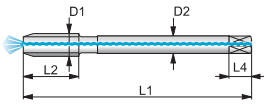
Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

C40A/1 KC

UNF ANSI / ASME B1.1	4xD	C 2-3 P	R40° KC	DIN 2184-1	HSSE PM	ISO 2 6H

produr AltPlus



Material	GR2			GR3		GR4
Subg.	1	2	3	1	2	2
mts./min.	22	15	4	12	10	25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	14	-	9	7	10	3	10,5	0003273937
UNF 1/2	13	•	110	18	-	9	7	10	4	10,8	0003274457
UNF 5/8	11	•	110	26	-	12	9	12	4	13,5	0003274949

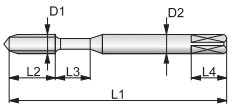
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

C40A/2

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40º | DIN 2184-1 | HSSE PM | 2B

prospeed Nogrip



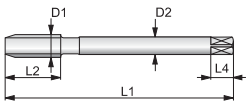
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	6	8	3,5	2,7	6	3	2,3	0004209173
UNF Nr 6	40	•	56	7	8	4	3	6	3	2,75	0004209233
UNF Nr 8	36	•	63	7	9	4,5	3,4	6	3	3,5	0004209383
UNF Nr 10	32	•	70	9	9	6	4,9	8	3	3,8	0004209012
UNF 1/4	28	•	80	11	12	6	4,9	8	3	5,1	0004208713
UNF 5/16	24	•	90	11	15	8	6,2	9	3	6,5	0004208933
UNF 3/8	24	•	100	12	18	10	8	11	3	7,9	0004208873

C40A/1

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40º | DIN 2184-1 | HSSE PM | 2B

prospeed Nogrip



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

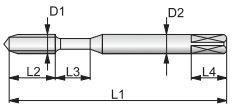
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	90	14	-	6	4,9	8	3	6,5	0004209665
UNF 1/2	20	•	110	18	-	9	7	10	4	10,8	0004209444
UNF 5/8	18	•	110	28	-	12	9	12	4	13,5	0004209504

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos / *Blind holes.*

C40A/2

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40º | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

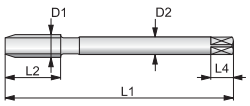
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	6	8	3,5	2,7	6	3	2,3	0003322277
UNF Nr 6	40	•	56	7	8	4	3	6	3	2,75	0003322829
UNF Nr 8	36	•	63	7	9	4,5	3,4	6	3	3,5	0003323490
UNF Nr 10	32	•	70	9	9	6	4,9	8	3	3,8	0003324061
UNF 1/4	28	•	80	11	12	6	4,9	8	3	5,1	0003324824
UNF 5/16	24	•	90	11	15	8	6,2	9	3	6,5	0003326125
UNF 3/8	24	•	100	12	18	10	8	11	3	7,9	0003327288

Macho adecuado para el roscado en aceros inoxidables.
For machining stainless steels.

C40A/1

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40º | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	90	14	-	6	4,9	8	3	6,5	0003328341
UNF 1/2	20	•	110	18	-	9	7	10	4	10,8	0003329614
UNF 5/8	18	•	110	26	-	12	9	12	4	13,5	0003331283

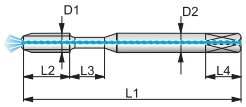
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

C40A/2 KC

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° KC | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

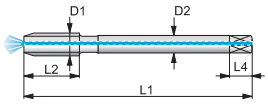
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	28	•	80	11	12	6	4,9	8	3	5,1	0003325123
UNF 5/16	24	•	90	11	15	8	6,2	9	3	6,5	0003326336
UNF 3/8	24	•	100	12	18	10	8	11	3	7,9	0003327499

Macho adecuado para el roscado en aceros inoxidables.
For machining stainless steels.

C40A/1 KC

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° KC | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	90	14	-	6	4,9	8	3	6,5	0003328552
UNF 1/2	20	•	110	18	-	9	7	10	4	10,8	0003329835
UNF 5/8	18	•	110	26	-	12	9	12	4	13,5	0003331403

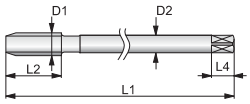
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos / *Blind holes.*

C40AX

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° | SIM. DIN 2184-1 | HSSE PM | 2B

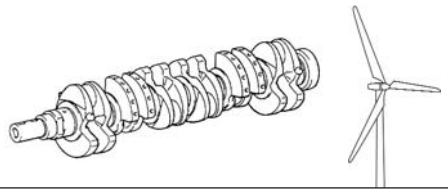
prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	125	14	-	6	4,9	8	3	6,5	0003009851
UNF 1/2	20	•	125	18	-	9	7	10	4	10,8	0003330280

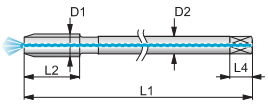
Macho extra-largo para roscados horizontales en aceros de viruta larga, soluciona el problema de evacuación de virutas en agujeros profundos.
Extra-long tap for horizontal working on long-chipping steels, solves the chip evacuation problem in deep holes.



C40AX KC

UNF ANSI / ASME B1.1 | 4xD viruta larga *long chip* | **C** 2-3 P | R40° KC | SIM. DIN 374 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

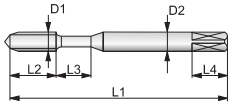
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	18	•	125	14	-	6	4,9	8	3	6,5	0003085225
UNF 1/2	13	•	125	18	-	9	7	10	4	10,8	0003330401

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C/2 — N

UNF ANSI / ASME B1.1 | 1xD | **C** 2-3P | DIN 2184-1 | HSSE Co5 | 2B

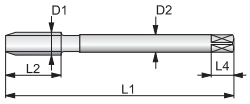


Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 1	72	•	45	8	-	2,8	2,1	5	3	1,55	0000427386
UNF Nr 2	64	•	45	9	-	2,8	2,1	5	3	1,85	0000427447
UNF Nr 3	56	•	50	9	-	2,8	2,1	5	3	2,10	0000427597
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,40	0000427657
UNF Nr 5	44	•	56	10	8	3,5	2,7	6	3	2,65	0000427718
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,90	0000427878
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,50	0000427929
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	4,10	0000428017
UNF Nr 12	28	•	80	16	12	6	4,9	8	3	4,60	0000428168
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,50	0000428228
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,90	0000428389
UNF 3/8	24	•	100	20	18	10	8	11	3	8,50	0000428449

C/1 — N

UNF ANSI / ASME B1.1 | 1xD | **C** 2-3P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 5/16	24		90	18	-	6	4,9	8	3	6,90	0000429010
UNF 3/8	24		100	20	-	7	5,5	8	3	8,50	0000429170
UNF 7/16	20	•	100	20	-	8	6,2	9	3	9,90	0000429221
UNF 1/2	20	•	110	22	-	9	7	10	3	11,50	0000429381
UNF 9/16	18	•	110	25	-	11	9	12	4	12,80	0000429441
UNF 5/8	18	•	110	28	-	12	9	12	4	14,50	0000429502
UNF 3/4	16	•	125	32	-	14	11	14	4	17,50	0000429652
UNF 7/8	14	•	140	34	-	18	14,5	17	4	20,50	0000429712
UNF 1”	12	•	140	36	-	20	16	19	4	23,50	0000694319
UNF 1”1/8	12	•	180	38	-	22	18	21	4	26,50	0000694479
UNF 1”1/4	12	•	180	38	-	25	20	23	4	29,50	0000694530
UNF 1”1/2	12	•	200	45	-	28	22	25	4	36,00	0000694740

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

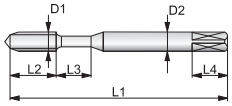
JMC

C/2

CI

C.D.I.®

UNF ANSI / ASME B1.1	C 2-3P	DIN 2184-1	HSSE Co5	2B



Material	GR4		
Subg.	1	2	3
mts./min.	30-35	25-30	20-25

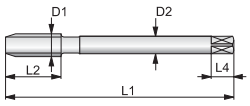
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,4	0002007151
UNF Nr 5	44	•	56	10	8	3,5	2,7	6	3	2,65	0002007212
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,9	0002007362
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0002007422
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	4,1	0001440179
UNF Nr 12	28	•	80	16	12	6	4,9	8	3	4,6	0002007583
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,5	0002007643
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,9	0002007793
UNF 3/8	24	•	100	20	18	10	8	11	3	8,5	0002007854

C/1

CI

C.D.I.®

UNF ANSI / ASME B1.1	C 2-3P	DIN 2184-1	HSSE Co5	2B



Material	GR4		
Subg.	1	2	3
mts./min.	30-35	25-30	20-25

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 5/16	24		90	18	-	6	4,9	8	3	6,9	0001984833
UNF 3/8	24		100	20	-	7	5,5	8	3	8,5	0001401600
UNF 7/16	20	•	100	20	-	8	6,2	9	3	9,9	0001025241
UNF 1/2	20	•	110	22	-	9	7	10	3	11,5	0001818487
UNF 9/16	18	•	110	25	-	11	9	12	4	12,8	0001984993
UNF 5/8	18	•	110	28	-	12	9	12	4	14,5	0001025301
UNF 3/4	16	•	125	32	-	14	11	14	4	17,5	0001785251
UNF 7/8	14	•	140	34	-	18	14,5	17	4	20,5	0001985072
UNF 1"	12	•	160	36	-	20	16	19	4	23,5	0001985132

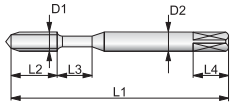
Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2

CI

AltPlus

UNF ANSI / ASME B1.1 | C 2-3P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40

D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	56	10	8	3,5	2,7	6	3	2,4	0002031463
UNF Nr 5	44	56	10	8	3,5	2,7	6	3	2,65	0002031514
UNF Nr 6	40	56	11	8	4	3	6	3	2,9	0002031674
UNF Nr 8	36	63	12	9	4,5	3,4	6	3	3,5	0002031734
UNF Nr 10	32	70	14	9	6	4,9	8	3	4,1	0002031895
UNF Nr 12	28	80	16	12	6	4,9	8	3	4,6	0002031945
UNF 1/4	28	80	16	12	6	4,9	8	3	5,5	0002032034
UNF 5/16	24	90	18	15	8	6,2	9	3	6,9	0002032184
UNF 3/8	24	100	20	18	10	8	11	3	8,5	0002032245

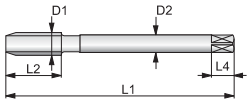
Macho de alto rendimiento para el roscado en fundición gris y nodular.
High performance tap suitable for nodular as well as grey cast iron.

C/1

CI

AltPlus

UNF ANSI / ASME B1.1 | C 2-3P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR4			GR5		GR6
Subg.	1	2	3	2	6	4
mts./min.	30-35	25-30	20-25	20-25	15-20	30-40

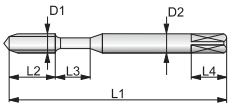
D1	tpi	L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 5/16	24	90	18	-	6	4,9	8	3	6,9	0001985283
UNF 3/8	24	100	20	-	7	5,5	8	3	8,5	0001985343
UNF 7/16	20	100	20	-	8	6,2	9	3	9,9	0001985403
UNF 1/2	20	110	22	-	9	7	10	3	11,5	0001985564
UNF 9/16	18	110	25	-	11	9	12	4	12,8	0001985624
UNF 5/8	18	110	28	-	12	9	12	4	14,5	0001985774
UNF 3/4	16	125	32	-	14	11	14	4	17,5	0001693951
UNF 7/8	14	140	34	-	18	14,5	17	4	20,5	0001985835
UNF 1"	12	160	36	-	20	16	19	4	23,5	0001985995

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2

N

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B 3B UNJF



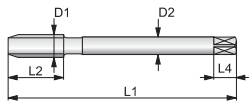
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

	D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
2B	UNF Nr 0	80	•	40	8	-	2,5	2,1	5	3	1,25	0000483095
	UNF Nr 1	72	•	45	8	-	2,8	2,1	5	3	1,55	0001715464
	UNF Nr 2	64	•	45	9	-	2,8	2,1	5	3	1,85	0001715524
	UNF Nr 3	56	•	50	9	-	2,8	2,1	5	3	2,10	0001715675
	UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,40	0001274312
	UNF Nr 5	44	•	56	10	8	3,5	2,7	6	3	2,65	0000433395
	UNF Nr 6	40	•	56	11	8	4	3	6	3	2,90	0000433446
	UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,50	0000433506
	UNF Nr 10	32	•	70	14	9	6	4,9	8	3	4,10	0000433667
	UNF Nr 12	28	•	80	16	12	6	4,9	8	3	4,60	0000433727
	UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,50	0000433877
	UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,90	0000433938
	UNF 3/8	24	•	100	20	18	10	8	11	3	8,50	0000434027
3B UNJF	UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,40	0002000577
	UNF Nr 5	44	•	56	10	8	3,5	2,7	6	3	2,65	0002000627
	UNF Nr 6	40	•	56	11	8	4	3	6	3	2,90	0002000787
	UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,50	0002000848
	UNF Nr 10	32	•	70	14	9	6	4,9	8	3	4,10	0002000908
	UNF Nr 12	28	•	80	16	12	6	4,9	8	3	4,60	0002001087
	UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,50	0002001147
	UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,90	0002001208

PS/1

N

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B 3B UNJF



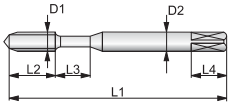
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1 2		6		5	5 6

	D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
2B	UNF 5/16	24		90	18	-	6	4,9	8	3	6,90	0000434177
	UNF 3/8	24		100	20	-	7	5,5	8	3	8,50	0000434237
	UNF 7/16	20	•	100	20	-	8	6,2	9	3	9,90	0000434398
	UNF 1/2	20	•	110	22	-	9	7	10	3	11,50	0000434458
	UNF 9/16	18	•	110	25	-	11	9	12	4	12,80	0000434508
	UNF 5/8	18	•	110	28	-	12	9	12	4	14,50	0000434669
	UNF 3/4	16	•	125	32	-	14	11	14	4	17,50	0000434729
	UNF 7/8	14	•	140	34	-	18	14,5	17	4	20,50	0000434880
	UNF 1"	12	•	140	36	-	20	16	19	4	23,50	0000434930
3B UNJF	UNF 3/8	24		100	20	-	7	5,5	8	3	8,50	0002001358
	UNF 7/16	20	•	100	20	-	8	6,2	9	3	9,90	0002001419
	UNF 1/2	20	•	110	22	-	9	7	10	3	11,50	0002001579
	UNF 9/16	18	•	110	25	-	11	9	12	4	12,80	0002001639
	UNF 5/8	18	•	110	28	-	12	9	12	4	14,50	0002001780
	UNF 3/4	16	•	125	32	-	14	11	14	4	17,50	0002001840

Machos de roscar a máquina. Agujeros pasantes
Machine taps. *Through holes*

PS/2
VAF
Nogrip-1®

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B

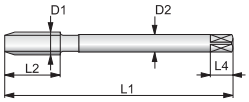


Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	8 13	5 10	15 20
	1 2	1 2	1 2 3 4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0001317616
UNF 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0001317345
UNF 3/8	16	•	100	20	18	10	8	11	3	7,90	0001006437

PS/1
VAF
Nogrip-1®

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	8 13	5 10	15 20
	1 2	1 2	1 2 3 4	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	14	•	100	20	-	8	6,2	9	3	9,30	0001318126
UNF 1/2	13	•	110	22	-	9	7	10	3	10,80	0001318408
UNF 5/8	11	•	110	28	-	12	9	12	4	13,50	0001317987
UNF 3/4	10	•	125	32	-	14	11	14	4	16,50	0001318779
UNF 7/8	9	•	140	34	-	18	14,5	17	4	19,50	0001319078
UNF 1"	8	•	160	36	-	20	16	19	4	22,25	0001319400

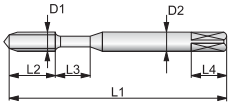
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS/2

VAF

TiCN

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	13	18	15-20	13-18	9	11	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

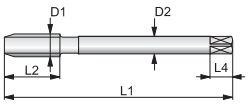
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	20	•	80	16	12	6	4,9	8	3	5,10	0002008585
UNF 5/16	18	•	90	18	15	8	6,2	9	3	6,50	0002008645
UNF 3/8	16	•	100	20	18	10	8	11	3	7,90	0002008706

PS/1

VAF

TiCN

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 2B



Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	13	18	15-20	13-18	9	11	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	14	•	100	20	-	8	6,2	9	3	9,30	0002007914
UNF 1/2	13	•	110	22	-	9	7	10	3	10,80	0002008093
UNF 5/8	11	•	110	28	-	12	9	12	3	13,50	0002008153
UNF 3/4	10	•	125	32	-	14	11	14	4	16,50	0002008214
UNF 7/8	9	•	140	34	-	18	14,5	17	4	19,50	0002008364
UNF 1"	8	•	160	36	-	20	16	19	4	22,25	0002008425

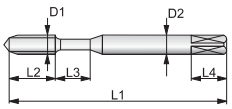
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/2

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

produr
Nogrip



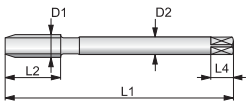
Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4
	1 2 3			1 2		3	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,3	0004212446
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0004212506
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0004212667
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0004212396
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0004212015
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0004212235
UNF 3/8	24	•	100	20	18	10	8	11	3	7,9	0004212175

PS/1

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

produr
Nogrip



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4
	1 2 3			1 2		3	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	20	-	9	7	10	3	10,5	0004212938
UNF 1/2	20	•	110	22	-	9	7	10	3	10,8	0004212727
UNF 5/8	18	•	110	28	-	12	9	12	4	13,5	0004212878

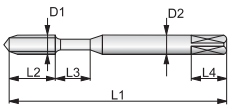
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros pasantes / *Through holes.*

JMC

PS/2

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

produr AltPlus



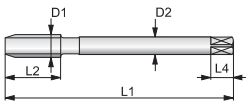
Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,3	0003267877
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0003268177
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0003268509
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0003268870
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0003270719
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0003271230
UNF 3/8	24	•	100	20	18	10	8	11	3	7,9	0003271722

PS/1

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

produr AltPlus



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	20	12	3	10	8	20	4

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	20	-	9	7	10	3	10,5	0003276392
UNF 1/2	20	•	110	22	-	9	7	10	3	10,8	0003276512
UNF 5/8	18	•	110	28	-	12	9	12	4	13,5	0003277023

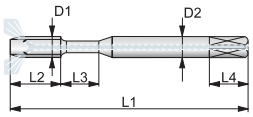
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2 KL

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B

produr AltPlus



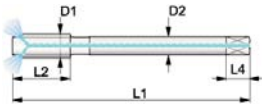
Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	22	15	4	12	10	25	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0003270930
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0003271441
UNF 3/8	24	•	100	20	18	10	8	11	3	7,9	0003272011

PS/1 KL

UNF ANSI / ASME B1.1 | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B

produr AltPlus



Material	GR2			GR3		GR4	GR9
Subg.	1	2	3	1	2	3	2
mts./min.	22	15	4	12	10	25	6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	20	-	9	7	10	3	10,5	0003276181
UNF 1/2	20	•	110	22	-	9	7	10	3	10,8	0003276723
UNF 5/8	18	•	110	28	-	12	9	12	4	13,5	0003277243

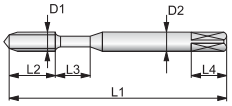
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2

UNF ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

prospeed Nogrip



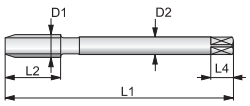
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,30	0004213458
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0004213509
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,50	0004213669
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,80	0004213398
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,10	0004213027
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,50	0004213238
UNF 3/8	24	•	100	20	18	10	8	11	3	7,90	0004213177

PS/1

UNF ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

prospeed Nogrip



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	90	18	-	6	4,9	8	3	6,50	0004213930
UNF 1/2	20	•	110	22	-	9	7	10	3	10,80	0004213720
UNF 5/8	18	•	110	28	-	12	9	12	4	13,50	0004213880

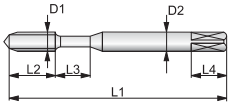
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2

UNF ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



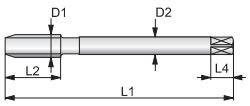
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,30	0003322548
UNF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0003323119
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,50	0003323761
UNF Nr 10	32	•	70	14	9	6	4,9	8	3	3,80	0003324332
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,10	0003325615
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,50	0003326768
UNF 3/8	24	•	100	20	18	10	8	11	3	7,90	0003327820

PS/1

UNF ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | DIN 2184-1 | HSSE PM | 2B

prospeed LubePlus



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	25	25	10	8	25	25	6
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	90	18	-	6	4,9	8	3	6,50	0003328983
UNF 1/2	20	•	110	22	-	9	7	10	3	10,80	0003330772
UNF 5/8	18	•	110	28	-	12	9	12	4	13,50	0003331775

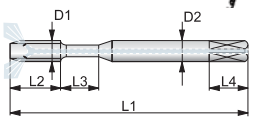
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros pasantes / *Through holes.*

PS/2 KL

prospeed
LubePlus

UNF ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B | P 60°



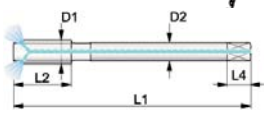
Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 1/4	28	•	80	16	12	6	4,9	8	3	5,10	0003325826
UNF 5/16	24	•	90	18	15	8	6,2	9	3	6,50	0003326988
UNF 3/8	24	•	100	20	18	10	8	11	3	7,90	0003328060

PS/1 KL

prospeed
LubePlus

UNF ANSI / ASME B1.1 | viruta larga *long chip* | **B** 3,5-5 P | KL | DIN 2184-1 | HSSE PM | 2B | P 60°



Material	GR1	GR2	GR3		GR4	GR6	GR9
Subg.	1	1	1	2	2	2	1
mts./min.	30	30	12	10	30	30	8
	2 3	2 3	2 3		3	6	4 5

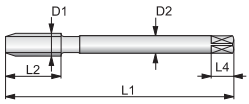
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	90	18	-	6	4,9	8	3	6,50	0003329122
UNF 1/2	20	•	110	22	-	9	7	10	3	10,80	0003330983
UNF 5/8	18	•	110	28	-	12	9	12	4	13,50	0003331995

Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A/1	UN ANSI / ASME B1.1	2,5÷3xD	C 2-3P	R35°	≈DIN 376	HSSE Co5	2B	P 60°

N



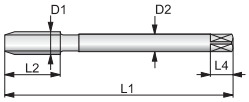
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1	2	6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UN 1"1/8	8	•	180	28	-	22	18	21	4	25,40	0002774383
UN 1"1/4	8	•	180	28	-	25	20	23	4	28,50	0001595940
UN 1"3/8	8	•	200	32	-	28	22	25	5	32,00	0002604149
UN 1"1/2	8	•	200	32	-	28	22	25	5	35,00	0003634889

C35A/1	UN ANSI / ASME B1.1	2,5÷3xD	C 2-3P	R35°	≈DIN 376	HSSE Co5	2B	P 60°

N

Nogrip-1®



Material	GR1		GR2		GR3		GR9	
Subg.	1,2,4,5		6		1,2,3		1	
mts./min.	8	13	8	13	5	8	7	12
	1	2	1	2	1 2 3 4		3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UN 1"1/8	8	•	180	28	-	22	18	21	4	25,40	0003629882
UN 1"1/4	8	•	180	28	-	25	20	23	4	28,50	0002600572
UN 1"3/8	8	•	200	32	-	28	22	25	5	32,00	0002603578
UN 1"1/2	8	•	200	32	-	28	22	25	5	35,00	0002600632

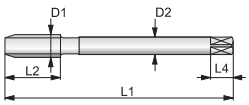
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A/1 | **UN** ANSI / ASME B1.1 | 3xD | **C** 2-3P | R35° | ≈DIN 376 | HSSE Co5 | 2B | P 60°

VAF

Nogrip-1®



Material	GR1		GR2		GR3				GR4		GR5		GR9	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4				2,4		4		2	
mts./min.	10	15	12-17	11-14	8	10			20	25	10	20	4	6
	1 2		1 2		1 2 3 4				6		5 6		3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UN 1"1/8	8	•	180	28	-	22	18	21	4	25,40	0002849587
UN 1"1/4	8	•	180	28	-	25	20	23	4	28,50	0003635189
UN 1"3/8	8	•	200	32	-	28	22	25	5	32,00	0003635038
UN 1"1/2	8	•	200	32	-	28	22	25	5	35,00	0003634940

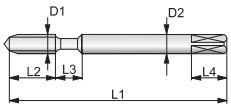
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

JMC

C10/2

UNJC ANSI / ASME B1.15 | 2xD | C 2-3 P | R10º | DIN 2184-1 | HSSE PM | 3B

proni



Material	GR8
Subg.	3
mts./min.	2

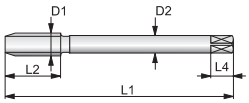
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0004197036
UNJC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0004197186
UNJC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0004197307
UNJC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0004197467
UNJC Nr 12	24	•	70	14	9	6	4,9	8	3	3,8	0004197528
UNJC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0004197678
UNJC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0004197739
UNJC 3/8	16	•	100	20	18	10	8	11	3	7,9	0004197899

Macho con tolerancia ajustada para el roscado de aleaciones de Niquel.
Tap with adjusted tolerance for machining Nickel alloys.

C10/1

UNJC ANSI / ASME B1.15 | 2xD | C 2-3 P | R10º | DIN 2184-1 | HSSE PM | 3B

proni



Material	GR8
Subg.	3
mts./min.	2

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJC 7/16	14	•	100	18	-	6	4,9	8	4	6,5	0004197959
UNJC 1/2	13	•	110	22	-	9	7	10	4	10,8	0004198199
UNJC 5/8	11	•	110	28	-	12	9	12	4	13,5	0004198038

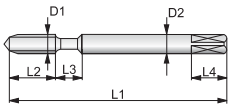
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

JMC

C15/2

UNJC ANSI / ASME B1.15	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	3B	P 60º

proti



Material	GR9
Subg.	2
mts./min.	4
	4 5

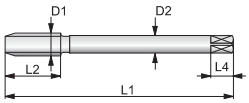
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0004094384
UNJC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0004094595
UNJC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0004095658
UNJC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0004095718
UNJC Nr 12	24	•	70	14	9	6	4,9	8	3	3,8	0004095879
UNJC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0004095939
UNJC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0004096018
UNJC 3/8	16	•	100	20	18	10	8	11	3	7,9	0004096229

Macho con tolerancia ajustada para el roscado de aleaciones de Titanio.
Tap with adjusted tolerance for machining Titanium alloys.

C15/1

UNJC ANSI / ASME B1.15	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	3B	P 60º

proti



Material	GR9
Subg.	2
mts./min.	4
	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJC 7/16	14	•	100	18	-	6	4,9	8	4	6,5	0004093924
UNJC 1/2	13	•	110	22	-	9	7	10	4	10,8	0004094164
UNJC 5/8	11	•	110	28	-	12	9	12	4	13,5	0004094224

Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

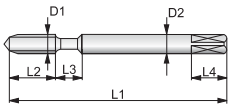
JMC

C15/2

UNJC ANSI / ASME B1.15	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	3B	P 60º

proti

CromPlus



Material	GR9
Subg.	2
mts./min.	4
	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,3	0003332566
UNJC Nr 6	32	•	56	11	8	4	3	6	3	2,75	0003333076
UNJC Nr 8	32	•	63	12	9	4,5	3,4	6	3	3,5	0003341080
UNJC Nr 10	24	•	70	14	9	6	4,9	8	3	3,8	0003341412
UNJC Nr 12	24	•	70	14	9	6	4,9	8	3	3,8	0003341843
UNJC 1/4	20	•	80	16	12	6	4,9	8	3	5,1	0003342203
UNJC 5/16	18	•	90	18	15	8	6,2	9	3	6,5	0003342635
UNJC 3/8	16	•	100	20	18	10	8	11	3	7,9	0003343095

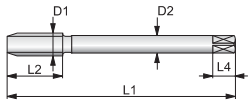
Macho con tolerancia ajustada para el roscado de aleaciones de Titanio.
Tap with adjusted tolerance for machining Titanium alloys.

C15/1

UNJC ANSI / ASME B1.15	2xD	C 2-3 P	R15º	DIN 2184-1	HSSE PM	3B	P 60º

proti

CromPlus



Material	GR9
Subg.	2
mts./min.	4
	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJC 7/16	14	•	100	18	-	6	4,9	8	4	6,5	0003343426
UNJC 1/2	13	•	110	22	-	9	7	10	4	10,8	0003348648
UNJC 5/8	11	•	110	28	-	12	9	12	4	13,5	0003344639

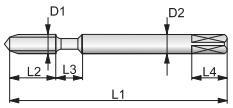
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

JMC

C10/2

UNJF ANSI / ASME B1.15	2xD	C 2-3 P	R10º	DIN 2184-1	HSSE PM	3B	P 60º

proni



Material	GR8
Subg.	3
mts./min.	2
	2 3

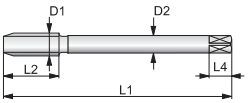
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0004199683
UNJF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0004199894
UNJF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0004199954
UNJF Nr 12	28	•	70	14	9	6	4,9	8	3	3,8	0004200002
UNJF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0004200152
UNJF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0004200213
UNJF 3/8	24	•	100	20	18	10	8	11	3	7,9	0004200373

Macho con tolerancia ajustada para el roscado de aleaciones de Niquel.
Tap with adjusted tolerance for machining Nickel alloys.

C10/1

UNJF ANSI / ASME B1.15	2xD	C 2-3 P	R10º	DIN 2184-1	HSSE PM	3B	P 60º

proni



Material	GR8
Subg.	3
mts./min.	2
	2 3

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF 7/16	20	•	100	20	-	8	6,2	9	4	9,9	0004200433
UNJF 1/2	20	•	110	22	-	9	7	10	4	11,5	0004200584
UNJF 5/8	18	•	110	28	-	12	9	12	4	14,5	0004200644

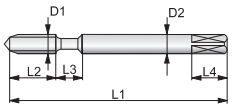
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.

Agujeros ciegos y pasantes / *Blind and through holes.*

C15/2

UNJF ANSI / ASME B1.15 | 2xD | **C** 2-3 P | R15º | DIN 2184-1 | HSSE PM | 3B

proti



Material	GR9
Subg.	2
mts./min.	4
	4 5

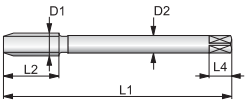
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF Nr 4	45	•	56	10	8	3,5	2,7	6	3	2,3	0004092862
UNJF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0004092922
UNJF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0004093001
UNJF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0004093161
UNJF Nr 12	28	•	70	14	9	6	4,9	8	3	3,8	0004093222
UNJF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0004057810
UNJF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0004093382
UNJF 3/8	24	•	100	20	18	10	8	11	3	7,9	0004093433

Macho con tolerancia ajustada para el roscado de aleaciones de Titanio.
Tap with adjusted tolerance for machining Titanium alloys.

C15/1

UNJF ANSI / ASME B1.15 | 2xD | **C** 2-3 P | R15º | DIN 2184-1 | HSSE PM | 3B

proti



Material	GR9
Subg.	2
mts./min.	4
	4 5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF 7/16	20	•	100	20	-	8	6,2	9	4	9,9	0004093593
UNJF 1/2	20	•	110	22	-	9	7	10	4	11,5	0004037181
UNJF 9/16	18	•	110	25	-	11	9	12	4	12,8	0004093653
UNJF 5/8	18	•	110	28	-	12	9	12	4	14,5	0004093714
UNJF 3/4	16	•	125	32	-	14	11	14	4	17,5	0004093864

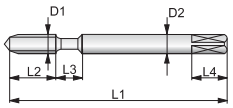
Machos de roscar a máquina, de alto rendimiento.
High performance machine taps.
Agujeros ciegos y pasantes / *Blind and through holes.*

JMC

C15/2

UNJF ANSI / ASME B1.15	2xD	C 2-3 P	R15°	DIN 2184-1	HSSE PM	3B	P 60°

proti CromPlus



Material	GR9
Subg.	2
mts./min.	4
	4 5

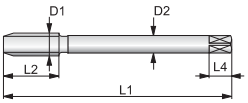
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF Nr 4	45	•	56	10	8	3,5	2,7	6	3	2,3	0003345099
UNJF Nr 6	40	•	56	11	8	4	3	6	3	2,75	0003345421
UNJF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,5	0003346152
UNJF Nr 10	32	•	70	14	9	6	4,9	8	3	3,8	0003346644
UNJF Nr 12	28	•	70	14	9	6	4,9	8	3	3,8	0003347154
UNJF 1/4	28	•	80	16	12	6	4,9	8	3	5,1	0003347375
UNJF 5/16	24	•	90	18	15	8	6,2	9	3	6,5	0003348006
UNJF 3/8	24	•	100	20	18	10	8	11	3	7,9	0003348438

Macho con tolerancia ajustada para el roscado de aleaciones de Titanio.
Tap with adjusted tolerance for machining Titanium alloys.

C15/1

UNJF ANSI / ASME B1.15	2xD	C 2-3 P	R15°	DIN 2184-1	HSSE PM	3B	P 60°

proti CromPlus



Material	GR9
Subg.	2
mts./min.	4
	4 5

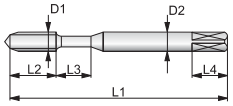
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF 7/16	20	•	100	20	-	8	6,2	9	4	9,9	0003349219
UNJF 1/2	20	•	110	22	-	9	7	10	4	11,5	0003349922
UNJF 9/16	18	•	110	25	-	11	9	12	4	12,8	0003350588
UNJF 5/8	18	•	110	28	-	12	9	12	4	14,5	0003351008
UNJF 3/4	16	•	125	32	-	14	11	14	4	17,5	0003351430

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A/2

UNJF ANSI / ASME B1.1 | 2,5÷3xD | **C** 2-3P | R35° | DIN 2184-1 | HSSE Co5 | 3B

N



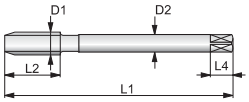
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF Nr 4	48	•	56	6	12	3,5	2,7	6	3	2,40	0001991844
UNJF Nr 5	44	•	56	6	13	3,5	2,7	6	3	2,65	0001991904
UNJF Nr 6	40	•	56	7	13	4	3	6	3	2,90	0001992083
UNJF Nr 8	36	•	63	7	13	4,5	3,4	6	3	3,50	0001992144
UNJF Nr 10	32	•	70	9	13	6	4,9	8	3	4,10	0001992204
UNJF Nr 12	28	•	80	9	19	6	4,9	8	3	4,60	0001992354
UNJF 1/4	28	•	80	11	19	6	4,9	8	3	5,50	0001992415
UNJF 5/16	24	•	90	11	22	8	6,2	9	3	6,90	0001992575

C35A/1

UNJF ANSI / ASME B1.1 | 2,5÷3xD | **C** 2-3P | R35° | DIN 2184-1 | HSSE Co5 | 3B

N



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	15
	1 2		6		5	5 6

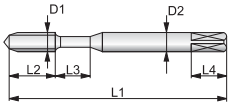
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF 3/8	24		100	12	-	7	5,5	8	3	8,50	0001992635
UNJF 7/16	20	•	100	14	-	8	6,2	9	3	9,90	0001992786
UNJF 1/2	20	•	110	18	-	9	7	10	3	11,50	0001992846
UNJF 9/16	18	•	110	18	-	11	9	12	3	12,80	0001992907
UNJF 5/8	18	•	110	20	-	12	9	12	3	14,50	0001993085
UNJF 3/4	16	•	125	22	-	14	11	14	4	17,50	0001993146

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS/2 — N

UNJF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | **HSSE** Co5 | 3B

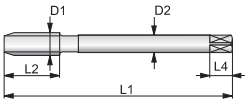


Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1	2	6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,40	0002000577
UNJF Nr 5	44	•	56	10	8	3,5	2,7	6	3	2,65	0002000627
UNJF Nr 6	40	•	56	11	8	4	3	6	3	2,90	0002000787
UNJF Nr 8	36	•	63	12	9	4,5	3,4	6	3	3,50	0002000848
UNJF Nr 10	32	•	70	14	9	6	4,9	8	3	4,10	0002000908
UNJF Nr 12	28	•	80	16	12	6	4,9	8	3	4,60	0002001087
UNJF 1/4	28	•	80	16	12	6	4,9	8	3	5,50	0002001147
UNJF 5/16	24	•	90	18	15	8	6,2	9	3	6,90	0002001208

PS/1 — N

UNJF ANSI / ASME B1.1 | **B** 3,5-5 P | DIN 2184-1 | **HSSE** Co5 | 3B



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	10	15	7	12	20	25
	1	2	6		5	5 6

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNJF 3/8	24		100	20	-	7	5,5	8	3	8,50	0002001358
UNJF 7/16	20	•	100	20	-	8	6,2	9	3	9,90	0002001419
UNJF 1/2	20	•	110	22	-	9	7	10	3	11,50	0002001579
UNJF 9/16	18	•	110	25	-	11	9	12	3	12,80	0002001639
UNJF 5/8	18	•	110	28	-	12	9	12	3	14,50	0002001780
UNJF 3/4	16	•	125	32	-	14	11	14	4	17,50	0002001840

Machos de roscar a maquina / *Machine taps*

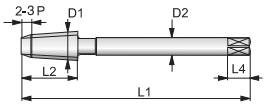
Para roscas que precisan sellador de estanquidad. Agujeros ciegos y pasantes

For threads with dryseal material. Blind and through holes

JMC

C15/1 AZ Nogrip-1®

NPT ANSI / ASME B1.20.1 | **C** 2-3 P | R15° | ≈DIN 374 | HSSE Co5 | C.1:16

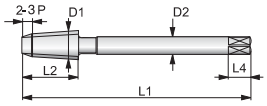


Material	GR1		GR2		GR3	
Subg.	2,3,4,5,6		1,2,3,4,5,6,7,8		1,2,3,4	
mts./min.	3	6	3	6	3	6
	1 2		1 2		1 2 3 4	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPT 1/8	27	•	100	15	-	8	6,2	9	5	8,4	0000713035
NPT 1/4	18	•	100	22	-	11	9	12	5	11,1	0000713316
NPT 3/8	18	•	110	20	-	12	9	12	4	14,3	0000713688
NPT 3/8	18	•	110	20	-	14	11	12	5	14,3	0004157073
NPT 1/2	14	•	140	25	-	16	12	15	5	17,9	0000713959
NPT 3/4	14	•	150	26	-	20	16	19	5	23,3	0004156834
NPT 1"	11,5	•	170	32	-	25	20	23	5	29	0004156984

C15/1 AZ TiCN

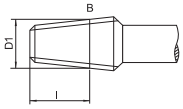
NPT ANSI / ASME B1.20.1 | **C** 2-3 P | R15° | ≈DIN 374 | HSSE Co5 | C.1:16



Material	GR1		GR2		GR3	
Subg.	2,3,4,5,6		1,2,3,4,5,6,7,8		1,2,3,4	
mts./min.	3	6	3	6	3	6
	1 2		1 2		1 2 3 4	

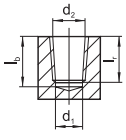
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPT 1/8	27	•	100	15	-	8	6,2	9	5	8,4	0003122245
NPT 1/4	18	•	100	22	-	11	9	12	5	11,1	0003090714
NPT 3/8	18	•	110	20	-	12	11	12	4	14,3	0004157123
NPT 3/8	18	•	110	20	-	14	11	12	5	14,3	0003090875
NPT 1/2	14	•	140	25	-	16	12	15	5	17,9	0003090935
NPT 3/4	14	•	150	26	-	20	16	19	5	23,3	0003619714
NPT 1"	11,5	•	170	32	-	25	20	23	5	29	0004096711

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal / *Nominal Ø*	L2 mm	D_1 mm	l mm
NPT 1/16	14	7,94	12
NPT 1/8	15	10,29	12
NPT 1/4	21	13,72	17,5
NPT 3/8	21	17,15	17,6
NPT 1/2	27	21,34	22,8
NPT 3/4	27	26,67	23
NPT 1"	32	33,4	27,4
NPT 1" 1/4	33	41,16	28,1
NPT 1" 1/2	33	48,26	28,4
NPT 2"	33	60,33	28

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.



Ø nominal / *Nominal Ø*	d_2 mm	l_r mm	l_b mm
NPT 1/16	6,39	9,29	10,7
NPT 1/8	8,74	9,32	10,8
NPT 1/4	11,36	13,52	15,6
NPT 3/8	14,8	13,83	16
NPT 1/2	18,32	18,07	20,8
NPT 3/4	23,67	18,55	21,3
NPT 1"	29,69	22,29	25,6
NPT 1" 1/4	38,45	22,8	26,1
NPT 1" 1/2	44,52	22,8	26,1
NPT 2"	56,56	23,2	26,5

Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores

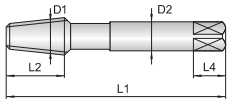
Taper reamers for taper holes 1:16. See reamers programme

Machos de roscar a mano / *Hand taps*

Para roscas que precisan sellador de estanquidad. Agujeros ciegos y pasantes

For threads with dryseal material. Blind and through holes

UNICO BOTTOMING	NPT ANSI / ASME B1.1	C 2-3 P	JMC NORM./ STD	HSS	C.1:16



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	3	6	3	6	3	6	3	6
	1 2		6		6		5 5 6	

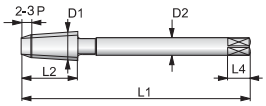
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPT 1/16	27	•	56	14	-	6	4,9	8	3	6,15	0000288778
NPT 1/8	27	•	63	15	-	7	5,5	8	4	8,4	0000288838
NPT 1/4	18	•	70	21	-	11	9	12	4	11,1	0000288989
NPT 3/8	18	•	70	21	-	12	9	12	4	14,3	0000289077
NPT 1/2	14	•	80	27	-	16	12	15	5	17,9	0000289128
NPT 3/4	14	•	100	27	-	20	16	19	5	23,3	0000289288
NPT 1"	11 1/2	•	110	32	-	25	20	23	5	29	0000289349
NPT 1"1/4	11 1/2	•	125	33	-	32	24	27	5	37,7	0000289409
NPT 1"1/2	11 1/2	•	140	33	-	36	29	32	6	43,7	0000289559
NPT 2"	11 1/2	•	160	33	-	36	29	32	6	55,6	0000289610

Machos de roscar a maquina / *Machine taps*

Para roscas que precisan sellador de estanquidad. Agujeros ciegos y pasantes

For threads with dryseal material. Blind and through holes

C/1	NPT ANSI / ASME B1.20.1	C 2-3 P	≈DIN 374	HSSE Co5	C.1:16
N					



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	3	6	3	6	3	6	3	6
	1 2		6		6		5 5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPT 1/16	27	•	90	14	-	6	4,9	8	3	6,15	0000694801
NPT 1/8	27	•	100	15	-	8	6,2	9	4	8,4	0000694961
NPT 1/4	18	•	100	22	-	11	9	12	4	11,1	0000695100
NPT 3/8	18	•	110	20	-	14	11	12	4	14,3	0004058752
NPT 1/2	14	•	140	25	-	16	12	15	5	17,9	0000695532
NPT 3/4	14	•	150	26	-	20	16	19	5	23,3	0004085097
NPT 1"	11,5	•	170	32	-	25	20	23	5	29	0004058541

Machos de roscar a maquina / *Machine taps*

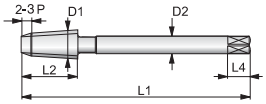
Para roscas que precisan sellador de estanquidad. Agujeros ciegos y pasantes

For threads with dryseal material. Blind and through holes

JMC

C/1 | **N** | ***TiN***

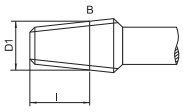
NPT ANSI / ASME B1.20.1 | **C** 2-3 P | ≈DIN 374 | HSSE Co5 | C.1:16 | P 55°



Material	GR1	GR2	GR3	GR4	GR6	GR10	GR11
Subg.	1,2,3,4,5,6	1,2,3,6,7,8	1,2,3	2,4	3	1 2	1
mts./min.	5 8	5 8	5 8	5 8	20 25	7-12 10-15	5 8
	1 2	1 2	1 2 3 4	6	5 6	5 6	

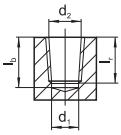
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPT 1/16	27	•	90	14	-	6	4,9	8	3	6,15	0002122032
NPT 1/8	27	•	100	15	-	8	6,2	9	4	8,4	0000695040
NPT 1/4	18	•	100	22	-	11	9	12	4	11,1	0002122242
NPT 3/8	18	•	110	20	-	14	11	12	4	14,3	0004095387
NPT 1/2	14	•	140	25	-	16	12	15	5	17,9	0002122463
NPT 3/4	14	•	150	26	-	20	16	19	5	23,3	0004088004
NPT 1"	11,5	•	170	32	-	25	20	23	5	29	0004088155

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal *Nominal Ø*	L2 mm	D_1 mm	l mm
NPT 1/16	14	7,94	12
NPT 1/8	15	10,29	12
NPT 1/4	21	13,72	17,5
NPT 3/8	21	17,15	17,6
NPT 1/2	27	21,34	22,8
NPT 3/4	27	26,67	23
NPT 1"	32	33,4	27,4
NPT 1" 1/4	33	41,16	28,1
NPT 1" 1/2	33	48,26	28,4
NPT 2"	33	60,33	28

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.



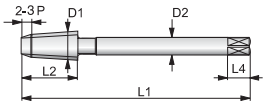
Ø nominal *Nominal Ø*	d_2 mm	l_r mm	l_b mm
NPT 1/16	6,39	9,29	10,7
NPT 1/8	8,74	9,32	10,8
NPT 1/4	11,36	13,52	15,6
NPT 3/8	14,8	13,83	16
NPT 1/2	18,32	18,07	20,8
NPT 3/4	23,67	18,55	21,3
NPT 1"	29,69	22,29	25,6
NPT 1" 1/4	38,45	22,8	26,1
NPT 1" 1/2	44,52	22,8	26,1
NPT 2"	56,56	23,2	26,5

Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores

Taper reamers for taper holes 1:16. See reamers programme

C/1 | **N**

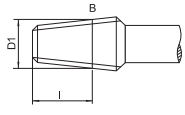
NPTF ANSI B1. 20. 3 | **C** 2-3P | ≈DIN 374 | HSSE Co5 | C.1:16 | P 60°



Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,4	1,2	2 3
mts./min.	3 6	3 6	3 6	3 6
	1 2	6	6	5 5 6

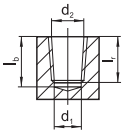
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPTF 1/16	27	•	90	14	-	6	4,9	8	3	6,1	0002023500
NPTF 1/8	27	•	100	15	-	8	6,2	9	4	8,4	0002023660
NPTF 1/4	18	•	100	22	-	11	9	12	4	11	0001998649
NPTF 3/8	18	•	110	20	-	14	11	12	4	14,5	0004059764
NPTF 1/2	14	•	140	25	-	16	12	15	5	17,5	0001356185
NPTF 3/4	14	•	150	26	-	20	16	19	5	23	0004095507
NPTF 1"	11,5	•	170	32	-	25	20	23	5	29	0004058602

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal *Nominal Ø*	L2 mm	D_1 mm	l mm
NPTF 1/16	14	7,94	12
NPTF1/8	15	10,29	12
NPTF 1/4	21	13,72	17,5
NPTF 3/8	21	17,15	17,6
NPTF 1/2	27	21,34	22,8
NPTF 3/4	27	26,67	23
NPTF 1"	32	33,4	27,4
NPTF 1" 1/4	33	41,16	28,1
NPTF 1" 1/2	33	48,26	28,4
NPTF 2"	33	60,33	28

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.



Ø nominal *Nominal Ø*	d_2 mm	l_r mm	l_b mm
NPTF 1/16	6,39	9,29	10,7
NPTF 1/8	8,74	9,32	10,8
NPTF 1/4	11,36	13,52	15,6
NPTF 3/8	14,8	13,83	16
NPTF 1/2	18,32	18,07	20,8
NPTF 3/4	23,67	18,55	21,3
NPTF 1"	29,69	22,29	25,6
NPTF 1" 1/4	38,45	22,8	26,1
NPTF 1" 1/2	44,52	22,8	26,1
NPTF 2"	56,56	23,2	26,5

Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores

Taper reamers for taper holes 1:16. See reamers programme

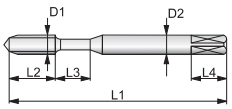
Machos de roscar a máquina. Para roscas de seguridad. Agujeros ciegos
Machine taps. For security threads . Blind holes

C35A/2

BT+VAF

Nogrip-1®

LK M JMC Norm. / STD | 3xD | **C** 2-3 P | R35° | DIN 371 | HSSE Co5 | ISO 2 (6H) | 60°



Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,55	0002019656
LK-M 5	0,80	•	70	8	17	6	4,9	8	3	4,40	0002019716
LK-M 6	1,00	•	80	9	21	6	4,9	8	3	5,20	0002019877
LK-M 8	1,25	•	90	11	24	8	6,2	9	3	7,00	0002019937
LK-M 10	1,50	•	100	12	27	10	8	11	3	8,80	0002020011

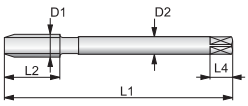
Macho adecuado para el roscado en piezas con estres dinámico.
Suitable for threading parts that perform under dynamic stress.

C35A/1

BT+VAF

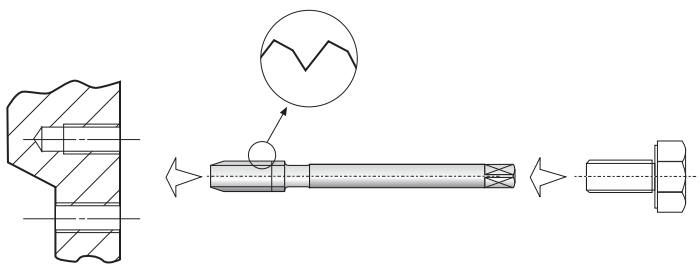
Nogrip-1®

LK M JMC Norm. / STD | 3xD | **C** 2-3 P | R35° | DIN 376 | HSSE Co5 | ISO 2 (6H) | 60°



Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 12	1,75	•	110	14	-	9	7	10	3	10,70	0002020172
LK-M 14	2,00	•	110	18	-	11	9	12	3	12,50	0002020222
LK-M 16	2,00	•	110	18	-	12	9	12	3	14,50	0002020382
LK-M 18	2,50		125	22	-	14	11	14	4	16,00	0002020443
LK-M 20	2,50		140	22	-	16	12	15	4	18,00	0002020503
LK-M 24	3,00		160	28	-	18	14,5	17	4	21,50	0002023932



Tipo BT
Type BT

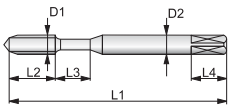
Machos de roscar a máquina. Para roscas de seguridad. Agujeros ciegos
Machine taps. For security threads . Blind holes

C35A/2

BT+VAF

TiN

LK M JMC Norm. / STD	3xD	C 2-3 P	R35°	DIN 371	HSSE Co5	ISO 2 (6H)	P 60°



	GR1	GR2	GR3	GR4
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4
	1-2	1-2	1-2 / 3-4	6
Vc/Cs	10-15	12-17/11-14	8-10	20-25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 4	0,70	•	63	7	14	4,5	3,4	6	3	3,55	0002020654
LK-M 5	0,80	•	70	8	17	6	4,9	8	3	4,40	0002020714
LK-M 6	1,00	•	80	9	21	6	4,9	8	3	5,20	0002020874
LK-M 8	1,25	•	90	11	24	8	6,2	9	3	7,00	0002020935
LK-M 10	1,50	•	100	12	27	10	8	11	3	8,80	0001698802

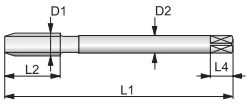
Macho adecuado para el roscado en piezas con estres dinámico.
Suitable for threading parts that perform under dynamic stress.

C35A/1

BT+VAF

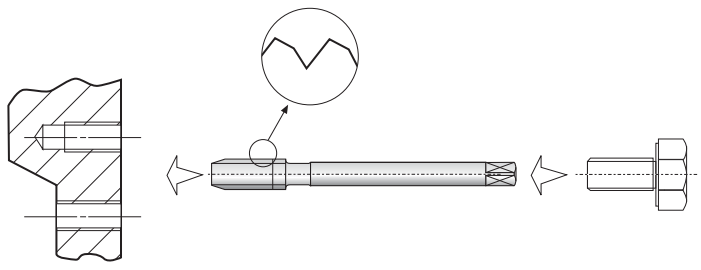
TiN

LK M JMC Norm. / STD	3xD	C 2-3 P	R35°	DIN 376	HSSE Co5	ISO 2 (6H)	P 60°



	GR1	GR2	GR3	GR4
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4
	1-2	1-2	1-2 / 3-4	6
Vc/Cs	10-15	12-17/11-14	8-10	20-25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 12	1,75	•	110	14	-	9	7	10	3	10,70	0001698963
LK-M 14	2,00	•	110	18	-	11	9	12	3	12,50	0002021014
LK-M 16	2,00	•	110	18	-	12	9	12	3	14,50	0001699042
LK-M 18	2,50		125	22	-	14	11	14	4	16,00	0002021174
LK-M 20	2,50		140	22	-	16	12	15	4	18,00	0002021234
LK-M 24	3,00		160	28	-	18	14,5	17	4	21,50	0002021385



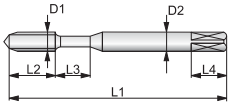
Tipo BT
Type BT

Machos de roscar a máquina. Para roscas de seguridad. Agujeros pasantes
Machine taps. For security threads . Through holes

JMC

PS/2
BT+VAF
Nogrip-1®

LK M JMC Norm. / STD | **B** 3,5-5 P | DIN 371 | HSSE Co5 | ISO 2 (6H) | 60°



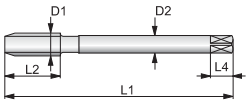
Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	8	13	5	10	15	20
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,55	0002021445
LK-M 5	0,80	•	70	14	11	6	4,9	8	3	4,40	0002021505
LK-M 6	1,00	•	80	16	14	6	4,9	8	3	5,20	0002021666
LK-M 8	1,25	•	90	18	17	8	6,2	9	3	7,00	0002021716
LK-M 10	1,50	•	100	20	19	10	8	11	3	8,80	0002021877

Macho adecuado para el roscado en piezas con estres dinámico.
Suitable for threading parts that perform under dynamic stress.

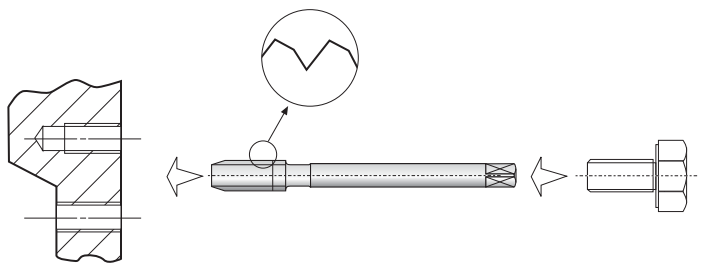
PS/1
BT+VAF
Nogrip-1®

LK M JMC Norm. / STD | **B** 3,5-5 P | DIN 376 | HSSE Co5 | ISO 2 (6H) | 60°



Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	8	13	5	10	15	20
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 12	1,75	•	110	22	-	9	7	10	3	10,70	0002021937
LK-M 14	2,00	•	110	25	-	11	9	12	3	12,50	0002022016
LK-M 16	2,00	•	110	28	-	12	9	12	3	14,50	0002022176
LK-M 18	2,50		125	32	-	14	11	14	4	16,00	0002022237
LK-M 20	2,50		140	32	-	16	12	15	4	18,00	0002022387
LK-M 24	3,00		160	36	-	18	14,5	17	4	21,50	0002022447



Tipo BT
Type BT

Machos de roscar a máquina. Para roscas de seguridad. Agujeros pasantes
Machine taps. For security threads . Through holes

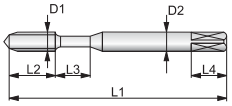
JMC

PS/2

BT+VAF

TiN

LK M JMC Norm. / STD | **B** 3,5-5 P | DIN 371 | HSSE Co5 | ISO 2 (6H) | 60°



Material	GR1		GR2		GR3		GR4	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4	
mts./min.	13	18	15-20	13-18	9	11	20	25
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 4	0,70	•	63	12	9	4,5	3,4	6	3	3,55	0002022508
LK-M 5	0,80	•	70	14	11	6	4,9	8	3	4,40	0002022668
LK-M 6	1,00	•	80	16	14	6	4,9	8	3	5,20	0002022728
LK-M 8	1,25	•	90	18	17	8	6,2	9	3	7,00	0002022879
LK-M 10	1,50	•	100	20	19	10	8	11	3	8,80	0002022939

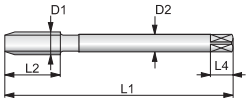
Macho adecuado para el roscado en piezas con estres dinámico.
Suitable for threading parts that perform under dynamic stress.

PS/1

BT+VAF

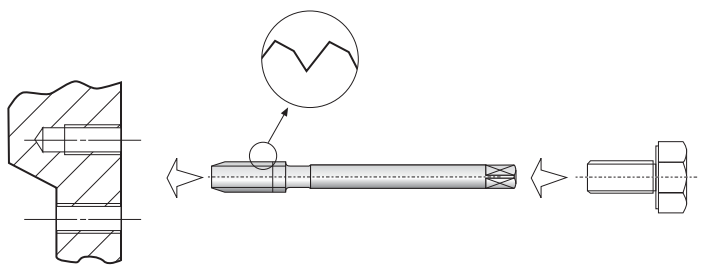
TiN

LK M JMC Norm. / STD | **B** 3,5-5 P | DIN 376 | HSSE Co5 | ISO 2 (6H) | 60°



Material	GR1		GR2		GR3		GR4	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4	
mts./min.	13	18	15-20	13-18	9	11	20	25
	1 2		1 2		1 2 3 4		6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
LK-M 12	1,75	•	110	22	-	9	7	10	3	10,70	0002023018
LK-M 14	2,00	•	110	25	-	11	9	12	3	12,50	0002023178
LK-M 16	2,00	•	110	28	-	12	9	12	3	14,50	0002023239
LK-M 18	2,50		125	32	-	14	11	14	4	16,00	0002023399
LK-M 20	2,50		140	32	-	16	12	15	4	18,00	0002023440
LK-M 24	3,00		160	36	-	18	14,5	17	4	21,50	0001788699



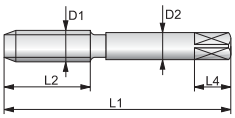
Tipo BT
Type BT

Machos de roscar a mano / *Hand taps*

Rosca para tubos de conducción eléctrica DIN 40430. Agujeros ciegos y pasantes

Steel conduit threads DIN 40430. Blind and through holes

ÚNICO | **Pg** DIN 40430 | 1xD | **C** 2-3 P | DIN 40432 | HSS



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

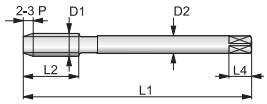
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Pg 7	20	•	70	20	-	9	7	10	4	11,4	0000289770
Pg 9	18	•	70	20	-	12	9	12	4	14	0000289831
Pg 11	18	•	80	22	-	14	11	14	4	17,25	0000289981
Pg 13,5	18	•	80	22	-	18	14,5	17	4	19	0000290075
Pg 16	18	•	90	22	-	18	14,5	17	4	21,25	0000290126
Pg 21	16	•	90	25	-	22	18	21	4	26,75	0000290286
Pg 29	16	•	100	25	-	28	22	25	6	35,5	0000290346
Pg 36	16	•	125	25	-	36	29	32	6	45,5	0000290407
Pg 42	16	•	125	25	-	36	29	32	6	52,5	0000290557
Pg 48	16	•	130	30	-	36	29	32	6	57,5	0000290617

Machos de roscar a maquina. Agujeros ciegos y pasantes

Machine taps. *Blind and through holes*

C/1 | **Pg** DIN 40430 | 1xD | **C** 2-3P | DIN 40433 | HSSE Co5

N



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Pg 7	20	•	110	22	-	9	7	10	3	11,40	0000695803
Pg 9	18	•	100	22	-	12	9	12	3	14,00	0000695963
Pg 11	18	•	125	25	-	14	11	14	4	17,25	0000696042
Pg 13,5	18	•	125	25	-	16	12	15	4	19,00	0000696103
Pg 16	18	•	125	25	-	18	14,5	17	4	21,25	0000696263
Pg 21	16	•	150	28	-	22	18	21	4	26,75	0000696323

La rosca para tubos de conducción eléctrica DIN 40430 ha sido sustituida por la rosca Métrica fina DIN EN 60423.

Steel conduit threads (Pg) DIN 40430 will be replaced by Metric fine threads DIN EN 60423

Conversión de roscas Pg a Métrica fina para tubos de conducción eléctrica.

Equivalence between Pg thread and MF thread for steel conduit thread.

Pg DIN 40430	MF - EI UNE - EN 60423	Tol.
-	MF - EI 8 x 1	7H
-	MF - EI 10 x 1	7H
7	MF - EI 12 x 1,5	7H
9	MF - EI 16 x 1,5	7H
11	MF - EI 20 x 1,5	7H
13,5	MF - EI 20 x 1,5	7H
16	MF - EI 25 x 1,5	7H
21	MF - EI 32 x 1,5	7H
29	MF - EI 40 x 1,5	7H
36	MF - EI 50 x 1,5	7H
48	MF - EI 63 x 1,5	7H
-	MF - EI 75 x 1,5	7H

Machos de roscar a máquina / *Machine taps*

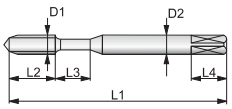
Para insertos metálicos de rosca. Agujeros ciegos

For wire thread inserts. Blind holes

C35A/2

AL

EG M DIN 8140 PART 2 | 3xD | C 2-3P | R35° | DIN 40 435 | HSSE Co5 | 6H mod.



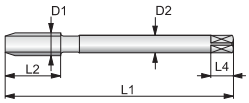
Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D	P	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG M 2	0,40	2,52	•	50	5	5	2,8	2,1	5	3	2,15	0001747413
EG M 2,5	0,45	3,09	•	56	6	12	3,5	2,7	6	3	2,65	0001650831
EG M 2,6	0,45	3,19	•	56	6	12	3,5	2,7	6	3	2,75	0001677161
EG M 3	0,50	3,65	•	63	7	14	4,5	3,4	6	3	3,15	0001651984
EG M 4	0,70	4,91	•	70	8	17	6	4,9	8	3	4,20	0001652133
EG M 5	0,80	6,04	•	80	9	21	6	4,9	8	3	5,25	0001652284
EG M 6	1,00	7,30	•	90	11	24	8	6,2	9	3	6,30	0001652344
EG M 8	1,25	9,62	•	100	12	27	10	8	11	3	8,40	0001651834

C35A/1

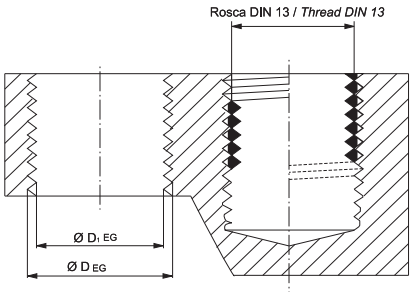
AL

EG M DIN 8140 PART 2 | 3xD | C 2-3P | R35° | DIN 40 435 | HSSE Co5 | 6H mod.



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D	P	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG M 10	1,50	11,95	•	110	14	-	9	7	8	3	10,40	0001653998
EG M 12	1,75	14,27	•	110	18	-	11	9	12	3	12,50	0001654077
EG M 14	2,00	16,59	•	110	18	-	12	9	12	3	14,50	0001654298
EG M 16	2,00	18,60		125	22	-	14	11	14	4	16,50	0001654348
EG M 18	2,50	21,25		140	22	-	18	14,5	17	4	18,75	0001654569
EG M 20	2,50	23,25		160	28	-	18	14,5	17	4	20,75	0001654770



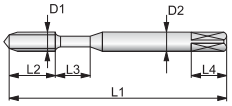
Machos de roscar a máquina / *Machine taps*

Para insertos metálicos de rosca. Agujeros pasantes

For wire thread inserts. Through holes

PS/2 AL

EG M DIN 8140 PART 2 | **B** 3,5-5 P | DIN 40 435 | HSSE Co5 | 6H mod.

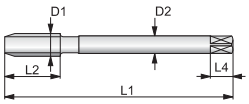


Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D	P	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG M 2	0,40	2,52	•	50	9	-	2,8	2,1	5	3	2,15	0002010214
EG M 2,5	0,45	3,09	•	56	10	8	3,5	2,7	6	3	2,65	0001652565
EG M 2,6	0,45	3,19	•	56	10	8	3,5	2,7	6	3	2,75	0001677221
EG M 3	0,50	3,65	•	63	12	9	4,5	3,4	6	3	3,15	0001652615
EG M 4	0,70	4,91	•	70	14	11	6	4,9	8	3	4,20	0001652836
EG M 5	0,80	6,04	•	80	16	14	6	4,9	8	3	5,25	0001652996
EG M 6	1,00	7,30	•	90	18	17	8	6,2	9	3	6,30	0001653075
EG M 8	1,25	9,62	•	100	20	19	10	8	11	3	8,40	0001653135

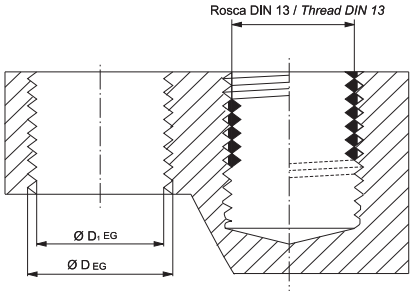
PS/1 AL

EG M DIN 8140 PART 2 | **B** 3,5-5 P | DIN 40 435 | HSSE Co5 | 6H mod.



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D	P	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG M 10	1,50	11,95	•	110	22	-	9	7	8	3	10,40	0001653346
EG M 12	1,75	14,27	•	110	23	-	11	9	12	3	12,50	0001653407
EG M 14	2,00	16,59	•	110	28	-	12	9	12	3	14,50	0001654138
EG M 16	2,00	18,60		125	28	-	14	11	14	4	16,50	0001654409
EG M 18	2,50	21,25		140	32	-	18	14,5	17	4	18,75	0001653778
EG M 20	2,50	23,25		160	36	-	18	14,5	17	4	20,75	0001653838



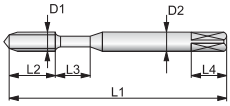
Machos de roscar a máquina / *Machine taps*

Para insertos metálicos de rosca. Agujeros ciegos

For wire thread inserts. Blind holes

C35A/2 AL

EG UNC MS 33537 | 3xD | **C** 2-3 P | R35° | DIN 2184-1 | HSSE Co5 | 3B



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

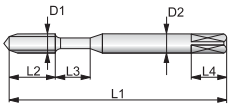
D	tpi	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG UNC Nr 2	56	2,77	•	56	6	12	3,5	2,7	6	3	2,30	0001656995
EG UNC Nr 4	40	3,67	•	63	7	13	4,5	3,4	6	3	3,10	0001657084
EG UNC Nr 6	32	4,54	•	70	9	13	6	4,9	8	3	3,80	0001657295
EG UNC Nr 8	32	5,20	•	80	9	19	6	4,9	8	3	4,40	0001657355
EG UNC Nr 10	24	6,20	•	80	10	20	7	5,5	8	3	5,20	0001657416
EG UNC 1/4	20	8,00	•	90	11	24	8	6,2	9	3	6,70	0001657908
EG UNC 5/16	18	9,77	•	100	12	27	10	8	11	3	8,40	0001658086
EG UNC 3/8	16	11,59	•	110	14	25	12	9	12	3	10,00	0001658147

Machos de roscar a máquina. Agujeros pasantes

Machine taps. Through holes

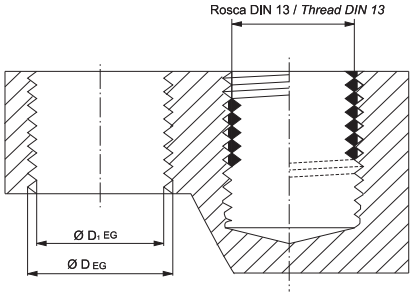
PS/2 AL

EG UNC MS 33537 | **B** 3,5-5 P | DIN 2184-1 | HSSE Co5 | 3B



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D	tpi	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG UNC Nr 2	56	2,77	•	56	10	8	3,5	2,7	6	3	2,30	0001655351
EG UNC Nr 4	40	3,67	•	63	12	9	4,5	3,4	6	3	3,10	0001655401
EG UNC Nr 6	32	4,54	•	70	14	11	6	4,9	8	3	3,80	0001655622
EG UNC Nr 8	32	5,20	•	80	16	14	6	4,9	8	3	4,40	0001655782
EG UNC Nr 10	24	6,20	•	80	17	13	7	5,5	8	3	5,20	0001655993
EG UNC 1/4	20	8,00	•	90	18	17	8	6,2	9	3	6,70	0001656132
EG UNC 5/16	18	9,77	•	100	20	19	10	8	11	3	8,40	0001656293
EG UNC 3/8	16	11,59	•	110	22	20	12	9	12	3	10,00	0001656353



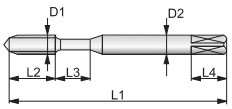
Machos de roscar a máquina / *Machine taps*

Para insertos metálicos de rosca. Agujeros ciegos

For wire thread inserts. Blind holes

JMC

C35A/2	EG UNF MS 33537	3xD	C 2-3 P	R35°	DIN 2184-1	HSSE Co5	3B	P 60°
AL								



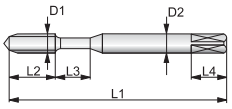
Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D	tpi	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG UNF Nr 6	40	4,33	•	70	9	13	6	4,9	8	3	3,80	0001660086
EG UNF Nr 8	36	5,08	•	80	9	19	6	4,9	8	3	4,40	0001660147
EG UNF Nr 10	32	5,86	•	80	10	20	7	5,5	8	3	5,20	0001660207
EG UNF 1/4	28	7,53	•	90	11	24	8	6,2	9	3	6,70	0001660358
EG UNF 5/16	24	9,31	•	100	12	27	10	8	11	3	8,40	0001660418
EG UNF 3/8	24	10,90	•	110	14	25	12	9	12	3	10,00	0001660578

Machos de roscar a máquina. Agujeros pasantes

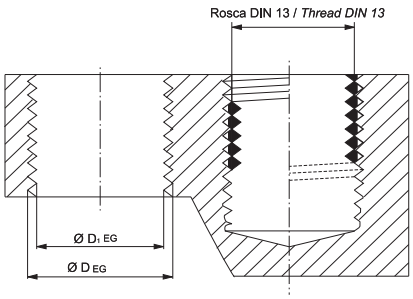
Machine taps. Through holes

PS/2	EG UNF MS 33537		B 3,5-5 P		DIN 2184-1	HSSE Co5	3B	P 60°
AL								



Material	GR5		GR6		GR11	
Subg.	1		1,2	3	1,2	
mts./min.	10	15	20	25	10	15
	5 6		5 6		6	

D	tpi	D EG(D1) mm		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
EG UNF Nr 6	40	4,33	•	70	14	11	6	4,9	8	3	3,80	0001658840
EG UNF Nr 8	36	5,08	•	80	16	14	6	4,9	8	3	4,40	0001658900
EG UNF Nr 10	32	5,86	•	80	17	13	7	5,5	8	3	5,20	0001659089
EG UNF 1/4	28	7,53	•	90	18	17	8	6,2	9	3	6,70	0001659149
EG UNF 5/16	24	9,31	•	100	20	19	10	8	11	3	8,40	0001659200
EG UNF 3/8	24	10,90	•	110	22	20	12	9	12	3	10,00	0001659350



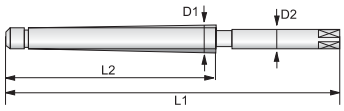
Machos de roscar a máquina / *Machine taps*

Machos de roscar a máquina con guia de centraje para roscas trapezoidales. Agujeros pasantes

Machine taps with cylindrical pilot for trapezoidal threads. Through holes

TN | **N**

Tr ISO-DIN 103 | 1xD | 2º20P | JMC NORM./ STD | HSS | 7H



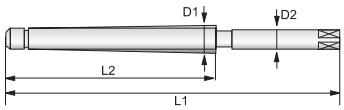
Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	3	6	3	6	3	6	3	6
	1 2		6		6		5	5 6

D1	tpi		L1	L2	L3	D2	a	Z RH	Ød1	Cod.
Tr 8	1,5		79	46,5	-	6	4,9	3	6,60	0002017220
Tr 10	2	•	102	62	-	7	5,5	3	8,20	0001442665
Tr 10	3	•	129	78	-	7	5,5	3	7,50	0001433388
Tr 12	3	•	139	90	-	8	6,2	3	9,25	0001378608
Tr 14	3	•	148	93	-	10	8	3	11,25	0002017380
Tr 16	4	•	184	120	-	11	9	3	12,25	0001695464
Tr 18	4	•	196	124	-	13	10	3	14,25	0002017441
Tr 20	4	•	205	128	-	15	12	3	16,25	0001334365
Tr 22	5	•	231	145	-	16	12	4	17,25	0002017591
Tr 24	5	•	242	150	-	18	14,5	4	19,25	0002017651
Tr 26	5	•	254	155	-	20	16	4	21,25	0002017712
Tr 28	5	•	266	160	-	22	18	4	23,25	0002017872
Tr 30	6	•	288	174	-	23	18	4	24,25	0002017922
Tr 32	6	•	301	180	-	25	20	4	26,25	0002018011
Tr 36	6		327	192	-	29	22	4	30,25	0002018162

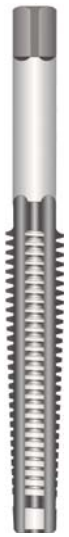
Corte a izquierdas / *Left hand cut*

TN | **LH** | **N**

Tr ISO-DIN 103 | 1xD | 2º20P | JMC NORM./ STD | HSS | 7H



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	3	6	3	6	3	6	3	6
	1 2		6		6		5	5 6



D1	tpi	L1	L2	L3	D2	a	Z RH	Ød1	Cod.
Tr 8	1,5	79	46,5	-	6	4,9	3	6,60	0002018222
Tr 10	2	102	62	-	7	5,5	3	8,20	0002018382
Tr 12	3	139	90	-	8	6,2	3	9,25	0002018443
Tr 14	3	148	93	-	10	8	3	11,25	0002018503
Tr 16	4	184	120	-	11	9	3	12,25	0002018654
Tr 18	4	196	124	-	13	10	3	14,25	0002018714
Tr 20	4	205	128	-	15	12	3	16,25	0001445943
Tr 22	5	231	145	-	16	12	4	17,25	0002018874
Tr 24	5	242	150	-	18	14,5	4	19,25	0002018935
Tr 26	5	254	155	-	20	16	4	21,25	0002019014
Tr 28	5	266	160	-	22	18	4	23,25	0002019174
Tr 30	6	288	174	-	23	18	4	24,25	0002019224
Tr 32	6	301	180	-	25	20	4	26,25	0002019385
Tr 36	6	327	192	-	29	22	4	30,25	0002019445

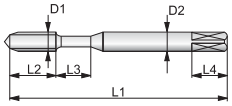
Machos de roscar a máquina / *Machine taps*

Para roscas de válvulas de neumático. Agujeros ciegos y pasantes

For tire valves threads . Blind and through holes

C/2 — N

Vg DIN 7756 | 1xD | **C** 2-3P | ≈DIN 371 | HSSE Co5

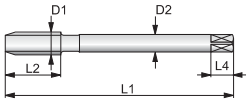


Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	P mm	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Vg 5	0,71	36	•	80	16	14	6	4,9	8	3	4,6	0001595177
Vg 5,2	1,06	24	•	80	16	14	6	4,9	8	3	4,2	0002010374
Vg 6	0,79	32	•	80	16	12	6	4,9	8	3	5,3	0002010425
Vg 8	0,79	32	•	90	18	17	8	6,2	9	3	6,9	0001703170
Vg 9,6	1,00	-	•	100	20	19	10	8	11	3	8,8	0002010585

C/1 — N

Vg DIN 7756 | 1xD | **C** 2-3P | ≈DIN 376 | HSSE Co5



Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2,4		1,2		2	3
mts./min.	8	13	7	12	6	9	10	15
	1 2		6		6		5 5 6	

D1	P mm	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Vg 10	0,91	28	•	100	20	-	8	6,2	9	3	9,3	0002010645
Vg 12	0,98	26	•	110	22	-	9	7	10	3	11,1	0002010706

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

C/2

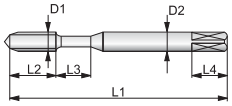
BR

BA
BS 93

C
2-3P

SIN / DIN
371

HSSE
Co5



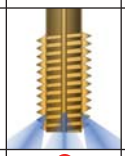
Material	GR5	
Subg.	2,3	
mts./min.	15	20
	5	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
BA 0	1,00	•	80	16	14	6	4,9	8	3	5,1	0002010856
BA 1	0,90	•	80	16	14	6	4,9	8	3	4,5	0002010916
BA 2	0,81	•	70	14	11	6	4,9	8	3	4	0000702175
BA 3	0,73	•	70	14	11	6	4,9	8	3	3,4	0002011156
BA 4	0,66	•	63	12	9	4,5	3,4	6	3	3	0002011216
BA 5	0,59	•	56	11	9	4	3	6	3	2,6	0000702236
BA 6	0,53	•	56	10	8	3,5	2,7	6	3	2,3	0002011376
BA 7	0,48	•	50	9	-	2,8	2,1	6	3	2	0002011437
BA 8	0,43	•	45	9	-	2,8	2,1	5	3	1,8	0002011587

Machos laminación / *Roll taps*

Machos de máquina de laminación. *Fluteless / Roll taps*

Aplicaciones / *Applications*

	HSS-E Co				
	POLIGON. PROFILRULL	POLIGON. PROFILRULL R	POLIGON. PROFILRULL 2R	POLIGON. PROFILRULL E	POLIGON. PROFILRULL ER
	TiN	*TiN*	*TiN*	*TiN*	*TiN*
	ext.	ext.	intern. KL	ext.	ext.
	1xD	3,5xD	3,5xD	1xD	3,5xD
	C	C	C	E	E
				✓	✓
					
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	○	○	○	○	○
1					
2	○	○	○	○	○
3					
4					
5					
6	●	●	●	●	●
7	○	○	○	○	○
8					
1	○	○	○	○	○
2	●	●	●	●	●
3	●	●	●	●	●
4					
1					
2					
3					
4					
1					
2					
3					
4					
5					
6					
1	●	●	●	●	●
2	●	●	●	●	●
3					
4					
1					
2					
1					
2					
3					
1					
2					
3					
4					
1	○	○	○	○	○
2					
1					
2					
3					

● Recomendado / *Recommended*
● Adecuado / *Suitable*
○ Alternativo / *Alternative*

	M ISO-DIN 13				**MF** ISO-DIN 13			
Agujero / *Hole*	1xD	3,5xD		3,5xD	1xD	3,5xD	3,5xD	
Entrada-ranura / *Chamfer-flute*	C	C/Lubrificant	C/Lubrificant+KL	E/Lubrificant	C	C/Lubrificant	E/Lubrificant	
Norma DIN / *DIN Standard*	371-376			371-376	374			
Referencia / *Reference*	PROFILRULL	PROFILRULL R	PROFILRULL R KL	PROFILRULL ER	PROFILRULL 1	PROFILRULL 1R	PROFILRULL 1ER	
Tipo / *Type*	POLIGON.	POLIGON.	POLIGON.	POLIGON.	POLIGON.	POLIGON.	POLIGON.	
Superficie / *Surface*	*TiN*	*TiN*	*TiN*	*TiN*	*TiN*	*TiN*	*TiN*	
Material / *Material*	HSSE Co5		HSSE Co5	HSSE Co5	HSSE Co5			
Tolerancia / *Tolerance*	6HX / 6GX		6HX / 6GX	6HX / 6GX		6HX / 6GX	6HX / 6GX	
Gama / *Range*	M1,4...20	M3...20	M5...12	M4...20	MF8...20	MF8...20	MF 8...12	
Página / *Page*	270	272	273	274	275	276	277	

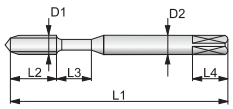
	G(BSP) ISO228/1-DIN 259/1		**UNC** ANSI / ASME B1.1		**UNF** ANSI / ASME B1.1		
Agujero / *Hole*	1xD	3,5xD	1xD	3,5xD	1xD	3,5xD	
Entrada-ranura / *Chamfer-flute*	C	C / Lubrificant	C	C / Lubrificant	C	C / Lubrificant	
Norma DIN / *DIN Standard*	≈371 - 5156		≈371 - 5156		≈371 - 5156		
Referencia / *Reference*	PROFILRULL	PROFILRULL R	PROFILRULL	PROFILRULL R	PROFILRULL	PROFILRULL R	
Tipo / *Type*	POLIGON.	POLIGON.	POLIGON.	POLIGON.	POLIGON.	POLIGON.	
Superficie / *Surface*	*TiN*	*TiN*	*TiN*	*TiN*	*TiN*	*TiN*	
Material / *Material*	HSSE Co5		HSSE Co5		HSSE Co5		
Tolerancia / *Tolerance*			2BX		2BX		
Gama / *Range*	G 1/8...3/4	G 1/8...3/4	UNC Nr.4...5/8	UNC Nr5...5/8	UNC Nr.4...5/8	UNC Nr5...5/8	
Página / *Page*	278	279	280	281	282	283	

Machos de máquina de laminación. Agujeros ciegos y pasantes
Fluteless / roll taps. Blind and through holes

JMC

PROFILRULL 2 | POLIGON. | TiN

M ISO-DIN 13	1xD	C 2-3 P	DIN 371	HSSE Co5	6HX 6GX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 1,4*	0,30	•	40	7	-	2,5	2,1	5	3	1,25	0002024723
	M 1,6	0,35	•	40	8	-	2,5	2,1	5	3	1,45	0001905487
	M 1,7	0,35	•	40	8	-	2,5	2,1	5	3	1,55	0002024883
	M 1,8	0,35	•	40	8	-	2,5	2,1	5	3	1,65	0002024934
	M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,80	0000033262
	M 2,2	0,45	•	45	9	-	2,8	2,1	5	3	2,00	0002025023
	M 2,3	0,40	•	45	9	-	2,8	2,1	5	3	2,10	0001697689
	M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,30	0000033322
	M 2,6	0,45	•	50	9	-	2,8	2,1	5	3	2,40	0001133481
	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,80	0000033483
	M 3,5	0,60	•	56	11	9	4	3	6	4	3,25	0000033533
	M 4	0,70	•	63	12	9	4,5	3,4	6	4	3,70	0000033693
	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0000033754
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0000033814
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0000033964
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0000034053
6GX	M 1,4*	0,30		40	7	-	2,5	2,1	5	3	1,25	0002028020
	M 1,6	0,35		40	8	-	2,5	2,1	5	3	1,45	0002028180
	M 1,7	0,35		40	8	-	2,5	2,1	5	3	1,55	0002028301
	M 1,8	0,35		40	8	-	2,5	2,1	5	3	1,65	0002028451
	M 2	0,40	•	45	8	-	2,8	2,1	5	3	1,80	0000034114
	M 2,2	0,45		45	9	-	2,8	2,1	5	3	2,00	0002028511
	M 2,3	0,40		45	9	-	2,8	2,1	5	3	2,10	0001697800
	M 2,5	0,45	•	50	9	-	2,8	2,1	5	3	2,30	0000034264
	M 2,6	0,45		50	9	-	2,8	2,1	5	3	2,40	0001133541
	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,80	0000034324
	M 3,5	0,60	•	56	11	9	4	3	6	4	3,25	0000034485
	M 4	0,70	•	63	12	9	4,5	3,4	6	4	3,70	0000034545
	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0000034696
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0000034756
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0000034816
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0000034977

* Tol. 4HX

*1 Tol. 6HX

D1	Tol. Ø d1
M 1,4	+ 0,01
M 1,6 - M 2,6	+ 0,02
M 3 - M 5	± 0,03
M 6 - M 10	± 0,05

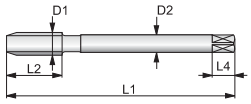
Machos de máquina de laminación. Agujeros ciegos y pasantes
Fluteless / roll taps. Blind and through holes

PROFILRULL 1

POLIGON.

TiN

M ISO-DIN 13	1xD	C 2-3 P	DIN 376	HSSE Co5	6HX 6GX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0000126979
	M 14	2,00	•	110	25	-	11	9	12	6	13,05	0000127058
	M 16	2,00	•	110	28	-	12	9	12	6	15,05	0000127118
	M 18	2,50	•	125	32	-	14	11	14	7	16,90	0000980138
	M 20	2,50	•	140	32	-	16	12	15	7	18,90	0001162213
6GX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0000127278
	M 14	2,00	•	110	25	-	11	9	12	6	13,05	0001159371
	M 16	2,00	•	110	28	-	12	9	12	6	15,05	0001160007
	M 18	2,50	•	125	32	-	14	11	14	7	16,90	0001161371
	M 20	2,50	•	140	32	-	16	12	15	7	18,90	0001162373

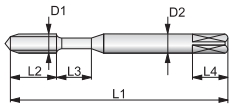
D1	Tol. Ø d1
M 12 - M 20	± 0,05

Machos de máquina de laminación / *Fluteless / roll taps*

Con ranuras de engrase. Agujeros ciegos y pasantes / *With coolant grooves. Blind and through holes*

PROFILRULL 2R | **POLIGON.** | ***TiN***

M ISO-DIN 13 | 3,5xD | **C** 2-3 P | DIN 371 | HSSE Co5 | 6HX 6GX



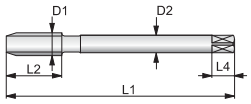
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,80	0000037813
	M 3,5	0,60	•	56	11	9	4	3	6	4	3,25	0000037974
	M 4	0,70	•	63	12	9	4,5	3,4	6	4	3,70	0000038052
	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0000038113
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0000038273
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0000038334
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0000038484
6GX	M 3	0,50	•	56	10	8	3,5	2,7	6	3	2,80	0000038544
	M 3,5	0,60	•	56	11	9	4	3	6	4	3,25	0000038605
	M 4	0,70	•	63	12	9	4,5	3,4	6	4	3,70	0000038765
	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0000038825
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0000038976
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0000039065
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0000039115

D1	Tol. Ø d1
M 3 - M 5	± 0,03
M 6 - M 10	± 0,05

PROFILRULL 1R | **POLIGON.** | ***TiN***

M ISO-DIN 13 | 3,5xD | **C** 2-3 P | DIN 376 | HSSE Co5 | 6HX 6GX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0000128110
	M 14	2,00	•	110	25	-	11	9	12	6	13,05	0000128271
	M 16	2,00	•	110	28	-	12	9	12	6	15,05	0000146905
	M 18	2,50	•	125	32	-	14	11	14	7	16,40	0001164438
	M 20	2,50	•	140	32	-	16	12	15	7	18,40	0001165220
6GX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0000128331
	M 14	2,00	•	110	25	-	11	9	12	6	13,05	0001163436
	M 16	2,00	•	110	28	-	12	9	12	6	15,05	0001163867
	M 18	2,50	•	125	32	-	14	11	14	7	16,40	0001164598
	M 20	2,50	•	140	32	-	16	12	15	7	18,40	0001165380

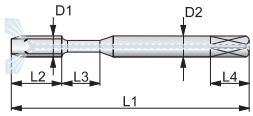
D1	Tol. Ø d1
M 12 - M 20	± 0,05

Machos de máquina de laminación / *Fluteless / roll taps*

Con refrigeración interna. Agujeros ciegos y pasantes / *With internal coolant. Blind and through holes*

PROFILRULL 2R KL | **POLIGON.** | ***TiN***

M ISO-DIN 13 | 3,5xD | C 2-3 P | DIN 371 | HSSE Co5 | 6HX 6GX | P 60°



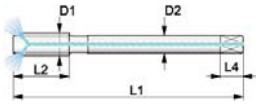
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0002692189
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0002692510
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0002693021
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0002693452
6GX	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0002692390
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0002692942
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0002693241
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0002693673

D1	Tol. Ø d1
M 3 - M 5	± 0,03
M 6 - M 10	± 0,05

PROFILRULL 1R KL | **POLIGON.** | ***TiN***

M ISO-DIN 13 | 3,5xD | C 2-3 P | DIN 376 | HSSE Co5 | 6HX 6GX | P 60°



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0002693884
6GX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0002694023

D1	Tol. Ø d1
M 12	± 0,05

Machos de máquina de laminación / *Fluteless / roll taps*

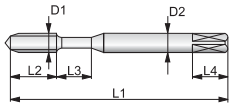
Con entrada corta y ranuras de engrase. Agujeros ciegos y pasantes

With short lead and oil coolant grooves. Blind and through holes

JMC

PROFILRULL 2ER | **POLIGON.** | ***TiN***

M ISO-DIN 13 | 3,5xD | **E** 1,5-2 P | DIN 371 | HSSE Co5 | 6HX 6GX



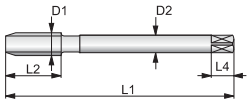
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 4	0,70	•	63	12	9	4,5	3,4	6	4	3,70	0002037045
	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0002037196
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0002037256
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0002037317
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0002037477
6GX	M 4	0,70	•	63	12	9	4,5	3,4	6	4	3,70	0002040048
	M 5	0,80	•	70	14	11	6	4,9	8	4	4,65	0002040108
	M 6	1,00	•	80	16	14	6	4,9	8	5	5,55	0002040258
	M 8	1,25	•	90	18	17	8	6,2	9	5	7,40	0002040319
	M 10	1,50	•	100	20	19	10	8	11	5	9,30	0002040479

D1	Tol. Ø d1
M 4 - M 5	± 0,03
M 6 - M 10	± 0,05

PROFILRULL 1ER | **POLIGON.** | ***TiN***

M ISO-DIN 13 | 3,5xD | **E** 1,5-2 P | DIN 376 | HSSE Co5 | 6HX 6GX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0002044539
	M 14	2,00	•	110	25	-	11	9	12	6	13,05	0002044699
	M 16	2,00	•	110	28	-	12	9	12	6	15,05	0002044750
	M 18	2,50	•	125	32	-	14	11	14	7	16,90	0002044810
	M 20	2,50	•	140	32	-	16	12	15	7	18,90	0002044960
6GX	M 12	1,75	•	110	22	-	9	7	10	5	11,15	0002145988
	M 14	2,00	•	110	25	-	11	9	12	6	13,05	0002046112
	M 16	2,00	•	110	28	-	12	9	12	6	15,05	0002046262
	M 18	2,50	•	125	32	-	14	11	14	7	16,90	0002046323
	M 20	2,50	•	140	32	-	16	12	15	7	18,90	0002046483

D1	Tol. Ø d1
M 12 - M 20	± 0,05

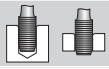
Machos de máquina de laminación. Agujeros ciegos y pasantes
Fluteless / Roll taps. Blind and through holes

PROFILRULL 1

POLIGON.

TiN

MF ISO-DIN 13

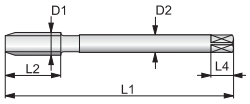


C 2-3 P

DIN 374

HSSE Co5

6HX 6GX



D1	Tol. Ø d1
M 8 - M 12	± 0,03
M 12 - M 20	+ 0,05

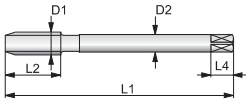
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	MF 8	1,00	•	90	18	-	6	4,9	8	5	7,58	0001288540
	MF 10	1,00	•	90	16	-	7	5,5	8	5	9,58	0000181746
	MF 10	1,25	•	100	20	-	7	5,5	8	5	9,48	0000181806
	MF 12	1,00	•	100	22	-	9	7	10	5	11,58	0000181957
	MF 12	1,25	•	100	22	-	9	7	10	5	11,48	0000182046
	MF 12	1,50	•	100	22	-	9	7	10	5	11,38	0001012718
	MF 14	1,50	•	100	22	-	11	9	12	6	13,38	0000182106
	MF 16	1,50	•	100	22	-	12	9	12	6	15,38	0001011163
	MF 18	1,50	•	110	22	-	14	11	14	7	17,38	0000980288
	MF 20	1,50	•	125	22	-	16	12	15	7	19,38	0000979993
6GX	MF 8	1,00	•	90	18	-	6	4,9	8	5	7,58	0001518700
	MF 10	1,00	•	90	16	-	7	5,5	8	5	9,58	0001802676
	MF 10	1,25	•	100	20	-	7	5,5	8	5	9,48	0000484369
	MF 12	1,00	•	100	22	-	9	7	10	5	11,58	0001802244
	MF 12	1,25	•	100	22	-	9	7	10	5	11,48	0000485422
	MF 12	1,50	•	100	22	-	9	7	10	5	11,38	0001050495
	MF 14	1,50	•	100	22	-	11	9	12	6	13,38	0000487155
	MF 16	1,50	•	100	22	-	12	9	12	6	15,38	0000487707

Machos de máquina de laminación / *Fluteless / roll taps*

Con ranuras de engrase. Agujeros ciegos y pasantes / *With coolant grooves. Blind and through holes.*

PROFILRULL 1R	MF ISO-DIN 13	3,5xD	C 2-3 P	DIN 374	HSSE Co5	6HX 6GX	P 60°
POLIGON.							
TiN							



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	MF 8	1,00	•	90	18	-	6	4,9	8	5	7,58	0001288761
	MF 10	1,00	•	90	16	-	7	5,5	8	5	9,58	0000182969
	MF 10	1,25	•	100	20	-	7	5,5	8	5	9,48	0000183048
	MF 12	1,00	•	100	22	-	9	7	10	5	11,58	0000183108
	MF 12	1,25	•	100	22	-	9	7	10	5	11,48	0000183259
	MF 12	1,50	•	100	22	-	9	7	10	5	11,38	0001211536
	MF 14	1,50	•	100	22	-	11	9	12	6	13,38	0000183319
	MF 16	1,50	•	100	22	-	12	9	12	6	15,38	0000183470
	MF 18	1,50	•	110	22	-	14	11	14	7	17,38	0001211807
	MF 20	1,50	•	125	22	-	16	12	15	7	19,38	0001212047
6GX	MF 8	1,00	•	90	18	-	6	4,9	8	5	7,58	0002051761
	MF 10	1,00	•	90	16	-	7	5,5	8	5	9,58	0001802465
	MF 10	1,25	•	100	20	-	7	5,5	8	5	9,48	0000484851
	MF 12	1,00	•	100	22	-	9	7	10	5	11,58	0001802896
	MF 12	1,25	•	100	22	-	9	7	10	5	11,48	0001803036
	MF 12	1,50	•	100	22	-	9	7	10	5	11,38	0001050826
	MF 14	1,50	•	100	22	-	11	9	12	6	13,38	0001803246
	MF 16	1,50	•	100	22	-	12	9	12	6	15,38	0001803467

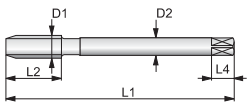
D1	Tol. Ø d1
M 8 - M 12	± 0,03
M 12 - M 20	+ 0,05

Machos de máquina de laminación / *Fluteless / roll taps*

Con entrada corta y ranuras de engrase. Agujeros ciegos y pasantes

With short lead and oil coolant grooves. Blind and through holes

PROFILRULL 1ER	MF ISO-DIN 13	3,5xD	E 1,5-2 P	DIN 374	HSSE Co5	6HX 6GX
POLIGON.						
TiN						



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	MF 8	1,00	•	90	18	-	6	4,9	8	5	7,58	0002060135
	MF 10	1,00	•	90	16	-	7	5,5	8	5	9,58	0001421797
	MF 10	1,25	•	100	20	-	7	5,5	8	5	9,48	0002067080
	MF 12	1,00	•	100	22	-	9	7	10	5	11,58	0002060285
	MF 12	1,25	•	100	22	-	9	7	10	5	11,48	0002060345
	MF 12	1,50	•	100	22	-	9	7	10	5	11,38	0002060406
6GX	MF 8	1,00	•	90	18	-	6	4,9	8	5	7,58	0002063844
	MF 10	1,00	•	90	16	-	7	5,5	8	5	9,58	0002063994
	MF 10	1,25	•	100	20	-	7	5,5	8	5	9,48	0002064083
	MF 12	1,00	•	100	22	-	9	7	10	5	11,58	0002064134
	MF 12	1,25	•	100	22	-	9	7	10	5	11,48	0002064294
	MF 12	1,50	•	100	22	-	9	7	10	5	11,38	0002064354

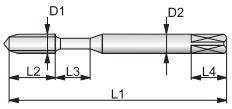
D1	Tol. Ø d1
M 8 - M 12	± 0,03
M 12 - M 20	+ 0,05

Machos de máquina de laminación. Agujeros ciegos y pasantes
Fluteless / Roll taps. *Blind and through holes*

JMC

PROFILRULL 2 | **G**(BSP) ISO 228/1 DIN 259/1 | 1xD | **C** 2-3 P | ≈DIN 371 | HSSE Co5

POLIGON.
TiN



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

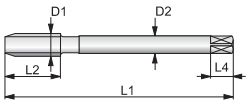
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8*	28	•	100	16	23	10	8	11	5	9,35	0000217336

* Sim. DIN 371 (M10)

Tol. Ø d1
± 0,05

PROFILRULL 1 | **G**(BSP) ISO 228/1 DIN 259/1 | 1xD | **C** 2-3 P | DIN 5156 | HSSE Co5

POLIGON.
TiN



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	5	9,20	0000219491
G 1/4	19	•	100	16	-	11	9	12	6	12,60	0000217497
G 3/8	19	•	100	16	-	12	9	12	7	15,90	0000217547
G 1/2	14	•	125	18	-	16	12	15	7	19,90	0000217608
G 5/8	14	•	125	20	-	18	14,5	17	7	21,90	0001245098
G 3/4	14	•	140	22	-	20	16	19	7	25,40	0000488438

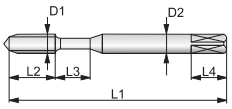
Tol. Ø d1
± 0,05

Machos de máquina de laminación / *Fluteless / roll taps*

Con ranuras de engrase. Agujeros ciegos y pasantes / *With coolant grooves. Blind and through holes*

PROFILRULL 2R — POLIGON. — TiN

G (BSP) ISO 228/1 DIN 259/1 | 3,5xD | **C** 2-3 P | ≈DIN 371 | HSSE Co5



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

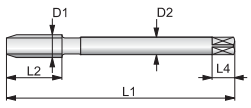
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8*	28	•	100	16	23	10	8	11	5	9,35	0000220610

* Sim. DIN 371 (M10)

Tol. Ø d1
± 0,05

PROFILRULL 1R — POLIGON. — TiN

G (BSP) ISO 228/1 DIN 259/1 | 3,5xD | **C** 2-3 P | DIN 5156 | HSSE Co5



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

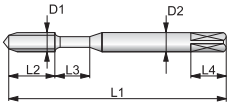
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	90	13	-	7	5,5	8	5	9,20	0000219823
G 1/4	19	•	100	16	-	11	9	12	6	12,60	0000220821
G 3/8	19	•	100	16	-	12	9	12	7	15,90	0000221060
G 1/2	14	•	125	18	-	16	12	15	7	19,90	0000221281
G 5/8	14	•	125	20	-	18	14,5	17	7	21,90	0001245420
G 3/4	14	•	140	22	-	20	16	19	7	25,40	0001245640

Tol. Ø d1
± 0,05

Machos de máquina de laminación. Agujeros ciegos y pasantes
Fluteless / roll taps. Blind and through holes

PROFILRULL 2 | **POLIGON.** | ***TiN***

UNC ANSI / ASME B1.1 | 1xD | **C** 2-3 P | ≈DIN 371 | HSSE Co5 | 2BX



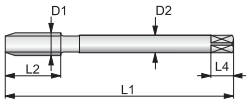
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	•	45	9	-	2,8	2,1	5	3	1,95	0002068635
UNC Nr 3	48	•	50	9	-	2,8	2,1	5	3	2,25	0002068795
UNC Nr 4	40	•	56	10	8	3,5	2,7	6	3	2,60	0001264725
UNC Nr 5	40	•	56	10	8	3,5	2,7	6	3	2,90	0001264946
UNC Nr 6	32	•	56	11	8	4	3	6	4	3,15	0001039971
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	4	3,85	0001263452
UNC Nr 10	24	•	70	14	9	6	4,9	8	4	4,40	0001263723
UNC Nr 12	24	•	80	16	12	6	4,9	8	5	5,05	0001263883
UNC 1/4	20	•	80	16	12	6	4,9	8	5	5,80	0001264183
UNC 5/16	18	•	90	18	15	8	6,2	9	5	7,35	0001264393
UNC 3/8	16	•	100	20	18	10	8	11	5	8,85	0001264514

D1	Tol. Ø d1
UNC Nr 4 - Nr 12	± 0,03
UNC 1/4 - 3/8	± 0,05

PROFILRULL 1 | **POLIGON.** | ***TiN***

UNC ANSI / ASME B1.1 | 1xD | **C** 2-3 P | ≈DIN 376 | HSSE Co5 | 2BX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	22	-	8	6,2	9	5	10,35	0001265245
UNC 1/2	13	•	110	22	-	9	7	10	5	11,90	0001265516
UNC 5/8	11	•	110	28	-	12	9	12	6	14,90	0001265677

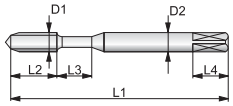
D1	Tol. Ø d1
7/16 - 5/8	± 0,05

Machos de máquina de laminación / *Fluteless / roll taps.*

Con ranuras de engrase. Agujeros ciegos y pasantes / *With coolant grooves. Blind and through holes.*

PROFILRULL 2R | **POLIGON.** | ***TiN***

UNC ANSI / ASME B1.1 | 3,5xD | **C** 2-3 P | ≈DIN 371 | HSSE Co5 | 2BX



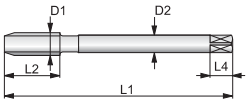
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 5	40	•	56	10	8	3,5	2,7	6	3	2,90	0001323404
UNC Nr 6	32	•	56	11	8	4	3	6	4	3,15	0001323625
UNC Nr 8	32	•	63	12	9	4,5	3,4	6	4	3,85	0001323836
UNC Nr 10	24	•	70	14	9	6	4,9	8	4	4,40	0001324075
UNC Nr 12	24	•	80	16	12	6	4,9	8	5	5,05	0001324296
UNC 1/4	20	•	80	16	12	6	4,9	8	5	5,80	0001324417
UNC 5/16	18	•	90	18	15	8	6,2	9	5	7,35	0001324627
UNC 3/8	16	•	100	20	18	10	8	11	5	8,85	0001324848

D1	Tol. Ø d1
UNC Nr 5 - Nr 12	± 0,03
UNC 1/4 - 3/8	± 0,05

PROFILRULL 1R | **POLIGON.** | ***TiN***

UNC ANSI / ASME B1.1 | 3,5xD | **C** 2-3 P | ≈DIN 376 | HSSE Co5 | 2BX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

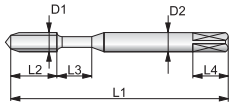
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC 7/16	14	•	100	22	-	8	6,2	9	5	10,35	0000979562
UNC 1/2	13	•	110	22	-	9	7	10	5	11,90	0001325087
UNC 5/8	11	•	110	28	-	12	9	12	6	14,90	0001325298

D1	Tol. Ø d1
UNC 7/16 - 5/8	± 0,05

Machos de máquina de laminación. Agujeros ciegos y pasantes
Fluteless / Roll taps. Blind and through holes

PROFILRULL 2 | **POLIGON.** | ***TiN***

UNF ANSI / ASME B1.1 | 1xD | **C** 2-3 P | DIN 371 | HSSE Co5 | 2BX



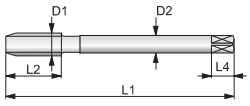
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,60	0000781259
UNF Nr 5	44	•	56	10	8	3,5	2,7	6	3	2,95	0001279694
UNF Nr 6	40	•	56	11	8	4	3	6	4	3,25	0001279755
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	4	3,90	0001279965
UNF Nr 10	32	•	70	14	9	6	4,9	8	4	4,50	0001280100
UNF Nr 12	28	•	80	16	12	6	4,9	8	5	5,10	0001280321
UNF 1/4	28	•	80	16	12	6	4,9	8	5	5,95	0001280532
UNF 5/16	24	•	90	18	15	8	6,2	9	5	7,50	0001280752
UNF 3/8	24	•	100	20	18	10	8	11	5	9,10	0000781962

D1	Tol. Ø d1
UNF Nr 4 - Nr 12 UNF 1/4 - 3/8	+ 0,03 ± 0,05

PROFILRULL 1 | **POLIGON.** | ***TiN***

UNF ANSI / ASME B1.1 | 1xD | **C** 2-3 P | DIN 376 | HSSE Co5 | 2BX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	22	-	8	6,2	9	5	10,60	0000489160
UNF 1/2	20	•	110	22	-	9	7	10	5	12,15	0000489431
UNF 5/8	18	•	110	28	-	12	9	12	6	15,30	0001280963
UNF 3/4	16	•	125	32	-	14	11	14	7	18,40	0001012446
UNF 1"	12	•	160	36	-	19	16	19	7	24,50	0001281102

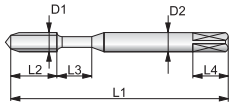
D1	Tol. Ø d1
UNF 7/16 - 1"	± 0,05

Machos de máquina de laminación / *Fluteless / roll taps*

Con ranuras de engrase. Agujeros ciegos y pasantes / *With coolant grooves. Blind and through holes*

PROFILRULL 2R | **POLIGON.** | ***TiN***

UNF ANSI / ASME B1.1 | 3,5xD | **C** 2-3 P | DIN 371 | HSSE Co5 | 2BX



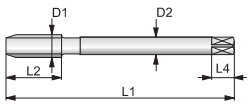
Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	•	56	10	8	3,5	2,7	6	3	2,60	0001321340
UNF Nr 5	44	•	56	10	8	3,5	2,7	6	3	2,95	0001321400
UNF Nr 6	40	•	56	11	8	4	3	6	4	3,25	0001321560
UNF Nr 8	36	•	63	12	9	4,5	3,4	6	4	3,90	0001321621
UNF Nr 10	32	•	70	14	9	6	4,9	8	4	4,50	0001321771
UNF Nr 12	28	•	80	16	12	6	4,9	8	5	5,10	0001321831
UNF 1/4	28	•	80	16	12	6	4,9	8	5	5,95	0001321992
UNF 5/16	24	•	90	18	15	8	6,2	9	5	7,50	0001322071
UNF 3/8	24	•	100	20	18	10	8	11	5	9,10	0001322131

D1	Tol. Ø d1
UNF Nr 4 - Nr 12 UNF 1/4 - 3/8	+ 0,03 ± 0,05

PROFILRULL 1R | **POLIGON.** | ***TiN***

UNF ANSI / ASME B1.1 | 3,5xD | **C** 2-3 P | DIN 376 | HSSE Co5 | 2BX



Material	GR1	GR2	GR3		GR6		GR10
Subg.	1,2,3,4,5,6	2,6,7	1	2,3	1	2	1
mts./min.	13-18	10-13	10-13	12-15	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		5		5

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF 7/16	20	•	100	22	-	8	6,2	9	5	10,60	0001012597
UNF 1/2	20	•	110	22	-	9	7	10	5	12,15	0001322342
UNF 5/8	18	•	110	28	-	12	9	12	6	15,30	0001322623
UNF 3/4	16	•	125	32	-	14	11	14	7	18,40	0001322834
UNF 1"	12	•	160	36	-	19	16	19	7	24,50	0001323073

D1	Tol. Ø d1
UNF 7/16 - 1"	± 0,05

Orificio previo / *Previous hole*

El orificio previo es un factor muy importante respecto al rendimiento final y, por tanto, es necesario un severo control tanto de la medida como de la calidad superficial. Por otra parte, es conveniente realizar chaflanes en los extremos de estos orificios con el fin de evitar material recrecido.
Para el cálculo del diámetro a taladrar y perfiles de 60º y 55º, se aplicarán las fórmulas siguientes:

Para roscas en **TOL. 6H**	Para roscas en **TOL. 6G**
MIN. Ø NOMINAL - (0,43 x PASO) MAX. Ø NOMINAL - (0,48 x PASO)	MIN. Ø NOMINAL - (0,41 x PASO) MAX. Ø NOMINAL - (0,46 x PASO)

The previous hole is a significant factor with regard to the result to be achieved and, therefore, a thorough control is necessary for either the size and surface quality. In addition, it is advisable to make bevel edges at the ands of these holes in order to prevent built-up material from being produced.
The folowing formulas will be applied for the calculation of the diameter to be drilled and profiles of 60º and 55º.

For threads in **TOL. 6H**	*For threads in* **TOL. 6G**
MIN. Ø NOMINAL - (0,43 x PASO) MAX. Ø NOMINAL - (0,48 x PASO)	MIN. Ø NOMINAL - (0,41 x PASO) MAX. Ø NOMINAL - (0,46 x PASO)

Ventajas del macho de laminación *Advantages of roll taps*

Los machos de laminación ofrecen ventajas muy importantes:

- Ausencia de virutas (funcionalidad y ecología)
- Superior precisión de medida.
- Mayor calidad de acabado superficial.
- Mejora de las propiedades mecánicas de la rosca.
- Mayor productividad: vida del macho, velocidad de corte.

The roll taps have very significan adventages:

- No chips produced (reliability and ecology)
- Higher accuracy of measurement.
- Higher quality of surface finish.
- Improvement in the engineering properties of the thread.
- Higher productivity: taps lifetime, cutting speed.

Velocidad laminación / *Rolling speed*

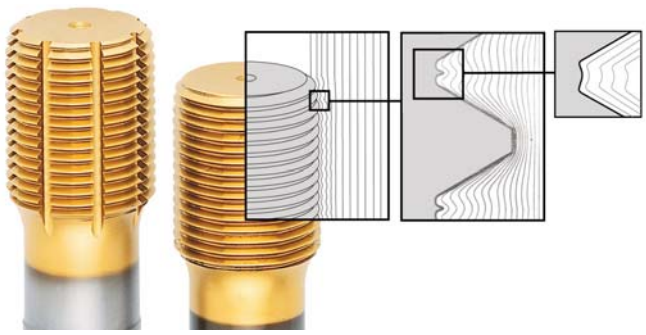
La velocidad óptima de laminación debe de ser confirmada en el propio proceso, hasta alcanzar la velocidad idónea.
La fricción alcanza valores muy altos y, por tanto genera temperaturas elevadas, por lo que es muy necesaria la aplicación de tratamientos o recubrimientos superficiales que contraresten los efectos citados.
Como orientación general las velocidades de laminación son un 50% superiores a las de un roscado convencional por corte.
The optimum rolling speed is to be confirmed in the own process, up to reach the suitable speed.
Friction reaches very high values and, therefore generates high temperatures, so that the application of heat treatments or surface coatings taking up the mentioned effects will be highly required.
As a general guidance, the rolling speeds are 50% higher than those of a conventional cutting tapping.

Refrigerante / *Coolant*

La lubricación es muy importante y el sistema debe reunir las condiciones adecuadas para evitar los efectos citados anteriormente.
En general, se recomiendan aceites con características y formulaciones adecuadas de alta presión.
Lubrication is of great significance and the system is to be provided with the suitable conditions to avoid the previously mentioned effects.
In general, oils with suitable high pressure characteristics and formulas are recommended.

Momento torsor / *Torque*

El momento torsor (Mt) de estos machos es superior y puede ser hasta 2 veces el de un roscado convencional.
El par torsor puede verse incrementado en roscados de longitud superior a 2xd.
The torque (Mt) of these is higher and it can be up to 2 times of a cnventional tapping.
The twisting torque can become increased in tappings of length longer than 2xd.



Norma JIS / *JIS standard*

Machos de roscar a máquina. NORMA JIS / *Machine taps. JIS STANDARD*

Aplicaciones / *Applications*

HSSE Co5

basicline ✓											plusline+											
N											VAF						CONEX		TAPER		FORMING	
C15	C15	C15	C35	C35	C35	TN C35	PS	PS	PS	TN PS	C35	C35	C35	PS	PS	PS	C	C	C15 AZ	C15 AZ	PROFILRULL	PROFILRULL R
	Nogrip	*TiN*		*Nogrip*	*TiN*			*Nogrip*	*TiN*		*Nogrip*	*TiN*	*TiCN*	*Nogrip*	*TiN*	*TiCN*	*C.D.I.*	*AltPlus*	*Nogrip*	*TiN*	*TiN*	*TiN*
Exterior			Exterior				Exterior				Exterior			Exterior			Exterior		Exterior		Exterior	
2xD			2,5÷ 3xD				B				2,5÷ 3xD			B			C		C R15°		1xD	3,5xD
C R15°			C R35°								C R35°										C	

1	○	●	●	○	●	●	○	○	●	●	○											●	●
2	○	●	●	○	●	●	○	○	●	●	○								●	●	●	●	●
3	●	●	●	●	●	●	●	●	●	●	●								●	●	●	●	●
4	○	●	●	○	●	●	○	○	●	●	○								●	●	●	●	●
5	○	●	●	○		●	○	○		●	○	●	●	●	●	●	●		●	●	●	●	●
6			●		○	●			○	●									●	●	○	○	
1						●				●		●	●	●	●	●	●		○	●			
2						●				●		●	●	●	●	●	●		○	●	○	○	
3						●				●		●	●	●	●	●	●		○	●			
4												●	●	●	●	●	●		○	●			
5												●	●	●	●	●	●		○	●			
6		●	●		●	●			●	●									●	●	●	●	
7			●			●				●		●	●	●	●	●	●		○	●	○	○	
8			●									●	●	●	●	●	●		○	●			
1		●			●	○			●	○									●	○	○	○	
2		●			●	○			●	○									●	○	●	●	
3		●			●	○			●	○									●	○	●	●	
4												●	●	●	●	●	●		●	○			
1																		●	●				
2	○		○									●	●	●	●	●	●	●	●				
3																		●	●				
4	○		○									●	●	●	●	●	●						
1	○			○			○	○			○												
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6																			●				
1																					●	●	
2	○			○			○	○			○										●	●	
3	○		○	○		○	○	○		○	○												
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4																							
1						○				○											○	○	
2						○				○													
1						○				○													
2																							
3																							

● Recomendado / *Recommended*
● Adecuado / *Suitable*
○ Alternativo / *Alternative*

	M ISO-DIN 13						
Agujero / *Hole*	2xD			2,5÷3xD			
Entrada-ranura / *Chamfer-flute*	C-R15º			C-R35º			
Norma DIN / *DIN Standard*	JIS			JIS			
Referencia / *Reference*	C15	C15	C15	C35A	C35A	C35A	TN - C35 XL
Tipo / *Type*	N			N			
Superficie / *Surface*		*Nogrip-1®*	*TiN*		*Nogrip-1®*	*TiN*	
Material / *Material*	HSSE Co5			HSSE Co5			
Tolerancia / *Tolerance*	ISO 2 (6H)			ISO 2 (6H) / ISO 3 (6G) / 7G / ISO1 4H			ISO 2 (6H)
Gama / *Range*	M3...16	M3...16	M3...16	M2...56	M2...56	M2...56	M3...20
Página / *Page*	291	291	292	293	294	295	296

	M ISO-DIN 13									
Agujero / *Hole*				2,5÷3xD						
Entrada-ranura / *Chamfer-flute*	B			C-R35º			B			
Norma DIN / *DIN Standard*	JIS			JIS			JIS			
Referencia / *Reference*	PS	PS	PS	TN -PS XL	C35A	C35A	C35A	PS	PS	PS
Tipo / *Type*	N				VAF			VAF		
Superficie / *Surface*		*Nogrip-1®*	*TiN*		*Nogrip-1®*	*TiN*	*TiCN*	*Nogrip-1®*	*TiN*	*TiCN*
Material / *Material*	HSSE Co5				HSSE Co5			HSSE Co5		
Tolerancia / *Tolerance*	ISO 2 (6H) / ISO 3 (6G) / 7G / ISO1 4H			ISO 2 (6H)	ISO 2 (6H)			ISO 2 (6H)		
Gama / *Range*	M1,4...52	M1,4...52	M1,4...52	M2...16	M2...16	M2...16	M2...12	M2...16	M2...16	M3...12
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Machos de roscar a máquina. NORMA JIS
Machine taps. JIS STANDARD
Índice de referencias / *Index of references*

	M ISO-DIN 13				**MJ** DIN ISO 5855-1			
Agujero / *Hole*			1xD	3,5xD	2,5÷3xD			
Entrada-ranura / *Chamfer-flute*	C		C		C	B		
Norma DIN / *DIN Standard*	JIS		JIS		JIS			
Referencia / *Reference*	C	C	PROFILRULL	PROFILRULL R	C35	PS		
Tipo / *Type*	CONEX		POLIGON.	POLIGON.	N			
Superficie / *Surface*	*C.D.I.®*	*AltPlus*	*TiN*	*TiN*				
Material / *Material*	HSSE Co5		HSSE Co5		HSSE Co5			
Tolerancia / *Tolerance*	GH		6HX / 6GX		ISO1 4H			
Gama / *Range*	M3...20	M3...16	M 1,4...12	M 3...12	MJ 3...12	MJ 3...12		
Página / *Page*	299	299	308	309	310	310		

	MF ISO-DIN 13						**(G)PS**	**Rc**(BSPT) IS0 7/1 BS 21	
Agujero / *Hole*	2,5÷3xD						2,5÷3xD		
Entrada-ranura / *Chamfer-flute*	C-R35º			B			C-R35º	C-R15º	
Norma DIN / *DIN Standard*	JIS			JIS			JIS	JIS	
Referencia / *Reference*	C35A	C35A	C35A	PS	PS	PS	C35A	C15/1	C15/1
Tipo / *Type*	N			N			N	AZ	
Superficie / *Surface*		*Nogrip-1®*	*TiN*		*Nogrip-1®*	*TiN*	*Nogrip-1®*	*Nogrip-1®*	*TiN*
Material / *Material*	HSSE Co5			HSSE Co5			HSSE Co5	HSSE Co5	
Tolerancia / *Tolerance*	ISO 2 (6H)			ISO 2 (6H)					
Gama / *Range*	MF4...36	MF4...36	MF4...36	MF4...36	MF4...36	MF4...36	G1/8...1"	Rc1/16...1"	Rc1/16...1"
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	UNC ANSI / ASME B1.1								
Agujero / *Hole*	2,5÷3xD						2,5÷3xD		
Entrada-ranura / *Chamfer-flute*	C-R35°			B			C-R35°		
Norma DIN / *DIN Standard*	JIS			JIS			JIS		
Referencia / *Reference*	C35A	C35A	C35A	PS	PS	PS	C35A	C35A	C35A
Tipo / *Type*	N			N			VAF		
Superficie / *Surface*		Nogrip-1®	TiN		Nogrip-1®	TiN	Nogrip-1®	TiN	TiCN
Material / *Material*	HSSE Co5			HSSE Co5			HSSE Co5		
Tolerancia / *Tolerance*	GH			GH			GH		
Gama / *Range*	UNC Nr4...1"	UNC Nr4...1"	UNC Nr4...1"	UNC Nr2...1"	UNC Nr2...1"	UNC Nr2...1"	UNC Nr2...1"	UNC Nr2...1"	UNC Nr2...1"
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	UNC ANSI / ASME B1.1			UNF ANSI / ASME B1.1					
Agujero / *Hole*				2,5÷3xD					
Entrada-ranura / *Chamfer-flute*	C-R35°			C-R35°			B		
Norma DIN / *DIN Standard*	JIS			JIS			JIS		
Referencia / *Reference*	PS	PS	PS	C35A	C35A	C35A	PS	PS	PS
Tipo / *Type*	VAF			N			N		
Superficie / *Surface*	Nogrip-1®	TiN	TiCN		Nogrip-1®	TiN		Nogrip-1®	TiN
Material / *Material*	HSSE Co5			HSSE Co5			HSSE Co5		
Tolerancia / *Tolerance*	GH			GH			GH		
Gama / *Range*	UNC Nr2...1"	UNC Nr2...1"	UNC Nr2...1"	UNF Nr4...1"	UNF Nr4...1"	UNF Nr4...1"	UNF Nr2...1"	UNF Nr2...1"	UNF Nr2...1"
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	UNF ANSI / ASME B1.1						NPT ANSI / ASME B1.20.1	
Agujero / *Hole*	3xD							
Entrada-ranura / *Chamfer-flute*	C-R35º			C-R35º			C-R15º	
Norma DIN / *DIN Standard*	JIS			JIS			JIS	
Referencia / *Reference*	C35A	C35A	C35A	PS	PS	PS	C15/1	C15/1
Tipo / *Type*	VAF			VAF			AZ	
Superficie / *Surface*	*Nogrip-1®*	*TiN*	*TiCN*	*Nogrip-1®*	*TiN*	*TiCN*	*Nogrip-1®*	*TiN*
Material / *Material*	HSSE Co5			HSSE Co5			HSSE Co5	
Tolerancia / *Tolerance*	GH			GH				
Gama / *Range*	UNF Nr2...1"	UNF Nr2...1"	UNF Nr2...1"	UNF Nr2...1"	UNF Nr2...1"	UNF Nr2...1"	NPT1/16...1"	NPT1/16...1"
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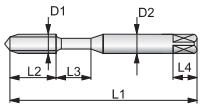
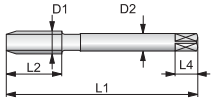
Machos de roscar a máquina. Agujeros ciegos.
Machine taps. Blind holes.

JMC

C15 | **N**

M ISO-DIN 13	2xD	C 2-3 P	R15°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°



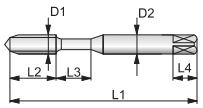


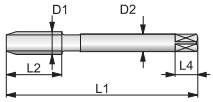
Material	GR1		GR4		GR5		GR6	
Subg.	1,2,3,4,5		2, 4		1,2		2	3
mts./min.	10	15	15	20	6	9	15	20
	1 2		6		6		5	6

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	46	10	8	4	3,2	6	3	2,5	0000877481
M 4	0,70	•	52	12	9	5	4	7	3	3,3	0000877813
M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,2	0000878052
M 6	1,00	•	62	16	14	6	4,5	7	3	5	0000878815
M 8	1,25	•	70	18	-	6,2	5	8	3	6,8	0000879486
M 10	1,50	•	75	20	-	7	5,5	8	3	8,5	0000880333
M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,2	0001458818
M14	2,00	•	88	25	-	10,5	8	11	3	12	0001460486
M16	2,00	•	95	28	-	12,5	10	13	3	14	0001460818

C15 | **N** | ***Nogrip-1®***

M ISO-DIN 13	2xD	C 2-3 P	R15°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°



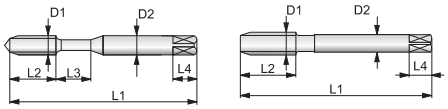


Material	GR1		GR2	GR3		GR9
Subg.	1,2,3,4,5		6	1, 2, 3		2
mts./min.	10	15	13	5	8	4-6
	1 2		1 2	1 2 3 4		4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	46	10	8	4	3,2	6	3	2,5	0001173173
M 4	0,70	•	52	12	9	5	4	7	3	3,3	0000877973
M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,2	0000878112
M 6	1,00	•	62	16	14	6	4,5	7	3	5	0000878975
M 8	1,25	•	70	18	-	6,2	5	8	3	6,8	0000879546
M 10	1,50	•	75	20	-	7	5,5	8	3	8,5	0000880052
M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,2	0001458968
M14	2,00	•	88	25	-	10,5	8	11	3	12	0001460537
M16	2,00	•	95	28	-	12,5	10	13	3	14	0001460968

Machos de roscar a máquina. Agujeros ciegos.
Machine taps. Blind holes.

C15	M ISO-DIN 13	2xD	C 2-3 P	R15°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°
N								
TiN								



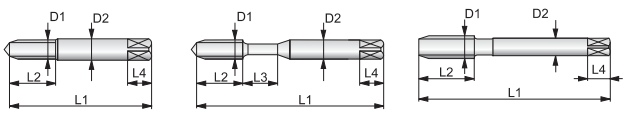
Material	GR1		GR2		GR4		GR6	
Subg.	1,2,3,4,5	6	6	7,8	2,4		3	
mts./min.	15-20	10-15	18	13	12	17	20	25
	1 2		1 2		6		5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	46	10	8	4	3,2	6	3	2,5	0000877542
M 4	0,70	•	52	12	9	5	4	7	3	3,3	0001173233
M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,2	0000878323
M 6	1,00	•	62	16	14	6	4,5	7	3	5	0000879054
M 8	1,25	•	70	18	-	6,2	5	8	3	6,8	0000879606
M 10	1,50	•	75	20	-	7	5,5	8	3	8,5	0000880112
M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,2	0001459057
M14	2,00	•	88	25	-	10,5	8	11	3	12	0001460697
M16	2,00	•	95	28	-	12,5	10	13	3	14	0001461057

Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A	M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	ISO 2 (6H) ISO 3 (6G)	P 60°
N								



SG

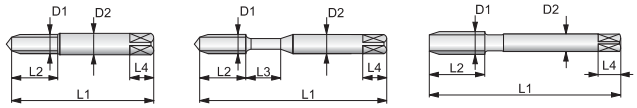
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	13
	1 2		6		5 5 6	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,6	0001332360
	M 2,2	0,45	•	42	10	SG	3	2,5	5	3	1,75	0002082718
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	1,9	0001722255
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0001391297
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,1	0001171449
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,5	0000862672
	M 4	0,70	•	52	7	10	5	4	7	3	3,3	0000863464
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,2	0000864245
	M 6	1,00	•	62	9	21	6	4,5	7	3	5	0000865037
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,8	0000867313
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,5	0000868254
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,2	0001451892
	M 14	2,00	•	88	18	-	10,5	8	11	3	12	0001452192
	M 16	2,00	•	95	18	-	12,5	10	13	3	14	0001452463
	M 18	2,50	•	100	22	-	14	11	14	4	15,5	0001176722
	M 20	2,50	•	105	22	-	15	12	15	4	17,5	0001452744
	M 22	2,50	•	115	22	-	17	13	16	4	19,5	0001453043
	M 24	3,00	•	120	28	-	19	15	18	4	21	0001453315
	M 30	3,50	•	135	32	-	23	17	20	4	26,5	0001476569
	M 36	4,00	•	155	36	-	28	21	24	4	32	0001451199
	M 39	4,00	•	165	36	-	32	24	27	4	35	0001451250
	M 42	4,50	•	175	45	-	32	24	27	4	37,5	0001451310
	M 45	4,50	•	180	45	-	36	29	32	5	40,5	0000871538
	M 48	5,00	•	185	50	-	36	29	32	5	43	0001451460
	M 52	5,00	•	195	50	-	40	32	35	5	47	0001451521
	M 56	5,50	•	205	55	-	44	35	38,8	5	50,5	0001451681
ISO 3 (6G)	M 2	0,40		40	SG	-	3	2,5	5	3	1,6	0002399087
	M 2,3	0,40		42	SG	-	3	2,5	5	3	1,9	0003439929
	M 2,5	0,45		44	SG	-	3	2,5	5	3	2,05	0002399147
	M 2,6	0,45		44	SG	-	3	2,5	5	3	2,1	0003443653
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,5	0000863183
	M 4	0,70	•	52	7	10	5	4	7	3	3,3	0000863956
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,2	0000864737
	M 6	1,00	•	62	9	21	6	4,5	7	3	5	0000865529
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,8	0000867804
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,5	0000868746
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,2	0001594024
7G	M 3	0,50	•	46	6	9	4	3,2	6	3	2,5	0000863243
	M 4	0,70	•	52	7	10	5	4	7	3	3,3	0000864035
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,2	0000864898
	M 6	1,00	•	62	9	21	6	4,5	7	3	5	0000865689
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,8	0000867955
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,5	0000868807
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,2	0001594235
ISO 1 (4H)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,5	0001071152
	M 4	0,70	•	52	7	10	5	4	7	3	3,3	0000863895
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,2	0000864677
	M 6	1,00	•	62	9	21	6	4,5	7	3	5	0000865468
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,8	0000867744
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,5	0000868686
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,2	0001772888

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A	M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°
N								
Nogrip-1®								



SG

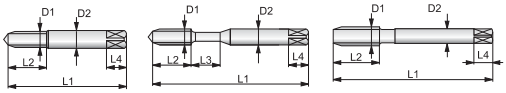
Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,6	6	1, 2, 3	2
mts./min.	10 15	13	5 8	4-6
	1 2	1 2	1 2 3 4	4

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0001722104
	M 2,2	0,45	•	42	10	SG	3	2,5	5	3	1,75	0002082868
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	1,90	0001722315
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0001722475
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,10	0001727698
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0000862512
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0000863303
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0000864195
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0000864958
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0000867252
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0001035530
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0001451952
	M 14	2,00	•	88	18	-	10,5	8	11	3	12,00	0001452252
	M 16	2,00	•	95	18	-	12,5	10	13	3	14,00	0001452523
	M 18	2,50	•	100	22	-	14	11	14	4	15,50	0001176882
	M 20	2,50	•	105	22	-	15	12	15	4	17,50	0001452804
	M 22	2,50	•	115	22	-	17	13	16	4	19,50	0001453194
	M 24	3,00	•	120	28	-	19	15	18	4	21,00	0001453475
	M 30	3,50	•	135	32	-	23	17	20	4	26,50	0001476629
	M 36	4,00	•	155	36	-	28	21	24	4	32,00	0002490906
	M 39	4,00	•	165	36	-	32	24	27	4	35,00	0003454021
	M 42	4,50	•	175	45	-	32	24	27	4	37,50	0001645604
	M 45	4,50	•	180	45	-	36	29	32	5	40,50	0003454453
	M 48	5,00	•	185	50	-	36	29	32	5	43,00	0003454673
	M 52	5,00	•	195	50	-	40	32	35	5	47,00	0000454884
	M 56	5,50	•	205	55	-	44	35	38,8	5	50,50	0001799821
ISO 3 (6G)	M 2	0,40		40	SG	-	3	2,5	5	3	1,60	0003440214
	M 2,3	0,40		42	SG	-	3	2,5	5	3	1,90	0003440004
	M 2,5	0,45		44	SG	-	3	2,5	5	3	2,05	0003440435
	M 2,6	0,45		44	SG	-	3	2,5	5	3	2,10	0003443713
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003443924
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003445878
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003446449
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003447712
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0003448233
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0003448875
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003449727
7G	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003444163
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003445938
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003446931
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0002739121
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0003448383
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0000449014
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003450012
ISO 1 (4H)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003444384
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003446178
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003447381
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003448012
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0003448504
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0003449235
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003450233

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A	M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°
N								
TiN								



SG

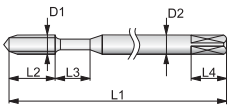
Material	GR1	GR2	GR3	GR6	GR10	GR11
Subg.	1,2,3,4,5 6	1,2,3,7 6	1,2,3	3	1,2	1
mts./min.	15-20 10-15	13 18	10 13	20 25	10 15	20
	1 2	1 2	1 2 3 4	5 6		

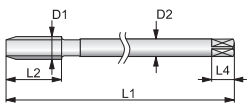
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0001332420
	M 2,2	0,45	•	42	10	SG	3	2,5	5	3	1,75	0002082929
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	1,90	0002083168
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0001690302
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,10	0001690463
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0000862733
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0000863524
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0000864306
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0000865197
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0000867463
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0000868315
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0001452031
	M 14	2,00	•	88	18	-	10,5	8	11	3	12,00	0001452312
	M 16	2,00	•	95	18	-	12,5	10	13	3	14,00	0001452683
	M 18	2,50	•	100	22	-	14	11	14	4	15,50	0001176943
	M 20	2,50	•	105	22	-	15	12	15	4	17,50	0001452955
	M 22	2,50	•	115	22	-	17	13	16	4	19,50	0001453254
	M 24	3,00	•	120	28	-	19	15	18	4	21,00	0001453525
	M 30	3,50	•	135	32	-	23	17	20	4	26,50	0001476779
	M 36	4,00	•	155	36	-	28	21	24	4	32,00	0002083599
	M 39	4,00	•	165	36	-	32	24	27	4	35,00	0003454181
	M 42	4,50	•	175	45	-	32	24	27	4	37,50	0003454392
	M 45	4,50	•	180	45	-	36	29	32	5	40,50	0003454513
	M 48	5,00	•	185	50	-	36	29	32	5	43,00	0003454724
	M 52	5,00	•	195	50	-	40	32	35	5	47,00	0003454944
ISO 3 (6G)	M 2	0,40		40	SG	-	3	2,5	5	3	1,60	0003440375
	M 2,3	0,40		42	SG	-	3	2,5	5	3	1,90	0003440164
	M 2,5	0,45		44	SG	-	3	2,5	5	3	2,05	0003443592
	M 2,6	0,45		44	SG	-	3	2,5	5	3	2,10	0003443864
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003444013
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0002736817
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0002736977
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003447873
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0001364680
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0003448935
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003449938
7G	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003444224
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003446017
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003447230
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003447933
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0003448443
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0003449175
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003450172
ISO 1 (4H)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003444444
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003446228
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003447441
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003448172
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0003448664
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0003449395
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003450393

Machos de roscar a máquina Con mango extralargo. Agujeros ciegos
Machine Taps *With extra long shank. Blind holes*

JMC

TN-C35	M ISO-DIN 13	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°
XL								
N								





Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	13
	1 2		6		5 5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	100	6	10	4	3,2	6	3	2,50	0001073920
M 4	0,70	•	120	7	10	5	4	7	3	3,30	0001066206
M 5	0,80	•	150	8	17	5,5	4,5	7	3	4,20	0001096311
M 6	1,00	•	150	9	21	6	5,4	7	3	5,00	0001096522
M 8	1,25	•	150	11	-	6,2	5	8	3	6,80	0001097745
M 10	1,50	•	160	12	-	7	5,5	8	3	8,50	0001217690
M 12	1,75	•	180	14	-	8,5	6,5	9	3	10,20	0001123102
M 14	2,00	•	200	18	-	10,5	8	11	3	12,00	0001522655
M 16	2,00	•	200	18	-	12,5	10	13	3	14,00	0001096803
M 18	2,50	•	200	22	-	14	11	14	4	15,50	0003574344
M 20	2,50	•	250	22	-	15	12	15	4	17,50	0001123473

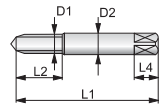
Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A | **M** ISO-DIN 13 | 3xD | **C** 2-3 P | R35° | JIS STD. | HSSE Co5 | ISO 2X (6HX)

VAF

Nogrip-1®



SG

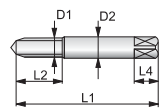
Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2	4
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0001606864
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0002399208
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0000862893
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0000863675
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0000864466
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0000865258
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0000867523
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0000868475
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0001449199
	M 14	2,00	•	88	18	-	10,5	8	11	3	12,00	0001449300
	M 16	2,00	•	95	18	-	12,5	10	13	3	14,00	0001449521
ISO 3 (6G)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003508777
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003508998
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003509137
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003512351

C35A | **M** ISO-DIN 13 | 3xD | **C** 2-3 P | R35° | JIS | HSSE Co5 | ISO 2X (6HX)

VAF

TiN



SG

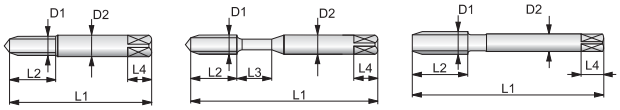
Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2	4
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0002640535
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0002640695
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0000862943
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0000863735
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0000864526
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0000865308
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0000867684
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0000868526
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0001450689
	M 14	2,00	•	88	18	-	10,5	8	11	3	12,00	0001450739
	M 16	2,00	•	95	18	-	12,5	10	13	3	14,00	0001450890
ISO 3 (6G)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003508838
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003509077
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003509288
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003512401

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A
VAF
TiCN

M ISO-DIN 13	3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	ISO 2X (6HX)	P 60°



SG

Material	GR1	GR2	GR3	GR4
Subg.	5	1,2,3,4,5,7,8	4	2 4
mts./min.	6 9	7 12	5 8	8 15
	1 2	1 2	1 2 3 4	6

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0003588643
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0003588793
	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0001173454
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0001173725
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0001174025
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0001174235
	M 8	1,25	•	70	11	-	6,2	5	8	3	6,80	0000868194
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0000869046
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0002287530
ISO 3 (6G)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003588854
	M 4	0,70	•	52	7	10	5	4	7	3	3,30	0003588914
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003589093
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003589214

Macho adecuado para el roscado en materiales de alta resistencia para moldes y matrices.
Recommended tap for the threading process of high wear resistance materials such as moulds and dies.

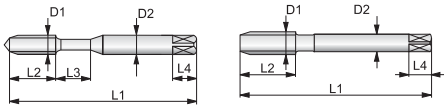
Macho adecuado para el roscado en aceros inoxidables duplex.
For machining duplex stainless steels.

Machos de roscar a máquina. Agujeros ciegos y pasantes
Machine taps. Blind and through holes

JMC

C | **CONEX** | ***C.D.I.®***

M ISO-DIN 13	C 2-3 P	JIS STD.	HSSE Co5	ISO 2x (6HX)

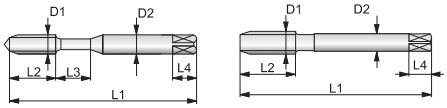


Material	GR4
Subg.	1,2,3
mts./min.	20-25

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0001530176
M 4	0,70	•	52	12	9	5	4	7	3	3,30	0001530397
M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0001530518
M 6	1,00	•	62	16	14	6	4,5	7	4	5,00	0001461549
M 8	1,25	•	70	18	-	6,2	5	8	4	6,80	0001419084
M 10	1,50	•	75	20	-	7	5,5	8	4	8,50	0001462059
M 12	1,75	•	82	22	-	8,5	6,5	9	4	10,20	0001462321
M 14	2,00	•	88	25	-	10,5	8	11	4	12,00	0001462602
M 16	2,00	•	95	28	-	12,5	10	13	4	14,00	0001462973
M 18	2,50	•	100	32	-	14	11	14	4	15,50	0001463272
M 20	2,50	•	105	32	-	15	12	15	4	17,50	0001463544

C | **CONEX** | ***Altplus***

M ISO-DIN 13	C 2-3 P	JIS	HSSE Co5	ISO 2x (6HX)



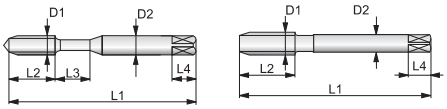
Material	GR4	GR5	GR6
Subg.	1 2 3	2,6	4
mts./min.	30-35 25-30 20-25	10	20 - 25
		seco	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0003382758
M 4	0,70	•	52	12	9	5	4	7	3	3,30	0003382818
M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0003382969
M 6	1,00	•	62	16	14	6	4,5	7	4	5,00	0001461699
M 8	1,25	•	70	18	-	6,2	5	8	4	6,80	0001461810
M 10	1,50	•	75	20	-	7	5,5	8	4	8,50	0001462110
M 12	1,75	•	82	22	-	8,5	6,5	9	4	10,20	0001462481
M 14	2,00	•	88	25	-	10,5	8	11	4	12,00	0001462752
M 16	2,00	•	95	28	-	12,5	10	13	4	14,00	0001463052
M 18	2,50	•	100	32	-	14	11	14	4	15,50	0001463323
M 20	2,50	•	105	32	-	15	12	15	4	17,50	0001463604

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS	M		B		JIS STD.	HSSE	ISO 2 (6H) ISO 3 (6G)	
N	ISO-DIN 13		3,5-5 P			Co5		



Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	13
	1 2		6		5 5 6	

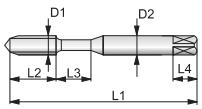
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 1,4*1	0,30	•	40	7	SG	3	2,5	5	3	1,10	0001475406
	M 1,6	0,35	•	40	8	SG	3	2,5	5	3	1,25	0002093246
	M 1,7	0,35	•	40	8	SG	3	2,5	5	3	1,35	0003458733
	M 1,8	0,35	•	40	8	SG	3	2,5	5	3	1,45	0002093518
	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0000852172
	M 2,2	0,45	•	42	10	SG	3	2,5	5	3	1,75	0002083710
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	1,90	0002084010
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0000852383
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,10	0000852504
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000852875
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000853727
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000854397
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000855450
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000856452
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000857023
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0001453806
	M 14	2,00	•	88	25	-	10,5	8	11	3	12,00	0001454477
	M 16	2,00	•	95	28	-	12,5	10	13	3	14,00	0001455048
	M 18	2,50	•	100	32	-	14	11	14	4	15,50	0001178516
	M 20	2,50	•	105	32	-	15	12	15	4	17,50	0001455961
	M 22	2,50	•	115	32	-	17	13	16	4	19,50	0001456532
	M 24	3,00	•	120	36	-	19	15	18	4	21,00	0001457474
	M 30	3,50	•	135	40	-	23	17	20	4	26,50	0001457806
	M 36	4,00	•	155	45	-	28	21	24	4	32,00	0001458266
	M 39	4,00	•	165	36	-	32	24	27	4	35,00	0001458326
	M 42	4,50	•	175	45	-	32	24	27	4	37,50	0001458476
	M 45	4,50	•	180	45	-	36	29	32	6	40,50	0001458537
	M 48	5,00	•	185	50	-	36	29	32	6	43,00	0001458697
	M 52	5,00	•	195	50	-	40	32	35	6	47,00	0001458757
ISO 3 (6G)	M 1,4*2	0,30		40	7	SG	3	2,5	5	3	1,10	0002093186
	M 1,6	0,35		40	8	SG	3	2,5	5	3	1,25	0002093397
	M 1,7	0,35		40	8	SG	3	2,5	5	3	1,35	0002093457
	M 1,8	0,35		40	8	SG	3	2,5	5	3	1,45	0002093678
	M 2	0,40		40	10	SG	3	2,5	5	3	1,60	0001593504
	M 2,2	0,45		42	10	SG	3	2,5	5	3	1,75	0002093889
	M 2,3	0,40		42	10	SG	3	2,5	5	3	1,90	0002093949
	M 2,5	0,45		44	12	SG	3	2,5	5	3	2,05	0001071373
	M 2,6	0,45		44	12	SG	3	2,5	5	3	2,10	0002094188
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000853174
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000854177
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000855179
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000855882
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000856944
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0000857455
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0001674656
	M 16	2,00	•	95	28	-	12,5	10	13	3	14,00	0001473341

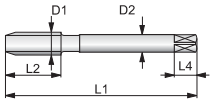
*1 Tol. ISO 2 (4H)
*2 Tol. ISO 3 (6H)

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS	M ISO-DIN 13		B 3,5-5 P		JIS STD.	HSSE Co5	ISO 2 (6H) ISO 3 (6G)	
N								





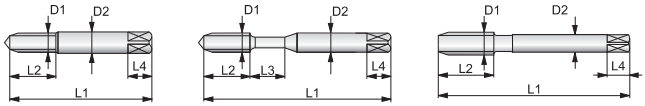
Material	GR1		GR5		GR6	
Subg.	1,2,3,4,5		1,2		2	3
mts./min.	8	13	10	15	10	13
	1 2		6		5 5 6	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
7G	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000853235
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000854237
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000855390
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000855932
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000856724
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000857515
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0001593725
ISO 1 (4H)	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000853014
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000853937
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000855029
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000855721
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000856884
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000857394
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0002374109

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS	M ISO-DIN 13		B 3,5-5 P		JIS STD.	HSSE Co5	ISO 2 (6H)	
N								
Nogrip-1®								



SG

Material	GR1		GR2	GR3		GR9
Subg.	1,2,3,4,6		6	1, 2, 3		2
mts./min.	10	15	13	5	8	4-6
	1 2		1 2	1 2 3 4		4

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 1,4*1	0,30	•	40	7	SG	3	2,5	5	3	1,10	0001475566
	M 1,6	0,35	•	40	8	SG	3	2,5	5	3	1,25	0002569776
	M 1,7	0,35	•	40	8	SG	3	2,5	5	3	1,35	0003458893
	M 1,8	0,35	•	40	8	SG	3	2,5	5	3	1,45	0003459243
	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0002083650
	M 2,2	0,45	•	42	10	SG	3	2,5	5	3	1,75	0002083871
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	1,90	0002084160
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0002084381
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,10	0002640103
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000852935
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000853877
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000854448
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000855501
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000856513
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000857184
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0001453957
	M 14	2,00	•	88	25	-	10,5	8	11	3	12,00	0001454538
	M 16	2,00	•	95	28	-	12,5	10	13	3	14,00	0001455108
	M 18	2,50	•	100	32	-	14	11	14	4	15,50	0001178676
	M 20	2,50	•	105	32	-	15	12	15	4	17,50	0001456040
	M 22	2,50	•	115	32	-	17	13	16	4	19,50	0001456693
	M 24	3,00	•	120	36	-	19	15	18	4	21,00	0001457534
	M 30	3,50	•	135	40	-	23	17	20	4	26,50	0001457966
	M 36	4,00	•	155	45	-	28	21	24	4	32,00	0002089232
	M 39	4,00	•	200	36	-	32	24	27	4	35,00	0003507615
	M 42	4,50	•	200	45	-	32	24	27	4	37,50	0003507775
	M 45	4,50	•	220	45	-	36	29	32	6	40,50	0003507986
	M 48	5,00	•	250	50	-	36	29	32	6	43,00	0003508135
	M 52	5,00	•	250	50	-	40	32	35	6	47,00	0003508346
ISO 3 (6G)	M 1,4*2	0,30		40	7	SG	3	2,5	5	3	1,10	0003457941
	M 1,6	0,35		40	8	SG	3	2,5	5	3	1,25	0003458301
	M 1,7	0,35		40	8	SG	3	2,5	5	3	1,35	0003459032
	M 1,8	0,35		40	8	SG	3	2,5	5	3	1,45	0003459524
	M 2	0,40		40	10	SG	3	2,5	5	3	1,60	0003460522
	M 2,3	0,40		42	10	SG	3	2,5	5	3	1,90	0003460733
	M 2,5	0,45		44	12	SG	3	2,5	5	3	2,05	0003460954
	M 2,6	0,45		44	12	SG	3	2,5	5	3	2,10	0003461193
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0003463037
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0003463800
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0003464521
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0003465102
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0003466536
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0003573774
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003486833

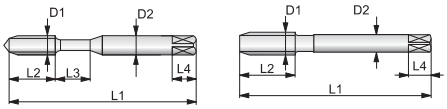
*1 Tol. ISO 2 (4H)
*2 Tol. ISO 3 (6H)

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS | **N** | ***Nogrip-1®***

M ISO-DIN 13 | **B** 3,5-5 P | JIS STD. | **HSSE** Co5 | ISO 2 (6H)



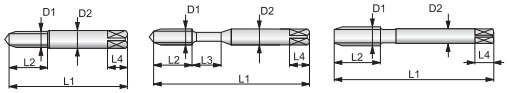
Material	GR1		GR2	GR3		GR9
Subg.	1,2,3,4,6		6	1, 2, 3		2
mts./min.	10	15	13	5	8	4-6
	1 2		1 2	1 2 3 4		4

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
7G	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0003463258
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0003464049
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0003464682
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0003465313
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0003466315
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0003483124
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0003487073
ISO 1 (4H)	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0003462898
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0003464250
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0003464802
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0003465533
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0003466746
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0003484558
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0003487293

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS	M ISO-DIN 13		B 3,5-5 P		JIS STD.	HSSE Co5	ISO 2 (6H)	
N								
TiN								



SG

Material	GR1		GR2		GR3		GR6		GR10		GR11
Subg.	1,2,3,4,5	6	1,2,3,7	6	1,2,3		3		1,2		1
mts./min.	15-20	10-15	13	18	10	13	20	25	10	15	20
	1 2		1 2		1 2 3 4		5 6				

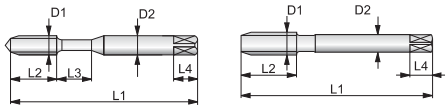
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 1,4*1	0,30	•	40	7	SG	3	2,5	5	3	1,10	0003457891
	M 1,6	0,35	•	40	8	SG	3	2,5	5	3	1,25	0003458241
	M 1,7	0,35	•	40	8	SG	3	2,5	5	3	1,35	0003458954
	M 1,8	0,35	•	40	8	SG	3	2,5	5	3	1,45	0003459464
	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,60	0000852233
	M 2,2	0,45	•	42	10	SG	3	2,5	5	3	1,75	0002083921
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	1,90	0002084221
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,05	0000852443
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,10	0000852664
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000852714
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000854016
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000854930
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000855661
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000856663
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000857234
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0001454046
	M 14	2,00	•	88	25	-	10,5	8	11	3	12,00	0001454688
	M 16	2,00	•	95	28	-	12,5	10	13	3	14,00	0001455259
	M 18	2,50	•	100	32	-	14	11	14	4	15,50	0001178736
	M 20	2,50	•	105	32	-	15	12	15	4	17,50	0001456101
	M 22	2,50	•	115	32	-	17	13	16	4	19,50	0001456743
	M 24	3,00	•	120	36	-	19	15	18	4	21,00	0001457695
	M 30	3,50	•	135	40	-	23	17	20	4	26,50	0001458045
	M 36	4,00	•	155	45	-	28	21	24	4	32,00	0002087017
	M 39	4,00	•	200	36	-	32	24	27	4	35,00	0003507554
	M 42	4,50	•	200	45	-	32	24	27	4	37,50	0003507836
	M 45	4,50	•	220	45	-	36	29	32	6	40,50	0003508075
	M 48	5,00	•	250	50	-	36	29	32	6	43,00	0003508286
	M 52	5,00	•	250	50	-	40	32	35	6	47,00	0003508406
ISO 3 (6G)	M 1,4*2	0,30		40	7	SG	3	2,5	5	3	1,10	0003458030
	M 1,6	0,35		40	8	SG	3	2,5	5	3	1,25	0003458462
	M 1,7	0,35		40	8	SG	3	2,5	5	3	1,35	0003459193
	M 1,8	0,35		40	8	SG	3	2,5	5	3	1,45	0003459675
	M 2	0,40		40	10	SG	3	2,5	5	3	1,60	0003460672
	M 2,3	0,40		42	10	SG	3	2,5	5	3	1,90	0003460893
	M 2,5	0,45		44	12	SG	3	2,5	5	3	2,05	0003461032
	M 2,6	0,45		44	12	SG	3	2,5	5	3	2,10	0003461253
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0002737056
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0002851155
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000855239
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0003465252
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0003466686
	M 10	1,50	•	75	12	-	7	5,5	8	3	8,50	0003573834
	M 12	1,75	•	82	14	-	8,5	6,5	9	3	10,20	0003486994

*1 Tol. ISO 2 (4H)
*2 Tol. ISO 3 (6H)

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS | **N** | ***TiN***

M ISO-DIN 13 | **B** 3,5-5 P | JIS STD. | HSSE Co5 | ISO 2 (6H)



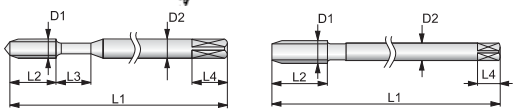
Material	GR1	GR2	GR3	GR6	GR10	GR11
Subg.	1,2,3,4,5 / 6	1,2,3,7 / 6	1,2,3	3	1,2	1
mts./min.	15-20 / 10-15	13 / 18	10 / 13	20 / 25	10 / 15	20
	1 2	1 2	1 2 3 4	5 6		

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
7G	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0003463318
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0003464190
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0003464742
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0003465473
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0003466475
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0003483345
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0003487133
ISO 1 (4H)	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0003462958
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0003464310
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0003464953
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000856021
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0003466807
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0003484778
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0003487344

Machos de roscar a máquina. Con mango extralargo. Agujeros pasantes
Machine Taps. With extra long shank. Through holes

TN-PS | **N**

M ISO-DIN 13 | **B** 3,5-5 P | JIS STD. | HSSE Co5 | ISO 2 (6H)



Material	GR1	GR5	GR6	
Subg.	1,2,3,4,5	1,2	2	3
mts./min.	8 / 13	10 / 15	10	13
	1 2	6	5 5 6	

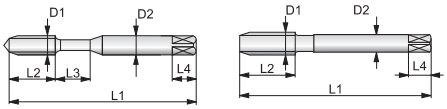
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	100	10	6	4	3,2	6	3	2,50	0001069152
M 4	0,70	•	120	12	8	5	4	7	3	3,30	0001097193
M 5	0,80	•	150	14	11	5,5	4,5	7	3	4,20	0001217540
M 6	1,00	•	150	16	14	6	4,5	7	3	5,00	0001069424
M 8	1,25	•	150	18	-	6,2	5	8	3	6,80	0001097253
M 10	1,50	•	160	20	-	7	5,5	8	3	8,50	0001076716
M 12	1,75	•	180	22	-	8,5	6,5	9	3	10,20	0001076927
M 14	2,00	•	200	25	-	10,5	8	11	3	12,00	0001522594
M 16	2,00	•	250	28	-	12,5	10	13	3	14,00	0001282486

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS | **VAF** | ***Nogrip-1®***

M ISO-DIN 13 | **B** 3,5-5 P | JIS STD. | HSSE Co5 | ISO 2X (6HX)

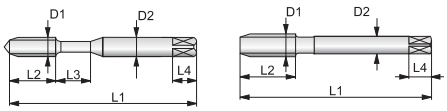


Material	GR1		GR2		GR3		GR4	
Subg.	5		1,2,3,4,5,7,8		4		2	4
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	-	3	2,5	5	3	1,60	0001606643
	M 2,5	0,45	•	44	12	-	3	2,5	5	3	2,05	0002394357
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000886778
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000887128
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000887550
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000887981
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000885616
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000885826
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0001454256
	M 14	2,00	•	88	25	-	10,5	8	11	3	12,00	0001454809
	M 16	2,00	•	95	28	-	12,5	10	13	3	14,00	0001455470
ISO 3 (6G)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003509348
	M 4	0,70	•	52	8	10	5	4	7	3	3,30	0003509569
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003509770
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0003512290

PS | **VAF** | ***TiN***

M ISO-DIN 13 | **B** 3,5-5 P | JIS STD. | HSSE Co5 | ISO 2X (6HX)



Material	GR1		GR2		GR3		GR4	
Subg.	5,6		1,2,3,4,5,7/8		4		2,4	
mts./min.	10	15	12-17	11-14	8	10	20	25
	1 2		1 2		1 2 3 4		6	

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
ISO 2 (6H)	M 2	0,40	•	40	10	-	3	2,5	5	3	1,60	0002640043
	M 2,5	0,45	•	44	12	-	3	2,5	5	3	2,05	0001041971
	M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000886829
	M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000887289
	M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000887610
	M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000888070
	M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000885766
	M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000885987
	M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0001454317
	M 14	2,00	•	88	25	-	10,5	8	11	3	12,00	0001454969
	M 16	2,00	•	95	28	-	12,5	10	13	3	14,00	0001455530
ISO 3 (6G)	M 3	0,50	•	46	6	9	4	3,2	6	3	2,50	0003509409
	M 4	0,70	•	52	8	10	5	4	7	3	3,30	0003509629
	M 5	0,80	•	60	8	17	5,5	4,5	7	3	4,20	0003509830
	M 6	1,00	•	62	9	21	6	4,5	7	3	5,00	0001108397

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS

VAF

TiCN

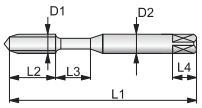
M ISO-DIN 13

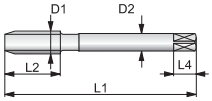
B 3,5-5 P

JIS STD.

HSSE Co5

ISO 2X (6HX)





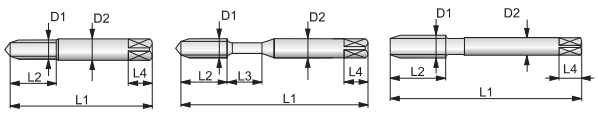
Material	GR1	GR2	GR3	GR4	GR9
Subg.	5	1,2,3,4,5,7/8	4	2,4	2
mts./min.	10-15	12-17	11-14	8-10	20-25	6
	1 2	1 2	1 2 3 4	6	3

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
M 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000886989
M 4	0,70	•	52	12	9	5	4	7	3	3,30	0000887349
M 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000887771
M 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0001339436
M 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0001174517
M 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0001174727
M 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0002287480

Machos de máquina de laminación. Agujeros ciegos y pasantes
Fluteless / roll taps. *Blind and Through holes*

PROFILRULL
POLIGON.
TiN

M ISO-DIN 13	1xD	C 2-3 P	JIS STD.	HSSE Co5	4HX MJ 6HX 6GX	P 60°



SG

Material	GR1	GR2	GR3	GR5	GR6	GR10
Subg.	1,2,3,4,5,6	1,2,3,4,5,6,7,8	1 | 2,3	1,2,3,4	1 | 2	1
mts./min.	18-23	15-18	15-18 | 17-20	17,22	20-30 | 20-25	17-22
	1 2	1 2	1 2 3 4	6	5	5

	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 1,4*1	0,30	•	40	7	SG	3	2,5	5	3	1,25	0002518211
	M 1,6	0,35	•	40	8	SG	3	2,5	5	3	1,55	0002713452
	M 1,7	0,35	•	40	8	SG	3	2,5	5	3	1,55	0002518362
	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,80	0001333202
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	2,10	0002518422
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,30	0001067097
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,40	0001067429
	M 3	0,50	•	46	10	8	4	3,2	6	4	2,80	0001041489
	M 4	0,70	•	52	12	9	5	4	7	4	3,70	0001059786
	M 5	0,80	•	60	14	11	5,5	4,5	7	4	4,65	0001061576
	M 6	1,00	•	62	16	14	6	4,5	7	4	5,55	0001062900
	M 8	1,25	•	70	18	-	6,2	5	8	4	7,40	0001215967
	M 10	1,50	•	75	20	-	7	5,5	8	5	9,30	0001220321
	M 12	1,75	•	82	22	-	8,5	6,5	9	6	11,20	0001459489
6GX	M 1,4*2	0,30	•	40	7	SG	3	2,5	5	3	1,25	0003607360
	M 1,7	0,35	•	40	8	SG	3	2,5	5	3	1,55	0003607570
	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,80	0002577148
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	2,10	0002092455
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,30	0001067218
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,40	0001057350
	M 3	0,50	•	46	10	8	4	3,2	6	4	2,80	0001179307
	M 4	0,70	•	52	12	9	5	4	7	4	3,70	0001041600
	M 5	0,80	•	60	14	11	5,5	4,5	7	4	4,65	0001061636
	M 6	1,00	•	62	16	14	6	4,5	7	4	5,55	0001063088
	M 8	1,25	•	70	18	-	6,2	5	8	4	7,40	0001216266
	M 10	1,50	•	75	20	-	7	5,5	8	5	9,30	0001220603
	M 12	1,75	•	82	22	-	8,5	6,5	9	6	11,20	0001459750
4HX MJ	M 1,7	0,35	•	40	8	SG	3	2,5	5	3	1,55	0003607791
	M 2	0,40	•	40	10	SG	3	2,5	5	3	1,80	0000132571
	M 2,3	0,40	•	42	10	SG	3	2,5	5	3	2,10	0003607902
	M 2,5	0,45	•	44	12	SG	3	2,5	5	3	2,30	0003608141
	M 2,6	0,45	•	44	12	SG	3	2,5	5	3	2,40	0003608362

*1 Tol. 4HX
*2 Tol. 6HX

D1	Tol. Ø d1
M 1,4	± 0,01
M 1,6 - M 2,6	± 0,02
M 3 - M 5	± 0,03
M 6 - M12	± 0,05

Machos de máquina de laminación. / *Fluteless / roll taps.*

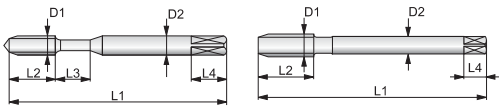
Con ranuras de engrase. Agujeros ciegos y pasantes / *With coolant grooves. Blind and through holes*

PROFILRULL R

POLIGON.

TiN

M ISO-DIN 13	3xD	C 2-3 P	JIS STD.	HSSE Co5	6HX 6GX



Material	GR1	GR2	GR3		GR5	GR6		GR10
Subg.	1,2,3,4,5,6	1,2,3,4,5,6,7,8	1	2,3	1,2,3,4	1	2	1
mts./min.	18-23	15-18	15-18	17-20	17,22	20-30	20-25	17-22
	1 2	1 2	1 2 3 4		6	5		5

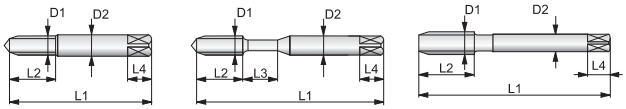
	D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
6HX	M 3	0,50	•	46	10	8	4	3,2	6	4	2,80	0001213049
	M 4	0,70	•	52	12	9	5	4	7	4	3,70	0001213802
	M 5	0,80	•	60	14	11	5,5	4,5	7	4	4,65	0001061084
	M 6	1,00	•	62	16	14	6	4,5	7	4	5,55	0001062207
	M 8	1,25	•	70	18	-	6,2	5	8	4	7,40	0001216538
	M 10	1,50	•	75	20	-	7	5,5	8	5	9,30	0001220974
	M 12	1,75	•	82	22	-	8,5	6,5	9	6	11,20	0001460055
6GX	M 3	0,50	•	46	10	8	4	3,2	6	4	2,80	0001213310
	M 4	0,70	•	52	12	9	5	4	7	4	3,70	0001214102
	M 5	0,80	•	60	14	11	5,5	4,5	7	4	4,65	0001214965
	M 6	1,00	•	62	16	14	6	4,5	7	4	5,55	0001062578
	M 8	1,25	•	70	18	-	6,2	5	8	4	7,40	0001216819
	M 10	1,50	•	75	20	-	7	5,5	8	5	9,30	0001221273
	M 12	1,75	•	82	22	-	8,5	6,5	9	6	11,20	0001460326

D1	Tol. Ø d1
M 3 - M 5	± 0,03
M 6 - M12	± 0,05

Machos de roscar a máquina. Agujeros ciegos y pasantes.
Machine taps. *Blindand through holes*

JMC

C35A	MJ DIN ISO 5855-1	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	ISO 1 (4H)	P 60°
N								



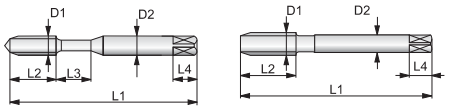
SG

Material	GR1		GR5		GR6		GR9
Subg.	1,2,3,4,5		1,2		2	3	1
mts./min.	8	13	10	15	10	13	6
	1 2		6		5 5 6		3

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 3	0,50	•	46	6	9	4	3,2	6	3	2,5	0001071152
MJ 4	0,70	•	52	7	10	5	4	7	3	3,3	0000863895
MJ 5	0,80	•	60	8	17	5,5	4,5	7	3	4,2	0000864677
MJ 6	1,00	•	62	9	21	6	4,5	7	3	5	0000865468
MJ 8	1,25	•	70	11	-	6,2	5	8	3	6,8	0000867744
MJ 10	1,50	•	75	12	-	7	5,5	8	3	8,5	0000868686
MJ 12	1,75	•	82	14	-	8,5	6,5	9	3	10,2	0001772888

JMC

PS	MJ DIN ISO 5855-1		B 3,5-5 P		JIS STD.	HSSE Co5	ISO 1 (4H)	P 60°
N								



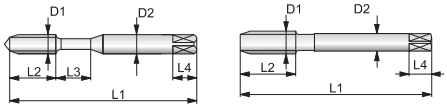
Material	GR1		GR4		GR5		GR6		GR9
Subg.	1,2,3,4,5		2, 3, 4		1,2		2	3	1
mts./min.	10	15	15	20	6	9	15	20	6
	1 2		6		6		5	6	3

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MJ 3	0,50	•	46	10	8	4	3,2	6	3	2,50	0000853014
MJ 4	0,70	•	52	12	9	5	4	7	3	3,30	0000853937
MJ 5	0,80	•	60	14	11	5,5	4,5	7	3	4,20	0000855029
MJ 6	1,00	•	62	16	14	6	4,5	7	3	5,00	0000855721
MJ 8	1,25	•	70	18	-	6,2	5	8	3	6,80	0000856884
MJ 10	1,50	•	75	20	-	7	5,5	8	3	8,50	0000857394
MJ 12	1,75	•	82	22	-	8,5	6,5	9	3	10,20	0002374109

Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A	MF ISO-DIN 13	2,5÷3xD	C 2-3P	R35°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°
N								



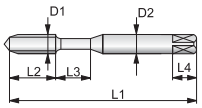
Material	GR1	GR4		GR5	GR6	
Subg.	1,2,3,4,5	2,3		1,2	2,3	
mts./min.	8-13	7	12	10-15	10	15
	1 2	6		6	5	5 6

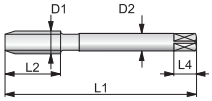
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50	•	52	8	10	5	4	7	3	3,50	0001722536
MF 5	0,50	•	60	8	17	5,5	4,5	7	3	4,50	0001722747
MF 6	0,50	•	62	9	21	6	4,5	7	3	5,50	0003562974
MF 6	0,75	•	62	9	21	6	4,5	7	3	5,25	0001722967
MF 8	0,75	•	70	11	-	6,2	5	8	3	7,25	0003558819
MF 8	1,00	•	70	11	-	6,2	5	8	3	7,00	0001718953
MF 10	1,00	•	75	12	-	7	5,5	8	3	9,00	0001723267
MF 10	1,25	•	75	12	-	7	5,5	8	3	8,75	0001075433
MF 12	1,00	•	82	14	-	8,5	6,5	9	3	11,00	0002578140
MF 12	1,25	•	82	14	-	8,5	6,5	9	3	10,75	0001723538
MF 12	1,50	•	82	14	-	8,5	6,5	9	3	10,50	0001570842
MF 14	1,00	•	88	18	-	10,5	8	11	3	13,00	0003558969
MF 14	1,25	•	88	18	-	10,5	8	11	3	12,75	0003559058
MF 14	1,50	•	88	18	-	10,5	8	11	3	12,50	0001723809
MF 16	1,00	•	95	18	-	12,5	10	13	3	15,00	0001530949
MF 16	1,25	•	95	18	-	12,5	10	13	3	14,75	0003559109
MF 16	1,50	•	95	18	-	12,5	10	13	3	14,50	0001724048
MF 18	1,00	•	100	22	-	14	11	14	4	17,00	0003559269
MF 18	1,50	•	100	22	-	14	11	14	4	16,50	0001724269
MF 18	2,00	•	100	22	-	14	11	14	4	16,00	0003559329
MF 20	1,00	•	105	22	-	15	12	15	4	19,00	0003559480
MF 20	1,50	•	105	22	-	15	12	15	4	18,50	0001724470
MF 20	2,00	•	105	22	-	15	12	15	4	18,00	0003559751
MF 22	1,00	•	115	22	-	17	13	16	3	21,00	0003559962
MF 22	1,50	•	115	22	-	17	13	16	4	20,50	0001875048
MF 22	2,00	•	115	22	-	17	13	16	4	20,00	0003560267
MF 24	1,00	•	120	28	-	19	15	18	4	23,00	0003560698
MF 24	1,50	•	120	28	-	19	15	18	4	22,50	0001724691
MF 24	2,00	•	120	28	-	19	15	18	4	22,00	0001724802
MF 26	1,50	•	130	25	-	20	15	18	4	24,50	0003561058
MF 27	1,50	•	130	25	-	20	15	18	4	25,00	0003561119
MF 27	2,00	•	130	25	-	20	15	18	4	25,00	0002663357
MF 28	1,50	•	135	25	-	21	17	20	4	26,50	0003561691
MF 30	1,50	•	135	32	-	23	17	20	4	28,50	0002578201
MF 30	2,00	•	135	32	-	23	17	20	4	28,00	0002083228
MF 32	1,50	•	110	28	-	24	19	22	4	20,50	0000498856
MF 33	1,50	•	110	28	-	25	19	22	4	31,50	0003561811
MF 33	2,00	•	110	28	-	25	19	22	4	31,00	0003561972
MF 36	1,50	•	155	36	-	28	21	24	4	34,50	0003562051

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A	MF ISO-DIN 13	2,5÷3xD	C 2-3P	R35°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°
N								
Nogrip-1®								





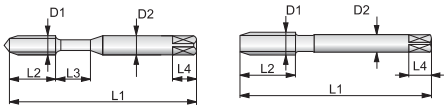
Material	GR1	GR2	GR3	GR9
Subg.	1,2,4,5	6	1,2,3	1
mts./min.	8-13	8-13	5 8	7-12
	1 2	1 2	1 2 3 4	3 4

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50	•	52	8	10	5	4	7	3	3,50	0001722686
MF 5	0,50	•	60	8	17	5,5	4,5	7	3	4,50	0001722807
MF 6	0,50	•	62	9	21	6	4,5	7	3	5,50	0003563053
MF 6	0,75	•	62	9	21	6	4,5	7	3	5,25	0001723046
MF 8	0,75	•	70	11	-	6,2	5	8	3	7,25	0003563274
MF 8	1,00	•	70	11	-	6,2	5	8	3	7,00	0001723107
MF 10	1,00	•	75	12	-	7	5,5	8	3	9,00	0001723317
MF 10	1,25	•	75	12	-	7	5,5	8	3	8,75	0001723478
MF 12	1,00	•	82	14	-	8,5	6,5	9	3	11,00	0003449446
MF 12	1,25	•	82	14	-	8,5	6,5	9	3	10,75	0001723698
MF 12	1,50	•	82	14	-	8,5	6,5	9	3	10,50	0001723749
MF 14	1,00	•	88	18	-	10,5	8	11	3	13,00	0003562111
MF 14	1,25	•	88	18	-	10,5	8	11	3	12,75	0003562322
MF 14	1,50	•	88	18	-	10,5	8	11	3	12,50	0001723960
MF 16	1,00	•	95	18	-	12,5	10	13	3	15,00	0003452026
MF 16	1,25	•	95	18	-	12,5	10	13	3	14,75	0003562542
MF 16	1,50	•	95	18	-	12,5	10	13	3	14,50	0001724109
MF 18	1,00	•	100	22	-	14	11	14	4	17,00	0003562753
MF 18	1,50	•	100	22	-	14	11	14	4	16,50	0001724320
MF 18	2,00	•	100	22	-	14	11	14	4	16,00	0003563484
MF 20	1,00	•	105	22	-	15	12	15	4	19,00	0003563605
MF 20	1,50	•	105	22	-	15	12	15	4	18,50	0001724530
MF 20	2,00	•	105	22	-	15	12	15	4	18,00	0003563816
MF 22	1,00	•	115	22	-	17	13	16	3	21,00	0003564055
MF 22	1,50	•	115	22	-	17	13	16	4	20,50	0001875108
MF 22	2,00	•	115	22	-	17	13	16	4	20,00	0003564336
MF 24	1,00	•	120	28	-	19	15	18	4	23,00	0003564607
MF 24	1,50	•	120	28	-	19	15	18	4	22,50	0001724751
MF 24	2,00	•	120	28	-	19	15	18	4	22,00	0001724962
MF 26	1,50	•	130	22	-	20	15	18	4	24,50	0003564818
MF 27	1,50	•	130	25	-	20	15	18	4	25,00	0003565057
MF 27	2,00	•	130	25	-	20	15	18	4	25,00	0002663297
MF 28	1,50	•	135	25	-	21	17	20	4	26,50	0003565278
MF 30	1,50	•	135	32	-	23	17	20	4	28,50	0003453230
MF 30	2,00	•	135	32	-	23	17	20	4	28,00	0002083389
MF 32	1,50	•	110	28	-	24	19	22	4	20,50	0003565489
MF 33	1,50	•	110	28	-	25	19	22	4	31,50	0003565760
MF 33	2,00	•	110	28	-	25	19	22	4	31,00	0003565971
MF 36	1,50	•	155	36	-	28	21	24	4	34,50	0003566110

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A	MF ISO-DIN 13	2,5÷3xD	C 2-3P	R35°	JIS STD.	HSSE Co5	ISO 2 (6H)	P 60°
N								
TiN								



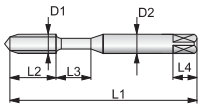
Material	GR1		GR2	GR3		GR6		GR10		GR11
Subg.	1,2,4,5	6	1,2,3,6,7	1,2,3		2,3		1	2	1
mts./min.	13-18	11-14	13-18	10	13	20	25	7-12	10-15	15-20
	1 2		1 2	1 2 3 4		5 6		5 6		

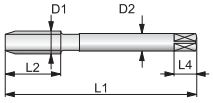
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50	•	52	8	10	5	4	7	3	3,50	0003444595
MF 5	0,50	•	60	8	17	5,5	4,5	7	3	4,50	0003446388
MF 6	0,50	•	62	9	21	6	4,5	7	3	5,50	0003563113
MF 6	0,75	•	62	9	21	6	4,5	7	3	5,25	0003447662
MF 8	0,75	•	70	11	-	6,2	5	8	3	7,25	0003563324
MF 8	1,00	•	70	11	-	6,2	5	8	3	7,00	0002578361
MF 10	1,00	•	75	12	-	7	5,5	8	3	9,00	0002371966
MF 10	1,25	•	75	12	-	7	5,5	8	3	8,75	0002578411
MF 12	1,00	•	82	14	-	8,5	6,5	9	3	11,00	0002580361
MF 12	1,25	•	82	14	-	8,5	6,5	9	3	10,75	0003449506
MF 12	1,50	•	82	14	-	8,5	6,5	9	3	10,50	0001571352
MF 14	1,00	•	88	18	-	10,5	8	11	3	13,00	0003562261
MF 14	1,25	•	88	18	-	10,5	8	11	3	12,75	0003562482
MF 14	1,50	•	88	18	-	10,5	8	11	3	12,50	0002372044
MF 16	1,00	•	95	18	-	12,5	10	13	3	15,00	0003452177
MF 16	1,25	•	95	18	-	12,5	10	13	3	14,75	0003562603
MF 16	1,50	•	95	18	-	12,5	10	13	3	14,50	0002578572
MF 18	1,00	•	100	22	-	14	11	14	4	17,00	0003562814
MF 18	1,50	•	100	22	-	14	11	14	4	16,50	0002578632
MF 18	2,00	•	100	22	-	14	11	14	4	16,00	0003563545
MF 20	1,00	•	105	22	-	15	12	15	4	19,00	0003563755
MF 20	1,50	•	105	22	-	15	12	15	4	18,50	0002578792
MF 20	2,00	•	105	22	-	15	12	15	4	18,00	0003564487
MF 22	1,00	•	115	22	-	17	13	16	3	21,00	0003564115
MF 22	1,50	•	115	22	-	17	13	16	4	20,50	0003564276
MF 22	2,00	•	115	22	-	17	13	16	4	20,00	0002564547
MF 24	1,00	•	120	28	-	19	15	18	4	23,00	0003564768
MF 24	1,50	•	120	28	-	19	15	18	4	22,50	0003452458
MF 24	2,00	•	120	28	-	19	15	18	4	22,00	0003452669
MF 26	1,50	•	130	22	-	20	15	18	4	24,50	0003564978
MF 27	1,50	•	130	25	-	20	15	18	4	25,00	0003565118
MF 27	2,00	•	130	25	-	20	15	18	4	25,00	0003561540
MF 28	1,50	•	135	25	-	21	17	20	4	26,50	0003565600
MF 30	1,50	•	135	32	-	23	17	20	4	28,50	0003453189
MF 30	2,00	•	135	32	-	23	17	20	4	28,00	0002083449
MF 32	1,50	•	110	28	-	24	19	22	4	20,50	0003565549
MF 33	1,50	•	110	28	-	25	19	22	4	31,50	0003565820
MF 33	2,00	•	110	28	-	25	19	22	4	31,00	0003566060
MF 36	1,50	•	155	36	-	28	21	24	4	34,50	0003566270

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS	MF ISO-DIN 13		B 3,5-5 P		JIS STD.	HSSE Co5	ISO 2 (6H)	
N								





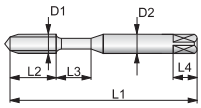
Material	GR1	GR4		GR5	GR6	
Subg.	1,2,3,4,5	2,3		1,2	2,3	
mts./min.	8-13	7	12	10-15	10	15
	1 2	6		6	5	5 6

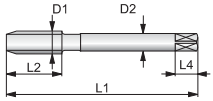
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50	•	52	10	10	5	4	7	3	3,50	0002084502
MF 5	0,50	•	60	12	17	5,5	4,5	7	3	4,50	0001597884
MF 6	0,50	•	62	12	21	6	4,5	7	3	5,50	0003375475
MF 6	0,75	•	62	12	21	6	4,5	7	3	5,25	0002084712
MF 8	0,75	•	62	14	-	6,2	5	8	3	7,25	0003375526
MF 8	1,00	•	70	18	-	6,2	5	8	3	7,00	0002084933
MF 10	1,00	•	70	16	-	7	5,5	8	3	9,00	0002085172
MF 10	1,25	•	75	20	-	7	5,5	8	3	8,75	0001493649
MF 12	1,00	•	70	22	-	8,5	6,5	9	3	11,00	0003566331
MF 12	1,25	•	80	22	-	8,5	6,5	9	3	10,75	0002085383
MF 12	1,50	•	82	22	-	8,5	6,5	9	3	10,50	0002085504
MF 14	1,00	•	80	22	-	10,5	8	11	3	13,00	0003566602
MF 14	1,25	•	80	22	-	10,5	8	11	3	12,75	0003566973
MF 14	1,50	•	88	22	-	10,5	8	11	3	12,50	0001721534
MF 16	1,00	•	75	22	-	12,5	10	13	3	15,00	0003567273
MF 16	1,25	•	95	22	-	12,5	10	13	3	14,75	0003567554
MF 16	1,50	•	95	22	-	12,5	10	13	3	14,50	0002085715
MF 18	1,00	•	95	25	-	14	11	14	4	17,00	0003567825
MF 18	1,50	•	95	25	-	14	11	14	4	16,50	0002085935
MF 18	2,00	•	95	28	-	14	11	14	4	16,00	0003568125
MF 20	1,00	•	95	22	-	15	12	15	4	19,00	0003568496
MF 20	1,50	•	95	22	-	15	12	15	4	18,50	0002086175
MF 20	2,00	•	105	28	-	15	12	15	4	18,00	0003568767
MF 22	1,00	•	115	25	-	17	13	16	3	21,00	0003569127
MF 22	1,50	•	95	25	-	17	13	16	4	20,50	0003569498
MF 22	2,00	•	115	34	-	17	13	16	4	20,00	0003569769
MF 24	1,00	•	120	25	-	19	15	18	4	23,00	0003570335
MF 24	1,50	•	95	25	-	19	15	18	4	22,50	0002086446
MF 24	2,00	•	120	28	-	19	15	18	4	22,00	0004187238
MF 26	1,50	•	95	28	-	20	15	18	4	24,50	0003570616
MF 27	1,50	•	130	28	-	20	15	18	4	25,00	0003570988
MF 27	2,00	•	130	28	-	20	15	18	4	25,00	0004187660
MF 28	1,50	•	105	28	-	21	17	20	4	26,50	0003571348
MF 30	1,50	•	105	28	-	23	17	20	4	28,50	0003571779
MF 30	2,00	•	135	28	-	23	17	20	4	28,00	0002086877
MF 32	1,50	•	105	28	-	24	19	22	4	20,50	0003572069
MF 33	1,50	•	110	28	-	25	19	22	4	31,50	0003572340
MF 33	2,00	•	110	28	-	25	19	22	4	31,00	0003572611
MF 36	1,50	•	155	36	-	28	21	24	4	34,50	0003572982

Machos de roscar a máquina. Agujeros pasantes
Machine taps. *Through holes*

JMC

PS	MF ISO-DIN 13		B 3,5-5 P		JIS STD.	HSSE Co5	ISO 2 (6H)	
N								
Nogrip-1®								



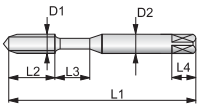


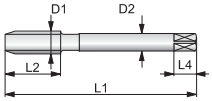
Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,6	6	1,2,3	1
mts./min.	8-13	8-13	5 8	7-12
	❶❷	❶❷	❶❷❸❹	❸❹

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50	•	52	10	10	5	4	7	3	3,50	0002084652
MF 5	0,50	•	60	12	17	5,5	4,5	7	3	4,50	0001704875
MF 6	0,50	•	62	12	21	6	4,5	7	3	5,50	0003573984
MF 6	0,75	•	62	12	21	6	4,5	7	3	5,25	0002084873
MF 8	0,75	•	70	14	-	6,2	5	8	3	7,25	0003465965
MF 8	1,00	•	70	18	-	6,2	5	8	3	7,00	0002085012
MF 10	1,00	•	75	16	-	7	5,5	8	3	9,00	0002085223
MF 10	1,25	•	70	20	-	7	5,5	8	3	8,75	0001721965
MF 12	1,00	•	82	22	-	8,5	6,5	9	3	11,00	0003566491
MF 12	1,25	•	82	22	-	8,5	6,5	9	3	10,75	0002085444
MF 12	1,50	•	82	22	-	8,5	6,5	9	3	10,50	0002085654
MF 14	1,00	•	88	22	-	10,5	8	11	3	13,00	0003566762
MF 14	1,25	•	88	22	-	10,5	8	11	3	12,75	0003567062
MF 14	1,50	•	88	22	-	10,5	8	11	3	12,50	0001722044
MF 16	1,00	•	95	22	-	12,5	10	13	3	15,00	0003567333
MF 16	1,25	•	95	22	-	12,5	10	13	3	14,75	0003567604
MF 16	1,50	•	95	22	-	12,5	10	13	3	14,50	0002085875
MF 18	1,00	•	100	25	-	14	11	14	4	17,00	0003567985
MF 18	1,50	•	100	25	-	14	11	14	4	16,50	0002086014
MF 18	2,00	•	100	28	-	14	11	14	4	16,00	0003568275
MF 20	1,00	•	105	22	-	15	12	15	4	19,00	0003568556
MF 20	1,50	•	105	22	-	15	12	15	4	18,50	0002086385
MF 20	2,00	•	105	28	-	15	12	15	4	18,00	0003568827
MF 22	1,00	•	115	25	-	17	13	16	3	21,00	0003569287
MF 22	1,50	•	115	25	-	17	13	16	4	20,50	0003569558
MF 22	2,00	•	115	34	-	17	13	16	4	20,00	0003570064
MF 24	1,00	•	120	25	-	19	15	18	4	23,00	0003570496
MF 24	1,50	•	120	25	-	19	15	18	4	22,50	0002086506
MF 24	2,00	•	120	28	-	19	15	18	4	22,00	0002640314
MF 26	1,50	•	130	28	-	20	15	18	4	24,50	0003570767
MF 27	1,50	•	130	28	-	20	15	18	4	25,00	0003571066
MF 27	2,00	•	130	28	-	20	15	18	4	25,00	0002086717
MF 28	1,50	•	135	28	-	21	17	20	4	26,50	0003571498
MF 30	1,50	•	135	28	-	23	17	20	4	28,50	0003571820
MF 30	2,00	•	135	28	-	23	17	20	4	28,00	0002086938
MF 32	1,50	•	110	28	-	24	19	22	4	20,50	0003572129
MF 33	1,50	•	110	28	-	25	19	22	4	31,50	0003572400
MF 33	2,00	•	110	28	-	25	19	22	4	31,00	0003572771
MF 36	1,50	•	155	36	-	28	21	24	4	34,50	0003573071

Machos de roscar a máquina. Agujeros pasantes
Machine taps. *Through holes*

PS	MF ISO-DIN 13		B 3,5-5 P		JIS STD.	HSSE Co5	ISO 2 (6H)	
N								
TiN								



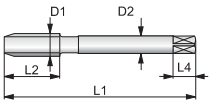


Material	GR1	GR2	GR3	GR6	GR10	GR11
Subg.	1,2,3,4,5 / 6	1,2,3,6,7	1,2,3	2,3	1 / 2	1
mts./min.	13-18 / 11-14	13-18	10 / 13	20 / 25	7-12 / 10-15	15-20
	1 2	1 2	1 2 3 4	5 6	5 6	

D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
MF 4	0,50	•	62	10	10	6	4,5	7	3	5,50	0003463689
MF 5	0,50	•	62	12	17	6	4,5	7	3	5,50	0003464471
MF 6	0,50	•	62	12	21	6	4,5	7	3	5,50	0003574073
MF 6	0,75	•	62	12	21	6	4,5	7	3	5,50	0003465042
MF 8	0,75	•	70	14	-	6,2	5	8	3	7,00	0003466044
MF 8	1,00	•	70	18	-	6,2	5	8	3	7,00	0003466104
MF 10	1,00	•	88	16	-	7	5,5	11	3	12,50	0002640263
MF 10	1,25	•	88	20	-	7	5,5	11	3	12,50	0003482824
MF 12	1,00	•	95	22	-	8,5	6,5	13	3	14,50	0003566542
MF 12	1,25	•	95	22	-	8,5	6,5	13	3	14,50	0003486623
MF 12	1,50	•	95	22	-	12,5	10	13	3	14,50	0003486773
MF 14	1,00	•	88	22	-	10,5	8	11	3	12,50	0003566823
MF 14	1,25	•	88	22	-	10,5	8	11	3	12,50	0003567122
MF 14	1,50	•	88	22	-	10,5	8	11	3	12,50	0003501069
MF 16	1,00	•	95	22	-	12,5	10	13	3	14,50	0003567493
MF 16	1,25	•	95	22	-	12,5	10	13	3	14,50	0003567765
MF 16	1,50	•	95	22	-	12,5	10	13	3	14,50	0003501119
MF 18	1,00	•	100	25	-	14	11	14	4	16,50	0003568064
MF 18	1,50	•	100	25	-	14	11	14	4	16,50	0003501270
MF 18	2,00	•	135	28	-	23	17	20	4	28,00	0003568335
MF 20	1,00	•	105	22	-	15	12	15	4	18,50	0003568616
MF 20	1,50	•	105	22	-	15	12	15	4	18,50	0003501330
MF 20	2,00	•	135	28	-	23	17	20	4	28,00	0003568988
MF 22	1,00	•	105	25	-	12,5	10	13	3	14,50	0003569338
MF 22	1,50	•	120	25	-	19	15	18	4	22,50	0003569619
MF 22	2,00	•	135	34	-	23	17	20	4	28,00	0003569980
MF 24	1,00	•	105	25	-	12,5	10	13	3	14,50	0003570556
MF 24	1,50	•	105	25	-	12,5	10	13	3	14,50	0003501490
MF 24	2,00	•	135	28	-	23	17	20	4	28,00	0003507123
MF 26	1,50	•	120	28	-	19	15	18	4	22,50	0003570827
MF 27	1,50	•	120	28	-	19	15	18	4	22,50	0003571127
MF 27	2,00	•	120	28	-	19	15	18	4	22,50	0003507283
MF 28	1,50	•	120	28	-	19	15	18	4	22,50	0003571558
MF 30	1,50	•	120	28	-	19	15	18	4	22,50	0003571980
MF 30	2,00	•	120	28	-	19	15	18	4	22,50	0003507404
MF 32	1,50	•	120	28	-	19	15	18	4	22,50	0003572280
MF 33	1,50	•	120	28	-	19	15	18	4	22,50	0003572551
MF 33	2,00	•	135	28	-	23	17	20	4	28,00	0003572832
MF 36	1,50	•	155	36	-	19	15	18	4	22,50	0003573121

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

C35A	(G)PF	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	P 55°
N							
Nogrip-1®							



Material	GR1	GR2	GR3		GR9
Subg.	1,2,4,5	6	1,2,3		1
mts./min.	8-13	8-13	5	8	7-12
	1 2	1 2	1 2 3 4		3 4

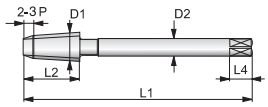
D1	P		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
G 1/8	28	•	55	13	-	8	6	9	3	8,70	0001436445
G 1/4	19	•	62	16	-	11	9	12	3	11,70	0001436506
G 3/8	19	•	65	16	-	14	11	14	3	15,25	0001436666
G 1/2	14	•	80	18	-	18	14	17	4	19,00	0001436716
G 3/4	14	•	85	22	-	23	17	20	4	24,50	0001436877
G 1"	11	•	95	26	-	26	21	24	4	30,50	0001436937

Machos de roscar a máquina. Para roscas gas cónicas. Agujeros ciegos
Machine taps. For tapered pipe thread. Blind holes

JMC

C15/1 AZ Nogrip-1®

Rc (BSPT) ISO 7/1 BS 21 | **C** 2-3 P | R15° | JIS STD. | **HSSE** Co5 | C.1:16

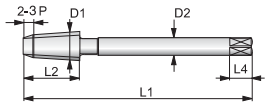


Material	GR1	GR2	GR3	GR4	GR9
Subg.	2,4,5,6	1,2,3,4,5,7,8	1,2,3,4	1	1,2,3
mts./min.	3 6	3 6	3 6	3 - 6	3 6
	1 2	1 2	1 2 3 4	6	3 4

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rc 1/16	28	•	63	14	-	6	5	8	3	6,30	0001026243
Rc 1/8	28	•	63	15	-	8	6	9	5	8,30	0001026675
Rc 1/4	19	•	63	19	-	11	9	11	5	11,00	0001026956
Rc 3/8	19	•	70	21	-	14	11	14	5	14,50	0001022023
Rc 1/2	14	•	80	26	-	18	14	17	5	18,10	0001021181
Rc 3/4	14	•	100	28	-	23	17	20	5	23,50	0001020450
Rc 1"	11	•	110	33	-	26	21	24	5	29,60	0001027306

C15/1 AZ TiN

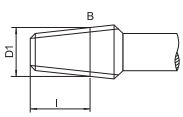
Rc (BSPT) ISO 7/1 BS 21 | **C** 2-3 P | R15° | JIS STD. | **HSSE** Co5 | C.1:16



Material	GR1	GR2	GR3	GR4
Subg.	2,4,5,6	1,2,3,4,5,7,8	1,2,3,4	1
mts./min.	3 6	3 6	3 6	3 6
	1 2	1 2	1 2 3 4	6

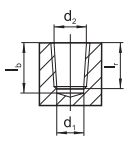
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
Rc 1/16	28	•	63	14	-	6	5	8	3	6,30	0001026303
Rc 1/8	28	•	63	15	-	8	6	9	5	8,30	0001026735
Rc 1/4	19	•	63	19	-	11	9	11	5	11,00	0001027035
Rc 3/8	19	•	70	21	-	14	11	14	5	14,50	0001023888
Rc 1/2	14	•	80	26	-	18	14	17	5	18,10	0001020390
Rc 3/4	14	•	100	28	-	23	17	20	5	23,50	0001019452
Rc 1"	11	•	110	33	-	26	21	24	5	29,60	0001027466

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal *Nominal Ø*	L2 mm	D_1 mm	l mm
Rc 1/16	14	7,72	10,1
Rc 1/8	15	9,73	10,1
Rc 1/4	19	13,16	15
Rc 3/8	21	16,66	15,4
Rc 1/2	26	20,95	20,5
Rc 3/4	28	26,44	21,8
Rc 1"	33	33,25	26
Rc 1" 1/4	36	41,91	28,3
Rc 1" 1/2	37	47,8	28,3
Rc 2"	41	59,61	32,7

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.



Ø nominal *Nominal Ø*	d_2 mm	l_r mm	l_b mm
Rc 1/16	6,49	8,31	10,1
Rc 1/8	8,5	8,31	10,1
Rc 1/4	11,35	12,37	15
Rc 3/8	14,85	12,77	15,4
Rc 1/2	18,49	16,83	20,5
Rc 3/4	23,98	18,13	21,8
Rc 1"	30,11	21,42	26
Rc 1" 1/4	38,78	23,72	28,3
Rc 1" 1/2	44,67	23,72	28,3
Rc 2"	56,48	28,02	32,6

Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores
Taper reamers for taper holes 1:16. See reamers programme

Machos de roscar a máquina. Agujeros ciegos
Machine taps. *Blind holes*

JMC

C35A

N

UNC ANSI / ASME B1.1

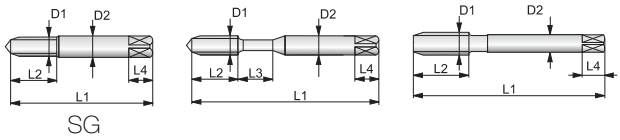
2,5÷3xD

C 2-3 P

R35°

JIS STD.

HSSE Co5



SG

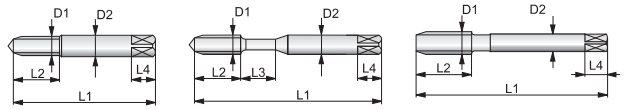
Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,3	1,2	2,3
mts./min.	8-13	7 12	10-15	10 15
	1 2	6	6	5 5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0001184525
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	5	3	2,30	0001184746
UNC Nr 5	40	GH2	•	46	6	12	4	3,2	6	3	2,60	0001719042
UNC Nr 6	32	GH2	•	48	7	14	4	3,2	6	3	2,75	0001045769
UNC Nr 6	32	GH3	•	48	7	14	4	3,2	6	3	2,75	0000866461
UNC Nr 8	32	GH2	•	52	7	10	5	4	7	3	3,50	0001180245
UNC Nr 8	32	GH3	•	52	7	10	5	4	7	3	3,50	0001166714
UNC Nr 10	24	GH3	•	60	8	17	5,5	4,5	7	3	3,80	0001298136
UNC Nr 12	24	GH3	•	62	9	21	6	4,5	7	3	4,50	0001719192
UNC 1/4	20	GH5	•	62	11	19	6	4,5	7	3	5,10	0000866953
UNC 5/16	18	GH5	•	70	11	-	6,1	5	8	3	6,50	0000875697
UNC 3/8	16	GH5	•	75	12	-	7	5,5	8	3	7,90	0000875968
UNC 7/16	14	GH5	•	80	14	-	8	6	9	3	9,30	0001719252
UNC 1/2	13	GH5	•	85	18	-	9	7	10	3	10,80	0001719313
UNC 9/16	12	GH5	•	90	18	-	10,5	8	11	3	12,20	0001719473
UNC 5/8	11	GH5	•	95	20	-	12	9	12	3	13,50	0001719524
UNC 3/4	10	GH5	•	105	22	-	14	11	14	4	16,50	0001719684
UNC 7/8	9	GH6	•	115	26	-	17	13	16	4	19,50	0001719744
UNC 1"	8	GH6	•	125	28	-	20	15	18	4	22,25	0001719805

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A	UNC ANSI / ASME B1.1	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	P 60°
N							
Nogrip-1®							

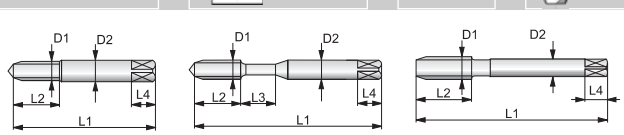


SG

Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,3	1,2	2,3
mts./min.	8-13	7 12	10-15	10 15
	1 2	6	6	5 5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003512832
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	5	3	2,30	0003513624
UNC Nr 5	40	GH2	•	46	6	12	4	3,2	6	3	2,60	0003513845
UNC Nr 6	32	GH2	•	48	7	14	4	3,2	6	3	2,75	0003589364
UNC Nr 6	32	GH3	•	48	7	14	4	3,2	6	3	2,75	0003514787
UNC Nr 8	32	GH2	•	52	7	10	5	4	7	3	3,50	0003589585
UNC Nr 8	32	GH3	•	52	7	10	5	4	7	3	3,50	0003523853
UNC Nr 10	24	GH3	•	60	8	17	5,5	4,5	7	3	3,80	0003524213
UNC Nr 12	24	GH3	•	62	9	21	6	4,5	7	3	4,50	0003524363
UNC 1/4	20	GH5	•	62	11	19	6	4,5	7	3	5,10	0003524424
UNC 5/16	18	GH5	•	70	11	-	6,1	5	8	3	6,50	0003524584
UNC 3/8	16	GH5	•	75	12	-	7	5,5	8	3	7,90	0003524644
UNC 7/16	14	GH5	•	80	14	-	8	6	9	3	9,30	0003524705
UNC 1/2	13	GH5	•	85	18	-	9	7	10	3	10,80	0003524855
UNC 9/16	12	GH5	•	90	18	-	10,5	8	11	3	12,20	0003524916
UNC 5/8	11	GH5	•	95	20	-	12	9	12	3	13,50	0003525155
UNC 3/4	10	GH5	•	105	22	-	14	11	14	4	16,50	0003525215
UNC 7/8	9	GH6	•	115	26	-	17	13	16	4	19,50	0003525426
UNC 1"	8	GH6	•	125	28	-	20	15	18	4	22,25	0002600411

C35A	UNC ANSI / ASME B1.1	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	P 60°
N							
TiN							



SG

Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,3	1,2	2,3
mts./min.	8-13	7 12	10-15	10 15
	1 2	6	6	5 5 6

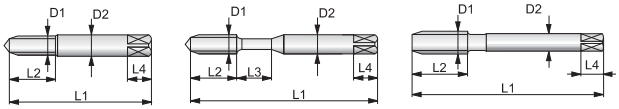
D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0001184688
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	5	3	2,30	0001184896
UNC Nr 5	40	GH2	•	46	6	12	4	3,2	6	3	2,60	0003513995
UNC Nr 6	32	GH2	•	48	7	14	4	3,2	6	3	2,75	0001045820
UNC Nr 6	32	GH3	•	48	7	14	4	3,2	6	3	2,75	0000866521
UNC Nr 8	32	GH2	•	52	7	10	5	4	7	3	3,50	0001418905
UNC Nr 8	32	GH3	•	52	7	10	5	4	7	3	3,50	0000866681
UNC Nr 10	24	GH3	•	60	8	17	5,5	4,5	7	3	3,80	0000866742
UNC Nr 12	24	GH3	•	62	9	21	6	4,5	7	3	4,50	0002902684
UNC 1/4	20	GH5	•	62	11	19	6	4,5	7	3	5,10	0000867031
UNC 5/16	18	GH5	•	70	11	-	6,1	5	8	3	6,50	0000875758
UNC 3/8	16	GH5	•	75	12	-	7	5,5	8	3	7,90	0000876057
UNC 7/16	14	GH5	•	80	14	-	8	6	9	3	9,30	0003288254
UNC 1/2	13	GH5	•	85	18	-	9	7	10	3	10,80	0002525925
UNC 9/16	12	GH5	•	90	18	-	10,5	8	11	3	12,20	0003525094
UNC 5/8	11	GH5	•	95	20	-	12	9	12	3	13,50	0002760155
UNC 3/4	10	GH5	•	105	22	-	14	11	14	4	16,50	0003525376
UNC 7/8	9	GH6	•	115	26	-	17	13	16	4	19,50	0002744770
UNC 1"	8	GH6	•	125	28	-	20	15	18	4	22,25	0002967464

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A | VAF | *Nogrip-1®*

UNC ANSI / ASME B1.1 | 3xD | **C** 2-3P | R35° | JIS STD. | **HSSE** Co5



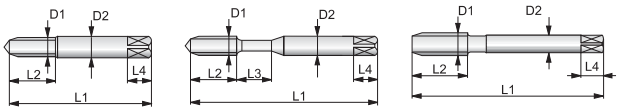
SG

Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003513132
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	5	3	2,30	0002518582
UNC Nr 5	40	GH2	•	46	6	12	4	3,2	6	3	2,60	0002518643
UNC Nr 6	32	GH3	•	48	7	14	4	3,2	6	3	2,75	0002518703
UNC Nr 8	32	GH3	•	52	7	10	5	4	7	3	3,50	0002518853
UNC Nr 10	24	GH3	•	60	8	17	5,5	4,5	7	3	3,80	0002518914
UNC Nr 12	24	GH3	•	62	9	21	6	4,5	7	3	4,50	0002519093
UNC 1/4	20	GH5	•	62	11	19	6	4,5	7	3	5,10	0002519153
UNC 5/16	18	GH5	•	70	11	-	6,1	5	8	3	6,50	0002519213
UNC 3/8	16	GH5	•	75	12	-	7	5,5	8	3	7,90	0002519374
UNC 7/16	14	GH5	•	80	14	-	8	6	9	3	9,30	0002519424
UNC 1/2	13	GH5	•	85	18	-	9	7	10	3	10,80	0002519585
UNC 9/16	12	GH5	•	90	18	-	10,5	8	11	3	12,20	0002519645
UNC 5/8	11	GH5	•	95	20	-	12	9	12	3	13,50	0002519705
UNC 3/4	10	GH5	•	105	22	-	14	11	14	4	16,50	0002519856
UNC 7/8	9	GH6	•	115	26	-	17	13	16	4	19,50	0002519916
UNC 1"	8	GH6	•	125	28	-	20	15	18	4	22,25	0002520090

C35A | VAF | *TiN*

UNC ANSI / ASME B1.1 | 3xD | **C** 2-3P | R35° | JIS STD. | **HSSE** Co5



SG

Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7,8	4	2,4	4
mts./min.	13-18	15-20	13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003513292
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	5	3	2,30	0002513784
UNC Nr 5	40	GH2	•	46	6	12	4	3,2	6	3	2,60	0002514084
UNC Nr 6	32	GH3	•	48	7	14	4	3,2	6	3	2,75	0002514847
UNC Nr 8	32	GH3	•	52	7	10	5	4	7	3	3,50	0002525586
UNC Nr 10	24	GH3	•	60	8	17	5,5	4,5	7	3	3,80	0000866892
UNC Nr 12	24	GH3	•	62	9	21	6	4,5	7	3	4,50	0002525647
UNC 1/4	20	GH5	•	62	11	19	6	4,5	7	3	5,10	0000867192
UNC 5/16	18	GH5	•	70	11	-	6,1	5	8	3	6,50	0000875818
UNC 3/8	16	GH5	•	75	12	-	7	5,5	8	3	7,90	0000876118
UNC 7/16	14	GH5	•	80	14	-	8	6	9	3	9,30	0002340427
UNC 1/2	13	GH5	•	85	18	-	9	7	10	3	10,80	0002340587
UNC 9/16	12	GH5	•	90	18	-	10,5	8	11	3	12,20	0003525707
UNC 5/8	11	GH5	•	95	20	-	12	9	12	3	13,50	0003525857
UNC 3/4	10	GH5	•	105	22	-	14	11	14	4	16,50	0002714183
UNC 7/8	9	GH6	•	115	26	-	17	13	16	4	19,50	0003525918
UNC 1"	8	GH6	•	125	28	-	20	15	18	4	22,25	0003526007

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A

VAF

TiCN

UNC ANSI / ASME B1.1

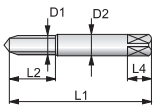
3xD

C 2-3P

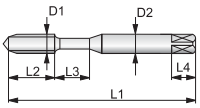
R35°

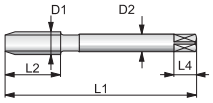
JIS STD.

HSSE Co5



SG





Material	GR1		GR2		GR3				GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4				2,4		4	
mts./min.	10	15	12-17	11-14	8		10		20	25	10	20
	1 2		1 2		1 2 3 4				6		5 6	

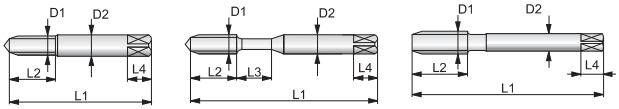
D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003590703
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	5	3	2,30	0003590854
UNC Nr 5	40	GH2	•	46	6	12	4	3,2	6	3	2,60	0003590914
UNC Nr 6	32	GH3	•	48	7	14	4	3,2	6	3	2,75	0003591093
UNC Nr 8	32	GH3	•	52	7	10	5	4	7	3	3,50	0003591153
UNC Nr 10	24	GH3	•	60	8	17	5,5	4,5	7	3	3,80	0003591214
UNC Nr 12	24	GH3	•	62	9	21	6	4,5	7	3	4,50	0003591374
UNC 1/4	20	GH5	•	62	11	19	6	4,5	7	3	5,10	0003591424
UNC 5/16	18	GH5	•	70	11	-	6,1	5	8	3	6,50	0003591585
UNC 3/8	16	GH5	•	75	12	-	7	5,5	8	3	7,90	0003591645
UNC 7/16	14	GH5	•	80	14	-	8	6	9	3	9,30	0003591706
UNC 1/2	13	GH5	•	85	18	-	9	7	10	3	10,80	0003595223
UNC 9/16	12	GH5	•	90	18	-	10,5	8	11	3	12,20	0003595434
UNC 5/8	11	GH5	•	95	20	-	12	9	12	3	13,50	0003595594
UNC 3/4	10	GH5	•	105	22	-	14	11	14	4	16,50	0003595654
UNC 7/8	9	GH6	•	115	26	-	17	13	16	4	19,50	0003595705
UNC 1"	8	GH6	•	125	28	-	20	15	18	4	22,25	0003595925

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS
N

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | JIS STD. | HSSE Co5

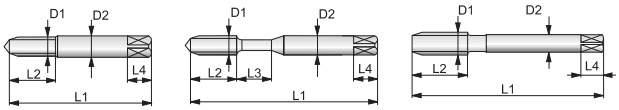


Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20	13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0000851010
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	6	3	2,30	0000851220
UNC Nr 5	40	GH2	•	46	12	8	4	3,2	6	3	2,60	0002515575
UNC Nr 6	32	GH2	•	48	11	9	4	3,2	6	3	2,75	0000851441
UNC Nr 6	32	GH3	•	48	11	9	4	3,2	6	3	2,75	0002515636
UNC Nr 8	32	GH2	•	52	12	9	5	4	7	3	3,50	0000851652
UNC Nr 8	32	GH3	•	52	12	9	5	4	7	3	3,50	0001110026
UNC Nr 10	24	GH3	•	60	14	11	5,5	4,5	7	3	3,80	0001040978
UNC Nr 12	24	GH3	•	60	16	14	6	4,5	7	3	4,50	0001690894
UNC 1/4	20	GH5	•	62	16	14	6	4,5	7	3	5,10	0000850388
UNC 5/16	18	GH5	•	70	18	-	6,1	5	8	3	6,50	0000861248
UNC 3/8	16	GH5	•	75	20	-	7	5,5	8	3	7,90	0000861459
UNC 7/16	14	GH5	•	80	20	-	8	6	9	3	9,30	0002372316
UNC 1/2	13	GH5	•	85	23	-	9	7	10	3	10,80	0001721684
UNC 9/16	12	GH5	•	90	23	-	10,5	8	11	3	12,20	0002515796
UNC 5/8	11	GH5	•	95	28	-	12	9	12	3	13,50	0001721744
UNC 3/4	10	GH5	•	105	32	-	14	11	14	4	16,50	0001721805
UNC 7/8	9	GH6	•	115	34	-	17	13	16	4	19,50	0002515857
UNC 1"	8	GH6	•	125	36	-	20	15	18	4	22,25	0002376104

PS
N
Nogrip-1®

UNC ANSI / ASME B1.1 | **B** 3,5-5 P | JIS STD. | HSSE Co5



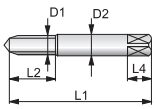
Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20	13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003512993
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	6	3	2,30	0001525712
UNC Nr 5	40	GH2	•	46	12	8	4	3,2	6	3	2,60	0003514134
UNC Nr 6	32	GH2	•	48	11	9	4	3,2	6	3	2,75	0003642522
UNC Nr 6	32	GH3	•	48	11	9	4	3,2	6	3	2,75	0003526157
UNC Nr 8	32	GH2	•	52	12	9	5	4	7	3	3,50	0003590643
UNC Nr 8	32	GH3	•	52	12	9	5	4	7	3	3,50	0003526217
UNC Nr 10	24	GH3	•	60	14	11	5,5	4,5	7	3	3,80	0003526378
UNC Nr 12	24	GH3	•	60	16	14	6	4,5	7	3	4,50	0003526438
UNC 1/4	20	GH5	•	62	16	14	6	4,5	7	3	5,10	0003526589
UNC 5/16	18	GH5	•	70	18	-	6,1	5	8	3	6,50	0003526649
UNC 3/8	16	GH5	•	75	20	-	7	5,5	8	3	7,90	0002505346
UNC 7/16	14	GH5	•	80	20	-	8	6	9	3	9,30	0003526709
UNC 1/2	13	GH5	•	85	23	-	9	7	10	3	10,80	0003526860
UNC 9/16	12	GH5	•	90	23	-	10,5	8	11	3	12,20	0003527009
UNC 5/8	11	GH5	•	95	28	-	12	9	12	3	13,50	0003527159
UNC 3/4	10	GH5	•	105	32	-	14	11	14	4	16,50	0003527431
UNC 7/8	9	GH6	•	115	34	-	17	13	16	4	19,50	0003527581
UNC 1"	8	GH6	•	125	36	-	20	15	18	4	22,25	0003527641

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS	UNC ANSI / ASME B1.1		B 3,5-5 P		JIS STD.	HSSE Co5	
N							
TiN							



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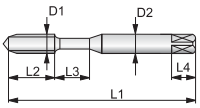
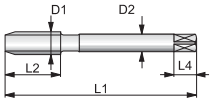




Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20 / 13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0000851170
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	6	3	2,30	0000851381
UNC Nr 5	40	GH2	•	46	12	8	4	3,2	6	3	2,60	0002902463
UNC Nr 6	32	GH2	•	48	11	9	4	3,2	6	3	2,75	0000851501
UNC Nr 6	32	GH3	•	48	11	9	4	3,2	6	3	2,75	0002996356
UNC Nr 8	32	GH2	•	52	12	9	5	4	7	3	3,50	0001110237
UNC Nr 8	32	GH3	•	52	12	9	5	4	7	3	3,50	0001166222
UNC Nr 10	24	GH3	•	60	14	11	5,5	4,5	7	3	3,80	0001040697
UNC Nr 12	24	GH3	•	60	16	14	6	4,5	7	3	4,50	0002902524
UNC 1/4	20	GH5	•	62	16	14	6	4,5	7	3	5,10	0000850449
UNC 5/16	18	GH5	•	70	18	-	6,1	5	8	3	6,50	0000861309
UNC 3/8	16	GH5	•	75	20	-	7	5,5	8	3	7,90	0000861510
UNC 7/16	14	GH5	•	80	20	-	8	6	9	3	9,30	0003381966
UNC 1/2	13	GH5	•	85	23	-	9	7	10	3	10,80	0002510293
UNC 9/16	12	GH5	•	90	23	-	10,5	8	11	3	12,20	0002571345
UNC 5/8	11	GH5	•	95	28	-	12	9	12	3	13,50	0002579087
UNC 3/4	10	GH5	•	105	32	-	14	11	14	4	16,50	0002571295
UNC 7/8	9	GH6	•	115	34	-	17	13	16	4	19,50	0002996296
UNC 1"	8	GH6	•	125	36	-	20	15	18	4	22,25	0003140117

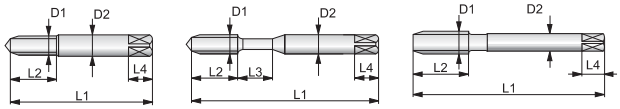
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS | UNC ANSI / ASME B1.1 | B 3,5-5 P | JIS STD. | HSSE Co5

VAF

Nogrip-1®



SG

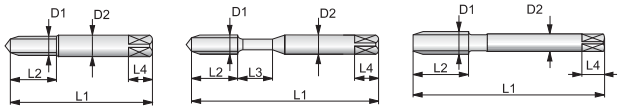
Material	GR1	GR2	GR3	GR4
Subg.	6	1,2,3,4,5,7,8	4	2,4
mts./min.	6 9	8 13	5 10	15 20
	1 2	1 2	1 2 3 4	6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003513413
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	6	3	2,30	0002516638
UNC Nr 5	40	GH2	•	46	12	8	4	3,2	6	3	2,60	0002516798
UNC Nr 6	32	GH3	•	48	11	9	4	3,2	6	3	2,75	0002516919
UNC Nr 8	32	GH3	•	52	12	9	5	4	7	3	3,50	0002517098
UNC Nr 10	24	GH3	•	60	14	11	5,5	4,5	7	3	3,80	0002551479
UNC Nr 12	24	GH3	•	60	16	14	6	4,5	7	3	4,50	0002517158
UNC 1/4	20	GH5	•	62	16	14	6	4,5	7	3	5,10	0002517219
UNC 5/16	18	GH5	•	70	18	-	6,1	5	8	3	6,50	0002517369
UNC 3/8	16	GH5	•	75	20	-	7	5,5	8	3	7,90	0002517420
UNC 7/16	14	GH5	•	80	20	-	8	6	9	3	9,30	0002517580
UNC 1/2	13	GH5	•	85	23	-	9	7	10	3	10,80	0002517640
UNC 9/16	12	GH5	•	90	23	-	10,5	8	11	3	12,20	0002517851
UNC 5/8	11	GH5	•	95	28	-	12	9	12	3	13,50	0002517791
UNC 3/4	10	GH5	•	105	32	-	14	11	14	4	16,50	0002517912
UNC 7/8	9	GH6	•	115	34	-	17	13	16	4	19,50	0002518090
UNC 1"	8	GH6	•	125	36	-	20	15	18	4	22,25	0002518151

PS | UNC ANSI / ASME B1.1 | B 3,5-5 P | JIS STD. | HSSE Co5

VAF

TiN



SG

Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20 13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003513564
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	6	3	2,30	0001040487
UNC Nr 5	40	GH2	•	46	12	8	4	3,2	6	3	2,60	0003514626
UNC Nr 6	32	GH3	•	48	11	9	4	3,2	6	3	2,75	0001041057
UNC Nr 8	32	GH3	•	52	12	9	5	4	7	3	3,50	0000166382
UNC Nr 10	24	GH3	•	60	14	11	5,5	4,5	7	3	3,80	0000075372
UNC Nr 12	24	GH3	•	60	16	14	6	4,5	7	3	4,50	0003528212
UNC 1/4	20	GH5	•	62	16	14	6	4,5	7	3	5,10	0003528433
UNC 5/16	18	GH5	•	70	18	-	6,1	5	8	3	6,50	0001080871
UNC 3/8	16	GH5	•	75	20	-	7	5,5	8	3	7,90	0001359302
UNC 7/16	14	GH5	•	80	20	-	8	6	9	3	9,30	0002373047
UNC 1/2	13	GH5	•	85	23	-	9	7	10	3	10,80	0002997148
UNC 9/16	12	GH5	•	90	23	-	10,5	8	11	3	12,20	0003528593
UNC 5/8	11	GH5	•	95	28	-	12	9	12	3	13,50	0002997208
UNC 3/4	10	GH5	•	105	32	-	14	11	14	4	16,50	0002374802
UNC 7/8	9	GH6	•	115	34	-	17	13	16	4	19,50	0003528644
UNC 1"	8	GH6	•	125	36	-	20	15	18	4	22,25	0003528864

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS

VAF

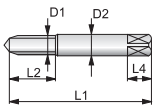
TiCN

UNC
ANSI / ASME B1.1

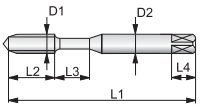
B
3,5-5 P

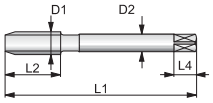
JIS STD.

HSSE
Co5



SG





Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	13	18	15-20	13-18	9	11	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

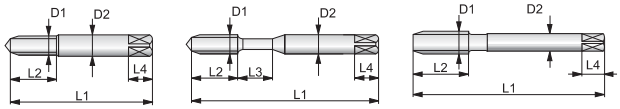
D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNC Nr 2	56	GH2	•	42	10	SG	3	2,5	5	3	2,30	0003596165
UNC Nr 4	40	GH2	•	46	15	SG	4	3,2	6	3	2,30	0003596225
UNC Nr 5	40	GH2	•	46	12	8	4	3,2	6	3	2,60	0003596375
UNC Nr 6	32	GH3	•	48	11	9	4	3,2	6	3	2,75	0003596436
UNC Nr 8	32	GH3	•	52	12	9	5	4	7	3	3,50	0003596596
UNC Nr 10	24	GH3	•	60	14	11	5,5	4,5	7	3	3,80	0003596657
UNC Nr 12	24	GH3	•	60	16	14	6	4,5	7	3	4,50	0003596717
UNC 1/4	20	GH5	•	62	16	14	6	4,5	7	3	5,10	0003596867
UNC 5/16	18	GH5	•	70	18	-	6,1	5	8	3	6,50	0003596928
UNC 3/8	16	GH5	•	75	20	-	7	5,5	8	3	7,90	0003597007
UNC 7/16	14	GH5	•	80	20	-	8	6	9	3	9,30	0003597167
UNC 1/2	13	GH5	•	85	23	-	9	7	10	3	10,80	0003597227
UNC 9/16	12	GH5	•	90	23	-	10,5	8	11	3	12,20	0003597388
UNC 5/8	11	GH5	•	95	28	-	12	9	12	3	13,50	0003597438
UNC 3/4	10	GH5	•	105	32	-	14	11	14	4	16,50	0003597659
UNC 7/8	9	GH6	•	115	34	-	17	13	16	4	19,50	0003597719
UNC 1"	8	GH6	•	125	36	-	20	15	18	4	22,25	0003597860

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A | **UNF** ANSI / ASME B1.1 | 2,5÷3xD | **C** 2-3 P | R35° | JIS STD. | **HSSE** Co5

N



SG

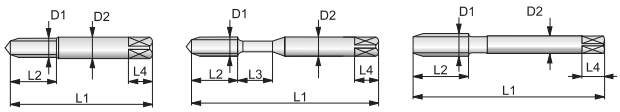
Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,3	1,2	2,3
mts./min.	8-13	7 12	10-15	10 15
	1 2	6	6	5 5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0001719955
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0001720049
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0001720190
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0001720250
UNF Nr 10	32	GH2	•	60	14	11	5,5	4,5	7	3	4,10	0003589645
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0001326291
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0001720471
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0001692678
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0001326411
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0001720682
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0002088230
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0001720802
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0001720953
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0001721042
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0001721102
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0001721252
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0001721313

C35A | **UNF** ANSI / ASME B1.1 | 2,5÷3xD | **C** 2-3 P | R35° | JIS STD. | **HSSE** Co5

N

Nogrip-1®



SG

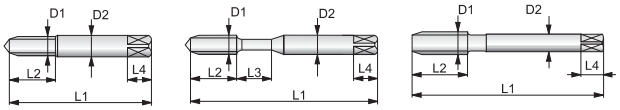
Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,3	1,2	2,3
mts./min.	8-13	7 12	10-15	10 15
	1 2	6	6	5 5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003528925
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003529164
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003456949
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003529435
UNF Nr 10	32	GH2	•	60	14	11	5,5	4,5	7	3	4,10	0003589706
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0003529656
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003530704
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0003530925
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0003531004
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0002511787
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0003531164
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0002498924
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0003531224
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0003531375
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0002511847
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003531435
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0003531656

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A	UNF ANSI / ASME B1.1	2,5÷3xD	C 2-3 P	R35°	JIS STD.	HSSE Co5	P 60°
N							
TiN							



SG

Material	GR1	GR4	GR5	GR6
Subg.	1,2,3,4,5	2,3	1,2	2,3
mts./min.	8-13	7 12	10-15	10 15
	1 2	6	6	5 5 6

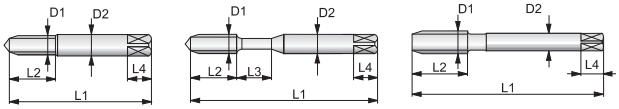
D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003529004
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003529224
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003529375
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003529595
UNF Nr 10	32	GH2	•	60	14	11	5,5	4,5	7	3	4,10	0003590362
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0001701507
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003530864
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0001692738
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0001326572
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0001326622
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0002727470
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0002374962
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0002371805
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0002700006
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0002757143
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003531595
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0003531716

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A | VAF | *Nogrip-1®*

UNF ANSI / ASME B1.1 | 3xD | **C** 2-3P | R35° | JIS STD. | **HSSE** Co5



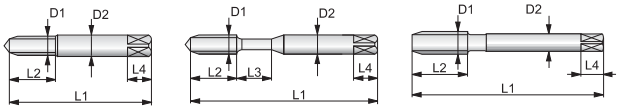
SG

Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	7	12	5	8	8	15
	1 2		1 2		1 2 3 4		6	

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0002553102
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0002553263
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0002553323
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0002553473
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0002553534
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0002553694
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0002553755
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0002553815
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0002553965
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0002554054
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0002554105
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0002554265
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0002554696
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0002554325
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0002554486
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0002554536

C35A | VAF | *TiN*

UNF ANSI / ASME B1.1 | 3xD | **C** 2-3P | R35° | JIS STD. | **HSSE** Co5



SG

Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20	13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003531927
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003532006
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003532166
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003532227
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0003532387
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003532437
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0003532598
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0003533440
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0003533650
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0003533711
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0003533871
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0003533922
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0003534010
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0003534161
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003534221
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0003534382

Machos de roscar a máquina. Agujeros ciegos
Machine taps. Blind holes

JMC

C35A

VAF

TiCN

UNF ANSI / ASME B1.1

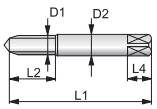
3xD

C 2-3P

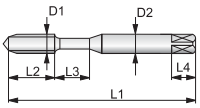
R35°

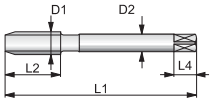
JIS STD.

HSSE Co5



SG





Material	GR1		GR2		GR3				GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4				2,4		4	
mts./min.	10	15	12-17	11-14	8		10		20	25	10	20
	1 2		1 2		1 2 3 4				6		5 6	

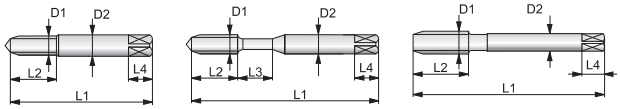
D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003598922
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003599443
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003599935
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003600293
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0003600344
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003600404
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0003600775
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0003601135
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0003601406
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0003601627
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0002710385
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0003601838
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0003602077
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0003602137
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003602298
UNF 1”	12	GH6	•	125	36	-	20	15	18	4	23,50	0003602358

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

JMC

PS | **UNF** ANSI / ASME B1.1 | **B** 3,5-5 P | JIS STD. | **HSSE** Co5

N



SG

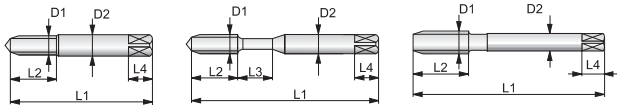
Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20	13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0002520151
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0002520211
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0002520372
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0002520422
UNF Nr 10	32	GH2	•	60	14	11	5,5	4,5	7	3	4,10	0002657288
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0001079713
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0002520582
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0001691525
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0001079381
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0001964685
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0002520643
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0002520703
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0002520853
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0002520914
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0002521003
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0002551108
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0002551268

PS | **UNF** ANSI / ASME B1.1 | **B** 3,5-5 P | JIS STD. | **HSSE** Co5

N

Nogrip-1®



SG

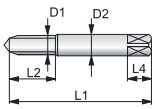
Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20	13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003540230
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003540451
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003540662
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003540883
UNF Nr 10	32	GH2	•	60	14	11	5,5	4,5	7	3	4,10	0003590422
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0002505136
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003541022
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0003551311
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0003551743
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0003552032
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0003552685
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0003553316
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0003553808
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0003554318
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0003554478
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003554539
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0003554740

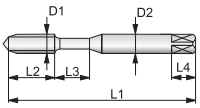
Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

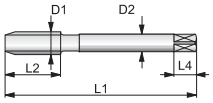
JMC

PS	UNF ANSI / ASME B1.1		B 3,5-5 P		JIS STD.	HSSE Co5	
N							
TiN							



SG



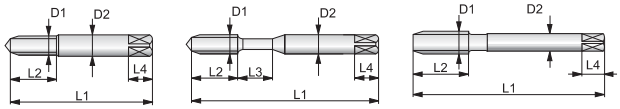


Material	GR1	GR2	GR3	GR4	GR5
Subg.	2,4,5,6	1,2,3,4,5,7/8	4	2,4	4
mts./min.	13-18	15-20	13-18	9-11	20-25	10-20
	1 2	1 2	1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003540391
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003540501
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003540722
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003540933
UNF Nr 10	32	GH2	•	60	14	11	5,5	4,5	7	3	4,10	0003590583
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0001080229
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003541172
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0001691676
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0001075593
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0001326782
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0002372476
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0002375041
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0002372536
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0002700216
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0002700156
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003554689
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0003554800

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

PS | VAF | *Nogrip-1®* | **UNF** ANSI / ASME B1.1 | **B** 3,5-5 P | JIS STD. | HSSE Co5

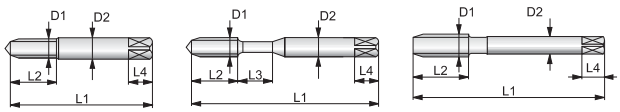


SG

Material	GR1		GR2		GR3		GR4	
Subg.	6		1,2,3,4,5,7,8		4		2,4	
mts./min.	6	9	8	13	5	10	15	20
	1 2		1 2		1 2 3 4		6	

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0002551539
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0002551690
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0002551740
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0002551800
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0002551961
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0002552040
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0002552100
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0002552260
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0002552321
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0002552471
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0002552532
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0002552692
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0002552752
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0002552803
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0002552963
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0002553042

PS | VAF | *TiN* | **UNF** ANSI / ASME B1.1 | **B** 3,5-5 P | JIS STD. | HSSE Co5



SG

Material	GR1		GR2		GR3	GR4	GR5
Subg.	2,4,5,6		1,2,3,4,5,7/8		4	2,4	4
mts./min.	13-18		15-20	13-18	9-11	20-25	10-20
	1 2		1 2		1 2 3 4	6	5 6

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003557044
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003557104
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003557264
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003557325
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0003557475
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003557536
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0003557696
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0003557756
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0003557807
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0003557967
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0003558046
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0003558106
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0003558267
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0003558327
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003558477
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0000358538

Machos de roscar a máquina. Agujeros pasantes
Machine taps. Through holes

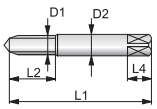
PS
VAF
TiCN

UNF
ANSI / ASME B1.1

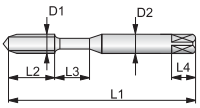
B
3,5-5 P

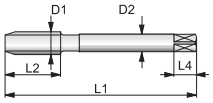
JIS STD.

HSSE
Co5



SG





Material	GR1		GR2		GR3		GR4		GR5	
Subg.	2,4,5,6		1,2,3,4,5,7,8		4		2,4		4	
mts./min.	13	18	15-20	13-18	9	11	20	25	10	20
	1 2		1 2		1 2 3 4		6		5 6	

D1	P	Tol.		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
UNF Nr 4	48	GH2	•	46	15	SG	4	3,2	6	3	2,40	0003602569
UNF Nr 5	44	GH2	•	46	12	8	4	3,2	6	3	2,65	0003602629
UNF Nr 6	40	GH2	•	48	11	9	4	3,2	6	3	2,90	0003602780
UNF Nr 8	36	GH2	•	52	12	9	5	4	7	3	3,50	0003603561
UNF Nr 10	32	GH3	•	60	14	11	5,5	4,5	7	3	4,10	0003603622
UNF Nr 12	28	GH3	•	60	16	14	6	4,5	7	3	4,60	0003603782
UNF 1/4	28	GH4	•	62	16	14	6	4,5	7	3	5,50	0003603842
UNF 5/16	24	GH4	•	70	18	-	6,1	5	8	3	6,90	0003604082
UNF 3/8	24	GH4	•	75	20	-	7	5,5	8	3	8,50	0003604142
UNF 7/16	20	GH5	•	80	20	-	8	6	9	3	9,90	0003604292
UNF 1/2	20	GH5	•	85	23	-	9	7	10	3	11,50	0003604353
UNF 9/16	18	GH5	•	90	23	-	10,5	8	11	3	12,80	0003604413
UNF 5/8	18	GH5	•	95	28	-	12	9	12	3	14,50	0003604845
UNF 3/4	16	GH5	•	105	32	-	14	11	14	4	17,50	0003605415
UNF 7/8	14	GH6	•	115	34	-	17	13	16	4	20,50	0003605636
UNF 1"	12	GH6	•	125	36	-	20	15	18	4	23,50	0003605786

Machos de roscar a máquina / *Machine taps*

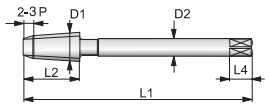
Para roscas con uso de sellador de estanqueidad. Agujeros ciegos y pasantes

For threads with dryseal material. Blind and Through holes

JMC

C15/1 AZ Nogrip-1®

NPT ANSI / ASME B1.20.1 | **C** 2-3 P | R15° | JIS STD. | **HSSE** Co5 | C.1:16

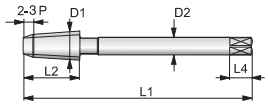


Material	GR1	GR2	GR3
Subg.	2,3,4,5,6	1,2,3,4,5,6,7,8	1,2,3,4
mts./min.	3 6	3 6	3 6
	1 2	1 2	1 2 3 4

D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPT 1/16	27	•	55	14	-	8	6	9	3	6,15	0001464275
NPT 1/8	27	•	63	15	-	8	6,2	9	5	8,40	0001027898
NPT 1/4	18	•	63	19	-	11	9	12	5	11,10	0001028197
NPT 3/8	18	•	70	21	-	14	11	14	5	14,30	0000882609
NPT 1/2	14	•	80	27	-	18	14	17	5	17,90	0000882970
NPT 3/4	14	•	100	27	-	23	17	20	5	23,30	0000883069
NPT 1"	11,5	•	110	32	-	26	21	24	5	29,00	0000883270

C15/1 AZ TiN

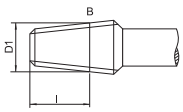
NPT ANSI / ASME B1.20.1 | **C** 2-3 P | R15° | JIS STD. | **HSSE** Co5 | C.1:16



Material	GR1	GR2	GR3
Subg.	2,3,4,5,6	1,2,3,4,5,6,7,8	1,2,3,4
mts./min.	3 6	3 6	3 6
	1 2	1 2	1 2 3 4

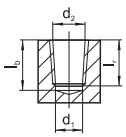
D1	tpi		L1	L2	L3	D2	a	L4	Z RH	Ød1	Cod.
NPT 1/16	27	•	55	14	-	8	6	9	3	6,15	0003643474
NPT 1/8	27	•	63	15	-	8	6,2	9	5	8,40	0001027958
NPT 1/4	18	•	63	19	-	11	9	12	5	11,10	0001028258
NPT 3/8	18	•	70	21	-	14	11	14	5	14,30	0000882769
NPT 1/2	14	•	80	27	-	18	14	17	5	17,90	0000882820
NPT 3/4	14	•	100	27	-	23	17	20	5	23,30	0000883129
NPT 1"	11,5	•	110	32	-	26	21	24	5	29,00	0000883330

Medidas del macho. Conicidad 1/16.
Tap sizes. Taper 1/16



Ø nominal *Nominal Ø*	L2 mm	D_1 mm	l mm
NPT 1/16	14	7,94	12
NPT 1/8	15	10,29	12
NPT 1/4	21	13,72	17,5
NPT 3/8	21	17,15	17,6
NPT 1/2	27	21,34	22,8
NPT 3/4	27	26,67	23
NPT 1"	32	33,4	27,4
NPT 1" 1/4	33	41,16	28,1
NPT 1" 1/2	33	48,26	28,4
NPT 2"	33	60,33	28

Diámetros de taladro previo para agujeros cónicos.
Tapping drills sizes for taper holes.



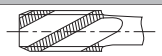
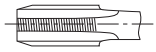
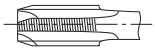
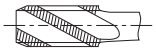
Ø nominal *Nominal Ø*	d_2 mm	l_r mm	l_b mm
NPT 1/16	6,39	9,29	10,7
NPT 1/8	8,74	9,32	10,8
NPT 1/4	11,36	13,52	15,6
NPT 3/8	14,8	13,83	16
NPT 1/2	18,32	18,07	20,8
NPT 3/4	23,67	18,55	21,3
NPT 1"	29,69	22,29	25,6
NPT 1" 1/4	38,45	22,8	26,1
NPT 1" 1/2	44,52	22,8	26,1
NPT 2"	56,56	23,2	26,5

Escariadores disponibles con Conicidad 1:16. Ver programa de escariadores
Taper reamers for taper holes 1:16. See reamers programme

Tipos de ranuras y entradas para machos de roscar.
Flutes and chamfers types for taps.

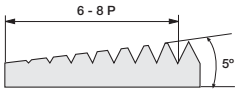
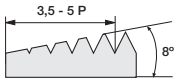
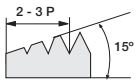
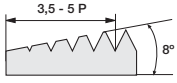
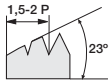
Ranuras / *Flutes*

La norma DIN 2197 tipifica los siguientes tipos de ranura para machos de roscar:
DIN norm 2197 provides regulations for the following types of flute for taps:

	Denominación *Nomenclature*	Ángulo de hélice *Helix angle* Medio/Basic	Formas entrada *Chamfer forms*	Descripción *Description*
	**L15**	**-15º**	**D**	Ranura en hélice a izquierda para agujeros pasantes *Flute on left hand helix for through holes*
		**0º**	**A,C,D,E**	Ranura recta para agujeros ciegos y pasantes *Straight flute for blind and through holes*
	Ángulo de hélice en la entrada *Spiral point*	**13º**	**B**	Ranura recta con entrada en hélice a izquierda para agujeros pasantes *Straight flute with spiral point for through holes*
	**R15** **R25** **R35** **R45**	**15º** **25º** **35º** **45º**	**C,E**	Ranura en hélice a derecha para agujeros ciegos *Flute on right hand helix for blind holes*

Entradas / *Chamfers*

La norma DIN 2197 tipifica los siguientes tipos de entrada para machos de roscar:
DIN norm 2197 provides regulations for the following types of chamfer for taps:

Forma / Form A		Para agujeros pasantes cortos. Ranura recta *For short through holes. Straight flute*
Forma / Form B		Para agujeros pasantes medios y materiales de viruta larga. Ranura recta con entrada. *For medium through holes and materials producing long chips. Straight with spiral flute.*
Forma / Form C		Para agujeros ciegos o pasantes y materiales de viruta corta. Ranura recta o helicoidal. *For blind or through holes and materials producing short chips. Straight or spiral flute.*
Forma / Form D		Para agujeros ciegos con salida de rosca larga o pasantes. Ranura recta o helicoidal. *For blind holes with deeper previous hole or through holes. Straight or spiral flute.*
Forma / Form E		Para agujeros ciegos con salida de rosca corta. Ranura recta o helicoidal. *For blind holes with shorter previous hole. Straight or spiral flute.*

Roscas normalizadas.
Standard threads.

Simbolo *Symbol*	Ángulo *Angle*	Norm. *Standard*	Descripción	*Description*
M	60º	DIN 13	Rosca Métrica ISO	*Metric ISO thread*
M	60º	DIN 158	Rosca Métrica ISO Cónica	*Taper metric ISO thread*
EG-M	60º	DIN 8140 PART 2	Rosca Métrica ISO para insertos helicoil o reductores de roscas	*Metric ISO thread for helical coil wire screw thread inserts*
MF	60º	DIN 13	Rosca Métrica Fina ISO	*Metric fine ISO thread*
MJ	60º	DIN ISO 5855	Rosca Métrica ISO para aeronáutica	*Metric ISO thread for aeronautics*
G	55º	DIN-ISO 228	Rosca ISO para tubos, cilíndrica, no estanca	*Pipe parallel ISO thread*
R	55º	DIN 259	Rosca para tubos, cilíndrica, no estanca, antigua	*Pipe parallel whitworth thread*
Rp	55º	DIN 2999-3858	Rosca interior cilíndrica para tubos	*Internal dryseal parallel thread*
Tr	30º	DIN 103	Rosca trapezoidal Métrica ISO	*Trapezoidal thread*
S	30º+3º	DIN 513	Rosca Diente de Sierra	*Saw form thread*
S	45º	DIN 2781	Rosca Diente de Sierra (2)	*Saw form thread (2)*
Rd	30º	DIN: 405/20400/15403	Rosca Redonda	*Rounded thread*
E	–	DIN 40400	Rosca lámparas eléctricas Edison	*Edison form thread*
Pg	80º	DIN 40430	Rosca para tubos de conducción eléctrica	*Steel conduit thread*
FG	60º	DIN 79012	Rosca para bicicletas	*Bicycle thread*
Vg	60º	DIN 7756	Rosca para válvulas	*Valves thread*
W	55º	DIN 477	Rosca Whitworth cónica para botellas de gas	*Whitworth thread for gas bottles valves*
BSW	55º	BS84 (1956)	Rosca Whitworth normal	*Whitworth coarse thread*
BSF	55º	BS84 (1956)	Rosca Whitworth fina	*Whitworth fine thread*
BA	47º30'	BS93 (1951)	Rosca Inglesa	*British association thread*
BSC	60º	BS811 (1950)	Rosca Inglesa para bicicletas	*British norm thread for bicycles*
G	55º	BS2779 (1973)	Rosca Whitworth para tubos cilíndrica (BSP)	*Pipe parallel whitworth thread (BSP)*
Rp	55º	BS21 (1973)	Rosca Whitworth cilíndrica para tubos (BSPP)	*Pipe parallel thread (BSPP)*
R	55º	BS21 (1985)	Rosca Whitworth cónica exterior para tubos estanca (BSPT)	*External dryseal pipe taper thread (BSPT)*
Rc	55	BS21 (1985)	Rosca Whitworth cónica interior para tubos, estanca (BSPT)	*Internal dryseal pipe taper thread (BSPT)*
NC	60º	ANSI B1.1 (1960)	Rosca nacional americana normal	*American national coarse thread series*
UNC	60º	ANSI B1.1 (1982)	Rosca unificada americana normal	*Unified coarse thread series*
EG-UNC	60º	MS 33537	Rosca unificada americana normal para insertos helicoil o reductores de roscas	*Unified coarse thread series for helical coil wire screw thread inserts*
NF	60º	ANSI B1.1 (1960)	Rosca nacional americana fina	*American national fine thread series*
UNF	60º	ANSI B1.1 (1982)	Rosca unificada americana fina	*Unified fine thread series*
NEF	60º	ANSI B1.1 (1960)	Rosca nacional americana extra fina	*American national extra fine thread series*
UNEF	60º	ANSI B1.1 (1982)	Rosca unificada americana extra fina	*Unified extra fine thread series*
N	60º	ANSI B1.1 (1960)	Rosca nacional americana, pasos 8-12-16 Hilos / 1"	*American national 8-12-16 T.P.I. pitch series (8N, 12N, 16N)*
UN	60º	ANSI B1.1 (1982)	Rosca unificada americana, pasos 8-12-16 Hilos/1"	*Unified 8-12-16 T.P.I. pitch series*
NS	60º	ANSI B1.1 (1960)	Rosca nacional americana, pasos especiales	*American national thread special pitches*
UNS	60º	ANSI B1.1 (1982)	Rosca unificada americana especial	*Unified thread special pitches*
UNM	60º	ASA B1.10 (1958)	Rosca unificada miniatura	*Unified miniature thread series*
UNJ	60º	BS 4084 (1978)	Rosca unif. con radio de fondo controlado 0,15011P A 0,18042P	*Unified constant pitch thread series with 0,15011P to 0,18042P controlled root radious*
UNJC	60º	BS 4084 (1978)	Rosca unificada normal con radio de fondo controlado 0,15011P A 0,18042P	*Unified coarse thread series with a 0,15011P to 0,18042P controlled radious*
UNJF	60º	BS 4084 (1978)	Rosca unificada fina con radio de fondo controlado 0,15011P A 0,18042P	*Unified fine thread series with a 0,15011P to 0,18042P controlled root radious*
UNJEF	60º	BS 4084 (1978)	Rosca unificada extrafina con radio de fondo controlado 0,15011P A 0,18042P	*Unified extra fine thread series with a 0,15011P to 0,18042P controlled root radious*
NH	60º	ANSI B2.4 H28 (1966)	Rosca americana para material contra incendios	*American national firehouse and hose coupling thread*
NPS	60º		Usada para designar los machos NPSC y NPSM	*American standard straight pipe thread NPSC & NPSM*
NPSC	60º	ANSI/ASME -B1.20.1 (1983)	Rosca americana cilíndrica para acoplamientos de tubos	*American standard straight pipe thread in pipe couplings* (marked NPS)
NPSF	60º	ANSI B1.20.3 (1976)	Rosca americana estanca cilíndrica para tubos	*Dryseal american standard internal straight pipe thread (fuel)*
NPSH	60º	ANSI/ASME- B1.20.1 (1983)	Rosca americana cilíndrica para acoplamientos de tubos flexibles	*American standard straight pipe thread for hose couplings*
NPSI	60º	ANSI B1.20.3 - (1976)	Rosca americana intermedia interna cilíndrica para tubos estancos	*American standard intermidiate internal straight pipe thread*
NPSL	60º	ANSI/ASME - B1.20.1 (1983)	Rosca americana cilíndrica de tubos para uniones mecánicas mechanical joints	*American standard straight pipe thread for loose-fitting*
NPSM	60º	ANSI/ASME-B1.20.1 (1983)	Rosca americana cilíndrica de tubos para uniones mecánicas	*American standard straight pipe thread for free-fitting mechanical joints*
ANPT	60º	MIL-P-7105	Rosca americana para tubos cónicos en aeronáutica	*Aeronautical national form taper pipe thread*
NPT	60º	ANSI/ASME-B1.20.1 (1983)	Rosca americana cónica para tubos	*American standard taper pipe thread*
NPTF	60º	ANSI-B1.20.3 (1976)	Rosca americana estanca cónica para tubos (FUEL)	*Dryseal american standard taper pipe thread (fuel)*
NPTR	60º	ANSI/ASME-B1.20.1 (1983)	Rosca americana cónica para juntas de raíles de ferrocarril	*American standard taper pipe thread for railling joints* (tap marked NPT)
NGO	60º	ANSI/ASME-B1.20.1 (1983)	Rosca americana para salidas de gas	*National gas outlet thread (specify RH or LH)*
NGS	60º	ANSI/ASME-B1.20.1 (1983)	Rosca americana GAS cilíndrica	*National gas straight thread*
NGT	60º	ANSI B57.1(1977)	Rosca americana GAS cónica	*National gas taper thread (see also «SGT»)*
PTF	60º	ANSI B1.20.3-(1976)	Rosca cónica para tubos SAE corta y estanca	*Dryseal SAE short taper pipe thread*
ACME-C	29º	ANSI B1.5 (1977)	Rosca trapezoidal americana centralizada	*Acme thread centralizing*
ACME-G	29º	ANSI B1.5 (1977)	Rosca trapezoidal americana para usos generales	*Acme thread general purpose*
STUB-ACME	29º	ANSI B1.8 (1977)	Rosca trapezoidal americana truncada	*Stub Acme thread*
AMO	55º	ANSI B1.11(1958)	Rosca americana para objetivos de microscopios	*American standard microscope objetive thread*
N-BUTT	45º+5º	ANSI B1.9 (1973)	Rosca americana BUTTRESS diente de sierra	*American BUTTRESS thread*
V	60º		Rosca en "V" con cresta y fondos truncados	*60º «V» thread with truncated crest and root* (flatted to the user's specifications)
SB			Roscas para fabricantes de estufas	*Manufacturers stovebolt standards thread*
STI	60º		Rosca especial para insertos helicoil o reductores de roscas	*Special thread for helical coil wire screw thread inserts*
SGT	60º	ANSI B57.1(1977)	Rosca cónica GAS especial	*Special gas taper thread*
SPL-PTF	60º	ANSI B1.20.3 (1976)	Rosca estanca especial GAS cónica	*Dryseal special taper pipe thread*
API	60º		Inst. americano del petróleo. Rosca americana cónica para instalaciones petrolíferas	*American national taper form thread for petroleum installations*

Medidas de roscas normalizadas.
Standard threads.

Métrica / Metric ISO DIN 13

Ø Nominal *Nominal*	Ø Rosca *Thread* mm	Paso *Pitch* **M** mm	Pasos *Pitches* **MF** mm
M 1	1	0,25	0,2
M 1,1	1,1	0,25	0,2
M 1,2	1,2	0,25	0,2
M 1,4	1,4	0,3	0,2
M 1,6	1,6	0,35	0,2
M 1,7*	1,7	0,35	0,2
M 1,8	1,8	0,35	0,2
M 2	2	0,4	0,25
M 2,2	2,2	0,45	0,25
M 2,3*	2,3	0,4	0,25
M 2,5	2,5	0,45	0,35
M 2,6*	2,6	0,45	0,35
M 3	3	0,5	0,35
M 3,5	3,5	0,6	0,35
M 4	4	0,7	0,35-0,5
M 4,5	4,5	0,75	0,5
M 5	5	0,8	0,5
M 6	6	1	0,5-0,75
M 7	7	1	0,5-0,75
M 8	8	1,25	0,75-1
M 9	9	1,25	0,75-1
M 10	10	1,5	0,75-1-1,25
M 11	11	1,5	1
M 12	12	1,75	1-1,25-1,5
M 14	14	2	1-1,25-1,5
M 15	15	-	1,5
M 16	16	2	1-1,5
M 17	17	-	1,5
M 18	18	2,5	1,5-2
M 20	20	2,5	1,5-2
M 22	22	2,5	1,5-2
M 24	24	3	1,5-2
M 25	25	-	1,5-2
M 26	26	-	1,5-2
M 27	27	3	1,5-2
M 28	28	-	1,5-2
M 30	30	3,5	1,5-2-3
M 32	32	-	1,5-2
M 33	33	3,5	1,5-2-3
M 35	35	-	1,5
M 36	36	4	1,5-2-3
M 38	38	-	1,5-2
M 39	39	4	1,5-2-3
M 40	40	-	1,5-2-3
M 42	42	4,5	1,5-2-3
M 45	45	4,5	1,5-2-3-4
M 48	48	5	1,5-2-3-4
M 50	50	-	1,5-2-3
M 52	52	5	1,5-2-3-4
M 55	55	-	1,5-2-3-4
M 56	56	5,5	1,5-2-3-4
M 60	60	5,5	1,5-2-3-4
M 64	64	6	1,5-2-3-4
M 68	68	6	1,5-2-3-4
M 70	70	-	2-3-4-6
M 72	72	-	2-3-4-6
M 75	75	-	2-3-4-6
M 76	76	-	2-3-4-6
M 80	80	-	2-3-4-6
M 85	85	-	2-3-4-6
M 90	90	-	2-3-4-6
M 95	95	-	2-3-4-6
M 100	100	-	2-3-4-6

Pg DIN 40430

Ø Nominal *Nominal*	Ø Tubo *Pipe* mm	Paso *Pitch* tpi
Pg 7	12,5	20
Pg 9	15,2	18
Pg 11	18,6	18
Pg 13,5	20,4	18
Pg 16	22,5	18
Pg 21	28,3	16
Pg 29	37	16
Pg 36	47	16
Pg 42	54	16
Pg 48	59,3	16

Whitworth BSW / BSF BS 84

Ø Nominal *Nominal*	Ø Rosca *Thread* mm	Paso *Pitch* **BSW** tpi	Pasos *Pitches* **BSF** tpi
1/16	1,587	60	
3/32	2,381	48	
1/8	3,175	40	
5/32	3,968	32	
3/16	4,762	24	32
7/32	5,556	24	28
1/4	6,350	20	26
9/32	7,143	20	26
5/16	7,938	18	22
3/8	9,525	16	20
7/16	11,112	14	18
1/2	12,700	12	16
9/16	14,287	12	16
5/8	15,875	11	14
11/16	17,462	11	14
3/4	19,050	10	12
13/16	20,637	10	12
7/8	22,225	9	11
1"	25,400	8	10
1" 1/8	28,575	7	9
1" 1/4	31,750	7	9
1" 3/8	34,925	6	8
1" 1/2	38,100	6	8
1" 5/8	41,275	5	8
1" 3/4	44,450	5	7
1" 7/8	47,625	4 1/2	
2"	50,800	4 1/2	7
2" 1/4	57,150	4	6
2" 1/2	63,500	4	6
2" 3/4	69,850	3 1/2	6
3"	76,200	3 1/2	5

G(BSP) ISO 228/1-DIN 259/1
RC (BSPT) ISO 7/1-BS21

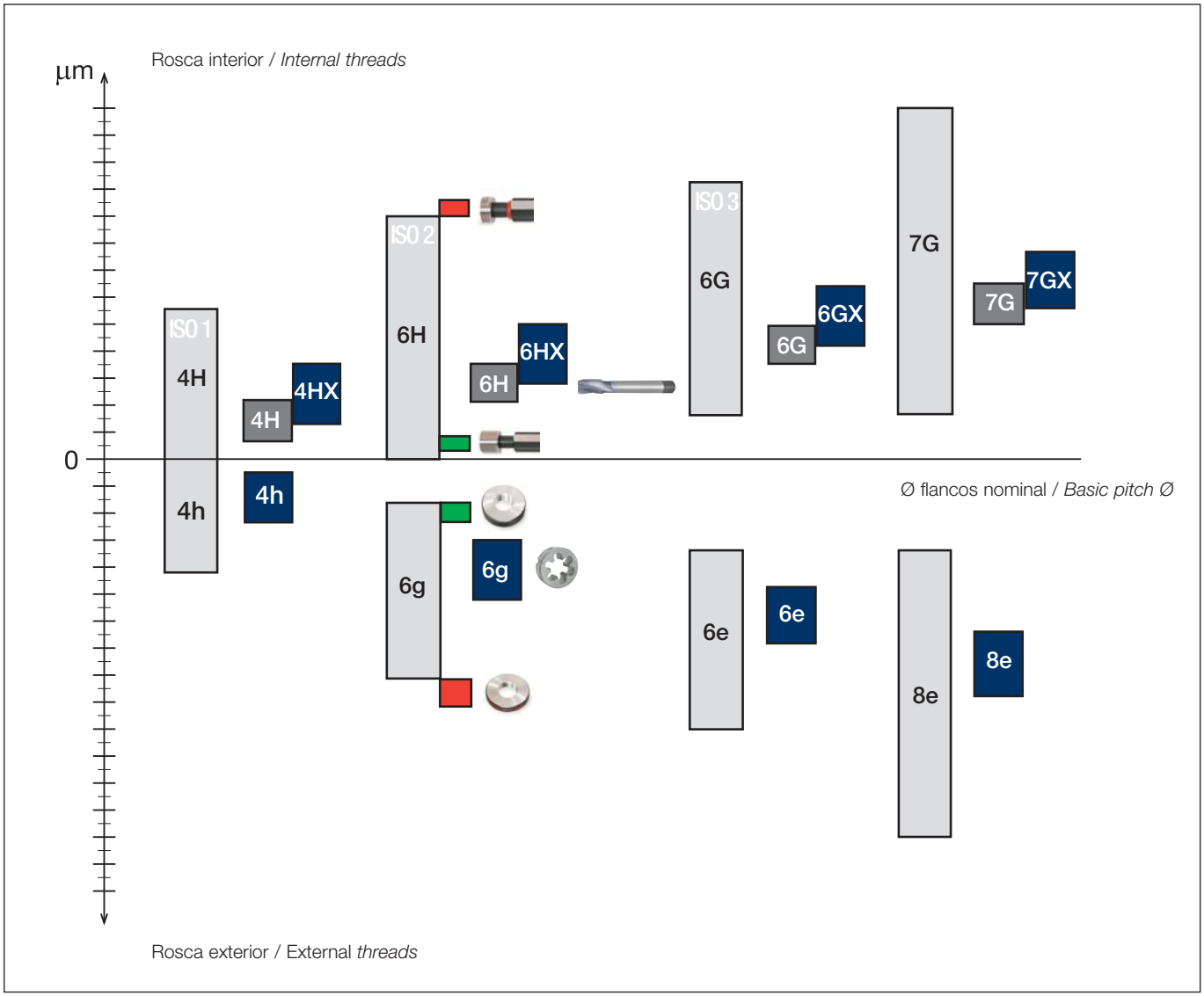
Ø Nominal *Nominal*	Ø Rosca *Thread* mm	Paso *Pitch* tpi
1/8	9,728	28
1/4	13,157	19
3/8	16,662	19
1/2	20,995	14
5/8	22,911	14
3/4	26,441	14
7/8	30,201	14
1"	33,249	11
1" 1/8	37,897	11
1" 1/4	41,910	11
1" 3/8	44,323	11
1" 1/2	47,803	11
1" 3/4	53,746	11
2"	59,614	11
2" 1/4	65,710	11
2" 1/2	75,184	11
2" 3/4	81,534	11
3"	87,884	11
3" 1/4	93,980	11
3" 1/2	100,330	11
3" 3/4	106,680	11
4"	113,030	11

UNC / UNF / UNEF / UN / UNS ASME B1.1

Ø *Nominal* *Nominal*	Ø Rosca *Thread* mm	Paso *Pitch* **UNC** tpi	Paso *Pitch* **UNF** tpi	Paso *Pitch* **UNEF** tpi	Pasos *Pitches* **UN** tpi	Pasos *Pitches* **UNS** tpi
Nr O (.060)	1,524		80			
Nr 1 (.073)	1,854	64	72			
Nr 2 (.086)	2,184	56	64			
Nr 3 (.099)	2,515	48	56			
Nr 4 (.112)	2,845	40	48			
Nr 5 (.125)	3,175	40	44			
Nr 6 (.138)	3,505	32	40			
Nr 8 (.164)	4,166	32	36			
Nr 10 (.190)	4,826	24	32			28,36,40,48,56
Nr 12 (.216)	5,486	24	28	32		36,40,48,56
1/4	6,350	20	28	32		24,27,36,40,48,56
5/16	7,938	18	24	32	20,28	27,36,40,48
3/8	9,525	16	24	32	20,28	18,27,36,40
7/16	11,113	14	20	28	16,32	18,24,27
1/2	12,700	13	20	28	16,32	12,14,18,24,27
9/16	14,288	12	18	24	16,20,28,32	14,27
5/8	15,875	11	18	24	12,16,20,28,32	14,27
11/16	17,463			24	12,16,20,28,32	-
3/4	19,050	10	16	20	12,28,32	14,18,24,27
13/16	20,638			20	12,16,28,32	-
7/8	22,225	9	14	20	12,16,28,32	10,18,24,27
15/16	23,813			20	12,16,28,32	-
1"	25,400	8	12	20	16,28,32	10,14,18,24,27
1" 1/16	26,998			18	8,12,16,20,28	-
1" 1/8	28,575	7	12	18	8,16,20,28	10,14,24
1" 3/16	30,163			18	8,12,16,20,28	-
1" 1/4	31,750	7	12	18	8,16,20,28	10,14,24
1" 5/16	33,338			18	8,12,16,20,28	-
1" 3/8	34,925	6	12	18	8,16,20,28	10,14,24
1" 7/16	36,153			18	6,8,12,16,20,28	-
1" 1/2	38,100	6	12	18	8,16,20,28	10,14,24
1" 9/16	39,688			18	6,8,12,16,20	-
1" 5/8	41,275			18	6,8,12,16,20	10,14,24
1" 11/16	42,863			18	6,8,12,16,20	-
1" 3/4	44,450	5		16	6,8,12,20	10,14,18
1" 13/16	46,037				6,8,12,16,20	-
1" 7/8	47,625				6,8,12,16,20	10,14,18
1" 15/16	49,212				6,8,12,16,20	-
2"	50,800	4 1/2		16	6,8,12,20	10,14,18
2" 1/4	57,150	4 1/2			6,8,12,16,20	10,14,18
2" 1/2	63,500	4			6,8,12,16,20	10,14,18
2" 3/4	69,850	4			6,8,12,16,20	10,14,18
3"	76,200	4			6,8,12,16,20	10,14,18
3" 1/4	82,550	4			6,8,12,16	10,14,18
3" 1/2	88,900	4			6,8,12,16	10,14,18
3" 3/4	95,250	4			6,8,12,16	10,14,18
4"	101,600	4			6,8,12,16	10,14

Tolerancia del diámetro de flancos para roscas Métricas.
Tolerance zones of the pitch diameter for Metric threads.

Amplitut de campo de tolerancia. / *Tolerance zones of the pitch diameter*



Rosca interior / *Internal thread*

- Tolerancia de diámetro en los flancos de la rosca interior según DIN ISO 865-1.
  Pitch diameter tolerance of the internal thread acc. DIN ISO 865-1.
- Tolerancia de diámetro en los flancos del macho de rosca según DIN EN 22857 (DIN 7G según DIN 802-4).
  Pitch diameter tolerance of the tap acc. DIN EN 22857 (DIN 7G acc. DIN 802-4).
- Tolerancia de diámetro en los flancos del macho con sobre-medida según norma JMC.
  Pitch diameter tolerance of the tap acc. JMC standards.
- Tolerancia de diámetro en los flancos del calibre tampón de rosca no pasa según DIN ISO 1502.
  Pitch diameter tolerance of the no-go thread plug gauge acc. DIN ISO 1502.
- Tolerancia de diámetro en los flancos del calibre tampón de rosca pasa según DIN ISO 1502.
  Pitch diameter tolerance of the go thread plug gauge acc. DIN ISO 1502.

Rosca exterior / External *thread*

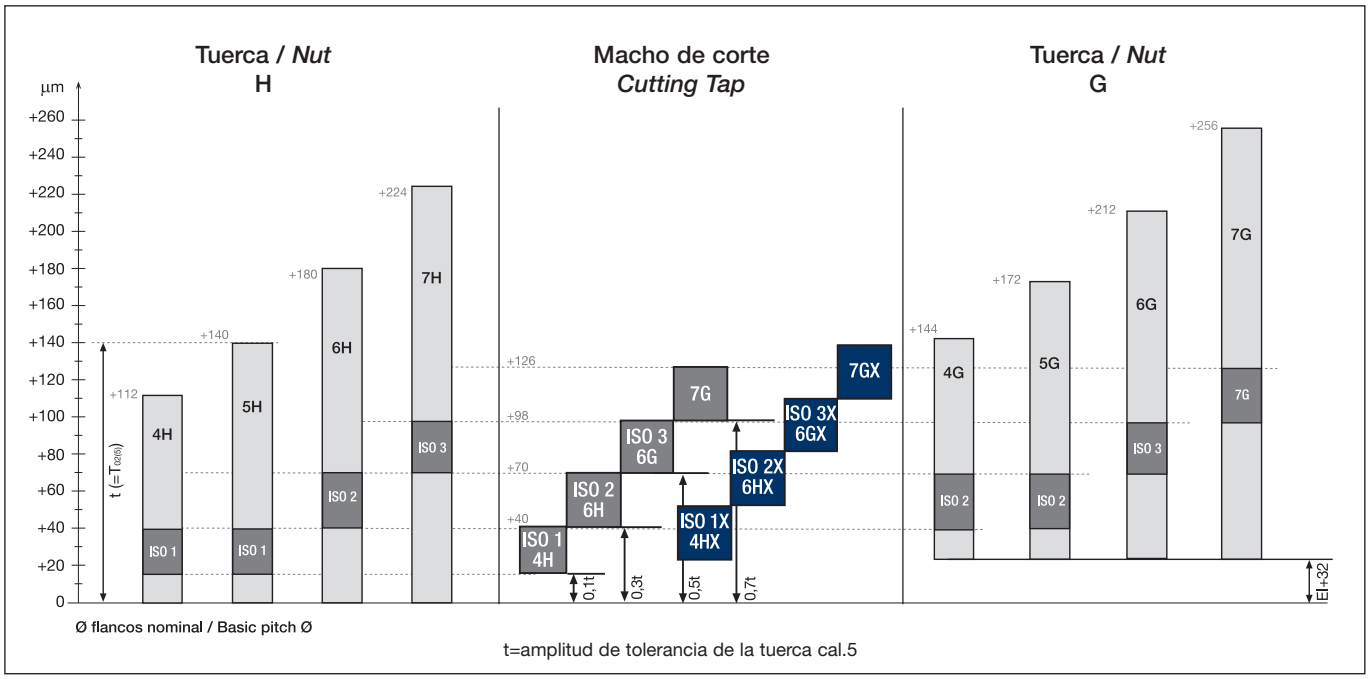
- Tolerancia de diámetro en los flancos de la rosca exterior según DIN ISO 865-1.
  Pitch diameter tolerance of the external thread acc. DIN ISO 865-1.
- Tolerancia de diámetro en los flancos del cojinete según norma JMC.
  Pitch diameter tolerance of the die acc. JMC standards.
- Tolerancia de diámetro en los flancos del calibre anillo de rosca no pasa según DIN ISO 1502.
  Pitch diameter tolerance of the no-go thread ring gauge acc. DIN ISO 1502.
- Tolerancia de diámetro en los flancos del anillo calibre de rosca pasa según DIN ISO 1502.
  Pitch diameter tolerance of the go thread ring gauge acc. DIN ISO 1502.

Tolerancias de rosca Métrica ISO.
Tolerance of ISO Metric thread.

Equivalencias entre clases de tolerancia de macho y campos de tolerancia de rosca interior.
Equivalence between tap class tolerances and nut tolerances.

Tolerancia de rosca interior (tuerca) *Internal tolerances (Nut)* DIN 13	Tolerancia de macho rosca M *Tap tolerances M thread* DIN EN 22857	Tolerancia de macho rosca M *Tap tolerances M thread* DIN 802 PARTE I (norma antigua) *DIN 802 PART I (old norm)*
	CLASE / CLASS	
4H 5H	1 ISO 1	4H
4G 5G 6H	2 ISO 2	6H
6G 7H 8H	3 ISO 3	6G
7G 8G		7G

La tolerancia 7G no está recogida por la norma EN 22857, por lo que nos remitimos a la antigua norma DIN 802 (parte 1) para su aplicación.
Tolerance 7G is not according to norm EN 22857, therefore we refer to the old DIN 802 norm (part 1).



Ejemplos: Valores mostrados en µm para M10 / *Example: all values shown for M10 in µm*

El campo de tolerancia (x) no está recogido por la norma EN 22857, sin embargo la antigua norma DIN 802 (parte 1) permite que para algunos casos (roscado en materiales abrasivos, machos de laminación, etc.) la tolerancia se pueda modificar a criterio del fabricante.
The tolerance denominated (x) is not on norm EN 22857, nevertheless old DIN 802 norm (part 1) allows the norm to be changed in some cases (threading in abrasive materials, forming taps, etc.), following the manufacturers criterion.

Tolerancias para el cálculo de roscas métricas de los machos de roscar .
Tolerances of metric thread tap pitch diameter.

Ø Rosca *Thread* Ø **D mm.**		Paso *Pictch* **P mm.**	µm							
			ISO 1 - 4H		ISO 2 - 6H		ISO 3 - 6G		7G	
Desde/*From*	Hasta/*up to*		Es	Ei	Es	Ei	Es	Ei	Es	Ei
0,99	1,4	0,2	+15	+3	+25	+15	-	-	-	-
		0,25	+17	+6	+28	+17	-	-	-	-
		0,3	+18	+6	+30	+18	-	-	-	-
1,4	2,8	0,2	+16	+6	+26	+16	-	-	-	-
		0,25	+18	+6	+30	+18	-	-	-	-
		0,35	+20	+6	+34	+20	-	-	-	-
		0,4	+21	+7	+35	+21	+49	+35	-	-
		0,45	+23	+8	+38	+23	+53	+38	-	-
2,8	5,6	0,35	+21	+6	+36	+21	-	-	-	-
		0,5	+24	+8	+40	+24	+56	+40	+72	+56
		0,6	+27	+9	+45	+27	+63	+45	+81	+63
		0,7	+29	+10	+48	+29	+67	+48	+86	+67
		0,75								
		0,8	+30	+10	+50	+30	+70	+50	+90	+70
5,6	11,2	0,5	+27	+9	+45	+27	+63	+45	+81	+63
		0,75	+32	+11	+53	+32	+74	+53	+95	+74
		1	+35	+11	+59	+35	+83	+59	+107	+83
		1,25	+38	+13	+63	+38	+88	+63	+113	+88
		1,5	+42	+14	+70	+42	+98	+70	+126	+98
11,2	22,4	0,5	+29	+10	+48	+29	+67	+48	+86	+67
		0,75	+34	+12	+56	+34	+78	+56	+100	+78
		1	+35	+11	+59	+35	+83	+59	+107	+83
		1,25	+42	+14	+70	+42	+98	+70	+126	+98
		1,5	+45	+15	+75	+45	+105	+75	+135	+105
		1,75	+48	+16	+80	+48	+112	+80	+144	+112
		2	+51	+17	+85	+51	+119	+85	+153	+119
		2,5	+54	+18	+90	+54	+126	+90	+162	+126
22,4	45	0,5	+30	+10	+50	+30	+70	+50	+90	+70
		0,75	+36	+12	+60	+36	+84	+60	+108	+84
		1	+40	+14	+66	+40	+92	+66	+118	+92
		1,5	+48	+16	+80	+48	+112	+80	+144	+112
		2	+54	+18	+90	+54	+126	+90	+162	+126
		3	+64	+22	+106	+64	+148	+106	+190	+148
		3,5	+67	+22	+112	+67	+157	+112	+202	+157
		4	+71	+24	+118	+71	+165	+118	+212	+165
		4,5	+75	+25	+125	+75	+175	+125	+225	+175
45	90	0,5	+34	+12	+56	+34	+78	+56	+100	+78
		0,75	+38	+13	+63	+38	+88	+63	+113	+88
		1	+45	+15	+75	+45	+105	+75	+135	+105
		1,5	+51	+17	+85	+51	+119	+85	+153	+119
		2	+57	+19	+95	+57	+133	+95	+171	+133
		3	+67	+22	+112	+67	+157	+112	+202	+157
		4	+75	+25	+125	+75	+175	+125	+225	+175
		5	+80	+27	+133	+80	+186	+133	+239	+186
		5,5	+84	+28	+140	+84	+196	+140	+252	+196
		6	+90	+30	+150	+90	+210	+150	+270	+210

Fórmula para el cálculo de medidas / *Size formula calculation:*
Tolerancias Métricas / *Metric tolerances*

Ø flancos/*pitch min.*= Ø flancos nominal / *Basic pitch* Ø + Ei (mm.)	Ø exterior min. = Ø nominal/*Basic pitch* Ø + Es (mm.)
Ø flancos/*pitch max.*= Ø flancos nominal / *Basic pitch* Ø + Es (mm.)	Ø exterior max. = Ø exterior min. + 0,030 (mm.)

M Tolerancias del diámetro de flancos de los machos de roscar.
Tolerances of thread tap pitch diameter.

Ø Rosca *Thread* Ø **D mm.**			Paso *Pitch* **P mm.**	Ø Flancos nominal *Basic pitch*Ø **mm.**	Ø Rosca *Thread* Ø **D mm.**			Paso *Pitch* **P mm.**	Ø Flancos nominal *Basic pitch*Ø **mm.**	Ø Rosca *Thread* Ø **D mm.**			Paso *Pitch* **P mm.**	Ø Flancos nominal *Basic pitch*Ø **mm.**
Serie 1	Serie 2	Serie 3			Serie 1	Serie 2	Serie 3			Serie 1	Serie 2	Serie 3		
M1*			0,25	0,838			M7	1	6,350	M36			4	33,402
	M1,1*		0,25	0,938	M8			1,25	7,188		M39		4	36,402
M1,2*			0,25	1,038			M9	1,25	8,188	M42			4,5	39,077
	M1,4*		0,3	1,205	M10			1,5	9,026		M45		4,5	42,077
M1,6			0,35	1,373			M11	1,5	0,026	M48			5	44,752
	M1,8		0,35	1,573	M12			1,75	10,863		M52		5	48,752
M2			0,4	1,740		M14		2	12,701	M56			5,5	52,428
	M2,2		0,45	1,908	M16			2	14,701		M60		5,5	56,428
M2,5			0,45	2,208		M18		2,5	16,376	M64			6	60,103
M3			0,5	2,675	M20			2,5	18,376		M68		6	64,103
	M3,5		0,6	3,110		M22		2,5	20,376					
M4			0,7	3,545	M24			3	22,051					
	M4,5		0,75	4,013		M27		3	25,051					
M5			0,8	4,480	M30			3,5	27,727					
M6			1	5,350		M33		3,5	30,727					

Tolerancias del diámetro de flancos de los machos de roscar.
Tolerances of thread tap pitch diameter.

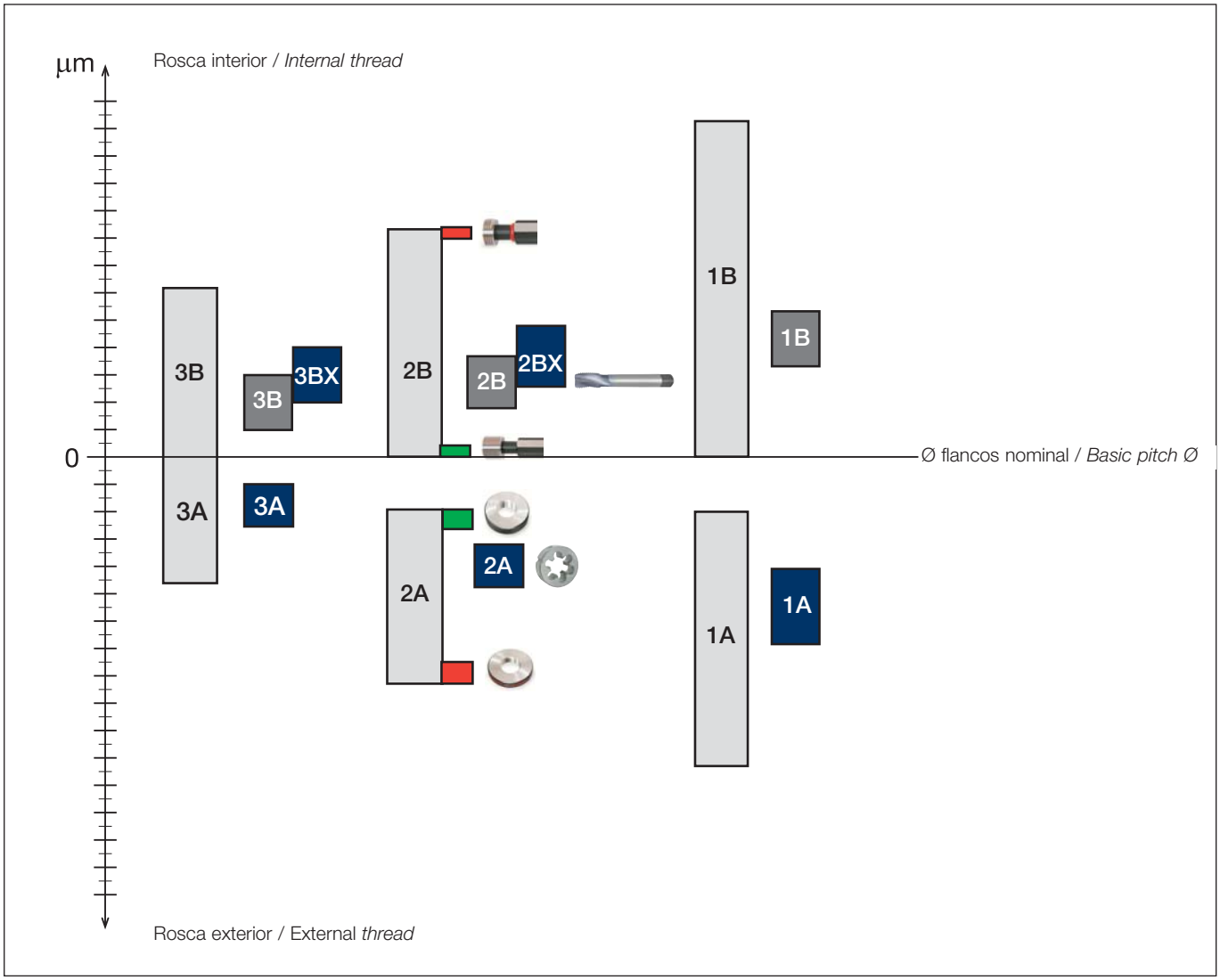
JMC

MF

Ø Rosca *Thread Ø* D mm.			Paso *Pitch* P mm.	Ø Flancos nominal *Basic pitchØ* mm.	Ø Rosca *Thread Ø* D mm.			Paso *Pitch* P mm.	Ø Flancos nominal *Basic pitchØ* mm.	Ø Rosca *Thread Ø* D mm.			Paso *Pitch* P mm.	Ø Flancos nominal *Basic pitchØ* mm.
Serie 1	Serie 2	Serie 3			Serie 1	Serie 2	Serie 3			Serie 1	Serie 2	Serie 3		
M1*			0,2	0,870			M28	2	26,701			M62	3	60,051
	M1,1*		0,2	0,970	M30			1	29,350			M62	4	59,402
M1,2*			0,2	1,070	M30			1,5	29,026	M64			1,5	63,026
	M1,4*		0,2	1,270	M30			2	28,701	M64			2	62,701
M1,6			0,2	1,470	M30			3	28,051	M64			3	62,051
	M1,8		0,2	1,670			M32	1,5	31,026	M64			4	61,402
M2			0,25	1,838			M32	2	30,701			M65	1,5	64,026
	M2,2		0,25	2,038		M33		1,5	32,026			M65	2	63,701
M2,5			0,35	2,273		M33		2	31,701			M65	3	63,051
M3			0,35	2,773		M33		3	31,051			M65	4	62,402
	M3,5		0,35	3,237			M35	1,5	34,026		M68		1,5	67,026
M4			0,5	3,675	M36			1,5	35,026		M68		2	66,701
	M4,5		0,5	4,175	M36			2	34,701		M68		3	66,051
M5			0,5	4,675	M36			3	34,051		M68		4	65,402
		M5,5	0,5	5,175			M38	1,5	37,026			M70	1,5	69,026
M6			0,5	5,675		M39		1,5	38,026			M70	2	68,701
M6			0,75	5,513		M39		2	37,701			M70	3	68,051
		M7	0,75	6,513		M39		3	37,051			M70	4	67,402
M8			0,5	7,675			M40	1,5	39,026			M70	6	66,103
M8			0,75	7,531			M40	2	38,701	M72			1,5	71,026
M8			1	7,350			M40	3	38,051	M72			2	70,701
		M9	1	8,350	M42			1,5	41,026	M72			3	70,051
M10			0,75	9,513	M42			2	40,701	M72			4	69,402
M10			1	9,350	M42			3	40,051	M72			6	68,103
M10			1,25	3,188	M42			4	39,402			M75	1,5	74,026
		M11	1	10,350		M45		1,5	44,026			M75	2	73,701
M12			1	11,350		M45		2	43,701			M75	3	73,051
M12			1,25	11,188		M45		3	43,051			M75	4	72,402
M12			1,5	11,026		M45		4	42,402		M76		1,5	75,026
	M14		1	13,350	M48			1,5	47,026		M76		2	74,701
	M14		1,25	13,188	M48			2	46,701		M76		3	74,051
	M14		1,5	13,026	M48			3	76,051		M76		4	73,402
		M15	1	14,350	M48			4	45,402		M76		6	72,103
		M15	1,5	14,026			M50	1,5	49,026	M80			1,5	79,026
M16			1	15,350			M50	2	48,701	M80			2	78,701
M16			1,5	15,026			M50	3	48,051	M80			3	78,051
		M17	1	16,350		M52		1,5	51,026	M80			4	77,402
		M17	1,5	16,026		M52		2	50,701	M80			6	76,103
	M18		1	17,350		M52		3	50,051		M85		2	83,701
	M18		1,5	17,026		M52		4	79,402		M85		3	83,051
	M18		2	16,701			M55	1,5	54,026		M85		4	82,402
M20			1	19,350			M55	2	53,701		M85		6	81,103
M20			1,5	19,026			M55	3	53,051	M90			2	88,701
M20			2	18,701			M55	4	52,402	M90			3	88,051
	M22		1	21,350	M56			1,5	55,026	M90			4	87,402
	M22		1,5	21,026	M56			2	54,701	M90			6	86,103
	M22		2	20,701	M56			3	54,051		M95		2	93,701
M24			1	23,350	M56			4	53,402		M95		3	93,051
M24			1,5	23,026			M58	1,5	57,026		M95		4	92,402
M24			2	22,701			M58	2	56,701		M95		6	91,103
		M25	1	24,350			M58	3	56,051	M100			2	98,701
		M25	1,5	24,026			M58	4	55,402	M100			3	98,051
		M25	2	23,701		M60		1,5	59,026	M100			4	97,402
	M27		1	26,350		M60		2	58,701	M100			6	96,103
	M27		1,5	26,026		M60		3	58,051		M105		2	103,701
	M27		2	25,701		M60		4	57,402		M105		3	103,051
		M28	1	27,350			M62	1,5	61,026		M105		4	102,402
		M28	1,5	27,026			M62	2	60,701		M105		6	101,103

Tolerancia del diámetro de flancos para roscas Americanas.
Tolerance zones of the pitch diameter for Unified threads.

Amplitut de campo de tolerancia. / *Tolerance zones of the pitch diameter*



Rosca interior / *Internal thread*

- Tolerancia de diámetro en los flancos de la rosca interior según ASME B1.1
  Pitch diameter tolerance of the internal thread acc. ASME B1.1
- Tolerancia de diámetro en los flancos del macho con sobre-medida según norma JMC.
  Pitch diameter tolerance of the tap acc. JMC standards.
- Tolerancia de diámetro en los flancos del calibre tampón de rosca no pasa según DIN ISO 1502
  Pitch diameter tolerance of the no-go thread plug gauge acc. DIN ISO 1502
- Tolerancia de diámetro en los flancos del calibre tampón de rosca pasa según DIN ISO 1502
  Pitch diameter tolerance of the go thread plug gauge acc. DIN ISO 1502.

Rosca exterior / External *thread*

- Tolerancia de diámetro en los flancos de la rosca exterior según ASME B1.1
  Pitch diameter tolerance of the external thread acc. ASME B1.1
- Tolerancia de diámetro en los flancos del cojinete según norma JMC.
  Pitch diameter tolerance of the die acc. JMC standards.
- Tolerancia de diámetro en los flancos del calibre anillo de rosca no pasa según ANSI/ASME B1.2
  Pitch diameter tolerance of the no-go thread ring gauge acc. ANSI/ASME B1.2
- Tolerancia de diámetro en los flancos del anillo calibre de rosca pasa según ANSI/ASME B1.2
  Pitch diameter tolerance of the go thread ring gauge acc. ANSI/ASME B1.2

Clases de tolerancias para el cálculo de roscas Americanas.
Tolerances to calculate Unified and American threads.

Tolerancia de machos recomendado para clase 2, 3, 2B, y 3B, UNC, UNF.
Recommended tap for class of thread 2, 3, 2B and 3B UNC, UNF.

Ø Rosca *Thread Ø* **D inch.**	Paso / *Pictch* **tpi.**		Clase *Class 2*	Clase *Class 3*	Clase normal *Normal Class 2B*	Clase *Class 3B*
	NC UNC	NF UNF				
Nº0	..	80	G H1	G H1	G H2	G H1
Nº1	64	..	G H1	G H1	G H2	G H1
Nº1	..	72	G H1	G H1	G H2	G H1
Nº2	56	..	G H1	G H1	G H2	G H1
Nº2	..	64	G H1	G H1	G H2	G H1
Nº3	48	..	G H1	G H1	G H2	G H1
Nº3	..	56	G H1	G H1	G H2	G H1
Nº4	40	..	G H2	G H1	G H2	G H2
Nº4	..	48	G H1	G H1	G H2	G H1
Nº5	40	..	G H2	G H1	G H2	G H2
Nº5	..	44	G H1	G H1	G H2	G H1
Nº6	32	..	G H2	G H1	G H3	G H2
Nº6	..	40	G H2	G H1	G H2	G H2
Nº8	32	..	G H2	G H1	G H3	G H2
Nº8	..	36	G H2	G H1	G H2	G H2
Nº10	24	..	G H3	G H1	G H3	G H3
Nº10	..	32	G H2	G H1	G H3	G H2
Nº12	24	..	G H3	G H1	G H3	G H3
Nº12	..	28	G H3	G H1	G H3	G H3
1/4	20	..	G H3	G H2	G H5	G H3
1/4	..	28	G H3	G H1	G H4	G H3
5/16	18	..	G H3	G H2	G H5	G H3
5/16	..	24	G H3	G H1	G H4	G H3
3/8	16	..	G H3	G H2	G H5	G H3
3/8	..	24	G H3	G H1	G H4	G H3
7/16	14	..	G H5	G H3	G H5	G H3
7/16	..	20	G H3	G H1	G H5	G H3
1/2	13	..	G H5	G H3	G H5	G H3
1/2	..	20	G H3	G H1	G H5	G H3
9/16	12	..	G H5	G H3	G H5	G H3
9/16	..	18	G H3	G H2	G H5	G H3
5/8	11	..	G H5	G H3	G H5	G H3
5/8	..	18	G H3	G H2	G H5	G H3
3/4	10	..	G H5	G H3	G H5	G H5
3/4	..	16	G H3	G H2	G H5	G H3
7/8	9	..	G H6	G H4	G H6	G H4
7/8	..	14	G H4	G H2	G H6	G H4
1"	8	..	G H6	G H4	G H6	G H4
1"	..	12	G H4	G H2	G H6	G H4
1"	..	..	G H4	G H2	G H6	G H4
1" 1/8	7	..	G H8	G H4	G H8	G H4
1" 1/8	..	12	G H4	G H4	G H6	G H4
1" 1/4	7	..	G H8	G H4	G H8	G H4
1" 1/4	..	12	G H4	G H4	G H6	G H4
1" 3/8	6	..	G H8	G H4	G H8	G H4
1" 3/8	..	12	G H4	G H4	G H6	G H4
1" 1/2	6	..	G H8	G H4	G H8	G H4
1" 1/2	..	12	G H4	G H4	G H6	G H4

Fórmula para el cálculo de medidas / *Size formula calculation:*
Tolerancias Americanas / *American Tolerances*

Ø flancos/*pitch max.*= Ø flancos nominal / *Basic pitch Ø* + (nºGH x 0,0127) (mm.)
Ø flancos/*pitch min*.= Ø flancos/*pitch max* - 0,0127 (mm.)

Tolerancias del diámetro de flancos de los machos de roscar.
Tolerances of thread tap pitch diameter.

JMC

UNC

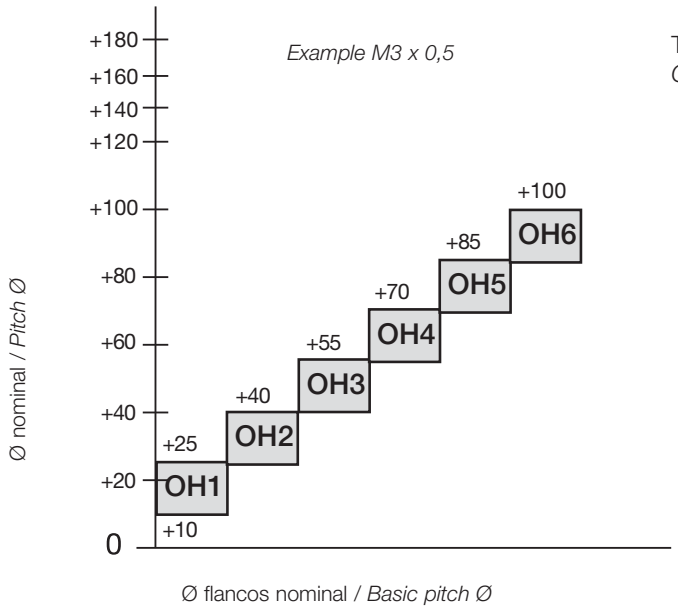
Ø Rosca *Thread* Ø **D inch.**	Paso *Pitch* **P** tpi.	Ø Flancos nominal *Basic pitch*Ø mm.	Ø Rosca *Thread* Ø **D inch.**	Paso *Pitch* **P** tpi.	Ø Flancos nominal *Basic pitch*Ø mm.
No. 1	64	1,598	1	8	23,338
No. 2	56	1,890	1 1/8	7	26,218
No. 3	48	2,172	1 1/4	7	29,393
No. 4	40	2,433	1 3/8	6	32,174
No. 5	40	2,764	1 1/2	6	35,349
No. 6	32	2,990	1 3/4	5	41,151
No. 8	32	3,650	2	4,5	47,135
No. 10	24	4,138	2 1/4	4,5	53,485
No. 12	24	4,798	2 1/2	4	59,375
1/4	20	5,524	2 3/4	4	65,725
5/16	18	7,021	3	4	72,075
3/8	16	8,494	3 1/4	4	78,425
7/16	14	9,934	3 1/2	4	84,775
1/2	13	11,430	3 3/4	4	91,125
9/16	12	12,913	4	4	97,475
5/8	11	14,376			
3/4	10	17,399			
7/8	9	20,391			

UNF

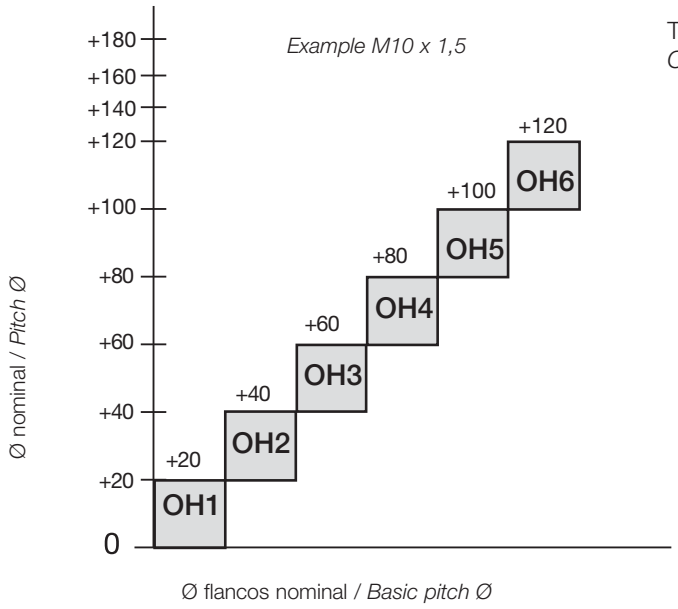
Ø Rosca *Thread* Ø **D inch.**	Paso *Pitch* **P** tpi.	Ø Flancos nominal *Basic pitch*Ø mm.	Ø Rosca *Thread* Ø **D inch.**	Paso *Pitch* **P** tpi.	Ø Flancos nominal *Basic pitch*Ø mm.
No. 0	80	1,318	3/8	24	8,837
No. 1	72	1,626	7/16	20	10,287
No. 2	64	1,928	1/2	20	11,874
No. 3	56	2,220	9/16	18	13,371
No. 4	48	2,502	5/8	18	14,958
No. 5	44	2,799	3/4	16	18,019
No. 6	40	3,094	7/8	14	21,046
No. 8	36	3,708	1	12	24,026
No. 10	32	4,310	1 1/8	12	27,201
No. 12	28	4,897	1 1/4	12	30,376
1/4	28	5,761	1 3/8	12	33,551
5/16	24	7,249	1 1/2	12	36,726

Valores de tolerancias para el cálculo del Ø de flancos de roscas Japonesas. / *Tolerance values to calculate the pitch diameter of Japanese threads.*

Tolerancias OH / *OH Tap Limits*



Tolerancias OH para machos con paso ≤ 0,6
OH Limits for taps with a pitch ≤ 0,6



Tolerancias OH para machos con paso ≥ 0,7
OH Limits for taps with a pitch ≥ 0,7

Fórmula para el cálculo de medidas / *Size formula calculation:*
Tolerancias Japonesas / *Japan Tolerances*

P ≤ 0,6 (T.P.I. ≥ 40)
Ø flancos max.= Ø flancos nominal + 0,010 + 0,015 x nºOH (mm.)
Ø flancos min.= Ø flancos max. - 0,015 (mm.)

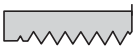
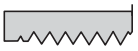
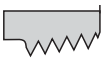
P ≤ 0,7 (T.P.I. ≥ 36)
Ø flancos max.= Ø flancos nominal + 0,020 x nºOH (mm.)
Ø flancos min.= Ø flancos max. - 0,020 (mm.)

P ≤ 0,6 (T.P.I. ≥ 40)
Ø flancos max.= Ø flancos nominal + 0,0127 x nºRH (mm.)
Ø flancos min.= Ø flancos max. - 0,0127 (mm.)

Roscas estancas y no estancas para tubos.
Threads for dryseal and non dryseal pipes.

Debido a la gran confusión que reina actualmente sobre las normas existentes en diferentes países y ámbitos geográficos, así como su designación en cada caso, presentamos a continuación una tabla resumida en la que intentamos ayudar a nuestros clientes a resolver sus dudas al respecto, resumiendo todas estas normas y asimilando las que son equivalentes.

As at the present moment there is not a clear idea about norms, each country in geographical environement having its own concept, as well as its particular name in each case, we hereunder have worked out a summarized table including these norms and assimilating those which are equivalent, which we hope will help our customers to solve any doubt.

Roscas para tubos *Threads for pipes*	Norma *Standard*	Aplicación *Application*	Símbolo *Symbol*	Ejecución *Execution*	Inglesa *English*	Japonesa *Japanese*	
No estancas *Non dryseal*	**ISO 228/1**	Rosca interior cilíndrica *Internal parallel thread*	**G**	Con macho normal G *With standard G tap*	**BSP**	**PF**	
		Rosca exterior cilíndrica *External parallel thread*	**G**	Con cojinete normal G *With standard G die*	**BSP**	**PF**	
	DIN 259/1	Rosca interior cilíndrica *Internal parallel thread*	**R**	Con macho normal G *With standard G tap*	**BSP**	**PF**	
		Rosca exterior cilíndrica *External parallel thread*	**R**	Con cojinete normal G *With standard G die*	**BSP**	**PF**	
Estancas *Dryseal*	**BS21 ISO7/1**	Rosca interior cilíndrica inferior al nominla *Internal parallel thread under nominal size*	**RP**	Con macho inferior Rp *With smaller tap Rp*	**BSPP**	**PS**	
		Rosca interior cónica *Internal taper thread*	**Rc**	Con macho cónico Rc *With taper Rc tap*	**BSPT**	**PT**	
		Rosca exterior cónica *External taper thread*	**R**	Con cojinete cónico R *With taper R die*	**BSPT**	**PT**	
	DIN 2999/1 3858	Rosca interior cilíndrica inferior al nominla *Internal parallel thread under nominal size*	**RP**	Con macho inferior Rp *With smaller tap Rp*	**BSPP**	**PS**	
		Rosca exterior cónica *External taper thread*	**R**	Con cojinete cónico R *With taper R die*	**BSPT**	**PT**	

Cojinetes / *Threading dies*

Cojinetes de roscar / *Threading dies*

Tabla de aplicaciones / *Applications table*

	COJINETE DE MANO	COJINETE DE MÁQUINA	COJINETE DE MÁQUINA HP C.D.I.®	COJINETE DE MÁQUINA BR	COJINETE DE MÁQUINA AL	COJINETE DE MÁQUINA VA Nogrip®
	2P	2P	2P	2P	2P	2P
		✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓
	✓	✓				
1	○	●	●			●
2	○	●	●			●
3	○	●	●			●
4	○	●	●			●
5	○	●	●			●
6						
1			●			
2			●			
3			●			
4						
5						
6						
7						
8						
1						○
2			●			●
3						●
4						
1						
2	○	○	●			
3						
4	○	○	●			
1	○	●	●		●	
2	○	●	●	●		
3				●		
4						
5						
6						
1					●	
2	○	●	●		●	
3	○	●	●		●	
4						
1						
2						
1						
2						
3						
1			●			●
2			●			●
3						
4						
1						
2						
1					○	
2					○	
3						

● Recomendado / *Recommended*
● Adecuado / *Suitable*
○ Alternativo / *Alternative*

	M ISO-DIN 13							
Entrada-ranura / *Chamfer-flute*	2P ≈			corregida / *spiral point*				
Norma DIN / *DIN Standard*	EN 22568	JMC	EN 22568					
Referencia / *Reference*	COJINETE MANO	COJINETE MANO	COJINETE MANO	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE
Tipo / *Type*		Ext. Ø25	LH		HP	BR	AL	VA
Recubrimiento / *Coating*					C.D.I.®			Nogrip®
Material / *Material*	HSS				HSSE	HSS		
Tolerancia / *Tolerance*	6g							
Gama / *Range*	M1...76	M3...12	M2...M52	M1,7...68	M3...24	M1,7...68	M1,7...68	M1,7...68
Página / *Page*	354	355	355	356	357	358	359	360

	MF ISO-DIN 13							
Entrada-ranura / *Chamfer-flute*	≈ 2P		corregida *spiral point*	≈ 2P	corregida / *spiral point*			
Norma DIN / *DIN Standard*	EN 22568		EN 22568	EN 22568	EN 22568			
Referencia / *Reference*	COJINETE MANO	COJINETE MANO	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE MAQUINA			
Tipo / *Type*		LH		BR	VA			
Superficie / *Surface*					Nogrip®			
Material / *Material*	HSS							
Tolerancia / *Tolerance*	6g							
Gama / *Range*	MF3...52	MF5...24	MF3...52	MF3...52	MF3...52			
Página / *Page*	361	362	363, 364	365, 366	367, 368			

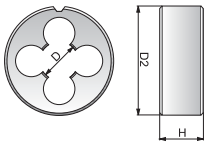
	BSW BS 84		**BSF** BS 84	**G(BSP)** ISO 228/1 DIN 259/1					**R**(BSPT) ISO 7/1 BS 21
Entrada-ranura / *Chamfer-flute*	≈ 2P		≈ 2P	≈ 2P		corregida *spiral point*	≈2P	≈ 2P	≈ 2P
Norma DIN / *DIN Standard*	EN 22568		EN 22568	EN 24231					EN 24230
Referencia / *Reference*	COJINETE MANO	COJINETE MANO	COJINETE MANO	COJINETE MANO	COJINETE MANO	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE MANO
Tipo / *Type*		LH			LH		BR	VA	C. 1:16
Superficie / *Surface*								*Nogrip®*	
Material / *Material*	HSS		HSS	HSS					HSS
Tolerancia / *Tolerance*	MEDIUM CLASS			CLASS A					
Gama / *Range*	W1/16...2"	W1/8...1"	BSF1/4...1"	G1/8...2"	G1/8...1"	G1/8...2"	G1/8...2"	G1/8...2"	R1/8...1"1/2
Página / *Page*	369	369	370	371	371	372	372	373	373

	UNC ANSI / ASME B1.1			**UNF** ANSI / ASME B1.1				**UNEF** ANSI / ASME B1	**NPT** ANSI / ASME B1.20.1
Entrada-ranura / *Chamfer-flute*	≈2P	corregida *spiral point*	corregida / *spiral point*	≈ 2P		corregida *spiral point*		≈2P	≈2P
Norma DIN / *DIN Standard*	EN 22568			EN 22568				EN 22568	EN 24230
Referencia / *Reference*	COJINETE MANO	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE MANO	COJINETE MANO	COJINETE MAQUINA	COJINETE MAQUINA	COJINETE MANO	COJINETE MANO
Tipo / *Type*			VA		LH				
Superficie / *Surface*			*Nogrip®*				*Nogrip®*		
Material / *Material*	HSS			HSS				HSS	HSS
Tolerancia / *Tolerance*	(2A)			(2A)				(2A)	
Gama / *Range*	UNCNº1...1"1/4	UNCNº4...1"1/4	UNCNº4...1"1/4	UNFNº0...1"1/4	UNF1/4...7/8	UNFNº4...1"1/4	UNFNº4...1"1/4	UNEF1/4...1"	NPT1/16...1"
Página / *Page*	374	374	375	376	376	377	377	378	378

	Pg DIN 40430	**Tr** ISO-DIN 103						
Entrada-ranura / *Chamfer-flute*	≈ 2P	corregida / *spiral point*						
Norma DIN / *DIN Standard*	EN 40434	EN 22568						
Referencia / *Reference*	COJINETE MANO	COJINETE MAQUINA	COJINETE MAQUINA					
Tipo / *Type*		RH	LH					
Superficie / *Surface*								
Material / *Material*	HSS	HSS						
Tolerancia / *Tolerance*		7e						
Gama / *Range*	Pg7...48	Tr10...36	Tr10...20					
Página / *Page*	379	380	380					

M

COJINETE MANO	M ISO-DIN 13	2P	DIN EN 22568	HSS	6g



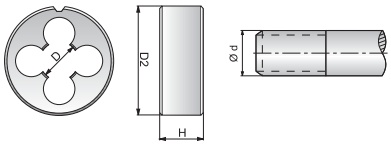
Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
M 1*	0,25	•	16	5	0,97	0000222494
M 1,1*	0,25	•	16	5	1,07	0000222554
M 1,2*	0,25	•	16	5	1,17	0000222614
M 1,4*	0,30	•	16	5	1,36	0000536047
M 1,6	0,35	•	16	5	1,54	0000536197
M 1,7	0,35	•	16	5	1,64	0000222775
M 1,8	0,35	•	16	5	1,74	0000536950
M 2	0,40	•	16	5	1,94	0000222825
M 2,2	0,45	•	16	5	2,13	0000537471
M 2,3	0,40	•	16	5	2,23	0000222986
M 2,5	0,45	•	16	5	2,43	0000223064
M 2,6	0,45	•	16	5	2,53	0000223125
M 3	0,50	•	20	5	2,92	0000223285
M 3,5	0,60	•	20	5	3,41	0000223346
M 4	0,70	•	20	5	3,91	0000223406
M 4,5	0,75	•	20	7	4,41	0000223556
M 5	0,80	•	20	7	4,90	0000223617
M 6	1,00	•	20	7	5,88	0000223777
M 7	1,00	•	25	9	6,88	0000223837
M 8	1,25	•	25	9	7,87	0000223988
M 9	1,25	•	25	9	8,87	0000224077
M 10	1,50	•	30	11	9,85	0000224127
M 11	1,50	•	30	11	10,85	0000224287
M 12	1,75	•	38	14	11,83	0000224348
M 13	1,75	•	38	14	12,83	0000224408
M 14	2,00	•	38	14	13,82	0000224559
M 15	2,00	•	38	14	14,82	0000224619
M 16	2,00	•	45	18	15,82	0000224779
M 18	2,50	•	45	18	17,79	0000224830
M 20	2,50	•	45	18	19,79	0000224980
M 22	2,50	•	55	22	21,79	0000225079
M 24	3,00	•	55	22	23,77	0000225139
M 27	3,00	•	65	25	26,77	0000225280
M 30	3,50	•	65	25	29,73	0000225340
M 33	3,50	•	65	25	32,73	0000225401
M 36	4,00	•	65	25	35,70	0000225561
M 39	4,00	•	75	30	38,70	0000225611
M 42	4,50	•	75	30	41,69	0000225772
M 45	4,50	•	90	36	44,69	0000225832
M 48	5,00	•	90	36	47,66	0000225992
M 52	5,00	•	90	36	51,66	0000226071
M 56	5,50	•	105	36	55,65	0000226132
M 60	5,50	•	105	36	59,65	0000226282
M 64	6,00	•	105	36	63,62	0000226342
M 68	6,00	•	120	36	67,62	0000226403
(M 72)	6,00	•	120	36	71,62	0000226563
(M 76)	6,00	•	120	36	75,62	0000226624

* Tol. 6h

COJINETE MANO
Ext. Ø25

M ISO-DIN 13 | 2P | JMC NORM./ STD | HSS | 6g

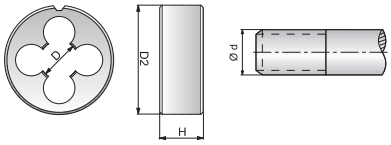


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
M 3	0,50	•	25	9	2,92	0000537802
M 4	0,70	•	25	9	3,91	0000538252
M 5	0,80	•	25	9	4,90	0000538684
M 6	1,00	•	25	9	5,88	0000539044
M 8	1,25	•	25	9	7,87	0000223988
M 10	1,50	•	25	9	9,85	0000540102
M 12	1,75	•	25	9	11,83	0000540473

COJINETE MANO
LH

M ISO-DIN 13 | 2P | DIN EN 22568 | HSS | 6g | LH



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
M 2	0,40	•	16	5	1,94	0000437244
M 2,6	0,45	•	16	5	2,53	0000437395
M 3	0,50	•	20	5	2,92	0000437455
M 3,5	0,60	•	20	5	3,41	0000437515
M 4	0,70	•	20	5	3,91	0000437676
M 5	0,80	•	20	7	4,90	0000437726
M 6	1,00	•	20	7	5,88	0000437886
M 7	1,00	•	25	9	6,88	0000437947
M 8	1,25	•	25	9	7,87	0000438026
M 9	1,25	•	25	9	8,87	0000438186
M 10	1,50	•	30	11	9,85	0000438246
M 12	1,75	•	38	14	11,83	0000438307
M 14	2,00	•	38	14	13,82	0000438457
M 16	2,00	•	45	18	15,82	0000438518
M 18	2,50	•	45	18	17,79	0000438678
M 20	2,50	•	45	18	19,79	0000438738
M 22	2,50	•	55	22	21,79	0000438889
M 24	3,00	•	55	22	23,77	0000438949
M 27	3,00	•	65	25	26,77	0000439028
M 30	3,50	•	65	25	29,73	0000439188
M 33	3,50	•	65	25	32,73	0000439249
M 36	4,00	•	65	25	35,70	0000439309
M 39	4,00	•	75	30	38,70	0000439450
M 42	4,50	•	75	30	41,69	0000439510
M 45	4,50	•	90	36	44,69	0000439670
M 48	5,00	•	90	36	47,66	0000439731
M 52	5,00	•	90	36	51,66	0000439881

Cojinetes de roscar. Tipo normal
Threading dies. Standard type

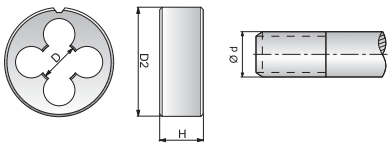
COJINETE MAQUINA	M ISO-DIN 13	2P	DIN EN 22568	HSS	6g	P 60°

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
M 1,7	0,35	•	16	5	1,64	0000226774
M 2	0,40	•	16	5	1,94	0000226834
M 2,3	0,40	•	16	5	2,23	0000226995
M 2,5	0,45	•	16	5	2,43	0000227074
M 2,6	0,45	•	16	5	2,53	0000227134
M 3	0,50	•	20	5	2,92	0000227294
M 3,5	0,60	•	20	5	3,41	0000227345
M 4	0,70	•	20	5	3,91	0000227405
M 4,5	0,75	•	20	7	4,41	0000227565
M 5	0,80	•	20	7	4,90	0000227626
M 6	1,00	•	20	7	5,88	0000227776
M 7	1,00	•	25	9	6,88	0000227837
M 8	1,25	•	25	9	7,87	0000227997
M 9	1,25		25	9	8,87	0000228076
M 10	1,50	•	30	11	9,85	0000228136
M 11	1,50		30	11	10,85	0000228297
M 12	1,75	•	38	14	11,83	0000228357
M 13	1,75		38	14	12,83	0000228407
M 14	2,00	•	38	14	13,82	0000228568
M 15	2,00		38	14	14,82	0000228628
M 16	2,00	•	45	18	15,82	0000228788
M 18	2,50	•	45	18	17,79	0000228839
M 20	2,50	•	45	18	19,79	0000228999
M 22	2,50	•	55	22	21,79	0000229078
M 24	3,00	•	55	22	23,77	0000229138
M 27	3,00	•	65	25	26,77	0000229299
M 30	3,50	•	65	25	29,73	0000229359
M 33	3,50	•	65	25	32,73	0000229410
M 36	4,00	•	65	25	35,70	0000229560
M 39	4,00	•	75	30	38,70	0000229620
M 42	4,50	•	75	30	41,69	0000229781
M 45	4,50	•	90	36	44,69	0000229841
M 48	5,00	•	90	36	47,66	0000229992
M 52	5,00	•	90	36	51,66	0000230076
M 56	5,50	•	105	36	55,65	0000230136
M 60	5,50	•	105	36	59,65	0000230297
M 64	6,00	•	105	36	63,62	0000230357
M 68	6,00	•	120	36	67,62	0000230417

Cojinetes de roscar. Para roscado de materiales de alta resistencia
Threading dies. *For threading high resistance materials*

COJINETE MAQUINA	M ISO-DIN 13		2P	DIN EN 22568	HSSE	6g		
HP								
C.D.I®								

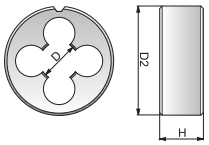


Material	GR1	GR2	GR3	GR4	GR5	GR6	
Subg.	1,2,3,4,5	1,2,3	1,2,3	2,4	1,2	2	3
	1 2	1 2	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
M 3	0,50	•	20	5	2,92	0002104431
M 4	0,70	•	20	5	3,91	0002104592
M 5	0,80	•	20	7	4,90	0002104652
M 6	1,00	•	20	7	5,88	0002104712
M 8	1,25	•	25	9	7,87	0002104863
M 10	1,50	•	30	11	9,85	0002104923
M 12	1,75	•	38	14	11,83	0002105002
M 14	2,00		38	14	13,82	0002105162
M 16	2,00		45	18	15,82	0002105223
M 18	2,50		45	18	17,79	0002105383
M 20	2,50		45	18	19,79	0002105434
M 22	2,50		55	22	21,79	0002105594
M 24	3,00		55	22	23,77	0002105654

Cojinetes de roscar. Para el roscado de latones
Threading dies. For threading brass

COJINETE MAQUINA	M ISO-DIN 13		2P	DIN EN 22568	HSS	6g	
BR							



Material	GR5
Subg.	2,3

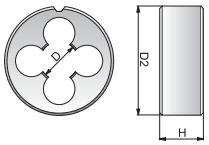
D	P		D2	H	Ø d	Cod.
M 1,7	0,35	•	16	5	1,64	0000888281
M 2	0,40	•	16	5	1,94	0000888341
M 2,3	0,40	•	16	5	2,23	0000888402
M 2,5	0,45	•	16	5	2,43	0000888552
M 2,6	0,45	•	16	5	2,53	0000888612
M 3	0,50	•	20	5	2,92	0000888773
M 3,5	0,60	•	20	5	3,41	0000889072
M 4	0,70	•	20	5	3,91	0000889344
M 4,5	0,75	•	20	7	4,41	0000889615
M 5	0,80	•	20	7	4,90	0000890562
M 6	1,00	•	20	7	5,88	0000596899
M 7	1,00	•	25	9	6,88	0000890833
M 8	1,25	•	25	9	7,87	0000599254
M 9	1,25		25	9	8,87	0000891283
M 10	1,50	•	30	11	9,85	0000891564
M 11	1,50		30	11	10,85	0000891775
M 12	1,75	•	38	14	11,83	0000892075
M 13	1,75		38	14	12,83	0000892295
M 14	2,00	•	38	14	13,82	0000892567
M 15	2,00		38	14	14,82	0000892777
M 16	2,00	•	45	18	15,82	0000893298
M 18	2,50	•	45	18	17,79	0000893358
M 20	2,50	•	45	18	19,79	0000893629
M 22	2,50	•	55	22	21,79	0000893990
M 24	3,00	•	55	22	23,77	0000894290
M 27	3,00	•	65	25	26,77	0000894561
M 30	3,50	•	65	25	29,73	0000894842

Cojinetes de roscar. Para el roscado de aluminios
Threading dies. For threading aluminium

JMC

M

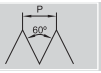
COJINETE MAQUINA	M ISO-DIN 13		2P	DIN EN 22568	HSS	6g	
AL							



Material	GR5	GR6		GR11
Subg.	1	1,2	3	1,2
	6	5	5 6	6

D	P		D2	H	Ø d	Cod.
M 1,7	0,35	•	16	5	1,64	0000899141
M 2	0,40	•	16	5	1,94	0000899362
M 2,3	0,40	•	16	5	2,23	0000899573
M 2,5	0,45	•	16	5	2,43	0000899793
M 2,6	0,45	•	16	5	2,53	0000899904
M 3	0,50	•	20	5	2,92	0000888984
M 3,5	0,60	•	20	5	3,41	0000889283
M 4	0,70	•	20	5	3,91	0000889564
M 4,5	0,75	•	20	7	4,41	0000889835
M 5	0,80	•	20	7	4,90	0000890612
M 6	1,00	•	20	7	5,88	0000890773
M 7	1,00	•	25	9	6,88	0000891072
M 8	1,25	•	25	9	7,87	0000891133
M 9	1,25		25	9	8,87	0000891404
M 10	1,50	•	30	11	9,85	0000891625
M 11	1,50		30	11	10,85	0000891996
M 12	1,75	•	38	14	11,83	0000892135
M 13	1,75		38	14	12,83	0000892406
M 14	2,00	•	38	14	13,82	0000892627
M 15	2,00		38	14	14,82	0000892998
M 16	2,00	•	45	18	15,82	0000893077
M 18	2,50	•	45	18	17,79	0000893569
M 20	2,50	•	45	18	19,79	0000893830
M 22	2,50	•	55	22	21,79	0000894130
M 24	3,00	•	55	22	23,77	0000894411
M 27	3,00	•	65	25	26,77	0000894782
M 30	3,50	•	65	25	29,73	0000895082

Cojinetes de roscar. Para el roscado de aceros inoxidables
Threading dies. For threading stainless steels

COJINETE	M ISO-DIN 13		≈2P	DIN EN 22568	HSS	6g	
VA							
Nogrip-1®							

Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,5	6	1,2,3	1,2
	1 2	1 2	1 2 3 4	3 4

D	P		D2	H	Ø d	Cod.
M 1,7	0,35	•	16	5	1,64	0000899081
M 2	0,40	•	16	5	1,94	0000899201
M 2,3	0,40	•	16	5	2,23	0000899412
M 2,5	0,45	•	16	5	2,43	0000899633
M 2,6	0,45	•	16	5	2,53	0000899844
M 3	0,50	•	20	5	2,92	0000888833
M 3,5	0,60	•	20	5	3,41	0000889133
M 4	0,70	•	20	5	3,91	0000889404
M 4,5	0,75	•	20	7	4,41	0000889775
M 5	0,80	•	20	7	4,90	0000570638
M 6	1,00	•	20	7	5,88	0000615727
M 7	1,00	•	25	9	6,88	0000890994
M 8	1,25	•	25	9	7,87	0000570799
M 9	1,25		25	9	8,87	0000891344
M 10	1,50	•	30	11	9,85	0000615887
M 11	1,50		30	11	10,85	0000891835
M 12	1,75	•	38	14	11,83	0000615947
M 13	1,75		38	14	12,83	0000892346
M 14	2,00	•	38	14	13,82	0000792270
M 15	2,00		38	14	14,82	0000892838
M 16	2,00	•	45	18	15,82	0000893137
M 18	2,50	•	45	18	17,79	0000893408
M 20	2,50	•	45	18	19,79	0000893780
M 22	2,50	•	55	22	21,79	0000894079
M 24	3,00	•	55	22	23,77	0000894350
M 27	3,00	•	65	25	26,77	0000894622
M 30	3,50	•	65	25	29,73	0000894993

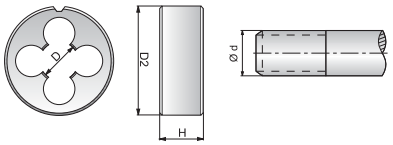
COJINETE MANO	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
MF 3	0,35	•	20	5	2,94	0000230788
MF 3,5	0,35	•	20	5	3,44	0000230849
MF 4	0,50	•	20	5	3,92	0000230999
MF 5	0,50	•	20	5	4,92	0000231088
MF 5	0,75	•	20	7	4,90	0000231138
MF 6	0,50	•	20	5	5,92	0000231299
MF 6	0,75	•	20	7	5,90	0000231359
MF 7	0,75	•	25	9	6,90	0000231410
MF 8	0,75	•	25	9	7,90	0000231560
MF 8	1,00	•	25	9	7,88	0000231620
MF 9	1,00	•	25	9	8,88	0000231781
MF 10	0,75	•	30	11	9,90	0000231841
MF 10	1,00	•	30	11	9,88	0000231902
MF 10	1,25	•	30	11	9,86	0000232080
MF 11	1,00	•	30	11	10,88	0000232141
MF 11	1,25	•	30	11	10,86	0000232291
MF 12	0,75	•	38	10	11,90	0000232352
MF 12	1,00	•	38	10	11,88	0000232412
MF 12	1,25	•	38	10	11,86	0000232572
MF 12	1,50	•	38	10	11,85	0000232623
MF 13	1,00	•	38	10	12,88	0000232783
MF 13	1,25	•	38	10	12,86	0000232843
MF 13	1,50	•	38	10	12,85	0000232904
MF 14	1,00	•	38	10	13,88	0000233083
MF 14	1,25	•	38	10	13,86	0000233143
MF 14	1,50	•	38	10	13,85	0000233203
MF 15	1,00	•	38	10	14,88	0000540744
MF 15	1,25	•	38	10	14,86	0000233354
MF 15	1,50	•	38	10	14,85	0000233414
MF 16	1,00	•	45	14	15,88	0000233575
MF 16	1,25	•	45	14	15,86	0000233635
MF 16	1,50	•	45	14	15,85	0000233785
MF 18	1,00	•	45	14	17,88	0000233846
MF 18	1,25	•	45	14	17,86	0000233906
MF 18	1,50	•	45	14	17,85	0000234085
MF 18	2,00	•	45	14	17,82	0000234145
MF 20	1,00	•	45	14	19,88	0000234206
MF 20	1,50	•	45	14	19,85	0000234356
MF 20	2,00	•	45	14	19,82	0000234416
MF 22	1,00	•	55	16	21,88	0000234577
MF 22	1,25	•	55	16	21,86	0000542267
MF 22	1,50	•	55	16	21,85	0000234637
MF 22	2,00	•	55	16	21,82	0000234788
MF 24	1,00	•	55	16	23,88	0000234848
MF 24	1,50	•	55	16	23,85	0000234908
MF 24	2,00	•	55	16	23,82	0000235087
MF 25	1,50	•	55	16	24,85	0000542538
MF 26	1,50	•	55	16	25,85	0000235148

Cojinetes de roscar. Para roscados manuales
Threading dies. For hand threading

COJINETE MANO	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	

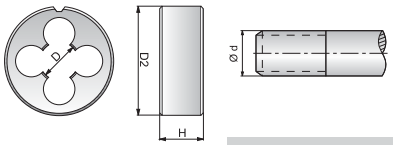


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
MF 27	1,50	•	65	18	26,85	0000235208
MF 27	2,00	•	65	18	26,82	0000235368
MF 28	1,50	•	65	18	27,85	0000235419
MF 30	1,50	•	65	18	29,85	0000235579
MF 30	2,00	•	65	18	29,82	0000235630
MF 32	1,50	•	65	18	31,85	0000235790
MF 33	1,50	•	65	18	32,85	0000235840
MF 34	1,50	•	65	18	33,85	0000235901
MF 35	1,50	•	65	18	34,85	0000236080
MF 36	1,50	•	65	18	35,85	0000236140
MF 36	2,00	•	65	18	35,82	0000236200
MF 38	1,50	•	75	20	37,85	0000236361
MF 40	1,50	•	75	20	39,85	0000236421
MF 42	2,00	•	75	20	41,82	0000236571
MF 45	1,50	•	90	22	44,85	0000236632
MF 50	1,50	•	90	22	49,85	0000236792
MF 52	1,50	•	90	22	51,85	0000236853

Cojinetes de roscar. Para roscados manuales. Corte a izquierda
Threading dies. For hand threading. Left hand cut

COJINETE MANO LH	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	LH



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
MF 5	0,50	•	20	5	4,92	0000439941
MF 6	0,50	•	20	5	5,92	0000440026
MF 6	0,75	•	20	7	5,90	0000440186
MF 8	0,75	•	25	9	7,90	0000440246
MF 8	1,00	•	25	9	7,88	0000440307
MF 10	1,00	•	30	11	9,88	0000440457
MF 12	1,00	•	38	10	11,88	0000440518
MF 12	1,25	•	38	10	11,86	0000440678
MF 12	1,50	•	38	10	11,85	0000440738
MF 14	1,00	•	38	10	13,88	0000440889
MF 14	1,25	•	38	10	13,86	0000440949
MF 14	1,50	•	38	10	13,85	0000441038
MF 16	1,00	•	45	14	15,88	0000441188
MF 16	1,50	•	45	14	15,85	0000441249
MF 18	1,50	•	45	14	17,85	0000441309
MF 18	2,00	•	45	14	17,82	0000441460
MF 20	1,50	•	45	14	19,85	0000441510
MF 22	1,50	•	55	16	21,85	0000441670
MF 24	1,50	•	55	16	23,85	0000441731

COJINETE MAQUINA	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
MF 3	0,35	•	20	5	2,94	0000900483
MF 3,5	0,35	•	20	5	3,44	0000900815
MF 4	0,50	•	20	5	3,92	0000901265
MF 5	0,50	•	20	5	4,92	0000901606
MF 5	0,75	•	20	7	4,90	0000902056
MF 6	0,50	•	20	5	5,92	0000902488
MF 6	0,75	•	20	7	5,90	0000902810
MF 7	0,75	•	25	9	6,90	0000903270
MF 8	0,75	•	25	9	7,90	0000903601
MF 8	1,00	•	25	9	7,88	0000646994
MF 9	1,00	•	25	9	8,88	0000904332
MF 10	0,75	•	30	11	9,90	0000904764
MF 10	1,00	•	30	11	9,88	0000599194
MF 10	1,25	•	30	11	9,86	0000793493
MF 11	1,00	•	30	11	10,88	0000905766
MF 11	1,25	•	30	11	10,86	0000906126
MF 12	0,75	•	38	10	11,90	0000906608
MF 12	1,00	•	38	10	11,88	0000804969
MF 12	1,25	•	38	10	11,86	0000598954
MF 12	1,50	•	38	10	11,85	0000784326
MF 13	1,00	•	38	10	12,88	0000907821
MF 13	1,25	•	38	10	12,86	0000908281
MF 13	1,50	•	38	10	12,85	0000908612
MF 14	1,00	•	38	10	13,88	0000785539
MF 14	1,25	•	38	10	13,86	0000909344
MF 14	1,50	•	38	10	13,85	0000790325
MF 15	1,00	•	38	10	14,88	0001246853
MF 15	1,25	•	38	10	14,86	0000911344
MF 15	1,50	•	38	10	14,85	0000911775
MF 16	1,00	•	45	14	15,88	0000647073
MF 16	1,25	•	45	14	15,86	0000912406
MF 16	1,50	•	45	14	15,85	0000912838
MF 18	1,00	•	45	14	17,88	0000913137
MF 18	1,25	•	45	14	17,86	0000913569
MF 18	1,50	•	45	14	17,85	0000913990
MF 18	2,00	•	45	14	17,82	0000914340

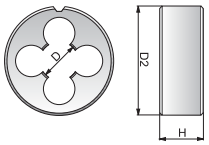
Cojinetes de roscar. Tipo normal
Threading dies. Standard type

COJINETE MAQUINA	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
MF 20	1,00	•	45	14	19,88	0000914772
MF 20	1,50	•	45	14	19,85	0000915132
MF 20	2,00	•	45	14	19,82	0000915563
MF 22	1,00	•	55	16	21,88	0000915995
MF 22	1,25	•	55	16	21,86	0000916355
MF 22	1,50	•	55	16	21,85	0000916786
MF 22	2,00	•	55	16	21,82	0000917136
MF 24	1,00	•	55	16	23,88	0000917568
MF 24	1,50	•	55	16	23,85	0000792330
MF 24	2,00	•	55	16	23,82	0000804477
MF 25	1,50	•	55	16	24,85	0001289271
MF 26	1,50	•	55	16	25,85	0000918560
MF 27	1,50	•	65	18	26,85	0000918902
MF 27	2,00	•	65	18	26,82	0000919352
MF 28	1,50	•	65	18	27,85	0000919783
MF 30	1,50	•	65	18	29,85	0000920149
MF 30	2,00	•	65	18	29,82	0000920570
MF 32	1,50	•	65	18	31,85	0000921081
MF 33	1,50	•	65	18	32,85	0000921412
MF 34	1,50	•	65	18	33,85	0000921844
MF 35	1,50	•	65	18	34,85	0000922204
MF 36	1,50	•	65	18	35,85	0000922635
MF 36	2,00	•	65	18	35,82	0000923085
MF 38	1,50	•	75	20	37,85	0000923417
MF 40	1,50	•	75	20	39,85	0000923848
MF 42	2,00	•	75	20	41,82	0000924208
MF 45	1,50	•	90	22	44,85	0000924630
MF 50	1,50	•	90	22	49,85	0000925090
MF 52	1,50	•	90	22	51,85	0000925421

COJINETE MAQUINA	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	
BR							

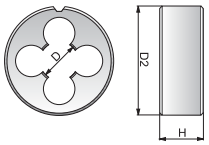


Material	GR5
Subg.	2,3

D	P		D2	H	Ø d	Cod.
MF 3	0,35	•	20	5	2,94	0000900544
MF 3,5	0,35	•	20	5	3,44	0000900975
MF 4	0,50	•	20	5	3,92	0000901325
MF 5	0,50	•	20	5	4,92	0000901757
MF 5	0,75	•	20	7	4,90	0000902117
MF 6	0,50	•	20	5	5,92	0000902548
MF 6	0,75	•	20	7	5,90	0000902970
MF 7	0,75	•	25	9	6,90	0000903330
MF 8	0,75	•	25	9	7,90	0000903761
MF 8	1,00	•	25	9	7,88	0000904051
MF 9	1,00	•	25	9	8,88	0000904483
MF 10	0,75	•	30	11	9,90	0000904824
MF 10	1,00	•	30	11	9,88	0000905114
MF 10	1,25	•	30	11	9,86	0000905495
MF 11	1,00	•	30	11	10,88	0000905826
MF 11	1,25	•	30	11	10,86	0000906276
MF 12	0,75	•	38	10	11,90	0000906768
MF 12	1,00	•	38	10	11,88	0000907068
MF 12	1,25	•	38	10	11,86	0000907339
MF 12	1,50	•	38	10	11,85	0000907550
MF 13	1,00	•	38	10	12,88	0000907981
MF 13	1,25	•	38	10	12,86	0000908331
MF 13	1,50	•	38	10	12,85	0000908763
MF 14	1,00	•	38	10	13,88	0000909062
MF 14	1,25	•	38	10	13,86	0000909494
MF 14	1,50	•	38	10	13,85	0000909775
MF 15	1,00	•	38	10	14,88	0001288971
MF 15	1,25	•	38	10	14,86	0000911404
MF 15	1,50	•	38	10	14,85	0000911835
MF 16	1,00	•	45	14	15,88	0000912125
MF 16	1,25	•	45	14	15,86	0000912557
MF 16	1,50	•	45	14	15,85	0000912988
MF 18	1,00	•	45	14	17,88	0000913288
MF 18	1,25	•	45	14	17,86	0000913619
MF 18	1,50	•	45	14	17,85	0000914079
MF 18	2,00	•	45	14	17,82	0000914401

Cojinetes de roscar. Para el roscado de latones
Threading dies. For threading brass

COJINETE MAQUINA	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	
BR							



Material	GR5
Subg.	2,3

D	P		D2	H	Ø d	Cod.
MF 20	1,00	•	45	14	19,88	0000914832
MF 20	1,50	•	45	14	19,85	0000915292
MF 20	2,00	•	45	14	19,82	0000915624
MF 22	1,00	•	55	16	21,88	0000916074
MF 22	1,25	•	55	16	21,86	0000916405
MF 22	1,50	•	55	16	21,85	0000916837
MF 22	2,00	•	55	16	21,82	0000917297
MF 24	1,00	•	55	16	23,88	0000917628
MF 24	1,50	•	55	16	23,85	0000917990
MF 24	2,00	•	55	16	23,82	0000918299
MF 25	1,50	•	55	16	24,85	0001289331
MF 26	1,50	•	55	16	25,85	0000918621
MF 27	1,50	•	65	18	26,85	0000919081
MF 27	2,00	•	65	18	26,82	0000919412
MF 28	1,50	•	65	18	27,85	0000919844
MF 30	1,50	•	65	18	29,85	0000920299
MF 30	2,00	•	65	18	29,82	0000920621
MF 32	1,50	•	65	18	31,85	0000921141
MF 33	1,50	•	65	18	32,85	0000921573
MF 34	1,50	•	65	18	33,85	0000921904
MF 35	1,50	•	65	18	34,85	0000922354
MF 36	1,50	•	65	18	35,85	0000922786
MF 36	2,00	•	65	18	35,82	0000923146
MF 38	1,50	•	75	20	37,85	0000923577
MF 40	1,50	•	75	20	39,85	0000923909
MF 42	2,00	•	75	20	41,82	0000924369
MF 45	1,50	•	90	22	44,85	0000924790
MF 50	1,50	•	90	22	49,85	0000925140
MF 52	1,50	•	90	22	51,85	0000925572

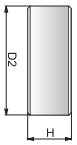
COJINETE MAQUINA	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	
VA							
Nogrip-1®							

Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,5	6	1,2,3	1,2
	1 2	1 2	1 2 3 4	3 4

D	P		D2	H	Ø d	Cod.
MF 3	0,35	•	20	5	2,94	0000900694
MF 3,5	0,35	•	20	5	3,44	0000901054
MF 4	0,50	•	20	5	3,92	0000901486
MF 5	0,50	•	20	5	4,92	0000901817
MF 5	0,75	•	20	7	4,90	0000902277
MF 6	0,50	•	20	5	5,92	0000902609
MF 6	0,75	•	20	7	5,90	0000903059
MF 7	0,75	•	25	9	6,90	0000903480
MF 8	0,75	•	25	9	7,90	0000903812
MF 8	1,00	•	25	9	7,88	0000904111
MF 9	1,00	•	25	9	8,88	0000904543
MF 10	0,75	•	30	11	9,90	0000904974
MF 10	1,00	•	30	11	9,88	0000905274
MF 10	1,25	•	30	11	9,86	0000905545
MF 11	1,00	•	30	11	10,88	0000905977
MF 11	1,25	•	30	11	10,86	0000906337
MF 12	0,75	•	38	10	11,90	0000906829
MF 12	1,00	•	38	10	11,88	0000907128
MF 12	1,25	•	38	10	11,86	0000805108
MF 12	1,50	•	38	10	11,85	0000907610
MF 13	1,00	•	38	10	12,88	0000908060
MF 13	1,25	•	38	10	12,86	0000908492
MF 13	1,50	•	38	10	12,85	0000908823
MF 14	1,00	•	38	10	13,88	0000909123
MF 14	1,25	•	38	10	13,86	0000909554
MF 14	1,50	•	38	10	13,85	0000909825
MF 15	1,00	•	38	10	14,88	0001289060
MF 15	1,25	•	38	10	14,86	0000911554
MF 15	1,50	•	38	10	14,85	0000911986
MF 16	1,00	•	45	14	15,88	0000912285
MF 16	1,25	•	45	14	15,86	0000912617
MF 16	1,50	•	45	14	15,85	0000805258
MF 18	1,00	•	45	14	17,88	0000913348
MF 18	1,25	•	45	14	17,86	0000913770
MF 18	1,50	•	45	14	17,85	0000914130
MF 18	2,00	•	45	14	17,82	0000914561

Cojinetes de roscar. Para el roscado de aceros inoxidables
Threading dies. For threading stainless steels

COJINETE MAQUINA	MF ISO-DIN 13		2P	DIN EN 22568	HSS	6g	
VA							
Nogrip-1®							



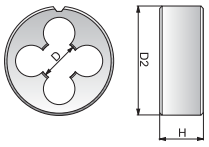
Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,5	6	1,2,3	1,2
	1 2	1 2	1 2 3 4	3 4

D	P		D2	H	Ø d	Cod.
MF 20	1,00	•	45	14	19,88	0000914993
MF 20	1,50	•	45	14	19,85	0000915343
MF 20	2,00	•	45	14	19,82	0000915774
MF 22	1,00	•	55	16	21,88	0000916134
MF 22	1,25	•	55	16	21,86	0000916566
MF 22	1,50	•	55	16	21,85	0000916997
MF 22	2,00	•	55	16	21,82	0000917357
MF 24	1,00	•	55	16	23,88	0000917789
MF 24	1,50	•	55	16	23,85	0000918088
MF 24	2,00	•	55	16	23,82	0000918350
MF 25	1,50	•	55	16	24,85	0001289492
MF 26	1,50	•	55	16	25,85	0000918781
MF 27	1,50	•	65	18	26,85	0000919141
MF 27	2,00	•	65	18	26,82	0000919573
MF 28	1,50	•	65	18	27,85	0000919904
MF 30	1,50	•	65	18	29,85	0000920350
MF 30	2,00	•	65	18	29,82	0000920781
MF 32	1,50	•	65	18	31,85	0000921201
MF 33	1,50	•	65	18	32,85	0000921633
MF 34	1,50	•	65	18	33,85	0000922083
MF 35	1,50	•	65	18	34,85	0000922414
MF 36	1,50	•	65	18	35,85	0000922846
MF 36	2,00	•	65	18	35,82	0000923206
MF 38	1,50	•	75	20	37,85	0000923637
MF 40	1,50	•	75	20	39,85	0000924087
MF 42	2,00	•	75	20	41,82	0000924429
MF 45	1,50	•	90	22	44,85	0000924851
MF 50	1,50	•	90	22	49,85	0000925201
MF 52	1,50	•	90	22	51,85	0000925632

Cojinetes de roscar. Para roscados manuales
Threading dies. For hand threading

JMC

COJINETE MANO | **BSW** BS 84 | 2P | DIN EN 22568 | HSS | MEDIUM CLASS

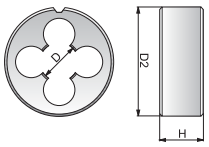


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
W 1/16	60	•	16	5	1,51	0000236903
W 3/32	48	•	16	5	2,30	0000237092
W 1/8	40	•	20	5	3,09	0000237142
W 5/32	32	•	20	7	3,88	0000237203
W 3/16	24	•	20	7	4,66	0000237363
W 7/32	24	•	20	7	5,46	0000237423
W 1/4*	20	•	20	7	6,24	0000237574
W 5/16	18	•	25	9	7,82	0000237634
W 3/8	16	•	30	11	9,40	0000237794
W 7/16	14	•	30	11	10,98	0000237855
W 1/2	12	•	38	14	12,56	0000237915
W 9/16	12	•	38	14	14,14	0000238094
W 5/8	11	•	45	18	15,72	0000238154
W 3/4	10	•	45	18	18,89	0000238205
W 7/8	9	•	55	22	22,10	0000238365
W 1”	8	•	55	22	25,27	0000238426
W 1”1/8	7	•	65	25	28,44	0000238586
W 1”1/4	7	•	65	25	31,61	0000238636
W 1”3/8	6	•	65	25	34,77	0000238797
W 1”1/2	6	•	75	30	37,95	0000238857
W 1”5/8	5	•	75	30	41,11	0000238917
W 1”3/4	5	•	90	36	44,28	0000239096
W 1”7/8	4,5	•	90	36	47,45	0000239157
W 2”	4,5	•	90	36	50,63	0000239217

Cojinetes de roscar. Para roscados manuales. Corte a izquierda
Threading dies. For hand threading. Left hand cut

COJINETE MANO LH | **BSW** BS 84 | 2P | DIN EN 22568 | HSS | MEDIUM CLASS | LH



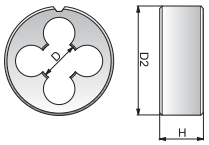
Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
W 1/8	40	•	20	5	3,09	0000444035
W 3/16	24	•	20	7	4,66	0000444195
W 7/32	24	•	20	7	5,46	0000444256
W 1/4*	20	•	20	7	6,24	0000444306
W 5/16	18	•	25	9	7,82	0000444466
W 3/8	16	•	30	11	9,40	0000444527
W 7/16	14	•	30	11	10,98	0000444687
W 1/2	12	•	38	14	12,56	0000444737
W 5/8	11	•	45	18	15,72	0000444958
W 3/4	10	•	45	18	18,89	0000445037
W 7/8	9	•	55	22	22,10	0000445197
W 1”	8	•	55	22	25,27	0000445258

* JMC Norm. sim. DIN EN 24231

Cojinetes de roscar. Para roscados manuales
Threading dies. For hand threading

COJINETE MANO	BSF BS 84		2P	DIN EN 22568	HSS	MEDIUM CLASS	



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
BSF 1/4	26	•	25	7	6,25	0000239367
BSF 5/16	22	•	25	9	7,83	0000239428
BSF 3/8	20	•	38	14	9,41	0000239588
BSF 7/16	18	•	38	14	10,99	0000239649
BSF 1/2	16	•	38	14	12,57	0000239799
BSF 9/16	16	•	38	14	14,12	0000239859
BSF 5/8	14	•	45	18	15,73	0000239910
BSF 3/4	12	•	45	18	18,89	0000240094
BSF 7/8	11	•	55	22	22,11	0000240154
BSF 1”	10	•	55	22	25,28	0000240215

Cojinetes de roscar. Para roscados manuales
Threading dies. For hand threading

COJINETE MANO	G(BSP) ISO 228/1 DIN 259/1		2P	DIN EN 24231	HSS	CLASS A	

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
G 1/8	28	•	30	11	9,62	0000441891
G 1/4	19	•	38	10	13,03	0000441941
G 3/8	19	•	45	14	16,54	0000442030
G 1/2	14	•	45	14	20,81	0000442181
G 5/8	14	•	55	16	22,77	0000442241
G 3/4	14	•	55	16	26,30	0000442301
G 7/8	14	•	65	18	30,06	0000442462
G 1"	11	•	65	18	33,07	0000442522
G 1"1/8	11	•	75	20	37,72	0000442673
G 1"1/4	11	•	75	20	41,73	0000442733
G 1"3/8	11	•	90	22	44,14	0000442893
G 1"1/2	11	•	90	22	47,62	0000442954
G 1"3/4	11	•	105	22	53,57	0000443033
G 2"	11	•	105	22	59,43	0000443193

Cojinetes de roscar. Para roscados manuales. Corte a izquierda
Threading dies. For hand threading. Left hand cut

COJINETE MANO LH	G(BSP) ISO 228/1 DIN 259/1		2P	DIN EN 24231	HSS	CLASS A	LH

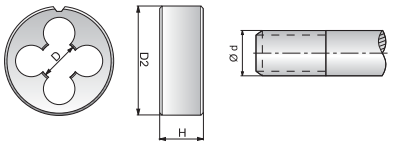
Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
G 1/8	28	•	30	11	9,62	0000443243
G 1/4	19	•	38	10	13,03	0000443304
G 3/8	19	•	45	14	16,54	0000443464
G 1/2	14	•	45	14	20,81	0000443524
G 5/8	14	•	55	16	22,77	0000443675
G 3/4	14	•	55	16	26,30	0000443735
G 7/8	14	•	65	18	30,06	0000443896
G 1"	11	•	65	18	33,07	0000443956

Cojinetes de roscar. Tipo normal
Threading dies. Standard type

JMC

COJINETE MAQUINA	G(BSP) ISO 228/1 DIN 259/1		2P	DIN EN 24231	HSS	CLASS A	

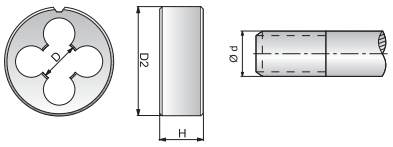


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
G 1/8	28	•	30	11	9,62	0000546758
G 1/4	19	•	38	10	13,03	0000546818
G 3/8	19	•	45	14	16,54	0000546979
G 1/2	14	•	45	14	20,81	0000547057
G 5/8	14	•	55	16	22,77	0000547118
G 3/4	14	•	55	16	26,30	0000547278
G 7/8	14	•	65	18	30,06	0000949457
G 1"	11	•	65	18	33,07	0000547339
G 1"1/8	11	•	75	20	37,72	0000950023
G 1"1/4	11	•	75	20	41,73	0000950455
G 1"3/8	11	•	90	22	44,14	0000950736
G 1"1/2	11	•	90	22	47,62	0000951186
G 1"3/4	11	•	105	22	53,57	0000951517
G 2"	11	•	105	22	59,43	0000951949

Cojinetes de roscar. Para el roscado de latones
Threading dies. For threading brass

COJINETE MAQUINA BR	G(BSP) ISO 228/1 DIN 259/1		2P	DIN EN 24231	HSS	CLASS A	

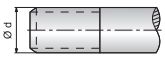


Material	GR5
Subg.	2,3
	6

D	tpi		D2	H	Ø d	Cod.
G 1/8	28	•	30	11	9,62	0000947944
G 1/4	19	•	38	10	13,03	0000948244
G 3/8	19	•	45	14	16,54	0000570859
G 1/2	14	•	45	14	20,81	0000570910
G 5/8	14	•	55	16	22,77	0000948946
G 3/4	14	•	55	16	26,30	0000571098
G 7/8	14	•	65	18	30,06	0000949517
G 1"	11	•	65	18	33,07	0000571159
G 1"1/8	11	•	75	20	37,72	0000950183
G 1"1/4	11	•	75	20	41,73	0000571209
G 1"3/8	11	•	90	22	44,14	0000950886
G 1"1/2	11	•	90	22	47,62	0000951246
G 1"3/4	11	•	105	22	53,57	0000951678
G 2"	11	•	105	22	59,43	0000952038

Cojinetes de roscar. Para el roscado de aceros inoxidables
Threading dies. For threading stainless steels

COJINETE MAQUINA	G(BSP) ISO 228/1 DIN 259/1	DIN EN 24231	HSS	CLASS A
VA				
Nogrip-1®				

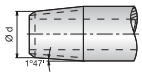


Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,5	6	1,2,3	1,2
	1 2	1 2	1 2 3 4	3 4

D	tpi		D2	H	Ø d	Cod.
G 1/8	28	•	30	11	9,62	0000948023
G 1/4	19	•	38	10	13,03	0000948304
G 3/8	19	•	45	14	16,54	0000948515
G 1/2	14	•	45	14	20,81	0000948736
G 5/8	14	•	55	16	22,77	0000949025
G 3/4	14	•	55	16	26,30	0000949246
G 7/8	14	•	65	18	30,06	0000949678
G 1"	11	•	65	18	33,07	0000949888
G 1"1/8	11	•	75	20	37,72	0000950244
G 1"1/4	11	•	75	20	41,73	0000950515
G 1"3/8	11	•	90	22	44,14	0000950946
G 1"1/2	11	•	90	22	47,62	0000951306
G 1"3/4	11	•	105	22	53,57	0000951738
G 2"	11	•	105	22	59,43	0000952188

Cojinetes de roscar. Para roscas gas cónicas
Threading dies. For tappered pipe threads

COJINETE MANO	R(BSPT) ISO 7/1 BS 21	DIN EN 24230	HSS	C.1:16

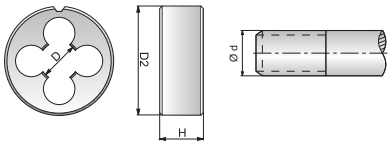


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
R 1/8	28	•	30	11	9,48	0000244585
R 1/4	19	•	38	14	12,78	0000244645
R 3/8	19	•	45	15	16,26	0000244706
R 1/2	14	•	45	18	20,44	0000244866
R 3/4	14	•	55	22	25,85	0000244927
R 1"	11	•	65	25	32,60	0000245005
R 1"1/4	11	•	75	26	41,12	0000245166
R 1"1/2	11	•	90	27	47,01	0000245216

Cojinetes de roscar. Para roscados manuales
Threading dies. For hand threading

COJINETE MANO	UNC ANSI / ASME B1.1	2P	DIN EN 22568	HSS	(2A)

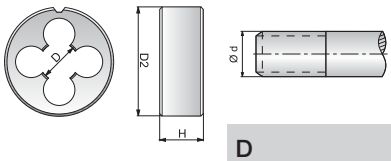


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
UNC Nr 1	64	•	16	5	1,79	0000547811
UNC Nr 2	56	•	16	5	2,12	0000548050
UNC Nr 3	48	•	16	5	2,44	0000548271
UNC Nr 4	40	•	20	5	2,76	0000240365
UNC Nr 5	40	•	20	5	3,09	0000240426
UNC Nr 6	32	•	20	5	3,41	0000240586
UNC Nr 8	32	•	20	7	4,07	0000240646
UNC Nr 10	24	•	20	7	4,71	0000240797
UNC Nr 12	24	•	20	7	5,37	0000240857
UNC 1/4	20	•	20	7	6,22	0000240917
UNC 5/16	18	•	25	9	7,80	0000241096
UNC 3/8	16	•	30	11	9,37	0000241157
UNC 7/16	14	•	30	11	10,95	0000241217
UNC 1/2	13	•	38	14	12,52	0000241367
UNC 9/16	12	•	38	14	14,10	0000241428
UNC 5/8	11	•	45	18	15,68	0000241588
UNC 3/4	10	•	45	18	18,84	0000241649
UNC 7/8	9	•	55	22	22,00	0000241709
UNC 1"	8	•	55	22	25,16	0000241859
UNC 1"1/8	7	•	65	25	28,31	0000241910
UNC 1"1/4	7	•	65	25	31,49	0000242099

Cojinetes de roscar. Tipo normal / *Threading dies. Standard type*

COJINETE MAQUINA	UNC ANSI / ASME B1.1	2P	DIN EN 22568	HSS	(2A)



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
UNC Nr 4	40	•	20	5	2,76	0000933866
UNC Nr 5	40	•	20	5	3,09	0000934226
UNC Nr 6	32	•	20	5	3,41	0000934658
UNC Nr 8	32	•	20	7	4,07	0000935168
UNC Nr 10	24	•	20	7	4,71	0000935590
UNC Nr 12	24	•	20	7	5,37	0000935921
UNC 1/4	20	•	20	7	6,22	0000936381
UNC 5/16	18	•	25	9	7,80	0000936713
UNC 3/8	16	•	30	11	9,37	0000937163
UNC 7/16	14	•	30	11	10,95	0000937594
UNC 1/2	13	•	38	14	12,52	0000937926
UNC 9/16	12	•	38	14	14,10	0000938386
UNC 5/8	11	•	45	18	15,68	0000938717
UNC 3/4	10	•	45	18	18,84	0000939177
UNC 7/8	9	•	55	22	22,00	0000939509
UNC 1"	8	•	55	22	25,16	0000939931
UNC 1"1/8	7	•	65	25	28,31	0000940386
UNC 1"1/4	7	•	65	25	31,49	0000940717

Cojinetes de roscar. Para el roscado de aceros inoxidables
Threading dies. For threading stainless steels

COJINETE MAQUINA VA *Nogrip-1®*

UNC ANSI / ASME B1.1

2P | DIN EN 22568 | HSS | (2A)

Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,5	6	1,2,3	1,2
	1 2	1 2	1 2 3 4	3 4

D	tpi		D2	H	Ø d	Cod.
UNC Nr 4	40	•	20	5	2,76	0000934006
UNC Nr 5	40	•	20	5	3,09	0000934437
UNC Nr 6	32	•	20	5	3,41	0000934929
UNC Nr 8	32	•	20	7	4,07	0000935379
UNC Nr 10	24	•	20	7	4,71	0000935711
UNC Nr 12	24	•	20	7	5,37	0000936161
UNC 1/4	20	•	20	7	6,22	0000936592
UNC 5/16	18	•	25	9	7,80	0000936924
UNC 3/8	16	•	30	11	9,37	0000937384
UNC 7/16	14	•	30	11	10,95	0000937715
UNC 1/2	13	•	38	14	12,52	0000938165
UNC 9/16	12	•	38	14	14,10	0000938507
UNC 5/8	11	•	45	18	15,68	0000938938
UNC 3/4	10	•	45	18	18,84	0000939388
UNC 7/8	9	•	55	22	22,00	0000939710
UNC 1”	8	•	55	22	25,16	0000940175
UNC 1”1/8	7	•	65	25	28,31	0000940507
UNC 1”1/4	7	•	65	25	31,49	0000940938

Cojinetes de roscar. Para roscados manuales
Threading dies. For hand threading

JMC

COJINETE MANO	UNF ANSI / ASME B1.1	2P	DIN EN 22568	HSS	(2A)

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
UNF Nr 0	80	•	16	5	1,47	0000547760
UNF Nr 1	72	•	16	5	1,79	0000802954
UNF Nr 2	64	•	16	5	2,12	0000547971
UNF Nr 3	56	•	16	5	2,44	0000548110
UNF Nr 4	48	•	20	5	2,77	0000242159
UNF Nr 5	44	•	20	5	3,10	0000242219
UNF Nr 6	40	•	20	5	3,42	0000242370
UNF Nr 8	36	•	20	5	4,08	0000242420
UNF Nr 10	32	•	20	7	4,73	0000242581
UNF Nr 12	28	•	20	7	5,38	0000242641
UNF 1/4	28	•	20	7	6,24	0000242701
UNF 5/16	24	•	25	9	7,82	0000242852
UNF 3/8	24	•	30	11	9,41	0000242912
UNF 7/16	20	•	30	11	10,98	0000243001
UNF 1/2	20	•	38	10	12,56	0000243151
UNF 9/16	18	•	38	10	14,14	0000243212
UNF 5/8	18	•	45	14	15,73	0000243372
UNF 3/4	16	•	45	14	18,89	0000243432
UNF 7/8	14	•	55	16	22,05	0000243583
UNF 1"	12	•	55	16	25,21	0000243643
UNF 1"1/8	12	•	65	18	28,38	0000243704
UNF 1"1/4	12	•	65	18	31,55	0000243864

Cojinetes de roscar. Para roscados manuales. Corte a izquierda
Threading dies. For hand threading. Left hand cut

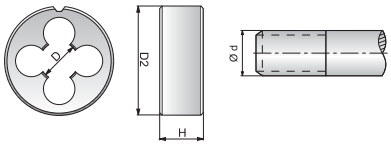
COJINETE MANO LH	UNF ANSI / ASME B1.1	2P	DIN EN 22568	HSS	(2A)	LH

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
UNF 1/4	28	•	20	7	6,24	0000548602
UNF 5/16	24	•	25	9	7,82	0000548762
UNF 3/8	24	•	30	11	9,41	0001497718
UNF 7/16	20	•	30	11	10,98	0002114450
UNF 1/2	20	•	38	10	12,56	0001497868
UNF 9/16	18		38	10	14,14	0001472550
UNF 5/8	18	•	45	14	15,73	0002114510
UNF 3/4	16	•	45	14	18,89	0001712518
UNF 7/8	14	•	55	16	22,05	0002124528
UNF 1"	12	•	55	16	25,21	0002124317

Cojinetes de roscar. Tipo normal
Threading dies. Standard type

COJINETE MAQUINA	UNF ANSI / ASME B1.1		2P	DIN EN 22568	HSS	(2A)	

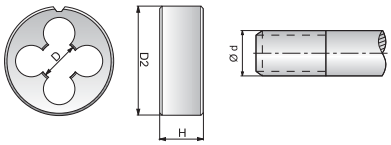


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
UNF Nr 4	48	•	20	5	2,77	0000941177
UNF Nr 5	44	•	20	5	3,10	0000941509
UNF Nr 6	40	•	20	5	3,42	0000941931
UNF Nr 8	36	•	20	5	4,08	0000942381
UNF Nr 10	32	•	20	7	4,73	0000942722
UNF Nr 12	28	•	20	7	5,38	0000943172
UNF 1/4	28	•	20	7	6,24	0000943504
UNF 5/16	24	•	25	9	7,82	0000943875
UNF 3/8	24	•	30	11	9,41	0000944235
UNF 7/16	20	•	30	11	10,98	0000602862
UNF 1/2	20	•	38	10	12,56	0000609667
UNF 9/16	18	•	38	10	14,14	0000945026
UNF 5/8	18	•	45	14	15,73	0000945458
UNF 3/4	16	•	45	14	18,89	0000945889
UNF 7/8	14	•	55	16	22,05	0000946239
UNF 1"	12	•	55	16	25,21	0000946661
UNF 1"1/8	12	•	65	18	28,38	0000947021
UNF 1"1/4	12	•	65	18	31,55	0000947452

Cojinetes de roscar. Para el roscado de aceros inoxidables
Threading dies. For threading stainless steels

COJINETE MAQUINA	UNF ANSI / ASME B1.1		2P	DIN EN 22568	HSS	(2A)	
VA							
Nogrip-1®							

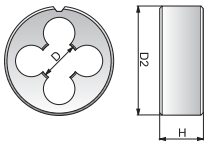


Material	GR1	GR2	GR3	GR9
Subg.	1,2,3,4,5	6	1,2,3	1,2
	1 2	1 2	1 2 3 4	3 4

D	tpi		D2	H	Ø d	Cod.
UNF Nr 4	48	•	20	5	2,77	0000941388
UNF Nr 5	44	•	20	5	3,10	0000941710
UNF Nr 6	40	•	20	5	3,42	0000942170
UNF Nr 8	36	•	20	5	4,08	0000942501
UNF Nr 10	32	•	20	7	4,73	0000942933
UNF Nr 12	28	•	20	7	5,38	0000943393
UNF 1/4	28	•	20	7	6,24	0000784477
UNF 5/16	24	•	25	9	7,82	0000944024
UNF 3/8	24	•	30	11	9,41	0000944455
UNF 7/16	20	•	30	11	10,98	0000792119
UNF 1/2	20	•	38	10	12,56	0000596036
UNF 9/16	18	•	38	10	14,14	0000945237
UNF 5/8	18	•	45	14	15,73	0000945668
UNF 3/4	16	•	45	14	18,89	0000946028
UNF 7/8	14	•	55	16	22,05	0000946450
UNF 1"	12	•	55	16	25,21	0000946882
UNF 1"1/8	12	•	65	18	28,38	0000947242
UNF 1"1/4	12	•	65	18	31,55	0000947673

Cojinetes de roscar. Para roscados manuales
Threading dies. For hand threading

COJINETE MANO	UNEF ANSI / ASME B1		2P	DIN EN 22568	HSS	(2A)	

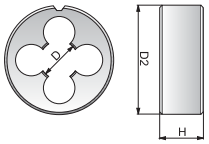


Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
UNF 1/4	32	•	20	7	6,25	0000982404
UNF 5/16	32	•	25	9	7,84	0000982353
UNF 3/8	32	•	30	11	9,42	0001466822
UNF 7/16	28	•	30	11	11,00	0002102376
UNF 1/2	28	•	38	10	12,59	0000805319
UNF 5/8	24	•	45	14	15,75	0000807474
UNF 3/4	20	•	45	14	18,91	0002102437
UNF 1"	20	•	55	16	25,26	0000982564

Cojinetes de roscar. Para roscas que precisan sellador de estanqueidad
Threading dies. For threads with dryseal material

COJINETE MANO	NPT ANSI / ASME B1.20.1		DIN EN 24230	HSS	C.1:16	



Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
NPT 1/16	27	•	30	11	7,52	0000549494
NPT 1/8	27	•	30	11	9,87	0000243914
NPT 1/4	18	•	38	14	13,10	0000244003
NPT 3/8	18	•	45	14	16,52	0000244154
NPT 1/2	14	•	55	22	20,55	0000244214
NPT 3/4	14	•	55	22	25,87	0000244374
NPT 1"	11,5	•	65	25	32,42	0000244435

Cojinetes de roscar / *Threading dies*

Para roscados manuales. Rosca para tubos de conducción eléctrica

For hand threading. For steel conduit threads

COJINETE MANO	Pg DIN 40430		2P	DIN EN 40434	HSS	

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,3	1,2	2	3
	1 2	6	6	5	5 6

D	tpi		D2	H	Ø d	Cod.
Pg 7	20	•	38	10	12,40	0000245437
Pg 9	18	•	45	14	15,10	0000245597
Pg 11	18	•	45	14	18,50	0000245648
Pg 13,5	18	•	45	14	20,30	0000245708
Pg 16	18	•	55	16	22,40	0000245868
Pg 21	16	•	65	18	28,15	0000245929
Pg 29	16	•	65	18	36,85	0000246008
Pg 36	16	•	90	22	46,85	0000246168
Pg 42	16	•	105	22	53,85	0000246228
Pg 48	16	•	105	22	59,15	0000246379

Cojinetes de roscar. Tipo normal. Rosca trapezoidal
Threading dies. Standard type. Trapezoidal thread.

JMC

COJINETE MAQUINA	Tr ISO-DIN 103		2P	DIN EN 22568	HSS	7e	P 30°

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
Tr 10	3	•	38	14	9,88	0002172163
Tr 12	3	•	38	14	11,88	0002172224
Tr 14	4	•	45	18	13,85	0002172384
Tr 16	4	•	45	18	15,85	0002172444
Tr 18	4	•	45	18	17,85	0002172595
Tr 20	4	•	55	22	19,85	0002172655
Tr 22	5	•	55	22	21,84	0002172715
Tr 24	5	•	65	25	23,84	0002172876
Tr 26	5	•	65	25	25,84	0002172926
Tr 28	5	•	65	25	27,84	0002173015
Tr 30	6	•	65	25	29,82	0002173165
Tr 32	6	•	65	25	31,82	0002173226
Tr 36	6	•	65	25	35,82	0002173386

Cojinetes de roscar. Tipo normal. Rosca trapezoidal. Corte a izquierda
Threading dies. Standard type. Trapezoidal thread. Left hand cut.

COJINETE MAQUINA LH	Tr ISO-DIN 103		2P	DIN EN 22568	HSS	7e	P 30°	LH

Material	GR1	GR4	GR5	GR6	
Subg.	1,2,3,4,5	2,4	1,2	2	3
	1 2	6	6	5	5 6

D	P		D2	H	Ø d	Cod.
Tr 10	3	•	38	14	9,88	0002173447
Tr 12	3	•	38	14	11,88	0002173507
Tr 14	4	•	45	18	13,85	0002173657
Tr 16	4	•	45	18	15,85	0002173718
Tr 18	4	•	45	18	17,85	0002173878
Tr 20	4	•	55	22	19,85	0002173938

Fresas de roscar / *Thread milling cutter*

Fresas de roscar de Metal Duro integral
Condiciones de corte recomendadas
Solid carbide thread milling cutters
Recommended cutting conditions

	N AltPlus			NR AltPlus			N-KC AltPlus			NTP-KC AltPlus			NA AltPlus			Micro AltPlus		BFA 2 AltPlus				
		Fz = mm./Z			Fz = mm./Z			Fz = mm./Z			Fz = mm./Z			Fz = mm./Z			Fz=mm./Z		Fb=mm./rev.		Fz=mm./Z	
	Vc=m/min.	Ø ≤ 6mm.	Ø ≥ 8 mm.	Vc=m/min.	Ø ≤ 6mm.	Ø ≥ 8 mm.	Vc=m/min.	Ø ≤ 6mm.	Ø ≥ 8 mm.	Vc=m/min.	Ø ≤ 6mm.	Ø ≥ 8 mm.	Vc=m/min.	Ø ≤ 6mm.	Ø ≥ 8 mm.	Vc=m/min.	Ø ≤ 6mm.	Vc= m/min.	Ø≤ 6 mm.	Ø≥ 8 mm.	Ø≤ 6 mm.	Ø≥ 8 mm.
1	80-150 80-150 50-100	0,04 0,02 0,03	0,10 0,04 0,08	80-150 80-150 50-100	0,04 0,02 0,03	0,10 0,04 0,08	80-150 80-150 50-100	0,04 0,02 0,03	0,10 0,04 0,08	80-150 80-150 50-100	0,04 0,02 0,03	0,10 0,04 0,08	80-150 80-150 50-100	0,04 0,02 0,03	0,10 0,04 0,08	100-150	0,03-0,10					
1	40-80 40-80 40-80	0,02 0,02 0,02	0,08 0,05 0,08	40-80 40-80 40-80	0,02 0,02 0,02	0,08 0,05 0,08	40-80 40-80 40-80	0,02 0,02 0,02	0,08 0,05 0,08	40-80 40-80 40-80	0,02 0,02 0,02	0,08 0,05 0,08	40-80 40-80 40-80	0,02 0,02 0,02	0,08 0,05 0,08	100-150	0,03-0,10					
2	30-80	0,02	0,05	30-80	0,02	0,05	30-80	0,02	0,05	30-80	0,02	0,05	30-80	0,02	0,05							
1	30-50	0,02	0,05	30-50	0,02	0,05	30-50	0,02	0,05	30-50	0,02	0,05	30-50	0,02	0,05							
1	80-150	0,04	0,10	80-150	0,04	0,10	80-150	0,04	0,10	80-150	0,04	0,10	80-150	0,04	0,10	100-200	0,05-0,15	100-200	0,10	0,30	0,04	0,10
2	80-150	0,04	0,10	80-150	0,04	0,10	80-150	0,04	0,10	80-150	0,04	0,10	80-150	0,04	0,10	100-200	0,05-0,15	100-200	0,10	0,30	0,04	0,10
1	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12							
2	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	100-200	0,05-0,15	100-200	0,10	0,25	0,05	0,12
3	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	150-300	0,05	0,12	100-200	0,05-0,15	100-200	0,10	0,25	0,05	0,12
4	100-200	0,04	0,10	100-200	0,04	0,10	100-200	0,04	0,10	100-200	0,04	0,10	100-200	0,04	0,10	100-200	0,05-0,15	80-160	0,10	0,25	0,04	0,10
1	100-400	0,03	0,12	100-400	0,03	0,12	100-400	0,03	0,12	100-400	0,03	0,12	100-400	0,03	0,12	100-400 100-400	0,05-0,2 0,05-0,2	100-400 100-350	0,10 0,10	0,3 0,3	0,03 0,03	0,12 0,12
	100-300	0,03	0,12	100-300	0,03	0,12	100-300	0,03	0,12	100-300	0,03	0,12	100-300	0,03	0,12	100-300	0,05-0,2	80-280	0,10	0,3	0,03	0,10
1	150-300	0,04	0,12	150-300	0,04	0,12	150-300	0,04	0,12	150-300	0,04	0,12	150-300	0,04	0,12	150-300	0,04-0,12	100-350	0,10	0,2	0,05	0,12
1	40-80 30-60	0,02	0,08	40-80 30-60	0,02	0,08	40-80 30-60	0,02	0,08	40-80 30-60	0,02	0,08	40-80 30-60	0,02	0,08							
1	40-50 30-70	0,03 0,03	0,10 0,08	40-50 30-70	0,03 0,03	0,10 0,08	40-50 30-70	0,03 0,03	0,10 0,08	40-50 30-70	0,03 0,03	0,10 0,08	40-50 30-70	0,03 0,03	0,10 0,08							
1	150-300 100-250	0,04 0,03	0,12 0,10	150-300 100-250	0,04 0,03	0,12 0,10	150-300 100-250	0,04 0,03	0,12 0,10	150-300 100-250	0,04 0,03	0,12 0,10	150-300 100-250	0,04 0,03	0,12 0,10							
1	90-120	0,04	0,10	90-120	0,04	0,10	90-120	0,04	0,10	90-120	0,04	0,10	90-120	0,04	0,10	100-200	0,05 - 0,2	60-200	0,15	0,40	0,04	0,10
2	60-80	0,04	0,10	60-80	0,04	0,10	60-80	0,04	0,10	60-80	0,04	0,10	60-80	0,04	0,10	100-200	0,05 - 0,2	40-120	0,10	0,25	0,04	0,10

● Recomendado / *Recommended*
● Adecuado / *Suitable*

Vc = Velocidad de corte *Cutting speed* m/min. | Fz = Avance por diente *Feed per tooth* mm./z. | Fb = Avance taladrado *Drilling feed* mm./rev.

* Éstos valores recomendados dependen de las siguentes condiciones: máquina, sistema de fijación, refrigerante, profundidad de rosca, etc. Es posible que tengan que ser adaptados.

* *These recommended values depend on the following conditions: machine locking system, coolant, thread depth, etc. You may have to be adapted.*

	M / MF ISO-DIN 13							
Tipo roscado / *Threading type*	2xD	2xD ext.	2xD	2xD	2xD	2xD	2xD	2xD
Referencia / *Reference*	N	NR	N-KC	NA	NA-KC	Micro 1	Micro 2	BFA 2
Refrigeración / *Coolant*	ext.	ext.	int.	ext.	int.	ext.	ext.	int.
Recubrimiento / *Coating*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*
Ranura / *Flute*	R 10°	R 10°	R 10°	R 45°	R 45°	R 15°	R 15°	R 30°
Mango / *Shank*	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
Material / *Material*	MDI *Solid carbide*							
Gama / *Range*	M 2...24	P 1-1,5-2	M/MF 5...36	M3 - M4	M5...16	M 2...6	M 2...6	M/MF 5...16
Página / *Page*	384	388	389	390	390	391	391	392

	G(BSP) DIN EN ISO 228		**Rc**(BSPT) ISO 7/1 BS21	**UN/UNC/UNF** ANSI/ASME B1.1		**UNC** ANSI/ASME B1.1	**UNF** ANSI/ASME B1.1	**NPT** ANSI/ASME B1.20.1
Tipo roscado / *Threading type*	2xD	2xD	2xD C1:16	2xD	2xD	2xD	2xD	2xD C1:16
Referencia / *Reference*	N	BFA 2	NTP-KC	N	Micro 1	BFA 2	BFA 2	NTP-KC
Refrigeración / *Coolant*	ext.	int.	int.	ext.	ext.	int.	int.	int.
Recubrimiento / *Coating*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*
Ranura / *Flute*	R 10°	R 30°	R 10°	R 10°	R 15°	R 30°	R 30°	R 15°
Mango / *Shank*	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HA
Material / *Material*	MDI *Solid carbide*							
Gama / *Range*	G 1/8...3"	G 1/8...3/8	Rc 1/8...3"	UN nº5...1"	UN nº2...nº12	UNC nº12...3/4	UNF nº12...3/4	NPT 1/16...2"
Página / *Page*	385	393	387	386	386	393	394	387

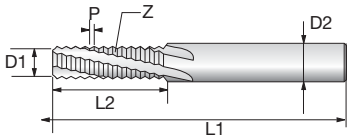
Fresas de roscar para tornos automáticos en HSSE bajo consulta.
HSSE threading milling cutters for automatic lathes upon request.

Fresas de roscar de Metal Duro integral.
Solid carbide thread milling cutters.

Para roscados interiores / *For internal threading*

N	M / MF ISO-DIN 13	2xD	R10°	JMC NORM./ STD	MDI *Solid carbide*	DIN 6535	P 60°

Altplus



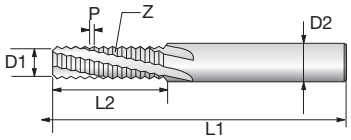
P mm	M		MF	D1	L1	L2	D2	hilos *threads*	Z	Cod.
0,4	M 2			1,5	50	4,60	4	11	3	0003729035
0,45	M 2,2			1,6	50	5,17	4	12	3	0003729196
0,45	M 2,5			1,9	50	5,62	4	12	3	0003729256
0,5	M 3			2,3	50	6,75	4	13	3	0003729316
0,6	M 3,5			2,6	50	8,10	4	13	3	0003729467
0,7	M 4			3	75	8,66	6	12	3	0003720025
0,75	M 4,5			3,4	50	7,87	4	13	3	0003770648
0,75		≥	MF 6	4,5	63	16,87	6	14	3	0003728956
0,8	M 5			4	75	13,10	6	16	3	0003729527
1	M 6	≥	MF 8	4,8	75	17,37	6	17	3	0003729687
1		≥	MF 8	6	75	21,37	6	21	3	0003729748
1		≥	MF 10	8	75	23,37	8	23	3	0003729808
1		≥	MF 12	10	80	26,37	10	26	4	0003730254
1		≥	MF 14	12	85	31,37	12	31	4	0003730314
1,25	M 8	≥	MF 10	6	75	21,71	6	17	3	0003730193
1,25		≥	MF 12	8	75	24,21	8	19	3	0003730464
1,25		≥	MF 14	10	80	26,71	10	21	4	0003730525
1,5	M 10	≥	MF 12	8	75	24,55	8	16	3	0003731748
1,5		≥	MF 14	10	80	27,55	10	18	4	0003731808
1,5		≥	MF 16	12	85	32,05	12	21	4	0003731959
1,5		≥	MF 20	16	100	39,55	16	26	5	0003755402
1,75	M 12	≥	MF 18	8	75	25,15	8	14	3	0003732047
2	M 14	≥	MF 18	10	80	28,74	10	14	4	0003732258
2	M 16	≥	MF 18	12	85	32,74	12	16	4	0003732319
2		≥	MF 20	16	100	40,74	16	20	5	0003755994
2,5	M 18	≥		14	100	38,42	14	15	4	0003755783
2,5	M 20 M 22			16	100	40,92	16	16	5	0003770869
3		≥	MF 24	20	105	46,11	20	15	5	0003755623

Fresas de roscar de Metal Duro integral.
Solid carbide thread milling cutters.

Para roscados interiores y exteriores / *For internal and external threading*

N	G(BSP) DIN EN ISO 228	2xD	R10°	JMC NORM./ STD	MDI *Solid carbide*	DIN 6535	P 55°

Altplus



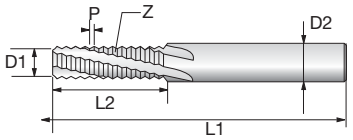
P tpi	G	D1	L1	L2	D2	hilos *threads*	Z	Cod.
28	1/8	6	75	21,27	6	23	3	0003736699
19	1/4-3/8	8	75	23,33	8	17	3	0003736810
19	1/4-3/8	10	80	23,34	10	20	4	0003737109
14	1/2-5/8-3/4-7/8	12	85	31,35	12	23	4	0003737480
11	1”-1”1/8-1”1/4-1”1/2	12	85	33,46	12	18	4	0003737691
11	1”-3”	16	100	40,72	16	22	5	0003737752

Fresas de roscar de Metal Duro integral.
Solid carbide thread milling cutters.

Para roscados interiores / *For internal threading*

N	UNC/UNF ANSI/ASME B1.1	2xD	R10°	JMC NORM./ STD	MDI *Solid carbide*	DIN 6535	P 60°

Altplus



P tpi	UNC	UNF	D1	L1	L2	D2	hilos *threads*	Z	Cod.
44		nº5	2,5	50	5,48	4	9	3	0003737812
40	nº5	nº6	2,3	50	7,30	4	11	3	0003737962
36		nº8	3,1	50	7,41	4	10	3	0003738051
32	nº6-nº8	nº10	2,5	50	8,33	4	10	3	0003738112
28		nº12-1/4	4	75	13,03	6	14	3	0003738262
24	nº10-nº12		3	75	13,09	6	12	3	0003738322
24		3/8-5/16	6	75	21,56	6	20	3	0003738483
20	1/4		4	75	13,17	6	10	3	0003738543
20		7/16-1/2	8	75	23,33	8	18	3	0003738693
18	5/16		4,8	75	17,45	6	12	3	0003738754
18		9/16	10	80	27,33	10	19	4	0003738814
18		5/8	12	85	31,57	12	22	4	0003738975
16	3/8		6	75	22,81	6	14	3	0003739114
16		3/4	12	85	32,34	12	20	4	0003739264
14	7/16	7/8	8	75	24,26	8	13	3	0003739485
13	1/2		8	75	24,17	8	12	3	0003739325
12	9/16		10	80	28,30	10	13	4	0003739545
11	5/8		10	80	28,56	10	12	4	0003739606
10	3/4		12	85	33,96	12	13	4	0003739756
9	7/8		16	120	49,39	16	17	3	0003739816
8	1"		16	120	55,56	16	17	3	0003739977

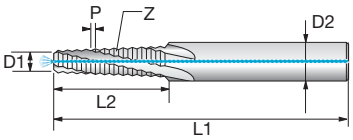
Fresas de roscar cónicas de MDI. Con refrigeración interna.

Taper solid carbide thread milling cutters. With internal coolant.

Para roscados interiores / *For internal threading*

NTP
KC
Altplus

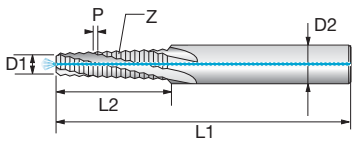
Rc(BSPT) ISO 7/1 BS21 | C 1:16 2xD1 | R10° | JMC NORM./ STD | MDI *Solid carbide* | DIN 6535 | P 55°



P tpi	BSPT(Rc)	D1	L1	L2	D2 *threads*	hilos Z		Cod.
28	1/8	6	75	15,82	6	17	3	0003740051
19	1/4-3/8	8	75	20,64	8	15	3	0003740112
14	1/2-5/8-3/4-7/8	14	100	28,01	14	21	4	0003740262
11	1"-2"	20	105	33,35	20	14	5	0003740322

NTP
KC
Altplus

NPT ANSI/ASME B1.20.1 | C 1:16 2xD1 | R10° | JMC NORM./ STD | MDI *Solid carbide* | DIN 6535 | P 60°

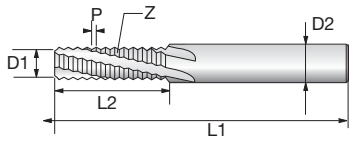


P tpi	NPT	D1	L1	L2	D2	hilos *threads*	Z	Cod.
27	1/16-1/8	6	75	15,39	6	16	3	0003740483
18	1/4-3/8	8	75	20,27	8	14	4	0003740543
14	1/2-5/8-3/4	14	100	27,87	14	15	5	0003740603
11,5	1"~2"	20	105	33,93	20	15	5	0003740754
8	2 1/2~3"	20	100	42,86	20	14	4	0003740814

Fresas de roscar de Metal Duro integral.
Solid carbide thread milling cutters.

Para roscados exteriores / *For external threading*

NR	M/MF	ext.	R10°	JMC	MDI	DIN 6535	P 60°
Altplus	ISO DIN 13			NORM./ STD	*Solid carbide*		



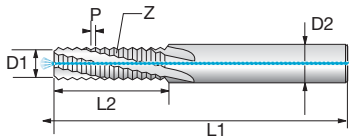
P mm	D1	L1	L2	D2	hilos *hreads*	Z	Cod.
1	10	76	21,50	10	21	4	0003740975
1,5	12	83	26,25	12	17	4	0003741053
2	16	100	35,00	16	17	4	0003741114

Fresas de roscar de Metal Duro integral. Con refrigeración interna.

Solid carbide thread milling cutters. With internal coolant.

Para roscados interiores / *For internal threading*

N	M / MF ISO-DIN 13	2xD	R10°	JMC NORM./ STD	MDI *Solid carbide*	DIN 6535 HD	P 60°
KC							
Altplus							



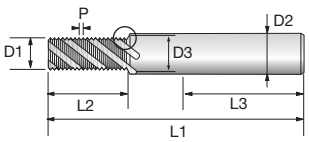
P mm	M		MF	D1	L1	L2	D2	hilos *threads*	Z	Cod.
0,8	M 5			4	75	13,10	6	16	3	0003741977
1	M 6	≥	M 8	4,8	75	17,37	6	17	3	0003742056
1		≥	M 8	6	75	21,37	6	21	3	0003742116
1		≥	M 10	8	75	23,37	8	23	3	0003742276
1		≥	M 12	10	80	26,37	10	26	4	0003742337
1		≥	M 14	12	85	31,37	12	31	4	0003742487
1		≥	M 16	14	100	36,37	14	36	5	0003742768
1		≥	M 14	16	100	39,37	16	39	5	0003742608
1		≥	M 18	20	105	42,37	20	42	5	0003742819
1,25		≥	M 10	6	75	21,71	6	17	3	0003744331
1,25		≥	M 12	8	75	24,21	8	19	3	0003744492
1,25		≥	M 14	10	80	26,71	10	21	4	0003744271
1,5	M 10	≥	M 12	6	75	21,55	6	14	3	0003744763
1,5	M 10	≥	M 12	8	75	24,55	8	16	3	0003744823
1,5		≥	M 14	10	80	27,55	10	18	4	0003744542
1,5		≥	M 16	12	85	32,05	12	21	4	0003744603
1,5		≥	M 18	14	100	36,55	14	24	5	0003744111
1,5		≥	M 20	16	100	39,55	16	26	5	0003743821
1,5		≥	M 24	20	105	42,55	20	28	5	0003743971
1,5		≥	M 30	25	130	51,55	25	34	6	0003744060
1,5		≥	M 36	32	155	67,05	32	44	6	0003744974
1,75	M 12			8	75	25,15	8	14	3	0003743279
2	M 14	≥	M 18	8	75	24,74	8	12	3	0003745063
2	M 14	≥	M 18	10	80	28,74	10	14	4	0003745123
2	M 16	≥	M 18	12	85	32,74	12	16	4	0003745273
2		≥	M 18	14	85	36,74	14	18	5	0003745334
2		≥	M 20	16	100	40,74	16	20	5	0003745494
2		≥	M 24	20	105	44,74	20	22	5	0003745554
2		≥	M 30	25	130	52,74	25	26	6	0003745605
2		≥	M 36	32	155	67,74	32	34	6	0003745765
2,5	M 20			14	100	38,42	14	15	5	0003745826
2,5	M 20			16	100	40,92	16	16	5	0003745986
3	M 24			16	100	43,11	16	14	5	0003746065
3	M 27	≥	M 30	20	105	46,11	20	15	5	0003746125
3	M 33			25	130	55,11	25	18	6	0003746276
3		≥	M 36	32	155	69,11	32	23	6	0003746336
3,5	M 30			20	105	46,79	20	13	5	0003746496
3,5	M 33			25	130	53,79	25	15	6	0003746557
4	M 36			25	130	54,48	25	13	6	0003746617

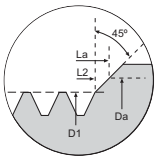
Fresas de roscar con avellanador de Metal Duro integral.
Solid carbide thread milling cutters with countersink.

Para roscados interiores / *For internal threading*

NA *Altplus*

M / MF ISO-DIN 13 | 2xD | R10° 45° | JMC NORM./ STD | MDI *Solid carbide* | DIN 6535 HD



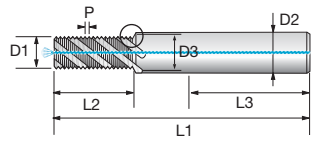


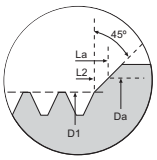
P mm	M	D1	L1	L2	La	Da	Z	Cod.
0,5	M 3	2,3	63	6,75	7,35	6	3	0003746767
0,7	M 4	3	63	8,75	9,60	6	3	0003746828

Con refrigeración interna / *With internal coolant*

NA **KC** *Altplus*

M / MF ISO-DIN 13 | 2xD | R10° 45° | JMC NORM./ STD | MDI *Solid carbide* | DIN 6535 HD





P mm	M	D1	L1	L2	La	D2	Z	Cod.
0,8	M 5	4	55	10,75	11,15	6	3	0003746988
1	M 6	4,8	62	12,40	12,90	8	3	0003747067
1,25	M 8	6,5	74	16,80	17,40	10	3	0003747127
1,5	M 10	8,2	80	20,15	20,80	12	3	0003747288
1,75	M 12	9,9	90	25,25	26,00	14	4	0003747338
2	M 14	11,6	100	28,85	29,70	16	4	0003747499
2	M 16	13,6	102	32,85	33,70	18	4	0003747559

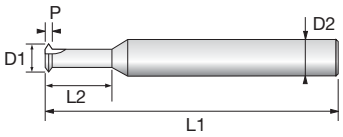
Mini fresas de roscar de Metal Duro integral. Diente parcial 60º.

Solid carbide thread milling cutters. Partial profile 60º.

Para roscados interiores / *For internal threading*

Micro 1 *Altplus*

M/MF ISO-DIN 13 | **UN** ANSI/ASME B1.1 | 2,25xD | R15º | JMC NORM./ STD | **MDI** *Solid carbide* | DIN 6535 HD



M	MF	UNC UNF	D1	L1	L2	D2	hilos *threads*	Z	Cod.
M 2 - M 2,2	MF 1,8 - MF 2	nº2	1,5	39	5,40	3	1	3	0003747619
M 2,5	MF 2,2	nº3	1,9	39	6,20	3	1	3	0003747760
	MF 2,5	nº4	2,1	39	7,10	3	1	3	0003747820
M 3		nº5	2,3	39	7,80	3	1	3	0003747981
M 3,5	MF 3	nº6	2,6	39	8,70	3	1	3	0003748069
M 4	MF 3,5 - MF 4	nº8	3	39	10,20	3	1	3	0003748120
M 4,5	MF 4,5	nº10	3,6	50	12,00	4	1	3	0003748280
M 5 - M 6	M F5 - M 6	nº12	4	50	14,50	4	1	3	0003748341

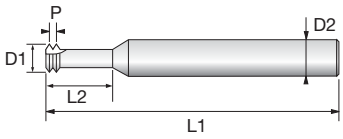
Mini fresas de roscar de Metal Duro integral. Dos dientes.

Solid carbide thread milling cutters. Two teeth.

Para roscados interiores / *For internal threading*

Micro 2 *Altplus*

M/MF ISO-DIN 13 | 2,25xD | R15º | JMC NORM./ STD | **MDI** *Solid carbide* | DIN 6535 HD



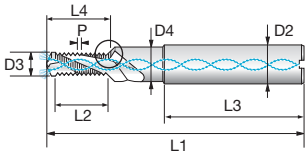
P mm	M	D1	L1	L2	D2	hilos *threads*	Z	Cod.
0,4	M2	1,5	39	5,00	3	2	3	0003748491
0,45	M2,2	1,6	39	5,40	3	2	3	0003748551
0,45	M2,5	1,9	39	6,10	3	2	3	0003748612
0,5	M2,5	2,3	39	7,30	3	2	3	0003748772
0,6	M3,5	2,6	39	8,50	3	2	3	0003748822
0,7	M4	3	39	10,00	3	2	3	0003748983
0,8	M5	3,8	50	12,10	4	2	3	0003749062
1	M6	4,5	63	14,50	6	2	3	0003749122
1,25	M8	6	63	19,30	6	2	3	0003749282

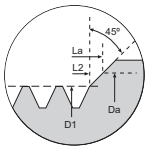
Fresas de roscar broca-avellanador de MDI. Con refrigeración interna.
Solid carbide drill-thread milling cutters. With internal coolant.

Para roscado, taladrado y avellanado de agujeros / *For threading, drilling and countersinking*

BFA2 *Altplus*

M ISO-DIN 13 | 2xD | R30° | JMC NORM./ STD | **MDI** *Solid carbide* | DIN 6535 HD

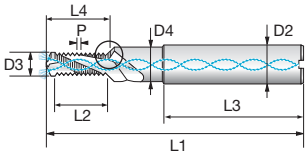


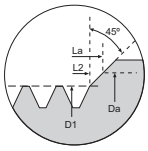


M	P mm	L1	L2	L3	D1	D2	D3	Da	L4	Z	Cod.
M 5	0,8	55	9,55	36	4,04	6	4,20	5,3	11,80	2	0003750069
M 6	1	62	12,05	36	4,80	8	5,00	6,3	14,66	2	0003750120
M 8	1,25	74	15,07	40	6,50	10	6,75	8,3	18,39	2	0003750280
M 10	1,5	79	19,58	45	8,20	12	8,50	10,3	23,61	2	0003750341
M 12	1,75	89	22,85	45	9,90	14	10,25	12,3	27,58	2	0003750401
M 14	2	102	28,11	48	11,60	16	12,00	14,3	33,54	2	0003750551
M 16	2	102	32,11	48	13,60	18	14,00	16,3	37,91	2	0003750612

BFA2 *Altplus*

MF ISO-DIN 13 | 2xD | R30° | JMC NORM./ STD | **MDI** *Solid carbide* | DIN 6535 HD





MF	P mm	L1	L2	L3	D1	D2	D3	Da	L4	Z	Cod.
M 6	0,75	62	11,95	36	5,05	8	5,25	6,3	14,30	2	0003750772
M 8	1,25	74	15,90	40	6,75	10	7,00	8,3	19,10	2	0003750832
M 10	1,5	79	20,10	45	8,70	12	9,00	10,3	23,47	2	0003750983
M 10	1,5	79	20,10	45	8,40	12	8,75	10,3	23,90	2	0003751072
M 12	1,75	89	23,90	45	10,65	14	11,00	12,3	27,80	2	0003751122
M 12	1,75	89	23,90	45	10,40	14	10,75	12,3	28,00	2	0003751282
M 12	1,75	89	24,10	45	10,15	14	10,51	12,3	28,50	2	0003751343
M 14	2	102	27,12	48	12,10	16	12,51	14,3	31,90	2	0003751403
M 16	2	102	31,65	48	14,10	18	14,51	16,3	36,80	2	0003751554

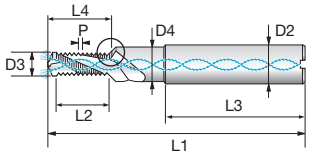
Fresas de roscar broca-avellanador de MDI. Con refrigeración interna.

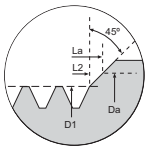
Solid carbide drill-thread milling cutters. With internal coolant.

Para roscado, taladrado y avellanado de agujeros / *For threading, drilling and countersinking*

BFA2 *Altplus*

G DIN EN ISO 228 | 2xD | R30° | JMC NORM./ STD | **MDI** *Solid carbide* | DIN 6535 HD | P 55°

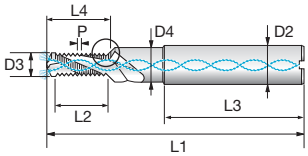


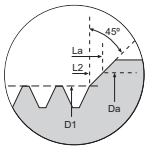


G	P tpi	L1	L2	L3	D1	D2	D3	Da	L4	Z	Cod.
G 1/8	28	79	18,98	45	8,50	12	8,80	10,00	17,85	2	0003751614
G 1/4	19	102	25,30	48	11,40	16	11,80	13,50	23,30	2	0003751985
G 3/8	19	102	37,40	48	14,85	18	15,25	17,00	36,05	2	0003751835

BFA2 *Altplus*

UNC ANSI/ASME B1.1 | 2xD | R30° | JMC NORM./ STD | **MDI** *Solid carbide* | DIN 6535 HD | P 60°





UNC	P tpi	L1	L2	L3	D1	D2	D3	Da	L4	Z	Cod.
UNC nº12	24	62	10,65	36	4,21	6	4,50	5,79	13,20	2	0003752074
UNC 1/4	20	62	12,75	36	4,85	8	5,20	6,65	15,80	2	0003752134
UNC 5/16	18	74	15,60	40	6,25	10	6,60	8,25	19,10	2	0003752285
UNC 3/8	16	80	19,15	45	7,65	12	8,00	9,83	23,20	2	0003752345
UNC 7/16	14	80	21,85	45	9,00	12	9,40	11,43	26,50	2	0003752405
UNC 1/2	13	89	25,50	45	10,35	14	10,75	13,00	30,65	2	0003752566
UNC 9/16	12	102	27,65	48	11,80	16	12,25	14,61	33,30	2	0003752616
UNC 5/8	11	102	30,15	48	13,10	18	13,50	16,18	36,35	2	0003752777
UNC 3/4	10	115	38,25	50	16,00	20	16,50	19,35	45,35	2	0003752837

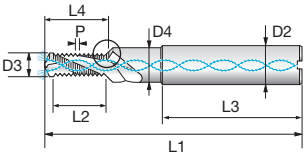
Fresas de roscar broca-avellanador de MDI. Con refrigeración interna.

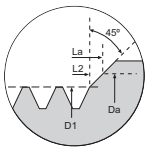
Solid carbide drill-thread milling cutters. With internal coolant.

Para roscado, taladrado y avellanado de agujeros / *For threading, drilling and countersinking*

BFA2 *Altplus*

UNF ANSI/ASME B1.1 | 2xD | R30° | JMC NORM./ STD | MDI *Solid carbide* | DIN 6535 HD | P 60°





UNF	P tpi	L1	L2	L3	D1	D2	D3	Da	L4	Z	Cod.
UNF nº12	28	62	10,95	36	4,36	6	4,65	5,80	13,35	2	0003752997
UNF1/4	28	62	12,75	36	5,26	8	5,50	6,65	15,35	2	0003753076
UNF 5/16	24	74	15,95	40	6,60	10	6,90	8,25	19,00	2	0003753137
UNF 3/8	24	80	19,15	45	8,20	12	8,50	9,85	22,50	2	0003753287
UNF 7/16	20	80	21,70	45	9,55	12	9,90	11,40	25,65	2	0003753347
UNF 1/2	20	89	25,55	45	11,10	14	11,50	13,00	29,80	2	0003753408
UNF 9/16	18	102	28,35	48	12,50	16	12,90	14,60	33,10	2	0003753568
UNF 5/8	18	102	31,20	48	14,10	18	14,50	16,20	36,25	2	0003753628
UNF 3/4	16	115	38,30	50	16,95	20	17,50	19,40	44,15	2	0003753779

Ventajas de las fresas de roscar / *Advantages of the thread milling cutters*

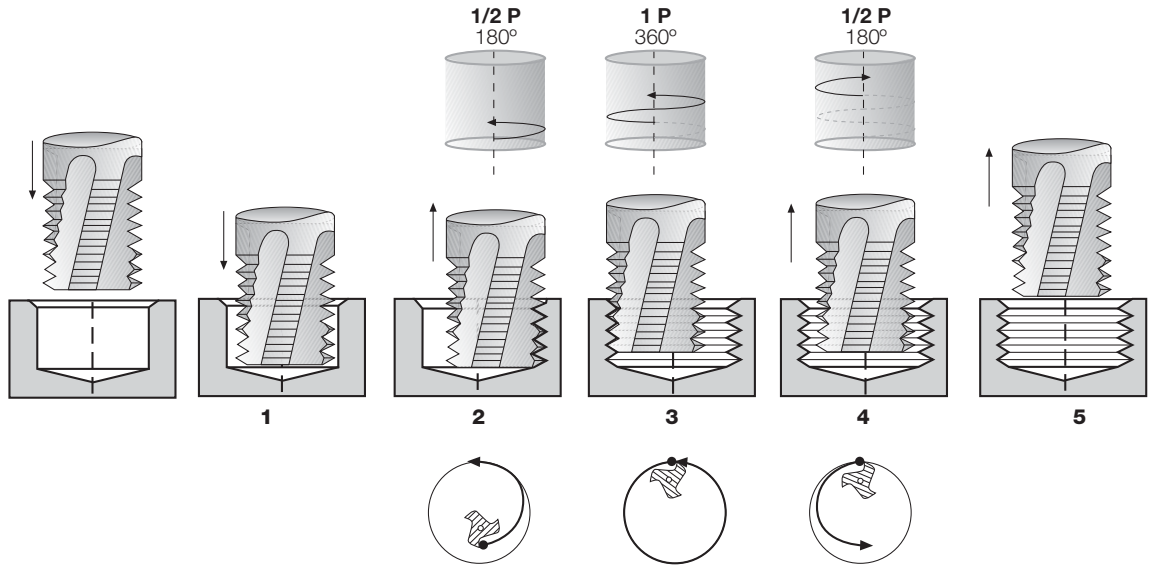
- Reducción en los tiempos de roscado gracias a las altas velocidades de corte y avance
- Posibilidad de obtener cualquier tolerancia con la misma herramienta
- Generan virutas cortas evitando problemas de evacuación
- Herramienta única para el roscado tanto de agujeros ciegos como pasantes
- Herramienta única para el roscado a derechas o a izquierdas
- Herramienta única para el roscado de una amplia gama de materiales: de viruta corta o larga, de alta o baja resistencia
- Herramienta única para el roscado de diferentes diámetros nominales con el mismo paso de rosca
- Profundidades de rosca controladas
- Bajo esfuerzo de corte y consumo de energia.

- *Reduces threading times due to the high cutting and feed speed*
- *Any tolerance can be produced with the same tool*
- *Produces short chips preventing breakage problems*
- *Blind and throug holes can be thread with the same tool*
- *Right and left threads can be produced with the same tool*
- *A wide range of materials can be thread with the same tool, short and long chip materials, high and soft resistance materials*
- *Several nominal diameter threads with the same pitch can be produced with the same tool*
- *Controlled depth of threads*
- *Saving on energy.*

Proceso de roscado / *Threading proces*

1.- Avance axial hasta la profundidad de rosca.
2.- Entrada de la herramienta con giro de 180º en movimiento de arco tangente.
3.- Avance del paso en rotación de 360º.
4.- Salida con giro de 180º, en arco tangente.
5.- Salida rápida del agujero.

1.- Axial approach to the required thread depth
2.- Tool entry turning 180º, along tangent arc
3.- Helical movement during one full orbit, turning 360º
4.- Tool removal turning 180º, along tangent arc
5.- Fast tool removal from the hole



Ventajas de las fresas de roscar Micro / *Advantages of the Micro thread milling cutters*

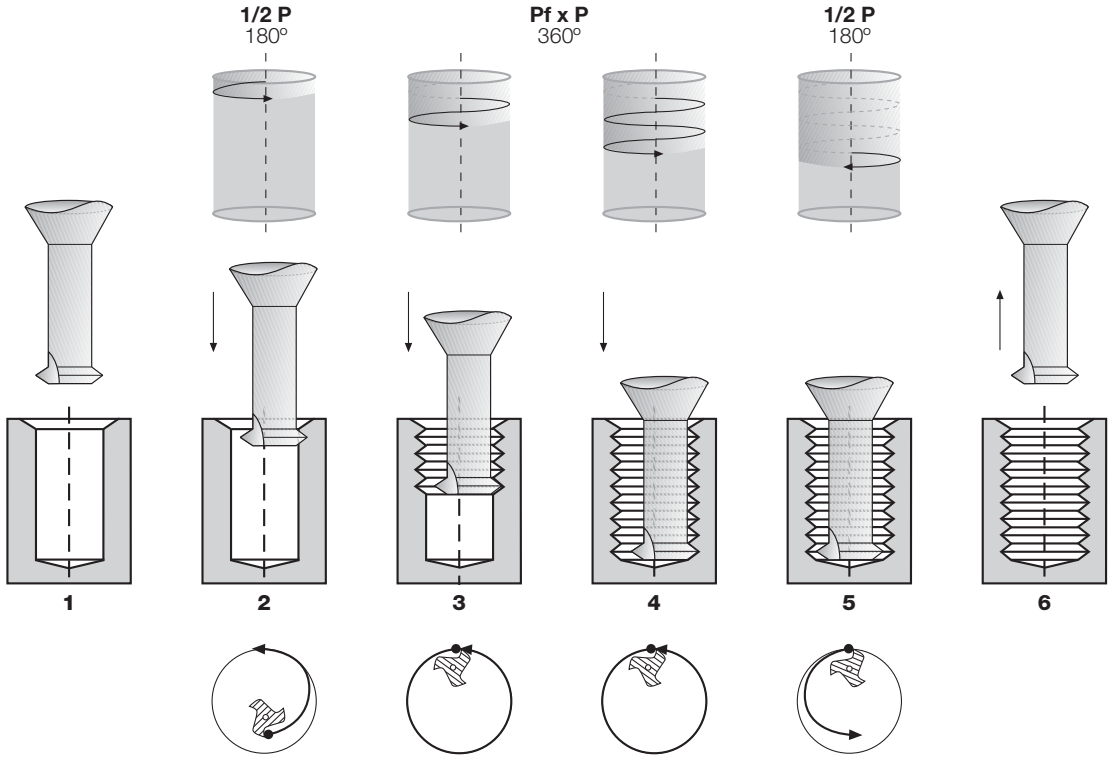
- Reducción en los tiempos de roscado gracias a las altas velocidades de corte y avance
- Posibilidad de obtener cualquier tolerancia con la misma herramienta
- Generan virutas cortas evitando problemas de evacuación
- Herramienta única para el roscado tanto de agujeros ciegos como pasantes
- Herramienta única para el roscado a derechas o a izquierdas
- Herramienta única para el roscado de una amplia gama de materiales: de viruta corta o larga, de alta o baja resistencia
- Herramienta única para el roscado de diferentes diámetros nominales con el mismo paso de rosca
- Profundidades de rosca controladas
- Bajo esfuerzo de corte y consumo de energia.

- *Reduces threading times due to the high cutting and feed speeds*
- *Any tolerance can be produced with the same tool*
- *Produces short chips preventing breaking problems*
- *Blind and throug holes can be thread with the same tool*
- *Right and left threads can be produced with the same tool*
- *A wide range of materials can be thread with the same tool, short and long chip materials, high and soft resistance materials*
- *Several nominal diameter threads with the same pitch can be produced with the same tool*
- *Controlled depth of threads*
- *Saving on energy.*

Proceso de roscado / *Threading proces*

1.- Avance hasta la posición inicial sobre el centro del agujero
2.- Inicio del roscado con entrada de la herramienta con giro de 180º en arco tangente
3.- Avance del paso en rotación de 360º, hasta la profundidad de rosca
4.- Salida con giro de 180º, en arco tangente
5.- Salida rápida del agujero

1.- Approach to initial position over the center of the hole
2.- Tool entry turning 180º, along tangent arc
3.- Helical movement during one full orbit, turning 360º up to the full depth of the thread
4.- Tool removal turning 180º, along tangent arc
5.- Fast tool removal from the hole



Ventajas de las fresas de roscar BFA / *Advantages of the BFA thread milling cutters*

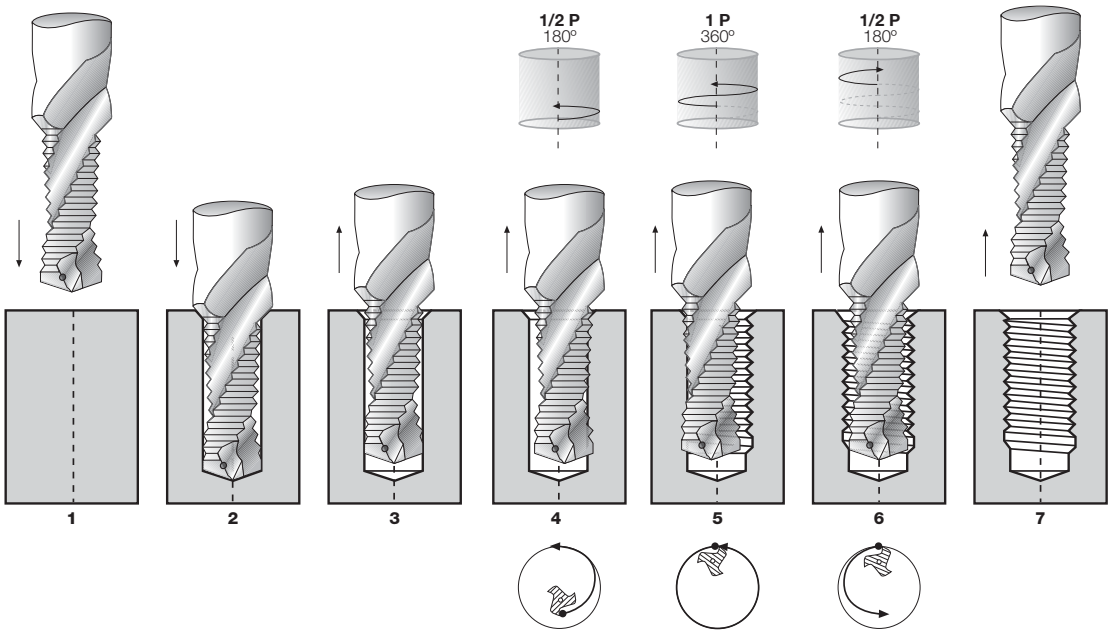
- Aumento de la productividad gracias a la unión de taladrado, avellanado y roscado en un único ciclo de trabajo sin cambio de herramienta.
- Reducción en los tiempos de roscado gracias a las altas velocidades de corte y avance
- Posibilidad de obtener cualquier tolerancia con la misma herramienta
- Generan virutas cortas evitando problemas de evacuación
- Herramienta única para el roscado a derechas o a izquierdas
- Profundidades de rosca controladas
- Bajo esfuerzo de corte y consumo de energia.

- *Increase productivity due to the combination of drilling, changing and threading in only one secuence of machining without changing the tool.*
- *Reduces threading times due to the high cutting and feed speeds*
- *Any tolerance can be produced with the same tool*
- *Produces short chips preventing breakage problems*
- *Right and left threads can be produced with the same tool*
- *Controlled depth of threads*
- *Saving on energy*

Proceso de roscado / *Threading proces*

1.- Avance hasta la posición inicial sobre el centro del agujero.
2.- Taladrado del diámetro previo y avellanado.
3.- Posicionamiento en el punto de inicio del proceso de roscado.
4.- Entrada de la fresa con giro de 180º en arco tangente.
5.- Avance del paso en rotación de 360º.
6.- Salida con giro de 180º en arco tangente.
7.- Salida rápida del agujero.

1.- Approach to initial position over centre hole.
2.- Drilling of core diameter and 90º chamfering.
3.- Placing to start position of thread milling process.
4.- Thread milling starts with cutter entry path.
5.- Thread milling
6.- End of thread milling process with cutter exit path.
7.- Return to initial position and end of machine cycle.



Programación CNC para fresas de roscar tipo N.
CNC program for thread milling cuters type N.

Programa según DIN 66025 / *Program according to DIN 66025*

N000	G80 G40 G49	Cabezera de programa *Heading of the program*
N010	M6 T	Solicitud de herramienta *Tool selection*
N020	G90 G54 G00 X Y	Activar G54 y desplazamiento al centro del agujero *Switch on G54 and approach to the center of the hole*
N030	G00 G43 H1 Z50	Activar compensación longitudinal, desplazamiento a 50mm. sobre el agujero *Switch on length compensation, positioning it 50mm. over the hole*
N040	M3 S Z2	Inicio giro en sentido horario, acercamiento a 2mm. del agujero *Rotate clockwise, approach 2 mm. over the centre of the hole*
N050	G01 Z -A5 F300	Desplazamiento a la profundidad de roscado *Axial aproach to required thread depth*
N060	G91	Cambio a valores incrementales *Change to Incremental values*
N070	G01 G41 X 0 Y-A3	Compensación radial *Radial compensation*
N080	G03 X 0 Y A4 Z A1 I 0 J A6 F	Interpolación de la entrada a 180º *Tool entry turning 180º*
N090	GO3 X 0 Y 0 Z P I 0 J -A2	Interpolación a 360º *Linear interpolation 360º*
N100	G03 X 0 Y -A4 Z A1 I 0 J -A6	Interpolación de la salida 180º *Tool removal turning 180º*
N110	G00 G40 Y A3	Invertir movimento de corrección, movimiento lineal hacia el centro del agujero *Linear moviment, towards hole center reverse invert axle correction*
N120	G90	Cambio a valor absoluto *Change to absolut values*
N130	G00 G80 Z2	Volver a la posición inicial *Return to initial position*
N140	M30 M95	Fin del ciclo *End of cycle*

Variables / *Variables*

Antes de utilizar este programa recomendamos hacer la simulación fuera de la pieza. Por ser un ejemplo genérico debe comprobarse las diferencias con las instrucciones del CNC. JMC no se hace responsable en caso de no respetarse estos puntos. Para cualquier información acerca de la programación consultar en info@jmcabre.com.
Before using this program we recommend to check it without of the workpiece. This is a generic program and must not be used before checking the difference between this program and the CNC handbook. JMC doesn't assume any responsability in case this instructions are not followed. For further information contact us at info@jmcabre.com.

Nomenclaturas y formulas / *Nomenclature and formulas*

P	Paso / *Pitch*	mm.
D	Ø nominal de la rosca *Nominal Ø of thread*	mm.
d	Ø nominal de la fresa *Nominal Ø of mill*	mm.
Ø Pr	Ø previo *Previous hole*	mm.
Pf	Profundidad útil de rosca *Thread depth*	mm.
F	Avance *Feed*	mm./min.
Vc	Velocidad de corte *Cutting speed*	m./min.
N	Velocidad de rotación *Rotating speed*	RPM
Z	Nº dientes *Nr. of tooth*	
Fz	Avance por diente *Feed for tooth*	mm.
F2	Avance en el eje de la fresa *Feed in the center of the mill*	mm./min.
π	3,14159	mm.

A1	**1/2 x P**
A2	**1/2 x D**
A3	**1/2 x Ø Pr**
A4	**1/2 x D + 1/2 x Ø Pr**
A5	**Pf + A1**
A6	**1/2 x A4**

$$Vc = \frac{D \times \pi \times N}{1000} \text{ m./min.}$$

$$N = \frac{Vc \times 1000}{d \times \pi} \text{ RPM}$$

$$F = N \times Z \times Fz \text{ mm./min.}$$

$$F_2 = \frac{F \times (D-d)}{D} \text{ mm./min.}$$

Calibres / *Gauges*

Calibres certificados según normas internacionales.
Gauges with Certificate according to international standards.

- Fabricaciones especiales bajo pedido.
  Special production of non standards under order.
- Marcados especiales con referencia del cliente.
  Special marking with customer's references.

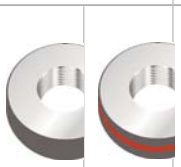
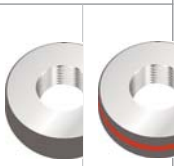
CERT.
ISO 17025

- Precios y plazos ajustados.
  Best prices and delivery delays.
- Servicio urgente de fabricación en menos de 10 dias (bajo demanda).
  Urgent supply in less than 10 days (upon request)

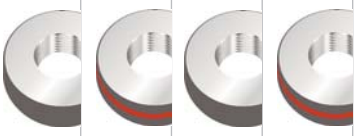
JMC
Precision cutting tools

	M ISO-DIN 13											
Marca / *Brand*	JMC											
Norma / *Standard*	DIN/ISO 1502			DIN/ISO 1502		DIN/ISO 1502			DIN/ISO 1502			
Referencia / *Reference*	Tampón / *Plug*			Anillo / *Ring*		Tampón / *Plug*			Anillo / *Ring*			
Tipo / *Type*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	pasa/*go*	no pasa *no go*	P/NP - *G/NG*			pasa/*go*	no pasa *no go*	pasa/*go*	no pasa *no go*
Certificado / *Certificate*												
Entrada / *Chamfer*												
Material / *Material*	X210 Cr12			X210 Cr12		X210 Cr12			X210 Cr12			
Tolerancia / *Tolerance*	ISO 6H			ISO 6g		ISO 6H-LH	ISO 6G	ISO 6E	ISO 6g LH		ISO 6e	
Gama / *Range*	M1...42	M42...68	M42...68	M2...68	M2...68	M1,1...30	M1,1...30	M3...10	M2...30	M2...30	M3...20	M3...20
Página / *Page*	408			411		409			412		412	

	MJ DIN ISO 5855	**EG-M** DIN 8140-2	**MF** DIN 13					
Norma / *Standard*	DIN/ISO 1502	DIN/ISO 1502	DIN/ISO 1502					
Referencia / *Reference*	Tampón / *Plug*	Tampón / *Plug*	Tampón / *Plug*			Tampón / *Plug*	Anillo / *Ring*	
Tipo / *Type*	P/NP - *G/NG*	P/NP - *G/NG*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	P/NP - *G/NG*	pasa/*go*	no pasa *no go*
Certificado / *Certificate*								
Entrada / *Chamfer*								
Material / *Material*	X210 Cr12	X210 Cr12	X210 Cr12			X210 Cr12	X210 Cr12	
Tolerancia / *Tolerance*	4H - 5H	6H mod.	ISO 6H			ISO 6G	ISO 6g	
Gama / *Range*	MJ 3...10	EG-M 2...20	MF4...55	MF56...100	MF56...100	MF8...24	MF4...100	MF4...100
Página / *Page*	410		412 - 416			417	418 - 422	

	BSW BS 84		**G** DIN EN ISO 228				
Norma / *Standard*	DIN 11 BS 912-2		DIN EN ISO 228-2				
Referencia / *Reference*	Tampón / *Plug*	Anillo / *Ring*	Tampón / *Plug*			Anillo / *Ring*	
Tipo / *Type*	P/NP - *G/NG*	pasa/*go* / no pasa *no go*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	pasa/*go*	no pasa *no go*
Certificado / *Certificate*							
Entrada / *Chamfer*							
Material / *Material*	X210 Cr12	X210 Cr12	X210 Cr12			X210 Cr12	
Tolerancia / *Tolerance*	medium class	medium class					
Gama / *Range*	W 1/8...1"	W 1/8...1"	G1/8...1"1/2		G1"3/4...4"	G1/8..4"	
							
Página / *Page*	423	423	424			424	

	R, Rc, Rp ISO 7-2					
Norma / *Standard*	DIN 2999		ISO 7-2/1982		ISO 7-2/2000 DIN EN 10226-3	
	Rp	**R**	**R**	**R**	**Rc/Rp**	**R**
Referencia / *Reference*	Tampón *Plug*	Anillo *Ring*	Tampón *Plug*	Anillo *Ring*	Tampón *Plug*	Anillo *Ring*
Tipo / *Type*	Cónico *Tapered*	Cilíndrico *Parallel*	Cónico *Tapered*	Cónico *Tapered*	Cónico *Tapered*	Cilíndrico *Parallel*
Certificado / *Certificate*						
Entrada / *Chamfer*						
Material / *Material*	X210 Cr12		X210 Cr12		X210 Cr12	
Tolerancia / *Tolerance*	C 1:16		C 1:16		ISO 7 nº3	C 1:16
Gama / *Range*	R 1/8"...3"		R 1/8"...3"		R 1/8"...3"	
Página / *Page*	425		425		425	

	UNC ASME B1.1								UNJC ASME B1.15 ISO3161	EG-UNC ASME B1.1
Norma / *Standard*	ANSI / ASME B1.2								ANSI/ASME B1.2	ANSI/ASME B1.1 - 1.2 (83)
Referencia / *Reference*	Tampón / *Plug*				Anillo / *Ring*				Tampón / *Plug*	Tampón / *Plug*
Tipo / *Type*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	pasa/*go*	no pasa *no go*	P/NP - *G/NG*	P/NP - *G/NG*
Certificado / *Certificate*										
Entrada / *Chamfer*										
Material / *Material*	X210 Cr12				X210 Cr12				X210 Cr12	X210 Cr12
Tolerancia / *Tolerance*	2B			3B	2A		3A		3B	3B
Gama / *Range*	UNC Nr.4...1"1/2	UNC 1"3/4...4"	UNC 1"3/4...4"	UNC Nr.4...1"	UNC Nr.4...4"	UNC Nr.4...4"	UNC Nr.4...3/4	UNC Nr.4...3/4	UNJC Nr.4...1"	EG-UNC Nr.2...3/8
										
Página / *Page*	426				427				428	428

	UNF ASME B1.1						UNJF ASME B1.15 ISO3161	EG-UNF ASME B1.1
Norma / *Standard*	ANSI / ASME B1.2						ANSI/ASME B1.2	ANSI/ASME B1.1 - 1.2 (83)
Referencia / *Reference*	Tampón / *Plug*				Anillo / *Ring*		Tampón / *Plug*	Tampón / *Plug*
Tipo / *Type*	P/NP *G/NG*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	pasa/*go*	no pasa *no go*	P/NP - *G/NG*	P/NP - *G/NG*
Certificado / *Certificate*								
Entrada / *Chamfer*								
Material / *Material*	X210 Cr12				X210 Cr12		X210 Cr12	X210 Cr12
Tolerancia / *Tolerance*	2B	3B	2A		3A		3B	2B
Gama / *Range*	UNF Nr.0...1"3/8	UNF Nr.4...1"	UNF Nr.0...1"1/2		UNF Nr.4...3/4		UNJF Nr.4...1"	EG-UNF Nr.4...1/2
Página / *Page*	429		431				429	430

	UNEF ASME B1.1		**NPT** ASME B1.20.1		**NPTF** ASME B1.20.3	
Norma / *Standard*	ANSI / ASME B1.1-1.2 (83)		ANSI/ASME B1.20.1 NF E 03-601		ANSI/ASME B1.20.5	
Referencia / *Reference*	Tampón / *Plug*	Anillo / *Ring*	Tampón / *Plug*	Anillo / *Ring*	Tampón / *Plug*	Anillo / *Ring*
Tipo / *Type*	P/NP - *G/NG*	pasa/*go* / no pasa *no go*	Cónico/*Tapered*	Cónico/*Tapered*	Cónico/*Tapered*	Cónico/*Tapered*
Certificado / *Certificate*						
Entrada / *Chamfer*						
Material / *Material*	X210 Cr12	X210 Cr12	X210 Cr12	X210 Cr12	X210 Cr12	X210 Cr12
Tolerancia / *Tolerance*	2B	2A	C1:16	C1:16	C1:16	C1:16
Gama / *Range*	UNEF Nr.12...1"	UNEF Nr.12...1"	NPT 1/16...4"	NPT 1/16...4"	NPTF 1/16...4"	NPTF 1/16...4"
Página / *Page*	430	430	432	432	433	433

	Pg DIN 40430					**Tr** DIN 103				
Norma / *Standard*	DIN 40431					DIN 103-9				
Referencia / *Reference*	Tampón / *Plug*			Anillo / *Ring*		Tampón / *Plug*			Anillo / *Ring*	
Tipo / *Type*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	pasa/*go*	no pasa *no go*	P/NP *G/NG*	pasa/*go*	no pasa *no go*	pasa/*go*	no pasa *no go*
Certificado / *Certificate*										
Entrada / *Chamfer*										
Material / *Material*	X210 Cr12			X210 Cr12		X210 Cr12			X210 Cr12	
Tolerancia / *Tolerance*	ISO 6H			ISO 6g		7H			7e	
Gama / *Range*	Pg 7...48	Pg 36...48	Pg 36...48	Pg 7...48	Pg 7...48	Tr 10...40	Tr 42...60	Tr 42...60	Tr 10...60	Tr 10...60
Página / *Page*	434			435		436			437	

Norma / *Standard*	DIN 7162			DIN 2250	DIN 7162	DIN 7162 / ISO 1938			DIN 2250
Referencia / *Reference*	**Tampón / *Plug***			**Anillo / *Ring***	**Herradura / *Snap***	**Tampón / *Plug***			**Anillo / *Ring***
Tipo / *Type*	**P/NP *G/NG***	**pasa/*go***	**no pasa *no go***	**Comprobador *Setting***	**P/NP - *G/NG***	**P/NP *G/NG***	**pasa/*go***	**no pasa *no go***	**Comprobador**
Certificado / *Certificate*									
Material / *Material*	**X210 Cr12**			**X210 Cr12**	**X210 Cr12**	**X210 Cr12**			**X210 Cr12**
Tolerancia / *Tolerance*	H7			C	h7	Ø y Tol. especial, bajo demanda *Special Ø and Tol. upon request*			
Gama / *Range*	Ømm. 2...56	Ømm. 57...100	Ømm. 57...100	Ømm. 2...100	Ømm. 2...100	Ømm. 2...56	Ømm. 57...100	ØDmm. 57...100	Ømm. 2...100
Página / *Page*	438 - 439			440 - 441		442			442

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP | **M** DIN 13 | DIN/ISO 1502 | **ISO-6H** | CERT. | **X210 Cr12**

D	P	pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
		Cod.	Cod.	Cod.
M 1*	0,25	• 0002873186		
M 1,1*	0,25	• 0002873247		
M 1,2*	0,25	• 0002873307		
M 1,4*	0,30	• 0002873467		
M 1,6	0,35	• 0002873738		
M 1,8	0,35	• 0002873899		
M 2	0,40	• 0002872455		
M 2,2	0,45	• 0002873949		
M 2,3	0,40	• 0002876304		
M 2,5	0,45	• 0002874038		
M 2,6	0,45	• 0002876464		
M 3	0,50	• 0002755088		
M 3,5	0,60	• 0002874188		
M 4	0,70	• 0002529442		
M 4,5	0,75	• 0002707503		
M 5	0,80	• 0002754909		
M 6	1,00	• 0002615220		
M 7	1,00	• 0002874249		
M 8	1,25	• 0002479618		
M 9	1,25	• 0002874309		
M 10	1,50	• 0002479568		
M 11	1,50	• 0002874460		
M 12	1,75	• 0002754417		
M 14	2,00	• 0002754578		
M 16	2,00	• 0002754638		
M 18	2,50	• 0002754788		
M 20	2,50	• 0002754849		
M 22	2,50	• 0002864441		
M 24	3,00	• 0002864502		
M 27	3,00	• 0002864662		
M 30	3,50	• 0002864723		
M 33	3,50	• 0002874520		
M 36	4,00	• 0002828769		
M 39	4,00	• 0002874670		
M 42	4,50	• 0002828829	• 0002874891	• 0002874731
M 45	4,50		• 0002874952	• 0002875030
M 48	5,00		• 0002875241	• 0002875191
M 52	5,00		• 0002875302	• 0002820048
M 56	5,50		• 0002875522	• 0002875462
M 60	5,50		• 0002875673	• 0002875733
M 64	6,00		• 0002875954	• 0002875893
M 68	6,00		• 0002876033	• 0002876193

*Tol. 5H según DIN 13 parte 14
**Tol. 5H according to DIN 13 part 14*

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP	M DIN 13	DIN/ISO 1502	ISO - 6H LH ISO - 6G - 6E	CERT.		P 60°	X210 Cr12

D	P	ISO - 6H LH pasa/go - no pasa/*no go*	Cod.	ISO - 6G pasa/go - no pasa/*no go*	Cod.	ISO - 6E pasa/go - no pasa/*no go*	Cod.
M 1,1	0,25	•	*0003017584	•	**0003018004		
M 1,4	0,30	•	*0003017644	•	**0003017925		
M 2	0,40	•	0002876685	•	0002876525		
M 2,2	0,45			•	0002878680		
M 2,3	0,40	•	0003017704	•	0002878740		
M 2,5	0,45	•	0002876735	•	0002878800		
M 2,6	0,45	•	0003017865	•	0002878951		
M 3	0,50	•	0002876896	•	0002854644	•	0002880198
M 3,5	0,60	•	0002876956	•	0003007636		
M 4	0,70	•	0002877035	•	0002854704	•	0002880258
M 4,5	0,75	•	0002877195	•	0002879040		
M 5	0,80	•	0002877256	•	0002301195	•	0002880318
M 6	1,00	•	0002877316	•	0002511145	•	0002880479
M 7	1,00	•	0002877466	•	0002879190		
M 8	1,25	•	0002877527	•	0002835077	•	0002880529
M 10	1,50	•	0002877687	•	0002854865	•	0002880047
M 12	1,75	•	0002877748	•	0002854925		
M 14	2,00	•	0002877898	•	0002879250		
M 16	2,00	•	0002877958	•	0002879311		
M 18	2,50	•	0002878037	•	0002879471		
M 20	2,50	•	0002878198	•	0002879521		
M 22	2,50	•	0002878258	•	0002879682		
M 24	3,00	•	0002878318	•	0002879742		
M 27	3,00	•	0002878469	•	0002879803		
M 30	3,50	•	0002878529	•	0002879953		

*Tol. 5H según DIN 13 parte 14 **Tol. 6H según DIN 13 parte 14
**Tol. 5H according to DIN 13 part 14 **Tol. 6H according to DIN 13 part 14*

Tampón P/NP

MJ DIN ISO 5855 | DIN/ISO 1502 | 4H - 5H | X210 Cr12

pasa/go - no pasa/*no go*

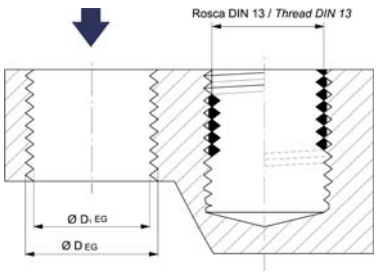
D	P		Cod.
MJ 3	0,50	•	0002900037
MJ 4	0,70	•	0002900198
MJ 5	0,80	•	0002899989
MJ 6	1,00	•	0002900258
MJ 8	1,00	•	0002900308
MJ 8	1,25	•	0002900469
MJ 10	1,25	•	0002900529
MJ 10	1,50	•	0002900680

Tampón P/NP

EG-M DIN 8140-2 | DIN/ISO 1502 | 6H mod. | X210 Cr12

Para insertos metálicos de rosca. / *For wire thread inserts.*

Para calibrar antes de introducir el inserto metálico / *To gauge before screwing the insert*



pasa/go - no pasa/*no go*

D	P		Cod.
EG-M 2	0,40	•	0002900730
EG-M 2,5	0,45	•	0002900890
EG-M 2,6	0,45	•	0002900951
EG-M 3	0,50	•	0002511908
EG-M 3,5	0,60	•	0002901030
EG-M 4	0,70	•	0002534028
EG-M 5	0,80	•	0002901190
EG-M 6	1,00	•	0002901250
EG-M 8	1,25	•	0002901311
EG-M 10	1,50	•	0002901461
EG-M 12	1,75	•	0002901521
EG-M 14	2,00	•	0002901682
EG-M 16	2,00	•	0002901742
EG-M 18	2,50	•	0002901893
EG-M 20	2,50	•	0002901953

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo P/NP	M DIN 13	DIN/ISO 1502	ISO-6g	CERT.		P 60°	X210 Cr12

D	P	pasa - *go* Cod.	no pasa - *no go* Cod.
M 2	0,40	0002882684	0002880680
M 2,2	0,45	0002882744	0002880740
M 2,5	0,45	0002882965	0002880951
M 3	0,50	0002810030	0002809955
M 3,5	0,60	0002883104	0002881100
M 4	0,70	0002810190	0002810240
M 5	0,80	0002810301	0002810461
M 6	1,00	0002810522	0002810672
M 7	1,00	0002883476	0002881250
M 8	1,25	0002810732	0002810893
M 9	1,25	0002883536	0002881311
M 10	1,50	0002810953	0002811032
M 11	1,50	0002883696	0002881471
M 12	1,75	0002710726	0002710877
M 14	2,00	0002811192	0002811253
M 16	2,00	0002811303	0002811463
M 18	2,50	0002811524	0002811684
M 20	2,50	0002811735	0002811895
M 22	2,50	0002869453	0002869182
M 24	3,00	0002869392	0002869242
M 27	3,00	0002867177	0002866887
M 30	3,50	0002867027	0002866938
M 33	3,50	0002883747	0002881531
M 36	4,00	0002883807	0002881682
M 39	4,00	0002883967	0002881742
M 42	4,50	0002884046	0002881803
M 45	4,50	0002884107	0002881963
M 48	5,00	0002884267	0002882042
M 52	5,00	0002884327	0002882102
M 56	5,50	0002884478	0002882253
M 60	5,50	0002884538	0002882313
M 64	6,00	0002884699	0002882473
M 68	6,00	0002884759	0002882534

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo P/NP | **M** DIN 13 | DIN/ISO 1502 | ISO-6g LH ISO-6e | CERT. | X210 Cr12

		ISO - 6g LH		ISO - 6e	
		pasa - *go*	no pasa - *no go*	pasa - *go*	no pasa - *no go*
D	P	Cod.	Cod.	Cod.	Cod.
M 2	0,40	• 0003017212	• 0003017152		
M 2,5	0,45	• 0003017433	• 0003017373		
M 3	0,50	• 0002884960	• 0002884809	• 0002893273	• 0002891811
M 3,5	0,60	• 0002885109	• 0002885049	• 0002893333	• 0002892110
M 4	0,70	• 0002885320	• 0002885269	• 0002893494	• 0002891971
M 4,5	0,75	• 0002885531	• 0002885470		
M 5	0,80	• 0002885751	• 0002885691	• 0002893544	• 0002892050
M 6	1,00	• 0002765588	• 0002765438	• 0002893605	• 0002892331
M 7	1,00	• 0002885962	• 0002885812	• 0002893765	• 0002892482
M 8	1,25	• 0002894607	• 0002894556	• 0002893825	• 0002892542
M 10	1,50	• 0002894828	• 0002894767	• 0002893976	• 0002892602
M 12	1,75	• 0002895067	• 0002894988	• 0002894065	• 0002892763
M 14	2,00	• 0002895278	• 0002895127	• 0002894125	• 0002892823
M 16	2,00	• 0002895498	• 0002895338	• 0002894275	• 0002892973
M 18	2,50	• 0002895619	• 0002895559	• 0002894336	• 0002893062
M 20	2,50	• 0002895820	• 0002895760	• 0003138759	• 0002893113
M 22	2,50	• 0002863871	• 0002895980		
M 24	3,00	• 0002896120	• 0002896069		
M 27	3,00	• 0002896330	• 0002896280		
M 30	3,50	• 0002896551	• 0002896491		

Tampón P/NP | **MF** DIN 13 | DIN/ISO 1502 | ISO - 6H | CERT. | X210 Cr12

		pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
D	**P**	**Cod.**	**Cod.**	**Cod.**
MF 4	0,50	• 0002902253		
MF 5	0,50	• 0002902313		
MF 6	0,50	• 0002916973		
MF 8	0,50	• 0002917061		
MF 5	0,75	• 0002917122		
MF 6	0,75	• 0002917272		
MF 7	0,75	• 0002917333		
MF 8	0,75	• 0002785896		
MF 9	0,75	• 0002917493		
MF 10	0,75	• 0002917553		
MF 12	0,75	• 0002917604		
MF 8	1,00	• 0002777722		
MF 9	1,00	• 0002917764		
MF 10	1,00	• 0002808522		
MF 11	1,00	• 0002917824		
MF 12	1,00	• 0002725957		
MF 13	1,00	• 0002917985		
MF 14	1,00	• 0002726046		
MF 15	1,00	• 0002918064		
MF 16	1,00	• 0002918124		
MF 18	1,00	• 0002918274		
MF 20	1,00	• 0002918335		
MF 22	1,00	• 0002918495		
MF 24	1,00	• 0002918556		
MF 25	1,00	• 0002918616		
MF 26	1,00	• 0002918766		
MF 27	1,00	• 0002918827		
MF 30	1,00	• 0002817266		
MF 32	1,00	• 0002947869		
MF 33	1,00	• 0002947920		
MF 34	1,00	• 0002948018		
MF 35	1,00	• 0002948169		
MF 36	1,00	• 0002948229		
MF 38	1,00	• 0002948380		
MF 39	1,00	• 0002948440		
MF 40	1,00	• 0002948590		
MF 42	1,00	• 0002948651		
MF 45	1,00	• 0002948711		
MF 48	1,00	• 0002948871		
MF 50	1,00	• 0002948922		
MF 52	1,00	• 0002949011		
MF 55	1,00	• 0002949161		
MF 56	1,00		• 0002949382	• 0002950500
MF 58	1,00		• 0002949442	• 0002950651
MF 60	1,00		• 0002949503	• 0002950711
MF 62	1,00		• 0002949653	• 0002950871

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP | **MF** DIN 13 | DIN/ISO 1502 | ISO - 6H | X210 Cr12

D	P	pasa/go - no pasa/*no go* Cod.	pasa - *go* Cod.	no pasa - *no go* Cod.
MF 64	1,00		• 0002949713	• 0002950932
MF 65	1,00		• 0002949874	• 0002951011
MF 68	1,00		• 0002949934	• 0002951171
MF 70	1,00		• 0002950018	• 0002951221
MF 72	1,00		• 0002950169	• 0002951382
MF 75	1,00		• 0002950229	• 0002951442
MF 76	1,00		• 0002950380	• 0002951503
MF 80	1,00		• 0002950440	• 0002951653
MF 10	1,25	• 0002808672		
MF 12	1,25	• 0002808732		
MF 14	1,25	• 0002919126		
MF 12	1,50	• 0002808893		
MF 13	1,50	• 0002921347		
MF 14	1,50	• 0002808953		
MF 15	1,50	• 0002921497		
MF 16	1,50	• 0002809032		
MF 18	1,50	• 0002809192		
MF 20	1,50	• 0002809243		
MF 22	1,50	• 0002864873		
MF 24	1,50	• 0002864933		
MF 25	1,50	• 0002295122		
MF 26	1,50	• 0002921558		
MF 27	1,50	• 0002921618		
MF 28	1,50	• 0002921779		
MF 30	1,50	• 0002921829		
MF 32	1,50	• 0002921989		
MF 33	1,50	• 0002812255		
MF 34	1,50	• 0002806185		
MF 35	1,50	• 0002922068		
MF 36	1,50	• 0002922129		
MF 38	1,50	• 0002922289		
MF 39	1,50	• 0002834778		
MF 40	1,50	• 0002922349		
MF 42	1,50	• 0002922400		
MF 45	1,50	• 0002922550		
MF 48	1,50	• 0002922611		
MF 50	1,50	• 0002922771		
MF 52	1,50	• 0002922831		
MF 55	1,50	• 0002949221		
MF 56	1,50		• 0002951874	• 0002953447
MF 58	1,50		• 0002951934	• 0002953507
MF 60	1,50		• 0002952013	• 0002953667
MF 62	1,50		• 0002952173	• 0002953728
MF 64	1,50		• 0002952234	• 0002953878
MF 65	1,50		• 0002952384	• 0002953939
MF 68	1,50		• 0002952444	• 0002954017

Tampón P/NP | **MF** DIN 13 | DIN/ISO 1502 | ISO - 6H | CERT. | X210 Cr12

		pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
D	**P**	**Cod.**	**Cod.**	**Cod.**
MF 70	1,50		• 0002952505	• 0002954178
MF 72	1,50		• 0002952665	• 0002954238
MF 75	1,50		• 0002952716	• 0002954399
MF 76	1,50		• 0002952876	• 0002954449
MF 80	1,50		• 0002952936	• 0002954509
MF 85	1,50		• 0002953015	• 0002954660
MF 90	1,50		• 0002953176	• 0002954720
MF 95	1,50		• 0002953236	• 0002954871
MF 100	1,50		• 0002953386	• 0002954931
MF 18	2,00	• 0002922982		
MF 20	2,00	• 0002923071		
MF 22	2,00	• 0002923121		
MF 24	2,00	• 0002923281		
MF 25	2,00	• 0002923342		
MF 26	2,00	• 0002923402		
MF 27	2,00	• 0002765377		
MF 28	2,00	• 0002923552		
MF 30	2,00	• 0002923613		
MF 32	2,00	• 0002923773		
MF 33	2,00	• 0002923834		
MF 34	2,00	• 0002923984		
MF 35	2,00	• 0002924073		
MF 36	2,00	• 0002924133		
MF 38	2,00	• 0002924284		
MF 39	2,00	• 0002924344		
MF 40	2,00	• 0002924404		
MF 42	2,00	• 0002924565		
MF 45	2,00	• 0002924615		
MF 48	2,00	• 0002924775		
MF 50	2,00	• 0002924836		
MF 52	2,00	• 0002924996		
MF 55	2,00	• 0002925075		
MF 56	2,00		• 0002925135	• 0002925567
MF 58	2,00		• 0002925286	• 0002925627
MF 60	2,00		• 0002925346	• 0002925407
MF 62	2,00		• 0002955020	• 0002956393
MF 64	2,00		• 0002955170	• 0002956454
MF 65	2,00		• 0002955231	• 0002956514
MF 68	2,00		• 0002955391	• 0002956664
MF 70	2,00		• 0002955451	• 0002956725
MF 72	2,00		• 0002955502	• 0002956885
MF 75	2,00		• 0002955662	• 0002956945
MF 76	2,00		• 0002955722	• 0002957024
MF 80	2,00		• 0002955883	• 0002957185
MF 85	2,00		• 0002888116	• 0002957235
MF 90	2,00		• 0002956022	• 0002957395
MF 95	2,00		• 0002956172	• 0002957456
MF 100	2,00		• 0002887977	• 0002957516

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP | **MF** DIN 13 | DIN/ISO 1502 | ISO - 6H | X210 Cr12

D	P	pasa/go - no pasa/*no go* Cod.	pasa - *go* Cod.	no pasa - *no go* Cod.
MF 30	3,00	• 0002925838		
MF 33	3,00	• 0002946927		
MF 39	3,00	• 0002947006		
MF 40	3,00	• 0002925778		
MF 42	3,00	• 0002947166		
MF 45	3,00	• 0002926298		
MF 48	3,00	• 0002926348		
MF 50	3,00	• 0002926409		
MF 52	3,00	• 0002926569		
MF 55	3,00	• 0002926620		
MF 56	3,00		• 0002927993	• 0002927130
MF 58	3,00		• 0002928072	• 0002927290
MF 60	3,00		• 0002928132	• 0002927351
MF 62	3,00		• 0002928293	• 0002927401
MF 64	3,00		• 0002928353	• 0002927562
MF 65	3,00		• 0002928564	• 0002928413
MF 68	3,00		• 0002928624	• 0002927622
MF 70	3,00		• 0002928785	• 0002927782
MF 72	3,00		• 0002928845	• 0002927833
MF 75	3,00		• 0002957667	• 0002958247
MF 76	3,00		• 0002957727	• 0002958398
MF 80	3,00		• 0002957887	• 0002958458
MF 85	3,00		• 0004265645	• 0002958518
MF 90	3,00		• 0002958027	• 0002958679
MF 100	3,00		• 0002958187	• 0002958729
MF 45	4,00	• 0002926770		
MF 48	4,00	• 0002926830		
MF 52	4,00	• 0002926991		
MF 55	4,00	• 0002927070		
MF 56	4,00		• 0002928995	• 0002930353
MF 60	4,00		• 0002929084	• 0002930413
MF 64	4,00		• 0002929295	• 0002930624
MF 68	4,00		• 0002929355	• 0002930785
MF 70	4,00		• 0002929416	• 0002930845
MF 72	4,00		• 0002929566	• 0002930905
MF 75	4,00		• 0002929626	• 0002931084
MF 76	4,00		• 0002929787	• 0002931145
MF 80	4,00		• 0002929847	• 0002931295
MF 85	4,00		• 0002929908	• 0002931355
MF 90	4,00		• 0002930082	• 0002931416
MF 95	4,00		• 0002930132	• 0002931576
MF 100	4,00		• 0002930293	• 0002931626

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP	MF DIN 13	DIN/ISO 1502	ISO - 6H ISO - 6G	CERT.		P 60°	X210 Cr12

ISO - 6H

D	P	pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
MF70	6,00		• 0002932578	• 0002931787
MF72	6,00		• 0002932639	• 0002931847
MF76	6,00		• 0002932789	• 0002931908
MF80	6,00		• 0002932840	• 0002932086
MF85	6,00		• 0002932900	• 0002932147
MF90	6,00		• 0002933089	• 0002932207
MF95	6,00		• 0002933149	• 0002932358
MF100	6,00		• 0002933200	• 0002932418

ISO - 6G

D	P	pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
MF 8	1,00	• 0003093018		
MF 10	1,00	• 0003092387		
MF 12	1,00	• 0003092448		
MF 10	1,25	• 0002385823		
MF 12	1,25	• 0003092508		
MF 14	1,25	• 0003055271		
MF 12	1,50	• 0003092668		
MF 14	1,50	• 0002812747		
MF 16	1,50	• 0003092719		
MF 18	1,50	• 0003092879		
MF 20	1,50	• 0003092930		
MF 24	1,50	• 0003058127		

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo P/NP | **MF** DIN 13 | DIN/ISO 1502 | ISO-6g | CERT. | X210 Cr12

D	P	pasa - *go*	Cod.	no pasa - *no go*	Cod.
MF 4	0,50	•	0002934413	•	0002933350
MF 5	0,50	•	0002934573	•	0002933410
MF 6	0,50	•	0002934633	•	0002933571
MF 8	0,50	•	0002934794	•	0002933631
MF 5	0,75	•	0002934844	•	0002933781
MF 6	0,75	•	0002934904	•	0002933842
MF 7	0,75	•	0002935083	•	0002933902
MF 8	0,75	•	0002935144	•	0002934081
MF 9	0,75	•	0002935204	•	0002934141
MF 10	0,75	•	0002935364	•	0002934202
MF 12	0,75	•	0002935425	•	0002934362
MF 8	1,00	•	0002843352	•	0002843202
MF 9	1,00	•	0002935575	•	0002936798
MF 10	1,00	•	0002843573	•	0002843413
MF 11	1,00	•	0002935636	•	0002936859
MF 12	1,00	•	0002725746	•	0002725525
MF 13	1,00	•	0002935796	•	0002936919
MF 14	1,00	•	0002725806	•	0002725686
MF 15	1,00	•	0002935856	•	0002937098
MF 16	1,00	•	0002751350	•	0002751290
MF 18	1,00	•	0002935907	•	0002937158
MF 20	1,00	•	0002936096	•	0002937209
MF 22	1,00	•	0002936146	•	0002937369
MF 24	1,00	•	0002936206	•	0002937429
MF 25	1,00	•	0002936367	•	0002937580
MF 26	1,00	•	0002936427	•	0002937630
MF 27	1,00	•	0002936577	•	0002937791
MF 30	1,00	•	0002936638	•	0002937851
MF 32	1,00	•	0002958880	•	0002961511
MF 33	1,00	•	0002958940	•	0002961671
MF 34	1,00	•	0002959029	•	0002961732
MF 35	1,00	•	0002959189	•	0002961882
MF 36	1,00	•	0002959240	•	0002961942
MF 38	1,00	•	0002959300	•	0002962031
MF 39	1,00	•	0002959450	•	0002962182
MF 40	1,00	•	0002959511	•	0002962242
MF 42	1,00	•	0002959671	•	0002962302
MF 45	1,00	•	0002959732	•	0002962463
MF 48	1,00	•	0002959882	•	0002962513
MF 50	1,00	•	0002959942	•	0002962673
MF 52	1,00	•	0002960027	•	0002962734
MF 55	1,00	•	0002960187	•	0002962894
MF 56	1,00	•	0002960247	•	0002962945
MF 58	1,00	•	0002960308	•	0002963033
MF 60	1,00	•	0002960458	•	0002963184
MF 62	1,00	•	0002960518	•	0002963244

Anillo
P/NP

MF DIN 13 | DIN/ISO 1502 | ISO-6g | CERT. | X210 Cr12

D	P	pasa - *go* Cod.	no pasa - *no go* Cod.
MF 64	1,00	0002960679	0002963305
MF 65	1,00	0002960739	0002963465
MF 68	1,00	0002960880	0002963525
MF 70	1,00	0002960940	0002963676
MF 72	1,00	0002961029	0002963736
MF 75	1,00	0002961189	0002963896
MF 76	1,00	0002961240	0002963957
MF 80	1,00	0002961300	0002964036
MF 10	1,25	0002843784	0002843633
MF 12	1,25	0002843905	0002843844
MF 14	1,25	0002938151	0002942707
MF 12	1,50	0002844355	0002844083
MF 13	1,50	0002940422	0002945002
MF 14	1,50	0002812897	0002812958
MF 15	1,50	0003018164	0002945162
MF 16	1,50	0002844575	0002844415
MF 18	1,50	0002824328	0002824488
MF 20	1,50	0002844786	0002844636
MF 22	1,50	0002823978	0002824057
MF 24	1,50	0002865875	0002865936
MF 25	1,50	0002940642	0002945222
MF 26	1,50	0002815744	0002815683
MF 27	1,50	0002940703	0002945373
MF 28	1,50	0002940853	0002945433
MF 30	1,50	0002940914	0002945593
MF 32	1,50	0002941092	0002945654
MF 33	1,50	0002941153	0002945704
MF 34	1,50	0002941213	0002945865
MF 35	1,50	0002941374	0002945925
MF 36	1,50	0002941424	0002946004
MF 38	1,50	0002941584	0002946164
MF 39	1,50	0002941645	0002946225
MF 40	1,50	0002941705	0002946375
MF 42	1,50	0002941855	0002946435
MF 45	1,50	0002941916	0002946596
MF 48	1,50	0002942005	0002946656
MF 50	1,50	0002942155	0002946716
MF 52	1,50	0002942215	0002946867
MF 55	1,50	0002964246	0002964196
MF 56	1,50	0002964307	0002965891
MF 58	1,50	0002841840	0002965951
MF 60	1,50	0002964528	0002966030
MF 62	1,50	0002964678	0002966191
MF 64	1,50	0002964738	0002966251
MF 65	1,50	0002964899	0002966311
MF 68	1,50	0002964959	0002966462
MF 70	1,50	0002965038	0002966522

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo P/NP | **MF** DIN 13 | DIN/ISO 1502 | ISO-6g | CERT. | X210 Cr12

D	P	pasa - *go*	Cod.	no pasa - *no go*	Cod.
MF 72	1,50	•	0002965198	•	0002966683
MF 75	1,50	•	0002965259	•	0002966743
MF 76	1,50	•	0003018215	•	0003018596
MF 80	1,50	•	0002965309	•	0002966893
MF 85	1,50	•	0002965460	•	0002966954
MF 90	1,50	•	0002965520	•	0002967033
MF 95	1,50	•	0002965680	•	0002967193
MF 100	1,50	•	0002965731	•	0002967253
MF 18	2,00	•	0002967314	•	0002971107
MF 20	2,00	•	0002967524	•	0002971258
MF 22	2,00	•	0002967685	•	0002971318
MF 24	2,00	•	0002967745	•	0002971479
MF 25	2,00	•	0002967806	•	0002971539
MF 26	2,00	•	0002967956	•	0002971689
MF 27	2,00	•	0002968045	•	0002971740
MF 28	2,00	•	0002968195	•	0002971800
MF 30	2,00	•	0002815533	•	0002815473
MF 32	2,00	•	0002968256	•	0002971961
MF 33	2,00	•	0002968316	•	0002972049
MF 34	2,00	•	0002968476	•	0002972100
MF 35	2,00	•	0002968527	•	0002972260
MF 36	2,00	•	0002968687	•	0002972311
MF 38	2,00	•	0002968747	•	0002972471
MF 39	2,00	•	0002968808	•	0002972531
MF 40	2,00	•	0002968958	•	0002972692
MF 42	2,00	•	0002969047	•	0002972742
MF 45	2,00	•	0002969107	•	0002972802
MF 48	2,00	•	0002969258	•	0002972963
MF 50	2,00	•	0002969318	•	0002973042
MF 52	2,00	•	0002969479	•	0002973102
MF 55	2,00	•	0002969539	•	0002973262
MF 56	2,00	•	0002969689	•	0002973323
MF 58	2,00	•	0002969740	•	0002973473
MF 60	2,00	•	0002969800	•	0002973534
MF 62	2,00	•	0003018375	•	0003018646
MF 64	2,00	•	0002969961	•	0002973694
MF 65	2,00	•	0002970045	•	0002973754
MF 68	2,00	•	0002970105	•	0002973805
MF 70	2,00	•	0002970256	•	0002973965
MF 72	2,00	•	0002970316	•	0002974044
MF 75	2,00	•	0002970476	•	0002974104
MF 76	2,00	•	0002970537	•	0002974265
MF 80	2,00	•	0002970687	•	0002974325
MF 85	2,00	•	0002970747	•	0002974475
MF 90	2,00	•	0002970808	•	0002974536
MF 95	2,00	•	0002970968	•	0002974696
MF 100	2,00	•	0002971047	•	0002974757

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo P/NP | **MF** DIN 13 | DIN/ISO 1502 | ISO-6g | CERT. | X210 Cr12

D	P	pasa - *go*	Cod.	no pasa - *no go*	Cod.
MF 30	3,00	•	0002974817	•	0002977603
MF 33	3,00	•	0002974967	•	0002977753
MF 39	3,00	•	0002975107	•	0002977974
MF 40	3,00	•	0002975267	•	0002978053
MF 42	3,00	•	0002975327	•	0003018435
MF 45	3,00	•	0002975488	•	0002978113
MF 48	3,00	•	0002975538	•	0002978274
MF 50	3,00	•	0002975698	•	0002978324
MF 52	3,00	•	0002975759	•	0002978485
MF 55	3,00	•	0002975819	•	0002978545
MF 56	3,00	•	0002975960	•	0002978605
MF 58	3,00	•	0002976058	•	0002978756
MF 60	3,00	•	0002976119	•	0002978816
MF 62	3,00	•	0002976269	•	0002978976
MF 64	3,00	•	0002976320	•	0002979055
MF 65	3,00	•	0002976480	•	0002979116
MF 68	3,00	•	0002976540	•	0002979276
MF 70	3,00	•	0002976691	•	0002979336
MF 72	3,00	•	0002976751	•	0002979487
MF 75	3,00	•	0002976812	•	0002979547
MF 76	3,00	•	0002976972	•	0002979608
MF 80	3,00	•	0002977051	•	0002979768
MF 85	3,00	•	0002977111	•	0002979818
MF 90	3,00	•	0002977322	•	0002979979
MF 100	3,00	•	0002977543	•	0002980113
MF45	4,00	•	0002980274	•	0002981828
MF48	4,00	•	0002980334	•	0002981979
MF52	4,00	•	0002980485	•	0002982068
MF55	4,00	•	0002980545	•	0002982118
MF56	4,00	•	0002980605	•	0002982278
MF60	4,00	•	0002980766	•	0002982339
MF64	4,00	•	0002980816	•	0002982499
MF68	4,00	•	0002980976	•	0002982540
MF70	4,00	•	0002984333	•	0002984273
MF72	4,00	•	0002981055	•	0002982600
MF75	4,00	•	0002981116	•	0002982760
MF76	4,00	•	0002981276	•	0002982821
MF80	4,00	•	0002981336	•	0002982971
MF85	4,00	•	0002981487	•	0002983060
MF90	4,00	•	0002981547	•	0002983120
MF95	4,00	•	0002981608	•	0002983271
MF100	4,00	•	0002981768	•	0002983331
MF70	6,00	•	0002983491	•	0002984494
MF72	6,00	•	0002983552	•	0002984554
MF76	6,00	•	0002983602	•	0002984614
MF80	6,00	•	0002983763	•	0002984765

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo P/NP	MF DIN 13	DIN/ISO 1502	ISO-6g	CERT.		P 60°	X210 Cr12

D	P	pasa - *go*	Cod.	no pasa - *no go*	Cod.
MF85	6,00	•	0002983823	•	0002984825
MF90	6,00	•	0002983983	•	0002984986
MF95	6,00	•	0002984062	•	0002985064
MF100	6,00	•	0002984123	•	0002985125

Calibres de rosca. Tampón - pasa/no pasa. Anillo - pasa/no pasa.
Thread gauges. Plug - go/no go. Ring - go/no go.

Tampón P/NP

BSW BS 84 | DIN 11 BS 912/2 | medium class | CERT. | P 55° | X210 Cr12

D	tpi	pasa/go - no pasa/*no go*	Cod.
W 1/8	40	•	0002745773
W 5/32	32		0002745833
W 3/16	24	•	0002745983
W 7/32	24		0002991837
W 1/4	20	•	0002991997
W 5/16	18	•	0002992076
W 3/8	16	•	0002992136
W 7/16	14	•	0002992297
W1/2	12	•	0002992347
W 9/16	12	•	0002992407
W 5/8	11	•	0002992568
W 3/4	10	•	0002992628
W 7/8	9	•	0002992778
W 1"	8	•	0002992839

• Bajo demanda. / *Upon request.*

Anillo P/NP

BSW BS 84 | DIN 11 BS 919/84 | medium class | CERT. | P 55° | X210 Cr12

D	tpi	pasa - *go*	Cod.	no pasa - *no go*	Cod.
W 1/8	40	•	0002993359	•	0002993299
W 5/32	32		0002993560		0002993400
W 3/16	24	•	0002993620	•	0002994783
W 7/32	24		0002993781		0002994843
W 1/4	20	•	0002739603	•	0002739553
W 5/16	18	•	0002993831	•	0002994994
W 3/8	16	•	0002993992	•	0002995083
W 7/16	14	•	0002994070	•	0002995133
W1/2	12	•	0002994131	•	0002995293
W 9/16	12	•	0002994291	•	0002995354
W 5/8	11	•	0002994352	•	0002995414
W 3/4	10	•	0002994412	•	0002995565
W 7/8	9	•	0002994562	•	0002995625
W 1"	8	•	0002994623	•	0002995785

• Bajo demanda. / *Upon request.*

Calibres de rosca. Tampón - pasa/no pasa. Anillo - pasa/no pasa.
Thread gauges. Plug - go/no go. Ring - go/no go.

JMC

Tampón P/NP

G DIN EN ISO 228	DIN EN ISO 228-2	CERT.	P 55°	X210 Cr12

D	tpi	pasa/go - no pasa/*no go* Cod.	pasa - *go* Cod.	no pasa - *no go* Cod.
G 1/8	28	• 0002809524		
G 1/4	19	• 0002809463		
G 3/8	19	• 0002809674		
G 1/2	14	• 0002295273		
G 5/8	14	• 0002993138		
G 3/4	14	• 0002809735		
G 7/8	14	• 0002809895		
G 1"	11	• 0002779395		
G 1"1/8	11	• 0002865012		
G 1"1/4	11	• 0002779666		
G 1"1/2	11	• 0002865173		
G 1"3/4	11		• 0002998080	• 0002997358
G 2"	11		• 0002998140	• 0002997419
G 2"1/4	11		• 0002998200	• 0002997579
G 2"1/2	11		• 0002780182	• 0002779726
G 2"3/4	11		• 0002998351	• 0002997630
G 3"	11		• 0002998411	• 0002997780
G 3"1/2	11		• 0002998571	• 0002997840
G 4"	11		• 0002998632	• 0002997901

Anillo P/NP

G DIN EN ISO 228	DIN EN ISO 228/2	CERT.	P 55°	X210 Cr12

D	tpi	pasa - *go* Cod.	no pasa - *no go* Cod.
G 1/8	28	• 0002829982	• 0002829611
G 1/4	19	• 0002830066	• 0002829761
G 3/8	19	• 0002830126	• 0002829821
G 1/2	14	• 0002807188	• 0002807248
G 5/8	14	• 0002838406	• 0002838837
G 3/4	14	• 0002838566	• 0002838998
G 7/8	14	• 0002838787	• 0002839077
G 1"	11	• 0002838627	• 0002839137
G 1"1/8	11	• 0002865504	• 0002865233
G 1"1/4	11	• 0002992999	• 0002865393
G 1"1/2	11	• 0002865725	• 0002865444
G 1"3/4	11	• 0002865664	• 0002993078
G 2"	11	• 0002998843	• 0002998782
G 2"1/4	11	• 0002999082	• 0002998903
G 2"1/2	11	• 0002999203	• 0002999142
G 2"3/4	11	• 0002999413	• 0002999363
G 3"	11	• 0002999634	• 0002999574
G 3"1/2	11	• 0003018707	• 0002999794
G 4"	11	• 0002999905	• 0002999845

Calibres de rosca. Tampón - pasa/no pasa. Anillo - pasa/no pasa. Para roscas estancas.

Thread gauges. *Plug - go/no go. Ring - go/no go. For presure tight joints.*

Tampón **R, Rc, Rp** | C 1:16 | X210 Cr12

Anillo

P/NP

	Para roscas interiores cilindricas Rp *For internal parallel Rp*		Para roscas exteriores cónicas R *For taper external R threads*
	Rp	DIN 2999	**R**
	Calibre tampón cónico *Taper plug gauge*		Calibre anillo cilíndrico *Parallel ring gauge*
D **tpi**	**Cod.**		**Cod.**
R 1/8" 28	0002744610		0003066562
R 1/4" 19	0003056333		0003067836
R 3/8" 19	0003056494		0003066773
R 1/2" 14	0003056544		0003066834
R 3/4" 14	0003056765		0003066994
R 1" 11	0003056825		0003067073
R 1 1/4" 11	0003057065		0003067133
R 1 1/2" 11	0003056976		0003067294
R 2" 11	0003057125		0003067354
R 2 1/2" 11	0003057275		0003067404
R 3" 11	0003057336		0003067565

	Para roscas interiores cilindricas Rp y cónicas Rc *For internal parallel Rp and taper Rc threads*		Para roscas exteriores cónicas R *For taper external R threads*
	R ISO 7	ISO 7-2/1982	**R** ISO 7
	Calibre tampón cónico *Taper plug gauge*		Calibre anillo cónico *Taper ring gauge*
D **tpi**	**Cod.**		**Cod.**
R 1/8" 28	0003064136		0003067625
R 1/4" 19	0003064287		0003067785
R 3/8" 19	0003064347		0003067996
R 1/2" 14	0003064407		0003068135
R 3/4" 14	0003064568		0003068296
R 1" 11	0003064618		0003068356
R 1 1/4" 11	0003064779		0003068417
R 1 1/2" 11	0003064839		0003068567
R 2" 11	0003065078		0003068788
R 2 1/2" 11	0003064999		0003068627
R 3" 11	0003065139		0003068848

	Para roscas interiores cilindricas Rp y cónicas Rc *For internal parallel Rp and taper Rc threads*		Para roscas exteriores cónicas R *For taper external R threads*
	Rc/Rp ISO 7 nº1	ISO 7-2/2000 DIN EN10226-3	**R** ISO 7 nº3
	Calibre tampón cónico *Taper plug gauge*		Calibre anillo cilíndrico *Parallel ring gauge*
D **tpi**	**Cod.**		**Cod.**
R 1/8" 28	0003065289		0003068998
R 1/4" 19	0003065349		0003069087
R 3/8" 19	0003065400		0003069138
R 1/2" 14	0003065560		0003069298
R 3/4" 14	0003065621		0003069358
R 1" 11	0003065771		0003069419
R 1 1/4" 11	0003065831		0003069569
R 1 1/2" 11	0003065992		0003069620
R 2" 11	0003066131		0003069780
R 2 1/2" 11	0003066071		0003069840
R 3" 11	0003066291		0003069901

- Bajo demanda. / *Upon request.*

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP	UNC ASME B1.1	ANSI/ASME B1.2	2B 3B	CERT.		P 60°	X210 Cr12

		2B			3B
		pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*	pasa/go - no pasa/*no go*
D	tdi	Cod.	Cod.	Cod.	Cod.
UNC Nr 4	40	• 0002866024			• 0003018867
UNC Nr 5	40	• 0002995906			• 0003018927
UNC Nr 6	32	• 0002866175			• 0003019006
UNC Nr 8	32	• 0002872305			• 0003019167
UNC Nr 10	24	• 0002816104			• 0003019227
UNC Nr 12	24	• 0002866235			• 0003019377
UNC 1/4	20	• 0002866396			• 0003019438
UNC 5/16	18	• 0002866456			• 0003019598
UNC 3/8	16	• 0002866506			• 0003019658
UNC 7/16	14	• 0002866667			• 0003019709
UNC 1/2	13	• 0002866727			• 0003019869
UNC 9/16	12	• 0002833836			• 0003019920
UNC 5/8	11	• 0002833986			• 0003020004
UNC 3/4	10	• 0002995846			• 0003020164
UNC 7/8	9	• 0002834075			• 0003032880
UNC 1"	8	• 0002834126			• 0003032940
UNC 1"1/8	7	• 0002996577			
UNC 1"1/4	7	• 0002996627			
UNC 1"3/8	6	• 0002996788			
UNC 1"1/2	6	• 0002996848			
UNC 1"3/4	5		• 0003000077	• 0003000831	
UNC 2"	4 1/2		• 0003000138	• 0003000991	
UNC 2"1/4	4 1/2		• 0003000288	• 0003001070	
UNC 2"1/2	4		• 0003000349	• 0003001130	
UNC 2"3/4	4		• 0002735112	• 0003001291	
UNC 3"	4		• 0003000409	• 0003001341	
UNC 3"1/4	4		• 0003000569	• 0003001401	
UNC 3"1/2	4		• 0003000620	• 0003001562	
UNC 4"	4		• 0003000770	• 0003001622	

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo
P/NP

UNC ASME B1.1 | ANSI/ASME B1.2 | 2A - 3A | CERT. | X210 Cr12

		2A				3A			
		pasa - *go*		no pasa - *no go*		pasa - *go*		no pasa - *no go*	
D	tpi		Cod.		Cod.		Cod.		Cod.
UNC Nr 4	40	•	0003004087	•	0003003998	•	0003024655	•	0003024505
UNC Nr 5	40	•	0003004297	•	0003004137	•	0003024876	•	0003024716
UNC Nr 6	32	•	0003004418	•	0003004358	•	0003025015	•	0003024936
UNC Nr 8	32	•	0003004629	•	0003004568	•	0003032237	•	0003032187
UNC Nr 10	24	•	0002816314	•	0002816475	•	0003025386	•	0003025226
UNC Nr 12	24	•	0003004840	•	0003004789	•	0003025507	•	0003025447
UNC 1/4	20	•	0003005089	•	0003004900	•	0003025718	•	0003025658
UNC 5/16	18	•	0003005290	•	0003005149	•	0003025939	•	0003025878
UNC 3/8	16	•	0003005410	•	0003005350	•	0003026178	•	0003026018
UNC 7/16	14	•	0003020375	•	0003020225	•	0003026389	•	0003026238
UNC 1/2	13	•	0003020596	•	0003020435	•	0003026500	•	0003026449
UNC 9/16	12	•	0003020707	•	0003020656	•	0003026710	•	0003026660
UNC 5/8	11	•	0003020927	•	0003020867	•	0003026931	•	0003026871
UNC 3/4	10	•	0003021167	•	0003021006	•	0003027170	•	0003027010
UNC 7/8	9	•	0003021377	•	0003021227				
UNC 1"	8	•	0003021598	•	0003021438				
UNC 1"1/8	7	•	0003021719	•	0003021658				
UNC 1"1/4	7	•	0003021920	•	0003021869				
UNC 1"3/8	6	•	0003022169	•	0003022008				
UNC 1"1/2	6	•	0003022380	•	0003022229				
UNC 1"3/4	5	•	0003022590	•	0003022430				
UNC 2"	4 1/2	•	0003022711	•	0003022651				
UNC 2"1/4	4 1/2	•	0003022922	•	0003022862				
UNC 2"1/2	4	•	0003023161	•	0003023011				
UNC 2"3/4	4	•	0003023222	•	0003023382				
UNC 3"	4	•	0003023874	•	0003023713				
UNC 3"1/4	4	•	0003024013	•	0003023924				
UNC 3"1/2	4	•	0003024224	•	0003024163				
UNC 4"	4	•	0003024445	•	0003024384				

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP	UNJC ASME B1.15 / ISO3161	ANSI/ASME B1.2	3B	CERT.			X210 Cr12

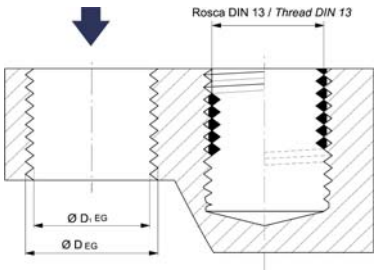
pasa/go - no pasa/*no go*

D	tpi		Cod.
UNJC Nr 4	40	•	0003001772
UNJC Nr 5	40	•	0003032729
UNJC Nr 6	32	•	0003001833
UNJC Nr 8	32	•	0003001993
UNJC Nr 10	24	•	0003002072
UNJC Nr 12	24	•	0003002132
UNJC 1/4	20	•	0003002293
UNJC 5/16	18	•	0003002353
UNJC 3/8	16	•	0003002404
UNJC 7/16	14	•	0003002564
UNJC 1/2	13	•	0003002624
UNJC 9/16	12	•	0003002785
UNJC 5/8	11	•	0003002835
UNJC 3/4	10	•	0003002995
UNJC 7/8	9	•	0003032519
UNJC 1"	8	•	0003032669

Tampón P/NP	EG-UNC ASME B1.1	ANSI/ASME B1.1 - 1.2 (83)	2B	CERT.			X210 Cr12

Para insertos metálicos de rosca. / *For wire thread inserts.*

Para calibrar antes de introducir el inserto metálico / *To gauge before screwing the insert*



pasa/go - no pasa/*no go*

D	tpi		Cod.
EG-UNC Nr 4	40	•	0003003295
EG-UNC Nr 5	40	•	0003032398
EG-UNC Nr 6	32	•	0003003355
EG-UNC Nr 8	32	•	0003003416
EG-UNC Nr 10	24	•	0003003566
EG-UNC Nr 12	24	•	0003032458
EG-UNC 1/4	20	•	0003003627
EG-UNC 5/16	18	•	0003003787
EG-UNC 3/8	16	•	0003003847

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón P/NP | **UNF** ASME B1.1 | ANSI/ASME B1.2 | 2B - 3B | CERT. | P 60° | X210 Cr12

D	tpi	2B pasa/go - no pasa/*no go*	3B pasa/go - no pasa/*no go*
UNF Nr 0	80	• 0002985285	
UNF Nr 1	72	• 0002985336	
UNF Nr 2	64	• 0002985496	
UNF Nr 3	56	• 0002985556	
UNF Nr 4	48	• 0002985617	• 0003027381
UNF Nr 5	44	• 0002985767	• 0003027441
UNF Nr 6	40	• 0002985827	• 0003027502
UNF Nr 8	36	• 0002985988	• 0003027662
UNF Nr 10	32	• 0002986067	• 0003027723
UNF Nr 12	28	• 0002986127	• 0003027873
UNF 1/4	28	• 0002986287	• 0003027933
UNF 5/16	24	• 0003008206	• 0002834617
UNF 3/8	24	• 0002986348	• 0003028012
UNF 7/16	20	• 0002602908	• 0003028173
UNF 1/2	20	• 0002986498	• 0003028233
UNF 9/16	18	• 0002986559	• 0003028393
UNF 5/8	18	• 0002986619	• 0003028444
UNF 3/4	16	• 0002986779	• 0003028504
UNF 7/8	14	• 0002889971	• 0003033189
UNF 1"	12	• 0002986820	• 0003033029
UNF 1"1/8	12	• 0002729534	
UNF 1"1/4	12	• 0002986980	
UNF 1"1/2	12	• 0002987069	
UNF 1"3/8	12	• 0003027231	

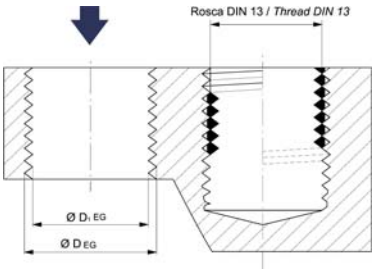
Tampón P/NP | **UNJF** ASME B1.15 / ISO 3161 | ANSI/ASME B1.2 | 3B | CERT. | P 60° | X210 Cr12

D	tpi	pasa/go - no pasa/*no go*
UNJF Nr 4	48	• 0003033451
UNJF Nr 5	44	• 0003033511
UNJF Nr 6	40	• 0003033671
UNJF Nr 8	36	• 0003033722
UNJF Nr 10	32	• 0003036186
UNJF Nr 12	28	• 0003033942
UNJF 1/4	28	• 0003034021
UNJF 5/16	24	• 0003034182
UNJF 3/8	24	• 0003034242
UNJF 7/16	20	• 0003034302
UNJF 1/2	20	• 0003034453
UNJF 9/16	18	• 0003034513
UNJF 5/8	18	• 0003034674
UNJF 3/4	16	• 0003034734
UNJF 7/8	14	• 0003034884
UNJF 1"	12	• 0003003074

Calibres de rosca. Tampón - pasa/no pasa.
Thread gauges. Plug - go/no go.

Tampón	**EG-UNF** ASME B1.1	ANSI/ASME B1.1 - 1.2 (83)	2B	CERT.			X210 Cr12
P/NP	Para insertos metálicos de rosca. / *For wire thread inserts.*						

Para calibrar antes de introducir el inserto metálico / *To gauge before screwing the insert*



D	tpi	pasa/go - no pasa/*no go* Cod.
EG-UNF Nr 4	48	0003035024
EG-UNF Nr 5	44	0003035184
EG-UNF Nr 6	40	0003035244
EG-UNF Nr 8	36	0003035305
EG-UNF Nr 10	32	0003035455
EG-UNF Nr 12	28	0003035515
EG-UNF 1/4	28	0003035676
EG-UNF 5/16	24	0003035736
EG-UNF 3/8	24	0003035887
EG-UNF 7/16	20	0003035947
EG-UNF 1/2	20	0003036036

Tampón	**UNEF** ASME B1.1	ANSI/ASME B1.1 - 1.2 (83)	2B 2A	CERT.				X210 Cr12
Anillo								
P/NP								

D	tpi	2B pasa/go - no pasa/*no go* Cod.	2A pasa - *go* Cod.	2A no pasa - *no go* Cod.
UNEF Nr 12	32	0003036247	0003038191	0003037891
UNEF 1/4	32	0003036307	0003038030	0003037952
UNEF 5/16	32	0003036467	0003038302	0003038241
UNEF 3/8	32	0003036518	0003038522	0003038462
UNEF 7/16	28	0003036678	0003038733	0003038673
UNEF 1/2	28	0003036738	0003038954	0003038893
UNEF 9/16	24	0003036899	0003039193	0003039033
UNEF 5/8	24	0003036949	0003039525	0003039253
UNEF 3/4	20	0003037038	0003039464	0003039304
UNEF 7/8	20	0003037188	0003039735	0003039685
UNEF 1"	20	0003037249	0003039956	0003039896

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo P/NP | **UNF** ASME B1.1 | ANSI/ASME B1.2 | 2A - 3A | CERT. | X210 Cr12

		2A		3A	
		pasa - *go*	no pasa - *no go*	pasa - *go*	no pasa - *no go*
D	tpi	Cod.	Cod.	Cod.	Cod.
UNF Nr 0	80	0002987129	0002989565		
UNF Nr 1	72	0002987401	0002989616		
UNF Nr 2	64	0002987551	0002989776		
UNF Nr 3	56	0002987611	0002989837		
UNF Nr 4	48	0002987772	0002989997	0003028936	0003028875
UNF Nr 5	44	0002987832	0002990071	0003029175	0003029024
UNF Nr 6	40	0002987982	0002990132	0003029396	0003029235
UNF Nr 8	36	0002988342	0002990282	0003029506	0003029456
UNF Nr 10	32	0002988122	0002990342	0003029727	0003029667
UNF Nr 12	28	0002988282	0002990403	0003029938	0003029887
UNF 1/4	28	0002988403	0002990563	0003030173	0003030022
UNF 5/16	24	0002988553	0002990614	0003031456	0003031516
UNF 3/8	24	0002988614	0002990774	0003030393	0003030233
UNF 7/16	20	0002988774	0002990834	0003030504	0003030454
UNF 1/2	20	0002988834	0002990995	0003030725	0003030664
UNF 9/16	18	0002988985	0002991074	0003030936	0003030885
UNF 5/8	18	0002989074	0002991134	0003031175	0003031024
UNF 3/4	16	0002989134	0002991284	0003031235	0003031396
UNF 7/8	14	0002890055	0002887756		
UNF 1"	12	0002989284	0002991345		
UNF 1"1/8	12	0002729263	0002729103		
UNF 1"1/4	12	0002989345	0002991405		
UNF 1"3/8	12	0003028664	0003028725		
UNF 1"1/2	12	0002989405	0002991565		

Tampón P/NP

NPT ANSI/ASME B1.20.1 | ANSI/ASME B1.20.1 NF E 03-601 | C1:16 | X210 Cr12

Para roscas que precisan sellador de estanqueidad. / *For threads with dryseal material.*

D	tpi	L1* pasa/go - no pasa/*no go*	Cod.
NPT 1/16	27	•	0003042256
NPT 1/8	27	•	0002832824
NPT 1/4	18	•	0002832984
NPT 3/8	18	•	0002854152
NPT 1/2	14	•	0002753415
NPT 3/4	14	•	0002753575
NPT 1"	11 1/2	•	0002753626
NPT 1"1/4	11 1/2	•	0003037309
NPT 1"1/2	11 1/2	•	0003037460
NPT 2"	11 1/2	•	0003031727
NPT 2"1/2	8	•	0003037520
NPT 3"	8	•	0003015157
NPT 3"1/2	8	•	0003037670
NPT 4"	8	•	0003037731

*L3 bajo demanda.

Anillo P/NP

NPT ANSI/ASME B1.20.1 | ANSI/ASME B1.20.1 NF E 03-601 | C1:16 | X210 Cr12

D	tpi	L1* pasa/go - no pasa/*no go*	Cod.
NPT 1/16	27	•	0003040733
NPT 1/8	27	•	0002855004
NPT 1/4	18	•	0002855164
NPT 3/8	18	•	0002855215
NPT 1/2	14	•	0002750830
NPT 3/4	14	•	0002750990
NPT 1"	11 1/2	•	0002751079
NPT 1"1/4	11 1/2	•	0003040030
NPT 1"1/2	11 1/2	•	0003040191
NPT 2"	11 1/2	•	0003040251
NPT 2"1/2	8	•	0003040302
NPT 3"	8	•	0003040462
NPT 3"1/2	8	•	0003040522
NPT 4"	8	•	0003040683

*L2 bajo demanda.

Tampón P/NP

NPTF ANSI B1.20.3 | NPTF-1 ASME B1.20.5 | C1:16 | X210 Cr12

Para roscas sin junta de estanqueidad. / *For threads without dryseal material.*

D	tpi	pasa/go - no pasa/*no go*	Cod.
NPTF 1/16	27	•	0003042316
NPTF 1/8	27	•	0003042466
NPTF 1/4	18	•	0003042527
NPTF 3/8	18	•	0003042687
NPTF 1/2	14	•	0003042748
NPTF 3/4	14	•	0003042808
NPTF 1"	11 1/2	•	0003042958
NPTF 1"1/4	11 1/2	•	0003043047
NPTF 1"1/2	11 1/2	•	0003043198
NPTF 2"	11 1/2	•	0003043258
NPTF 2"1/2	8	•	0003043318
NPTF 3"	8	•	0003043479
NPTF 3"1/2	8	•	0003043529
NPTF 4"	8	•	0003043680

Anillo P/NP

NPTF ANSI B1.20.3 | NPTF-1 ASME B1.20.5 | C1:16 | X210 Cr12

D	tpi	pasa/go - no pasa/*no go*	Cod.
NPTF 1/16	27	•	0003040893
NPTF 1/8	27	•	0003040954
NPTF 1/4	18	•	0003041033
NPTF 3/8	18	•	0003041193
NPTF 1/2	14	•	0003041253
NPTF 3/4	14	•	0003041314
NPTF 1"	11 1/2	•	0003041464
NPTF 1"1/4	11 1/2	•	0003041685
NPTF 1"1/2	11 1/2	•	0003041525
NPTF 2"	11 1/2	•	0003041745
NPTF 2"1/2	8	•	0003041896
NPTF 3"	8	•	0003041956
NPTF 3"1/2	8	•	0003042035
NPTF 4"	8	•	0003042195

Calibres de rosca. Tampón - pasa, rosca / no pasa, liso.
Thread gauges. Plug - go, thread / no go, plain.

Tampón	**Pg** DIN 40430	DIN 40431-40430	CERT.		P 80°	X210 Cr12
P/NP	Roscas para tubos de conducción eléctrica. / *Steel conduit threads.*					

	pasa/go - no pasa, liso/*no go,plain*	pasa - *go*	no pasa, liso - *no go, plain*
D	**tpi**	**Ød/mm**	**Cod.**	**Cod.**	**Cod.**
Pg 7	20	12,50	• 0003053547		
Pg 9	18	15,20	• 0003060760		
Pg 11	18	18,60	• 0003060820		
Pg 13,5	18	20,40	• 0003060980		
Pg 16	18	22,56	• 0003061069		
Pg 21	16	28,30	• 0003061120		
Pg 29	16	37,00	• 0003061280		
Pg 36	16	47,00	• 0003136323	• 0003091174	• 0003083863
Pg 42	16	54,00	• 0003136473	• 0003061822	• 0003083924
Pg 48	16	59,30	• 0003136534	• 0003061551	• 0003084002

• Bajo demanda. / *Upon request.*

El calibre tampón no pasa controla sólo el diámetro menor de la rosca interior, es por tanto liso.
The no go plug gauge has no thread and checks only the minor diameter.

Conversión de roscas Pg a Métrica fina para tubos de conducción eléctrica.

Equivalence between Pg thread and MF thread for steel conduit thread.

Pg DIN 40430	MF - El UNE - EN 60423	Tol.
-	MF - El 8 x 1	7H
-	MF - El 10 x 1	7H
7	MF - El 12 x 1,5	7H
9	MF - El 16 x 1,5	7H
11	MF - El 20 x 1,5	7H
13,5	MF - El 20 x 1,5	7H
16	MF - El 25 x 1,5	7H
21	MF - El 32 x 1,5	7H
29	MF - El 40 x 1,5	7H
36	MF - El 50 x 1,5	7H
48	MF - El 63 x 1,5	7H
-	MF - El 75 x 1,5	7H

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo	**Pg** DIN 40430	DIN 40431-40430	CERT.		P 80°	X210 Cr12
P/NP	Roscas para tubos de conducción eléctrica. / *Steel conduit threads.*					

			pasa - *go*		no pasa, liso - *no go, plain*	
D	**tpi**	**Ød/mm**		**Cod.**		**Cod.**
Pg 7	20	12,5	•	0003062403	•	0003082158
Pg 9	18	15,20	•	0003062282	•	0003082219
Pg 11	18	18,60	•	0003062614	•	0003082379
Pg 13,5	18	20,40	•	0003062834	•	0003082439
Pg 16	18	22,56	•	0003063074	•	0003082580
Pg 21	16	28,30	•	0003063284	•	0003082640
Pg 29	16	37,00	•	0003063405	•	0003082701
Pg 36	16	47,00	•	0003063616	•	0003082861
Pg 42	16	54,00	•	0003063837	•	0003082911
Pg 48	16	59,30	•	0003064076	•	0003083000

El calibre anillo no pasa controla sólo el diámetro menor de la rosca interior, es por tanto liso.
The no go ring gauge has no thread and checks only the minor diameter.

Conversión de roscas Pg a Métrica fina para tubos de conducción eléctrica.

Equivalence between Pg thread and MF thread for steel conduit thread.

Pg DIN 40430	MF UNE - EN 60423	Tol.
7	MF EL 12 x 1,5	8g
9	MF EL 16 x 1,5	8g
11	MF EL 20 x 1,5	8g
13,5	MF EL 20 x 1,5	8g
16	MF EL 25 x 1,5	8g
21	MF EL 32 x 1,5	8g
29	MF EL 40 x 1,5	8g
36	MF EL 50 x 1,5	8g
48	MF EL 63 x 1,5	8g

Calibres de rosca. Tampón - pasa / no pasa.
Thread gauges. Plug - go / no go.

Tampón	Tr DIN 103	DIN 103-9	7H				X210 Cr12
P/NP	Roscas trapezoidales. / *For trapezoidal threads.*						

		pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
D	**P**	**Cod.**	**Cod.**	**Cod.**
Tr 10	2,00	• 0003043740		
Tr 12	3,00	• 0003043800		
Tr 14	3,00	• 0003043951		
Tr 16	4,00	• 0003044040		
Tr 18	4,00	• 0003044100		
Tr 20	4,00	• 0003044250		
Tr 22	5,00	• 0003044311		
Tr 24	5,00	• 0003044471		
Tr 26	5,00	• 0003044531		
Tr 28	5,00	• 0003044682		
Tr 30	6,00	• 0003044742		
Tr 32	6,00	• 0003044803		
Tr 34	6,00	• 0003044963		
Tr 36	6,00	• 0003045042		
Tr 38	6,00	• 0003045102		
Tr 40	7,00	• 0003045965		
Tr 42	7,00		• 0003045253	• 0003045313
Tr 44	7,00		• 0003045534	• 0003045473
Tr 46	8,00		• 0003046044	• 0003045684
Tr 48	8,00		• 0003045805	• 0003045744
Tr 50	8,00		• 0003046265	• 0003046104
Tr 52	8,00		• 0003046315	• 0003046476
Tr 55	9,00		• 0003046696	• 0003046536
Tr 60	9,00		• 0003046807	• 0003046747

Calibres de rosca. Anillo - pasa/no pasa.
Thread gauges. Ring - go/no go.

Anillo	Tr DIN 103	DIN 103-9	7e	CERT.		P 30°	X210 Cr12
P/NP	Roscas trapezoidales. / *For trapezoidal threads.*						

		pasa - *go*		no pasa - *no go*	
D	P		Cod.		Cod.
Tr 10	2,00	•	0003047046	•	0003046967
Tr 12	3,00	•	0003047267	•	0003047107
Tr 14	3,00	•	0003047478	•	0003047327
Tr 16	4,00	•	0003047699	•	0003047538
Tr 18	4,00	•	0003051693	•	0003051543
Tr 20	4,00	•	0003047809	•	0003047759
Tr 22	5,00	•	0003048049	•	0003047960
Tr 24	5,00	•	0003048269	•	0003048109
Tr 26	5,00	•	0003048470	•	0003048320
Tr 28	5,00	•	0003048691	•	0003048531
Tr 30	6,00	•	0003048812	•	0003048751
Tr 32	6,00	•	0003049051	•	0003048962
Tr 34	6,00	•	0003049262	•	0003049101
Tr 36	6,00	•	0003049482	•	0003049322
Tr 38	6,00	•	0003049693	•	0003049533
Tr 40	7,00	•	0003049814	•	0003049754
Tr 42	7,00	•	0003050059	•	0003049964
Tr 44	7,00	•	0003050269	•	0003050109
Tr 46	8,00	•	0003050480	•	0003050320
Tr 48	8,00	•	0003050691	•	0003050531
Tr 50	8,00	•	0003050812	•	0003050751
Tr 52	8,00	•	0003051051	•	0003050962
Tr 55	9,00	•	0003051262	•	0003051111
Tr 60	9,00	•	0003051482	•	0003051322

Calibres lisos. Tampón - pasa / no pasa.
Plain gauges. Plug - go / no go.

Tampón P/NP | DIN 7162 | H7 | CERT. | X210 Cr12

ØDmm.	pasa/go - no pasa/*no go* Cod.	pasa - *go* Cod.	no pasa - *no go* Cod.
2	• 0002902805		
3	• 0002820530		
4	• 0002820690		
5	• 0002902955		
6	• 0002903044		
7	• 0002903194		
8	• 0002903255		
9	• 0002903315		
10	• 0002903476		
11	• 0002903526		
12	• 0002300956		
13	• 0002903686		
14	• 0002903747		
15	• 0002903807		
16	• 0002903957		
17	• 0002904046		
18	• 0002904107		
19	• 0002904257		
20	• 0002904317		
21	• 0002904478		
22	• 0002904538		
23	• 0002904689		
24	• 0002758145		
25	• 0002904749		
26	• 0002904809		
27	• 0002904960		
28	• 0002905049		
29	• 0002905109		
30	• 0002905259		
31	• 0002905310		
32	• 0002905470		
33	• 0002905531		
34	• 0002758206		
35	• 0002905681		
36	• 0002905741		
37	• 0002905802		
38	• 0002905962		
39	• 0002906041		
40	• 0002867398		
41	• 0002906101		
42	• 0002906262		
43	• 0002906312		
44	• 0002906472		
45	• 0002906533		
46	• 0002906693		
47	• 0002906744		
48	• 0002906804		
49	• 0002906964		
50	• 0002907043		
51	• 0002907104		
52	• 0002907264		

Calibres lisos. Tampón - pasa / no pasa.
Plain gauges. *Plug - go / no go.*

Tampón P/NP | DIN 7162 | H7 | CERT. | X210 Cr12

	pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
ØDmm.	**Cod.**	**Cod.**	**Cod.**
53	• 0002907324		
54	• 0002907475		
55	• 0002907535		
56	• 0002907695		
57		• 0002907806	• 0002912261
58		• 0002907967	• 0002912321
59		• 0002908045	• 0002912482
60		• 0002908106	• 0002912542
61		• 0002908266	• 0002912602
62		• 0002908327	• 0002912753
63		• 0002908477	• 0002912813
64		• 0002908537	• 0002912973
65		• 0002908698	• 0002913052
66		• 0002908758	• 0002913113
67		• 0002908818	• 0002913273
68		• 0002908969	• 0002913323
69		• 0002909058	• 0002913484
70		• 0002909108	• 0002913544
71		• 0002909268	• 0002913605
72		• 0002909329	• 0002913755
73		• 0002909489	• 0002913815
74		• 0002909530	• 0002913976
75		• 0002909690	• 0002914055
76		• 0002909750	• 0002914115
77		• 0002909811	• 0002914275
78		• 0002909961	• 0002914336
79		• 0002910055	• 0002914486
80		• 0002910106	• 0002914546
81		• 0002910266	• 0002914607
82		• 0002910327	• 0002914767
83		• 0002910487	• 0002914818
84		• 0002910537	• 0002914978
85		• 0002910698	• 0002915057
86		• 0002910758	• 0002915117
87		• 0002910818	• 0002915278
88		• 0002910969	• 0002915338
89		• 0002911058	• 0002915488
90		• 0002911118	• 0002915549
91		• 0002911268	• 0002915609
92		• 0002911329	• 0002915760
93		• 0002911489	• 0002915820
94		• 0002911540	• 0002915970
95		• 0002911690	• 0002916069
96		• 0002911750	• 0002916110
97		• 0002911811	• 0002916270
98		• 0002911971	• 0002916330
99		• 0002912050	• 0002916491
100		• 0002912110	• 0002916541

Calibres lisos. Anillo liso - Herradura.
Plain gauges. Setting ring - snap gauge.

Anillo
Herradura

DIN 2250 C Para el ajuste de instrumentos de medida. / *For checking measuring instruments.*
DIN 7162 Para verificación de ejes. / *To check axles.*

CERT.

X210 Cr12

	DIN 2250 C		DIN 7162 h7	
	liso - *plain*		herradura - *snap gauges*	
ØDmm.		Cod.		Cod.
2	•	0003070135	•	0003126244
3	•	0003070085	•	0003126305
4	•	0003070296	•	0003126465
5	•	0003070356	•	0003126525
6	•	0003070417	•	0003126676
7	•	0003070567	•	0003126736
8	•	0003070627	•	0003126896
9	•	0003070788	•	0003126957
10	•	0003070848	•	0003127036
11	•	0003070908	•	0003127196
12	•	0003071087	•	0003127246
13	•	0003071148	•	0003127307
14	•	0003071298	•	0003127467
15	•	0003071358	•	0003127528
16	•	0003071419	•	0003127678
17	•	0003071579	•	0003127738
18	•	0003071620	•	0003127899
19	•	0003071780	•	0003127959
20	•	0003071840	•	0003128038
21	•	0003071901	•	0003128198
22	•	0003072080	•	0003128259
23	•	0003072140	•	0003128309
24	•	0003072200	•	0003128460
25	•	0003072351	•	0003128520
26	•	0003072411	•	0003128680
27	•	0003072572	•	0003128731
28	•	0003072632	•	0003128891
29	•	0003072782	•	0003128951
30	•	0003072843	•	0003129030
31	•	0003072903	•	0003129191
32	•	0003073082	•	0003129251
33	•	0003073142	•	0003129311
34	•	0003073203	•	0003129462
35	•	0003073353	•	0003129522
36	•	0003073413	•	0003129683
37	•	0003073574	•	0003129743
38	•	0003073634	•	0003129893
39	•	0003073785	•	0003129954
40	•	0003073845	•	0003130038
41	•	0003073905	•	0003130198
42	•	0003074084	•	0003130259
43	•	0003074145	•	0003130319
44	•	0003074205	•	0003130460
45	•	0003074365	•	0003130520
46	•	0003074416	•	0003130680
47	•	0003074576	•	0003130741
48	•	0003074636	•	0003130891
49	•	0003074797	•	0003130951

Anillo

Herradura

DIN 2250 C Para el ajuste de instrumentos de medida. / *For checking measuring instruments.*
DIN 7162 Para verificación de ejes. / *To check axles.*

CERT.

X210 Cr12

	DIN 2250 C		DIN 7162 h7	
	liso - *plain*		herradura - *shap gauges*	
ØDmm.		**Cod.**		**Cod.**
50	•	0003074847	•	0003131030
51	•	0003074908	•	0003131191
52	•	0003075086	•	0003131251
53	•	0003075147	•	0003131311
54	•	0003075207	•	0003131462
55	•	0003075368	•	0003131522
56	•	0003075428	•	0003131683
57	•	0003075578	•	0003131743
58	•	0003075639	•	0003131803
59	•	0003075799	•	0003131954
60	•	0003076099	•	0003132043
61	•	0003075850	•	0003132193
62	•	0003075900	•	0003132253
63	•	0003077151	•	0003132314
64	•	0003077202	•	0003132474
65	•	0003077362	•	0003132524
66	•	0003077423	•	0003132685
67	•	0003077583	•	0003132745
68	•	0003077633	•	0003132806
69	•	0003077794	•	0003132956
70	•	0003077854	•	0003133045
71	•	0003077914	•	0003133105
72	•	0003078093	•	0003133256
73	•	0003078154	•	0003133316
74	•	0003078214	•	0003133476
75	•	0003078364	•	0003133537
76	•	0003078425	•	0003133687
77	•	0003078585	•	0003133747
78	•	0003078646	•	0003133808
79	•	0003078796	•	0003133968
80	•	0003078856	•	0003134047
81	•	0003078917	•	0003134107
82	•	0003079096	•	0003134258
83	•	0003079156	•	0003134318
84	•	0003079216	•	0003134479
85	•	0003079367	•	0003134539
86	•	0003079427	•	0003134689
87	•	0003079587	•	0003134740
88	•	0003079648	•	0003134800
89	•	0003079708	•	0003134961
90	•	0003079859	•	0003135311
91	•	0003079919	•	0003135049
92	•	0003080093	•	0003135100
93	•	0003080154	•	0003135260
94	•	0003080214	•	0003135471
95	•	0003080364	•	0003135531
96	•	0003080585	•	0003135692
97	•	0003080646	•	0003135742
98	•	0003080706	•	0003135802
99	•	0003080856	•	0003135963
100	•	0003080917	•	0003136042

Calibres lisos especiales.
Special plain gauges.

Tampón P/NP | DIN 7162 ISO 1938 | Diámetros exteriores nominales con valor decimal o centesimal. **Siempre bajo pedido**, indicando el campo tolerancia exacta. *Decimal or centesimal external nominal diameters are supplied only under order and the exact tolerances must be indicated.* | Tol. especial | CERT. | X210 Cr12

ØD	Rango mm.	pasa/go - no pasa/*no go*	pasa - *go*	no pasa - *no go*
A	2,01 - 2,99	•		
B	3,01 - 5,99	•		
C	6,01 - 9,99	•		
D	10,01 - 13,99	•		
E	14,01 - 17,99	•		
F	18,01 - 21,99	•		
G	22,01 - 26,99	•		
H	27,01 - 31,99	•		
I	32,01 - 37,99	•		
J	38,01 - 42,99	•		
K	43,01 - 48,99	•		
L	49,01 - 55,99	•		
M	56,01 - 62,99		•	•
N	63,01 - 69,99		•	•
O	70,01 - 76,99		•	•
P	77,01 - 83,99		•	•
Q	84,01 - 91,99		•	•
R	92,01 - 99,99		•	•

Anillo Comprobador | DIN 2250 C | Diámetros exteriores nominales con valor decimal o centesimal. **Siempre bajo pedido**, indicando el campo tolerancia exacta. *Decimal or centesimal external nominal diameters are supplied only under order and the exact tolerances must be indicated.* | Tol. especial | CERT. | X210 Cr12

ØD	Rango mm.	pasa - *go*
A	2,01 - 2,99	•
B	3,01 - 5,99	•
C	6,01 - 9,99	•
D	10,01 - 13,99	•
E	14,01 - 17,99	•
F	18,01 - 21,99	•
G	22,01 - 26,99	•
H	27,01 - 31,99	•
I	32,01 - 37,99	•
J	38,01 - 42,99	•
K	43,01 - 48,99	•
L	49,01 - 55,99	•
M	56,01 - 62,99	•
N	63,01 - 69,99	•
O	70,01 - 76,99	•
P	77,01 - 83,99	•
Q	84,01 - 91,99	•
R	92,01 - 99,99	•

Clases de tolerancias para calibres de rosca. *Tolerance classes for threads.*

Roscas Métricas con ángulo de 60ºde rosca / *Metric threads (M) with 60º threads angles*

Clases de tolerancias recomendadas para roscas interiores (Calibre tampón)
Recommended tolerance classes for internal threads (Plug Gauges)

	Posición tolerancia "G" / *Tolerance position "G"*			Posición tolerancia "H" / *Tolerance position "H"*		
	Longitud de acoplamiento de la rosca / *Length of Thread Engagement*					
	Corta/*Sort*	Normal	Largo/*Long*	Corta/*Sort*	Normal	Largo/*Long*
Fina/Fine	-	-	-	4H	5H	6H
Media/Medium	(5G)	6G	(7G)	5H	6H	7H
Gruesa/Coarse	-	(7G)	(8G)	-	7H	8H

Tolerancias recomendadas para roscas exteriores (Calibres anillo)
Recommended tolerance for external threads (Ring Gauges)

	Posición tol. "e"/*Tol. position"e"*			Posición tol. "f"/*Tol. position"f"*			Posición tol. "g"/*Tol. position"g"*			Posición tol."h"/*Tol. position "h"*		
	Longitud de acoplamiento de la rosca / *Length of Thread Engagement*											
	Corta/*Sort*	Normal	Larga/*Long*	Corta/*Sort*	Normal	Larga/*Long*	Corta/*Sort*	Normal	Larga/*Long*	Corta/*Sort*	Normal	Larga/*Long*
Fina/Fine	-	-	-	-	-	-	-	(4g)	(5g - 4g)	(3h - 4h)	4h	(5h - 4h)
Media/Medium	-	6e	(7e - 6e)	-	6f	-	(5g-6g)	**6g**	(7g - 6g)	(5h-6h)	6h	(7h - 6h)
Gruesa/Coarse	-	(8e)	(9e - 8e)	-	-	-	-	8g	(9g - 8g)	-	-	-

Clases de tolerancia en negrita primera opción, en letra normal segunda opción y entre paréntesis tercera opción.
Tolerance classes in bold are first choice, in normal print are second choice, in parentheses are third choice.

Roscas unificadas con ángulo de 60 º / *Unified threads with 60º thread angles*

Clases de tolerancias para roscas interiores *Tolerance classes for internal* Calibres tampón / *Plug Gauges*			Clases de tolerancias para roscas exteriores *Tolerance classes for external* Calibres anillo / *Ring Gauges*		
1B	2B	3B	1A	2A	3A

Roscas BSW/BSF con ángulo de 55º / *BSW/BSF Thread with 55º thread angles*

Clases de tolerancias para roscas interiores *Tolerance classes for internal* Calibres tampón / *Plug Gauges*	Clases de tolerancias para roscas exteriores *Tolerance classes for external* Calibres anillo / *Ring Gauges*
Clase media / *Medium class*	Clase media / *Medium class*
Clase normal / *Normal class*	Clase libre / *Free class*
Clase ajustada / *Close class*	Clase ajustada / *Close class*

Roscas G/BSP con ángulo de 55º / *G/BSP Thread with 55º thread angles*

Clases de tolerancias para roscas interiores *Tolerance classes for internal* Calibres tampón / *Plug Gauges*	Clases de tolerancias para roscas exteriores *Tolerance classes for external* Calibres anillo / *Ring Gauges*
Solo clase general / *Only general class*	Clase B / *Class B* Clase A / *Class A*

Roscas trapezoidales con ángulo de 30º / *Trapezoidal threads with 30º thread angles*

Tipo de rosca / *Type of threade*	Diámetro / *Diameter*	*Clases de tolerancia / Tolerance classes*			
Rosca interior (Calibre tampón) *Internal thread (Plug Gauges)*	Diámetro menor / *Minor diameter* Diámetro de flanco / *Pitch diameter*	- -	*4* *7*	- *8*	- *9*
Rosca interior (Calibre tampón) *Internal thread (Plug Gauges)*	Diámetro mayor / *Major diameter* Diámetro menor / *Minor diameter* Diámetro de flanco / *Pitch diameter*	- - *6*	*4* *7* *7*	- *8* *8*	- *9* *9*

Rosca interior (Calibre tampón): H para diámetro de flanco, diametro mayor y diamerto menor
Rosca exterior (Calibre anillo): "c" o "e" para diámetro de flanco y siempre h para diametros mayor y menor.
Internal thread (Plug Gauges): H for pitch diameter, major diameter and minor diameter
External thread (Ring Gauges): c or e for pitch diameter and always h for major and minor diameter

Rosca Métrica J (MJ) con ángulo de 60º / *Metric J threads (MJ) with 60º threads angles*

Tipo de rosca *Type of thread*	Diámetro nominal *Nominal diameter*	Rosca antes de recubrimiento *Before coating threads*	Después de recubrimiento o sin recubrimiento, rosca final *After coating or uncoating threads, finish thread* Ø nominal ≤ 2mm. pitch Ø ≤ 2mm.	Ø nominal > 2mm. pitch Ø > 2mm.
Rosca exterior (Calibre anillo) *External thread (Ring Gauges)*	-	4g 6g	4g 6g	4h 6h
Rosca interior (Calibre tampón) *Internal thread (Plug Gauges)*	≤ 5mm. ≥ 5mm.	4G 6G 4G 5G	4G 6G 4G 5G	4H 6H 4H 5H

Roscas Unified J (UNJ) con ángulo de 60º / *Unified J threads (UNJ) with 60º thread angles*

Clases de tolerancias para roscas interiores *Tolerance classes for internal* Calibres tampón / *Plug Gauges*	Clases de tolerancias para roscas exteriores *Tolerance classes for external* Calibres anillo / *Ring Gauges*
3B	3A

Roscas ACME con ángulo de 29º / *ACME thread with 29º thread angles*

Tipo de rosca / *Type of thread*	Diámetro nóminal / *Nominal diameter*	Clase tolerancia / *Tolerance class*
Rosca exterior (Calibre anillo) *External thread (Ring Gauges)*	1/4 - 5 5 - 8	2G, 3G, 4G 2C, 3C, 4C
Rosca interior (Calibre tampón) *Internal thread (Plug Gauges)*	1/4 - 5 5 - 8	2G, 3G, 4G 2C, 3C, 4C

Roscas Stub ACME con ángulo de 29º / *Stub ACME thread gauges with 29º thread angles*

Tipo de rosca / *Type of thread*	Diámetro nóminal / *Nominal diameter*	Clase tolerancia / *Tolerance class*
Rosca exterior (Calibre anillo) *External thread (Ring Gauges)*	1/4 - 5 5 - 8	2G, 3G, 4G 2C, 3C, 4C
Rosca interior (Calibre tampón) *Internal thread (Plug Gauges)*	1/4 - 5 5 - 8	2G, 3G, 4G 2C, 3C, 4C

Roscas Buttress ACME con ángulo de *7º/45º, 0º/52º*
Buttress ACME threads with 7º/45º, 0º/52º thread angles

BS 1657	ANSI / ASME B1.9
Libre / *Free* Media / *Medium* Gruesa / *Coarse*	Clase 2 / *Class 2 (Standard Grade)* Clase 3 / *Class 3 (Precision Grade)*

Metrica Buttress / Roscas con diente de sierra, con ángulo de 3º/30º
Metric Buttress / Saw tooth threads with 3º/30º thread angles

Calibre tampón *Thread plug gauges*	Anillo de rosca, tampón comprovador y de desgaste *Thread ring, check plug, wear check plug*
7H, 8H, 9H	6e, 7e, 8e, 9e, 6c, 7c, 8c, 9c

Clase tolerancia *Tolerance class*	Calibre tampón *Thread plug gauges*		Anillo de rosca, tampón comprovador y de desgaste *Thread ring, check plug, wear check plug*	
	Tipo de acoplamiento de la rosca / *Thread engagement type*			
	Normal	Largo/*Long*	*Normal*	Largo/*Long*
Media / *Medium*	7H	8H	7e	8e
Gruesa / *Coarse*	8H	9H	8c	9c

BA (British Association) roscas con ángulo de 47.1/2º
BA (British Association) threads with 47.1/2º thread angles

Para todo tipos de roscas BA / *For all types of BA threads*	
Normal (N)	Close (C)

Roscas BS cycle con ángulo de 60º / *BS cycle threads with 60º thread angles*

	Radios y uniones *Spokes and nipples*	Tornillos y tuercas *Bolts and nuts*	Aplicaciónes rosca especiales *Special thread applications*
Para todo tipos de roscas BS cycles *For all types of BS cycle threads*	- Media / *Medium* -	Ajustada/Close (C) Media/Medium (M) Libre/Free (F)	- Media / *Medium* -

Escariadores / *Reamers*

Condiciones de corte recomendadas / *Recommended cutting conditions*

	Avance (mm/rev.) / *Feed (mm/U)*										
	Diámetro de escariador (mm) / *Reamer diameter (mm)*										
	Ø 2	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 18	Ø 22	Ø 26	Ø 30
Nr. 1	0,020	0,040	0,050	0,060	0,080	0,090	0,105	0,130	0,160	0,185	0,215
Nr. 2	0,025	0,050	0,060	0,080	0,090	0,100	0,115	0,145	0,175	0,200	0,230
Nr. 3	0,030	0,060	0,080	0,100	0,120	0,140	0,165	0,205	0,250	0,290	0,335
Nr. 4	0,040	0,080	0,100	0,125	0,160	0,180	0,210	0,265	0,320	0,375	0,430
Nr. 5	0,050	0,100	0,120	0,160	0,200	0,220	0,260	0,330	0,395	0,465	0,530
Nr. 6	0,060	0,120	0,160	0,200	0,250	0,280	0,330	0,410	0,500	0,590	0,680
Nr. 7	0,080	0,160	0,200	0,250	0,310	0,340	0,400	0,505	0,610	0,710	0,810
Nr. 8	0,100	0,200	0,250	0,320	0,400	0,440	0,520	0,650	0,790	0,920	1,050

MD = Carbide

		Vel. Corte (m/min.) *Cutting speed (m/min.)*		Avance nº *Feed nr*		Excedentes mínimos para escariar (mm) *Minimum excess of material for reaming (mm)*					Refrigerante *Coolant*	
		HSSE	MD / *C*	HSSE	MD / *C*	< Ø 6	< Ø 10	< Ø 16	< Ø 25	> Ø 25	HSSE	MD / *C*
GR1	1	10 - 12	14 - 18	5	7	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	6	6
	2	10 - 12	14 - 18	5	7	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 6	1-2 / 6
	3	10 - 12	14 - 18	5	6	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	6	6
	4	6 - 8	10 - 14	4	5	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 6	1-2 / 6
	5	6 - 8	10 - 14	4	5	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 6	1-2 / 6
	6	6 - 8	10 - 14	4	5	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2	1-2
GR2	1	6 - 8	10 - 14	4	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	1-2	1-2
	2	3 - 4	6 - 10	4	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	1-2	1-2
	3	3 - 4	6 - 10	4	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	1-2	1-2
	4	10 - 12	14 - 18	4	6	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 6	1-2 / 6
	5	10 - 12	14 - 18	5	7	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 6	1-2 / 6
	6	10 - 12	14 - 18	5	7	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 6	1-2 / 6
	7	6 - 8	10 - 14	3	4	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	1-2 / 6	1-2 / 6
	8	6 - 8	10 - 14	4	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	1-2	1-2
GR3	1	2 - 5	6 - 10	3	3	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	1-2 / 3-4	1-2 / 3-4
	2	2 - 5	6 - 10	3	3	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 3-4	1-2 / 3-4
	3	2 - 5	6 - 10	3	3	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	1-2 / 3-4	1-2 / 3-4
	4	2 - 5	6 - 10	3	3	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	1-2 / 3-4	1-2 / 3-4
GR4	1	12 - 16	25 - 30	5	7	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	7	7
	2	10 - 14	25 - 25	4	6	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	6	6
	3	8 - 10	15 - 20	4	6	0,1 - 0,2	0,2	0,3	0,4	0,5	6	6
	4		6 - 10		4	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4		2 / 6
GR5	1	12 - 20	20 - 30	6	7	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	0,5	5 / 6	6
	2	14 - 20	30 - 35	6	8	0,1 - 0,2	0,2	0,2 - 0,3	0,3	0,3 - 0,4	5 / 6	6
	3	8 - 14	25 - 30	6	8	0,1 - 0,2	0,2	0,2 - 0,3	0,3	0,3 - 0,4	6	6
	4	10 - 18	20 - 25	6	7	0,1 - 0,2	0,2	0,2 - 0,3	0,3	0,3 - 0,4	5	6
	5	10 - 16	25 - 30	6	8	0,1 - 0,2	0,2	0,2 - 0,3	0,3	0,3 - 0,4	5	6
	6	10 - 16	20 - 25	6	7	0,1 - 0,2	0,2	0,2 - 0,3	0,3	0,3 - 0,4	5	6
GR6	1	16 - 22	30 - 35	7	8	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	0,5	6	6
	2	16 - 22	30 - 35	7	8	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	0,5	6	6
	3	10 - 20	20 - 30	6	8	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	0,5	6	6
	4	8 - 10	20 - 25	6	8	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	5 / 6	5 / 6
GR7	1	12 - 16	20 - 25	6	7	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	7	7
	2	12 - 16	20 - 25	6	7	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	7	7
GR8	1	2 - 6	6 - 10	5	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	3-4 / 6	3-4 / 6
	2	1 - 3	4 - 6	3	3	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	3-4	3-4
	3	1 - 3	4 - 6	3	3	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	3-4	3-4
GR9	1	2 - 6	6 - 10	4	5	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	3-4	3-4
	2	2 - 6	6 - 10	4	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	3-4	3-4
	3	2 - 6	6 - 10	4	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	3-4	3-4
	4	2 - 6	6 - 10	4	5	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	3-4	3-4
GR10	1	10 - 14	25 - 30	6	8	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	5 / 6	5 / 6
	2	10 - 14	25 - 30	6	8	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	5 / 6	5 / 6
GR11	1	8 - 10	15 - 20	7	8	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	7	7
	2	8 - 10	15 - 20	7	8	0,1 - 0,2	0,1 - 0,2	0,2 - 0,3	0,3 - 0,4	0,4 - 0,5	7	7
	3	6 - 8	10 - 14	7	8	0,1 - 0,2	0,2	0,2	0,3	0,3 - 0,4	7	7

• Los valores de corte indicados son solo orientativos. En condiciones favorables es posible un aumento de las mismas mientras que en condiciones desfavorables se recomienda una reducción.

• Los escariadores recubiertos (TiN, TiCN, TiAlN) permiten incrementar los valores de corte, para mas datos no duden en consultarnos.

• *The indicated cutting values are only approximate. Working with favorable conditions these values can be increased whereas working with unfavorable conditions we recommend to bring them down.*

• *Reamers coated (TiN, TiCN, TiAlN) allow increasing the cutting values. If you need more information don't hesitate to consult us.*

Escariadores de máquina / *Machine reamers*

Norma DIN / *DIN Standard*	212	99 MRA-G NC	8050	212	212 NC	212	212	212	212
Forma / *Form*	A C	A	A	BD - L8º	D - L8º	BD - L8º	BD - L8º	BD - L8º	BD - L8º
Características / *Characteristics*	1/10 mm	NC		NC	NC	1/10 mm	1/10 mm	XL	1/100 mm
Entrada / *Lead*	Ø3 25º >Ø3 20º+45º	45º+5º	45º	Ø3 25º >Ø3 20º+45º	Ø3 25º >Ø3 20º+45º	Ø3 25º >Ø3 20º+45º	Ø3 25º >Ø3 20º+45º	Ø3 25º >Ø3 20º+45º	Ø3 25º >Ø3 20º+45º
Tolerancia / *Tolerance*	H7	1/10 mm	H7	H7	H7	H7	H7	H7	Ø 6 $^{+0}_{+0,004}$ Ø>6 $^{+0}_{+0,005}$
Mango / *Shank*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*
Recubrimiento / *Coating*		Ø 6 $^{+0}_{+0,004}$ Ø>6 $^{+0}_{+0,005}$					TiCN		
Material / *Material*	HSSE Ø8 PMV3 >Ø8 Co5	MD integral *Solid carbide*	Placa MD *Carbide tip*	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5
Gama / *Range*	Ø1...16	Ø2,91...12,10	Ø14...20	Ø1/16...3/4	Ø3...20	Ø1...20	Ø1...16	Ø2...12	Ø0,95...16,02
Página / *Page*	448	449	449	450	450	4451 - 452	453 - 454	455	455

Escariadores de máquina / *Machine reamers*

Norma DIN / *DIN Standard*	212	SIM. 8093	212 NC	SIM. 8093 NC	MRB-D	FRONTAL	212		
Forma / *Form*	BD - L8º	B - L8º	BD - L8º	BD - L8º	B	A	E - L45º		
Características / *Characteristics*	XL	CH	1/10 mm	1/100 mm	HRC	CORTE FRONTAL *END FACE*			
Entrada / *Lead*	Ø3 25º >Ø3 20º+45º	45º	Ø3 25º >Ø3 20º+45º	Ø3 25º >Ø3 20º+45º	Ø 3 1/6 L2 Ø>3 1/6 L2+45º		Ø 3 1/6 L2 Ø>3 1/6 L2+45º		
Tolerancia / *Tolerance*	H7	H7	Ø 6 $^{+0}_{+0,004}$ Ø>6 $^{+0}_{+0,005}$	Ø 6 $^{+0}_{+0,004}$ Ø>6 $^{+0}_{+0,005}$	H7	H7	H7		
Mango / *Shank*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*		
Recubrimiento / *Coating*					TiCN				
Material / *Material*	MD integral *Solid carbide*	Cabeza MD *Carbide head*	MD integral *Solid carbide*	MD integral *Solid carbide*	MD integral *Solid carbide*	HSSE Co5	HSSE Co5		
Gama / *Range*	Ø2...12	Ø2...16	Ø2...12	Ø1,97...12,03	Ø2...12	Ø2,5...12	Ø1,5...20		
Página / *Page*	456	456	457	458	459	459	460		

Escariadores de máquina Porta-escariadores
Machine reamers Shell reamer holder

Norma DIN / *DIN Standard*	208	8051	8051	208	208	208	8094	208	FRONTAL
Forma / *Form*	A	A	A	B - L8°	B - L8°	B - L8°	B - L8°	C - L45°	A
Características / *Characteristics*			EXPANDIBLE		XL	XXL	CH		CORTE FRONTAL *END FACE*
Entrada / *Lead*	20° + 45°	45°	45°	20° + 45°	20° + 45°	20° + 45°	45°	1/6 L2+45°	
Tolerancia / *Tolerance*	H7	H7	H7	H7	H7	H7	H7	H7	H7
Mango / *Shank*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*
Recubrimiento / *Coating*									
Material / *Material*	HSSE Co5	Placa MD *Carbide tip*	Placa MD *Carbide tip*	HSSE Co5	HSSE Co5	HSSE Co5	Cabeza MD *Carbide head*	HSSE Co5	HSSE Co5
Gama / *Range*	Ø3...30	Ø10...40	Ø8...40	Ø3...50	Ø12,5...50	Ø12...40	Ø10...16	Ø5...30	Ø8...32
Página / *Page*	461	461	462	463	464	464	465	465	466

Escariadores de máquina Porta-escariadores
Machine reamers Shell reamer holder

Norma DIN / *DIN Standard*	219	217	2179	2180	1895	1895	1895	CÓNICO 5%	CÓNICO 5%
Forma / *Form*	B - L8°	C. 1:30	L 45°	L 45°	E	C - L8°	D - L45°	L 45°	L 45°
Características / *Characteristics*	Hueco *Shell*	Con accesorios *With spare parts*	C. 1:50 2%	C. 1:50 2%	Cono morse *Morse taper*	Cono morse *Morse taper*	Cono morse *Morse taper*	C. 1:20 5%	C. 1:20 5%
Entrada / *Lead*	45°								
Tolerancia / *Tolerance*	H7								
Mango / *Shank*	AGUJERO *HOLE* C. 1:30	Cono Morse *Morse taper*	Cilíndrico *Straight*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cono Morse *Morse taper*	Cilíndrico *Straight*	Cono Morse *Morse taper*
Recubrimiento / *Coating*									
Material / *Material*	HSSE Co5		HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5
Gama / *Range*	Ø32...80	Ø16...40	Ø1,5...12	Ø5...50	CM *MT* 0...6	CM *MT* 0...6	CM *MT* 0...6	Ø3...7	Ø8...10
Página / *Page*	467	467	468	468	469	469	470	471	471

Escariadores de máquina para agujeros cónicos *Machine reamers for taper holes*

Escariadores de mano *Hand reamers*

Norma DIN / *DIN Standard*	CÓNICO 8%	CÓNICO 8%	CÓNICO 10%	CÓNICO 10%	99-HRA	206	206	859	JMC
Forma / *Form*	L 45°	L 45°	L 45°	L 45°	A	B - L8°	B - L8°	B - L8°	A
Características / *Characteristics*	C. 2:25 8%	C. 2:25 8%	C. 1:10 10%	C. 1:10 10%	JIS	1/10 mm	Pulgadas *Inches*	Ajustable *Adjustable*	Extensible *Expansion*
Entrada / *Lead*						1/4 L2+45°	1/4 L2+45°	1/4 L2+45°	1/4 L2+45°
Tolerancia / *Tolerance*					D1 - D2	H7	H7		
Mango / *Shank*	Cilíndrico *Straight*	Cono Morse *Morse taper*	Cilíndrico *Straight*	Cono Morse *Morse taper*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*
Recubrimiento / *Coating*									
Material / *Material*	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5	HSS	HSS	HSS	HSS	HSS
Gama / *Range*	Ø3...6	Ø7...9	Ø2...6	Ø7...9	Ø3...20	Ø1...50	Ø1/16...1"	Ø5...50	Ø6,4...80
Página / *Page*	472	472	473	473	474 - 475	476 - 477	478	479	480

Escariadores de mano para agujeros cónicos *Hand reamers for taper holes*

Norma DIN / *DIN Standard*	JMC	JMC	JMC	9	9	204	CÓNICO 6,25%		
Forma / *Form*	A	A	A	A	B - L8°	D - L8°	B - L15°		
Características / *Characteristics*	Tuercas *Nuts*	Extensible HNG	Extensible + guia *Expansion + guia*	C. 1:50 2%	C. 1:50 2%	Cono Morse *Socket reamer*	C. 1:16 (NPT)		
Entrada / *Lead*	1/4 L2+45°	1/4 L2+45°	1/4 L2+45°						
Tolerancia / *Tolerance*									
Mango / *Shank*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*		
Recubrimiento / *Coating*									
Material / *Material*	HSS	HSS	HSS	HSS	HSS	HSS	HSS		
Gama / *Range*	Ø6,4...80	Ø6,4...80	Ø8...80	Ø1,2...50	Ø1,2...50	CM *MT* 0...6	Ø1/16...1"		
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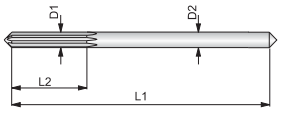
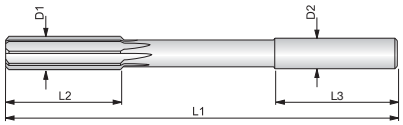
Escariador de máquina. Mango cilíndrico.
Machine chucking reamer. Straight shank.

212	DIN 212	FORM A-C		1/10 mm	H7	HSSE Co5		
A - C								



DIN 212 A
Ø 3,75



DIN 212 C
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
1	•	34	7	-	1	0000574708
1,2		34	7	-	1,2	0000104185
1,4		40	8	-	1,4	0000104235
1,5		40	8	-	1,5	0000104456
1,6		43	9	-	1,6	0000104516
1,7		43	9	-	1,7	0000104667
1,8		46	10	-	1,8	0000104727
1,9		46	10	-	1,9	0000104887
2	•	49	11	-	2	0000105880
2,1		49	11	-	2,1	0000105940
2,2		53	12	-	2,2	0000106189
2,3		53	12	-	2,3	0000106451
2,4		57	14	-	2,4	0000106732
2,5	•	57	14	-	2,5	0000106882
2,6		57	14	-	2,6	0000106942
2,7		61	15	-	2,7	0000107021
2,8		61	15	-	2,8	0000107302
2,9		61	15	-	2,9	0000107513
3	•	61	15	-	3	0000107884
3,1		65	16	-	3,1	0000108184
3,2		65	16	-	3,2	0000108465
3,3		65	16	-	3,3	0000108736
3,4		70	18	-	3,4	0000108897
3,5	•	70	18	-	3,5	0000108947
3,6		70	18	-	3,6	0000109247
3,7		70	18	-	3,7	0000109528
3,8		75	19	32	4	0000109899
3,9		75	19	32	4	0000110034
4	•	75	19	32	4	0000110305
4,1		75	19	32	4	0000110465
4,2		75	19	32	4	0000110525
4,3		80	21	33	4,5	0000110676
4,4		80	21	33	4,5	0000110736
4,5	•	80	21	33	4,5	0000110897
4,6		80	21	33	4,5	0000110957
4,7		80	21	33	4,5	0000111036
4,8		86	23	34	5	0000111196
4,9		86	23	34	5	0000111247
5	•	86	23	34	5	0000111307
5,1		86	23	34	5	0000111467
5,2		86	23	34	5	0000111528
5,3		86	23	34	5	0000111678
5,4		93	26	36	5,6	0000111738
5,5	•	93	26	36	5,6	0000111899
5,6		93	26	36	5,6	0000111959
5,7		93	26	36	5,6	0000112038
5,8		93	26	36	5,6	0000112198
5,9		93	26	36	5,6	0000112309

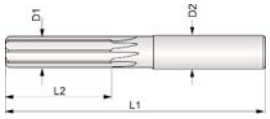
D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
6	•	93	26	36	5,6	0000112460
6,1		101	28	38	6,3	0000112520
6,2		101	28	38	6,3	0000112680
6,3		101	28	38	6,3	0000112731
6,4		101	28	38	6,3	0000112891
6,5	•	101	28	38	6,3	0000112952
6,6		101	28	38	6,3	0000113030
6,7		101	28	38	6,3	0000113191
6,8		109	31	40	7,1	0000113251
6,9		109	31	40	7,1	0000113312
7	•	109	31	40	7,1	0000113462
7,1		109	31	40	7,1	0000113522
7,2		109	31	40	7,1	0000113683
7,3		109	31	40	7,1	0000113743
7,4		109	31	40	7,1	0000113893
7,5	•	109	31	40	7,1	0000113954
7,6		117	33	42	8	0000124482
7,7		117	33	42	8	0000124814
7,8		117	33	42	8	0000125114
7,9		117	33	42	8	0000125485
8	•	117	33	42	8	0000125816
8,1		117	33	42	8	0000126116
8,2		117	33	42	8	0000126337
8,3		117	33	42	8	0000126768
8,4		117	33	42	8	0000131986
8,5	•	117	33	42	8	0000132065
8,6		125	36	44	9	0000132125
8,7		125	36	44	9	0000132285
8,8		125	36	44	9	0000132336
8,9		125	36	44	9	0000132496
9	•	125	36	44	9	0000132556
9,1		125	36	44	9	0000132617
9,2		125	36	44	9	0000132828
9,3		125	36	44	9	0000133127
9,4		125	36	44	9	0000133498
9,5	•	125	36	44	9	0000133770
9,6		133	38	46	10	0000134069
9,7		133	38	46	10	0000134340
9,8		133	38	46	10	0000134611
9,9		133	38	46	10	0000134772
10	•	133	38	46	10	0000134832
11	•	142	41	46	10	0000134983
12	•	151	44	46	10	0000135071
13	•	151	44	46	10	0000135122
14	•	160	47	50	12,5	0000135282
15	•	162	50	50	12,5	0000135343
16	•	170	52	50	12,5	0000135403

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Lengüeta de arrastre según DIN 1809, bajo demanda

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Tangs according to DIN 1809 on request*

Escariador de máquina. Centesimal en incrementos de 0,01 mm, mango cilíndrico.
Machine chucking reamer. In 0,01 mm increments, straight shank.

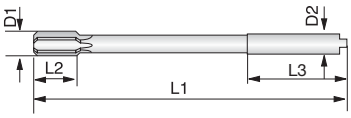
99	JIS	FORM A		1/100 mm	Ø 6 $^{+0}_{+0,004}$ Ø>6 $^{+0}_{+0,005}$	MD integral *Solid Carbide* K10	30°	
MRA-G								
NC								



D1 Ø mm - Ø mm	L1 mm	L2 mm	D2 mm h6	Z
2,91 - 3,00	60	27	3	4
3,01 - 3,50	60	27	3,5	4
3,51 - 4,00	60	27	4	4
4,01 - 4,50	70	30	4,5	6
4,51 - 5,00	70	30	5	6
5,01 - 5,50	80	30	5,5	6
5,51 - 6,00	80	30	6	6
6,01 - 7,00	80	35	7	6
7,01 - 8,00	80	35	8	6
8,01 - 9,00	90	40	9	6
9,01 - 10,00	90	40	10	6
10,01 - 11,00	90	40	11	6
11,01 - 12,10	90	45	12	6

Escariador de máquina. Con placas de Metal Duro, mango cilíndrico.
Machine chucking reamer. With carbide tips, straight shank.

8050	DIN 8050	FORM A		H7	MD integral *Solid Carbide* K10	45°	
A							



D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
14	•	160	19	50	12,5	0002134054
15	•	162	19	50	12,5	0002134115
16	•	170	22	50	12,5	0002134265
17	•	175	22	52	14	0002134326
18	•	182	22	52	14	0002134486
19	•	189	22	58	16	0002134546
20	•	195	22	58	16	0002134697

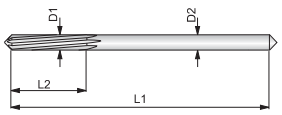
- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Lengüeta de arrastre según DIN 1809

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Tangs according to DIN 1809*

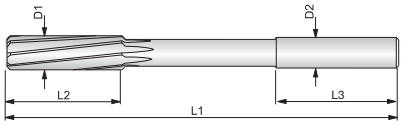
Escariador de máquina. (Medidas en pulgadas), mango cilíndrico.
Machine chucking reamer. (Diameter in inches), straight shank.

JMC

212	DIN 212	FORM B - D	L8⁰	H7	HSSE Co5		
B - D							



DIN 212 B
Ø 3/32



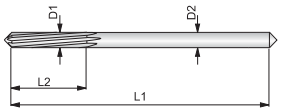
DIN 212 D
Ø 1/8

D1 nominal		D1 mm	L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
1/16	•	1,59	43	9	-	1,58	0000584445
3/32	•	2,38	57	14	-	2,38	0000587442
1/8	•	3,18	65	16	-	3,17	0000591456
5/32	•	3,97	75	19	33	4,00	0001282265
3/16	•	4,76	86	23	34	5,00	0000606018
7/32	•	5,56	93	26	36	5,60	0001684454
1/4	•	6,35	101	28	38	6,30	0000608876
9/32	•	7,14	109	31	40	7,10	0001684393
5/16	•	7,94	117	33	42	8,00	0000610665
3/8	•	9,53	133	38	46	10,00	0000612398
7/16	•	11,11	142	41	46	10,00	0001282325
1/2	•	12,7	151	44	46	10,00	0000621736
9/16	•	14,29	162	50	50	12,50	0001684514
5/8	•	15,88	170	52	50	12,50	0000640760
11/16	•	17,46	182	56	52	14,00	0001684664
3/4	•	19,05	195	60	58	16,00	0000647284

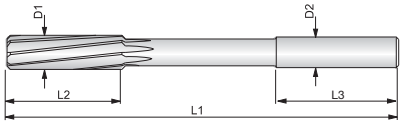
- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

212	DIN 212	FORM D	L8⁰	H7	HSSE Co5		
D							
NC							



DIN 212 B
Ø 3/32



DIN 212 D
Ø 1/8

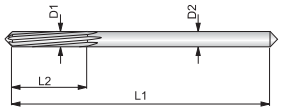
D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h6	Cod.
3	•	61	15	31	3	0002298280
4	•	75	19	32	4	0002298340
5	•	86	23	34	5	0002298490
6	•	93	26	36	6	0002298551
8	•	117	33	42	8	0002298611
10	•	133	38	46	10	0002298771
12	•	151	44	46	10	0002298822
14	•	160	47	50	14	0002298982
15	•	162	50	50	14	0003008638
16	•	170	52	50	14	0002299061
18	•	182	56	52	14	0002299121
20	•	195	60	58	16	0002299282

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

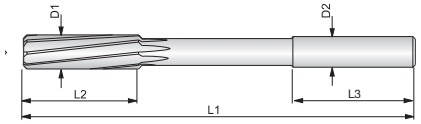
- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

Escariador de máquina. Mango cilíndrico.
Machine chucking reamer. Straight shank.

212	DIN 212	FORM B - D	L8°	1/10 mm	H7	HSSE Co5
B - D						



DIN 212 B
Ø 3,75



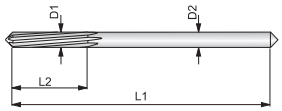
DIN 212 D
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
1	•	34	7	-	1	0000137628
1,1	•	34	7	-	1,1	0000584174
1,2	•	34	7	-	1,2	0000138078
1,3	•	34	7	-	1,3	0000983075
1,4	•	40	8	-	1,4	0000138139
1,5	•	40	8	-	1,5	0000138299
1,6	•	43	9	-	1,6	0000138349
1,7	•	43	9	-	1,7	0000138400
1,8	•	46	10	-	1,8	0000138560
1,9	•	46	10	-	1,9	0000138621
2	•	49	11	-	2	0000138771
2,1	•	49	11	-	2,1	0000138831
2,2	•	53	12	-	2,2	0000138992
2,3	•	53	12	-	2,3	0000139071
2,4	•	57	14	-	2,4	0000139131
2,5	•	57	14	-	2,5	0000139291
2,6	•	57	14	-	2,6	0000139352
2,7	•	61	15	-	2,7	0000139402
2,8	•	61	15	-	2,8	0000139562
2,9	•	61	15	-	2,9	0000139623
3	•	61	15	-	3	0000139783
3,1	•	65	16	-	3,1	0000139834
3,2	•	65	16	-	3,2	0000139994
3,3	•	65	16	-	3,3	0000140078
3,4	•	70	18	-	3,4	0000140139
3,5	•	70	18	-	3,5	0000145200
3,6	•	70	18	-	3,6	0000145351
3,7	•	70	18	-	3,7	0000145411
3,8	•	75	19	32	4	0000145572
3,9	•	75	19	32	4	0000145632
4	•	75	19	32	4	0000145782
4,1	•	75	19	32	4	0000145843
4,2	•	75	19	32	4	0000145903
4,3	•	80	21	33	4,5	0000146082
4,4	•	80	21	33	4,5	0000149200
4,5	•	80	21	33	4,5	0000149360
4,6	•	80	21	33	4,5	0000149420
4,7	•	80	21	33	4,5	0000149581
4,8	•	86	23	34	5	0000149631
4,9	•	86	23	34	5	0000149791
5	•	86	23	34	5	0000149852
5,1	•	86	23	34	5	0000149912
5,2	•	86	23	34	5	0000150096
5,3	•	86	23	34	5	0000150157
5,4	•	93	26	36	5,6	0000150207
5,5	•	93	26	36	5,6	0000150368
5,6	•	93	26	36	5,6	0000150428
5,7	•	93	26	36	5,6	0000150588

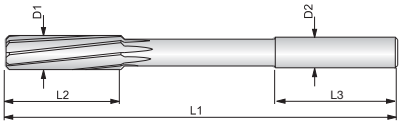
D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
5,8	•	93	26	36	5,6	0000150639
5,9	•	93	26	36	5,6	0000150799
6	•	93	26	36	5,6	0000150850
6,1	•	101	28	38	6,3	0000150910
6,2	•	101	28	38	6,3	0000151099
6,3	•	101	28	38	6,3	0000151159
6,4	•	101	28	38	6,3	0000151210
6,5	•	101	28	38	6,3	0000151360
6,6	•	101	28	38	6,3	0000151420
6,7	•	101	28	38	6,3	0000151581
6,8	•	109	31	40	7,1	0000151641
6,9	•	109	31	40	7,1	0000151791
7	•	109	31	40	7,1	0000151852
7,1	•	109	31	40	7,1	0000151912
7,2	•	109	31	40	7,1	0000152212
7,3	•	109	31	40	7,1	0000152423
7,4	•	109	31	40	7,1	0000152583
7,5	•	109	31	40	7,1	0000152704
7,6	•	117	33	42	8	0000153093
7,7	•	117	33	42	8	0000153214
7,8	•	117	33	42	8	0000153585
7,9	•	117	33	42	8	0000153856
8	•	117	33	42	8	0000153917
8,1	•	117	33	42	8	0000154006
8,2	•	117	33	42	8	0000154156
8,3	•	117	33	42	8	0000154216
8,4	•	117	33	42	8	0000154377
8,5	•	117	33	42	8	0000154437
8,6	•	125	36	44	9	0000154587
8,7	•	125	36	44	9	0000154648
8,8	•	125	36	44	9	0000154708
8,9	•	125	36	44	9	0000154869
9	•	125	36	44	9	0000154919
9,1	•	125	36	44	9	0000155008
9,2	•	125	36	44	9	0000155158
9,3	•	125	36	44	9	0000155219
9,4	•	125	36	44	9	0000155379
9,5	•	125	36	44	9	0000155439
9,6	•	133	38	46	10	0000155580
9,7	•	133	38	46	10	0000155640
9,8	•	133	38	46	10	0000155701
9,9	•	133	38	46	0	0000155861
10	•	133	38	46	10	0000155921
10,1	•	133	38	46	10	0000613170
10,2	•	133	38	46	10	0000613230
10,3	•	133	38	46	10	0000613451
10,4	•	133	38	46	10	0000613511
10,5	•	133	38	46	10	0000613662

Escariador de máquina. Mango cilíndrico.
Machine chucking reamer. Straight shank.

212	DIN 212	FORM B - D	L8⁰	1/10 mm	H7	HSSE Co5		
B - D								



DIN 212 B
≤ Ø 3,75



DIN 212 D
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mnm	D2 mm h9	Cod.
10,6	•	133	38	46	10	0000613722
10,7	•	142	41	46	10	0000613883
10,8	•	142	41	46	10	0000614022
10,9	•	142	41	46	10	0000614182
11	•	142	41	46	10	0000156000
11,1	•	142	41	46	10	0000614885
11,2	•	142	41	46	10	0000614945
11,3	•	142	41	46	10	0000615184
11,4	•	142	41	46	10	0000615245
11,5	•	142	41	46	10	0000615395
11,6	•	142	41	46	10	0000615456
11,7	•	142	41	46	10	0000615516
11,8	•	142	41	46	10	0000616026
11,9	•	151	44	46	10	0000616187
12	•	151	44	46	10	0000156161
12,1	•	151	44	46	10	0000617511
12,2	•	151	44	46	10	0000618513
12,3	•	151	44	46	10	0000619184
12,4	•	151	44	46	10	0000619675
12,5	•	151	44	46	10	0000620242
12,6	•	151	44	46	10	0000621194
12,7	•	151	44	46	10	0000621736
12,8	•	151	44	46	10	0000622688
12,9	•	151	44	46	10	0000623469
13	•	151	44	46	10	0000156211
13,1	•	151	44	46	10	0000625524
13,2	•	160	47	46	12,5	0000626045
13,3	•	160	47	50	12,5	0000626316
13,4	•	160	47	50	12,5	0000626747
13,5	•	160	47	50	12,5	0000627258
13,6	•	160	47	50	12,5	0000627740
13,7	•	160	47	50	12,5	0000627960
13,8	•	160	47	50	12,5	0000628310

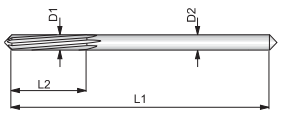
D1 mm		L1 mm	L2 mm	L3 mnm	D2 mm h9	Cod.
13,9	•	160	47	50	12,5	0000628531
14	•	160	47	50	12,5	0000156371
14,1	•	162	50	50	12,5	0000631041
14,2	•	162	50	50	12,5	0000632054
14,3	•	162	50	50	12,5	0000632485
14,4	•	162	50	50	12,5	0000632817
14,5	•	162	50	50	12,5	0000633548
14,6	•	162	50	50	12,5	0000634119
14,7	•	162	50	50	12,5	0000634540
14,8	•	162	50	50	12,5	0000634972
14,9	•	162	50	50	12,5	0000635271
15	•	162	50	50	12,5	0000156432
15,1	•	170	52	50	12,5	0000637978
15,2	•	170	52	50	12,5	0000638499
15,3	•	170	52	50	12,5	0000638760
15,4	•	170	52	50	12,5	0000638971
15,5	•	170	52	50	12,5	0000639120
15,6	•	170	52	50	12,5	0000640067
15,7	•	170	52	50	12,5	0000640278
15,8	•	170	52	50	12,5	0000640499
15,9	•	170	52	50	12,5	0000641060
16	•	170	52	50	12,5	0000156592
16,5	•	175	54	52	14	0000642985
17	•	175	54	52	14	0000156642
17,5	•	182	56	52	14	0000643988
18	•	182	56	52	14	0000156703
18,5	•	189	58	58	16	0000646342
19	•	189	58	58	16	0000156863
19,5	•	195	60	58	16	0000975061
20	•	195	60	58	16	0000156924

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Lengüeta de arrastre según DIN 1809, bajo demanda
- Mango (D2) tol. h6 para fijación hidráulica o térmica de gran precisión, bajo demanda
- Estuches de escariadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

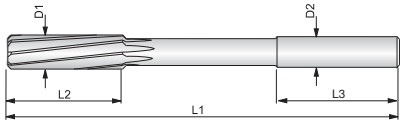
- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Tangs according to DIN 1809 on request*
- *Shank (D2) in tolerance h6 for high precision hydraulic and heat shriking chucks, upon request*
- *Cases of reamers in sets of difererent sizes, see cutting tool sets programme*

Escariador de máquina. Mango cilíndrico.
Machine chucking reamer. Straight shank.

212	DIN 212	FORM B - D	L8⁰	1/10 mm	H7	HSSE Co5
B - D						
TiCN						



DIN 212 B
Ø 3,75



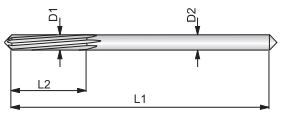
DIN 212 D
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
1	•	34	7	-	1	0001605159
1,1	•	34	7	-	1,1	0002087237
1,2	•	34	7	-	1,2	0001605430
1,3	•	40	8	-	1,3	0002087508
1,4	•	40	8	-	1,4	0001605701
1,5	•	40	8	-	1,5	0001500995
1,6	•	43	9	-	1,6	0001606161
1,7	•	43	9	-	1,7	0001606703
1,8	•	46	10	-	1,8	0001607163
1,9	•	46	10	-	1,9	0001607435
2	•	49	11	-	2	0001500774
2,1	•	49	11	-	2,1	0001607866
2,2	•	53	12	-	2,2	0001608166
2,3	•	53	12	-	2,3	0001608437
2,4	•	57	14	-	2,4	0001608718
2,5	•	57	14	-	2,5	0001501134
2,6	•	57	14	-	2,6	0001609168
2,7	•	61	15	-	2,7	0001609439
2,8	•	61	15	-	2,8	0001609710
2,9	•	61	15	-	2,9	0001610005
3	•	61	15	-	3	0001500342
3,1	•	65	16	-	3,1	0001610386
3,2	•	65	16	-	3,2	0001610658
3,3	•	65	16	-	3,3	0001610929
3,4	•	70	18	-	3,4	0001611228
3,5	•	70	18	-	3,5	0001611590
3,6	•	70	18	-	3,6	0001611871
3,7	•	70	18	-	3,7	0001612160
3,8	•	75	19	32	4	0001612441
3,9	•	75	19	32	4	0001612713
4	•	75	19	32	4	0001500563
4,1	•	75	19	32	4	0001613012
4,2	•	75	19	32	4	0001613223
4,3	•	80	21	33	4,5	0001613444
4,4	•	80	21	33	4,5	0001613654
4,5	•	80	21	33	4,5	0001613936
4,6	•	80	21	33	4,5	0001614175
4,7	•	80	21	33	4,5	0001614386
4,8	•	86	23	34	5	0001614506
4,9	•	86	23	34	5	0001614717
5	•	86	23	34	5	0001500403
5,1	•	86	23	34	5	0001615017
5,2	•	86	23	34	5	0001615237
5,3	•	86	23	34	5	0001615448
5,4	•	93	26	36	5,6	0001615669
5,5	•	93	26	36	5,6	0001615870
5,6	•	93	26	36	5,6	0001616019
5,7	•	93	26	36	5,6	0001616230

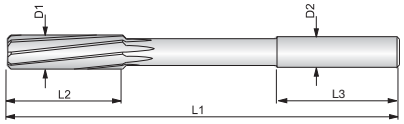
D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
5,8	•	93	26	36	5,6	0001616441
5,9	•	93	26	36	5,6	0001616661
6	•	93	26	36	5,6	0001352396
6,1	•	101	28	38	6,3	0001616932
6,2	•	101	28	38	6,3	0001617392
6,3	•	101	28	38	6,3	0001617172
6,4	•	101	28	38	6,3	0001617503
6,5	•	101	28	38	6,3	0001617724
6,6	•	101	28	38	6,3	0001617935
6,7	•	101	28	38	6,3	0001618174
6,8	•	109	31	40	7,1	0001618887
6,9	•	109	31	40	7,1	0001619026
7	•	109	31	40	7,1	0001619237
7,1	•	109	31	40	7,1	0001619457
7,2	•	109	31	40	7,1	0001619668
7,3	•	109	31	40	7,1	0001619889
7,4	•	109	31	40	7,1	0001620024
7,5	•	109	31	40	7,1	0001620234
7,6	•	117	33	42	8	0001620455
7,7	•	117	33	42	8	0001620666
7,8	•	117	33	42	8	0001620887
7,9	•	117	33	42	8	0001621026
8	•	117	33	42	8	0001264022
8,1	•	117	33	42	8	0001621397
8,2	•	117	33	42	8	0001621518
8,3	•	117	33	42	8	0001621728
8,4	•	117	33	42	8	0001621949
8,5	•	117	33	42	8	0001622188
8,6	•	125	36	44	9	0001622309
8,7	•	125	36	44	9	0001622510
8,8	•	125	36	44	9	0001622731
8,9	•	125	36	44	9	0001622942
9	•	125	36	44	9	0001623181
9,1	•	125	36	44	9	0001623302
9,2	•	125	36	44	9	0001623512
9,3	•	125	36	44	9	0001623733
9,4	•	125	36	44	9	0001623944
9,5	•	125	36	44	9	0001624183
9,6	•	133	38	46	10	0001624304
9,7	•	133	38	46	10	0001624515
9,8	•	133	38	46	10	0001624735
9,9	•	133	38	46	10	0001624946
10	•	133	38	46	10	0001352457
10,1	•	133	38	46	10	0002107388
10,2	•	133	38	46	10	0002107448
10,3	•	133	38	46	10	0002106928
10,4	•	133	38	46	10	0002107017
10,5	•	133	38	46	10	0002107167

Escariador de máquina. Mango cilíndrico.
Machine chucking reamer. Straight shank.

212	DIN 212	FORM B - D	L8°	1/10 mm	H7	HSSE Co5		
B - D								
TiCN								



DIN 212 B
Ø 3,75



DIN 212 D
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
10,6	•	133	38	46	10	0002107227
10,7	•	142	41	46	10	0002107508
10,8	•	142	41	46	10	0002107659
10,9	•	142	41	46	10	0002107719
11	•	142	41	46	10	0001625306
11,1	•	142	41	46	10	0002107870
11,2	•	142	41	46	10	0002107930
11,3	•	142	41	46	10	0002108019
11,4	•	142	41	46	10	0002108179
11,5	•	142	41	46	10	0002108220
11,6	•	142	41	46	10	0002126683
11,7	•	142	41	46	10	0002108440
11,8	•	142	41	46	10	0002108501
11,9	•	151	44	46	10	0002108651
12	•	151	44	46	10	0001352517
12,1	•	151	44	46	10	0002108712
12,2	•	151	44	46	10	0002108872
12,3	•	151	44	46	10	0002108932
12,4	•	151	44	46	10	0002109011
12,5	•	151	44	46	10	0002109172
12,6	•	151	44	46	10	0002109232
12,7	•	151	44	46	10	0002109382
12,8	•	151	44	46	10	0002109443
12,9	•	151	44	46	10	0002109503
13	•	151	44	46	10	0001626248
13,1	•	151	44	46	10	0002109663
13,2	•	160	47	46	12,5	0002109714
13,3	•	160	47	50	12,5	0002109874
13,4	•	160	47	50	12,5	0002109935
13,5	•	160	47	50	12,5	0002110019

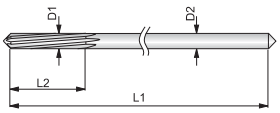
D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
13,6	•	160	47	50	12,5	0002110179
13,7	•	160	47	50	12,5	0002110230
13,8	•	160	47	50	12,5	0002110380
13,9	•	160	47	50	12,5	0002110440
14	•	160	47	50	12,5	0001626529
14,1	•	162	50	50	12,5	0002110501
14,2	•	162	50	50	12,5	0002110661
14,3	•	162	50	50	12,5	0002110712
14,4	•	162	50	50	12,5	0002110872
14,5	•	162	50	50	12,5	0002110932
14,6	•	162	50	50	12,5	0002111011
14,7	•	162	50	50	12,5	0002111172
14,8	•	162	50	50	12,5	0002111232
14,9	•	162	50	50	12,5	0002111382
15	•	162	50	50	12,5	0001626890
15,1	•	170	52	50	12,5	0002111443
15,2	•	170	52	50	12,5	0002111503
15,3	•	170	52	50	12,5	0002111663
15,4	•	170	52	50	12,5	0002111724
15,5	•	170	52	50	12,5	0002111874
15,6	•	170	52	50	12,5	0002111935
15,7	•	170	52	50	12,5	0002112013
15,8	•	170	52	50	12,5	0002112174
15,9	•	170	52	50	12,5	0002112234
16	•	170	52	50	12,5	0001352668

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Lengüeta de arrastre según DIN 1809, bajo demanda
- Mango (D2) tol. h6 para fijación hidráulica o térmica de gran precisión, bajo demanda

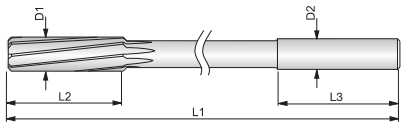
- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Tangs according to DIN 1809 on request*
- *Shank (D2) in tolerance h6 for high precision hydraulic and heat shriking chucks, upon request*

Escariador de máquina. Con mango cilíndrico extralargo.
Machine chucking reamer. With straight extra long shank.

212	SIM. DIN 212	FORM B - D	L8°	XL	H7	HSSE Co5
B - D						
XL						



DIN 212 B
Ø 3,75



DIN 212 D
> Ø 3,75

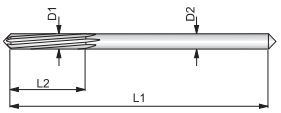
D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
2	•	90	11	-	2	0001702228
3	•	120	15	-	3	0001702389
4	•	140	19	32	4	0001702449
5	•	170	23	34	5	0001702509
6	•	200	26	36	5,6	0001702650
8	•	250	33	42	8	0001702710
10	•	250	38	46	10	0001702871
12	•	250	44	46	10	0001702931

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

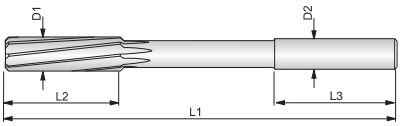
- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

Escariador de máquina. Centesimal en incrementos de 0,01 mm, mango cilíndrico.
Machine chucking reamer. In 0,01 mm increments, straight shank.

212	DIN 212	FORM B - D	L8°	1/100 mm	Ø 6 +0 +0,004 / Ø>6 +0 +0,005	HSSE Co5
B - D						



DIN 212 B
Ø 3,75



DIN 212 D
> Ø 3,75

D1 Ø mm - Ø mm		L1 mm	L2 mm	L3 mm	D2 mm h9
0,95 - 1,31	•	34	5-7	-	D1
1,32 - 1,54	•	40	8	-	D1
1,55 - 1,70	•	43	9	-	D1
1,71 - 1,90	•	46	10	-	D1
1,91 - 2,12	•	49	11	-	D1
2,13 - 2,36	•	53	12	-	D1
2,37 - 2,66	•	57	14	-	D1
2,67 - 3,05	•	61	15	-	D1
3,06 - 3,35	•	65	16	-	D1
3,36 - 3,75	•	70	18	-	D1
3,76 - 4,25	•	75	19	32	4
4,26 - 4,75	•	80	21	33	4,5
4,76 - 5,30	•	86	23	34	5
5,31 - 5,95	•	93	26	36	5,6
5,96 - 6,00	•	93	26	36	5,6
6,01 - 6,70	•	101	28	38	6,3
6,71 - 7,29	•	109	31	40	7,1
7,30 - 7,55	•	109	31	40	7,1

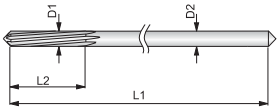
D1 Ø mm - Ø mm		L1 mm	L2 mm	L3 mm	D2 mm h9
7,56 - 8,50	•	117	33	42	8
8,51 - 9,25	•	125	36	44	9
9,26 - 9,50	•	125	36	44	9
9,51 - 10,64	•	133	38	46	10
10,65 - 11,25	•	142	41	46	10
11,26 - 11,80	•	142	41	46	10
11,81 - 12,02	•	151	44	46	10
12,03 - 13,02	•	151	44	46	10
13,03 - 13,20	•	151	44	50	10
13,21 - 14,00	•	160	47	50	12,5
14,01 - 14,02	•	162	50	50	12,5
14,03 - 15,00	•	162	50	50	12,5
15,01 - 15,02	•	170	52	50	12,5
15,03 - 16,00	•	170	52	50	12,5
16,01 - 16,02	•	175	54	52	14

- Tolerancias de fabricación según DIN 1420
- Mango (D2) tol. h6 para fijación hidráulica o térmica de gran precisión, bajo demanda
- Estuches de escariadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

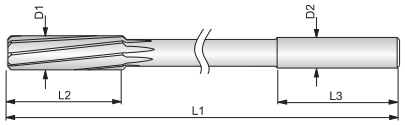
- *Manufacturing tolerances according to DIN 1420*
- *Shank (D2) in tolerance h6 for high precision hydraulic and heat shriking chucks, upon request*
- *Cases of reamers in sets of difererent sizes, see cutting tool sets programme*

Escariador de máquina. Con mango cilíndrico extralargo de Metal Duro integral.
Machine chucking reamer. With straight extra long shank solid carbide.

212	SIM. DIN 212	FORM B - D	L8⁰	XL	H7	MD integral *Solid Carbide* K10
B - D						
XL						



DIN 212 B
Ø 3,75



DIN 212 D
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
2	•	90	11	-	2	0002141768
3	•	120	15	-	3	0002141829
4	•	140	19	32	4	0002141989
5	•	170	23	34	5	0002142068
6	•	200	26	36	5,6	0002142128
8	•	250	33	42	8	0002142279
10	•	250	38	46	10	0002142339
12	•	250	44	46	10	0002142490

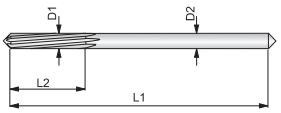
- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

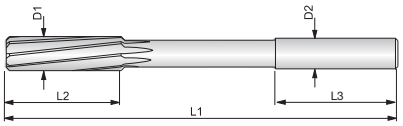
Escariador de máquina. De Metal Duro integral, mango cilíndrico.
Machine chucking reamer. Solid carbide, straight shank.

SIM. 8093	SIM. DIN 8093	FORM B - D	L8⁰	H7	MD integral *Solid Carbide* K10 ≥12	Cabeza MD *Carbide head* K10 ≥13
B						

CH



DIN 212 B
Ø 3,75



DIN 212 D
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
2	•	49	11	-	2	0000837157
2,5	•	57	14	-	2,5	0000837639
3	•	61	15	-	3	0000838159
3,5	•	70	18	-	3,5	0000838641
4	•	75	19	32	4	0000839152
4,5	•	80	21	33	4,5	0000839644
5	•	86	23	34	5	0000840159
5,5	•	93	26	36	5,6	0000840641
6	•	93	26	36	5,6	0000841152
6,5	•	101	28	38	6,3	0000841644
7	•	109	31	40	7,1	0000842154
7,5	•	109	31	40	7,1	0000842646
8	•	117	33	42	8	0000843156
8,5	•	117	33	42	8	0000843648
9	•	125	36	44	9	0000844168

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
9,5	•	125	36	44	9	0000844640
10	•	133	38	46	10	0000845161
10,5	•	133	38	46	10	0001491915
11	•	142	41	46	10	0000845221
11,5	•	142	41	46	10	0001493006
12	•	151	44	46	10	0000845372
13	•	151	44	46	10	0002139066
14	•	160	47	50	12,5	0002139116
15	•	162	50	50	12,5	0002139277
16	•	170	52	50	12,5	0002139337

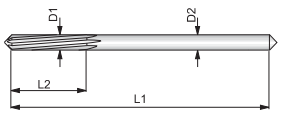
- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Estuches de escariadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte
- Lengüeta de arrastre según DIN 1809

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Cases of reamers in sets of difererent sizes, see cutting tool sets programme*
- *Tangs according to DIN 1809*

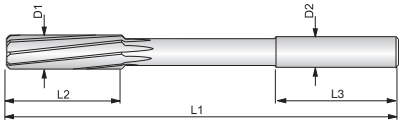
Escariador de máquina. De alta precisión en Metal Duro integral, mango cilíndrico.

Machine chucking reamer. High precision, solid carbide, straight shank.

212	DIN 212	FORM B - D	L8°	1/10 mm	Ø 6 +0 +0,004 / Ø>6 +0 +0,005	MD integral *Solid Carbide* K10
B - D						
NC						



DIN 212 B
Ø 3,75



DIN 212 D
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h6	Cod.
2	•	49	11	-	2	0000845653
2,1	•	49	11	-	2	0001483570
2,2	•	57	15	-	3	0001483630
2,3	•	57	15	-	3	0000845863
2,4	•	57	15	-	3	0001483781
2,5	•	57	15	-	3	0000845924
2,6	•	57	15	-	3	0001483841
2,7	•	61	15	-	3	0001483902
2,8	•	61	15	-	3	0001484080
2,9	•	61	15	-	3	0001484141
3	•	61	15	-	3	0001484201
3,1	•	61	15	-	3	0001484362
3,2	•	70	18	-	4	0001484412
3,3	•	70	18	-	4	0001484572
3,4	•	70	18	-	4	0001484633
3,5	•	70	18	-	4	0001484793
3,6	•	70	18	-	4	0001484843
3,7	•	70	18	-	4	0001484904
3,8	•	75	19	32	4	0001485083
3,9	•	75	19	32	4	0001485143
4	•	75	19	32	4	0001485203
4,1	•	75	19	32	4	0001485364
4,2	•	75	19	32	4	0001485424
4,3	•	80	21	33	5	0001485575
4,4	•	80	21	33	5	0001485635
4,5	•	80	21	33	5	0001485795
4,6	•	80	21	33	5	0001485856
4,7	•	80	21	33	5	0001485906
4,8	•	86	23	34	5	0001486095
4,9	•	86	23	34	5	0001486145
5	•	86	23	34	5	0001486206
5,1	•	86	23	34	5	0001486366
5,2	•	86	23	34	5	0001486426
5,3	•	86	23	34	5	0001486577
5,4	•	93	26	36	6	0001486637
5,5	•	93	26	36	6	0001486798
5,6	•	93	26	36	6	0001486858
5,7	•	93	26	36	6	0001486918
5,8	•	93	26	36	6	0001487097
5,9	•	93	26	36	6	0001487158
6	•	93	26	36	6	0000848388
6,1	•	101	28	38	6	0001487208
6,2	•	101	28	38	6	0001487368
6,3	•	101	28	38	6	0001487429
6,4	•	101	28	38	6	0001487589
6,5	•	101	28	38	6	0001487630
6,6	•	101	28	38	6	0001487790
6,7	•	101	28	38	6	0001487850

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h6	Cod.
6,8	•	117	33	42	8	0001487911
6,9	•	117	33	42	8	0001488090
7	•	117	33	42	8	0001488150
7,1	•	117	33	42	8	0001488210
7,2	•	117	33	42	8	0001488361
7,3	•	117	33	42	8	0001488421
7,4	•	117	33	42	8	0001488581
7,5	•	117	33	42	8	0001488642
7,6	•	117	33	42	8	0001488792
7,7	•	117	33	42	8	0001488853
7,8	•	117	33	42	8	0001488913
7,9	•	117	33	42	8	0001489092
8	•	117	33	42	8	0001489152
8,1	•	117	33	42	8	0001489213
8,2	•	117	33	42	8	0001489363
8,3	•	117	33	42	8	0001489423
8,4	•	117	33	42	8	0001489584
8,5	•	117	33	42	8	0001489644
8,6	•	133	38	46	10	0001489704
8,7	•	133	38	46	10	0001489855
8,8	•	133	38	46	10	0001489915
8,9	•	133	38	46	10	0001490090
9	•	133	38	46	10	0001402492
9,1	•	133	38	46	10	0001490150
9,2	•	133	38	46	10	0001490210
9,3	•	133	38	46	10	0001490361
9,4	•	133	38	46	10	0001490421
9,5	•	133	38	46	10	0001490581
9,6	•	133	38	46	10	0001490642
9,7	•	133	38	46	10	0001490702
9,8	•	133	38	46	10	0001490853
9,9	•	133	38	46	10	0001490913
10	•	133	38	46	10	0001491092
10,1	•	133	38	46	10	0001491213
10,2	•	133	38	46	10	0001491423
10,3	•	133	38	46	10	0001491644
10,4	•	133	38	46	10	0001491855
10,5	•	133	38	46	10	0001492004
10,6	•	133	38	46	10	0001492215
10,7	•	142	41	46	10	0001492436
10,8	•	142	41	46	10	0001492646
10,9	•	142	41	46	10	0001492867
11	•	142	41	46	10	0001492917
11,5	•	142	41	46	10	0001493157
12	•	151	44	46	10	0001084459

• Estuches de escariadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

• *Cases of reamers in sets of difererent sizes, see cutting tool sets programme*

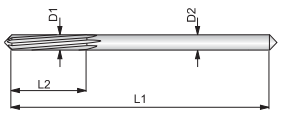
- Tolerancias de fabricación según DIN 1420
- Mango (D2) tol. h6 para fijación hidráulica o térmica de gran precisión, bajo demanda

- *Manufacturing tolerances according to DIN 1420*
- *Shank (D2) in tolerance h6 for high precision hydraulic and heat shriking chucks, upon request*

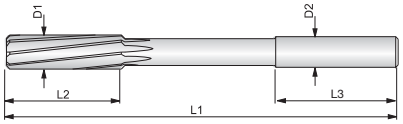
Escariador de máquina. Centesimal en incrementos de 0,01 mm, mango cilíndrico.

Machine chucking reamer. In 0,01 mm increments, solid carbide, straight shank.

SIM. 8093	SIM. DIN 8093	FORM B - D	L8⁰	1/100 mm	Ø 6 +0 +0,004 / Ø>6 +0 +0,005	MD integral *Solid Carbide* K10	25° / 20° / 45°
B - D							
NC							



DIN 212 B
Ø 3,75 ›



DIN 212 D
> Ø 3,75

D1 Ø mm - Ø mm		L1 mm	L2 mm	L3 mm	D2 mm h6
1,97 - 2,03	•	49	11	-	2
2,47 - 2,53	•	57	15	-	3
2,97 - 3,03	•	61	15	-	3
3,47 - 3,53	•	70	18	-	4
3,97 - 4,03	•	75	19	32	4
4,47 - 4,53	•	80	21	33	5
4,97 - 5,03	•	86	23	34	5
5,47 - 5,53	•	93	26	36	6
5,97 - 6,03	•	93	26	36	6
6,47 - 6,53	•	101	28	38	6
6,97 - 7,03	•	117	33	40	8
7,47 - 7,53	•	117	33	42	8

D1 Ø mm - Ø mm		L1 mm	L2 mm	L3 mm	D2 mm h6
7,97 - 8,03	•	117	33	42	8
8,47 - 8,53	•	117	33	44	8
8,97 - 9,03	•	133	38	44	10
9,47 - 9,53	•	133	38	46	10
9,97 - 10,03	•	133	38	46	10
10,47 - 10,53	•	133	38	46	10
10,97 - 11,03	•	142	41	46	10
11,47 - 11,53	•	142	41	46	10
11,97 - 12,03	•	151	44	46	10

- Tolerancias de fabricación según DIN 1420
- Mango (D2) tol. h6 para fijación hidráulica o térmica de gran precisión, bajo demanda
- Estuches de escariadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

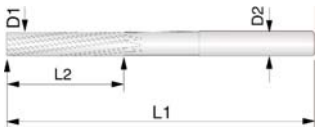
- *Manufacturing tolerances according to DIN 1420*
- *Shank (D2) in tolerance h6 for high precision hydraulic and heat shriking chucks, upon request*
- *Cases of reamers in sets of difererent sizes, see cutting tool sets programme*

Escariador de máquina. Para aceros templados hasta 60 HRC, mango cilíndrico.
Machine chucking reamer. For hardened steels up to 60 HRC, Straight shank.

MRB-D | DIN | FORM B | L7° | H7 | MD integral *Solid Carbide* K10 | 45°+5°

HRC

TiCN



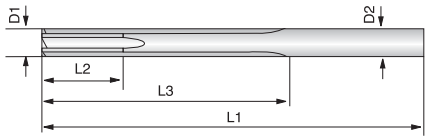
D1 mm		L1 mm	L2 mm	D2 mmh6	Z	Cod.
2	•	50	18	3	4	0002330358
3	•	50	18	3	4	0002330569
4	•	80	27	6	4	0002330780
5	•	80	30	6	4	0002330990
6	•	80	30	6	4	0002331130
8	•	80	35	8	6	0002331290
10	•	90	40	10	6	0002331561
12	•	90	45	12	6	0002331782

- Tolerancias de fabricación según DIN 1420
- Mango (D2) tol. h6 para fijación hidráulica o térmica de gran precisión, bajo demanda

- *Manufacturing tolerances according to DIN 1420*
- *Shank (D2) in tolerance h6 for high precision hydraulic and heat shriking chucks, upon request*

Escariador de máquina con corte frontal. Mango cilíndrico.
Machine chucking end face reamer. Straight shank.

FRONTAL | JMC NORM./ STD | FORM A | Corte frontal *End face* | H7 | HSSE Co5



D1 mm		L1 mm	L2 mm	L3 mm	D2 mm e9	Z	Cod.
2,5	•	57	12	33	2,5	4	0002200729
3	•	61	12	33	3	6	0002200870
3,5	•	70	12	39	3,5	6	0002200930
4	•	75	16	44	4	6	0002201019
4,5	•	80	16	48	4,5	6	0002201179
5	•	86	20	53	5	6	0002201230
6	•	93	20	59	6	6	0002201390
7	•	109	22	69	7	6	0002201440
8	•	117	24	71	8	6	0002201501
9	•	125	24	77	9	6	0002201721
10	•	133	26	84	10	6	0002201872
11	•	142	26	89	11	6	0002201932
12	•	151	26	96,5	12	6	0002202021

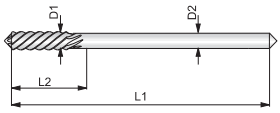
- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

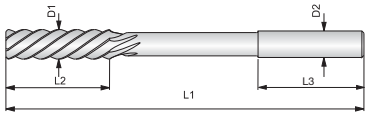
Escariador de máquina. Con canales en helice de 45º, mango cilíndrico.

Machine chucking reamer. 45º Quick spiral, straight shank.

212	DIN 212	FORM E	L45º	H7	HSSE Co5		
E							



DIN 212 E
Ø 3,75



DIN 212 E
> Ø 3,75

D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
1,5		40	8	-	1,5	0000648778
1,6		43	9	-	1,6	0000648839
1,7		43	9	-	1,7	0001675387
1,8		46	10	-	1,8	0000648999
1,9		46	10	-	1,9	0000649078
2	•	49	11	-	2	0000649138
2,1		49	11	-	2,1	0001685185
2,2		53	12	-	2,2	0000649359
2,3		53	12	-	2,3	0000649409
2,4		57	14	-	2,4	0000649560
2,5		57	14	-	2,5	0000649620
2,6		57	14	-	2,6	0000649831
2,7		61	15	-	2,7	0001365743
2,8		61	15	-	2,8	0000649991
2,9		61	15	-	2,9	0001685235
3	•	61	15	-	3	0000402077
3,5	•	70	18	-	3,5	0000402128
4	•	75	19	32	4	0000402288
4,5	•	80	21	33	4,5	0000402348
5	•	86	23	34	5	0000402409
5,5	•	93	26	36	5,6	0000402559
6	•	93	26	36	5,6	0000402610
6,5	•	101	28	38	6,3	0000402770
7	•	109	31	40	7,1	0000402830

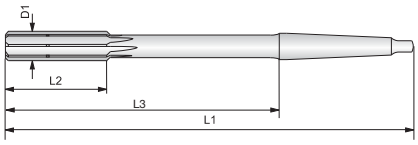
D1 mm		L1 mm	L2 mm	L3 mm	D2 mm h9	Cod.
7,5	•	109	31	40	7,1	0000402981
8	•	117	33	42	8	0000403070
8,5	•	117	33	42	8	0000403130
9	•	125	36	44	9	0000403280
9,5	•	125	36	44	9	0000403341
10	•	133	38	46	10	0000403401
10,5	•	133	38	46	10	0000656411
11	•	142	41	46	10	0000403562
11,5	•	142	41	46	10	0000656792
12	•	151	44	46	10	0000403612
12,5	•	151	44	46	10	0000657363
13	•	151	44	46	10	0000403772
13,5	•	160	47	50	12,5	0000657423
14	•	160	47	50	12,5	0000403833
14,5	•	162	50	50	12,5	0000657634
15	•	162	50	50	12,5	0000403993
16	•	170	52	50	12,5	0000404072
17		175	54	52	14	0000658144
18		182	56	52	14	0000658365
19		189	58	58	16	0000658425
20		195	60	58	16	0000658636

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Lengüeta de arrastre según DIN 1809, bajo demanda
- Para acabados de calidad en materiales de viruta larga. Agujeros pasantes

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Tangs according to DIN 1809 on request*
- *For high quality finishing on long chipping materials*

Escariador de máquina. Mango Cono Morse.
Machine chucking reamer. Morse Taper shank.

208	DIN 208	FORM A	H7	HSSE Co5
A				



D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
3*		125	16	59,5	1	0000658796
4*		129	19	63,5	1	0000404132
5	•	133	23	67,5	1	0000404283
6	•	138	26	72,5	1	0000404343
7	•	150	31	84,5	1	0000404403
8	•	156	33	90,5	1	0000404564
9	•	162	36	96,5	1	0000404624
10	•	168	38	102,5	1	0000404775
11	•	175	41	109,5	1	0000404835
12	•	182	44	116,5	1	0000404995
13	•	182	44	116,5	1	0000405074
14	•	189	47	123,5	1	0000405135
15	•	204	50	124	2	0000405295
16	•	210	52	130	2	0000405345
17	•	214	54	134	2	0000405406

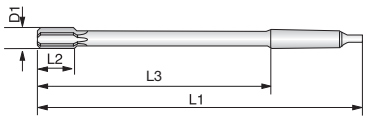
D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
18	•	219	56	139	2	0000405566
19	•	223	58	143	2	0000405626
20	•	228	60	148	2	0000405777
21	•	232	62	152	2	0000405837
22	•	237	64	157	2	0000405998
23	•	241	66	161	2	0000406076
24	•	268	68	169	3	0000406137
25	•	268	68	169	3	0000406297
26	•	273	70	174	3	0000406358
27	•	277	71	178	3	0000406408
28	•	277	71	178	3	0000406568
29	•	281	73	182	3	0000406629
30	•	281	73	182	3	0000406789

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- * JMC Norm.

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- ** JMC Norm.*

Escariador de máquina. Con placas de Metal Duro, mango Cono Morse.
Machine chucking reamer. With carbide tips, Morse Taper shank.

8051	DIN 8051	FORM A	H7	Placa MD *Carbide Tip* K10
A				



D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
10	•	168	19	102,5	1	0001523506
11	•	175	19	109,5	1	0001599678
12	•	182	19	116,5	1	0001523657
13	•	182	19	116,5	1	0001599738
14	•	189	19	123,5	1	0001523717
15	•	204	19	124	2	0001599889
16	•	210	22	130	2	0001523878
17	•	214	22	134	2	0001599949
18	•	219	22	139	2	0001523938
19	•	223	22	143	2	0001600097
20	•	228	22	148	2	0001524017
21	•	232	25	152	2	0001600157
22	•	237	25	157	2	0001524177
23	•	241	25	161	2	0001600208
24	•	268	25	169	3	0001524228

D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
25	•	268	25	169	3	0001600368
26	•	273	25	174	3	0001524388
27	•	277	25	178	3	0002140977
28	•	277	25	178	3	0001524448
30	•	281	30	182	3	0001524509
32	•	317	30	193	4	0001600429
34	•	321	30	197	4	0001600589
35	•	321	30	197	4	0002132692
36	•	325	30	200	4	0001600639
38	•	329	30	205	4	0001600790
40	•	329	30	205	4	0001600850

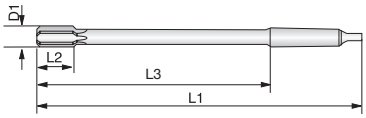
- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

Escariador de máquina. Con placas de Metal Duro expandible, mango Cono Morse.

Machine chucking reamer. With carbide tips, Morse Taper shank.

8051	SIM. DIN 8094	FORM A		Ø expandible 1%	H7	Placa MD *Carbide Tip* K10		
A								
EXPANDIBLE								



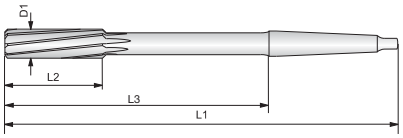
D1		L1 mm	L2 mm	L3 mm	Z	CM/MT	Cod.
8	•	156	16		4	1	0002405331
10	•	168	19	102,5	6	1	0002405762
12	•	182	19	116,5	6	1	0002406112
13	•	182	19	116,5	6	1	0003623658
14	•	189	19	123,5	6	1	0002406544
15	•	204	19	124	6	2	0002406825
16	•	210	22	130	6	2	0002404057
17	•	214	22	134	6	2	0003623718
18	•	219	22	139	6	2	0002404338
19	•	223	22	143	6	2	0003623879
20	•	228	22	148	6	2	0003535505
22	•	237	25	157	6	2	0002404810

D1		L1 mm	L2 mm	L3 mm	Z	CM/MT	Cod.
24	•	268	25	169	8	3	0003623939
25	•	268	25	169	8	3	0002405050
26	•	273	25	174	8	3	0002355236
28	•	277	25	178	8	3	0003624018
30	•	281	30	182	8	3	0002499003
32	•	317	30	193	8	4	0003624389
34	•	321	30	197	8	4	0003624440
35	•	321	30	197	8	4	0003624500
36	•	325	30	200	8	4	0003624650
38	•	329	30	205	8	4	0003624711
40	•	329	30	205	8	4	0003624871

• Gracias al tornillo regulador, expandible en un 1% del Ø nominal. • *Due to end screw, 1% diameter expandable.*

Escariador de máquina. Mango Cono Morse.
Machine chucking reamer. Morse Taper shank.

208	DIN 208	FORM B	L8⁰	H7	HSSE Co5		
B							



D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
3	•	125	16	59,5	1	0000661799
4	•	129	19	63,5	1	0000406830
5	•	133	23	67,5	1	0000406990
5,5	•	138	26	72,5	1	0000407079
6	•	138	26	72,5	1	0000407139
6,5	•	144	28	78,5	1	0000407290
7	•	150	31	84,5	1	0000407350
7,5	•	150	31	84,5	1	0000407410
8	•	156	33	90,5	1	0000407561
8,5	•	156	33	90,5	1	0000407621
9	•	162	36	96,5	1	0000407781
9,5	•	162	36	96,5	1	0000407842
10	•	168	38	102,5	1	0000407992
10,5	•	168	38	102,5	1	0000408081
11	•	175	41	109,5	1	0000408131
11,5	•	175	41	109,5	1	0000408292
12	•	182	44	116,5	1	0000408352
12,5	•	182	44	116,5	1	0000408413
13	•	182	44	116,5	1	0000410573
13,5	•	189	47	123,5	1	0000410623
14	•	189	47	123,5	1	0000410784
14,5	•	204	50	124	2	0000410844
15	•	204	50	124	2	0000410904
15,5	•	210	52	130	2	0000411083
16	•	210	52	130	2	0000411144
16,5	•	214	54	134	2	0000411204
17	•	214	54	134	2	0000411354
17,5	•	219	56	139	2	0000667221
18	•	219	56	139	2	0000411415
18,5	•	223	58	143	2	0000667702
19	•	223	58	143	2	0000411575
19,5	•	228	60	148	2	0000668223
20	•	228	60	148	2	0000411636
20,5	•	232	62	152	2	0000668654
21	•	232	62	152	2	0000411786
21,5	•	237	64	157	2	0000668865

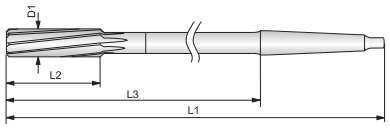
D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
22	•	237	64	157	2	0000411846
22,5	•	241	66	161	2	0000669004
23	•	241	66	161	2	0000411907
23,5	•	241	66	161	2	0000669165
24	•	268	68	169	3	0000412086
24,5	•	268	68	169	3	0000669385
25	•	268	68	169	3	0000412146
25,5	•	273	70	174	3	0000669657
26	•	273	70	174	3	0000412206
26,5	•	273	70	174	3	0000669717
27	•	277	71	178	3	0000412357
27,5	•	277	71	178	3	0000669867
28	•	277	71	178	3	0000412417
28,5	•	281	73	182	3	0000670002
29	•	281	73	182	3	0000412577
29,5	•	281	73	182	3	0000670162
30	•	281	73	182	3	0000412638
31	•	285	75	186	3	0001596942
32	•	317	77	193	4	0001467061
33	•	317	77	193	4	0001597021
34	•	321	78	193	4	0001467121
35	•	321	78	197	4	0001467272
36	•	325	79	201	4	0001467332
37	•	325	79	201	4	0001597182
38	•	329	81	205	4	0001467492
40	•	329	81	205	4	0001467553
42	•	333	82	209	4	0001467603
44	•	336	83	212	4	0001467763
45	•	336	83	212	4	0001467824
46	•	340	84	216	4	0001467984
48	•	344	86	220	4	0001468063
50	•	344	86	220	4	0001468123

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

Escariador de máquina largo y extra-largo. Mango Cono Morse.
Machine chucking reamer long and extra-long. Morse Taper shank.

208	SIM. DIN 208	FORM B	L8°	XL	H7	HSSE Co5
B						
XL						

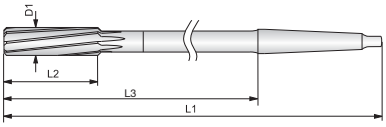


D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
12	•	245	22	180	1	0003658554
13	•	245	22	180	1	0003658614
14	•	245	22	180	1	0003658764
15	•	260	22	180	2	0003658825
16	•	260	25	180	2	0003651979
18	•	260	25	180	2	0003658985
20	•	270	28	190	2	0002545681
22	•	280	32	200	2	0003659064
24	•	300	32	200	3	0003659124
25	•	320	32	220	3	0003659285
26	•	330	32	230	3	0003659345
28	•	340	32	240	3	0003659496
30	•	350	36	250	3	0003659556
32	•	375	36	250	4	0003659616
34	•	375	36	250	4	0003659777
36	•	375	40	250	4	0003659827
38	•	395	40	270	4	0003659987
40	•	395	40	270	4	0003660062
42	•	405	40	280	4	0003660122
45	•	405	45	280	4	0003660283
50	•	415	45	290	4	0003660343

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

208	SIM. DIN 208	FORM B	L8°	XXL	H7	HSSE Co5
B						
XXL						



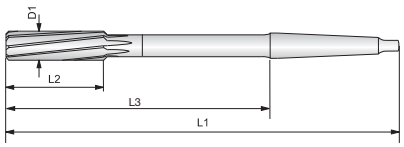
D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
12	•	315	40	250	1	0003660493
14	•	315	40	250	1	0003660554
16	•	350	45	270	2	0003660614
18	•	350	45	270	2	0003660774
20	•	350	45	270	2	0003660825
22	•	350	45	270	2	0001764162
24	•	450	70	350	3	0003660985
25	•	450	70	350	3	0003661064
26	•	450	70	350	3	0003661124
28	•	450	70	350	3	0003661285
30	•	450	70	350	3	0003661345
35	•	475	70	350	4	0003661406
40	•	475	70	350	4	0003661556

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

Escariador de máquina. Con cabeza de Metal Duro, mango Cono Morse.
Machine chucking reamer. With solid carbide head, Morse Taper shank.

8094	DIN 8094	FORM B	L8º	CH	H7	Cabeza MD *Carbide head* K10		
B								



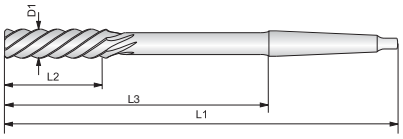
D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
10	•	168	38	102,5	1	0002140274
11	•	175	41	109,5	1	0002140335
12	•	182	44	116,5	1	0002140495
13	•	182	44	116,5	1	0002140545
14	•	189	47	123,5	1	0002140606
15	•	204	50	124	2	0002140766
16	•	210	52	130	2	0002140827

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

Escariador de máquina. Con canales en helice de 45º, mango Cono Morse.
Machine chucking reamer. 45º Quick spiral, Morse Taper shank.

208	DIN 208	FORM C	L45º	H7	HSSE Co5		
C							



D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
5	•	133	23	67,5	1	0000413630
6	•	138	26	72,5	1	0000413791
7	•	150	31	84,5	1	0000413841
8	•	156	33	90,5	1	0000413901
9	•	162	36	96,5	1	0000414080
10	•	168	38	102,5	1	0000414141
11	•	175	41	109,5	1	0000414201
12	•	182	44	116,5	1	0000414361
13	•	182	44	116,5	1	0000414422
14	•	189	47	123,5	1	0000414572
15	•	204	50	124	2	0000414632
16	•	210	52	130	2	0000414793
17	•	214	54	134	2	0000414853
18	•	219	56	139	2	0000414904
19	•	223	58	143	2	0000415092

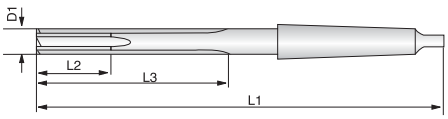
D1 mm		L1 mm	L2 mm	L3 mm	CM/MT	Cod.
20	•	228	60	148	2	0000415143
21	•	232	62	152	2	0000415203
22	•	237	64	157	2	0000415364
23	•	241	66	161	2	0000415424
24	•	268	68	169	3	0000415574
25	•	268	68	169	3	0000415635
26	•	273	70	174	3	0000415795
27	•	277	71	178	3	0000415855
28	•	277	71	178	3	0000415916
29	•	281	73	182	3	0000416095
30	•	281	73	182	3	0000416155

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Para acabados de calidad en materiales de viruta larga. Agujeros pasantes

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *For high quality finishing on long chipping materials*

Escariador de máquina con corte frontal. Mango Cono Morse.
Machine chucking end face reamer. Morse Taper shank.

FRONTAL	JMC NORM./ STD	FORM A		Corte frontal *End face*	H7	HSSE Co5	



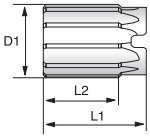
D1 mm		L1 mm	L2 mm	L3 mm	CM/*MT*	Z	Cod.
8	•	156	24	71	1	6	0002204457
9	•	162	24	77	1	6	0002202232
10	•	168	26	84	1	6	0002202392
11	•	175	26	89,5	1	6	0002202453
12	•	182	26	96,5	1	6	0002202663
13	•	182	26	96,5	1	6	0002202724
14	•	189	28	103,5	1	6	0002202884
15	•	204	28	104	2	6	0002202934
16	•	210	30	108	2	6	0002203023
17	•	214	30	112	2	6	0002203174
18	•	219	30	117	2	6	0002203234
19	•	223	32	119	2	6	0002203394
20	•	228	32	124	2	6	0002203455
21	•	232	32	128	2	6	0002204236
22	•	237	34	133	2	6	0002203515
24	•	268	34	139	3	6	0002203666
25	•	268	36	139	3	6	0002203726
26	•	273	36	144	3	6	0002203886
28	•	277	38	148	3	10	0002203947
30	•	281	42	150	3	10	0002204026
31	•	285	44	154	3	10	0002204397
32	•	317	44	157	4	10	0002204186

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*

Escariador de máquina hueco. Mango cono morse.
Shell reamer. Morse Taper shank.

219	DIN 219	FORM B	L8⁰	Hueco *Shell*	H7	HSS
B						



D1 mm		L1 mm	L2 mm	Ø int. mm	Cod.
32	•	50	36	16	0002170169
33	•	50	36	16	0002170229
34	•	50	36	16	0002170379
35	•	50	36	16	0002170430
36	•	56	40	19	0002170590
37	•	56	40	19	0002170651
38	•	56	40	19	0002170711
40	•	56	40	19	0002170861
42	•	56	40	19	0002170922
44	•	63	45	22	0002171001
45	•	63	45	22	0002171161
46	•	63	45	22	0002171221
47	•	63	45	22	0002171382
48	•	63	45	22	0002171432
50	•	63	45	22	0002171592

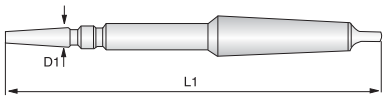
D1 mm		L1 mm	L2 mm	Ø int. mm	Cod.
52	•	71	50	27	0002174650
55	•	71	50	27	0002174710
58	•	71	50	27	0002174870
60	•	71	50	27	0002174931
62	•	80	56	32	0002175010
65	•	80	56	32	0002175170
68	•	80	56	32	0002175230
70	•	80	56	32	0002175441
72	•	90	63	40	0002175502
75	•	90	63	40	0002175662
78	•	90	63	40	0002175712
80	•	90	63	40	0002175873

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Con agujero interior cónico 1:30

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *With conical bore 1:30*

Porta-escariador. Mango Cono Morse.
Shell reamer holder. Morse Taper shank.

217	DIN 217	C.1:30	Con accesorios *With spare parts*



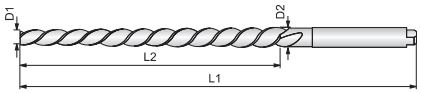
D1 mm	para / *for* Ø mm		L1 mm	CM/*MT*	Cod
16	31-35	•	261	3	0002260869
19	36-42	•	298	4	0002260929
22	43-50	•	312	4	0002261018
27*	51-60	•	327	4	0002261711
27	51-60	•	359	5	0002261168
32	61-71	•	376	5	0002261229
40	72-85	•	396	5	0002261389

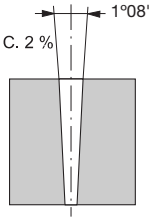
- Templado y rectificado
- * JMC Norm.

- *Hardened and ground*
- ** JMC Norm.*

Escariador de máquina cónico. Con canales en helice de 45º, mango cilíndrico.
Machine taper pin reamer. 45º quick spiral, straight shank.

2179	DIN 2179	L45º	C. 1:50 2%	HSSE Co5





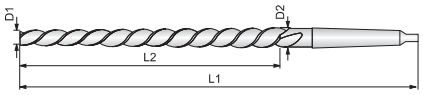
Ø nominal		D1 mm	D2 mm h9	L1 mm	L2 mm	Cod.
1,5	•	1,40	2,14	70	37	0000672508
2	•	1,90	2,86	68	48	0000672659
2,5	•	2,40	3,35	86	48	0000672719
3	•	2,90	4,06	100	58	0000419092
4	•	3,90	5,26	112	68	0000419152
5	•	4,90	6,36	122	73	0000419212
6	•	5,90	8,00	160	105	0000419373
7	•	6,90	9,40	160	125	0000673019
8	•	7,90	10,80	207	145	0000419423
10	•	9,90	13,40	245	175	0001574369
12	•	11,80	16,00	290	210	0001574420

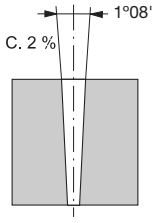
- Para pasadores cónicos según DIN 1, DIN 258, DIN 7977 y DIN 7978
- Lengüeta de arrastre según DIN 1809

- *For taper pins according to DIN 1, DIN 258, DIN 7977 and DIN 7978*
- *Tangs according to DIN 1809*

Escariador de máquina cónico. Con canales en helice de 45º, mango Cono Morse.
Machine taper pin reamer. 45º Quick spiral, Morse Taper shank.

2180	DIN 2180	L45º	C. 1:50 2%	HSSE Co5





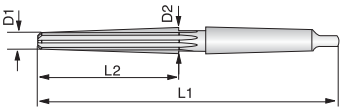
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	CM/MT	Cod.
5		4,90	6,36	155	73	1	0001680936
6		5,90	8,00	187	105	1	0001681015
8		7,90	10,80	227	145	1	0001681176
10		9,90	13,40	257	175	1	0001681386
12	•	11,80	16,00	315	210	2	0001681236
13*	•	12,86	16,74	295	194	2	0001681447
14*	•	13,86	17,74	295	194	2	0001681507
16	•	15,80	20,40	335	230	2	0001681667
20	•	19,80	24,80	377	250	3	0001681728
25	•	24,70	30,70	427	300	3	0001681878
30	•	29,70	36,10	475	320	4	0001681939
40	•	39,70	46,50	495	340	4	0001682017
50	•	49,70	56,90	550	360	5	0001682178

- Para pasadores cónicos según DIN 1, DIN 258, DIN 7977 y DIN 7978
- *JMC Norm.

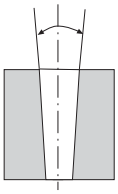
- *For taper pins according to DIN 1, DIN 258, DIN 7977 and DIN 7978*
- **JMC Norm.*

Escariador de máquina cónico. Para Cono Morse, mango Cono Morse.
Machine socket reamer. Morse Taper shank.

1895	DIN 1895	FORM E		HSSE Co5
E				

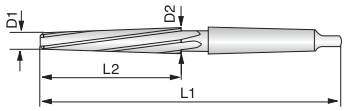


Cono Morse
Morse taper

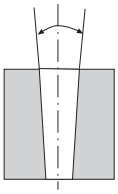


Cono Morse *Morse Taper*		D1 mm	D2 mm	L1 mm	L2 mm	CM/*MT*	Cod.
CM 0	•	6,55	9,72	137	61	1	0002198695
CM 1	•	9,57	12,86	142	66	1	0002198756
CM 2	•	14,73	18,68	173	79	2	0002198816
CM 3	•	20,01	24,83	212	96	3	0002198966
CM 4	•	26,23	32,41	263	119	4	0002199055
CM 5	•	37,23	45,77	331	150	5	0002199116
CM 6	•	54,17	65,02	389	208	5	0002199266

1895	DIN 1895	FORM C	L8°	HSSE Co5
C				



Cono Morse
Morse taper

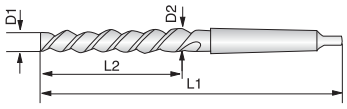


Cono Morse *Morse Taper*		D1 mm	D2 mm	L1 mm	L2 mm	CM/*MT*	Cod.
CM 0	•	6,55	9,72	137	61	1	0002199326
CM 1	•	9,57	12,86	142	66	1	0002199487
CM 2	•	14,73	18,68	173	79	2	0002199547
CM 3	•	20,01	24,83	212	96	3	0002199697
CM 4	•	26,23	32,41	263	119	4	0002199758
CM 5	•	37,23	45,77	331	150	5	0002199818
CM 6	•	54,17	65,02	389	208	5	0002199979

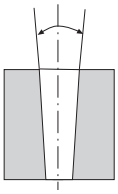
Escariador de máquina cónico / *Machine socket reamer.*

Con canales en helice de 45º, para Cono Morse, mango Cono Morse. / *45º Quick spiral, Morse Taper shank.*

1895	DIN 1895	FORM D	L45º	HSSE Co5
D				



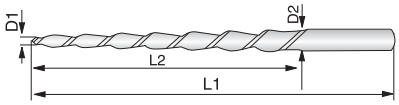
Cono Morse
Morse taper

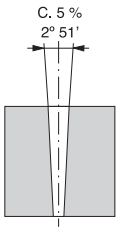


Cono Morse *Morse Taper*		D1 mm	D2 mm	L1 mm	L2 mm	CM/*MT*	Cod.
CM 0	•	6,34	9,51	137	61	1	0002200016
CM 1	•	9,37	12,66	142	66	1	0002200177
CM 2	•	14,53	18,48	173	79	2	0002200237
CM 3	•	19,81	24,63	212	96	3	0002200388
CM 4	•	25,92	32,10	263	119	4	0002200448
CM 5	•	37,56	45,45	331	150	5	0002200508
CM 6	•	53,86	64,70	389	208	5	0002200669

Escariador de máquina cónico. Para boquillas de inyección, Mango Cilíndrico.
Machine sprue reamer. *45º Quick spiral, Morse Taper shank.*

CÓNICO 5%	JMC NORM./ STD	L45º	C. 1:20 5%	HSSE Co5



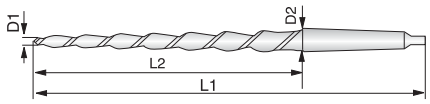


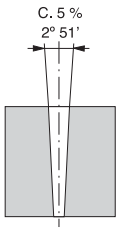
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	D3 mmh9	Cod.
3	•	3	6	110	60	6	0002339640
4	•	4	8	130	80	8	0002339790
5	•	5	10	155	100	10	0002339851
6	•	6	12	180	120	12	0002339911
7	•	7	14	200	140	14	0002340095

Escariador de máquina cónico / *Machine sprue reamer*

Con canales en helice de 45º, para boquillas de inyección, mango Cono Morse.
45º Quick spiral, Morse Taper shank.

CÓNICO 5%	JMC NORM./ STD	L45º	C. 1:20 5%	HSSE Co5



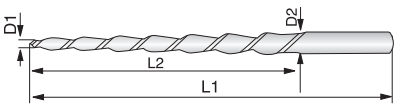


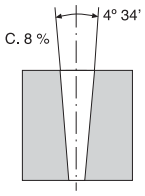
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	CM/*MT*	Cod.
8	•	8	16	260	160	2	0002362678
9	•	9	18	278	180	2	0002362739
10	•	10	20	300	200	2	0002362889

Escariador de máquina cónico / *Machine sprue reamer*

Con canales en helice de 45º, para boquillas de inyección, mango cilíndrico.
45º Quick spiral, straight shank.

CÓNICO 8% | **JMC** NORM./ STD | L45º | C. 2:25 8% | **HSSE** Co5



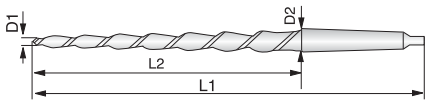


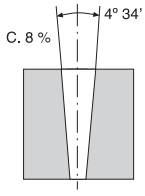
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	D3 mmh9	Cod.
3	•	3	8	110	62	8	0002366527
4	•	4	10	130	75	10	0002366688
5	•	5	12	150	90	12	0002366738
6	•	6	14	160	100	14	0002366898

Escariador de máquina cónico / *Machine sprue reamer*

Con canales en helice de 45º, para boquillas de inyección, mango Cono Morse.
45º Quick spiral, Morse Taper shank.

CÓNICO 8% | **JMC** NORM./ STD | L45º | C. 2:25 8% | **HSSE** Co5



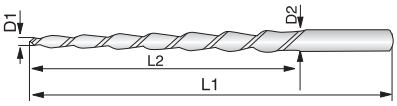


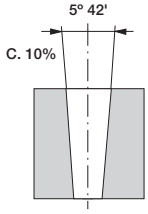
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	CM/*MT*	Cod.
7	•	7	16	210	112	2	0002366959
8	•	8	18	223	125	2	0002367038
9	•	9	20	236	137	2	0002367198

Escariador de máquina cónico / *Machine sprue reamer*

Con canales en helice de 45º, para boquillas de inyección, mango cilíndrico.
45º Quick spiral, straight shank.

CÓNICO 10%	JMC NORM./ STD	L45º	C. 1:10 10%	HSSE Co5



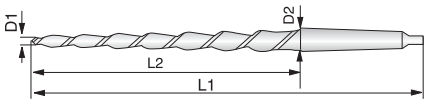


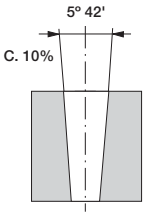
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	D3 mmh9	Cod.
2	•	2	6	90	40	6	0002328830
3	•	3	8	100	50	8	0002328990
4	•	4	10	115	60	10	0002329079
5	•	5	12	130	70	12	0002329130
6	•	6	14	140	80	14	0002329290

Escariador de máquina cónico / *Machine sprue reamer*

Con canales en helice de 45º, para boquillas de inyección, mango Cono Morse.
45º Quick spiral, Morse Taper shank.

CÓNICO 10%	JMC NORM./ STD	L45º	C. 1:10 10%	HSSE Co5

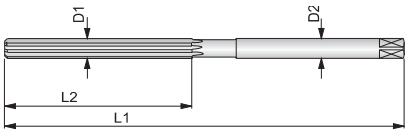




Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	CM/MT	Cod.
7	•	7	16	190	90	2	0002362458
8	•	8	18	200	100	2	0002362307
9	•	9	20	210	110	2	0002362518

Escariador de mano de alta precisión. Para Ajustes Especiales.
High precision hand reamers. For special precison.

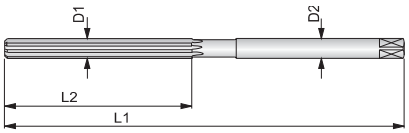
99	JIS	FORM A		1/100 mm	Ø 6 +0 +0,004 Ø>6 +0 +0,005	HSS	1°	
HRA								



Ø nominal		L1 mm	L2 mm	D2 mm	a	Cod.
3,00	•	72	40	3	2,5	0002154784
3,01	•	72	40	3	2,5	0002208948
3,02	•	72	40	3	2,5	0002154844
3,03	•	72	40	3	2,5	0002154904
3,10	•	72	40	3,1	2,5	0002155144
3,20	•	75	40	3,2	2,5	0002155354
3,30	•	75	40	3,3	2,5	0002155415
3,40	•	75	40	3,4	2,8	0002155575
3,50	•	75	40	3,5	2,8	0002155786
4,00	•	80	40	4	3,2	0001663204
4,01	•	80	40	4	3,2	0002209037
4,02	•	80	40	4	3,2	0002325773
4,03	•	80	40	4	3,2	0002156206
4,10	•	80	40	4,1	3,2	0002357662
4,20	•	85	45	4,2	3,5	0002209187
4,30	•	85	45	4,3	3,5	0002156577
4,40	•	85	45	4,4	3,5	0002624949
4,50	•	85	45	4,5	3,5	0001663364
5,00	•	90	45	5	4	0001663425
5,01	•	90	45	5	4	0002156909
5,02	•	90	45	5	4	0002157088
5,03	•	90	45	5	4	0002242415
5,10	•	90	45	5,1	4	0002157148
5,20	•	95	45	5,2	4	0002242566
5,30	•	95	45	5,3	4	0002625028
5,40	•	95	45	5,4	4	0002400058
5,50	•	95	45	5,5	4	0001663575
6,00	•	100	50	6	4,5	0001339216
6,01	•	100	50	6	4,5	0002157841
6,02	•	100	50	6	4,5	0002157901
6,03	•	100	50	6	4,5	0002158080
6,10	•	100	50	6,1	4,5	0002242626
6,20	•	100	50	6,2	4	0002364242
6,30	•	100	50	6,3	5	0002364302
6,40	•	100	50	6,4	5	0002607588
6,50	•	100	50	6,5	5	0001663636
7,00	•	105	55	7	5,5	0001663796
7,01	•	105	55	7	5,5	0002288261
7,02	•	105	55	7	5,5	0002288322
7,03	•	105	55	7	5,5	0002625188
7,10	•	105	55	7,1	5,5	0002364523
7,20	•	110	55	7,2	6	0002625510
7,30	•	110	55	7,3	6	0002625660
7,40	•	110	55	7,4	6	0002625720

Escariador de mano de alta precisión. Ajustes Especiales
High precision hand reamers.

99	JIS	FORM A		Tolerancia / Tolerance D1 +0 +0,005 D2 -0,02 -0,05	HSS	1°	
HRA							



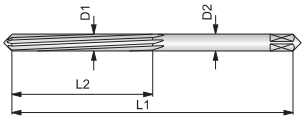
Ø nominal		L1 mm	L2 mm	D2 mm	a	Cod.
7,50	•	110	55	7,5	6	0001663856
8,00	•	115	60	8	6	0001663907
8,01	•	115	60	8	6	0002158422
8,02	•	115	60	8	6	0002158572
8,03	•	115	60	8	6	0002364673
8,10	•	115	60	8,1	6	0002158632
8,20	•	120	60	8,2	6,5	0002364894
8,30	•	120	60	8,3	6,5	0002626180
8,40	•	120	60	8,4	6,5	0002626451
8,50	•	120	60	8,5	6,5	0001664096
9,00	•	125	65	9	7	0001664146
10,00	•	130	70	10	8	0001664367
10,01	•	130	70	10	8	0002158853
10,02	•	130	70	10	8	0002158903
10,03	•	130	70	10	8	0002288693
10,10	•	130	70	10,1	8	0002159092
11,00	•	140	75	11	9	0001664577
12,00	•	150	75	12	9	0001664798
12,01	•	150	75	12	9	0002159203
12,02	•	150	75	12	9	0002288753
13,00	•	160	80	13	10	0002242787

- Escariador con tolerancias de fabricación súper precisas.
- Concebidos para solucionar problemas de ajustes especiales, trabajando a mano o a máquina.
- Entrada extra larga de (1º) para un buen centraje y progresión en agujeros pasantes.

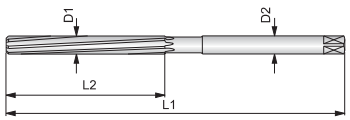
- *High Precision Reamers.*
- *For hand or machine use, specially designed to solve tight tolerance problems.*
- *Extra long chamfer for easy centering and progressing in through holes.*

Escariador de mano. Mango cilíndrico.
Hand reamer. Straight shank.

206	DIN 206	FORM B	L8°	1/10 mm	H7	HSS
B						



Ø 3 mm



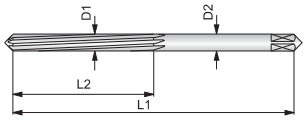
> Ø 3 mm

D1 mm		L1 mm	L2 mm	a	Cod.
1,00	•	34	16	-	0000564629
1,10	•	34	16	-	0000564780
1,20	•	34	16	-	0000564901
1,30	•	34	16	-	0000565089
1,40	•	41	20	1,12	0000565200
1,50	•	41	20	1,12	0000051404
1,60	•	44	21	1,25	0000051565
1,70	•	44	21	1,25	0000051625
1,80	•	47	23	1,4	0000054411
1,90	•	47	23	1,4	0000054572
2,00	•	50	25	1,6	0000054622
2,10	•	50	25	1,6	0000060200
2,20	•	54	27	1,8	0000060420
2,25	•	54	27	1,8	0000060571
2,30	•	54	27	1,8	0000060631
2,40	•	58	29	2,1	0000060792
2,50	•	58	29	2,1	0000060852
2,60	•	58	29	2,1	0000060912
2,70	•	62	31	2,1	0000061202
2,75	•	62	31	2,1	0000061362
2,80	•	62	31	2,1	0000061583
2,90	•	62	31	2,1	0000061915
3,00	•	62	31	2,1	0000062154
3,10	•	66	33	2,4	0000062214
3,20	•	66	33	2,4	0000062365
3,25	•	66	33	2,4	0000064379
3,30	•	66	33	2,4	0000064420
3,40	•	71	35	2,7	0000070659
3,50	•	71	35	2,7	0000064640
3,60	•	71	35	2,7	0000064701
3,70	•	71	35	2,7	0000064851
3,75	•	71	35	2,7	0000064911
3,80	•	76	38	3	0000065000
3,90	•	76	38	3	0000065151
4,00	•	76	38	3	0000065211
4,10	•	76	38	3	0000065432
4,20	•	76	38	3	0000065582
4,25	•	76	38	3	0000065643
4,30	•	81	41	3,4	0000070710
4,40	•	81	41	3,4	0000065863
4,50	•	81	41	3,4	0000065914
4,60	•	81	41	3,4	0000066003
4,70	•	81	41	3,4	0000066153
4,75	•	81	41	3,4	0000066213
4,80	•	87	44	3,8	0000066374
4,90	•	87	44	3,8	0000066434
5,00	•	87	44	3,8	0000066584
5,10	•	87	44	3,8	0000066645

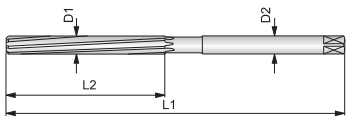
D1 mm		L1 mm	L2 mm	a	Cod.
5,20	•	87	44	3,8	0000066705
5,25	•	87	44	3,8	0000066866
5,30	•	87	44	3,8	0000066926
5,40	•	93	47	4,3	0000067005
5,50	•	93	47	4,3	0000067165
5,60	•	93	47	4,3	0000067216
5,70	•	93	47	4,3	0000067376
5,75	•	93	47	4,3	0000067436
5,80	•	93	47	4,3	0000067597
5,90	•	93	47	4,3	0000067647
6,00	•	93	47	4,3	0000067707
6,10	•	100	50	4,9	0000067868
6,20	•	100	50	4,9	0000067928
6,25	•	100	50	4,9	0000068007
6,30	•	100	50	4,9	0000068167
6,40	•	100	50	4,9	0000068228
6,50	•	100	50	4,9	0000068378
6,60	•	100	50	4,9	0000068439
6,70	•	100	50	4,9	0000068599
6,75	•	107	54	5,5	0000068659
6,80	•	107	54	5,5	0000068700
6,90	•	107	54	5,5	0000068860
7,00	•	107	54	5,5	0000068921
7,10	•	107	54	5,5	0000069009
7,20	•	107	54	5,5	0000069160
7,25	•	107	54	5,5	0000069220
7,30	•	107	54	5,5	0000069371
7,40	•	107	54	5,5	0000069431
7,50	•	107	54	5,5	0000069591
7,60	•	115	58	6,2	0000069652
7,70	•	115	58	6,2	0000069712
7,75	•	115	58	6,2	0000069862
7,80	•	115	58	6,2	0000069923
7,90	•	115	58	6,2	0000070007
8,00	•	115	58	6,2	0000070167
8,10	•	115	58	6,2	0000070228
8,20	•	115	58	6,2	0000070378
8,25	•	115	58	6,2	0000070439
8,30	•	115	58	6,2	0000070599
8,40	•	115	58	6,2	0000070860
8,50	•	115	58	6,2	0000070921
8,60	•	124	62	7	0000071009
8,70	•	124	62	7	0000071160
8,75	•	124	62	7	0000071220
8,80	•	124	62	7	0000071381
8,90	•	124	62	7	0000071431
9,00	•	124	62	7	0000071591
9,10	•	124	62	7	0000071652

Escariador de mano. Mango cilíndrico.
Hand reamer. Straight shank.

206	DIN 206	FORM B	L8°	1/10 mm	H7	HSS
B						



Ø 3 mm



> Ø 3 mm

D1 mm		L1 mm	L2 mm	a1	Cod.
9,20	•	124	62	7	0000071712
9,25	•	124	62	7	0000071862
9,30	•	124	62	7	0000071923
9,40	•	124	62	7	0000072012
9,50	•	124	62	7	0000072162
9,60	•	133	66	8	0000072222
9,70	•	133	66	8	0000072383
9,75	•	133	66	8	0000072443
9,80	•	133	66	8	0000072594
9,90	•	133	66	8	0000072654
10,00	•	133	66	8	0000072714
10,10	•	133	66	8	0000072875
10,20	•	133	66	8	0000072925
10,25	•	133	66	8	0000073014
10,30	•	133	66	8	0000073164
10,40	•	133	66	8	0000073225
10,50	•	133	66	8	0000073385
10,60	•	142	71	8	0000073445
10,70	•	142	71	9	0000073506
10,75	•	142	71	9	0000073656
10,80	•	142	71	9	0000073717
10,90	•	142	71	9	0000073877
11,00	•	142	71	9	0000073937
11,10	•	142	71	9	0000074016
11,20	•	142	71	9	0000074177
11,25	•	142	71	9	0000074227
11,30	•	142	71	9	0000074387
11,40	•	142	71	9	0000075179
11,50	•	142	71	9	0000075380
11,60	•	142	71	9	0000075500
11,70	•	142	71	9	0000075872
11,75	•	142	71	9	0000076011
11,80	•	152	76	9	0000076171
11,90	•	152	76	10	0000076232
12,00	•	152	76	10	0000076382
12,50	•	152	76	10	0000076442
13,00	•	152	76	10	0000076503
13,50	•	163	81	11	0000076663
14,00	•	163	81	11	0000076723
14,50	•	163	81	11	0000076874
15,00	•	163	81	11	0000076934
15,50	•	175	87	12	0000077013
16,00	•	175	87	12	0000077173
16,50	•	175	87	12	0000077234
17,00	•	175	87	12	0000077445

D1 mm		L1 mm	L2 mm	a1	Cod.
17,50	•	188	93	14,5	0000077505
18,00	•	188	93	14,5	0000077665
18,50	•	188	93	14,5	0000077876
19,00	•	188	93	14,5	0000078236
19,50	•	201	100	16	0000078668
20,00	•	201	100	16	0000078939
20,50	•	201	100	16	0000079238
21,00	•	201	100	16	0000079660
21,50	•	215	107	18	0000079941
22,00	•	215	107	18	0000080396
22,50	•	215	107	18	0000080517
23,00	•	215	107	18	0000080728
23,50	•	215	107	18	0000081028
24,00	•	231	115	20	0000081459
24,50	•	231	115	20	0000081720
25,00	•	231	115	20	0000082020
26,00	•	231	115	20	0000082241
27,00	•	247	124	22	0000082391
28,00	•	247	124	22	0000088686
29,00	•	247	124	22	0000088736
30,00	•	247	124	22	0000088897
31,00	•	265	133	25	0001596189
32,00	•	265	133	25	0001482086
33,00	•	265	133	25	0001596230
34,00	•	284	142	28	0001482146
35,00	•	284	142	28	0001482207
36,00	•	284	142	28	0001482357
37,00	•	284	142	28	0001596390
38,00	•	305	152	31,5	0001482417
39,00	•	305	152	31,5	0001596451
40,00	•	305	152	31,5	0001482578
41,00	•	305	152	31,5	0001596511
42,00	•	305	152	31,5	0001482638
43,00	•	326	163	35,5	0001596661
44,00	•	326	163	35,5	0001482788
45,00	•	326	163	35,5	0001482849
46,00	•	326	163	35,5	0001482909
47,00	•	326	163	35,5	0001596722
48,00	•	347	174	40	0001483088
49,00	•	347	174	40	0001596882
50,00	•	347	174	40	0001483148

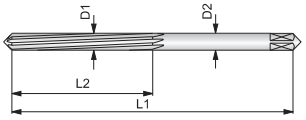
- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Cuadro de arrastre según DIN 10
- D2=D1 con tolerancia e9
- Estuches de escariadores en diferentes composiciones demedidas, ver en el programa de estuches de herramientas de corte

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Square according to DIN 10*
- *D2=D1 with tolerance e9*
- *Cases of reamers in sets of difererent sizes, see cutting tool sets programme*

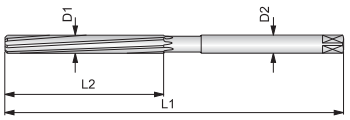
Escariador de mano. (Medidas en pulgadas), mango cilíndrico.

Hand reamer. (Diameter in inches), straight shank.

206	DIN 206	FORM B	L8°	H7	HSS		
B							



Ø 3/32”



> Ø 1/8”

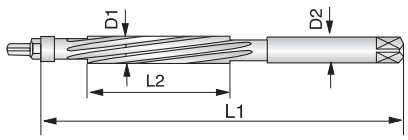
D1 nominal		D1 mm	L1 mm	L2 mm	a	Cod.
1/16	•	1,59	44	21	1,25	0000565903
3/32	•	2,38	58	29	2,10	0000566784
1/8	•	3,18	66	33	2,40	0000567415
5/32	•	3,97	76	38	3,00	0000982625
3/16	•	4,76	87	44	3,80	0000568428
1/4	•	6,35	100	50	4,90	0000569852
5/16	•	7,94	115	58	6,20	0000571360
3/8	•	9,53	133	66	8,00	0000572151
7/16	•	11,11	142	71	9,00	0000572854
1/2	•	12,70	152	76	10,00	0000573093
5/8	•	15,88	175	87	12,00	0000573706
3/4	•	19,05	201	100	16,00	0001282105
7/8	•	22,23	215	107	18,00	0000574156
1”	•	25,40	231	115	20,00	0000574216

- Para tolerancia de agujero H7
- Tolerancias de fabricación según DIN 1420
- Cuadrado de arrastre según DIN 10
- D2=D1 con tolerancia e9

- *Fit for holes tolerance H7*
- *Manufacturing tolerances according to DIN 1420*
- *Square according to DIN 10*
- *D2=D1 with tolerance e9*

Escariador de mano. Mango cilíndrico.
Hand reamer. Straight shank.

859	DIN 859	FORM B		L8°	Ajustable *Adjustable*	HSS		
B								



D1 mm		L1 mm	L2 mm	a	expansion mm	Cod.
5	•	87	30	4	0,10	0002178669
6	•	93	33	4,5	0,10	0002178729
7	•	107	38	5,6	0,10	0002178880
8	•	115	42	6,3	0,10	0002178930
9	•	124	46	7,1	0,10	0002179029
10	•	133	50	8	0,10	0002179179
11	•	142	51	9	0,15	0002179230
12	•	152	56	10	0,15	0002149406
13	•	152	56	10	0,15	0002179390
14	•	163	61	11,2	0,15	0002179450
15	•	163	61	11,2	0,15	0002179511
16	•	175	67	12,5	0,20	0002179661
17	•	175	67	12,5	0,20	0002179721
18	•	188	68	14	0,20	0001872744
19	•	188	68	14	0,20	0002179882
20	•	201	75	16	0,20	0002179942
21	•	201	75	16	0,20	0002180026
22	•	215	82	18	0,20	0002180177
23	•	215	82	18	0,20	0002180237
24	•	231	85	20	0,20	0002180518
25	•	231	85	20	0,20	0002180669
26	•	231	85	20	0,25	0002180729
27	•	247	94	22,4	0,25	0002180880
28	•	247	94	22,4	0,25	0002180940
29	•	247	94	22,4	0,25	0002181029
30	•	247	94	22,4	0,25	0002181189
31	•	265	99	25	0,30	0002181230
32	•	265	99	25	0,30	0002181390
33	•	265	99	28	0,30	0002181450
34	•	284	108	28	0,30	0002181511
35	•	284	108	28	0,30	0002181661
36	•	284	108	28	0,30	0002181721
37	•	284	108	31,5	0,30	0002181882
38	•	305	111	31,5	0,30	0002181942
39	•	305	111	31,5	0,30	0002182021
40	•	305	111	31,5	0,30	0001873806
42	•	305	111	31,5	0,30	0002182181
45	•	326	120	35,5	0,30	0002182242
50	•	347	131	40	0,30	0002182392

- Cuadrado de arrastre según DIN 10
- D2=D1 con tolerancia e9

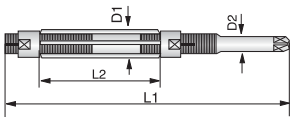
- *Square according to DIN 10*
- *D2=D1 with tolerance e9*

Escariador de mano. Mango cilíndrico.
Hand reamer. Straight shank.

JMC

EXTENSIBLE | JMC NORM./ STD | FORM A | Extensible *Expansion* | HSS

HNG



Gama/*Range* ømm	Gama/*Range* øinch		L1 mm	L2 mm	D2 mm	a	cuchillas *blades*	Cod.
6,4 - 7,2	1/4 - 9/32	•	111	32	4	3	4	0003379966
7,2 - 8	9/32 - 21/64	•	111	32	4,5	3,5	4	0003380041
8 - 9	21/64 - 23/64	•	111	32	5,5	4,3	5	0003380322
9 - 10	23/64 - 25/64	•	115	32	5,5	4,3	5	0003380472
10 - 11	25/64 - 7/16	•	120	35	6	4,9	5	0003380533
11 - 12	7/16 - 15/32	•	125	35	8	6,2	5	0003380753
12 - 13,5	15/32 - 17/32	•	130	42	8	6,2	5	0003380804
13,5 - 15,5	17/32 - 39/64	•	145	50	9	7	5	0003380964
15,5 - 18	39/64 - 45/64	•	165	60	10	8	5	0003381043
18 - 21	45/64 - 53/64	•	180	65	12	9	5	0003381103
21 - 24	53/64 - 61/64	•	190	70	12	10	5	0003381264
24 - 27,5	61/64 - 1" 5/64	•	205	75	14	11	5	0003381324
27,5 - 31,5	1" 5/64 - 1" 15/64	•	225	80	16	12	6	0003381475
31,5 - 37	1" 15/64 - 1" 29/641	•	240	90	18	14,5	6	0003381535
37 - 45	1" 29/64 - 1" 49/64	•	285	100	20	16	6	0003381695
45 - 55	1" 49/64 - 2" 5/32	•	320	109	25	20	6	0003376749
55 - 65	2" 5/32 - 2" 41/64	•	350	120	32	24	8	0003381756

• Cuadrado de arrastre según DIN 10 • *Square according to DIN 10*

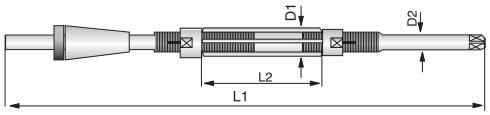
TUERCAS / JUEGO CUCHILLAS / *NUTS SPARE-BLADE*

JMC NORM./ STD | HSS

Gama/*Range* ømm	Gama/*Range* øinch		Cod. cuchillas / *blades*	Cod. tuercas / *nuts*
6,4 - 7,2	1/4 - 9/32	•	0003761201	0003437373
7,2 - 8	9/32 - 21/64	•	0003436421	0003437433
8 - 9	21/64 - 23/64	•	0003436581	0003438646
9 - 10	23/64 - 25/64	•	0003436641	0003681151
10 - 11	25/64 - 7/16	•	0003436702	0003437212
11 - 12	7/16 - 15/32	•	0003643534	0003437583
12 - 13,5	15/32 - 17/32	•	0003646471	0003790183
13,5 - 15,5	17/32 - 39/64	•	0003761351	0003790243
15,5 - 18	39/64 - 45/64	•	0003683216	0003437644
18 - 21	45/64 - 53/64	•	0003436852	0003437704
21 - 24	53/64 - 61/64	•	0003643684	0003642471
24 - 27,5	61/64 - 1" 5/64	•	0003436913	0003437864
27,5 - 31,5	1" 5/64 - 1" 15/64	•	0003437001	0003437915
31,5 - 37	1" 15/64 - 1" 29/64	•	0003436370	0003438004
37 - 45	1" 29/64 - 1" 49/64	•	0003437152	0003438154
45 - 55	1" 49/64 - 2" 5/32	•	0003715178	0003438214
55 - 67	2" 5/32 - 2" 41/64	•	0003646531	0003790735

Escariador de mano. Mango cilíndrico.
Hand reamer. Straight shank.

EXTENSIBLE + GUIA	JMC NORM./ STD	FORM A		Extensible + guia *Expansion + pilot*	HSS	



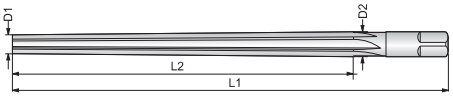
Gama/*Range* ømm	Gama/*Range* øinch		L1 mm	L2 mm	D2 mm	a	cuchillas *blades*	Cod.
8 - 9	21/64 - 23/64	•	175	35	4,5	3,7	5	0002183304
9 - 10	23/64 - 25/64	•	185	35	5,5	4,5	5	0001540747
10 - 11	25/64 - 7/16	•	195	40	5,9	4,5	5	0001540897
11 - 12	7/16 - 15/32	•	200	41	6,5	5	5	0001540958
12 - 13,5	15/32 - 17/32	•	220	44	7,5	5,7	5	0001541036
13,5 - 15,5	17/32 - 39/64	•	243	53	8	6,3	5	0001541197
15,5 - 18	39/64 - 45/64	•	274	61	9,5	7,5	5	0001541257
18 - 21	45/64 - 53/64	•	300	66	12	9,3	5	0001541318
21 - 24	53/64 - 61/64	•	320	70	13,5	10,3	5	0001541468
24 - 27,5	61/64 - 1” 5/64	•	350	83	15	11,5	6	0001541528
27,5 - 31,5	1” 5/64 - 1” 15/64	•	385	88	18,5	13,8	6	0001541689
31,5 - 37	1” 15/64 - 1” 29/641	•	424	91	21	16	6	0001541749
37 - 45	1” 29/64 - 1” 49/64	•	490	110	25	19	6	0002183515
45 - 55	1” 49/64 - 2” 5/32	•	600	128	32	24	6	0001545748
55 - 67	2” 5/32 - 2” 41/64	•	740	150	42	32	6	0002183676
67 - 80	2” 41/64 - 3” 5/32	•	830	170	45	33	6	0002183886

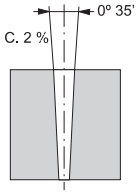
- Cuadrado de arrastre según DIN 10
- Con guia de centraje

- *Square according to DIN 10*
- *With pilot*

Escariador de mano cónico. Mango cilíndrico.
Hand taper pin reamer. Straight shank.

9	DIN 9	FORM A		C. 1:50 2%	HSS
A					





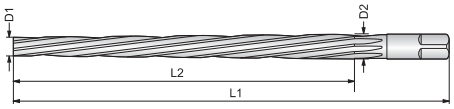
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	a	Cod.
1,2	•	1,1	1,74	50	32	2,4	0000671877
1,5	•	1,4	2,14	57	37	2,4	0000416205
2	•	1,9	2,86	68	48	2,4	0000416366
2,5	•	2,4	3,36	68	48	2,4	0000416426
3	•	2,9	4,06	80	58	3	0000416587
3,5*	•	3,4	4,66	87	63	3	0000416637
4	•	3,9	5,26	93	68	3,8	0000416797
4,5*	•	4,4	5,80	95	70	3,8	0000416858
5	•	4,9	6,36	100	73	4,9	0000416918
5,5*	•	5,4	7,20	118	90	4,9	0000417097
6	•	5,9	8,00	135	105	6,2	0000417157
6,5*	•	6,4	8,60	140	110	6,2	0000417218
7*	•	6,9	9,40	160	125	6,2	0000417368
8	•	7,9	10,80	180	145	8	0000417428
10	•	9,9	13,40	215	175	10	0000417589
12	•	11,8	16,00	255	210	11	0000672167
13*		12,8	17,00	255	210	12	0001682399
14*		13,8	18,00	255	210	12	0001682449
16		15,8	20,40	280	230	14,5	0000672227
20		19,8	24,80	310	250	18	0001682509
25		24,7	30,70	370	300	22	0001682660
30		29,7	36,10	400	320	24	0001682720
40		39,7	46,50	430	340	32	0001682871
50		49,7	56,90	460	360	39	0001682931

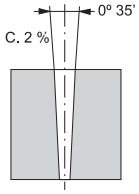
- Para pasadores cónicos según DIN 1, DIN 258, DIN 7977 y DIN 7978
- Cuadrado de arrastre según DIN 10
- * JMC Norm.

- *For taper pins according to DIN 1, DIN 258, DIN 7977 and DIN 7978*
- *Square according to DIN 10*
- ** JMC standard*

Escariador de mano cónico. Mango cilíndrico.
Hand taper pin reamer. Straight shank.

9	DIN 9	FORM B	L8°	C. 1:50 2%	HSS
B					





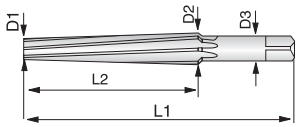
Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	a	Cod.
1,2	•	1,1	1,74	50	32	2,4	0000672448
1,5	•	1,4	2,14	57	37	2,4	0000417649
2	•	1,9	2,86	68	48	2,4	0000417790
2,5	•	2,4	3,36	68	48	2,4	0000417850
3	•	2,9	4,06	80	58	3	0000417910
3,5*	•	3,4	4,66	87	63	3	0000418099
4	•	3,9	5,26	93	68	3,8	0000418150
4,5*	•	4,4	5,80	95	70	3,8	0000418210
5	•	4,9	6,36	100	73	4,9	0000418360
5,5*	•	5,4	7,20	118	90	4,9	0000418421
6	•	5,9	8,00	135	105	6,2	0000418581
6,5*	•	6,4	8,60	140	110	6,2	0000418642
7*	•	6,9	9,40	160	125	6,2	0000418702
8	•	7,9	10,80	180	145	8	0000418852
10	•	9,9	13,40	215	175	10	0000418913
12	•	11,8	16,00	255	210	11	0001683170
13*	•	12,8	17,00	255	210	12	0001683231
14*	•	13,8	18,00	255	210	12	0001683391
16	•	15,8	20,40	280	230	14,5	0001683451
20	•	19,8	24,80	310	250	18	0001683502
25	•	24,7	30,70	370	300	22	0001683662
30	•	29,7	36,10	400	320	24	0001683722
40	•	39,7	46,50	430	340	32	0001683883
50	•	49,7	56,90	460	360	39	0001683933

- Para pasadores cónicos según DIN 1, DIN 258, DIN 7977 y DIN 7978
- Cuadrado de arrastre según DIN 10
- * JMC Norm.

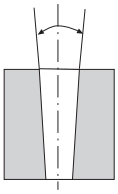
- *For taper pins according to DIN 1, DIN 258, DIN 7977 and DIN 7978*
- *Square according to DIN 10*
- ** JMC standard*

Escariador de mano cónico. Para Cono Morse, mango cilíndrico.
Hand socket reamer. *Straight shank.*

204	DIN 204	FORM D	L8°	HSS
D				



Cono Morse
Morse taper



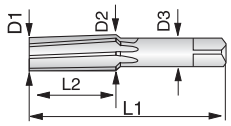
Cono Morse *Morse Taper*		D1 mm	D2 mm	L1 mm	L2 mm	D3 mm	a	Cod.
CM 0	•	6,55	9,72	93	61	8	6,2	0002197101
CM 1	•	9,57	12,86	102	66	10	8	0002197261
CM 2	•	14,73	18,68	121	79	14	11	0002197322
CM 3	•	20,01	24,83	146	96	20	16	0002197472
CM 4	•	26,23	32,41	179	119	25	20	0002197533
CM 5	•	37,87	45,77	222	150	31,5	24	0002197693
CM 6	•	54,17	65,02	300	208	45	35	0002197753

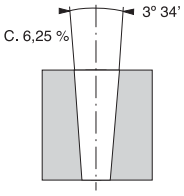
- Cuadrado de arrastre según DIN 10
- De acabado

- *Square according to DIN 10*
- *Finishing*

Escariador de mano. Cónico, mango cilíndrico.
Hand taper reamer. Straight shank.

CÓNICO 6,25%	JMC NORM./ STD	FORM B	L8°	C. 1:16 (NPT -BSPT)	HSS
B					





Ø nominal		D1 mm	D2 mm	L1 mm	L2 mm	D3 mm	a	Cod.
1/16	•	5,92	6,98	70	17	6	4,9	0001716898
1/8	•	8,02	9,09	70	17	7	5,5	0001650349
1/4	•	10,28	11,97	80	27	11	9	0001650400
3/8	•	13,70	15,39	85	27	12	9	0001717197
1/2	•	16,91	19,10	95	35	16	12	0001717318
3/4	•	22,23	24,42	105	35	20	16	0001717529
1"	•	27,97	30,66	130	43	25	20	0001717740

- Cuadrado de arrastre según DIN 10

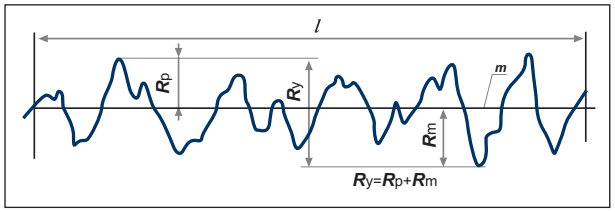
- *Square according to DIN 10*

Definición de rugosidades
Definition of measuring roughness

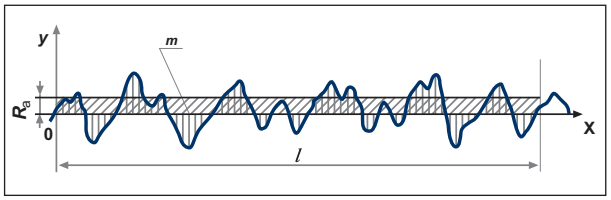
Las rugosidad superficial es el conjunto de irregularidades de la superficie real, definida convencionalmente en una sección donde los errores de forma y las ondulaciones han sido eliminados.
Surface roughness is a measure of the texture of a surface. It is quantified by the vertical deviations of a real surface from its ideal form.

Rt: Es la distancia entre el perfil más alto y el perfil más bajo. Es la medición más habitual.
***Rt:** The depth of roughness Rt is the maximum difference in measurement between the reference profile and basic profile. It is the most widely used measurement for determining surface roughness.*

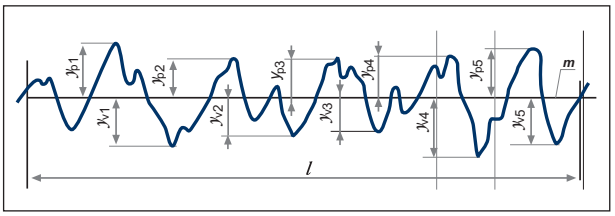
Rp: Distancia del punto más alto del perfil a la línea media, dentro de *l*. Ejemplo de selección de la medida correspondiente
***Rp:** The smoothing depth Rp is the distance between the mean profile and the reference profile. Of all measurements of roughness, the smoothing depth gives the best statement concerning the functional pattern of a surface, especially with regard to sliding and pressed surfaces.*



Ra: Es la media aritmética de los valores absolutos de las desviaciones del perfil, en los límites de la longitud básica *l*.
***Ra:** The mean roughness value Ra is the distance between one flattening line and the mean profile.*



Rz: Media de los valores absolutos de las alturas de las cinco crestas del perfil más altas y de las profundidades de los cinco valles del perfil más bajos, dentro de la longitud básica.
***Rz:** The calculated mean depth of roughness Rz is the arithmetical mean value, calculated from five single peak-to-valley heights, measured in five adjacent sections of the same length in Reference Section l.*



Rugosidad media *Average roughness* R_z µm	Valor medio de rugosidad *Mean roughness value* R_a µm	Profundidad de rugosidad *Depth of roughness* R_t µm	Suavizado de profundidad *Smoothing depth* R_p µm
0,05	0,01	0,05	0,01
0,1	0,02	0,1	0,02
0,2	0,04	0,2	0,04
0,4	0,08	0,4	0,08
0,8	0,16	0,8	0,16
1,6	0,32	1,6	0,32
3,2	0,63	3,2	0,63
6,3	1,25	6,3	1,25
10	2,5	10	2,5
20	5	20	5
40	10	40	10
80	20	80	20
160	40	160	40

Rugosidad µm *Roughness*	Clase de rugosidad *Roughness class*	Equival. DIN 140 *DIN 140*	Aplicaciones *Applications*
50 25	N12 N11	~	Forja, fundición, estampación. *Forging, casting, extruding.*
12,5 6,3	N10 N9	▽	Trabajos de desbaste, arranque basto de viruta *Rough work, drilling*
3,2 1,6	N8 N7	▽▽	Torneado fino, escariado, rectificado, brochado *Fine turning, reaming, grinding, broaching*
0,8 0,4	N6 N5	▽▽▽	Escariado, rectificado, esmerilado *Reaming, grinding, burnishing*
0,2 0,1	N4 N3	▽▽▽▽	Rectificado fino, bruñido *Honing, polishing*
0,005 0,0025	N2 N1	▽▽▽▽	Lapeado *Lapping*

Ejemplos de equivalencias entre las tolerancias de escariador según DIN 1420 y medidas centesimales (1/100) de escariadores JMC

Examples of equivalence between reamer tolerances according to DIN 1420 and intermediates JMC reamers sizes (1/100)

Tolerancia *Tolerance*	Diámetros nominales / *Nominal diameter*									
	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16
D 10	2,04	3,04	4,06	5,06	6,06	8,08	10,08	12,10	14,10	16,10
E 8	2, 02	3,02	4,03	5,03	6,03					
E 9	2,03	3,03	4,04	5,04	6,04	8,05	10,05	12,06	14,06	16,06
F 7	2,01	3,01				8,02	10,02			
F 8			4,02	5,02	6,02			12,03	14,03	16,03
G 7			4,01	5,01	6,01					
H 6	2,00	3,00								
H 7								12,01	14,01	16,01
H 8			4,01	5,01	6,01	8,01	10,01			
H 9			4,02	5,02	6,02	8,02	10,02	12,03	14,03	16,03
M 7								11,99	13,99	15,99
P 7								11,98	13,98	15,98

Ejemplo de selección de la medida correspondiente

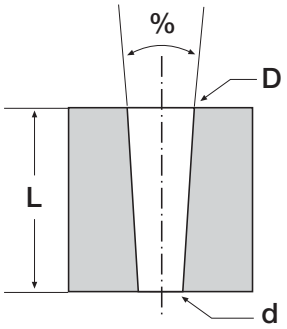
Example how to choose the corresponding size

Medida de escariador según Tol. DIN 1420* *Reamer size according to DIN 1420**			Medida de escariador cent. (1/100) JMC *Intermediate JMC reamer size (1/100)*			
Ø nominal *nominal Ø*	Tolerancia *Tolerance*	Campo Tol. *Tol. limits*	Ø 1/100	Campo Tol. *Tol. limits*		
		+15 µ			max./*high*	5,015
5	H8		Ø 5,01	+0,004 µ		5,014
		+8 µ		+0 µ	min./*low*	5,010
						5,008

* Ver tabla de tolerancias según DIN 1420 (pág. 487)

* *See tables of tolerances according to DIN 1420 (pag. 487)*

Cálculo de conicidad y ángulo para escariadores cónicos
Taper and angle calulation for conical reamers



$$\text{CONICIDAD } \% \text{ } \textit{TAPER} = \frac{D - d}{L} \times 100$$

Tabla de los principales ángulos y conicidades
Table of main angles and tapers

%Conicidad % Taper	Taper	α	%Conicidad % Taper	Taper	α	%Conicidad % Taper	Taper	α
1	1:100	0" 34'	10*	1:10*	5º 42'	25	1:4	14º 20'
2*	1:50*	1" 8'	10,5		6º	28		16º
3	3:100	1" 43'	11		6º 20'	30		17º
4	1:25	2" 16'	12	3:25	6º 50'	40		22º 40'
5*	1:20*	2" 51'	13		7º 25'	50	1:2	28º 05'
5,25*		3º	14		8º	60		33º 25'
6	3:50	3º 25'	15	3:20	8º 35'	70		38º 35'
6,25*	1:16*	3º 34'	16		9º 10'	80		43º 40'
7	7:100	4º	18		10º 20'	90		48º 30'
8*	2:25*	4º 34'	20	1:5	11º 30'	100	1:1	53º 10'
9	9:100	5º	21		12º			

* Normal / *Standar*

Tolerancias de los escariadores DIN 1420.
Tolerances of reamers DIN 1420.

Diámetro nominal *Nominal diameter* D1 mm		Tolerancias máxima y mínima permitidas en el escariador en µm. *Maximum and minimum tolerances allowed µm* Campo de tolerancias del taladro / *Range of hole tolerances*								
desde/from	hasta/up to	A9	A11	B8	B9	B10	B11	C8	C9	C10	C11
1	3	+291 +282	+321 +300	+151 +146	+161 +152	+174 +160	+191 +170	+ 71 + 66	+ 81 + 72	+ 94 + 80	+111 + 90
3	6	+295 +284	+333 +306	+155 +148	+165 +154	+180 +163	+203 +176	+ 85 + 78	+ 95 + 84	+110 + 93	+133 +106
6	10	+310 +297	+356 +324	+168 +160	+180 +167	+199 +178	+226 +194	+ 98 + 90	+110 + 97	+129 +108	+156 +124
10	18	+326 +310	+383 +344	+172 +162	+186 +170	+209 +184	+243 +204	+117 +107	+131 +115	+154 +129	+188 +149
18	30	+344 +325	+410 +364	+188 +176	+204 +185	+231 +201	+270 +224	+138 +126	+154 +135	+181 +151	+220 +174
30	40	+362 +340	+446 +390	+203 +189	+222 +200	+255 +220	+306 +250	+153 +139	+172 +150	+205 +170	+256 +200
40	50	+372 +350	+456 +400	+213 +199	+232 +210	+265 +230	+316 +260	+163 +149	+182 +160	+215 +180	+266 +210
50	65	+402 +376	+501 +434	+229 +212	+252 +226	+292 +250	+351 +284	+179 +162	+202 +176	+242 +200	+301 +234
65	80	+422 +396	+521 +454	+239 +222	+262 +236	+302 +260	+361 +294	+189 +172	+212 +186	+252 +210	+311 +244
80	100	+453 +422	+567 +490	+265 +246	+293 +262	+339 +290	+407 +330	+215 +196	+243 +212	+289 +240	+357 +280
100	120	+483 +452	+597 +520	+285 +266	+313 +282	+359 +310	+427 +350	+225 +206	+253 +222	+299 +250	+367 +290
120	140	+545 +510	+672 +584	+313 +290	+345 +310	+396 +340	+472 +384	+253 +230	+285 +250	+336 +280	+412 +324
140	160	+605 +570	+732 +644	+333 +310	+365 +330	+416 +360	+492 +404	+263 +240	+295 +260	+346 +290	+422 +334
160	180	+665 +630	+792 +704	+363 +340	+395 +360	+446 +390	+522 +434	+283 +260	+315 +280	+366 +310	+442 +354

desde/from	hasta/up to	D8	D9	D10	D11	E7	E8	E9	F6	F7	F8	F9	G6	G7
1	3	+ 31 + 26	+ 41 + 32	+ 54 + 40	+ 71 + 50	+ 22 + 18	+ 25 + 20	+ 35 + 26	+ 11 + 8	+ 14 + 10	+ 17 + 12	+ 27 + 18	+ 7 + 4	+ 10 + 6
3	6	+ 45 + 38	+ 55 + 44	+ 70 + 53	+ 93 + 66	+ 30 + 25	+ 35 + 28	+ 45 + 34	+ 16 + 13	+ 20 + 15	+ 25 + 18	+ 25 + 24	+ 10 + 7	+ 14 + 9
6	10	+ 58 + 50	+ 70 + 57	+ 89 + 68	+116 + 84	+ 37 + 31	+ 43 + 35	+ 55 + 42	+ 20 + 16	+ 25 + 19	+ 31 + 23	+ 43 + 30	+ 12 + 8	+ 17 + 11
10	18	+ 72 + 62	+ 86 + 70	+109 + 84	+143 +104	+ 47 + 40	+ 54 + 44	+ 68 + 52	+ 25 + 21	+ 31 + 24	+ 38 + 28	+ 52 + 36	+ 15 + 11	+ 21 + 14
18	30	+ 93 + 81	+109 + 90	+136 +106	+175 +129	+ 57 + 49	+ 68 + 56	+ 84 + 65	+ 31 + 26	+ 37 + 29	+ 48 + 36	+ 64 + 45	+ 18 + 13	+ 24 + 16
30	50	+113 + 99	+132 +110	+165 +130	+216 +160	+ 71 + 62	+ 83 + 69	+102 + 80	+ 38 + 32	+ 46 + 37	+ 58 + 44	+ 77 + 55	+ 22 + 16	+ 30 + 21
50	80	+139 +122	+162 +136	+202 +160	+261 +194	+ 85 + 74	+ 99 + 82	+122 + 96	+ 46 + 39	+ 55 + 44	+ 69 + 52	+ 92 + 66	+ 26 + 19	+ 35 + 24
80	120	+165 +146	+193 +162	+239 +190	+307 +230	+101 + 88	+117 + 98	+145 +114	+ 54 + 46	+ 65 + 52	+ 81 + 62	+109 + 78	+ 30 + 22	+ 41 + 28
120	180	+198 +175	+230 +195	+281 +225	+357 +269	+119 +105	+138 +115	+170 +135	+ 64 + 55	+ 77 + 63	+ 96 + 73	+128 + 93	+ 35 + 26	+ 48 + 34

desde/from	hasta/up to	H6	H7*	H8	H9	H10	H11	H12	J6	J7	J8	JS6	JS7	JS8	JS9
1	3	+ 5 + 2	+ 8 + 4	+ 11 + 6	+ 21 + 12	+ 34 + 20	+ 51 + 30	+ 85 + 50	+ 1 - 2	+ 2 - 2	+ 3 - 2	+ 2 - 1	+ 3 - 1	+ 4 - 1	+ 8 - 1
3	6	+ 6 + 3	+ 10 + 5	+ 15 + 8	+ 25 + 14	+ 40 + 23	+ 63 + 36	+102 + 60	+ 3 0	+ 4 - 1	+ 7 0	+ 2 - 1	+ 4 - 1	+ 6 - 1	+ 10 - 1
6	10	+ 7 + 3	+ 12 + 6	+ 18 + 10	+ 30 + 17	+ 49 + 28	+ 76 + 44	+127 + 74	+ 3 - 1	+ 5 - 1	+ 8 0	+ 3 - 1	+ 5 - 1	+ 7 - 1	+ 12 - 1
10	18	+ 9 + 5	+ 15 + 8	+ 22 + 12	+ 36 + 20	+ 59 + 34	+ 93 + 54	+153 + 90	+ 4 0	+ 7 0	+ 10 0	+ 3 - 1	+ 6 - 1	+ 9 - 1	+ 15 - 1
18	30	+ 11 + 6	+ 17 + 9	+ 28 + 16	+ 44 + 25	+ 71 + 41	+110 + 64	+178 +104	+ 6 + 1	+ 8 0	+ 15 + 3	+ 4 - 1	+ 7 - 1	+ 11 - 1	+ 18 - 1
30	50	+ 13 + 7	+ 21 + 12	+ 33 + 19	+ 52 + 30	+ 85 + 50	+136 + 80	+212 +124	+ 7 + 1	+ 10 + 1	+ 18 + 4	+ 5 - 1	+ 8 - 1	+ 13 - 1	+ 21 - 1
50	80	+ 16 + 9	+ 25 + 14	+ 39 + 22	+ 62 + 36	+102 + 60	+161 + 94	+255 +150	+ 10 + 3	+ 13 + 2	+ 21 + 4	+ 6 - 1	+10 - 1	+ 16 - 1	+ 25 - 1
80	120	+ 18 + 10	+ 29 + 16	+ 45 + 26	+ 73 + 42	+119 + 70	+187 +110	+297 +174	+ 12 + 4	+ 16 + 3	+ 25 + 6	+ 7 - 1	+ 12 - 1	+ 18 - 1	+ 30 - 1
120	180	+ 21 + 12	+ 34 + 20	+ 53 + 30	+ 85 + 50	+136 + 80	+212 +124	+340 +200	+ 14 + 5	+ 20 + 6	+ 31 + 8	+ 8 - 1	+ 14 0	+ 22 - 1	+ 35 0

Tolerancias de los escariadores DIN 1420.
Tolerances of reamers DIN 1420.

Diámetro nominal *Nominal diameter* D1 mm		Tolerancias máxima y mínima permitidas en el escariador en µm. *Maximum and minimum tolerances allowed µm* Campo de tolerancias del taladro / *Range of hole tolerances*												
desde/from	hasta/up to	K6	K7	K8	M6	M7	M8	N6	N7	N8	N9	N10	N11	P6	P7
1	3	-1 -4	-2 -6	- 3 - 8	- 3 - 6	- 4 - 8		- 5 - 8	- 6 -10	- 7 -12	- 8 -17	-10 -24	-13 - 34	- 7 -10	- 8 -12
3	6	0 -3	+1 -4	+ 2 - 5	- 3 - 6	- 2 - 7	- 1 - 8	- 7 -10	- 6 -11	- 5 -12	- 5 -16	- 8 -25	-12 - 39	-11 -14	-10 -15
6	10	0 -4	+2 -4	+ 2 - 6	- 5 - 9	- 3 - 9	- 3 -11	- 9 -13	- 7 -13	- 7 -15	- 6 -19	- 9 -30	-14 - 46	-14 -18	-12 -18
10	18	0 -4	+3 -4	+ 3 - 7	- 6 -10	- 3 -10	- 3 -13	-11 -15	- 8 -15	- 8 -18	- 7 -23	-11 -36	-17 - 56	-17 -21	-14 -21
18	30	0 -5	+2 -6	+ 5 - 7	- 6 -11	- 4 -12	- 1 -13	-13 -18	-11 -19	- 8 -20	- 8 -27	-13 -43	-20 - 66	-20 -25	-18 -26
30	50	0 -6	+3 -6	+ 6 - 8	- 7 -13	- 4 -13	- 1 -15	-15 -21	-12 -21	- 9 -23	-10 -32	-15 -50	-24 - 80	-24 -30	-21 -30
50	80	+1 -6	+4 -7	+ 7 -10	- 8 -15	- 5 -16	- 2 -19	-17 -24	-14 -25	-11 -28	-12 -38	-18 -60	-29 - 96	-29 -36	-26 -37
80	120	0 -8	+4 -9	+ 7 -12	-10 -18	- 6 -19	- 3 -22	-20 -28	-16 -29	-13 -32	-14 -45	-21 -70	- 33 -110	-34 -42	-30 -43
120	180	0 -9	+6 -8	+10 -13	-12 -21	- 6 -20	- 2 -25	-24 -33	-18 -32	-14 -37	-15 -50	-24 -80	- 38 -126	-40 -49	-34 -48

desde/from	hasta/up to	R6	R7	S6	S7	T6	U6	U7	U10	X10	X11	Z10	Z11
1	3	-11 -14	-12 -16	-15 -18	-16 -20		-19 -22	-20 -24				-32 -46	
3	6	-14 -17	-13 -18	-18 -21	-17 -22		-22 -25	-21 -26	-31 -48			-43 -60	
6	10	-18 -22	-16 -22	-22 -26	-20 -26		-27 -31	-25 -31	-37 -58			-51 -72	
10	14	22 -26	-19 -26	-27 -31	-24 -31		-32 -36	-29 -36	-44 -69			-61 -86	
14	18	-22 -26	-19 -26	-27 -31	-24 -31		-32 -36	-29 -36	-44 -69	-56 -81		-71 -96	
18	24	-26 -31	-24 -32	-33 -38	-31 -39		-39 -44	-37 -45		-67 -97		-86 -116	
24	30	-26 -31	-24 -32	-33 -38	-31 -39	-39 -44	-46 -51	-44 -52		-77 -107		-101 -131	-108 -154
30	40	-32 -38	-29 -38	-41 -47	-38 -47	-46 -52	-58 -64	-55 -64		-95 -130		-127 -162	-136 -192
40	50	-32 -38	-29 -38	-41 -47	-38 -47	-52 -58	-68 -74	-65 -74	-85 -120	-112 -147		-151 -186	-160 -216
50	65	-38 -45	-35 -46	-50 -57	-47 -58	-63 -70	-84 -91	-81 -92	-105 -147	-140 -182	-151 -218	-190 -232	-201 -268
65	80	-40 -47	-37 -48	-56 -63	-53 -64	-72 -79	- 99 -106	-96 -107	-120 -162	-164 -206	-175 -242	-228 -270	-239 -306
80	100	-48 -56	-44 -57	-68 -76	-64 -77	-88 -96	-121 -129	-117 -130	-145 -194	-199 -248	-211 -288	-279 -328	-291 -368
100	120	-51 -59	-47 -60	-76 -84	-72 -85	-101 -109	-141 -149	-137 -150	-165 -214	-231 -280	-243 -320	-331 -380	-343 -420
120	140	-60 -69	-54 -68	-89 -98	-83 -97	-119 -128	-167 -176	-161 -175	-194 -250	-272 -328	-286 -374	-389 -445	-403 -491
140	160	-62 -71	-56 -70	-97 -106	-91 -105	-131 -140	-187 -196	-181 -195	-214 -270	-304 -360	-318 -406	-439 -495	-453 -541
160	180	-65 -74	-59 -73	-105 -114	-99 -113	-143 -152	-207 -216	-201 -215	-234 -290	-334 -390	-348 -436	-489 -545	-503 -591

Avellanadores
Countersinking-Counterbores

Condiciones de corte recomendadas
Recommended cutting conditions

• Los valores de corte indicados son solo orientativos. En condiciones favorables es posible un aumento de los mismos mientras que en condiciones desfavorables se recomienda una reducción.

• Para avellanadores recubiertos (TiN), el avance no debe ser inferior al valor recomendado. Realizar el avellanado de una sola vez.

• *The indicated cutting values are only approximate. Working with favorable conditions these values can be increased whereas working with unfavorable conditions we recommend to bring them down.*

• *For TiN coated countersinks the feed must not be under the recommended conditions. The countersinking must be done in one single operation.*

MD = Carbide

		Vel. Corte *Cut. speed*	Avance (mm/rev.) / ***Feed*** *(mm/U)* Diámetro del avellanador (mm) / ***Countersink diameter*** *(mm)*								Refrigerante *Coolant*	
		(m/min.)	< Ø 4	Ø 4-6	Ø 6-10	Ø 10-16	Ø 16-20	Ø 20-25	Ø 25-40	Ø 40-63	HSSE	MD / *C*
GR1	1	20 - 25	0,07	0,09	0,12	0,14	0,16	0,20	0,25	0,35	6	6
	2	15 - 20	0,05	0,07	0,09	0,11	0,13	0,15	0,20	0,30	1-2 / 6	1-2 / 6
	3	15 - 20	0,05	0,07	0,09	0,11	0,13	0,15	0,20	0,30	6	6
	4	15 - 20	0,05	0,07	0,09	0,11	0,13	0,15	0,20	0,30	1-2 / 6	1-2 / 6
	5	12 - 17	0,04	0,06	0,08	0,10	0,12	0,14	0,18	0,25	1-2 / 6	1-2 / 6
	6	18 - 20	0,06	0,08	0,10	0,12	0,14	0,18	0,22	0,30	1-2	1-2
GR2	1	6 -10	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,16	1-2	1-2
	2	2 - 5	0,03	0,03	0,04	0,05	0,06	0,08	0,12	0,14	1-2	1-2
	3	2 - 5	0,03	0,03	0,04	0,05	0,06	0,08	0,12	0,14	1-2	1-2
	4	2 - 5	0,03	0,03	0,04	0,05	0,06	0,08	0,12	0,14	1-2 / 6	1-2 / 6
	5	2 - 5	0,03	0,03	0,04	0,05	0,06	0,08	0,12	0,14	1-2 / 6	1-2 / 6
	6	17 - 22	0,06	0,08	0,10	0,12	0,14	0,18	0,22	0,30	1-2 / 6	1-2 / 6
	7	12 - 17	0,04	0,06	0,08	0,10	0,12	0,14	0,18	0,25	1-2 / 6	1-2 / 6
	8	12 - 15	0,04	0,06	0,08	0,10	0,12	0,14	0,18	0,25	1-2	1-2
GR3	1	12 - 17	0,04	0,06	0,08	0,10	0,12	0,14	0,18	0,25	1-2 / 3-4	1-2 / 3-4
	2	17 - 22	0,06	0,08	0,10	0,12	0,14	0,18	0,22	0,30	1-2 / 3-4	1-2 / 3-4
	3	15 - 25	0,05	0,07	0,09	0,11	0,13	0,15	0,20	0,30	1-2 / 3-4	1-2 / 3-4
	4	6 - 8	0,03	0,03	0,04	0,05	0,06	0,08	0,12	0,14	1-2 / 3-4	1-2 / 3-4
GR4	1	15 - 24	0,06	0,07	0,08	0,12	0,16	0,20	0,25	0,28	7	7
	2	9 - 13	0,06	0,07	0,08	0,12	0,16	0,20	0,25	0,28	6	6
	3	9 - 13	0,06	0,07	0,08	0,12	0,16	0,20	0,25	0,28	6	6
	4	6 - 10	0,04	0,06	0,08	0,10	0,12	0,14	0,18	0,25	6	6
GR5	1	25 - 35	0,06	0,07	0,09	0,12	0,14	0,16	0,18	0,22	5 / 6	6
	2	30 - 50	0,10	0,12	0,14	0,18	0,20	0,24	0,30	0,40	5 / 6	6
	3	40 - 60	0,10	0,12	0,14	0,18	0,20	0,24	0,30	0,40	6	6
	4	25 - 35	0,08	0,10	0,12	0,14	0,16	0,18	0,24	0,30	5	6
	5	20 - 30	0,06	0,07	0,09	0,12	0,14	0,16	0,18	0,22	5	6
	6	20 - 30	0,06	0,07	0,09	0,12	0,14	0,16	0,18	0,22	5	6
GR6	1	50 - 90	0,10	0,12	0,14	0,18	0,22	0,26	0,30	0,40	6	6
	2	40 - 60	0,10	0,12	0,14	0,18	0,22	0,26	0,30	0,40	6	6
	3	25 - 40	0,08	0,10	0,12	0,14	0,18	0,22	0,26	0,30	6	6
	4	10 - 30	0,08	0,10	0,12	0,14	0,18	0,22	0,26	0,30	5 / 6	5 / 6
GR7	1	60 - 100	0,10	0,13	0,16	0,20	0,24	0,28	0,32	0,40	7	7
	2	50 - 80	0,10	0,13	0,16	0,20	0,24	0,28	0,32	0,40	7	7
GR8	1	10 - 15	0,07	0,09	0,12	0,14	0,16	0,20	0,25	0,35	3-4 / 6	3-4 / 6
	2	4 - 6	0,04	0,06	0,08	0,10	0,12	0,14	0,18	0,25	3-4	3-4
	3	2 - 5	0,03	0,03	0,04	0,05	0,06	0,08	0,12	0,14	3-4	3-4
GR9	1	4 - 6	0,05	0,06	0,08	0,10	0,12	0,14	0,16	0,20	3-4	3-4
	2	4 - 6	0,04	0,05	0,07	0,09	0,11	0,13	0,15	0,19	3-4	3-4
	3	2 - 5	0,03	0,04	0,06	0,08	0,10	0,12	0,14	0,18	3-4	3-4
	4	2 - 5	0,03	0,04	0,06	0,08	0,10	0,12	0,14	0,18	3-4	3-4
GR10	1	20 - 25	0,07	0,09	0,11	0,13	0,15	0,17	0,20	0,25	5 / 6	5 / 6
	2	20 - 25	0,07	0,09	0,11	0,13	0,15	0,17	0,20	0,25	5 / 6	5 / 6
GR11	1	35 - 70	0,10	0,12	0,14	0,18	0,20	0,24	0,30	0,40	7	7
	2	12 - 24	0,04	0,06	0,08	0,10	0,12	0,16	0,20	0,25	7	7
	3	2 - 8	0,03	0,04	0,06	0,08	0,10	0,12	0,14	0,18	7	7

Avellanadores cónicos / *Countersinks*

Norma DIN / *DIN Standard*	335	335	335	335	JMC	JMC	334	334
Forma / *Form*	C	C	C	D	Un corte*	Rebabador*	C	D
Ángulo / *Angle*	90°	90°	90°	90°	90°	90°	60°	60°
Ranuras / *Flutes*	Z=3	Z=3	Z=3	Z=3	Z=1	Agujero *Hole*	Z=3	Z=3
Mango / *Shank*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cono Morse *Morse taper*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cono Morse *Morse taper*
Recubrimiento / *Coating*		TiN						
Material / *Material*	HSSE Co5	HSSE Co5	MD integral *Solid carbide*	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5	HSSE Co5
Gama / *Range*	Ø4,3...31	Ø6,3...31	Ø6,3...31	Ø25...80	Ø10...48	Ø6,3...64	Ø6,3...25	Ø25...80
Página / *Page*	492	493	494	494	495	495	496	496

** Single cut* **Deburring*

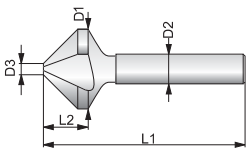
Avellanadores planos / *Counterbores*

Norma DIN / *DIN Standard*	373	373	JMC				Ejecuciones especiales para aeronaútica *Special executions for aeronautic*
Ajuste / *Adjust*	Fino*	Medio*	Fino*				
Forma / *Form*	Guia *Pilot*	Guia *Pilot*	Guia *Pilot*				
Ranuras / *Flutes*	Z=3	Z=3	Z=4				
Mango / *Shank*	Cilíndrico *Straight*	Cilíndrico *Straight*	Cono Morse *Morse taper*				HSSE - MD Integral PCD - Placa MD
Recubrimiento / *Coating*							
Material / *Material*	HSSE Co5	HSSE Co5	HSSE Co5				HSSE - Solid Carbide PCD - Carbide tipped
Gama / *Range*	M3...14	M3...12	M12...20				
Página / *Page*	497	497	498				**Bajo demanda / *Upon request***

** Fine* ** Medium* ** Fine*

Avellanador cónico 90º tres cortes. Mango cilíndrico.
Three flute countersink 90º. Straight shank.

335	DIN 335	FORM C	Z=3	HSSE Co5	90°	
C						



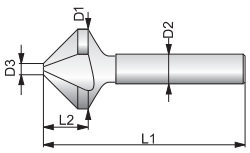
D1 mm z9		D3 mm	L1 mm	L2 mm	D2 mm h9	Cod.
4,3	•	1,3	40	3,5	4	0000435029
5	•	1,5	40	4	4	0000435179
5,3	•	1,5	40	4	4	0000435230
5,8	•	1,5	45	4,5	5	0000435390
6	•	1,5	45	4,5	5	0000435450
6,3	•	1,5	45	5	5	0000435511
7	•	1,8	50	5	6	0000435661
7,3	•	1,8	50	5,6	6	0000435722
8	•	2	50	5,6	6	0000435882
8,3	•	2	50	6	6	0000435942
9,4	•	2,2	50	6,7	6	0000436021
10	•	2,5	50	7,1	6	0000436182
10,4	•	2,5	50	7,1	6	0000436232
11,5	•	2,8	56	7,5	8	0000436392
12,4	•	2,8	56	8	8	0000436453
13,4	•	2,9	56	8,5	8	0000436513
15	•	3,2	60	9	10	0000436663
16,5	•	3,2	60	10	10	0000436724
19	•	3,5	63	11,2	10	0000436884
20,5	•	3,5	63	12,5	10	0000436945
23	•	3,8	67	13,2	10	0000437023
25	•	3,8	67	15	10	0000437184
31	•	4,2	71	18	12	0000536529

- Destalonado radial
- Avellanados de precisión
- Trabajos sin vibraciones y con buen centraje
- Avellanados finos según DIN 74 hoja1
- Para tornillos DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 y DIN 7516
- Nuevos estuches de avellanadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte
- Condiciones de corte, ver página 472

- *Radial relief*
- *Precision countersinking*
- *Works without vibrations and with satisfactory centering*
- *Countersinking according to DIN 74 sheet 1 shape Af (Fine)*
- *For screws DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 and DIN 7516*
- *New cases of countersinks in sets of difererent sizes, see cutting tool sets programme*
- *Cutting conditions, see page 472*

Avellanador cónico 90º tres cortes. Mango cilíndrico.
Three flute countersink 90º. Straight shank.

335	DIN 335	FORM C	Z=3	HSSE Co5	90°	
C						
TiN						



D1 mm z9		D3 mm	L1 mm	L2 mm	D2 mm h9	Cod.
6,3	•	1,5	45	5	5	0001327082
8,3	•	2	50	6	6	0001327142
10,4	•	2,5	50	7,1	6	0001327203
12,4	•	2,8	56	8	8	0001327353
16,5	•	3,2	60	10	10	0001327414
20,5	•	3,5	63	12,5	10	0001327574
25	•	3,8	67	15	10	0001327634
31	•	4,2	71	18	12	0001379610

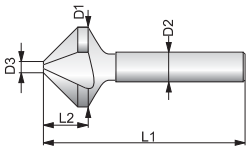
- Destalonado radial
- Avellanados de precisión
- Trabajos sin vibraciones y con buen centraje
- Avellanados finos según DIN 74 hoja1
- Para tornillos DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 y DIN 7516
- Nuevos estuches de avellanadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte
- Condiciones de corte, ver página 472

- *Radial relief*
- *Precision countersinking*
- *Works without vibrations and with satisfactory centering*
- *Countersinking according to DIN 74 sheet 1 shape Af (Fine)*
- *For screws DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 and DIN 7516*
- *New cases of countersinks in sets of difererent sizes, see cutting tool sets programme*
- *Cutting conditions, see page 472*

Avellanador cónico 90º tres cortes de Metal Duro integral.
Three flute countersink 90º solid carbide.

Mango cilíndrico / *Straight shank*

335	DIN 335	FORM C	Z=3	MD integral *Solid Carbide*	90°
C					



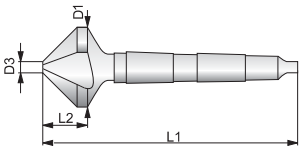
D1 mm z9		D3 mm	L1 mm	L2 mm	D2 mm h9	Cod.
6,3	•	1,5	45	5	5	0001877805
8,3	•	2	50	6	6	0001877966
10,4	•	2,5	50	7,1	6	0001878045
12,4	•	2,8	56	8	8	0001878105
16,5	•	3,2	60	10	10	0001878326
20,5	•	3,5	63	12,5	10	0001878476
25	•	3,8	67	15	10	0001878536
31	•	4,2	71	18	12	0001878697

- Destalonado radial
- Avellanados de precisión
- Trabajos sin vibraciones y con buen centraje
- Avellanados finos según DIN 74 hoja1
- Para tornillos DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 y DIN 7516

- *Radial relief*
- *Precision countersinking*
- *Works without vibrations and with satisfactory centering*
- *Countersinking according to DIN 74 sheet 1 shape Af (Fine)*
- *For screws DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 and DIN 7516*

Avellanador cónico 90º tres cortes. Mango Cono Morse
Three flute countersink 90º. Morse Taper shank

335	DIN 335	FORM D	Z=3	HSSE Co5	90°
D					



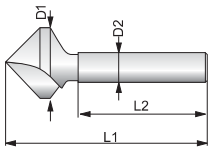
D1 mm z9		D3 mm	L1 mm	L2 mm	CM/MT	Cod.
25	•	3,2	105	-	2	0001648289
28	•	4	112	-	2	0001773941
30	•	3,5	112	-	2	0001774020
31	•	3,5	112	-	2	0001774180
34	•	3,5	133	-	2	0001416358
37	•	4,5	145	-	2	0001774230
40	•	4,5	160	-	3	0001737987
50	•	5	153	-	3	0001774391
63	•	10	167	-	4	0001774451
80	•	14	229	-	4	0001774512

- Destalonado radial
- Avellanados de precisión
- Trabajos sin vibraciones y con buen centraje
- Avellanados finos según DIN 74 hoja1
- Para tornillos DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 y DIN 7516

- *Radial relief*
- *Precision countersinking*
- *Works without vibrations and with satisfactory centering*
- *Countersinking according to DIN 74 sheet 1 shape Af (Fine)*
- *For screws DIN 963, DIN 964, DIN 965, DIN 966, DIN 7513 and DIN 7516*

Avellanador cónico 90º un corte. Mango cilíndrico.
Single flute countersink 90º. Straight shank.

JMC	JMC NORM./ STD	FORM C	Z=1	HSSE Co5	90°	
Un corte						



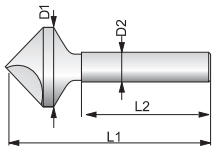
D1 mm		L1 mm	L2 mm	D2 mm h9	Cod.
10	•	54	-	6	0001798768
12	•	54	-	8	0001798828
16	•	60	-	10	0001799067
20	•	63	-	10	0001799128
25	•	66	-	12	0001799278
31	•	71	-	12	0001799339
37	•	76	-	12	0001799499

- Para madera y plásticos duros
- Fácil reafilado
- Trabajos sin vibraciones y con buen centraje

- *For wood and hard plastics*
- *Easy to resharp*
- *Works without vibrations and with satisfactory centering*

Avellanador-rebabador 90º. Mango cilíndrico
De-Burring tool 90º. Straight shank

JMC	JMC NORM./ STD	FORM C	Agujero *Hole*	HSSE Co5	90°		
Rebabador							



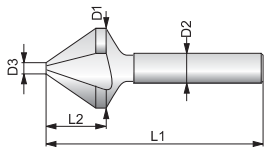
D1 mm		Capacidad/*Range* Ø mm	L1 mm	L2 mm	D2 mm h9	Cod.
10	•	3 - 10	45	-	6	0001782896
14	•	5 - 14	66	-	8	0001782957
21	•	16 - 21	71	-	10	0001783036
28	•	18 - 28	90	-	12	0001783196
35	•	10 - 35	102	-	15	0001783256

- Para metales de facil mecanización y plásticos
- Para desbarbado de pequeños chaflanes
- Buenos acabados
- Nuevos estuches de avellanadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

- *For light metals and plastics*
- *For deburring and small chamfers*
- *Satisfactory surface finish*
- *New cases of countersinks in sets of difererent sizes, see cutting tool sets programme*

Avellanador cónico 60º tres cortes. Mango cilíndrico.
Three flute countersink 60º. Straight shank.

334	DIN 334	FORM C	Z=3	HSSE Co5	60°	
C						



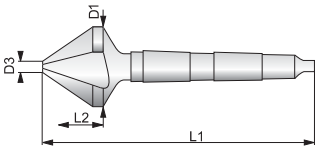
D1 mm z9		D3 mm	L1 mm	L2 mm	D2 mm h9	Cod.
6,3	•	1,6	47	-	5	0001774722
8,3	•	1,8	52	-	6	0001774883
12,4	•	-	56	-	8	0001774943
16,5	•	-	63	-	10	0001416419
20,5	•	-	67	-	10	0001775022
25	•	-	71	-	10	0001648490

- Destalonado radial
- Avellanados de precisión en agujeros para rosca
- Trabajos sin vibraciones y con buen centraje
- Condiciones de corte, ver página 472

- *Radial relief*
- *Precision countersinking when tapping drill holes*
- *Works without vibrations and with satisfactory centering*
- *Cutting conditions, see page 472*

Avellanador cónico 60º tres cortes. Mango Cono Morse
Three flute countersink 60º. Morse Taper shank

334	DIN 334	FORM D	Z=3	HSSE Co5	60°	
D						



D1 mm z9		D3 mm	L1 mm	L2 mm	CM/MT	Cod.
31	•	10	120	-	2	0001781894
40	•	12,5	140	-	3	0001511915
50	•	16	150	-	3	0001781954
63	•	20	180	-	3	0001782033
80	•	25	190	-	4	0001782194

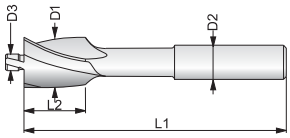
- Destalonado radial
- Avellanados de precisión en agujeros para rosca
- Trabajos sin vibraciones y con buen centraje
- Condiciones de corte, ver página 472

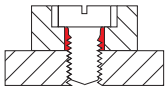
- *Radial relief*
- *Precision countersinking when tapping drill holes*
- *Works without vibrations and with satisfactory centering*
- *Cutting conditions, see page 472*

Avellanador plano 180º con guia. Mango cilíndrico.
Solid cap screw counterbore 180º. Straight shank.

373 Ajuste Fino

DIN 373 | Guia *Pilot* | Z=3 | HSSE Co5 | Ajuste Fino *Fine Adjustment*





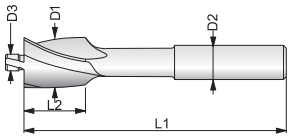
Rosca *Thread*		D1 mm	D3 mm	L1 mm	L2 mm	D2 mm h9	Cod.
M 3	•	6	3,2	71	14	5	0000531246
M 3,5	•	6,5	3,7	71	14	5	0000531527
M 4	•	8	4,3	71	14	5	0000531899
M 5	•	10	5,3	80	18	8	0000532198
M 6	•	11	6,4	80	18	8	0000532469
M 8	•	15	8,4	100	22	12,5	0000532731
M 10	•	18	10,5	100	22	12,5	0000532951
M 12	•	20	13	100	22	12,5	0000533301
M 14*	•	24	15	120	30	12,5	0001901960

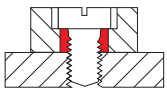
- Para avellanados según DIN 74 hoja 2
- Avellanados de agujeros pasantes en ajuste fino según DIN ISO 273
- Para tornillos Allen DIN 912, DIN 6912, DIN 7984 y tornillo cilíndrico con ranura DIN 84
- Nuevos estuches de avellanadores en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte
- * JMC Norm

- *Counterboring according to DIN 74 sheet 2*
- *Through holes fine counterboring according to DIN ISO 273*
- *For Allen screw DIN 912, DIN 6912, DIN 7984 and screw DIN 84*
- *New cases of counterbores in sets of difererent sizes, see cutting tool sets programme*
- * *JMC Standard*

373 Ajuste Medio

DIN 373 | Guia *Pilot* | Z=3 | HSSE Co5 | Ajuste Medio *Medium Adjustment*





Rosca *Thread*		D1 mm	D3 mm	L1 mm	L2 mm	D2 mm h9	Cod.
M 3	•	6	3,4	71	14	5	0000531307
M 3,5	•	6,5	3,9	71	14	5	0000531678
M 4	•	8	4,5	71	14	5	0000531959
M 5	•	10	5,5	80	18	8	0000532249
M 6	•	11	6,6	80	18	8	0000532520
M 8	•	15	9	100	22	12,5	0000532891
M 10	•	18	11	100	22	12,5	0000533030
M12	•	20	14	100	22	12,5	0000533462

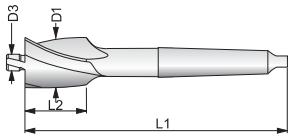
- Para avellanados según DIN 74 hoja 2
- Avellanados de agujeros pasantes en ajuste medio según DIN ISO 273
- Para tornillos Allen DIN 912, DIN 6912, DIN 7984 y tornillo cilíndrico con ranura DIN 84

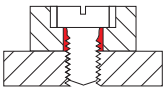
- *Counterboring according to DIN 74 sheet 2*
- *Through holes medium counterboring according to DIN ISO 273*
- *For Allen screw DIN 912, DIN 6912, DIN 7984 and screw DIN 84*

Avellanador plano 180º con guia. Mango Cono Morse
Solid cap screw counterbore 180º. Morse Taper shank

Frontal CM | **Ajuste Fino**

JMC NORM./ STD	Guia *Pilot*	Z=4	HSSE Co5	Ajuste Fino *Fine Adjustment*





Rosca *Thread*		D1 mm	D3 mm	L1 mm	L2 mm	CM/MT	Cod.
M 12	•	19	13	150	25	2	0001902471
M 14	•	22	15	130	30	2	0001902320
M 16	•	25	17	160	35	2	0001902260
M 18	•	28	19	192	35	3	0001902100
M 20	•	31	21	204	40	3	0001902049

- Avellanados de agujeros pasantes
- *Through holes fine counterboring*

Brocas / *Drills*

Condiciones de corte recomendadas
Recommended cutting conditions

Conversiones / *conversion*:

m/min. -> R.P.M.

$$R.P.M. = \frac{1000 \times m/min.}{3{,}14 \times DIAM.}$$

R.P.M. -> m/min.

$$m/mín. = \frac{R.P.M. \times 3{,}14 \times DIAM.}{1000}$$

mm -> pulgadas / *inches*

$$Pulgadas\ /\ inches = \frac{mm}{25{,}4}$$

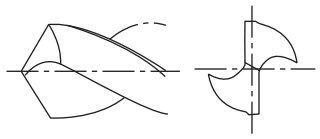
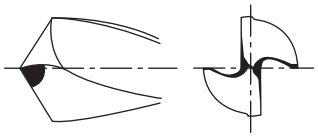
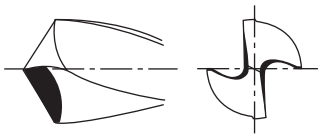
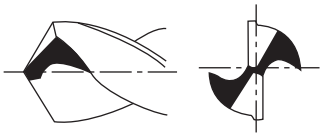
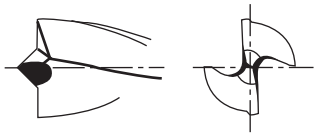
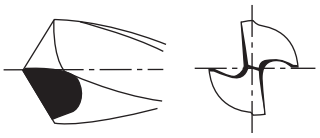
Los valores de corte indicados son solo orientativos. En condiciones favorables es posible un aumento de las mismas mientras que en condiciones desfavorables se recomienda una reducción.

The indicated cutting values are only approximate. Working with favorable conditions these values can be increased whereas working with unfavorable conditions we recommend to bring them down

○ Brillante / *Bright* ● *TiN* ● *AltPlus* **MD = *Carbide***

		Vel. Corte ***Cut. speed*** (m/min.)		**Avance** (mm/rev.) / ***Feed*** *(mm/U)* **Diámetro de broca** (mm) / ***Drill diameter*** *(mm)*												**Refrigerante** ***Coolant***	
		HSS-E	MD C	Ø 2		Ø 4		Ø 6		Ø 8		Ø 10		Ø 12			
		○ ●	○ ●	HSS-E	MD/C	HSS-E	MD/C	HSS-E	MD/C	HSS-E	MD/C	HSS-E	MD/C	HSS-E	MD/C	HSSE	MD/C
GR1	**1**	2 - 38	60 - 140	0,06	0,08	0,12	0,15	0,15	0,20	0,20	0,25	0,25	0,30	0,25	0,35	6	6
	2	25 - 30	60 - 120	0,05	0,06	0,10	0,10	0,12	0,15	0,16	0,20	0,20	0,25	0,20	0,30	1-2 / 6	1-2 / 6
	3	30 - 36	90 - 170	0,06	0,10	0,12	0,20	0,15	0,30	0,20	0,30	0,25	0,40	0,25	0,50	6	6
	4	30 - 36	60 - 140	0,05	0,08	0,10	0,15	0,15	0,20	0,16	0,25	0,20	0,30	0,20	0,50	1-2 / 6	1-2 / 6
	5	18 - 21	50 - 120	0,04	0,08	0,08	0,15	0,10	0,20	0,12	0,25	0,16	0,30	0,16	0,50	1-2 / 6	1-2 / 6
	6	16 - 19	60 - 120	0,04	0,06	0,08	0,10	0,10	0,15	0,12	0,20	0,16	0,25	0,16	0,30	1-2	1-2
GR2	**1**	18 - 21	50 - 100	0,04	0,08	0,08	0,15	0,10	0,20	0,12	0,25	0,16	0,30	0,16	0,35	1-2	1-2
	2	10 - 12	50 - 100	0,03	0,05	0,06	0,10	0,08	0,12	0,10	0,16	0,12	0,20	0,13	0,20	1-2	1-2
	3	10 - 12	50 - 100	0,03	0,08	0,06	0,15	0,08	0,20	0,10	0,25	0,12	0,30	0,13	0,35	1-2	1-2
	4	10 - 12	50 - 100	0,03	0,08	0,06	0,15	0,08	0,20	0,10	0,25	0,12	0,30	0,13	0,50	1-2 / 6	1-2 / 6
	5	8 - 9	50 - 80	0,02	0,05	0,05	0,10	0,06	0,12	0,08	0,16	0,10	0,20	0,10	0,20	1-2 / 6	1-2 / 6
	6	16 - 19	60 - 120	0,04	0,06	0,08	0,10	0,10	0,15	0,12	0,20	0,16	0,25	0,16	0,30	1-2 / 6	1-2 / 6
	7	10 - 12	30 - 60	0,03	0,05	0,06	0,10	0,08	0,12	0,10	0,13	0,12	0,16	0,13	0,18	1-2 / 6	1-2 / 6
	8	10 - 12	30 - 60	0,03	0,04	0,06	0,08	0,08	0,10	0,10	0,20	0,12	0,25	0,13	0,30	1-2	1-2
GR3	**1**	12 - 14	15 - 40	0,03	0,05	0,06	0,10	0,08	0,12	0,10	0,13	0,12	0,16	0,13	0,18	1-2 / 3-4	1-2 / 3-4
	2	14 - 17	25 - 60	0,04	0,05	0,08	0,10	0,10	0,12	0,12	0,16	0,16	0,20	0,16	0,20	1-2 / 3-4	1-2 / 3-4
	3	10 - 12	10 - 50	0,03	0,05	0,06	0,10	0,08	0,12	0,10	0,16	0,12	0,20	0,13	0,20	1-2 / 3-4	1-2 / 3-4
	4		10 - 30		0,02		0,05		0,06		0,08		0,10		0,11		1-2 / 3-4
GR4	**1**	30 - 36	70 - 180	0,06	0,12	0,12	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	7	7
	2	22 - 26	80 - 140	0,06	0,12	0,12	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	6	6
	3	22 - 26	70 - 130	0,06	0,10	0,12	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	6	6
	4	30 - 36	80 - 140	0,06	0,12	0,12	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	6	6
GR5	**1**	32 - 38	80 - 125	0,05	0,08	0,10	0,15	0,15	0,20	0,16	0,25	0,20	0,30	0,20	0,50	5 / 6	6
	2	40 - 48	80 - 200	0,05	0,08	0,10	0,15	0,15	0,20	0,16	0,25	0,20	0,30	0,20	0,50	5 / 6	6
	3	63 - 75	100 - 300	0,05	0,10	0,10	0,20	0,15	0,30	0,16	0,30	0,20	0,40	0,20	0,50	6	6
	4	36 - 43	80 - 125	0,04	0,08	0,08	0,15	0,10	0,20	0,12	0,25	0,16	0,30	0,16	0,50	5	6
	5	28 - 33	60 - 100	0,04	0,06	0,08	0,10	0,10	0,15	0,12	0,20	0,16	0,25	0,16	0,30	5	6
	6	22 - 26	60 - 100	0,06	0,06	0,08	0,10	0,10	0,15	0,12	0,20	0,16	0,25	0,16	0,30	5	6
GR6	**1**	90 - 100	180 - 300	0,08	0,12	0,12	0,20	0,20	0,30	0,25	0,30	0,30	0,40	0,30	0,50	6	6
	2	90 - 100	180 - 300	0,08	0,12	0,12	0,20	0,20	0,30	0,25	0,30	0,30	0,40	0,30	0,50	6	6
	3	70 - 85	150 - 250	0,08	0,12	0,12	0,20	0,20	0,30	0,25	0,30	0,30	0,40	0,30	0,50	6	6
	4	80 - 85	120 - 220	0,06	0,12	0,12	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	5 / 6	5 / 6
GR7	**1**	80 - 85	180 - 280	0,06	0,10	0,12	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	7	7
	2	80 - 85	80 - 280	0,06	0,10	0,12	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	7	7
GR8	**1**																
	2		10 - 35		0,04		0,08		0,10		0,12		0,16		0,16		3-4
	3		10 - 35		0,04		0,08		0,10		0,12		0,16		0,16		3-4
GR9	**1**	10 - 12	10 - 40	0,02	0,04	0,05	0,08	0,06	0,10	0,08	0,12	0,10	0,16	0,10	0,16	3-4	3-4
	2	10 - 12	10 - 40	0,02	0,04	0,05	0,08	0,06	0,10	0,08	0,12	0,10	0,16	0,10	0,16	3-4	3-4
	3	6 - 7	10 - 40	0,02	0,04	0,05	0,08	0,06	0,10	0,08	0,12	0,10	0,16	0,10	0,16	3-4	3-4
	4																
GR10	**1**	32 - 38	150 - 200	0,05	0,10	0,10	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	5 / 6	5 / 6
	2	32 - 38	150 - 200	0,05	0,10	0,10	0,20	0,16	0,30	0,20	0,30	0,25	0,40	0,25	0,50	5 / 6	5 / 6
GR11	**1**	22 - 26		0,05		0,10		0,16		0,20		0,25		0,25		7	
	2	25 - 30		0,04		0,08		0,10		0,12		0,16		0,16		7	
	3																

Tipos de afilados / *Sharpening types*

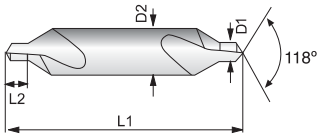
Forma / *Form* **N** (normal)		**Afilado normal / *Conventional point:*** Para usos generales en aceros, metales no férricos y materiales sintéticos. El ángulo de la punta dependerá de la capacidad de arranque de viruta del material a trabajar. Puede soportar esfuerzos laterales o choques y es de facil reafilado. Precisa de elevada fuerza de avance *For general drillings on steel, non ferreous metals and synthetic materials. The point angle depends on the easeness with which the materials can be cutted. Resist lateral efforts and impacts, easy to resharp. Requires considerable thrust force.*
Forma / *Form* **A** DIN 1412		**Corte transversal vaciado de punta / *Gash type thinning:*** Para taladrar diámetros grandes en materiales macizos. Buen centraje al inicio del taladro y reducción de la fuerza de avance *For heavy drilling.* *Good chamfering. Reduces thrust force*
Forma / *Form* **B** DIN 1412		**Corte transversal vaciado de punta con corte principal corregido / *Flatted lip type web thinning:*** Para aceros de alta resistencia o de dificil mecanización. Puede soportar esfuerzos laterales o choques, adecuado para piezas con poca pared. Precisa de elevada fuerza de avance y tiene tendencia a desviarse. *For high resistance steels difficult to machine.* *Resists lateral efforts and impacts, adecuate for thin workpieces. Requires considerable thrust force and has a tendency to slip.*
Forma / *Form* **C** DIN 1412		**Afilado en cruz / *Split point type:*** Para materiales duros y tenaces, agujeros profundos Buen centrage, reducido esfuerzo de avance y buena evacuación de virutas. *For tough and hard materials and for deep-hole drills.* *Good chamfering, reduces thrust force and has good chip removal.*
Forma / *Form* **D** DIN 1412		**Afilado para fundición gris / *Point for grey cast iron:*** Para taladrado en fundición gris, maleable y piezas de forja. Resistente al desgaste gracias a la protección de los ángulos de corte. *For drillings grey cast iron, malleable cast iron and wrought workpieces.* *Resistant to wear thanks to the protected cutting edges.*
Forma / *Form* **E** DIN 1412		**Punta de centrado / *Centre point:*** Para chapas, materiales de facil mecanización o agujeros ciegos con fondo plano. Fragil a los choques. *For drillings thin metal sections and soft materials, for blind holes with flat bottom.* *Sensitive to impacts*
Forma / *Form* **U** JMC Norm / Std.		**Afilado forma “U” / “U” type web thinning:** Para taladrado de agujeros profundos en aceros hasta 1200 N/mm^2 , aluminio, cobre, acero inoxidable austenítico y ferrítico y materiales sintéticos. Reduce el riesgo de rotura de los filos de corte y facilita la avacuación de viruta. *For drilling deep holes on steels up to 1200 N/mm^2, aluminium, copper, austenitic and ferritic stainless steel and sinthetyc meterials.* *Prevents chipping on cutting edge, good chip removal.*

	Brocas de centrar *Centre drills*				Brocas de puntear *Centre drills*			Brocas de puntear CN *NC Spotting drills*	Brocas agujeros de preroscado *Drills for thread holes*			
Norma DIN / *DIN standard*	333	333	333	333	Broca Puntear	Broca Puntear	Broca Puntear	JMC	338	338	6539	6539
Tipo / *Type*	A	A	A	A	STP	STP	STP	N	N	VA	N	UF
Ángulo punta / *Point angle*	60°	60°	60°	60°	60°	90°	120°	90°	130°	135°	130°	140°
Recubrimiento / *Coating*			TiN						Gold			
Mango / *Shank*						Cilíndrico *Straight*		Cilíndrico *Straight*	Cilíndrico *Straight*		Cilíndrico *Straight*	
Material / *Material*	HSS	HSSE Co5	HSSE Co5	MD integral *Solid carbide*	MD integral *Solid carbide*			MD integral *Solid carbide*	HSSE Co5		MD integral *Solid carbide*	
Gama / *Range*	Ø3,15...12,5	Ø3,15...12,5	Ø3,15...12,5	Ø3,15...12,5	Ø4...20	Ø4...20	Ø4...20	Ø4...20	M3...12	M3...12	M2,5...11,20	M2...12
Página / *Page*	503	503	504	504	505	505	505	506	507	507	508	509, 510

	Brocas de MD de alto rendimiento *High performance twist drill*					Broca destructora de machos *Ex hard drill for removing taps*	Brocas escariadoras *Core drills*	Brocas-avellanador 90° *Drill-countersink 90°*		Brocas-avellanador plano 180° *Drill-counterbore 180°*	
Norma DIN / *DIN standard*	6537	6537	6537	6537	6537	JMC	343	JMC	JMC	JMC	JMC
Tipo / *Type*	UF	KL	L-UF	L-KC	XL-KC	RM	N	Broca avell. 90°	Broca avell. 90°	Broca avell. 180°	Broca avell. 180°
Ángulo punta / *Point angle*	140°	140°	140°	140°	140°		120°	120°	120°	120°	120°
Recubrimiento / *Coating*	AlTiPlus	AlTiPlus	AlTiPlus	AlTiPlus	AlTiPlus				TiN		TiN
Mango / *Shank*	Cilíndrico *Straight*		Cilíndrico *Straight*			Cilíndrico *Straight*	Cono morse Morse taper	Cilíndrico *Straight*		Cilíndrico *Straight*	
Material / *Material*	MD integral *Solid carbide*		MD integral *Solid carbide*				HSS	HSSE Co5		HSSE Co5	
Gama / *Range*	M2...20	M3...20	M3...20	M3...20	M3...20	M4...20	Ø7,8...30	M3...10	M3...10	M3...12	M3...12
Página / *Page*	511-515	516-518	518-520	521-523	523-525	526	527	528	528	529	529

Broca de centrar, ángulo de punta 60º.
Centre drill 60º included angle.

333	DIN 333	Forma / Form A		HSS	
A					

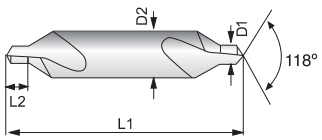


D1 mm	D2 mm h8		L1 mm	L2 mm	Cod.
0,5	3,15	•	25	0,6 - 0,8	0001772457
0,8	3,15	•	25	1,0 - 1,2	0001771173
1	3,15	•	31	1,3 - 1,6	0001771234
1,25	3,15	•	31	1,6 - 1,9	0001771394
1,6	4	•	35	2,0 - 2,4	0001771444
2	5	•	40	2,5 - 2,9	0001771505
2,5	6,3	•	45	3,1 - 3,6	0001771665
3,15	8	•	50	3,9 - 4,4	0001771725
4	10	•	55	5,0 - 5,6	0001771876
5	12,5	•	63	6,3 - 6,9	0001771936

• Para centrar agujeros a 60º sin avellanado según DIN 332 hoja1 Forma A

• *For 60º centres without protective countersink and straight faces according to DIN 332 sheet 1 Form A*

333	DIN 333	Forma / Form A		HSSE Co5	
A					



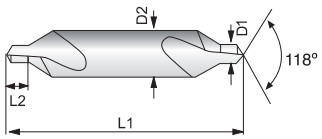
D1 mm	D2 mm h8		L1 mm	L2 mm	Cod.
1	3,15	•	31	1,3 - 1,6	0002187243
1,25	3,15	•	31	1,6 - 1,9	0002187304
1,6	4	•	35	2,0 - 2,4	0002187464
2	5	•	40	2,5 - 2,9	0002187524
2,5	6,3	•	45	3,1 - 3,6	0002187675
3,15	8	•	50	3,9 - 4,4	0002187735
4	10	•	55	5,0 - 5,6	0002187895
5	12,5	•	63	6,3 - 6,9	0002187956

• Para centrar agujeros a 60º sin avellanado según DIN 332 hoja1 Forma A

• *For 60º centres without protective countersink and straight faces according to DIN 332 sheet 1 Form A*

Broca de centrar, ángulo de punta 60º.
Centre drill 60º included angle.

333	DIN 333	Forma / Form A		HSSE Co5	
A					
TiN					



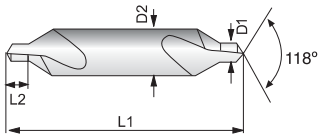
D1 mm	D2 mm h8		L1 mm	L2 mm	Cod.
0,5	3,15	•	25	0,6 - 0,8	0002188035
0,8	3,15	•	25	1,0 - 1,2	0002188195
1	3,15	•	31	1,3 - 1,6	0002188255
1,25	3,15	•	31	1,6 - 1,9	0002188306
1,6	4	•	35	2,0 - 2,4	0002188466
2	5	•	40	2,5 - 2,9	0002188527
2,5	6,3	•	45	3,1 - 3,6	0002188687
3,15	8	•	50	3,9 - 4,4	0002188737
4	10	•	55	5,0 - 5,6	0002188898
5	12,5	•	63	6,3 - 6,9	0002188958

• Para centrar agujeros a 60º sin avellanado según DIN 332 hoja1 Forma A

• *For 60º centres without protective countersink and straight faces according to DIN 332 sheet 1 Form A*

Broca de centrar, ángulo de punta 60º de Metal Duro integral.
Centre drill 60º included angle, solid carbide.

333	DIN 333	Forma / Form A		MD integral *Solid Carbide* K15	
A					



D1 mm	D2 mm h8		L1 mm	L2 mm	Cod.
0,5	3,15	•	25	0,6 - 0,8	0002189037
0,8	3,15	•	25	1,0 - 1,2	0002189197
1	3,15	•	31	1,3 - 1,6	0002189258
1,25	3,15	•	31	1,6 - 1,9	0002189468
1,6	4	•	35	2,0 - 2,4	0002189529
2	5	•	40	2,5 - 2,9	0002189689
2,5	6,3	•	45	3,1 - 3,6	0002189740
3,15	8	•	50	3,9 - 4,4	0002189890
4	10	•	55	5,0 - 5,6	0002189950
5	12,5	•	63	6,3 - 6,9	0002190035

• Para centrar agujeros a 60º sin avellanado según DIN 332 hoja1 Forma A

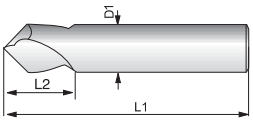
• *For 60º centres without protective countersink and straight faces according to DIN 332 sheet 1 Form A*

Broca de puntear, ángulo de punta 60º/ 90º.
NC Spotting drill 60º/90º point, solid carbide.

JMC

Broca Puntear SPT NC-60º

JMC NORM./ STD | 60º | MD integral *Solid Carbide* K30



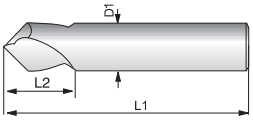
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
4	•	50	8	-	-	4	0003372951
5	•	50	12	-	-	5	0003373039
6	•	50	16	-	-	6	0003373190
8	•	64	20	-	-	8	0003373250
10	•	70	25	-	-	10	0003373311
12	•	75	25	-	-	12	0003373461
16	•	90	26	-	-	16	0003373521
20	•	100	40	-	-	20	0003373682

- Para centrar y avellanar en máquinas CN
- Mangos según DIN 6535-E (WHISTLE-NOTCH) o DIN 6535-B (WELDON), bajo demanda

- *For centering and countersinking on NC machines*
- *Shanks according to DIN 6535-E (WHISTLE-NOTCH) or DIN 6535-B (WELDON), upon request*

Broca Puntear SPT NC-90º

JMC NORM./ STD | 90º | MD integral *Solid Carbide* K30



D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
4	•	50	8	-	-	4	0003374805
5	•	50	12	-	-	5	0003374684
6	•	50	16	-	-	6	0003374744
8	•	64	20	-	-	8	0003374955
10	•	70	25	-	-	10	0003375044
12	•	75	25	-	-	12	0003375194
16	•	90	26	-	-	16	0003375255
20	•	100	40	-	-	20	0003375315

- Para centrar y avellanar en máquinas CN
- Mangos según DIN 6535-E (WHISTLE-NOTCH) o DIN 6535-B (WELDON), bajo demanda

- *For centering and countersinking on NC machines*
- *Shanks according to DIN 6535-E (WHISTLE-NOTCH) or DIN 6535-B (WELDON), upon request*

Broca de puntear, ángulo de punta 120º.
NC Spotting drill 120º point, solid carbide.

JMC

Broca Puntear

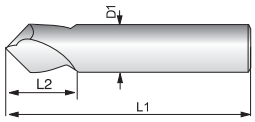
SPT

NC-120º

JMC NORM./ STD

120º

MD integral *Solid Carbide* K30



D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
4	•	50	8	-	-	4	0003373742
5	•	50	12	-	-	5	0003373892
6	•	50	16	-	-	6	0003373953
8	•	64	20	-	-	8	0003374032
10	•	70	25	-	-	10	0003374192
12	•	75	25	-	-	12	0003374252
16	•	90	26	-	-	16	0003374313
20	•	100	40	-	-	20	0003374463

- Para centrar y avellanar en máquinas CN
- Mangos según DIN 6535-E (WHISTLE-NOTCH) o DIN 6535-B (WELDON), bajo demanda

- *For centering and countersinking on NC machines*
- *Shanks according to DIN 6535-E (WHISTLE-NOTCH) or DIN 6535-B (WELDON), upon request*

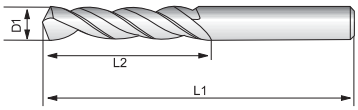
Broca helicoidal para agujeros de pre-roscado, serie corta.
Twist drill for thread holes, Jobber length.

Mango cilíndrico / *Straight shank.*

338 | DIN 338 | 130º | Form. C | R30º | HSSE Co5

N

Gold



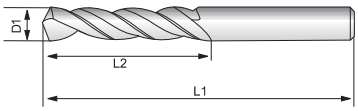
	D1 mm h8	para rosca *for thread*		L1 mm	L2 mm		Cod.
Corte *Cutting*	2,50	M3	•	57	30	10	0002255210
	3,30	M4	•	65	36	10	0002255431
	4,20	M5	•	75	43	10	0002255641
	5,00	M6	•	86	52	10	0002255862
	6,75	M8	•	109	69	10	0002256001
	8,50	M10	•	117	75	10	0002256212
	10,25	M12	•	133	87	10	0002256433
Laminación *Cold Forming*	2,80	M3	•	61	33	10	0002255370
	3,70	M4	•	70	39	10	0002255581
	4,65	M5	•	80	47	10	0002255702
	5,55	M6	•	93	57	10	0002255922
	7,40	M8	•	109	69	10	0002256162
	9,30	M10	•	125	81	10	0002256372
	11,20	M12	•	142	94	5	0002256593

- Para usos generales en aceros hasta 1200 N/mm²
- Condiciones de corte, ver página 484

- *For general drilling on steels up to 1200 N/mm²*
- *Cutting conditions, see page 484*

338 | DIN 338 | 135º | Form. C | R35º | HSSE Co5

VA



	D1 mm h8	para rosca *for thread*		L1 mm	L2 mm		Cod.
Corte *Cutting*	2,50	M3	•	57	30	10	0002256644
	3,30	M4	•	65	36	10	0002256864
	4,20	M5	•	75	43	10	0002257004
	5,00	M6	•	86	52	10	0002257224
	6,75	M8	•	109	69	10	0002257595
	8,50	M10	•	117	75	10	0002257706
	10,25	M12	•	133	87	10	0002257927
Laminación *Cold Forming*	2,80	M3	•	61	33	10	0002257375
	3,70	M4	•	70	39	10	0002256925
	4,65	M5	•	80	47	10	0002257164
	5,55	M6	•	93	57	10	0002257435
	7,40	M8	•	109	69	10	0002257656
	9,30	M10	•	125	81	10	0002257867
	11,20	M12	•	142	94	5	0002258006

- Broca de alto rendimiento para aceros inoxidables ferríticos y austeníticos
- Condiciones de corte, ver página 484

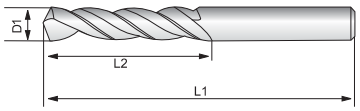
- *High performance drill for ferritic and austenitic stainless steels*
- *Cutting conditions, see page 484*

Broca de Metal Duro integral para agujeros de pre-roscado.
Twist drill for thread holes, solid carbide.

Mango cilíndrico / *Straight shank.*

6539 | DIN 6539 | 130º | MD integral *Solid Carbide* K20/30 | 3xD | R30º

N



	D1 mm h8	para rosca *for thread*		L1 mm	L2 mm	Cod.
Corte *Cutting*	2,50	M3	•	43	14	0002177395
	3,30	M4	•	49	18	0002177446
	4,20	M5	•	55	22	0002177506
	5,00	M6	•	62	16	0002177666
	6,80	M8	•	74	34	0002177938
	8,50	M10	•	79	37	0002178177
	10,20	M12	•	89	43	0002178398
Laminación *Cold Forming*	2,8	M3	•	46	16	0002192742
	3,7	M4	•	52	20	0002192802
	4,65	M5	•	58	24	0002177727
	5,55	M6	•	66	28	0002177877
	7,40	M8	•	74	34	0002178026
	9,30	M10	•	84	40	0002178237
	11,20	M12	•	95	47	0002178458

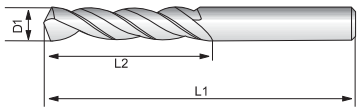
- Para usos generales en acero o fundición y especialmente recomendable para materiales no férricos como aleaciones de aluminio con Si y materiales sintéticos abrasivos
- Condiciones de corte, ver página 484

- *For general drillings on steels, cast iron and specilly adecuated for non-ferreous materials like Si aluminium alloys and abrasive sinthetyc materias*
- *Cutting conditions, see page 484*

Broca de MD de alto rendimiento.
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6539 | DIN 6539 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

UF

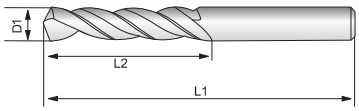


D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
2,00	•	40	-	12	-	2	0003107009
2,10	•	40	-	12	-	2,1	0003333348
2,20	•	40	-	13	-	2,2	0003333408
2,30	•	46	-	13	-	2,3	0003333568
2,40	•	46	-	14	-	2,4	0003333629
2,50	•	46	-	14	-	2,5	0003106920
2,60	•	46	-	14	-	2,6	0003333779
2,70	•	46	-	16	-	2,7	0003333830
2,80	•	49	-	16	-	2,8	0003333990
2,90	•	49	-	16	-	2,9	0003334079
3,00	•	49	-	16	-	3	0003107160
3,10	•	49	-	18	-	3,1	0003334139
3,20	•	49	-	18	-	3,2	0003334290
3,30	•	52	-	18	-	3,3	0003334350
3,40	•	52	-	20	-	3,4	0003334400
3,50	•	52	-	20	-	3,5	0003107210
3,60	•	52	-	20	-	3,6	0003334561
3,70	•	52	-	20	-	3,7	0003334621
3,80	•	55	-	22	-	3,8	0003334781
3,90	•	55	-	22	-	3,9	0003334832
4,00	•	55	-	22	-	4	0003107370
4,10	•	55	-	22	-	4,1	0003337577
4,20	•	55	-	22	-	4,2	0003337628
4,30	•	58	-	24	-	4,3	0003337788
4,40	•	58	-	24	-	4,4	0003337849
4,50	•	58	-	24	-	4,5	0003337909
4,60	•	58	-	24	-	4,6	0003338088
4,70	•	58	-	24	-	4,7	0003338148
4,80	•	62	-	26	-	4,8	0003338209
4,90	•	62	-	26	-	4,9	0003338359
5,00	•	62	-	26	-	5	0003107431
5,10	•	62	-	26	-	5,1	0003338419
5,20	•	62	-	26	-	5,2	0003338570
5,30	•	66	-	26	-	5,3	0003338630
5,40	•	66	-	28	-	5,4	0003338781
5,50	•	66	-	28	-	5,5	0003338841
5,60	•	66	-	28	-	5,6	0003339080
5,70	•	66	-	28	-	5,7	0003339141
5,80	•	70	-	28	-	5,8	0003339351
5,90	•	70	-	28	-	5,9	0003339632
6,00	•	70	-	28	-	6	0003339783
6,10	•	70	-	31	-	6,1	0003339843
6,20	•	70	-	31	-	6,2	0003339904
6,30	•	70	-	31	-	6,3	0003345581
6,40	•	70	-	31	-	6,4	0003345852
6,50	•	70	-	31	-	6,5	0003107591
6,60	•	70	-	31	-	6,6	0003345913
6,70	•	70	-	31	-	6,7	0003348588
6,80	•	74	-	34	-	6,8	0003107642
6,90	•	74	-	34	-	6,9	0003348709
7,00	•	74	-	34	-	7	0003348910

Broca de MD de alto rendimiento.
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6539 | DIN 6539 | 140º | Form. **C** | MD integral *Solid Carbide* K30 | 3xD | R30º

UF



D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
7,10	•	74	-	34	-	7,1	0003349370
7,20	•	74	-	34	-	7,2	0003349641
7,30	•	79	-	34	-	7,3	0003349861
7,40	•	79	-	34	-	7,4	0003350156
7,50	•	79	-	34	-	7,5	0003350438
7,60	•	79	-	37	-	7,6	0003350648
7,70	•	79	-	37	-	7,7	0003351922
7,80	•	79	-	37	-	7,8	0003352001
7,90	•	79	-	37	-	7,9	0003352161
8,00	•	79	-	37	-	8	0003352221
8,10	•	79	-	37	-	8,1	0003352372
8,20	•	79	-	37	-	8,2	0003352432
8,30	•	84	-	37	-	8,3	0003352593
8,40	•	84	-	37	-	8,4	0003352653
8,50	•	84	-	37	-	8,5	0003352703
8,60	•	84	-	40	-	8,6	0003352864
8,70	•	84	-	40	-	8,7	0003352924
8,80	•	84	-	40	-	8,8	0003353003
8,90	•	84	-	40	-	8,9	0003353163
9,00	•	84	-	40	-	9	0003353224
9,10	•	84	-	40	-	9,1	0003353374
9,20	•	84	-	40	-	9,2	0003353434
9,30	•	89	-	40	-	9,3	0003353595
9,40	•	89	-	40	-	9,4	0003353655
9,50	•	89	-	40	-	9,5	0003353716
9,60	•	89	-	43	-	9,6	0003356712
9,70	•	89	-	43	-	9,7	0003356873
9,80	•	89	-	43	-	9,8	0003356933
9,90	•	89	-	43	-	9,9	0003357383
10,00	•	89	-	43	-	10	0003357444
10,10	•	89	-	43	-	10,1	0003357504
10,20	•	89	-	43	-	10,2	0003357654
10,30	•	95	-	43	-	10,3	0003357715
10,40	•	95	-	43	-	10,4	0003369898
10,50	•	95	-	43	-	10,5	0003357935
10,60	•	95	-	43	-	10,6	0003358014
10,70	•	95	-	47	-	10,7	0003358175
10,80	•	95	-	47	-	10,8	0003358235
10,90	•	95	-	47	-	10,9	0003358385
11,00	•	95	-	47	-	11	0003370464
11,10	•	95	-	47	-	11,1	0003358506
11,20	•	95	-	47	-	11,2	0003358667
11,30	•	95	-	47	-	11,3	0003358877
11,40	•	95	-	47	-	11,4	0003358938
11,50	•	95	-	47	-	11,5	0003359017
11,60	•	95	-	47	-	11,6	0003359177
11,70	•	95	-	47	-	11,7	0003359237
11,80	•	102	-	47	-	11,8	0003359388
11,90	•	102	-	51	-	11,9	0003359448
12,00	•	102	-	51	-	12	0003359508

Broca de MD de alto rendimiento.
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6539 | DIN 6539 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

UF

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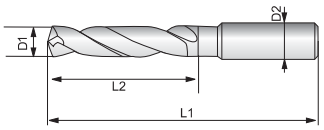

D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
2,00	•	40	-	12	-	2	0003361930
2,10	•	40	-	12	-	2,1	0003362029
2,20	•	40	-	13	-	2,2	0003362179
2,30	•	46	-	13	-	2,3	0003362230
2,40	•	46	-	14	-	2,4	0003362390
2,50	•	46	-	14	-	2,5	0003362450
2,60	•	46	-	14	-	2,6	0003362501
2,70	•	46	-	16	-	2,7	0003362661
2,80	•	49	-	16	-	2,8	0003362722
2,90	•	49	-	16	-	2,9	0003362882
3,00	•	49	-	16	-	3	0003125031
3,10	•	49	-	18	-	3,1	0003362932
3,20	•	49	-	18	-	3,2	0003125182
3,30	•	52	-	18	-	3,3	0003363021
3,40	•	52	-	20	-	3,4	0003363172
3,50	•	52	-	20	-	3,5	0003125242
3,60	•	52	-	20	-	3,6	0003363232
3,70	•	52	-	20	-	3,7	0003363392
3,80	•	55	-	22	-	3,8	0003125302
3,90	•	55	-	22	-	3,9	0003363453
4,00	•	55	-	22	-	4	0003117449
4,10	•	55	-	22	-	4,1	0003364023
4,20	•	55	-	22	-	4,2	0003364184
4,30	•	58	-	24	-	4,3	0003364234
4,40	•	58	-	24	-	4,4	0003364395
4,50	•	58	-	24	-	4,5	0003364455
4,60	•	58	-	24	-	4,6	0003364515
4,70	•	58	-	24	-	4,7	0003364666
4,80	•	62	-	26	-	4,8	0003364726
4,90	•	62	-	26	-	4,9	0003364886
5,00	•	62	-	26	-	5	0003125463
5,10	•	62	-	26	-	5,1	0003364947
5,20	•	62	-	26	-	5,2	0003365026
5,30	•	66	-	26	-	5,3	0003365186
5,40	•	66	-	28	-	5,4	0003365246
5,50	•	66	-	28	-	5,5	0003365397
5,60	•	66	-	28	-	5,6	0003365457
5,70	•	66	-	28	-	5,7	0003365518
5,80	•	70	-	28	-	5,8	0003365678
5,90	•	70	-	28	-	5,9	0003365728
6,00	•	70	-	28	-	6	0003113169
6,10	•	70	-	31	-	6,1	0003365889
6,20	•	70	-	31	-	6,2	0003365949
6,30	•	70	-	31	-	6,3	0003366028
6,40	•	70	-	31	-	6,4	0003366188
6,50	•	70	-	31	-	6,5	0003125513
6,60	•	70	-	31	-	6,6	0003366249
6,70	•	70	-	31	-	6,7	0003366309
6,80	•	74	-	34	-	6,8	0003125673
6,90	•	74	-	34	-	6,9	0003366450
7,00	•	74	-	34	-	7	0003113018

Broca de MD de alto rendimiento.
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6539 | DIN 6539 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

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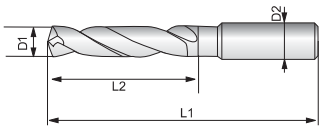

D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
7,10	•	74	-	34	-	7,1	0003366510
7,20	•	74	-	34	-	7,2	0003366670
7,30	•	79	-	34	-	7,3	0003366731
7,40	•	79	-	34	-	7,4	0003366881
7,50	•	79	-	34	-	7,5	0003366941
7,60	•	79	-	37	-	7,6	0003367020
7,70	•	79	-	37	-	7,7	0003367181
7,80	•	79	-	37	-	7,8	0003367241
7,90	•	79	-	37	-	7,9	0003367301
8,00	•	79	-	37	-	8	0003367452
8,10	•	79	-	37	-	8,1	0003367512
8,20	•	79	-	37	-	8,2	0003367673
8,30	•	84	-	37	-	8,3	0003368464
8,40	•	84	-	37	-	8,4	0003367883
8,50	•	84	-	37	-	8,5	0003368183
8,60	•	84	-	40	-	8,6	0003367944
8,70	•	84	-	40	-	8,7	0003368033
8,80	•	84	-	40	-	8,8	0003368243
8,90	•	84	-	40	-	8,9	0003368304
9,00	•	84	-	40	-	9	0003112920
9,10	•	84	-	40	-	9,1	0003368514
9,20	•	84	-	40	-	9,2	0003368675
9,30	•	89	-	40	-	9,3	0003368735
9,40	•	89	-	40	-	9,4	0003368896
9,50	•	89	-	40	-	9,5	0003369185
9,60	•	89	-	43	-	9,6	0003368946
9,70	•	89	-	43	-	9,7	0003369035
9,80	•	89	-	43	-	9,8	0003369246
9,90	•	89	-	43	-	9,9	0003369306
10,00	•	89	-	43	-	10	0003369466
10,10	•	89	-	43	-	10,1	0003369527
10,20	•	89	-	43	-	10,2	0003117399
10,30	•	95	-	43	-	10,3	0003369677
10,40	•	95	-	43	-	10,4	0003369737
10,50	•	95	-	43	-	10,5	0003369958
10,60	•	95	-	43	-	10,6	0003370033
10,70	•	95	-	47	-	10,7	0003370183
10,80	•	95	-	47	-	10,8	0003370243
10,90	•	95	-	47	-	10,9	0003370304
11,00	•	95	-	47	-	11	0003370524
11,10	•	95	-	47	-	11,1	0003370675
11,20	•	95	-	47	-	11,2	0003370735
11,30	•	95	-	47	-	11,3	0003371466
11,40	•	95	-	47	-	11,4	0003370896
11,50	•	95	-	47	-	11,5	0003371306
11,60	•	95	-	47	-	11,6	0003370956
11,70	•	95	-	47	-	11,7	0003371035
11,80	•	102	-	47	-	11,8	0003371195
11,90	•	102	-	51	-	11,9	0003371246
12,00	•	102	-	51	-	12	0003371527

Broca de MD de alto rendimiento.
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

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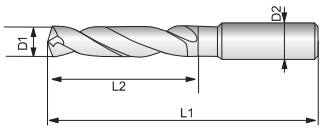

D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
2,50	•	53	18	14	36	3	0003278948
2,80	•	53	18	14	36	3	0002194746
3,00	•	62	20	14	36	6	0003159085
3,10	•	62	20	14	36	6	0003159788
3,20	•	62	20	14	36	6	0003159848
3,30	•	62	20	14	36	6	0003159908
3,40	•	62	20	14	36	6	0003160143
3,50	•	62	20	14	36	6	0003160414
3,60	•	62	20	14	36	6	0003160575
3,70	•	62	20	14	36	6	0003160625
3,80	•	66	24	17	36	6	0003160785
3,90	•	66	24	17	36	6	0003161206
4,00	•	66	24	17	36	6	0003161356
4,10	•	66	24	17	36	6	0003161637
4,20	•	66	24	17	36	6	0003161788
4,30	•	66	24	17	36	6	0003161908
4,40	•	66	24	17	36	6	0003162148
4,50	•	66	24	17	36	6	0003162358
4,60	•	66	24	17	36	6	0003162419
4,65	•	66	24	17	36	6	0002176443
4,70	•	66	24	17	36	6	0003162579
4,80	•	66	28	20	36	6	0003162630
4,90	•	66	28	20	36	6	0003162780
5,00	•	66	28	20	36	6	0003162901
5,10	•	66	28	20	36	6	0003165094
5,20	•	66	28	20	36	6	0003165144
5,30	•	66	28	20	36	6	0003165205
5,40	•	66	28	20	36	6	0003165365
5,50	•	66	28	20	36	6	0003165426
5,55	•	66	28	20	36	6	0002176504
5,60	•	66	28	20	36	6	0003165576
5,70	•	66	28	20	36	6	0003165636
5,80	•	66	28	20	36	6	0003165797
5,90	•	66	28	20	36	6	0003165857
6,00	•	66	28	20	36	6	0003165917
6,10	•	79	41	29	36	8	0003166096
6,20	•	79	41	29	36	8	0003166157
6,30	•	79	41	29	36	8	0003166207
6,40	•	79	41	29	36	8	0003166367
6,50	•	79	41	29	36	8	0003166428
6,60	•	79	41	29	36	8	0003166588
6,70	•	79	41	29	36	8	0003166639
6,80	•	79	41	29	36	8	0003166799
6,90	•	79	41	29	36	8	0003166859
7,00	•	79	41	29	36	8	0003166910
7,10	•	79	41	29	36	8	0003167159
7,20	•	79	41	29	36	8	0003167360
7,30	•	79	41	29	36	8	0003167420
7,40	•	79	41	29	36	8	0003174863
7,50	•	79	41	29	36	8	0003174923
7,60	•	79	41	29	36	8	0003175002

Broca de MD de alto rendimiento.
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

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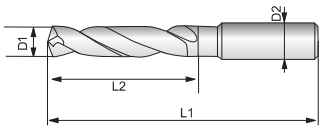

D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
7,70	•	79	41	29	36	8	0003175163
7,80	•	79	41	29	36	8	0003175223
7,90	•	79	41	29	36	8	0003175373
8,00	•	79	41	29	36	8	0003181935
8,10	•	89	47	35	40	10	0003175594
8,20	•	89	47	35	40	10	0003182014
8,30	•	89	47	35	40	10	0003175715
8,40	•	89	47	35	40	10	0003175865
8,50	•	89	47	35	40	10	0003175926
8,60	•	89	47	35	40	10	0003176005
8,70	•	89	47	35	40	10	0003176165
8,80	•	89	47	35	40	10	0003176225
8,90	•	89	47	35	40	10	0003176386
9,00	•	89	47	35	40	10	0003176436
9,10	•	89	47	35	40	10	0003176596
9,20	•	89	47	35	40	10	0003176657
9,30	•	89	47	35	40	10	0003176717
9,40	•	89	47	35	40	10	0003176868
9,50	•	89	47	35	40	10	0003176928
9,60	•	89	47	35	40	10	0003177017
9,70	•	89	47	35	40	10	0003177167
9,80	•	89	47	35	40	10	0003177228
9,90	•	89	47	35	40	10	0003177388
10,00	•	89	47	35	40	10	0003177448
10,10	•	102	55	40	45	12	0003177599
10,20	•	102	55	40	45	12	0003177659
10,30	•	102	55	40	45	12	0003177710
10,40	•	102	55	40	45	12	0003177870
10,50	•	102	55	40	45	12	0003177920
10,60	•	102	55	40	45	12	0003178019
10,70	•	102	55	40	45	12	0003178160
10,80	•	102	55	40	45	12	0003178220
10,90	•	102	55	40	45	12	0003178380
11,00	•	102	55	40	45	12	0003178441
11,10	•	102	55	40	45	12	0003178501
11,20	•	102	55	40	45	12	0003178651
11,30	•	102	55	40	45	12	0003178712
11,40	•	102	55	40	45	12	0003178872
11,50	•	102	55	40	45	12	0003178933
11,60	•	102	55	40	45	12	0003179011
11,70	•	102	55	40	45	12	0003179172
11,80	•	102	55	40	45	12	0003179222
11,90	•	102	55	40	45	12	0003181874
12,00	•	102	55	40	45	12	0003179443
12,50	•	107	60	43	45	14	0003179503
12,80	•	107	60	43	45	14	0003179654
13,00	•	107	60	43	45	14	0003179714
13,50	•	107	60	43	45	14	0003179874
13,80	•	107	60	43	45	14	0003179935
14,00	•	107	60	43	45	14	0003180019
14,50	•	115	65	45	48	16	0003180170

Broca de MD de alto rendimiento.
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

UF

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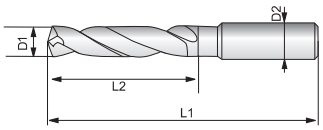

D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
14,80	•	115	65	45	48	16	0003180220
15,00	•	115	65	45	48	16	0003180380
15,50	•	115	65	45	48	16	0003180441
15,80	•	115	65	45	48	16	0003180501
16,00	•	115	65	45	48	16	0003180651
16,50	•	123	73	51	48	18	0003180712
16,80	•	123	73	51	48	18	0003180872
17,00	•	123	73	51	48	18	0003180933
17,50	•	123	73	51	48	18	0003181011
17,80	•	123	73	51	48	18	0003181172
18,00	•	123	73	51	48	18	0003181232
18,50	•	131	79	55	50	20	0003181383
19,00	•	131	79	55	50	20	0003181443
19,50	•	131	79	55	50	20	0003181503
19,80	•	131	79	55	50	20	0003181664
20,00	•	131	79	55	50	20	0003181714

- Con afilado de punta autocentrante
- Especialmente adecuada para aceros, también para fundiciónes, inoxidables, bronzes, aluminios, nickel o latónes
- Mangos según DIN 6535-E (WHISTLE-NOTCH) o DIN 6535-B (WELDON), bajo demanda
- Condiciones de corte, ver página 484

- *Self-centering sharpened point*
- *Specially adecuated for steels, also for cast iron, stainless steels, bronze, aluminium, nickel and brass*
- *Shanks according to DIN 6535-E (WHISTLE-NOTCH) or DIN 6535-B (WELDON), upon request*
- *Cutting conditions, see page 484*

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

KC

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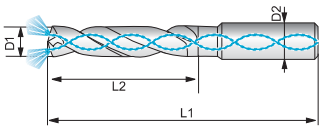


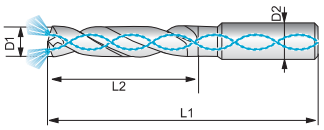
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
3,00	•	62	20	14	36	6	0003182174
3,10	•	62	20	14	36	6	0003196031
3,20	•	62	20	14	36	6	0003196191
3,30	•	62	20	14	36	6	0003182234
3,40	•	62	20	14	36	6	0003196252
3,50	•	62	20	14	36	6	0003196312
3,60	•	62	20	14	36	6	0003196463
3,70	•	62	20	14	36	6	0003197525
3,80	•	66	24	17	36	6	0003197686
3,90	•	66	24	17	36	6	0003197746
4,00	•	66	24	17	36	6	0003182385
4,10	•	66	24	17	36	6	0003197806
4,20	•	66	24	17	36	6	0003182445
4,30	•	66	24	17	36	6	0003197957
4,40	•	66	24	17	36	6	0003318543
4,50	•	66	24	17	36	6	0003198106
4,60	•	66	24	17	36	6	0003198256
4,70	•	66	24	17	36	6	0003198317
4,80	•	66	28	20	36	6	0003198477
4,90	•	66	28	20	36	6	0003198537
5,00	•	66	28	20	36	6	0003182666
5,10	•	66	28	20	36	6	0003198688
5,20	•	66	28	20	36	6	0003198748
5,30	•	66	28	20	36	6	0003198809
5,40	•	66	28	20	36	6	0003198969
5,50	•	66	28	20	36	6	0003199048
5,60	•	66	28	20	36	6	0003199108
5,70	•	66	28	20	36	6	0003199259
5,80	•	66	28	20	36	6	0003199319
5,90	•	66	28	20	36	6	0003199479
6,00	•	66	28	20	36	6	0003182726
6,10	•	79	41	29	36	8	0003199530
6,20	•	79	41	29	36	8	0003199680
6,30	•	79	41	29	36	8	0003199741
6,40	•	79	41	29	36	8	0003199801
6,50	•	79	41	29	36	8	0003199961
6,60	•	79	41	29	36	8	0003200009
6,70	•	79	41	29	36	8	0003200160
6,80	•	79	41	29	36	8	0003182877
6,90	•	79	41	29	36	8	0003200220
7,00	•	79	41	29	36	8	0003182937
7,10	•	79	41	29	36	8	0003200380
7,20	•	79	41	29	36	8	0003200431
7,30	•	79	41	29	36	8	0003200591
7,40	•	79	41	29	36	8	0003200651
7,50	•	79	41	29	36	8	0003200712
7,60	•	79	41	29	36	8	0003200862
7,70	•	79	41	29	36	8	0003200923
7,80	•	79	41	29	36	8	0003201011
7,90	•	79	41	29	36	8	0003201162
8,00	•	79	41	29	36	8	0003183016

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD | R30º

KC

AltPlus



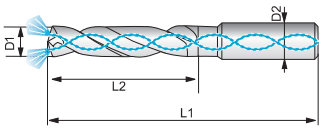
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
8,10	•	89	47	35	40	10	0003201222
8,20	•	89	47	35	40	10	0003201383
8,30	•	89	47	35	40	10	0003201443
8,40	•	89	47	35	40	10	0003201593
8,50	•	89	47	35	40	10	0003183237
8,60	•	89	47	35	40	10	0003201654
8,70	•	89	47	35	40	10	0003201714
8,80	•	89	47	35	40	10	0003201874
8,90	•	89	47	35	40	10	0003201925
9,00	•	89	47	35	40	10	0003202014
9,10	•	89	47	35	40	10	0003202164
9,20	•	89	47	35	40	10	0003202224
9,30	•	89	47	35	40	10	0003202385
9,40	•	89	47	35	40	10	0003202445
9,50	•	89	47	35	40	10	0003202506
9,60	•	89	47	35	40	10	0003202656
9,70	•	89	47	35	40	10	0003203719
9,80	•	89	47	35	40	10	0003203939
9,90	•	89	47	35	40	10	0003204179
10,00	•	89	47	35	40	10	0003183397
10,10	•	102	55	40	45	12	0003204239
10,20	•	102	55	40	45	12	0003183447
10,30	•	102	55	40	45	12	0003204440
10,40	•	102	55	40	45	12	0003204661
10,50	•	102	55	40	45	12	0003204871
10,60	•	102	55	40	45	12	0003205011
10,70	•	102	55	40	45	12	0003205171
10,80	•	102	55	40	45	12	0003205382
10,90	•	102	55	40	45	12	0003205442
11,00	•	102	55	40	45	12	0003183508
11,10	•	102	55	40	45	12	0003205663
11,20	•	102	55	40	45	12	0003205723
11,30	•	102	55	40	45	12	0003205934
11,40	•	102	55	40	45	12	0003206173
11,50	•	102	55	40	45	12	0003206234
11,60	•	102	55	40	45	12	0003206444
11,70	•	102	55	40	45	12	0003206505
11,80	•	102	55	40	45	12	0003206665
11,90	•	102	55	40	45	12	0003206876
12,00	•	102	55	40	45	12	0003183668
12,50	•	107	60	43	45	14	0003207175
13,00	•	107	60	43	45	14	0003207236
13,50	•	107	60	43	45	14	0003207457
14,00	•	107	60	43	45	14	0003207507
14,50	•	115	65	45	48	16	0003207667
15,00	•	115	65	45	48	16	0003207728
15,50	•	115	65	45	48	16	0003207888
16,00	•	115	65	45	48	16	0003207938
16,50	•	123	73	51	48	18	0003208027
17,00	•	123	73	51	48	18	0003208178
17,50	•	123	73	51	48	18	0003208238

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 3xD

KC

AltPlus

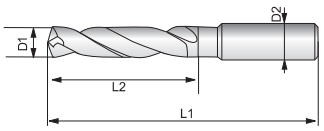


D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
18,00	•	123	73	51	48	18	0003208398
18,50	•	131	79	55	50	20	0003208459
19,00	•	131	79	55	50	20	0003208660
19,50	•	131	79	55	50	20	0003208720
20,00	•	131	79	55	50	20	0003208880

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 5xD

L - UF

AltPlus



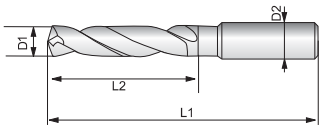
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
3,00	•	66	28	23	36	6	0003209722
3,10	•	66	28	23	36	6	0003209943
3,20	•	66	28	23	36	6	0003210027
3,30	•	66	28	23	36	6	0003210188
3,40	•	66	28	23	36	6	0003210398
3,50	•	66	28	23	36	6	0003210459
3,60	•	66	28	23	36	6	0003210660
3,70	•	66	28	23	36	6	0003210720
3,80	•	74	36	29	36	6	0003210941
3,90	•	74	36	29	36	6	0003211020
4,00	•	74	36	29	36	6	0003211391
4,10	•	74	36	29	36	6	0003211451
4,20	•	74	36	29	36	6	0003211672
4,30	•	74	36	29	36	6	0003211883
4,40	•	74	36	29	36	6	0003211943
4,50	•	74	36	29	36	6	0003212514
4,60	•	74	36	29	36	6	0003212735
4,70	•	74	36	29	36	6	0003212885

Broca de MD de alto rendimiento..
High performance twist drill.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 5xD

L - UF

AltPlus



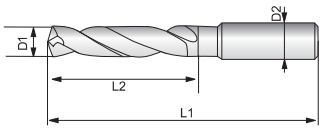
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
4,80	•	82	44	35	36	6	0003372730
4,90	•	82	44	35	36	6	0003212945
5,00	•	82	44	35	36	6	0003213024
5,10	•	82	44	35	36	6	0003213185
5,20	•	82	44	35	36	6	0003213245
5,30	•	82	44	35	36	6	0003213305
5,40	•	82	44	35	36	6	0003213456
5,50	•	82	44	35	36	6	0003213676
5,60	•	82	44	35	36	6	0003213737
5,70	•	82	44	35	36	6	0003213887
5,80	•	82	44	35	36	6	0003214036
5,90	•	82	44	35	36	6	0003214247
6,00	•	82	44	35	36	6	0003216242
6,10	•	91	53	43	36	8	0003216302
6,20	•	91	53	43	36	8	0003216463
6,30	•	91	53	43	36	8	0003216523
6,40	•	91	53	43	36	8	0003216673
6,50	•	91	53	43	36	8	0003216734
6,60	•	91	53	43	36	8	0003223314
6,70	•	91	53	43	36	8	0003223474
6,80	•	91	53	43	36	8	0003223534
6,90	•	91	53	43	36	8	0003223685
7,00	•	91	53	43	36	8	0003269932
7,10	•	91	53	43	36	8	0003223745
7,20	•	91	53	43	36	8	0003223103
7,30	•	91	53	43	36	8	0003223805
7,40	•	91	53	43	36	8	0003223966
7,50	•	91	53	43	36	8	0003224045
7,60	•	91	53	43	36	8	0003224105
7,70	•	91	53	43	36	8	0003224265
7,80	•	91	53	43	36	8	0003224316
7,90	•	91	53	43	36	8	0003224476
8,00	•	91	53	43	36	8	0003242568
8,10	•	103	61	49	40	10	0003242619
8,20	•	103	61	49	40	10	0003242779
8,30	•	103	61	49	40	10	0003242830
8,40	•	103	61	49	40	10	0003242990
8,50	•	103	61	49	40	10	0003243139
8,60	•	103	61	49	40	10	0003243340
8,70	•	103	61	49	40	10	0003243621
8,80	•	103	61	49	40	10	0003243772
8,90	•	103	61	49	40	10	0003243832
9,00	•	103	61	49	40	10	0003243992
9,10	•	103	61	49	40	10	0003244071
9,20	•	103	61	49	40	10	0003244132
9,30	•	103	61	49	40	10	0003244342
9,40	•	103	61	49	40	10	0003244403
9,50	•	103	61	49	40	10	0003244563
9,60	•	103	61	49	40	10	0003244623
9,70	•	103	61	49	40	10	0003244774
9,80	•	103	61	49	40	10	0003244834

Broca de MD de alto rendimiento para agujeros de pre-roscado.
High performance twist drill for thread holes, solid carbide
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 5xD

L - UF

AltPlus



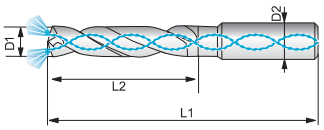
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
9,90	•	103	61	49	40	10	0003244995
10,00	•	103	61	49	40	10	0003245073
10,10	•	118	71	56	45	12	0003245134
10,20	•	118	71	56	45	12	0003245294
10,30	•	118	71	56	45	12	0003245355
10,40	•	118	71	56	45	12	0003245405
10,50	•	118	71	56	45	12	0003245565
10,60	•	118	71	56	45	12	0003245626
10,70	•	118	71	56	45	12	0003245786
10,80	•	118	71	56	45	12	0003245836
10,90	•	118	71	56	45	12	0003245997
11,00	•	118	71	56	45	12	0003246076
11,10	•	118	71	56	45	12	0003246136
11,20	•	118	71	56	45	12	0003246296
11,30	•	118	71	56	45	12	0003246357
11,40	•	118	71	56	45	12	0003250201
11,50	•	118	71	56	45	12	0003246568
11,60	•	118	71	56	45	12	0003246628
11,70	•	118	71	56	45	12	0003246788
11,80	•	118	71	56	45	12	0003246849
11,90	•	118	71	56	45	12	0003246999
12,00	•	118	71	56	45	12	0003247088
12,30	•	124	77	60	45	14	0003247138
12,50	•	124	77	60	45	14	0003247299
12,80	•	124	77	60	45	14	0003247359
13,00	•	124	77	60	45	14	0003247410
13,50	•	124	77	60	45	14	0003247560
13,80	•	124	77	60	45	14	0003247620
14,00	•	124	77	60	45	14	0003247781
14,50	•	133	83	63	48	16	0003247841
14,80	•	133	83	63	48	16	0003247901
15,00	•	133	83	63	48	16	0003248080
15,50	•	133	83	63	48	16	0003248141
15,80	•	133	83	63	48	16	0003248291
16,00	•	133	83	63	48	16	0003248351
16,50	•	143	93	71	48	18	0003248412
16,80	•	143	93	71	48	18	0003248572
17,00	•	143	93	71	48	18	0003248623
17,50	•	143	93	71	48	18	0003248783
17,80	•	143	93	71	48	18	0003248843
18,00	•	143	93	71	48	18	0003248904
18,50	•	153	101	77	50	20	0003249083
19,00	•	153	101	77	50	20	0003249143
19,50	•	153	101	77	50	20	0003249203
19,80	•	153	101	77	50	20	0003249354
20,00	•	153	101	77	50	20	0003249414

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 5xD | R30º

L - KC

AltPlus



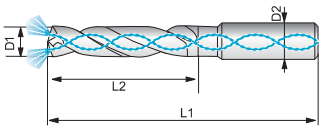
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
3,00	•	66	28	23	36	6	0003249574
3,10	•	66	28	23	36	6	0003249635
3,20	•	66	28	23	36	6	0003249785
3,30	•	66	28	23	36	6	0003249846
3,40	•	66	28	23	36	6	0003250080
3,50	•	66	28	23	36	6	0003250141
3,60	•	66	28	23	36	6	0003250351
3,70	•	66	28	23	36	6	0003250412
3,80	•	74	36	29	36	6	0003250572
3,90	•	74	36	29	36	6	0003250633
4,00	•	74	36	29	36	6	0003250783
4,10	•	74	36	29	36	6	0003250843
4,20	•	74	36	29	36	6	0003250904
4,30	•	74	36	29	36	6	0003251083
4,40	•	74	36	29	36	6	0003251143
4,50	•	74	36	29	36	6	0003251203
4,60	•	74	36	29	36	6	0003251354
4,70	•	74	36	29	36	6	0003251414
4,80	•	82	44	35	36	6	0003251574
4,90	•	82	44	35	36	6	0003251635
5,00	•	82	44	35	36	6	0003251785
5,10	•	82	44	35	36	6	0003251846
5,20	•	82	44	35	36	6	0003251906
5,30	•	82	44	35	36	6	0003252085
5,40	•	82	44	35	36	6	0003252145
5,50	•	82	44	35	36	6	0003252206
5,60	•	82	44	35	36	6	0003252366
5,70	•	82	44	35	36	6	0003252416
5,80	•	82	44	35	36	6	0003252577
5,90	•	82	44	35	36	6	0003252637
6,00	•	82	44	35	36	6	0003252797
6,10	•	91	53	43	36	8	0003252848
6,20	•	91	53	43	36	8	0003252908
6,30	•	91	53	43	36	8	0003253087
6,40	•	91	53	43	36	8	0003253147
6,50	•	91	53	43	36	8	0003253208
6,60	•	91	53	43	36	8	0003253368
6,70	•	91	53	43	36	8	0003253429
6,80	•	91	53	43	36	8	0003253579
6,90	•	91	53	43	36	8	0003253639
7,00	•	91	53	43	36	8	0003253790
7,10	•	91	53	43	36	8	0003253850
7,20	•	91	53	43	36	8	0003253901
7,30	•	91	53	43	36	8	0003254099
7,40	•	91	53	43	36	8	0003254140
7,50	•	91	53	43	36	8	0003254200
7,60	•	91	53	43	36	8	0003254361
7,70	•	91	53	43	36	8	0003254421
7,80	•	91	53	43	36	8	0003254571
7,90	•	91	53	43	36	8	0003254632

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 5xD | R30º

L - KC

AltPlus



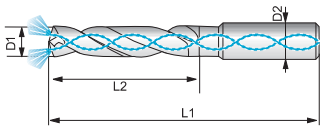
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
8,00	•	91	53	43	36	8	0003254792
8,10	•	103	61	49	40	10	0003254852
8,20	•	103	61	49	40	10	0003254913
8,30	•	103	61	49	40	10	0003255092
8,40	•	103	61	49	40	10	0003255152
8,50	•	103	61	49	40	10	0003255202
8,60	•	103	61	49	40	10	0003255363
8,70	•	103	61	49	40	10	0003255423
8,80	•	103	61	49	40	10	0003255584
8,90	•	103	61	49	40	10	0003255634
9,00	•	103	61	49	40	10	0003255794
9,10	•	103	61	49	40	10	0003255855
9,20	•	103	61	49	40	10	0003255915
9,30	•	103	61	49	40	10	0003256094
9,40	•	103	61	49	40	10	0003256154
9,50	•	103	61	49	40	10	0003256215
9,60	•	103	61	49	40	10	0003256365
9,70	•	103	61	49	40	10	0003256425
9,80	•	103	61	49	40	10	0003256586
9,90	•	103	61	49	40	10	0003256646
10,00	•	103	61	49	40	10	0003256797
10,10	•	118	71	56	45	12	0003256857
10,20	•	118	71	56	45	12	0003256917
10,30	•	118	71	56	45	12	0003257096
10,40	•	118	71	56	45	12	0003257157
10,50	•	118	71	56	45	12	0003257217
10,60	•	118	71	56	45	12	0003257367
10,70	•	118	71	56	45	12	0003288685
10,80	•	118	71	56	45	12	0003288806
10,90	•	118	71	56	45	12	0003288967
11,00	•	118	71	56	45	12	0003289045
11,10	•	118	71	56	45	12	0003289106
11,20	•	118	71	56	45	12	0003285036
11,30	•	118	71	56	45	12	0003289266
11,40	•	118	71	56	45	12	0003289317
11,50	•	118	71	56	45	12	0003289477
11,60	•	118	71	56	45	12	0003289537
11,70	•	118	71	56	45	12	0003289698
11,80	•	118	71	56	45	12	0003289748
11,90	•	118	71	56	45	12	0003289808
12,00	•	118	71	56	45	12	0003289969
12,50	•	124	77	60	45	14	0003290043
13,00	•	124	77	60	45	14	0003290104
13,50	•	124	77	60	45	14	0003290264
14,00	•	124	77	60	45	14	0003290314
14,50	•	133	83	63	48	16	0003290475
15,00	•	133	83	63	48	16	0003290535
15,50	•	133	83	63	48	16	0003290695
16,00	•	133	83	63	48	16	0003290746
16,50	•	143	93	71	48	18	0003290806

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 5xD | R30º

L - KC

AltPlus

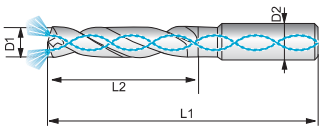


D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
17,00	•	143	93	71	48	18	0003290967
17,50	•	143	93	71	48	18	0003291045
18,00	•	143	93	71	48	18	0003291106
18,50	•	153	101	77	50	20	0003291266
19,00	•	153	101	77	50	20	0003291327
19,50	•	153	101	77	50	20	0003309527
20,00	•	153	101	77	50	20	0003291537

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 8xD | R30º

XL - KC

AltPlus



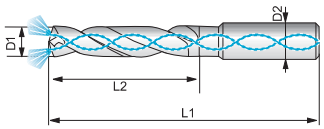
D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
3,00	•	72	34	31	36	6	0003292690
3,10	•	72	34	31	36	6	0003292750
3,20	•	72	34	31	36	6	0003292811
3,30	•	72	34	31	36	6	0003292961
3,40	•	72	34	31	36	6	0003293050
3,50	•	72	34	31	36	6	0003293100
3,60	•	72	34	31	36	6	0003293261
3,70	•	72	34	31	36	6	0003293321
3,80	•	81	43	38	36	6	0003293482
3,90	•	81	43	38	36	6	0003293532
4,00	•	81	43	38	36	6	0003293692
4,10	•	81	43	38	36	6	0003293753
4,20	•	81	43	38	36	6	0003293813
4,30	•	81	43	38	36	6	0003293963
4,40	•	81	43	38	36	6	0003294052
4,50	•	81	43	38	36	6	0003294113
4,60	•	81	43	38	36	6	0003294263

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537 | DIN 6537 | 140º | Form. C | MD integral *Solid Carbide* K30 | 8xD | R30º

XL - KC

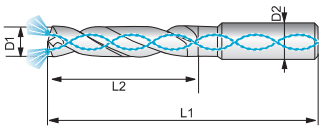
AltPlus



D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
4,70	•	81	43	38	36	6	0003294323
4,80	•	97	57	48	36	6	0003294484
4,90	•	97	57	48	36	6	0003294544
5,00	•	97	57	48	36	6	0003264379
5,10	•	97	57	48	36	6	0003294755
5,20	•	97	57	48	36	6	0003294815
5,30	•	97	57	48	36	6	0003294976
5,40	•	97	57	48	36	6	0003295055
5,50	•	97	57	48	36	6	0003295115
5,60	•	97	57	48	36	6	0003295265
5,70	•	97	57	48	36	6	0003295326
5,80	•	97	57	48	36	6	0003295486
5,90	•	97	57	48	36	6	0003295546
6,00	•	97	57	48	36	6	0003118722
6,10	•	116	76	64	36	8	0003295607
6,20	•	116	76	64	36	8	0003295757
6,30	•	116	76	64	36	8	0003295818
6,40	•	116	76	64	36	8	0003295978
6,50	•	116	76	64	36	8	0003296057
6,60	•	116	76	64	36	8	0003296117
6,70	•	116	76	64	36	8	0003296278
6,80	•	116	76	64	36	8	0003296328
6,90	•	116	76	64	36	8	0003309317
7,00	•	116	76	64	36	8	0003296549
7,10	•	116	76	64	36	8	0003296609
7,20	•	116	76	64	36	8	0003296750
7,30	•	116	76	64	36	8	0003296810
7,40	•	116	76	64	36	8	0003296970
7,50	•	116	76	64	36	8	0003297059
7,60	•	116	76	64	36	8	0003297110
7,70	•	116	76	64	36	8	0003297270
7,80	•	116	76	64	36	8	0003297330
7,90	•	116	76	64	36	8	0003297481
8,00	•	116	76	64	36	8	0003264439
8,10	•	142	95	80	40	10	0003297541
8,20	•	142	95	80	40	10	0003297601
8,30	•	142	95	80	40	10	0003297762
8,40	•	142	95	80	40	10	0003297812
8,50	•	142	95	80	40	10	0003297973
8,60	•	142	95	80	40	10	0003298051
8,70	•	142	95	80	40	10	0003298112
8,80	•	142	95	80	40	10	0003298272
8,90	•	142	95	80	40	10	0003298604
9,00	•	142	95	80	40	10	0003298764
9,10	•	142	95	80	40	10	0003298824
9,20	•	142	95	80	40	10	0003298975
9,30	•	142	95	80	40	10	0003299064
9,40	•	142	95	80	40	10	0003299114
9,50	•	142	95	80	40	10	0003299274
9,60	•	142	95	80	40	10	0003299335

Broca de MD de alto rendimiento con refrigeración interna.
High performance twist drill with internal coolant.
Mango cilíndrico / *Straight shank.*

6537	DIN 6537	140º	Form. C	MD integral *Solid Carbide* K30	8xD	R30º
XL - KC						
AltPlus						

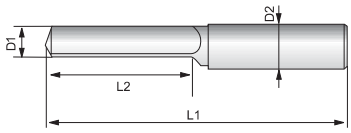


D1 mm h6		L1 mm	L2 mm	L3 mm	L4 mm	D2 mm h6	Cod.
9,70	•	142	95	80	40	10	0003299495
9,80	•	142	95	80	40	10	0003299546
9,90	•	142	95	80	40	10	0003299606
10,00	•	142	95	80	40	10	0003299766
10,10	•	163	114	96	45	12	0003299827
10,20	•	163	114	96	45	12	0003299977
10,30	•	163	114	96	45	12	0003300025
10,40	•	163	114	96	45	12	0003300185
10,50	•	163	114	96	45	12	0003300246
10,60	•	163	114	96	45	12	0003300396
10,70	•	163	114	96	45	12	0003300456
10,80	•	163	114	96	45	12	0003300517
10,90	•	163	114	96	45	12	0003300677
11,00	•	163	114	96	45	12	0003300728
11,10	•	163	114	96	45	12	0003300888
11,20	•	163	114	96	45	12	0003300948
11,30	•	163	114	96	45	12	0003301027
11,40	•	163	114	96	45	12	0003301188
11,50	•	163	114	96	45	12	0003301248
11,60	•	163	114	96	45	12	0003301308
11,70	•	163	114	96	45	12	0003301459
11,80	•	163	114	96	45	12	0003301519
11,90	•	163	114	96	45	12	0003301670
12,00	•	163	114	96	45	12	0003301730
12,50	•	182	133	112	45	14	0003301880
13,00	•	182	133	112	45	14	0003301941
13,50	•	182	133	112	45	14	0003302020
14,00	•	182	133	112	45	14	0003302180
14,50	•	204	152	128	48	16	0003302240
15,00	•	204	152	128	48	16	0003302301
15,50	•	204	152	128	48	16	0003302451
16,00	•	204	152	128	48	16	0003302511
16,50	•	223	171	144	48	18	0003302672
17,00	•	223	171	144	48	18	0003302943
17,50	•	223	171	144	48	18	0003303032
18,00	•	223	171	144	48	18	0003303182
18,50	•	244	190	160	50	20	0003303243
19,00	•	244	190	160	50	20	0003303303
19,50	•	244	190	160	50	20	0003303463
20,00	•	244	190	160	50	20	0003303514

Broca destructora de machos.
Ex hard drill for removing taps.

JMC
RM

JMC NORM./ STD | MD integral *Solid Carbide*

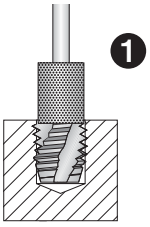


D1 mm e9	para rosca *for thread*		L1 mm	L2 mm	D2 mm h6	Z	Cod.
3,3	M4	•	50	15	6	3	0002253857
4,2	M5	•	50	15	6	3	0002253918
5,0	M6	•	50	15	6	3	0002254007
6,8	M8	•	60	20	8	3	0002254157
8,5	M10	•	70	25	10	3	0002254217
10,2	M12	•	75	30	12	3	0002254438
12,0	M14	•	75	30	12	3	0002254589
14,0	M16	•	100	40	14	3	0002254649
15,5	M18	•	100	40	16	3	0002255009
17,5	M20	•	100	50	17,5	3	0002255159

Proceso de utilización de la herramienta estractora de machos rotos:
Proces for removing damaged taps from the hole:

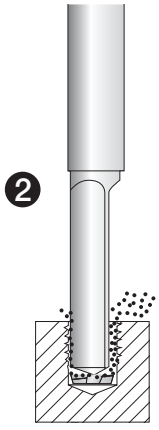
Macho roto en el interior del agujero

Damaged tap in the hole



Efectuar un plano sobre la parte quebrada del macho con una fresa frontal de MD o rectificarla con rotoflex y muela plana

Make the damaged surface flat with a solid carbide plug mill or grind with a micro grinder

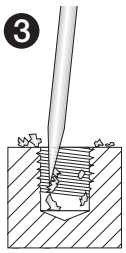


A alta velocidad de corte (1.400 ~2.400 Rpm.) y bajo avance (0,03 - 0,05 mm/rev.) iniciar el perforado con la herramienta, repitiendo varias veces la operación de punteado a efecto de tener un punto partida. La lubricación puede efectuarse con emulsión.

At high speed (1.400 ~2.400 Rpm.) and low feed (0,03 – 0,05 mm/U.) make an initial centered approach by drilling lightly repeating the operation many times. For the operation can be used emulsion.

Taladrar el nucleo del macho roto a la condiciones establecidas, deteniendo la operación ocasionalmente para eliminar los residuos. Utilizar en esta operación aceite de corte "INOX-CUT" en abundancia.
Una vez el agujero ha sido liberado, eliminar los residuos del macho de los hilos de la rosca.

Drill the core of the tap at a fixed feed and speed, stopping the operation ocasionally to remove chip waste. In addition use plenty of "INOX-CUT" cutting oil.
Once the hole has been cleared, remove the remands of the tap easely.

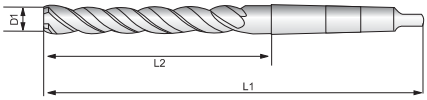


Se recomienda repasar el agujero con broca de MD a diámetro de preroscado antes de volver a roscar.

We recommend to re-drill the hole at the previous diameter with a solid carbide drill before tapping again

Broca-escariadora. Mango Cono Morse.
Core drill. Cono Morse taper.

343	DIN 343	120º	Z3	R27º	HSS
N					



D1 mm h8		L1 mm	L2 mm	CM *MT*	Ød1	Cod.
7,8*	•	156	75	1	5,6	0002248208
8*	•	156	75	1	5,6	0002248369
8,8	•	162	81	1	6,3	0002248570
9	•	162	81	1	6,3	0002248429
9,8	•	168	87	1	7	0002248790
10	•	168	87	1	7	0002248630
10,75	•	175	94	1	7,7	0002248851
11	•	175	94	1	7,7	0002248911
11,75	•	182	101	1	8,4	0002249090
12	•	182	101	1	8,4	0002249150
12,75	•	182	101	1	9,1	0002249201
13	•	182	101	1	9,1	0002249361
13,75	•	189	108	1	9,8	0002249421
14	•	189	108	1	9,8	0002249582
14,75	•	212	114	2	10,5	0002249632
15	•	212	114	2	10,5	0002249793
15,75	•	218	120	2	11,2	0002205399
16	•	218	120	2	11,2	0002249913
16,75	•	223	125	2	11,9	0002250098
17	•	223	125	2	11,9	0002250158
17,75	•	228	130	2	12,6	0002254378
18	•	228	130	2	12,6	0002250369
18,7	•	233	135	2	13,3	0002251090
19	•	233	135	2	13,3	0002250580
19,7	•	238	140	2	14	0002251211
20	•	238	140	2	14	0002250790
20,7	•	243	145	2	14,6	0002251361
21	•	243	145	2	14,6	0002251421
21,7	•	248	150	2	15,3	0002251582
22	•	248	150	2	15,3	0002251642
22,7	•	253	155	2	16	0002251793
23	•	253	155	2	16	0002251853
23,7	•	281	160	3	16,6	0002251913
24	•	281	160	3	16,6	0002252424
24,7	•	281	160	3	17,3	0002252584
25	•	281	160	3	17,3	0002252644
25,7	•	286	165	3	18	0002252705
26	•	286	165	3	18	0002252855
26,7	•	291	170	3	18,6	0002252916
27	•	291	170	3	18,6	0002253094
27,7	•	291	170	3	19,3	0002253155
28	•	291	170	3	19,3	0002253215
28,7	•	296	175	3	20	0002253376
29	•	296	175	3	20	0002253426
29,7	•	296	175	3	20,5	0002253586
30	•	296	175	3	20,5	0002253647

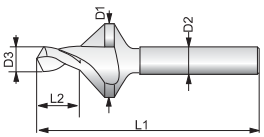
*JMC Norm.

- Para repasar agujeros ovalados o mal alineados
- Núcleo reforzado que proporciona gran robustez a la herramienta

- *To re-drill not round holes or holes out of alignment*
- *Reinforced core which provides robustness to the tool*

Broca-avellanador 90º. Mango cilíndrico.
Drill-countersink 90º. Straight shank.

JMC broca avellanadora | JMC NORM./ STD | 120º | 90º | HSSE Co5

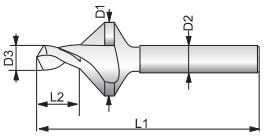


Rosca *Thread*		D3 mm	D1 mm	L1 mm	L2 mm	D2 mm	Cod.
M3	•	3,2	6,3	60	9	6	0002243789
M4	•	4,3	8,3	65	11	6	0002243849
M5	•	5,3	10,4	70	13	8	0002243900
M6	•	6,4	12,4	75	15	8	0002215046
M8	•	8,4	16,5	83	19	10	0002244088
M10	•	10,5	20,5	90	23	12	0002244149

- Destalonado radial
- Trabajos sin vibraciones y con buen centraje
- Taladrado y avellanados de precisión en una sola operación
- Nuevos estuches de brocas-avellanador en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

- *Radial relief*
- *Works without vibrations and with satisfactory centering*
- *Precision drilling and countersinking in a single operation*
- *New cases of drill-countersink in sets of differerent sizes, see cutting tool sets programme*

JMC broca avellanadora *TiN* | JMC NORM./ STD | 120º | 90º | HSSE Co5



Rosca *Thread*		D3 mm	D1 mm	L1 mm	L2 mm	D2 mm	Cod.
M3	•	3,2	6,3	60	9	6	0002244209
M4	•	4,3	8,3	65	11	6	0002244350
M5	•	5,3	10,4	70	13	8	0002244410
M6	•	6,4	12,4	75	15	8	0002244570
M8	•	8,4	16,5	83	19	10	0002244631
M10	•	10,5	20,5	90	23	12	0002244781

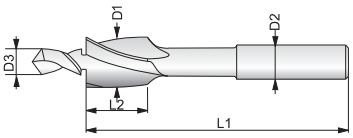
- Destalonado radial
- Trabajos sin vibraciones y con buen centraje
- Taladrado y avellanados de precisión en una sola operación
- Nuevos estuches de brocas-avellanador en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

- *Radial relief*
- *Works without vibrations and with satisfactory centering*
- *Precision drilling and countersinking in a single operation*
- *New cases of drill-countersink in sets of differerent sizes, see cutting tool sets programme*

Broca-avellanador plano 180º. Mango cilíndrico.
Drill-counterbore 180º. Straight shank.

JMC
broca fresa

JMC NORM./ STD | 120º | 180º | HSSE Co5



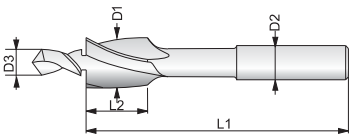
Rosca *Thread*		D3 mm	D1 mm	L1 mm	L3 mm	L2 mm	D2 mm	Cod.
M 3	•	3,2	5,9	72	9	13	5	0002244842
M 4	•	4,3	7,4	72	11	14	6	0002244902
M 5	•	5,3	8,9	82	13	16	8	0002245081
M 6	•	6,4	10,4	88	15	18	8	0002245141
M 8	•	8,4	13,5	105	19	22	12	0002245202
M 10	•	10,5	16,5	108	23	22	12	0002245352
M 12	•	13,0	19	115	27	24	12	0002245412

- Taladrado y avellanado de agujeros pasantes en ajuste fino
- Nuevos estuches de brocas-avellanador en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

- *Drilling and counterboring in fine adjustment of through holes*
- *New cases of drill-counterbore in sets of difererent sizes, see cutting tool sets programme*

JMC
broca fresa
TiN

JMC NORM./ STD | 120º | 180º | HSSE Co5



Rosca *Thread*		D3 mm	D1 mm	L1 mm	L3 mm	L2 mm	D2 mm	Cod.
M 3	•	3,20	5,9	72	9	13	5	0002245633
M 4	•	4,30	7,4	72	11	14	6	0002245783
M 5	•	5,30	8,9	82	13	16	8	0002245844
M 6	•	6,40	10,4	88	15	18	8	0002245904
M 8	•	8,40	13,5	105	19	22	12	0002246083
M 10	•	10,50	16,5	108	23	22	12	0002246143
M 12	•	13,00	19	115	27	24	12	0002246204

- Taladrado y avellanado de agujeros pasantes en ajuste fino
- Nuevos estuches de brocas-avellanador en diferentes composiciones de medidas, ver en el programa de estuches de herramientas de corte

- *Drilling and counterboring in fine adjustment of through holes*
- *New cases of drill-counterbore in sets of difererent sizes, see cutting tool sets programme*

Fresas frontales / *End mills*

Grupo materiales *Materials groups*		Subgrupos materiales *Application materials sub-groups*	Resist.Tensil *Tensile strength* (N/mm²)	Ejemplos *Examples*	Mecanizado *Machining*	Desbaste *Roughing cutter*		Acabado *Finishing*	
						Corte radial *Radial cut*	Prof. axial *Axial depth*	Corte radial *Radial cut*	Prof. axial *Axial depth*
GR1 Aceros no aleados *Non alloy steels*	1	Aceros de construcción y automáticos *General structural and free cutting steels*	≤ 500	ST44-2 / ST52-3		1xd	0,06xd	1xd	0,03xd
			≤ 800	95MnPb 36 / 10SPb 20		0,04xd	0,12xd	0,03xd	0,85xd
			≤ 850	C22 / CK22 / C25 / CK38 / CK40 / C45		0,02xd	0,05xd	0,01xd	0,02xd
GR2 Aceros aleados *Alloy steels*	1	Aceros de construcción o fundidos *General structural steels R<55HRC*	≤ 1150	20MnRc5 / 15CrMo5		1xd	0,04xd	1xd	0,02xd
			≤ 1450	42CrMo4 / 41Cr4		0,03xd	0,82xd	0,02xd	0,65xd
			≤ 1000	X42Cr13 / 56-5-2		0,02xd	0,03xd	0,01xd	0,02xd
	2	Aceros de construcción o fundidos *General structural steels R>55HRC*	> 55 HRC			1xd	0,03xd	1xd	0,01xd
						0,03xd	0,75xd	0,01xd	0,45xd
						0,02xd	0,02xd	0,01xd	0,01xd
GR3 Aceros inoxidables *Stainless steels*	1	Aceros inoxidables austeníticos y ferríticos *Austenitic and ferritic stainless steels*	≤ 700	X6CrAl13 / X8Cr30		1xd	0,04xd	1xd	0,01xd
			≤ 850	X5CrNi18-10 / X8CrNiMo17-12-2		0,02xd	0,83xd	0,01xd	0,85xd
						0,02xd	0,03xd	0,01xd	0,02xd
GR4 Fundiciones *Cast iron*	1	Fundición gris GG *GG Grey cast iron*	≤ 820	GG15 / GG20 / GG25 / GG40		1xd	0,04xd	1xd	0,02xd
						0,02xd	0,85xd	0,01xd	0,64xd
						0,03xd	0,04xd	0,02xd	0,02xd
	2	Fundición nodular GGG *GGG Nodular cast iron*	≤ 960	GGG40 / GGG50 / GGG70		1xd	0,22xd	1xd	0,03xd
						0,18xd	0,65xd	0,06xd	0,45xd
						0,10xd	0,25xd	0,02xd	0,03xd
GR5 Cobre *Copper*	1	Cobre puro / *Pure copper*	≤ 210	E-Cu / SE-Cu / Cobre Ellectrolitic		1xd	0,09xd	1xd	0,03xd
			≤ 400	G-CuSn5ZnPb		0,15xd	1,05xd	0,04xd	0,75xd
						0,08xd	0,15xd	0,03xd	0,05xd
GR6 Aluminio *Aluminium*	1	Aluminio y aleaciones de aluminio *Aluminium and aluminium alloys*	≤ 100	Al99.98 / Al99Cu / Al99.5ti		1xd	0,12xd	1xd	0,05xd
			≤ 270	AlMgSi0,5 / AlMgSiPb / AlCuBiPb		0,25xd	1,25xd	0,05xd	0,82xd
			≤ 330	GAlSi6Cu / GD-AlSi9Cu3 / GAlSi12		0,25xd	0,35xd	0,04xd	0,05xd
GR7 Magnesio *Magnesium*	1	Magnesio / *Magnesium*	≤ 275	GDMgAl6 / GDMgAl6Zn1 / GDMgAl8Zn1		1xd	0,12xd	1xd	0,05xd
			≤ 365	MgMn2 / MgAl6Zn / MgAl8Zn		0,25xd	1,25xd	0,05xd	0,82xd
						0,25xd	0,35xd	0,04xd	0,05xd
GR8 Níquel *Nickel*	1	Niquel y aleaciones de niquel *Nickel and nickel alloys*	≤ 500	RNi24 / RNi12 / RNi8		1xd	0,03xd	1xd	0,01xd
			≤ 900	Monel ® 400 / Inconel 625 / Invar		0,02xd	0,52xd	0,01xd	0,35xd
			≤ 1400	Nimonic 80 / Inconel 718 / Hastelloy C4		0,02xd	0,02xd	0,01xd	0,01xd
GR9 Titanio *Titanium*	1	Titanio y aleaciones de titanio *Titanium and titanium alloys*	≤ 850	Ti99,5 / Ti99,7 / Ti99,4 Ti99,2		1xd	0,03xd	1xd	0,01xd
			≤ 1200	Ti4Al4Mn / Ti6Al4V / Ti7Al4Mo		0,02xd	0,75xd	0,01xd	0,43xd
						0,02xd	0,03xd	0,01xd	0,02xd
GR10 Zinc / *Zinc*	1	Zinc / *Zinc*	≤ 300	ZnCuPb1		1xd	0,12xd	1xd	0,05xd
			≤ 328	GD-ZnAl4 / GD-ZnAl4Cu3 / GK-ZnAlCu1		0,25xd	1,25xd	0,05xd	0,82xd
						0,25xd	0,35xd	0,04xd	0,05xd
GR11 Materiales sintéticos *Synthetic materials*	1	Termoplásticos / *Thermoplastics*	≤ 80	Makrolon / Plexiglas / Hostalen		1xd	0,12xd	1xd	0,03xd
						0,08xd	0,95xd	0,04xd	0,63xd
						0,06xd	0,07xd	0,03xd	0,04xd
	2	Termoestables *Thermosetting plastics*	≤ 110	Bakelite / Resopal / Pertinax		1xd	0,06xd	1xd	0,02xd
						0,02xd	0,45xd	0,01xd	0,32xd
						0,02xd	0,03xd	0,01xd	0,02xd

Formulas de cálculo para fresado / *End mill working condition calculation method*

Velocidad de corte *Cutting speed:*

$$Vc = \frac{\pi \times D \times N}{1000}$$

Velocidad de rotación *Rotation speed:*

$$N = \frac{1000 \times Vc}{\pi \times D}$$

Avance / *Feed:*

$$F = N \times Z \times Fz$$

Avance por diente *Feed of teeth:*

$$Fz = \frac{F}{N \times Z}$$

Tiempo de trabajo *Working time:*

$$Tc = \frac{L}{F}$$

Mecanizado / *Machining*

- Ranura / *Slotting*
- Lateral / *Side cutting*
- Copiado / *Profiling*

	Desbaste / *Roughing cutter*						Acabados / *Finishing*					
		Fz = mm./Z						Fz = mm./Z				
	Velocidad *Speed* Vc=m/min.	Ø 2~3 mm.	Ø 4~6 mm.	Ø 8~10 mm.	Ø 12~16 mm.	Ø 20~25 mm.	Velocidad *Speed* Vc=m/min.	Ø 2~3 mm.	Ø 4~6 mm.	Ø 8~10 mm.	Ø 12~16 mm.	Ø 20~25 mm.
	155	0,014	0,028	0,057	0,084	0,114	225	0,016	0,032	0,065	0,095	0,130
1	255	0,022	0,044	0,088	0,132	0,176	345	0,025	0,050	0,100	0,150	0,200
	310	0,025	0,048	0,097	0,145	0,194	410	0,028	0,055	0,100	0,165	0,220
	145	0,013	0,026	0,053	0,079	0,105	175	0,014	0,029	0,059	0,088	0,117
1	240	0,020	0,040	0,081	0,122	0,163	295	0,022	0,045	0,090	0,135	0,180
	285	0,022	0,045	0,089	0,134	0,178	325	0,024	0,050	0,099	0,149	0,198
	75	0,011	0,021	0,045	0,069	0,098	35	0,012	0,023	0,049	0,075	0,107
2	125	0,016	0,032	0,069	0,106	0,152	140	0,018	0,035	0,075	0,115	0,165
	150	0,017	0,034	0,074	0,113	0,163	150	0,019	0,037	0,080	0,123	0,177
	80	0,010	0,021	0,042	0,063	0,104	105	0,013	0,025	0,051	0,075	0,216
1	135	0,017	0,035	0,070	0,104	0,174	175	0,021	0,042	0,085	0,125	0,210
	160	0,018	0,037	0,075	0,111	0,183	205	0,022	0,045	0,090	0,133	0,223
	135	0,013	0,027	0,055	0,080	0,108	155	0,015	0,031	0,062	0,091	0,123
1	230	0,020	0,041	0,084	0,123	0,167	255	0,023	0,047	0,095	0,140	0,190
	275	0,022	0,046	0,092	0,136	0,184	295	0,025	0,052	0,105	0,154	0,209
	600	0,016	0,032	0,068	0,203	0,126	600	0,024	0,049	0,104	0,141	0,191
2	600	0,020	0,041	0,086	0,117	0,158	600	0,016	0,032	0,068	0,203	0,126
	800	0,022	0,044	0,094	0,127	0,172	600	0,020	0,041	0,086	0,117	0,158
	400	0,014	0,027	0,054	0,081	0,135	400	0,018	0,036	0,076	0,225	0,140
1	400	0,018	0,036	0,072	0,108	0,180	400	0,022	0,045	0,095	0,130	0,175
	600	0,020	0,040	0,080	0,120	0,200	600	0,024	0,049	0,104	0,141	0,191
	1910	0,022	0,043	0,086	0,122	0,180	1910	0,024	0,048	0,096	0,136	0,200
1	1910	0,027	0,054	0,108	0,153	0,225	1910	0,030	0,060	0,120	0,170	0,250
	1910	0,031	0,060	0,112	0,171	0,252	1910	0,034	0,067	0,134	0,190	0,280
	1910	0,022	0,043	0,086	0,122	0,180	1910	0,024	0,048	0,096	0,136	0,200
1	1910	0,027	0,054	0,108	0,153	0,225	1910	0,030	0,060	0,120	0,170	0,250
	1910	0,031	0,060	0,112	0,171	0,252	1910	0,034	0,067	0,134	0,190	0,280
	25	0,009	0,018	0,034	0,054	0,090	30	0,011	0,021	0,039	0,063	0,105
1	40	0,015	0,030	0,056	0,090	0,151	50	0,018	0,035	0,065	0,105	0,175
	50	0,016	0,032	0,058	0,095	0,158	55	0,019	0,037	0,068	0,110	0,184
	80	0,011	0,022	0,044	0,065	0,108	90	0,012	0,024	0,048	0,072	0,120
1	135	0,018	0,036	0,073	0,108	0,181	155	0,020	0,040	0,080	0,120	0,200
	160	0,019	0,039	0,077	0,114	0,192	180	0,021	0,043	0,086	0,128	0,214
	1910	0,022	0,043	0,086	0,122	0,180	1910	0,024	0,048	0,096	0,136	0,200
1	1910	0,027	0,054	0,108	0,153	0,225	1910	0,030	0,060	0,120	0,170	0,250
	1910	0,031	0,060	0,112	0,171	0,252	1910	0,034	0,067	0,134	0,190	0,280
	280	0,015	0,031	0,057	0,085	0,139	335	0,017	0,034	0,064	0,094	0,154
1	360	0,020	0,041	0,077	0,113	0,185	420	0,022	0,045	0,085	0,125	0,205
	380	0,022	0,045	0,085	0,124	0,203	500	0,024	0,050	0,094	0,138	0,226
	120	0,012	0,025	0,049	0,071	0,122	160	0,013	0,027	0,053	0,077	0,133
2	175	0,017	0,035	0,069	0,101	0,175	230	0,019	0,038	0,075	0,110	0,190
	190	0,019	0,038	0,075	0,109	0,189	270	0,021	0,041	0,081	0,119	0,205

π = 3,14159
D = Diámetro / *Diameter* (mm.)
N = Velocidad de rotación (rev/min.)
Rotating speed (rev/min.)
Vc = Velocidad de corte (m/min.)
Cutting speed (m/min.)
Z = Número de dientes
Number of teeth
F = Avance (mm/min.)
Feed (mm/min.)
Fz = Avance por diente
Feed of teeth
Tc = Tiempo de trabajo
Working time
L = Longitud de trabajo
Working length

*** Éstos valores recomendados dependen de las siguentes condiciones: máquina, sistema de fijación, refrigerante, etc. Es posible que tengan que ser adaptados.**

**** These recommended values depend on the following conditions: machine locking system, coolant, etc. You may have to be adapted.***

Cortes / *Cuts*	Z3	Z4	Z3	Z4	Z2	Z2	Z3	Z4	Z2
Referencia / *Reference*	RFAE	RFAE	RAE	RAE	AE35	AE35	AE45	AE35	AF35
Referencia JMC / JMC *Reference*	DF-Z3	DF-Z4	D-Z3	D-Z4	F MINI-Z2	F-Z2	F-Z3	F-Z4	F CL-Z2
- / -	SEMI-DESBASTE *FINE PITCH ROUGHING CUTTER*	SEMI-DESBASTE *FINE PITCH ROUGHING CUTTER*	DESBASTE *ROUGHING CUTTER*	DESBASTE *ROUGHING CUTTER*	PLANA MINIATURA *MINIATURE SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*
Recubrimiento / *Coating*	AltPlus	AltPlus	AltPlus	AltPlus	AltPlus	AltPlus	AltPlus	AltPlus	AltPlus
Ranura λ / λ *Flute*	λs40°		λs25°		λs35°		λs45°	λs35°	
Material / *Material*	MDI *Solid carbide*				MDI *Solid carbide*				
Dureza material / *Material hardness*	<50HRC				<50HRC				
Tamaño grano / *Grain Size*	Ø<0,6 µm				Ø<0,6 µm				
Gama / *Range*	Ø4...20	Ø5...20	Ø4...20	Ø5...20	Ø0,2...3	Ø1...20	Ø1...20	Ø1...20	Ø1...20
Página / *Page*	537	537	538	538	539	540	541	542	543

Cortes / *Cuts*	Z4	Z2	Z4	Z2	Z2	Z3	Z3	Z2	Z2
Referencia / *Reference*	AF35	AS35	AS35	AE55	AF55	AE55	AF55	AN35	TE35
Referencia JMC / JMC *Reference*	F CL-Z4	F ML-Z2	F ML-Z4	F AL-Z2	F AL CL-Z2	F AL-Z3	F AL CL-Z3	F CUL-Z2	TP-Z2
- / -	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	CÓNICAS *TAPERED TYPE*	CÓNICAS *TAPERED TYPE*
Recubrimiento / *Coating*	AltPlus	AltPlus	AltPlus					AltPlus	AltPlus
Ranura λ / λ *Flute*	λs35°			λs55°				λs35°	λs35°
Material / *Material*	MDI *Solid carbide*			MDI *Solid carbide*				MDI *Solid carbide*	
Dureza material / *Material hardness*	<50HRC			<40HRC				<50HRC	<50HRC
Tamaño grano / *Grain Size*	Ø<0,6 µm			Ø<0,6 µm				Ø<0,6 µm	Ø<0,6 µm
Gama / *Range*	Ø1...20	Ø6...12	Ø6...12	Ø3...20	Ø3...20	Ø3...20	Ø3...20	Ø0,5...4	Ø0,5...10
Página / *Page*	544	545	545	546	546	547	547	548, 549	550, 551

Cortes / *Cuts*	Z2	Z2	Z2	Z4	Z2	Z2	Z2	Z4	Z2
Referencia / *Reference*	TF35	BE35	BE35	BE35	BN35	BS35	RE35	RE35	RS35
Referencia JMC / JMC *Reference*	TP CL-Z2	B MINI-Z2	B-Z3	B-Z4	B CUL-Z2	B ML-Z2	TN-Z2	TN-Z4	TN ML-Z2
- / -	CÓNICAS *TAPERED TYPE*	ESFÉRICA MINIATURA *MINIATURE BALL TYPE*	ESFÉRICA *BALL TYPE*	ESFÉRICA *BALL TYPE*	ESFÉRICA *BALL TYPE*	ESFÉRICA *BALL TYPE*	TÓRICAS *CORNER RADIUS*	TÓRICAS *CORNER RADIUS*	TÓRICAS *CORNER RADIUS*
Recubrimiento / *Coating*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*	*AltPlus*
Ranura λ / λ *Flute*	λs35º	λs35º					λs35º		
Material / *Material*	MDI *Solid carbide*								
Dureza material / *Material hardness*	<50HRC	<40HRC	<50HRC						
Tamaño grano / *Grain Size*	Ø<0,6 µm								
Gama / *Range*	Ø1...6	Ø0,2...3	Ø1...20	Ø1...20	Ø0,5...4	Ø1...16	Ø1...12	Ø3...12	Ø3...12
Página / *Page*	552, 553	554	555	556	557, 558	559	560, 561	562	563

Cortes / *Cuts*	Z2	Z2	Z2	Z4	Z4	Z4 - Z6 - Z8		Z2	Z2
Referencia / *Reference*	BE25	AU35	AU35	AU35	AUF35	AU45	AUF45	BU35	BU35
Referencia JMC / JMC *Reference*	B AL-Z2	F UMG MINI-Z2	F UMG-Z2	F UMG-Z4	F UMG CL-Z4	F UMG HRC	F UMG HRC ML	B UMG MINI-Z2	B UMG-Z2
- / -	ESFÉRICA *BALL TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	PLANA *SQUARE TYPE*	ESFÉRICA *BALL TYPE*	ESFÉRICA *BALL TYPE*
Recubrimiento / *Coating*		*LubePlus*	*LubePlus*	*LubePlus*	*LubePlus*	*LubePlus*	*LubePlus*	*LubePlus*	*LubePlus*
Ranura λ / λ *Flute*	λs25º	λs35º				λs45º		λs35º	
Material / *Material*	MDI *Solid carbide*	UMG-MDI *Solid carbide*							
Dureza material / *Material hardness*	<45HRC	<65HRC							
Tamaño grano / *Grain Size*	Ø<0,6 µm	Ø<0,4 µm							
Gama / *Range*	Ø1...12	Ø0,2...3	Ø1...20	Ø1...20	Ø1...20	Ø2...20	Ø6...20	Ø0,3...3	Ø1,5...20
Página / *Page*	564	565	566	567	568	569	569	570	571

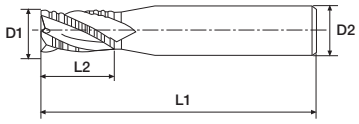
Cortes / *Cuts*	Z4	Z2	Z2	Z4					
Referencia / *Reference*	BU35	BUS35	RU35	RU35					
Referencia JMC / JMC *Reference*	B UMG-Z4	B UMG CL-Z2	B UMG-Z4	B UMG-Z4					
- / -	ESFÉRICA *BALL TYPE*	ESFÉRICA *BALL TYPE*	TÓRICAS *CORNER RADIUS*	TÓRICAS *CORNER RADIUS*					
Recubrimiento / *Coating*	*LubePlus*	*LubePlus*	*LubePlus*	*LubePlus*					
Ranura λ / λ *Flute*	λs:35°		λs:35°						
Material / *Material*	UMG-MDI *Solid carbide*								
Dureza material / *Material hardness*	<65HRC								
Tamaño grano / *Grain Size*	Ø<0,4 µm								
Gama / *Range*	Ø1...20	Ø1...20	Ø1...12	Ø3...12					
Página / *Page*	572	573	574	575					

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

DF-Z3

SEMI-DESBASTE
FINE PITCH ROUGHING CUTTER
Altplus

Z3	λs40°	fine	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²



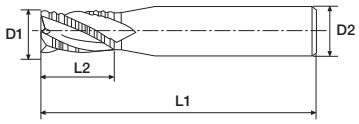
Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
RFAE40131040	4	8	50	6	•	0002450240
RFAE40131050	5	13	50	6	•	0002450300
RFAE40131060	6	16	50	6	•	0002450451
RFAE40131070	7	16	60	8	•	0002450511
RFAE40131080	8	19	60	8	•	0002450672
RFAE40131090	9	25	75	10	•	0002450732
RFAE40131100	10	25	75	10	•	0002450882
RFAE40131110	11	30	75	12	•	0002450943
RFAE40131120	12	30	75	12	•	0002451022
RFAE40131160	16	35	100	16	•	0002451182
RFAE40131200	20	40	100	20	•	0002451242

DF-Z4

SEMI-DESBASTE
FINE PITCH ROUGHING CUTTER
Altplus

Z4	λs40°	fine	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

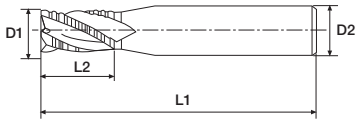
Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
RFAE40141050	5	13	50	6	•	0002451303
RFAE40141060	6	16	50	6	•	0002451453
RFAE40141070	7	16	60	8	•	0002451513
RFAE40141080	8	19	60	8	•	0002451674
RFAE40141090	9	25	75	10	•	0002451734
RFAE40141100	10	25	75	10	•	0002451885
RFAE40141110	11	30	75	12	•	0002451945
RFAE40141120	12	30	75	12	•	0002452034
RFAE40141140	14	34	100	16	•	0002584420
RFAE40141160	16	35	100	16	•	0002452184
RFAE40141200	20	40	100	20	•	0002452245

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

D-Z3	Z3	λs25º	roughing	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

DESBASTE *ROUGHING CUTTER*

Altplus



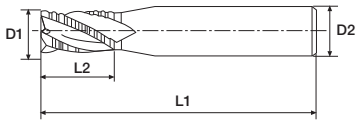
Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
RAE25131040	4	8	50	6	•	0002452305
RAE25131050	5	13	50	6	•	0002452465
RAE25131060	6	16	50	6	•	0002452516
RAE25131070	7	16	60	8	•	0002452676
RAE25131080	8	19	60	8	•	0002452736
RAE25131090	9	25	75	10	•	0002452897
RAE25131100	10	25	75	10	•	0002452947
RAE25131110	11	30	75	12	•	0002453036
RAE25131120	12	30	75	12	•	0002453186
RAE25131160	16	35	100	16	•	0002453247
RAE25131200	20	40	100	20	•	0002453307

D-Z4	Z4	λs25º	roughing	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

DESBASTE *ROUGHING CUTTER*

Altplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
RAE25141050	5	13	50	6	•	0002453468
RAE25141060	6	16	50	6	•	0002453528
RAE25141070	7	16	60	8	•	0002453678
RAE25141080	8	19	60	8	•	0002453739
RAE25141090	9	25	75	10	•	0002453899
RAE25141100	10	25	75	10	•	0002453950
RAE25141110	11	30	75	12	•	0002454038
RAE25141120	12	30	75	12	•	0002454199
RAE25141160	16	35	100	16	•	0002454249
RAE25141200	20	40	100	20	•	0002454300

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

F MINI-Z2	Z2	λs35°	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA MINIATURA
MINIATURE SQUARE TYPE

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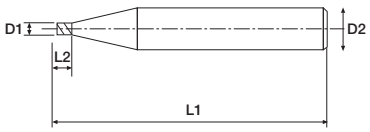

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AE35021002	0,2	0,4	50	4	•	0002407606
AE35021003	0,3	0,6	50	4	•	0002407767
AE35021004	0,4	0,8	50	4	•	0002407987
AE35021005	0,5	1	50	4	•	0002408127
AE35021006	0,6	1,2	50	4	•	0002408277
AE35021007	0,7	1,4	50	4	•	0002408337
AE35021008	0,8	1,6	50	4	•	0002408498
AE35021009	0,9	1,8	50	4	•	0002408558
AE35021010	1	3	50	4	•	0002408619
AE35021011	1,1	3	50	4	•	0002408769
AE35021012	1,2	3	50	4	•	0002408829
AE35021013	1,3	3	50	4	•	0002408980
AE35021014	1,4	3	50	4	•	0002409069
AE35021015	1,5	4	50	4	•	0002409129
AE35021016	1,6	4	50	4	•	0002409289
AE35021017	1,7	4	50	4	•	0002409330
AE35021018	1,8	4	50	4	•	0002409490
AE35021019	1,9	4	50	4	•	0002409551
AE35021020	2	6	50	4	•	0002409611
AE35021021	2,1	6	50	4	•	0002409761
AE35021022	2,2	6	50	4	•	0002409822
AE35021023	2,3	6	50	4	•	0002409982
AE35021024	2,4	6	50	4	•	0002410066
AE35021025	2,5	8	50	4	•	0002410127
AE35021026	2,6	8	50	4	•	0002410287
AE35021027	2,7	8	50	4	•	0002410337
AE35021028	2,8	8	50	4	•	0002410498
AE35021029	2,9	8	50	4	•	0002410558
AE35021030	3	8	50	4	•	0002410619

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

F-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA *SQUARE TYPE*

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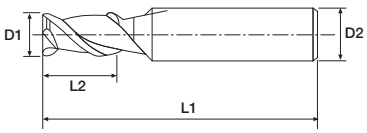

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AE35321030	3	8	50	3	•	0002410769
AE35021035	3,5	10	50	4	•	0002410829
AE35021040	4	11	50	4	•	0002410980
AE35121010	1	3	50	6	•	0002411069
AE35121015	1,5	4	50	6	•	0002411129
AE35121020	2	6	50	6	•	0002411289
AE35121025	2,5	8	50	6	•	0002412061
AE35121030	3	8	50	6	•	0002412121
AE35121035	3,5	10	50	6	•	0002412282
AE35121040	4	11	50	6	•	0002412342
AE35121045	4,5	11	50	6	•	0002412402
AE35121050	5	13	50	6	•	0002412553
AE35121055	5,5	13	50	6	•	0002412613
AE35121060	6	16	50	6	•	0002412774
AE35121065	6,5	16	60	8	•	0002412834
AE35121070	7	16	60	8	•	0002412984
AE35121075	7,5	19	60	8	•	0002413073
AE35121080	8	20	60	8	•	0002413124
AE35121085	8,5	20	75	10	•	0002413284
AE35121090	9	20	75	10	•	0002413344
AE35121095	9,5	25	75	10	•	0002413405
AE35121100	10	25	75	10	•	0002413555
AE35121105	10,5	25	75	12	•	0002413615
AE35121110	11	25	75	12	•	0002413776
AE35121115	11,5	30	75	12	•	0002413836
AE35121120	12	30	75	12	•	0002413987
AE35121130	13	40	100	16	•	0002747837
AE35121140	14	40	100	16	•	0002414075
AE35121150	15	40	100	16	•	0002560826
AE35121160	16	40	100	16	•	0002414136
AE35121180	18	40	100	20	•	0002414286
AE35121200	20	45	100	20	•	0002414347

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

F-Z3	Z3	λs45º	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA
SQUARE TYPE

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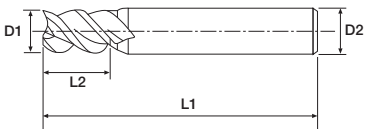

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AE45031010	1	3	50	4	•	0002415409
AE45031015	1,5	4	50	4	•	0002415560
AE45031020	2	6	50	4	•	0002415620
AE45031025	2,5	8	50	4	•	0002415770
AE45331030	3	8	50	3	•	0002415831
AE45031030	3	8	50	4	•	0002415991
AE45031035	3,5	10	50	4	•	0002416070
AE45031040	4	11	50	4	•	0002416130
AE45131010	1	3	50	6	•	0002416291
AE45131015	1,5	4	50	6	•	0002416341
AE45131020	2	6	50	6	•	0002416402
AE45131025	2,5	8	50	6	•	0002416562
AE45131030	3	8	50	6	•	0002416622
AE45131035	3,5	10	50	6	•	0002416773
AE45131040	4	11	50	6	•	0002416833
AE45131045	4,5	11	50	6	•	0002416993
AE45131050	5	13	50	6	•	0002417072
AE45131055	5,5	13	50	6	•	0002417133
AE45131060	6	16	50	6	•	0002417293
AE45131065	6,5	16	60	8	•	0002417353
AE45131070	7	16	60	8	•	0002417404
AE45131075	7,5	19	60	8	•	0002417564
AE45131080	8	20	60	8	•	0002417625
AE45131085	8,5	20	75	10	•	0002417785
AE45131090	9	20	75	10	•	0002417835
AE45131095	9,5	25	75	10	•	0002417996
AE45131100	10	25	75	10	•	0002418075
AE45131105	10,5	25	75	12	•	0002418135
AE45131110	11	25	75	12	•	0002418295
AE45131115	11,5	30	75	12	•	0002418356
AE45131120	12	30	75	12	•	0002418416
AE45131140	14	40	100	16	•	0002418566
AE45131160	16	40	100	16	•	0002418627
AE45131180	18	40	100	20	•	0002418787
AE45131200	20	45	100	20	•	0002418848

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

F-Z4	Z4	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA *SQUARE TYPE*

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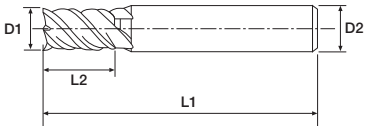

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AE35041010	1	3	50	4	•	0002418998
AE35041015	1,5	4	50	4	•	0002419087
AE35041020	2	6	50	4	•	0002419137
AE35041025	2,5	8	50	4	•	0002419298
AE35341030	3	8	50	3	•	0002419358
AE35041030	3	8	50	4	•	0002419418
AE35041035	3,5	10	50	4	•	0002419569
AE35041040	4	11	50	4	•	0002419629
AE35141010	1	3	50	6	•	0002419780
AE35141015	1,5	4	50	6	•	0002419840
AE35141020	2	6	50	6	•	0002419900
AE35141025	2,5	8	50	6	•	0002420085
AE35141030	3	8	50	6	•	0002420135
AE35141035	3,5	10	50	6	•	0002420295
AE35141040	4	11	50	6	•	0002420356
AE35141045	4,5	11	50	6	•	0002420416
AE35141050	5	13	50	6	•	0002420566
AE35141055	5,5	13	50	6	•	0002420627
AE35141060	6	16	50	6	•	0002420787
AE35141065	6,5	16	60	8	•	0002420848
AE35141070	7	16	60	8	•	0002420908
AE35141075	7,5	19	60	8	•	0002421087
AE35141080	8	20	60	8	•	0002421147
AE35141085	8,5	20	75	10	•	0002421298
AE35141090	9	20	75	10	•	0002421358
AE35141095	9,5	25	75	10	•	0002421418
AE35141100	10	25	75	10	•	0002421579
AE35141105	10,5	25	75	12	•	0002421629
AE35141110	11	25	75	12	•	0002421780
AE35141115	11,5	30	75	12	•	0002421840
AE35141120	12	30	75	12	•	0002421900
AE35141130	13	40	100	16	•	0002475760
AE35141140	14	40	100	16	•	0002422089
AE35141150	15	40	100	16	•	0002475820
AE35141160	16	40	100	16	•	0002422140
AE35141180	18	40	100	20	•	0002422200
AE35141200	20	45	100	20	•	0002422350

Fresas frontales de Metal duro integral. Micro Grano. Canal largo.
Solid Carbide end mills. Micro Grain. Long flute.

F CL-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA *SQUARE TYPE*

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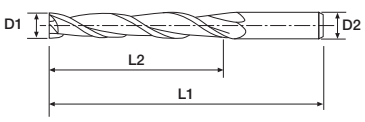
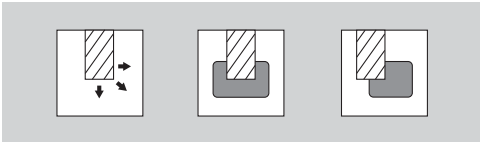


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AF35021010007	1	7	50	4	•	0002457687
AF35021015009	1,5	9	50	4	•	0002457748
AF35021020012	2	12	50	4	•	0002457808
AF35021025012	2,5	12	50	4	•	0002457959
AF35121030015	3	15	60	6	•	0002458047
AF35121035015	3,5	15	60	6	•	0002458198
AF35121040020	4	20	75	6	•	0002458258
AF35121045020	4,5	20	75	6	•	0002458319
AF35121050025	5	25	75	6	•	0002458479
AF35121055025	5,5	25	75	6	•	0002458529
AF35121060030	6	30	75	6	•	0002458680
AF35121070030	7	30	100	8	•	0002458740
AF35121080040	8	40	100	8	•	0002458801
AF35121090040	9	40	100	10	•	0002458951
AF35121100040	10	40	100	10	•	0002459040
AF35121110040	11	40	100	12	•	0002459100
AF35121120050	12	50	100	12	•	0002471118
AF35121140050	14	50	150	16	•	0002459251
AF35121160060	16	60	150	16	•	0002459311
AF35121200090	20	90	200	20	•	0002459471



Fresas frontales de Metal duro integral. Micro Grano. Canal largo.
Solid Carbide end mills. Micro Grain. Long flute.

F CL-Z4	Z4	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA
SQUARE TYPE

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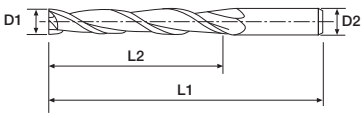

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AF35041010006	1	7	50	4	•	0002461532
AF35041015009	1,5	9	50	4	•	0002461682
AF35041020012	2	12	50	4	•	0002461742
AF35041025012	2,5	12	50	4	•	0002461803
AF35141030015	3	15	60	6	•	0002461963
AF35141035015	3,5	15	60	6	•	0002462042
AF35141040020	4	20	75	6	•	0002462102
AF35141045020	4,5	20	75	6	•	0002462263
AF35141050025	5	25	75	6	•	0002462313
AF35141055025	5,5	25	75	6	•	0002462474
AF35141060030	6	30	75	6	•	0002462534
AF35141070030	7	30	100	8	•	0002462694
AF35141080040	8	40	100	8	•	0002462745
AF35141090040	9	40	100	10	•	0002462805
AF35141100040	10	40	100	10	•	0002462965
AF35141110040	11	40	100	12	•	0002463044
AF35141120050	12	50	100	12	•	0002463105
AF35141140050	14	50	150	16	•	0002463265
AF35141160060	16	60	150	16	•	0002463325
AF35141200090	20	90	200	20	•	0002463476

Fresas frontales de Metal duro integral. Micro Grano. Mango largo.
Solid Carbide end mills. Micro Grain. Long shank.

F ML-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA *SQUARE TYPE*

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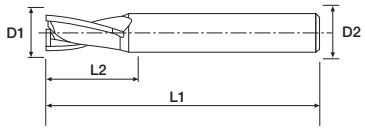
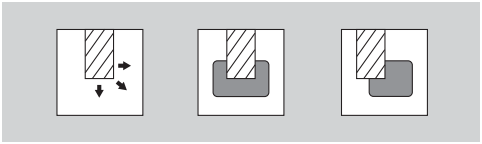


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AS35121060075	6	16	75	6	•	0002464328
AS35121060100	6	16	100	6	•	0002464538
AS35121080075	8	20	75	8	•	0002464699
AS35121080100	8	20	100	8	•	0002464759
AS35121100100	10	25	100	10	•	0002464810
AS35121100150	10	25	150	10	•	0002464960
AS35121120100	12	30	100	12	•	0002465059
AS35121120150	12	30	150	12	•	0002465109



F ML-Z4	Z4	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA *SQUARE TYPE*

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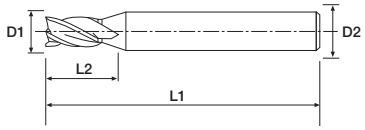


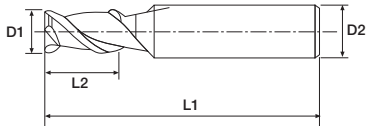
Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AS35141060075	6	16	75	6	•	0002466051
AS35141060100	6	16	100	6	•	0002466112
AS35141080075	8	20	75	8	•	0002466262
AS35141080100	8	20	100	8	•	0002466322
AS35141100100	10	25	100	10	•	0002466483
AS35141100150	10	25	150	10	•	0002466543
AS35141120100	12	30	100	12	•	0002466693
AS35141120150	12	30	150	12	•	0002466754

Fresas frontales de Metal duro integral. Micro Grano. Para Aluminio.
Solid Carbide end mills. Micro Grain. For Aluminium.

F AL-Z2	Z2	λs55º	<40HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA
SQUARE TYPE



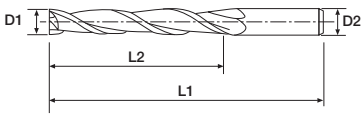
Material	GR5	GR6	GR7	GR10	GR11
Subg.	1	1	1	1	1
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*				
	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AE55120030	3	9	50	6	•	0002466814
AE55120040	4	12	50	6	•	0002466975
AE55120050	5	15	50	6	•	0002467053
AE55120060	6	18	50	6	•	0002467114
AE55120080	8	20	60	8	•	0002467264
AE55120100	10	30	75	10	•	0002467325
AE55120120	12	32	75	12	•	0002467485
AE55120160	16	45	100	16	•	0002467545
AE55120200	20	45	100	20	•	0002467606

Fresas frontales de Metal duro integral. Micro Grano. Para Aluminio. Canal largo.
Solid Carbide end mills. Micro Grain. For Aluminium. Long flute.

F AL CL-Z2	Z2	λs55º	<40HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA
SQUARE TYPE



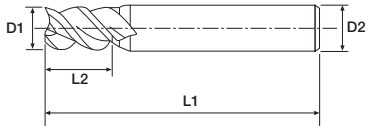
Material	GR5	GR6	GR7	GR10	GR11
Subg.	1	1	1	1	1
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*				
	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AF5512003012	3	12	60	6	•	0002467756
AF5512004016	4	16	60	6	•	0002467816
AF5512005020	5	20	60	6	•	0002467977
AF5512006025	6	25	75	6	•	0002468056
AF5512008032	8	32	75	8	•	0002468116
AF5512010045	10	45	100	10	•	0002468276
AF5512012045	12	45	100	12	•	0002468327
AF5512016065	16	65	150	16	•	0002468487
AF5512020075	20	75	150	20	•	0002468548

Fresas frontales de Metal duro integral. Micro Grano. Para Aluminio.
Solid Carbide end mills. Micro Grain. For Aluminium.

F AL-Z3	Z3	λs55º	<40HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA *SQUARE TYPE*



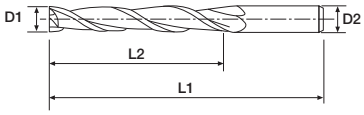
Material	GR5	GR6	GR7	GR10	GR11
Subg.	1	1	1	1	1
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*				
	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AE55130030	3	9	50	6	•	0002471339
AE55130040	4	12	50	6	•	0002486570
AE55130050	5	15	50	6	•	0002471540
AE55130060	6	18	50	6	•	0002471600
AE55130080	8	20	60	8	•	0002471761
AE55130100	10	30	75	10	•	0002471821
AE55130120	12	32	75	12	•	0002471971
AE55130160	16	45	100	16	•	0002472060
AE55130200	20	45	100	20	•	0002472111

Fresas frontales de Metal duro integral. Micro Grano. Para Aluminio. Canal largo.
Solid Carbide end mills. Micro Grain. For Aluminium. Long flute.

F AL CL-Z3	Z3	λs55º	<40HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA *SQUARE TYPE*



Material	GR5	GR6	GR7	GR10	GR11
Subg.	1	1	1	1	1
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*				
	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.		Cod.
AF5513003012	3	12	60	6	•	0002472271
AF5513004016	4	16	60	6	•	0002472331
AF5513005020	5	20	60	6	•	0002472492
AF5513006025	6	25	75	6	•	0002472542
AF5513008032	8	32	75	8	•	0002472603
AF5513010045	10	45	100	10	•	0002472763
AF5513012045	12	45	100	12	•	0002472823
AF5513016065	16	65	150	16	•	0002472974
AF5513020075	20	75	150	20	•	0002473063

Fresas frontales de Metal duro integral. Micro Grano. Cuello largo.
Solid Carbide end mills. Micro Grain. Long neck.

F CUL-Z2	Z2	λs35°	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA
SQUARE TYPE

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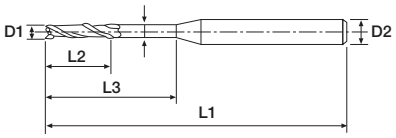

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L3 mm.	L1 mm.	D2 h6mm.		Cod.
AN3502100502	0,5	0,75	2	50	4	•	0002650764
AN3502100504	0,5	0,75	4	50	4	•	0003666999
AN3502100506	0,5	0,75	6	50	4	•	0003667078
AN3502100602	0,6	0,9	2	50	4	•	0003667138
AN3502100604	0,6	0,9	4	50	4	•	0002896611
AN3502100606	0,6	0,9	6	50	4	•	0002825481
AN3502100704	0,7	1,1	4	50	4	•	0003667298
AN3502100706	0,7	1,1	6	50	4	•	0003667359
AN3502100804	0,8	1,2	4	50	4	•	0003667419
AN3502100806	0,8	1,2	6	50	4	•	0002898837
AN3502100808	0,8	1,2	8	50	4	•	0002832553
AN3502100906	0,9	1,4	6	50	4	•	0003667560
AN3502100908	0,9	1,4	8	50	4	•	0003667620
AN3502100910	0,9	1,4	10	50	4	•	0003667780
AN3502101006	1	1,5	6	50	4	•	0002569074
AN3502101008	1	1,5	8	50	4	•	0002827977
AN3502101010	1	1,5	10	50	4	•	0002897553
AN3502101012	1	1,5	12	50	4	•	0002826543
AN3502101016	1	1,5	16	50	4	•	0002897614
AN3502101206	1,2	1,8	6	50	4	•	0003667841
AN3502101208	1,2	1,8	8	50	4	•	0002896822
AN3502101210	1,2	1,8	10	50	4	•	0003638527
AN3502101212	1,2	1,8	12	50	4	•	0002898987
AN3502101406	1,4	2,1	6	50	4	•	0003667991
AN3502101410	1,4	2,1	10	50	4	•	0003668080
AN3502101416	1,4	2,1	16	50	4	•	0003668130
AN3502101506	1,5	2,3	6	50	4	•	0003117509
AN3502101508	1,5	2,3	8	50	4	•	0002671200
AN3502101510	1,5	2,3	10	50	4	•	0002569134
AN3502101512	1,5	2,3	12	50	4	•	0002825541
AN3502101514	1,5	2,3	14	50	4	•	0003014095
AN3502101516	1,5	2,3	16	50	4	•	0002675912
AN3502101518	1,5	2,3	18	50	4	•	0003668291
AN3502101520	1,5	2,3	20	50	4	•	0002896983
AN3502101606	1,6	2,4	6	50	4	•	0002845086
AN3502101608	1,6	2,4	8	50	4	•	0002844907
AN3502101610	1,6	2,4	10	50	4	•	0002897061
AN3502101612	1,6	2,4	12	50	4	•	0003668412
AN3502101614	1,6	2,4	14	50	4	•	0003668562
AN3502101616	1,6	2,4	16	50	4	•	0002897122
AN3502101618	1,6	2,4	18	50	4	•	0003668622
AN3502101620	1,6	2,4	20	50	4	•	0002897282
AN3502101808	1,8	2,7	8	50	4	•	0002590921
AN3502101814	1,8	2,7	14	50	4	•	0003670622
AN3502101820	1,8	2,7	20	50	4	•	0003670783
AN3502102006	2	3	6	50	4	•	0003012090
AN3502102008	2	3	8	50	4	•	0002569285
AN3502102010	2	3	10	50	4	•	0002596443

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

F CUL-Z2	Z2	λs35°	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

PLANA
SQUARE TYPE

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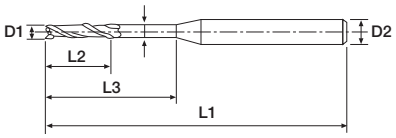
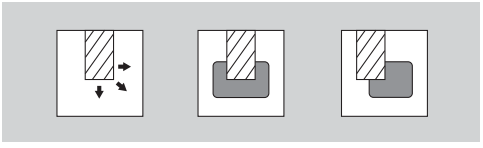


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L3 mm.	L1 mm.	D2 h6mm.		Cod.
AN3502102012	2	3	12	50	4	•	0002569345
AN3502102014	2	3	14	50	4	•	0002589221
AN3502102016	2	3	16	50	4	•	0002569405
AN3502102018	2	3	18	50	4	•	0002596504
AN3502102020	2	3	20	50	4	•	0002500124
AN3502102508	2,5	4	8	50	4	•	0002719958
AN3502102510	2,5	4	10	50	4	•	0002897343
AN3502102512	2,5	4	12	50	4	•	0002720032
AN3502102514	2,5	4	14	50	4	•	0003014155
AN3502102516	2,5	4	16	50	4	•	0002897493
AN3502102520	2,5	4	20	50	4	•	0002825602
AN3512103008	3	4,5	8	50	6	•	0002586706
AN3512103010	3	4,5	10	50	6	•	0002595933
AN3512103012	3	4,5	12	50	6	•	0002586866
AN3512103016	3	4,5	16	60	6	•	0002586917
AN3512103020	3	4,5	20	60	6	•	0002596012
AN3512103025	3	6	25	75	6	•	0002500285
AN3512103512	3,5	6	12	50	6	•	0003670843
AN3512103516	3,5	6	16	60	6	•	0003670903
AN3512103520	3,5	6	20	75	6	•	0003671082
AN3512103525	3,5	6	25	75	6	•	0003671143
AN3512103530	3,5	6	30	75	6	•	0003015589
AN3512104012	4	6	12	50	6	•	0002587006
AN3512104016	4	6	16	60	6	•	0002587156
AN3512104020	4	6	20	75	6	•	0002587216
AN3512104025	4	6	25	75	6	•	0002596172
AN3512104030	4	6	30	75	6	•	0002596232
AN3512104035	4	6	35	75	6	•	0002596383

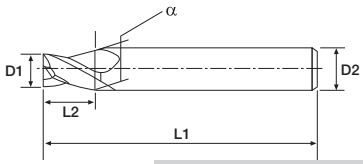


Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

TP-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

CÓNICAS *TAPERED TYPE*

Altplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	α	L2 mm.	L1 mm.	Ø max.	D2 h6mm.		Cod.
TE350210050030	0,5	30"	2	50	0,53	4	•	0003671203
TE350210050100	0,5	1°	2	50	0,57	4	•	0003671353
TE350210050130	0,5	1°30"	2	50	0,60	4	•	0003671414
TE350210050200	0,5	2°	2	50	0,64	4	•	0003671574
TE350210050230	0,5	2°30"	2	50	0,67	4	•	0003671635
TE350210050300	0,5	3°	2	50	0,71	4	•	0003671785
TE350210050500	0,5	5°	2	50	0,85	4	•	0003671845
TE350210050700	0,5	7°	2	50	0,99	4	•	0003671906
TE350210051000	0,5	10°	2	50	1,21	4	•	0003672085
TE350210100030	1	30"	4	50	1,07	4	•	0003672145
TE350210100100	1	1°	4	50	1,14	4	•	0003672205
TE350210100130	1	1°30"	4	50	1,21	4	•	0003672356
TE350210100200	1	2°	4	50	1,28	4	•	0003672416
TE350210100230	1	2°30"	4	50	1,35	4	•	0003672576
TE350210100300	1	3°	4	50	1,42	4	•	0003672637
TE350210100500	1	5°	4	50	1,70	4	•	0003672787
TE350210100700	1	7°	4	50	1,98	4	•	0003672848
TE350210101000	1	10°	4	50	2,41	4	•	0003672908
TE350210150030	1,5	30"	5	50	1,59	4	•	0003673418
TE350210150100	1,5	1°	5	50	1,67	4	•	0003673579
TE350210150130	1,5	1°30"	5	50	1,76	4	•	0003673639
TE350210150200	1,5	2°	5	50	1,85	4	•	0003673790
TE350210150230	1,5	2°30"	5	50	1,93	4	•	0003673840
TE350210150300	1,5	3°	5	50	2,02	4	•	0003673900
TE350210150500	1,5	5°	5	50	2,37	4	•	0003677859
TE350210150700	1,5	7°	5	50	2,73	4	•	0003674140
TE350210151000	1,5	10°	5	50	3,26	4	•	0003674200
TE350210200030	2	30"	6	50	2,10	4	•	0003674360
TE350210200100	2	1°	6	50	2,21	4	•	0003674421
TE350210200130	2	1°30"	6	50	2,31	4	•	0003674571
TE350210200200	2	2°	6	50	2,41	4	•	0003674631
TE350210200230	2	2°30"	6	50	2,52	4	•	0003674792
TE350210200300	2	3°	6	50	2,62	4	•	0003674852
TE350210200500	2	5°	6	50	3,05	4	•	0003674903
TE350210200700	2	7°	6	50	3,47	4	•	0003675091
TE351210201000	2	10°	6	50	4,11	6	•	0002534881
TE350210250030	2,5	30"	8	50	2,64	4	•	0003675854
TE350210250100	2,5	1°	8	50	2,78	4	•	0003675915
TE350210250130	2,5	1°30"	8	50	2,91	4	•	0003676094
TE350210250200	2,5	2°	8	50	3,05	4	•	0003676154
TE350210250230	2,5	2°30"	8	50	3,20	4	•	0003676204
TE350210250300	2,5	3°	8	50	3,33	4	•	0003676365
TE350210250500	2,5	5°	8	50	3,90	4	•	0003676425
TE351210250700	2,5	7°	8	50	4,46	6	•	0003677919
TE351210251000	2,5	10°	8	50	5,32	6	•	0002860442
TE351210300030	3	30"	10	50	3,17	6	•	0003678098
TE351210300100	3	1°	10	50	3,35	6	•	0003678159
TE351210300130	3	1°30"	10	50	3,52	6	•	0003678219

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

TP-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

CÓNICAS *TAPERED TYPE*

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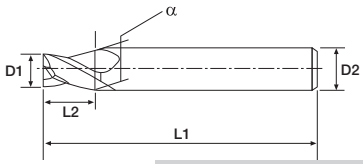
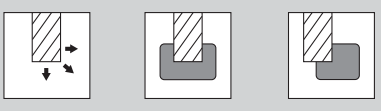


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	α	L2 mm.	L1 mm.	Ø max.	D2 h6mm.		Cod.
TE351210300200	3	2°	10	50	3,69	6	•	0003678369
TE351210300230	3	2°30"	10	50	3,87	6	•	0003678420
TE351210300300	3	3°	10	50	4,05	6	•	0003678580
TE351210300500	3	5°	10	50	4,75	6	•	0003678641
TE351210300700	3	7°	10	50	5,46	6	•	0003678701
TE351210301000	3	10°	10	50	6,53	8	•	0002860593
TE351210400030	4	30"	15	50	4,26	6	•	0002668790
TE351210400100	4	1°	15	50	4,52	6	•	0003678851
TE351210400130	4	1°30"	15	50	4,79	6	•	0003678912
TE351210400200	4	2°	15	50	5,04	6	•	0003679091
TE351210400230	4	2°30"	15	50	5,31	6	•	0003679151
TE351210400300	4	3°	15	50	5,57	6	•	0003679211
TE351210400500	4	5°	15	60	6,62	8	•	0003679372
TE351210400700	4	7°	15	60	7,68	8	•	0002860653
TE351210500030	5	30"	20	60	5,34	6	•	0002668850
TE351210500100	5	1°	20	60	5,70	6	•	0003679422
TE351210500130	5	1°30"	20	60	6,04	6	•	0003679582
TE351210500200	5	2°	20	60	6,39	8	•	0003679643
TE351210500230	5	2°30"	20	60	6,74	8	•	0003679703
TE351210500300	5	3°	20	60	7,10	8	•	0003679854
TE351210500500	5	5°	20	60	8,50	10	•	0003679914
TE351210500700	5	7°	20	75	9,91	10	•	0003336134
TE351210600030	6	30"	20	60	6,35	8	•	0002668901
TE351210600100	6	1°	20	60	6,70	8	•	0003680098
TE351210600130	6	1°30"	20	60	7,05	8	•	0003680159
TE351210600200	6	2°	20	60	7,40	8	•	0003680219
TE351210600230	6	2°30"	20	60	7,75	8	•	0003680379
TE351210600300	6	3°	20	60	8,10	8	•	0003680420
TE351210600500	6	5°	20	75	9,50	8	•	0003680580
TE351210800030	8	30"	25	75	8,44	10	•	0003683708
TE351210800100	8	1°	25	75	8,87	10	•	0003683868
TE351210800130	8	1°30"	25	75	9,31	10	•	0003683928
TE351210800200	8	2°	25	75	9,74	10	•	0003684007
TE351210800230	8	2°30"	25	75	10,18	10	•	0003379695
TE351210800300	8	3°	25	75	10,62	10	•	0003684228
TE351210800500	8	5°	25	100	12,37	12	•	0003684378
TE351211000030	10	30"	35	100	10,61	12	•	0003684439
TE351211000100	10	1°	35	100	11,22	12	•	0003684599
TE351211000130	10	1°30"	35	100	11,83	12	•	0003684650
TE351211000200	10	2°	35	100	12,44	12	•	0003684700
TE351211000230	10	2°30"	35	100	13,06	16	•	0003684860
TE351211000300	10	3°	35	100	13,67	16	•	0003684921
TE351211000500	10	5°	35	100	16,12	16	•	0003685000

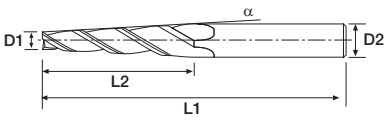


Fresas frontales de Metal duro integral. Micro Grano. Canal largo.
Solid Carbide end mills. Micro Grain. Long flute.

TP CL-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

CÓNICAS *TAPERED TYPE*

Altplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

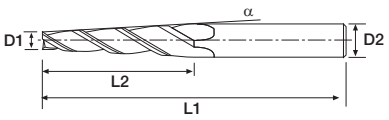
Ref.	D1 mm.	α	L2 mm.	L1 mm.	Ø max.	D2 h6mm.		Cod.
TF350210100030	1	30"	10	50	1,17	4	•	0003686865
TF350210100100	1	1°	10	50	1,35	4	•	0003686925
TF350210100130	1	1°30"	10	50	1,52	4	•	0003687014
TF350210100200	1	2°	10	50	1,70	4	•	0003687165
TF350210100230	1	2°30"	10	50	1,87	4	•	0003687225
TF350210100300	1	3°	10	50	2,05	4	•	0003687385
TF350210100500	1	5°	10	50	2,74	4	•	0003687446
TF350210100700	1	7°	10	50	3,44	4	•	0003687596
TF350210150030	1,5	30"	10	50	1,67	4	•	0003287041
TF350210150100	1,5	1°	10	50	1,85	4	•	0003687656
TF350210150130	1,5	1°30"	10	50	2,02	4	•	0003687717
TF350210150200	1,5	2°	10	50	2,20	4	•	0003687877
TF350210150230	1,5	2°30"	10	50	2,37	4	•	0003687928
TF350210150300	1,5	3°	10	50	2,55	4	•	0003688016
TF350210150500	1,5	5°	10	50	3,24	4	•	0002534931
TF350210150700	1,5	7°	10	50	3,94	4	•	0003688167
TF350210200030	2	30"	13	50	2,22	4	•	0003688227
TF350210200100	2	1°	13	50	2,45	4	•	0003688388
TF350210200130	2	1°30"	13	50	2,68	4	•	0003688448
TF350210200200	2	2°	13	50	2,90	4	•	0003688508
TF350210200230	2	2°30"	13	50	3,13	4	•	0003688659
TF350210200300	2	3°	13	50	3,36	4	•	0003688719
TF351210200500	2	5°	13	50	4,27	6	•	0003688870
TF351210200700	2	7°	13	50	5,17	6	•	0003688930
TF350210250030	2,5	30"	15	50	2,76	4	•	0003689019
TF350210250100	2,5	1°	15	50	3,03	4	•	0003689179
TF350210250130	2,5	1°30"	15	50	3,29	4	•	0003689220
TF350210250200	2,5	2°	15	50	3,56	4	•	0002605362
TF350210250230	2,5	2°30"	15	50	3,81	4	•	0003689651
TF351210250300	2,5	3°	15	50	4,07	6	•	0003689440
TF350210250500	2,5	5°	15	50	5,13	6	•	0003689501
TF351210300030	3	30"	20	60	3,35	6	•	0003690870
TF351210300100	3	1°	20	60	3,70	6	•	0003690930
TF351210300130	3	1°30"	20	60	4,05	6	•	0003691019
TF351210300200	3	2°	20	60	4,39	6	•	0003691179
TF351210300230	3	2°30"	20	60	4,65	6	•	0003691230
TF351210300300	3	3°	20	60	5,10	6	•	0002841629
TF351210300500	3	5°	20	60	6,50	6	•	0002841789
TF351210400030	4	30"	25	60	4,44	6	•	0003691380
TF351210400100	4	1°	25	60	4,88	6	•	0003691440
TF351210400130	4	1°30"	25	60	5,13	6	•	0003691501
TF351210400200	4	2°	25	60	5,75	6	•	0003691661
TF351210400230	4	2°30"	25	60	6,19	8	•	0003691711
TF351210400300	4	3°	25	60	6,62	8	•	0003691872
TF351210400500	4	5°	25	75	8,38	8	•	0002486088

Fresas frontales de Metal duro integral. Micro Grano. Canal largo.
Solid Carbide end mills. Micro Grain. Long flute.

TP CL-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

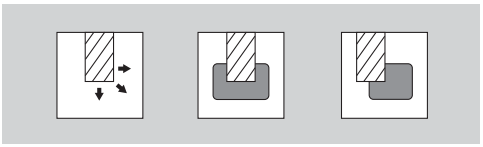
CÓNICAS
TAPERED TYPE

Altplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	α	L2 mm.	L1 mm.	Ø max.	D2 h6mm.		Cod.
TF351210500030	5	30"	30	75	5,52	6	•	0003694507
TF351210500100	5	1°	30	75	6,05	8	•	0003694668
TF351210500130	5	1°30"	30	75	6,57	8	•	0003694728
TF351210500200	5	2°	30	75	7,09	8	•	0003694889
TF351210500230	5	2°30"	30	75	7,62	8	•	0003694939
TF351210500300	5	3°	30	75	8,14	10	•	0003695028
TF351210500500	5	5°	30	75	10,25	10	•	0002546251
TF351210600030	6	30"	35	75	6,61	8	•	0003695178
TF351210600100	6	1°	35	75	7,22	8	•	0003695239
TF351210600130	6	1°30"	35	75	7,83	8	•	0003695399
TF351210600200	6	2°	35	75	8,44	10	•	0003695459
TF351210600230	6	2°30"	35	100	9,05	10	•	0003695510
TF351210600300	6	3°	35	100	9,67	10	•	0003695660
TF351210600500	6	5°	35	100	12,12	12	•	0003695721

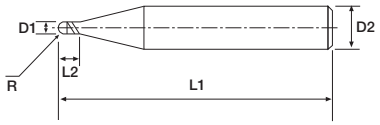


Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

B MINI-Z2	Z2	λs35°	<50HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

ESFÉRICA MINIATURA
MINIATURE BALL TYPE

Altplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.	R		Cod.
BE35021002	0,2	0,4	50	4	0,10	•	0003695881
BE35021003	0,3	0,6	50	4	0,15	•	0003150988
BE35021004	0,4	0,8	50	4	0,20	•	0002897774
BE35021005	0,5	1	50	4	0,25	•	0002714886
BE35021006	0,6	1,2	50	4	0,30	•	0002565285
BE35021007	0,7	1,4	50	4	0,35	•	0002565346
BE35021008	0,8	1,6	50	4	0,40	•	0002565496
BE35021009	0,9	1,8	50	4	0,45	•	0003695941
BE35021010	1	2	50	4	0,50	•	0002435375
BE35021011	1,1	2,2	50	4	0,55	•	0003696020
BE35021012	1,2	2,4	50	4	0,60	•	0002746404
BE35021013	1,3	2,6	50	4	0,65	•	0003696181
BE35021014	1,4	2,8	50	4	0,70	•	0003696231
BE35021015	1,5	3	50	4	0,75	•	0002435436
BE35021016	1,6	3,2	50	4	0,80	•	0003696391
BE35021017	1,7	3,4	50	4	0,85	•	0003696452
BE35021018	1,8	3,6	50	4	0,90	•	0003085707
BE35021019	1,9	3,8	50	4	0,95	•	0003696512
BE35021020	2	4	50	4	1,00	•	0002435596
BE35021021	2,1	4,2	50	4	1,05	•	0003696662
BE35021022	2,2	4,4	50	4	1,10	•	0003696723
BE35021023	2,3	4,6	50	4	1,15	•	0003696883
BE35021024	2,4	4,8	50	4	1,20	•	0003696944
BE35021025	2,5	5	50	4	1,25	•	0002435656
BE35021026	2,6	5,2	50	4	1,30	•	0003697022
BE35021027	2,7	5,4	50	4	1,35	•	0003697183
BE35021028	2,8	5,6	50	4	1,40	•	0003697243
BE35021029	2,9	5,8	50	4	1,45	•	0003697394
BE35021030	3	6	50	4	1,50	•	0002435867
BE35021035	3,5	7	50	4	1,75	•	0002437169
BE35021040	4	8	50	4	2,00	•	0002437220

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

B-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

ESFÉRICA
BALL TYPE

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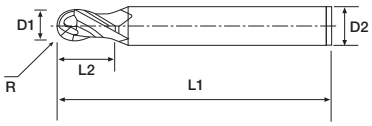
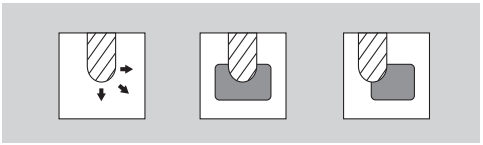


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.	R		Cod.
BE35321030	3	6	50	3	1,50	•	0002435707
BE35121010	1	2	50	6	0,50	•	0002437380
BE35121015	1,5	3	50	6	0,75	•	0002437430
BE35121020	2	4	50	6	1,00	•	0002437591
BE35121025	2,5	5	50	6	1,25	•	0002437651
BE35121030	3	6	50	6	1,50	•	0002437711
BE35121035	3,5	7	50	6	1,75	•	0002437862
BE35121040	4	8	50	6	2,00	•	0002437922
BE35121045	4,5	9	50	6	2,25	•	0002438011
BE35121050	5	10	50	6	2,50	•	0002438161
BE35121055	5,5	11	50	6	2,75	•	0002438222
BE35121060	6	12	50	6	3,00	•	0002438382
BE35121070	7	14	60	8	3,50	•	0002438443
BE35121080	8	16	60	8	4,00	•	0002438593
BE35121090	9	18	75	10	4,50	•	0002438653
BE35121100	10	20	75	10	5,00	•	0002438714
BE35121110	11	22	75	12	5,50	•	0002438874
BE35121120	12	24	75	12	6,00	•	0002438924
BE35121140	14	28	100	16	7,00	•	0002439013
BE35121160	16	32	100	16	8,00	•	0002439164
BE35121180	18	36	100	20	9,00	•	0002439224
BE35121200	20	40	100	20	10,00	•	0002439384



Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

B-Z4	Z4	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

ESFÉRICA
BALL TYPE

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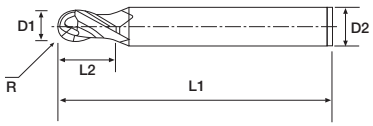
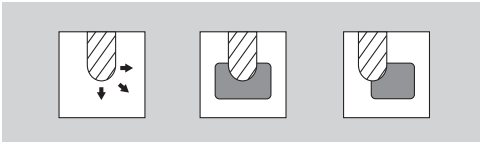


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.	R		Cod.
BE35041010	1	2	50	4	0,50	•	0002442507
BE35041015	1,5	3	50	4	0,75	•	0002442668
BE35041020	2	4	50	4	1,00	•	0002442718
BE35041025	2,5	5	50	4	1,25	•	0002442879
BE35341030	3	6	50	3	1,50	•	0002442939
BE35041030	3	6	50	4	1,50	•	0002443018
BE35041035	3,5	7	50	4	1,75	•	0002443178
BE35041040	4	8	50	4	2,00	•	0002443239
BE35141050	5	10	50	6	2,50	•	0002444442
BE35141055	5,5	11	50	6	2,75	•	0002444662
BE35141060	6	12	50	6	3,00	•	0002444723
BE35141070	7	14	60	8	3,50	•	0002444873
BE35141080	8	16	60	8	4,00	•	0002445022
BE35141090	9	18	75	10	4,50	•	0002445173
BE35141100	10	20	75	10	5,00	•	0002445233
BE35141120	12	24	75	12	6,00	•	0002445454
BE35141140	14	28	100	16	7,00	•	0002445504
BE35141160	16	32	100	16	8,00	•	0002445665
BE35141180	18	36	100	20	9,00	•	0002445725
BE35141200	20	40	100	20	10,00	•	0002445885



Fresas frontales de Metal duro integral. Micro Grano. Cuello largo.
Solid Carbide end mills. Micro Grain. Long neck.

B CUL-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

ESFÉRICA
BALL TYPE

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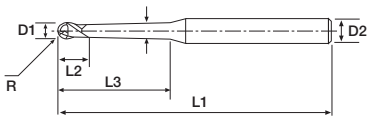


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

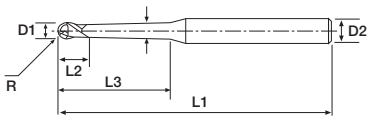
Ref.	D1 mm.	L2 mm.	L efectiva	L1 mm.	D2 mm.	R		Cod.
BN3502100502	0,5	0,75	2	50	4	0,25	•	0002650603
BN3502100504	0,5	0,75	4	50	4	0,25	•	0003257428
BN3502100506	0,5	0,75	6	50	4	0,25	•	0002715949
BN3502100602	0,6	0,9	2	50	4	0,30	•	0003136102
BN3502100604	0,6	0,9	4	50	4	0,30	•	0002897824
BN3502100606	0,6	0,9	6	50	4	0,30	•	0002825762
BN3502100804	0,8	1,2	4	50	4	0,40	•	0002825812
BN3502100806	0,8	1,2	6	50	4	0,40	•	0002898556
BN3502100808	0,8	1,2	8	50	4	0,40	•	0002825812
BN3502101006	1	1,5	6	50	4	0,50	•	0002755841
BN3502101008	1	1,5	8	50	4	0,50	•	0002565617
BN3502101010	1	1,5	10	50	4	0,50	•	0002728532
BN3502101012	1	1,5	12	50	4	0,50	•	0002777029
BN3502101206	1,2	1,8	6	50	4	0,60	•	0003697454
BN3502101208	1,2	1,8	8	50	4	0,60	•	0002897985
BN3502101210	1,2	1,8	10	50	4	0,60	•	0003697514
BN3502101212	1,2	1,8	12	50	4	0,60	•	0002898616
BN3502101406	1,4	2,1	6	50	4	0,70	•	0003697675
BN3502101410	1,4	2,1	10	50	4	0,70	•	0003697725
BN3502101416	1,4	2,1	16	50	4	0,70	•	0003697885
BN3502101506	1,5	2,3	6	50	4	0,75	•	0003011911
BN3502101508	1,5	2,3	8	50	4	0,75	•	0002671361
BN3502101510	1,5	2,3	10	50	4	0,75	•	0002671421
BN3502101512	1,5	2,3	12	50	4	0,75	•	0002825973
BN3502101514	1,5	2,3	14	50	4	0,75	•	0003013916
BN3502101516	1,5	2,3	16	50	4	0,75	•	0002898124
BN3502101518	1,5	2,3	18	50	4	0,75	•	0003699027
BN3502101520	1,5	2,3	20	50	4	0,75	•	0002536022
BN3502101606	1,6	2,4	6	50	4	0,80	•	0002845146
BN3502101608	1,6	2,4	8	50	4	0,80	•	0002845206
BN3502101610	1,6	2,4	10	50	4	0,80	•	0002898776
BN3502101612	1,6	2,4	12	50	4	0,80	•	0003015429
BN3502101614	1,6	2,4	14	50	4	0,80	•	0003699187
BN3502101616	1,6	2,4	16	50	4	0,80	•	0002898284
BN3502101618	1,6	2,4	18	50	4	0,80	•	0003699248
BN3502101620	1,6	2,4	20	50	4	0,80	•	0002898345
BN3502101808	1,8	2,7	8	50	4	0,90	•	0002574131
BN3502101814	1,8	2,7	14	50	4	0,90	•	0002574291
BN3502101820	1,8	2,7	20	50	4	0,90	•	0002889811
BN3502102008	2	3	8	50	4	1,00	•	0002565777
BN3502102010	2	3	10	50	4	1,00	•	0002719737
BN3502102012	2	3	12	50	4	1,00	•	0002587377
BN3502102014	2	3	14	50	4	1,00	•	0002587437
BN3502102016	2	3	16	50	4	1,00	•	0002569626
BN3502102018	2	3	18	50	4	1,00	•	0002853642

Fresas frontales de Metal duro integral. Micro Grano. Cuello largo.
Solid Carbide end mills. Micro Grain. Long neck.

B CUL-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

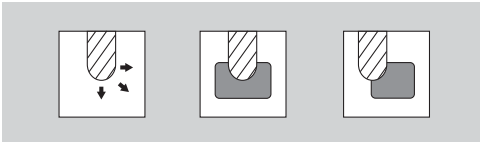
ESFÉRICA
BALL TYPE

Altplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L efectiva	L1 mm.	D2 mm.	R		Cod.
BN3502102020	2	3	20	50	4	1,00	•	0002569566
BN3502102508	2,5	4	8	50	4	1,25	•	0002719897
BN3502102512	2,5	4	12	50	4	1,25	•	0002672423
BN3502102516	2,5	4	16	50	4	1,25	•	0002898405
BN3502102520	2,5	4	20	50	4	1,25	•	0002719185
BN3512103010	3	4,5	10	50	6	1,50	•	0002587588
BN3512103012	3	4,5	12	50	6	1,50	•	0002587648
BN3512103016	3	4,5	16	60	6	1,50	•	0002587708
BN3512103020	3	4,5	20	75	6	1,50	•	0002671582
BN3512103025	3	6	25	75	6	1,50	•	0002535020
BN3512104012	4	6	12	50	6	2,00	•	0002587869
BN3512104016	4	6	16	60	6	2,00	•	0002587929
BN3512104020	4	6	20	75	6	2,00	•	0002588008
BN3512104025	4	6	25	75	6	2,00	•	0002824970
BN3512104030	4	6	30	75	6	2,00	•	0002613005



Fresas frontales de Metal duro integral. Micro Grano. Mango largo.
Solid Carbide end mills. Micro Grain. Long shank.

B ML-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

ESFÉRICA
BALL TYPE

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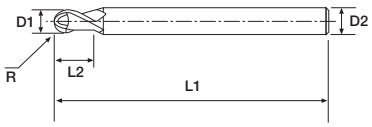

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 h6mm.	R		Cod.
BS35121010075	1	2	75	6	0,50	•	0002596664
BS35121010100	1	2	100	6	0,50	•	0002596714
BS35121015075	1,5	3	75	6	0,75	•	0002596875
BS35121015100	1,5	3	100	6	0,75	•	0002596935
BS35121020075	2	4	75	6	1,00	•	0002541892
BS35121020100	2	4	100	6	1,00	•	0002597014
BS35121025075	2,5	5	75	6	1,25	•	0002589371
BS35121025100	2,5	5	100	6	1,25	•	0002590861
BS35121030075	3	6	75	6	1,50	•	0002536183
BS35121030100	3	6	100	6	1,50	•	0002597174
BS35121035100	3,5	7	100	6	1,75	•	0002597235
BS35121040075	4	8	75	6	2,00	•	0002541943
BS35121040100	4	8	100	6	2,00	•	0002597385
BS35121050075	5	10	75	6	2,50	•	0002597445
BS35121050100	5	10	100	6	2,50	•	0002591432
BS35121060075	6	12	75	6	3,00	•	0002535170
BS35121060100	6	12	100	6	3,00	•	0002486419
BS35121060150	6	12	150	6	3,00	•	0002597506
BS35121080075	8	16	75	6	4,00	•	0002542031
BS35121080100	8	16	100	8	4,00	•	0002535231
BS35121080150	8	16	150	8	4,00	•	0002597666
BS35121100100	10	20	100	10	5,00	•	0002535391
BS35121100150	10	20	150	10	5,00	•	0002542182
BS35121100200	10	20	200	10	5,00	•	0002597727
BS35121120100	12	24	100	12	6,00	•	0002535452
BS35121120150	12	24	150	12	6,00	•	0002542242
BS35121120200	12	24	200	12	6,00	•	0002597877
BS35121160150	16	32	150	16	8,00	•	0002597937

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

TN-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

TÓRICAS
CORNER RADIUS

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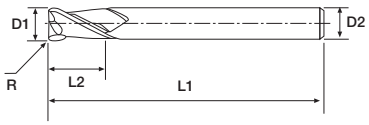

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	R esquina	L2 mm.	L1 mm.	D2		Cod.
RE3502101001R	1	0,1	3	50	4	•	0003699308
RE3502101002R	1	0,2	3	50	4	•	0002759630
RE3502101003R	1	0,3	3	50	4	•	0003699458
RE3502101502R	1,5	0,2	4	50	4	•	0002759911
RE3502101503R	1,5	0,3	4	50	4	•	0002719526
RE3502102002R	2	0,2	6	50	4	•	0002759790
RE3502102003R	2	0,3	6	50	4	•	0003699519
RE3502102005R	2	0,5	6	50	4	•	0002624236
RE3502102502R	2,5	0,2	8	50	4	•	0003699679
RE3532103002R	3	0,2	8	50	3	•	0002759850
RE3532103003R	3	0,3	8	50	3	•	0002500345
RE3532103005R	3	0,5	8	50	3	•	0002536233
RE3532103010R	3	1	8	50	3	•	0003239777
RE3502103002R	3	0,2	8	50	4	•	0003699730
RE3502103003R	3	0,3	8	50	4	•	0003699880
RE3502103005R	3	0,5	8	50	4	•	0002703655
RE3502103010R	3	1	8	50	4	•	0003699940
RE3502104002R	4	0,2	10	50	4	•	0002664359
RE3502104003R	4	0,3	10	50	4	•	0002500495
RE3502104005R	4	0,5	10	50	4	•	0002657830
RE3502104010R	4	1	10	50	4	•	0002567983
RE3502104015R	4	1,5	10	50	4	•	0003309748
RE3512105002R	5	0,2	13	50	6	•	0003700098
RE3512105003R	5	0,3	13	50	6	•	0004265705
RE3512105005R	5	0,5	13	50	6	•	0002500556
RE3512105010R	5	1	13	50	6	•	0003309808

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

TN-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

TÓRICAS
CORNER RADIUS

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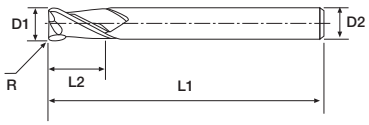

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	R esquina	L2 mm.	L1 mm.	D2		Cod.
RE3512106002R	6	0,2	15	50	6	•	0002814049
RE3512106003R	6	0,3	15	50	6	•	0004265866
RE3512106005R	6	0,5	15	50	6	•	0002500616
RE3512106010R	6	1	15	50	6	•	0002574352
RE3512106015R	6	1,5	15	50	6	•	0003309959
RE3512106020R	6	2	15	50	6	•	0003310043
RE3512108003R	8	0,3	20	60	8	•	0003310194
RE3512108005R	8	0,5	20	60	8	•	0002500777
RE3512108010R	8	1	20	60	8	•	0002504565
RE3512108015R	8	1,5	20	60	8	•	0002504625
RE3512108020R	8	2	20	60	8	•	0003310254
RE3512108025R	8	2,5	20	60	8	•	0003310314
RE3512108030R	8	3	20	60	8	•	0003008417
RE3512110003R	10	0,3	25	75	10	•	0003136805
RE3512110005R	10	0,5	25	75	10	•	0002657619
RE3512110010R	10	1	25	75	10	•	0003012151
RE3512110015R	10	1,5	25	75	10	•	0002650061
RE3512110020R	10	2	25	75	10	•	0004265916
RE3512110025R	10	2,5	25	75	10	•	0004266155
RE3512110030R	10	3	25	75	10	•	0004266005
RE3512112003R	12	0,3	30	75	12	•	0004266216
RE3512112005R	12	0,5	30	75	12	•	0003121885
RE3512112010R	12	1	30	75	12	•	0003013213
RE3512112015R	12	1,5	30	75	12	•	0003013364
RE3512112020R	12	2	30	75	12	•	0004266376
RE3512112025R	12	2,5	30	75	12	•	0004266436
RE3512112030R	12	3	30	75	12	•	0004266587

Fresas frontales de Metal duro integral. Micro Grano.
Solid Carbide end mills. Micro Grain.

TN-Z4	Z4	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

TÓRICAS
CORNER RADIUS

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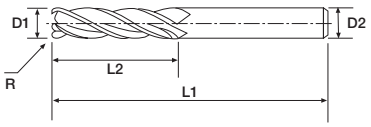

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	R esquina	L2 mm.	L1 mm.	D2		Cod.
RE3534103002R	3	0,2	8	50	3	•	0003701211
RE3534103003R	3	0,3	8	50	3	•	0002500827
RE3534103005R	3	0,5	8	50	3	•	0002588430
RE3534103010R	3	1	8	50	3	•	0002899347
RE3504103002R	3	0,2	8	50	4	•	0003701362
RE3504103003R	3	0,3	8	50	4	•	0003701422
RE3504103005R	3	0,5	8	50	4	•	0002651334
RE3504103010R	3	1	8	50	4	•	0003701582
RE3504104002R	4	0,2	10	50	4	•	0003009420
RE3504104003R	4	0,3	10	50	4	•	0002500987
RE3504104005R	4	0,5	10	50	4	•	0002574623
RE3504104010R	4	1	10	50	4	•	0002574783
RE3504104015R	4	1,5	10	50	4	•	0003701643
RE3514105003R	5	0,3	13	50	6	•	0002574844
RE3514105005R	5	0,5	13	50	6	•	0002501066
RE3514105010R	5	1	13	50	6	•	0002574904
RE3514106002R	6	0,2	15	50	6	•	0003087431
RE3514106003R	6	0,3	15	50	6	•	0002818961
RE3514106005R	6	0,5	15	50	6	•	0002473554
RE3514106010R	6	1	15	50	6	•	0002473605
RE3514106015R	6	1,5	15	50	6	•	0002512147
RE3514106020R	6	2	15	50	6	•	0002512207
RE3514108003R	8	0,3	20	60	8	•	0002902032
RE3514108005R	8	0,5	20	60	8	•	0002501127
RE3514108010R	8	1	20	60	8	•	0002473765
RE3514108015R	8	1,5	20	60	8	•	0002473826
RE3514108020R	8	2	20	60	8	•	0002473986
RE3514108025R	8	2,5	20	60	8	•	0003701793
RE3514108030R	8	3	20	60	8	•	0003701854
RE3514110003R	10	0,3	25	75	10	•	0002902192
RE3514110005R	10	0,5	25	75	10	•	0002474065
RE3514110010R	10	1	25	75	10	•	0002475981
RE3514110015R	10	1,5	25	75	10	•	0002476069
RE3514110020R	10	2	25	75	10	•	0002476120
RE3514110025R	10	2,5	25	75	10	•	0002476280
RE3514110030R	10	3	25	75	10	•	0002476341
RE3514112003R	12	0,3	30	75	12	•	0002476491
RE3514112005R	12	0,5	30	75	12	•	0002476612
RE3514112010R	12	1	30	75	12	•	0002476772
RE3514112015R	12	1,5	30	75	12	•	0002476822
RE3514112020R	12	2	30	75	12	•	0002476983
RE3514112025R	12	2,5	30	75	12	•	0002477062
RE3514112030R	12	3	30	75	12	•	0002477122

Fresas frontales de Metal duro integral. Micro Grano. Mango largo.
Solid Carbide end mills. Micro Grain. Long shank.

TN ML-Z2	Z2	λs35°	<55HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²
TÓRICAS *CORNER RADIUS*								
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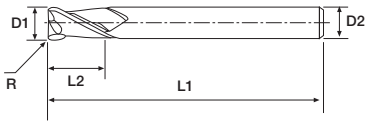


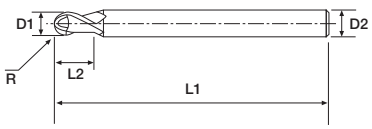
Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	R esquina	L2 mm.	L1 mm.	D2		Cod.
RS3532103003R	3	0,3	8	75	3	•	0002854433
RS3532103005R	3	0,5	8	75	3	•	0002501287
RS3532103010R	3	1	8	75	3	•	0002501347
RS3502104003R	4	0,3	10	75	4	•	0003023442
RS3502104005R	4	0,5	10	75	4	•	0002716027
RS3502104010R	4	1	10	75	4	•	0002501408
RS3502104015R	4	1,5	10	75	4	•	0003701914
RS3512106003R	6	0,3	15	100	6	•	0002861384
RS3512106005R	6	0,5	15	100	6	•	0003702093
RS3512106010R	6	1	15	100	6	•	0002501558
RS3512106015R	6	1,5	15	100	6	•	0003702153
RS3512106020R	6	2	15	100	6	•	0002501618
RS3512108003R	8	0,3	20	100	8	•	0003642743
RS3512108005R	8	0,5	20	100	8	•	0002799542
RS3512108010R	8	1	20	100	8	•	0002501779
RS3512108015R	8	1,5	20	100	8	•	0002536454
RS3512108020R	8	2	20	100	8	•	0002501839
RS3512108025R	8	2,5	20	100	8	•	0003702214
RS3512108030R	8	3	20	100	8	•	0003702364
RS3512110003R	10	0,3	25	100	10	•	0003702424
RS3512110005R	10	0,5	25	100	10	•	0002657770
RS3512110010R	10	1	25	100	10	•	0002501980
RS3512110015R	10	1,5	25	100	10	•	0003023593
RS3512110020R	10	2	25	100	10	•	0002502078
RS3512110025R	10	2,5	25	100	10	•	0003702916
RS3512110030R	10	3	25	100	10	•	0003703095
RS3512112003R	12	0,3	30	100	12	•	0003703155
RS3512112005R	12	0,5	30	100	12	•	0003287101
RS3512112010R	12	1	30	100	12	•	0002502129
RS3512112015R	12	1,5	30	100	12	•	0003023653
RS3512112020R	12	2	30	100	12	•	0002502289
RS3512112025R	12	2,5	30	100	12	•	0003703216
RS3512112030R	12	3	30	100	12	•	0003703376

Fresas frontales de Metal duro integral. Micro Grano. Para aluminio.
Solid Carbide end mills. Micro Grain. For aluminium.

B AL-Z2	Z2	λs25º	<40HRC	MDI *Solid carbide*	Co 10% Wc 90%	HV30	grain Ø<0,6 µm	3750 N/mm²

ESFÉRICA *BALL TYPE*



Material	GR5	GR6	GR7	GR10	GR11
Subg.	1	1	1	1	1
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*				
	5	5	5	5	air

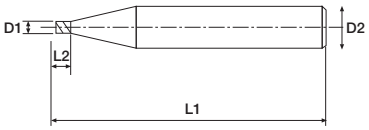
Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.	R		Cod.
BE25020010	1	2	50	4	0,50	•	0002681711
BE25020015	1,5	3	50	4	0,75	•	0002681861
BE25020020	2	4	50	4	1,00	•	0002681921
BE25020025	2,5	5	50	4	1,25	•	0002682010
BE25020030	3	6	50	4	1,50	•	0002555056
BE25020035	3,5	7	50	4	1,75	•	0002682161
BE25020040	4	8	50	4	2,00	•	0002555117
BE25120045	4,5	9	50	6	2,25	•	0002682221
BE25120050	5	10	50	6	2,50	•	0002555267
BE25120055	5,5	11	50	6	2,75	•	0002682381
BE25120060	6	12	50	6	3,00	•	0002555328
BE25120080	8	16	60	8	4,00	•	0002682442
BE25120100	10	20	75	10	5,00	•	0002682592
BE25120120	12	24	75	12	6,00	•	0002682652

Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. Ultra fine Micro Grain.

F UMG MINI-Z2	Z2	λs35º	<65HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

PLANA MINIATURA
MINIATURE SQUARE TYPE

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

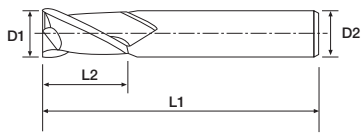
Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.		Cod.
AU35022002	0,2	0,4	50	4	•	0003703427
AU35022003	0,3	0,6	50	4	•	0003703587
AU35022004	0,4	0,8	50	4	•	0002899076
AU35022005	0,5	1	50	4	•	0003703647
AU35022006	0,6	1,2	50	4	•	0002899126
AU35022007	0,7	1,4	50	4	•	0003703708
AU35022008	0,8	1,6	50	4	•	0002813528
AU35022009	0,9	1,8	50	4	•	0003703858
AU35022010	1	3	50	4	•	0002813689
AU35022011	1,1	3	50	4	•	0003703918
AU35022012	1,2	3	50	4	•	0003704007
AU35022013	1,3	3	50	4	•	0003704158
AU35022014	1,4	3	50	4	•	0003704218
AU35022015	1,5	4	50	4	•	0002513631
AU35022016	1,6	4	50	4	•	0002643481
AU35022017	1,7	4	50	4	•	0003704378
AU35022018	1,8	4	50	4	•	0003471533
AU35022019	1,9	4	50	4	•	0003704439
AU35022020	2	6	50	4	•	0002512579
AU35022021	2,1	6	50	4	•	0003704640
AU35022022	2,2	6	50	4	•	0003704700
AU35022023	2,3	6	50	4	•	0003704860
AU35022024	2,4	6	50	4	•	0003704911
AU35022025	2,5	8	50	4	•	0002899287
AU35022026	2,6	8	50	4	•	0003705150
AU35022027	2,7	8	50	4	•	0003705210
AU35022028	2,8	8	50	4	•	0003705371
AU35022029	2,9	8	50	4	•	0003705431
AU35022030	3	8	50	4	•	0002512639

Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. *Ultra fine Micro Grain.*

F UMG-Z2	Z2	λs35º	<65HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

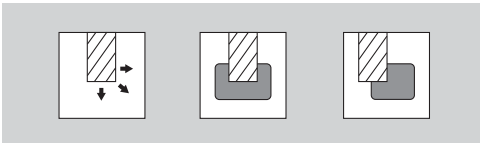
PLANA
SQUARE TYPE

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.		Cod.
AU35122035	3,5	10	50	6	•	0003706373
AU35122040	4	11	50	6	•	0002512789
AU35122045	4,5	11	50	6	•	0003706433
AU35122050	5	13	50	6	•	0002512840
AU35122055	5,5	13	50	6	•	0003706594
AU35122060	6	16	50	6	•	0002512900
AU35122065	6,5	19	60	8	•	0003706644
AU35122070	7	19	60	8	•	0002513089
AU35122075	7,5	19	60	8	•	0003706705
AU35122080	8	20	60	8	•	0002513149
AU35122085	8,5	20	75	10	•	0003706865
AU35122090	9	20	75	10	•	0002513200
AU35122095	9,5	25	75	10	•	0003706925
AU35122100	10	25	75	10	•	0002513360
AU35122105	10,5	25	75	12	•	0003707004
AU35122110	11	25	75	12	•	0002513411
AU35122115	11,5	30	75	12	•	0003707165
AU35122120	12	30	75	12	•	0002513571
AU35122140	14	40	100	14	•	0003707225
AU35122160	16	40	100	16	•	0003707375
AU35122200	20	45	100	20	•	0003707436

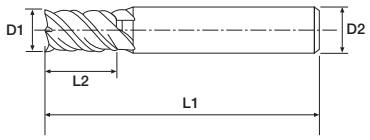


Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. Ultra fine Micro Grain.

F UMG-Z4	Z4	λs35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

PLANA
SQUARE TYPE

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

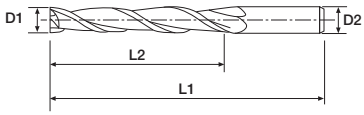
Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.		Cod.
AU35042010	1	3	50	4	•	0002674096
AU35042015	1,5	4	50	4	•	0002674157
AU35042020	2	6	50	4	•	0002651495
AU35042025	2,5	8	50	4	•	0002528380
AU35042030	3	8	50	4	•	0002528440
AU35142035	3,5	10	50	6	•	0002674217
AU35142040	4	11	50	6	•	0002605854
AU35142045	4,5	11	50	6	•	0002674378
AU35142050	5	13	50	6	•	0002605915
AU35142055	5,5	13	50	6	•	0002674428
AU35142060	6	16	50	6	•	0002605583
AU35142065	6,5	19	60	8	•	0002674588
AU35142070	7	19	60	8	•	0002674649
AU35142075	7,5	19	60	8	•	0002674709
AU35142080	8	20	60	8	•	0002606093
AU35142085	8,5	20	75	10	•	0002674850
AU35142090	9	20	75	10	•	0002674910
AU35142095	9,5	25	75	10	•	0002675009
AU35142100	10	25	75	10	•	0002606154
AU35142110	11	25	75	12	•	0002675210
AU35142120	12	30	75	12	•	0002512418
AU35142140	14	35	75	14	•	0002675430
AU35142160	16	40	100	16	•	0002675581
AU35142200	20	45	100	20	•	0002675641

Fresas frontales de Metal duro integral. Ultra Micro Grano fino. Canal largo.
Solid Carbide end mills. Ultra fine Micro Grain. Long flute.

F UMG CL-Z2	Z4	λs35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

PLANA
SQUARE TYPE

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.		Cod.
AUF35042010005	1	5	50	4	•	0002664621
AUF35042015006	1,5	6	50	4	•	0002664841
AUF35042020009	2	9	50	4	•	0002664781
AUF35042025010	2,5	10	50	4	•	0002664902
AUF35142030012	3	12	50	6	•	0002665081
AUF35142035014	3,5	14	50	6	•	0002665141
AUF35142040016	4	16	60	6	•	0002665201
AUF35142045018	4,5	18	60	6	•	0002665352
AUF35142050025	5	25	75	6	•	0002665412
AUF35142060025	6	25	75	6	•	0002665572
AUF35142070030	7	30	75	8	•	0002665633
AUF35142080035	8	35	100	8	•	0002665783
AUF35142100040	10	40	100	10	•	0002665844
AUF35142120045	12	45	100	12	•	0002665904
AUF35142140045	14	45	100	14	•	0002666083
AUF35142160065	16	65	150	16	•	0002666143
AUF35142200075	20	75	150	20	•	0002668148

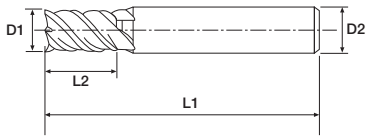
Fresas frontales de Metal duro integral / *Solid Carbide end mills.*

Ultra Micro Grano fino. Altas velocidades y aceros templados. / *Ultra fine Micro Grain. High speed and tempered steels.*

F UMG HRC	Z4-Z6-Z8	λs45º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

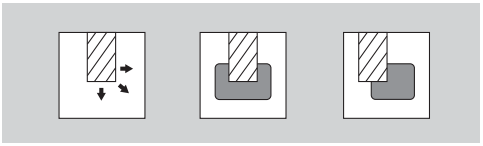
PLANA *SQUARE TYPE*

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.	nº cortes		Cod.
AU45042020	2	4	50	4	4	•	0002474125
AU45042030	3	6	50	6	4	•	0002474276
AU45142040	4	8	50	6	4	•	0002474336
AU45162050	5	10	50	6	6	•	0002474496
AU45162060	6	15	50	6	6	•	0002474557
AU45162080	8	20	60	8	6	•	0002474617
AU45162100	10	30	75	10	6	•	0002474767
AU45162120	12	32	75	12	6	•	0002474828
AU45162160	16	40	100	16	6	•	0002474988
AU45182200	20	45	100	20	8	•	0003707596



Fresas frontales de Metal duro integral / *Solid Carbide end mills.*

Ultra Micro Grano fino. Altas velocidades y aceros templados. Canal largo.

Ultra fine Micro Grain. High speed and tempered steels. Long flute.

F UMG HRC ML	Z6-Z8	λs45º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

PLANA *SQUARE TYPE*

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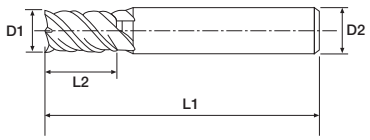

Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.	nº cortes		Cod.
AUF45162060025	6	25	75	6	6	•	0002475067
AUF45162080030	8	30	75	8	6	•	0002475559
AUF45162100045	10	45	100	10	6	•	0002475288
AUF45162120045	12	45	100	12	6	•	0002475338
AUF45162160065	16	65	150	16	6	•	0002475499
AUF45182200075	20	75	150	20	8	•	0002536725

Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. Ultra fine Micro Grain.

B UMG MINI-Z2	Z2	λ_s35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

ESFÉRICA MINIATURA
MINIATURE BALL TYPE

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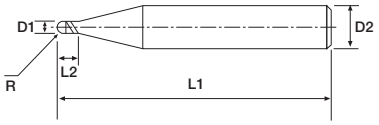


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

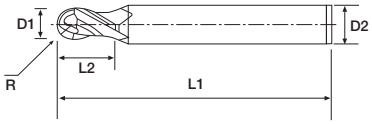
Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.	R		Cod.
BU35022003	0,3	0,6	50	4	0,15	•	0002666635
BU35022004	0,4	0,8	50	4	0,20	•	0002666785
BU35022005	0,5	1	50	4	0,25	•	0002606214
BU35022006	0,6	1,2	50	4	0,30	•	0002502340
BU35022007	0,7	1,4	50	4	0,35	•	0002565557
BU35022008	0,8	1,6	50	4	0,40	•	0002502400
BU35022009	0,9	1,8	50	4	0,45	•	0002666846
BU35022010	1	2	50	4	0,50	•	0002666414
BU35022011	1,1	2,2	50	4	0,55	•	0003707656
BU35022012	1,2	2,4	50	4	0,60	•	0003090503
BU35022013	1,3	2,6	50	4	0,65	•	0003707707
BU35022014	1,4	2,8	50	4	0,70	•	0003707867
BU35022015	1,5	3	50	4	0,75	•	0002853581
BU35022016	1,6	3,2	50	4	0,80	•	0003707928
BU35022017	1,7	3,4	50	4	0,85	•	0003708006
BU35022018	1,8	3,6	50	4	0,90	•	0003708167
BU35022019	1,9	3,8	50	4	0,95	•	0003708227
BU35022020	2	4	50	4	1,00	•	0002486298
BU35022021	2,1	4,2	50	4	1,05	•	0003708378
BU35022022	2,2	4,4	50	4	1,10	•	0003708438
BU35022023	2,3	4,6	50	4	1,15	•	0003708598
BU35022024	2,4	4,8	50	4	1,20	•	0003708659
BU35022025	2,5	5	50	4	1,25	•	0002537025
BU35022026	2,6	5,2	50	4	1,30	•	0003708719
BU35022027	2,7	5,4	50	4	1,35	•	0003708860
BU35022028	2,8	5,6	50	4	1,40	•	0003709009
BU35022029	2,9	5,8	50	4	1,45	•	0003709169
BU35022030	3	6	50	4	1,50	•	0002537185

Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. Ultra fine Micro Grain.

B UMG-Z2	Z2	λs35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

ESFÉRICA
BALL TYPE

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.	R		Cod.
BU35022035	3,5	7	50	4	1,75	•	0002537245
BU35022040	4	8	50	4	2,00	•	0002512087
BU35122045	4,5	9	50	6	2,25	•	0002537396
BU35122050	5	10	50	6	2,50	•	0002498432
BU35122055	5,5	11	50	6	2,75	•	0002537456
BU35122060	6	12	50	6	3,00	•	0002486359
BU35122070	7	14	60	8	3,50	•	0003709380
BU35122080	8	16	60	8	4,00	•	0002667145
BU35122090	9	18	75	10	4,50	•	0002667085
BU35122100	10	20	75	10	5,00	•	0002667206
BU35122120	12	24	75	12	6,00	•	0002536514
BU35122140	14	28	100	14	7,00	•	0003709430
BU35122160	16	32	100	16	8,00	•	0002835610
BU35122180	18	36	100	20	9,00	-	0003709591
BU35122200	20	40	100	20	10,00	-	0003709651

Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. *Ultra fine Micro Grain.*

JMC

B UMG-Z4	Z4	λs35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

ESFÉRICA
BALL TYPE

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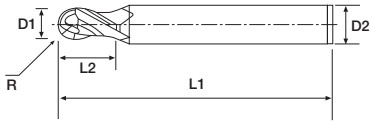
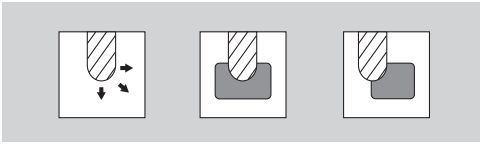


Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.	R		Cod.
BU35042010	1	2	50	4	0,50	•	0002734602
BU35042015	1,5	3	50	4	0,75	•	0003709711
BU35042020	2	4	50	4	1,00	•	0002734541
BU35042025	2,5	5	50	4	1,25	•	0003709862
BU35042030	3	6	50	4	1,50	•	0002705388
BU35042035	3,5	7	50	4	1,75	•	0003709922
BU35042040	4	8	50	4	2,00	•	0002745612
BU35042045	4,5	9	50	6	2,25	•	0003710006
BU35142050	5	10	50	6	2,50	•	0002667417
BU35142055	5,5	11	50	6	2,75	•	0003710167
BU35142060	6	12	50	6	3,00	•	0002667366
BU35142070	7	14	60	8	3,50	•	0002612358
BU35142080	8	16	60	8	4,00	•	0002666575
BU35142090	9	18	75	10	4,50	•	0003710227
BU35142100	10	20	75	10	5,00	•	0002669421
BU35142120	12	24	75	12	6,00	•	0003710388
BU35142140	14	28	100	14	7,00	•	0003710438
BU35142160	16	32	100	16	8,00	•	0003710598
BU35142200	20	40	100	20	10,00	-	0003710659

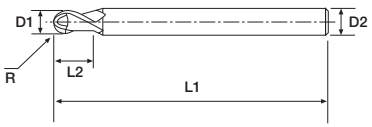


Fresas frontales de Metal duro integral. Ultra Micro Grano fino. Mango largo.
Solid Carbide end mills. Ultra fine Micro Grain. Long shank.

B UMG ML-Z2	Z2	λs35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

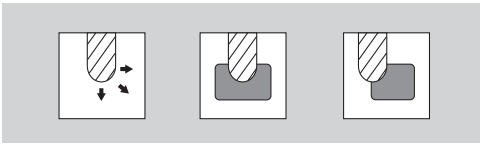
ESFÉRICA
BALL TYPE

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	L2 mm.	L1 mm.	D2 mm.	R		Cod.
BUS35122010075	1	2	75	6	0,50	•	0003087862
BUS35122015075	1,5	3	75	6	0,75	•	0002813749
BUS35122020075	2	4	75	6	1,00	•	0002813800
BUS35122025075	2,5	5	75	6	1,25	•	0002813950
BUS35122030075	3	6	75	6	1,50	•	0002854212
BUS35122035075	3,5	7	75	6	1,75	•	0003087923
BUS35122040075	4	8	75	6	2,00	•	0003087712
BUS35122045075	4,5	9	75	6	2,25	•	0003088012
BUS35122050075	5	10	75	6	2,50	•	0003088162
BUS35122055075	5,5	11	75	6	2,75	•	0003088222
BUS35122060075	6	12	75	6	3,00	•	0002671150
BUS35122060100	6	12	100	6	3,00	•	0002723250
BUS35122070075	7	14	75	8	3,50	•	0002723310
BUS35122080100	8	16	100	8	4,00	•	0002719677
BUS35122080150	8	16	150	8	4,00	•	0003088383
BUS35122090100	9	18	100	10	4,50	•	0003088443
BUS35122100100	10	20	100	10	5,00	•	0003031887
BUS35122100150	10	20	150	10	5,00	•	0003088593
BUS35122120100	12	24	100	12	6,00	•	0003031948
BUS35122120150	12	24	150	12	6,00	•	0003088654
BUS35122140100	14	28	100	14	7,00	•	0003088714
BUS35122160150	16	30	150	16	8,00	•	0003088925
BUS35122160200	16	30	200	16	8,00	•	0003089014
BUS35122200150	20	40	150	20	10,00	•	0003089164
BUS35122200200	20	40	200	20	10,00	•	0003089225

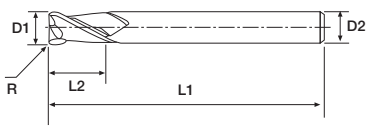


Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. Ultra fine Micro Grain.

TN UMG-Z2	Z2	λs35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

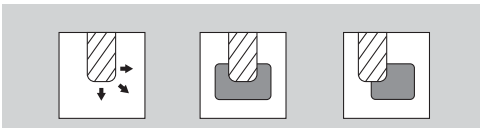
TÓRICAS
CORNER RADIUS

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	R esquina	L2 mm.	L1 mm.	D2		Cod.
RU3502201002R	1	0,2	2	50	4	•	0002719305
RU3502201003R	1	0,3	2	50	4	•	0003710719
RU3502201502R	1,5	0,2	3	50	4	•	0003710860
RU3502201503R	1,5	0,3	3	50	4	•	0003710920
RU3502202002R	2	0,2	5	50	4	•	0002719466
RU3502202005R	2	0,5	5	50	4	•	0003112016
RU3532203002R	3	0,2	8	50	4	•	0003711019
RU3532203003R	3	0,3	8	50	4	•	0003711220
RU3532203005R	3	0,5	8	50	4	•	0002732055
RU3532203010R	3	1	8	50	4	•	0003711380
RU3502204002R	4	0,2	10	50	4	•	0003711440
RU3502204003R	4	0,3	10	50	4	•	0003711591
RU3502204005R	4	0,5	10	50	4	•	0003711651
RU3502204010R	4	1	10	50	4	•	0003711711
RU3512206003R	6	0,3	16	75	6	•	0003712934
RU3512206005R	6	0,5	16	75	6	•	0002584581
RU3512206010R	6	1	16	75	6	•	0002749832
RU3512206020R	6	2	16	75	6	•	0003711922
RU3512208005R	8	0,5	20	75	8	•	0002818751
RU3512208010R	8	1	20	75	8	•	0002584641
RU3512208020R	8	2	20	75	8	•	0003712011
RU3512210005R	10	0,5	25	75	10	•	0003712161
RU3512210010R	10	1	25	75	10	•	0002584702
RU3512210015R	10	1,5	25	75	10	•	0003712222
RU3512210020R	10	2	25	75	10	•	0003712382
RU3512212005R	12	0,5	30	75	12	•	0003712443
RU3512212010R	12	1	30	75	12	•	0003712503
RU3512212015R	12	1,5	30	75	12	•	0003712653
RU3512212020R	12	2	30	75	12	•	0003712714
RU3512212030R	12	3	30	75	12	•	0003712874

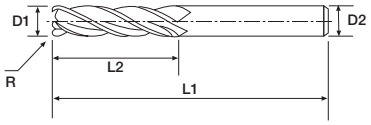


Fresas frontales de Metal duro integral. Ultra Micro Grano fino.
Solid Carbide end mills. Ultra fine Micro Grain.

TN UMG-Z4	Z4	λs35º	<60HRC	UMG-MDI *Solid carbide*	Co 12% Wc 87%	HRA 92,1	grain Ø<0,4 µm	3800 N/mm²

TÓRICAS
CORNER RADIUS

Lubeplus



Material	GR1	GR2	GR3	GR4	GR8	GR9	GR11
Subg.	1	1-2	1	1-2	1	1	2
condiciones corte *cutting conditions*	ver cuadro recomendaciones / *see table recommendations*						
	5	5	5	5	5	5	air

Ref.	D1 mm.	R esquina	L2 mm.	L1 mm.	D2		Cod.
RU3534203005R	3	0,5	8	50	3	•	0002599882
RU3504204005R	4	0,5	10	50	4	•	0002598177
RU3504204010R	4	1	10	50	4	•	0002588168
RU3514205010R	5	1	13	75	6	•	0002588219
RU3514206002R	6	0,2	16	75	6	•	0002598237
RU3514206003R	6	0,3	16	75	6	•	0002598397
RU3514206005R	6	0,5	16	75	6	•	0002570995
RU3514206010R	6	1	16	75	6	•	0002588379
RU3514206020R	6	2	16	75	6	•	0002598448
RU3514208005R	8	0,5	20	75	8	•	0002598508
RU3514208010R	8	1	20	75	8	•	0002535512
RU3514208020R	8	2	20	75	8	•	0002598668
RU3514210005R	10	0,5	25	75	10	•	0002598729
RU3514210010R	10	1	25	75	10	•	0002571074
RU3514210015R	10	1,5	25	75	10	•	0002598879
RU3514210020R	10	2	25	75	10	•	0002546312
RU3514210030R	10	3	25	75	10	•	0002598930
RU3514212005R	12	0,5	30	75	12	•	0002599028
RU3514212010R	12	1	30	75	12	•	0002536665
RU3514212015R	12	1,5	30	75	12	•	0002599179
RU3514212020R	12	2	30	75	12	•	0002535723
RU3514212030R	12	3	30	75	12	•	0002599239

Tabla de conversión de durezas / *Hardness conversion table*
Tratamientos térmicos / *Recommended cutting conditions*

Resistencia Tracción *Tensile Strength*	Vickers *Vickers*	Brinell *Brinell*	Dureza *Rockwell*	
N/mm²	HV	HB	HRB	HRC
200	63	60		
210	65	62		
220	69	66		
225	70	67		
230	72	68		
240	75	71		
250	79	75		
255	80	76		
260	82	78		
270	85	81	41	
280	88	84	45	
285	90	86	48	
290	91	87	49	
300	94	89	51	
305	95	90	52	
310	97	92	54	
320	100	95	56	
330	103	98	58	
335	105	100	59	
340	107	102	60	
350	110	105	62	
360	113	107	63,5	
370	115	109	64,5	
380	119	113	66	
385	120	114	67	
390	122	116	67,5	
400	125	119	69	
410	128	122	70	
415	130	124	71	
420	132	125	72	
430	135	128	73	
440	138	131	74	
450	140	133	75	
460	143	136	76,5	
465	145	138	77	
470	147	140	77,5	
480	150	143	78,5	
490	153	145	79,5	
495	155	147	80	
500	157	149	81	
510	160	152	81,5	
520	163	155	82,5	
530	165	157	83	
540	168	160	84,5	
545	170	162	85	
550	172	163	85,5	
560	175	166	86	
570	178	169	86,5	
575	180	171	87	
580	181	172		
590	184	175	88	
595	185	176		
600	187	178	89	
610	190	181	89,5	
620	193	184	90	
625	195	185		
630	197	187	91	
640	200	190	91,5	
650	203	193	92	
660	205	195	92,5	
670	208	198	93	
675	210	199	93,5	
680	212	201		
690	215	204	94	
700	219	208		
705	220	209	95	
710	222	211	95,5	
720	225	214	96	
730	228	216		
740	230	219	96,5	
750	233	221	97	
755	235	223		
760	237	225	97,5	
770	240	228	98	
780	243	231		21
785	245	233		
790	247	235	99	
800	250	238	99,5	22
810	253	240		
820	255	242		23
830	258	245		
835	260	247		24
840	262	249		

Resistencia Tracción *Tensile Strength*	Vickers *Vickers*	Brinell *Brinell*	Dureza *Rockwell*	
N/mm²	HV	HB	HRB	HRC
850	265	252		
860	268	255		25
865	270	257		
870	272	258		26
880	275	261		
890	278	264		
900	280	266		27
910	283	269		
915	285	271		
920	287	273		28
930	290	276		
940	293	278		29
950	295	280		
960	299	284		
965	300	285		
970	302	287		30
980	305	290		
980	308	293		
995	310	295		31
1000	311	296		
1010	314	299		
1020	317	301		32
1030	320	304		
1040	323	307		
1050	327	311		33
1060	330	314		
1070	333	316		
1080	336	319		34
1090	339	322		
1095	340	323		
1100	342	325		
1110	345	328		35
1120	349	332		
1125	350	333		
1130	352	334		
1140	355	337		36
1150	358	340		
1155	360	342		
1160	361	342		
1170	364	346		37
1180	367	349		
1190	370	352		
1200	373	354		38
1210	376	357		
1220	380	361		
1230	382	363		39
1240	385	366		
1250	388	369		
1255	390	371		
1260	392	372		40
1270	394	374		
1280	397	377		
1290	400	380		
1300	403	383		41
1310	407	387		
1320	410	390		
1330	413	393		42
1340	417	396		
1350	420	399		
1360	423	402		43
1370	426	405		
1380	429	408		
1385	430	409		
1390	431	410		
1400	434	413		44
1410	437	415		
1420	440	418		
1430	443	421		
1440	446	424		45
1450	449	427		
1455	450	428		
1460	452	429		
1470	455	432		
1480	458	435		46
1485	460	437		
1490	461	438		
1500	464	441		
1510	467	444		
1520	470	447		
1530	473	449		47
1540	476	452		
1550	479	455		
1555	480	(456)		

Resistencia Tracción *Tensile Strength*	Vickers *Vickers*	Brinell *Brinell*	Dureza *Rockwell*	
N/mm²	HV	HB	HRB	HRC
1560	481	(457)		
1570	484	(460)		48
1580	486	(462)		
1585	489	(465)		
1590	490	(466)		
1600	491	(467)		
1610	494	(470)		
1620	497	(472)		49
1630	500	(475)		
1640	503	(478)		
1650	506	(481)		
1660	509	(483)		
1665	510	(485)		
1670	511	(486)		
1680	514	(488)		50
1690	517	(491)		
1700	520	(494)		
1710	522	(496)		
1720	525	(499)		
1730	527	(501)		51
1740	530	(504)		
1750	533	(506)		
1760	536	(509)		
1770	539	(512)		
1775	540	(513)		
1780	541	(514)		
1790	544	(517)		52
1800	547	(520)		
1810	550	(523)		
1820	553	(525)		
1830	556	(528)		
1840	559	(531)		
1845	560	(532)		53
1850	561	(533)		
1860	564	(536)		
1870	567	(539)		
1880	570	(542)		
1890	572	(543)		
1900	575	(546)		
1910	578	(549)		54
1920	580	(551)		
1930	583	(554)		
1940	586	(557)		
1950	589	(560)		
1955	590	(561)		
1960	591	(562)		
1970	594	(564)		
1980	596	(567)		55
1990	599	(569)		
1995	600	(570)		
2000	602	(572)		
2010	605	(575)		
2020	607	(577)		
2030	610	(580)		
2040	613	(582)		
2050	615	(584)		56
2060	618	(587)		
2070	620	(589)		
2080	623	(592)		
2090	626	(595)		
2100	629	(598)		
2105	630	(599)		
2110	631	(600)		
2120	634	(602)		
2130	636	(604)		
2140	639	(607)		57
2145	640	(608)		
2150	641	(609)		
2160	644	(612)		
2170	647	(615)		
2180	650	(618)		
2190	653	(620)		
2200	655	(622)		58
	675			59
	698			60
	720			61
	745			62
	773			63
	800			64
	829			65
	864			66
	900			67
	940			68

* Ésta tabla de conversión de durezas está basada en la Norma DIN 50150 (diciembre de 1976).
* *This hardness conversion table is based on the standard DIN 50150 (December 1976).*

Equivalencias[1] aprox. para material tipo acero rápido
Equivalences[1] approx. for speed steel type material

Dureza /*Hardness* HRC	Dureza /*Hardness* HV_5
63	820
64	850
65	885
66	920
67	955

[1] Tabla no sujeta a Norma
[1] *Table not subject to any standard*

Estuches y accesorios
Cases and accessories

Estuches de machos de mano y cojinetes.
Hand tap and die cases.

Conjunto de juegos de machos de mano en estuche metálico
Hand tap sets in metal case

Contenido / *Contains*		Cod.
7 juegos de machos de mano / *7 hand tap sets* DIN 352, HSS, Tol. ISO2 (6H), M3 / M4 / M5 / M6 / M8 / M10 / M12	•	0000475413

Conjunto de juegos de machos de mano en estuche metálico VA NOGRIP I®
VA NOGRIP I® hand tap sets in metal case

Contenido / *Contains*		Cod.
7 juegos de machos de mano / *7 hand tap sets* DIN 352, HSS-E, Tol. ISO2X (6HX), M3 / M4 / M5 / M6 / M8 / M10 / M12	•	0000475624

Conjunto de juegos de machos de mano, cojinetes y portaherramientas en estuche metálico
Combined set of hand tap sets and dies in metal case

Contenido / *Contains*		Cod.
HSS **7 juegos de machos de mano / *7 hand tap sets*** DIN 352, Tol. ISO 2 (6H) M3 / M4 / M5 / M6 / M8 / M10 / M12 **7 cojinetes / *7 dies*** DIN Sim. EN 22568, Ø 25 X 9, Tol. ISO 2 6g M3 / M4 / M5 / M6 / M8 / M10 / M12 **1 portacojientes / *1 dieholders*** DIN 225 Ø 25 x 9 **1 giramachos / *1 tapwrenches*** DIN 1814 Nº 1 1/2	•	0000475574

Contenido / *Contains*		Cod.
HSS **11 juegos de machos de mano / *11 hand tap sets*** DIN 352, Tol. ISO 2 (6H) M3 / M4 / M5 / M6 / M8 / M10 / M12 / M14 / M16 / M18 / M20 **11 cojinetes / *11 dies*** DIN Sim. EN 22568, Ø 25 X 9, Tol. ISO 2 6g M3 / M4 / M5 / M6 / M8 / M10 / M12 / M14 / M16 / M18 / M20 **6 portacojientes / *6 dieholders*** DIN 225 Ø: 20 x 5 / 20 x 7 / 25 x 9 / 30 x 11 / 38 x 14 / 45 x 18 **2 giramachos / *2 tapwrenches*** DIN 1814 Nº 1 / Nº 3	•	0001107024

Estuches de machos de máquina.
Machine taps cases.

Conjunto de machos de máquina C35A, para agujeros ciegos
Set of C35A machine taps, for blind holes

Contenido / *Contains*	Estuche metálico / *Metal case*
7 machos de máquina / *7 machine taps*	
DIN 371 / 376, Tol. ISO2 (6H)	
M3 / M4 / M5 / M6 / M8 / M10 / M12	

Ref.	Acabado *Finish*	Material		Cod.
C35A/2 - C35A/1		HSS-E	•	0001107455
C35A/2 - C35A/1	*Nogrip*	HSS-E	•	0001908113
C35A/2 - C35A/1	*TiN*	HSS-E	•	0001908274

Contenido / *Contains*	Estuche plástico / *Plastic case*
5 machos de máquina / *5 machine taps*	
DIN 371, Tol. ISO2 (6H)	
M4 / M5 / M6 / M8 / M10	

Ref.	Acabado *Finish*	Material		Cod.
C35A/2 - C35A/1		HSS-E	•	0001841857
C35A/2 - C35A/1	*Nogrip*	HSS-E	•	0001907974
C35A/2 - C35A/1	*TiN*	HSS-E	•	0001908053
C35A/2 - C35A/1 TT		HSS	•	0001842096

Conjunto de machos de máquina PS, para agujeros pasantes
Set of PS machine taps, for through holes

Contenido / *Contains*	Estuche metálico / *Metal case*
7 machos de máquina / *7 machine taps*	
DIN 371 / 376, Tol. ISO2 (6H)	
M3 / M4 / M5 / M6 / M8 / M10 / M12	

Ref.	Acabado *Finish*	Material		Cod.
PS/2 - PS/1		HSS-E	•	0001107395
PS/2 - PS/1	*Nogrip*	HSS-E	•	0001907753
PS/2 - PS/1	*TiN*	HSS-E	•	0001907814

Contenido / *Contains*	Estuche plástico / *Plastic case*
5 machos de máquina / *5 machine taps*	
DIN 371, Tol. ISO2 (6H)	
M4 / M5 / M6 / M8 / M10	

Ref.	Acabado *Finish*	Material		Cod.
PS/2 - PS/1		HSS-E	•	0001841797
PS/2 - PS/1	*Nogrip*	HSS-E	•	0001901800
PS/2 - PS/1	*TiN*	HSS-E	•	0001907603
PS/2 - PS/1 TT		HSS	•	0001841907

Estuches de cojinetes de roscar.
Die cases.

Conjunto de cojinetes de mano en estuche de plástico
Hand die set in plastic case

Contenido / *Contains*		Cod.
7 cojinetes de mano / *7 hand dies* DIN EN 22568, HSS, Tol. 6g M3 / M4 / M5 / M6 / M8 / M10 / M12	•	0001800671

Estuches de escariadores.
Reamer cases.

Estuche 5 escariadores
5 reamers case

Conjunto de escariadores de mano en estuche plástico
Hand reamers set in plastic case

Contenido / *Contains*		Cod.
5 escariadores / *5 reamers* DIN 206 B, HSS, Tol. H7 Ø: 4 / 5 / 6 / 8 / 10 mm	•	0001839636

Contenido / *Contains*		Cod.
7 escariadores / *7 reamers* DIN 206 B, HSS, Tol. H7 Ø: 3 / 4 / 5 / 6 / 8 / 10 / 12 mm	•	0001839576

Conjunto de escariadores de máquina en estuche plástico
Machine chucking reamers set in plastic case

Contenido / *Contains*		Cod.
5 escariadores / *5 reamers* DIN 212 B-D, HSS-E, Tol. H7 Ø: 4 / 5 / 6 / 8 / 10 mm	•	0001839205

Contenido / *Contains*		Cod.
7 escariadores / *7 reamers* DIN 212 B-D, HSS-E, Tol. H7 Ø: 3 / 4 / 5 / 6 / 8 / 10 / 12 mm	•	0001839144

Estuche 7 escariadores
7 reamers case

Conjunto de escariadores de máquina centesimales en incrementos de 0,01 mm. en estuche plástico. ***Machine chucking reamers (increm. 0,01 mm) set in plastic case***

Contenido / *Contains*		Cod.
5 escariadores / *5 reamers* DIN 212 B-D, HSS-E, Tol. Ø 6 +0/+0,004 Ø>6+0/+0,005 Ø: 4,02 / 5,02 / 6,02 / 8,02 / 10,02 mm	•	0001839415

Contenido / *Contains*		Cod.
7 escariadores / *7 reamers* DIN 212 B-D, HSS-E, Tol. Ø 6 +0/+0,004 Ø>6+0/+0,005 Ø: 3,02 / 4,02 / 5,02 / 6,02 / 8,02 / 10,02 / 12,02 mm	•	0001839365

Estuches de escariadores.
Reamer cases.

PRECIBOX.
Conjunto escariadores de máquina centesimales en incrementos de 0,01 mm. en caja de madera
Machine chucking reamers (increm. 0,01 mm) set in wooden box.

Contenido / *Contains*		Cod.
96 escariadores / *96 reamers*	•	0000469565
DIN 212 B-D, HSS-E, Tol. Ø 6 +0/+0,004 Ø>6+0/+0,005		

Ø	Ø
0,97 - 1,02	4,97 - 5,02
1,47 - 1,52	5,47 - 5,52
1,97 - 2,02	5,97 - 6,02
2,47 - 2,52	6,47 - 6,52
2,97 - 3,02	6,97 - 7,02
3,47 - 3,52	7,97 - 8,02
3,97 - 4,02	8,97 - 9,02
4,47 - 4,52	9,97 - 10,02

Estuches de avellanadores cónicos y planos.
Countersink and counterbore cases.

Conjunto de avellanadores cónicos 90º tres cortes en estuche plástico
Three flute countersinks 90º set in plastic case

Contenido / *Contains*	Acabado *Finish*		Cod.
7 avellanadores / *7 countersinks*		•	0001327785
DIN 335C, HSS-Co5,	*TiN*	•	0001725753
Ø: 6,3 / 8,3 / 10,4 / 12,4 / 16,5 / 20,5 / 25			

Conjunto de avellanadores cónicos 90º tres cortes en estuche plástico
Three flute countersinks 90º set in plastic case

Contenido / *Contains*		Cod.
4 avellanadores / *4 countersinks*	•	0001499442
DIN 335C, HSS-Co5		
Ø: 8,3 / 12,4 / 16,5 / 25		

Estuches de avellanadores cónicos y planos.
Countersink and counterbore cases.

Conjunto de avellanadores-rebabadores 90º en estuche plástico
De-Burring tools 90º set in plastic case

Contenido / *Contains*		Cod.
4 rebabadores / *4 de-burring tools* JMC Norm, HSS-Co5 Ø: 10 / 14 / 21 / 28	•	0002241132

Conjunto de avellanadores planos 180º con guia en estuche plástico
Solid cap screw counterbores 180º set in plastic case

Contenido / *Contains*	Ajuste *Adjustment*		Cod.
6 avellanadores / *6 countersinks* DIN 373, HSS-Co5, M3 / M4 / M5 / M6 / M8 / M10	Fino / Fine	•	0001520590
	Medio / Medium	•	0001499502

Conjunto de brocas-avellanador cónico 90º tres cortes en estuche plástico
Three flute drill-countersinks 90º set in plastic case

Contenido / *Contains*	Acabado *Finish*		Cod.
3 broca-avellanador ***3 drill-countersinks*** JMC Norm, HSS, **M3 / M4 / M5**		•	0002246364
	TiN	•	0002246415

Contenido / *Contains*	Acabado *Finish*		Cod.
3 broca-avellanador ***3 drill-countersinks*** JMC Norm, HSS, **M6 / M8 / M10**		•	0002246575
	TiN	•	0002246635

Conjunto de brocas-avellanador plano 180º en estuche plástico
Drill-countersinks 180º set in plastic case

Contenido / *Contains*	Acabado *Finish*		Cod.
3 broca-avellanador ***3 drill-countersinks*** JMC Norm, HSS, **M3 / M4 / M5**		•	0002246796
	TiN	•	0002246846

Contenido / *Contains*	Acabado *Finish*		Cod.
3 broca-avellanador ***3 drill-countersinks*** JMC Norm, HSS, **M6 / M8 / M10**		•	0002246906
	TiN	•	0002247085

Estuches de fresas MD y broca destructora de machos
Solid Carbide end mills and ex hard drill for removing taps cases.

Conjunto de fresas de Metal Duro en estuche plástico
Solid Carbide in plastic case

Contenido / *Contains*	Acabado *Finish*	Cod.
7 fresas Metal Duro micrograno ***7 solid carbide*** 2 cortes, 3 cortes, 4 cortes Ø: 3 / 4 / 5 / 6 / 8 / 10 / 12 DIN 335C - HSS	*Altplus*	● 0002669632 ● 0002669090 ● 0002669792

Conjunto de brocad destructoras de machos rotos
Ex hard drill for removing taps in plastic case

Contenido / *Contains*	Cod.
4 brocas destructoras de machos ***4 ex hard drill for removing taps*** M4 / M6 / M8 / M10	● 0002806457
6 brocas destructoras de machos ***6 ex hard drill for removing taps*** M6 / M8 / M10 / M12 / M14 / M16	● 0002724744

Porta-herramientas para machos y cojinetes.
Tap wrenches and die holders.

Portacojinetes

Die holders

DIN 225
DIN EN22568

Ref. JMC	AC	ZM	Ø D2 x H mm	L1 mm	Gama de medidas *Sizes range*		Cod. AC	Cod. ZM
Nº0	•		16x5	160	M 1 - M2,6	1/16 - 3/32	0000521178	
Nº1	•	•	20x5	200	M 3 - M4	1/8 - 5/32	0004274229	0000529186
Nº2	•	•	20x7	200	M 4,5 - M6	3/16 - 1/4	0004274380	0000529246
Nº3	•	•	25x9	224	M 7 - M 9	5/16	0004274440	0000529307
Nº4	•	•	30x11	280	M 10 - M 11	3/8 - 7/16	0004274500	0000529467
Nº5	•	•	38x14	315	M 12 - M 14	1/2 - 9/16	0004274651	0000529517
Nº6	•	•	38x10	315	MF 12 - MF 14	G 1/8 - G 1/4	0000529678	0000529678
Nº7	•	•	45x18	450	M 16 - M 20	5/8 - 13/16	0000529738	0000529738
Nº8	•	•	45x14	450	MF 16 - MF 20	G 3/8 - G 1/2	0000529899	0000529899
Nº9	•		55x22	560	M 22 - M 24	7/8 - 1"	0000529949	
Nº10	•		55x16	560	MF 22 - MF 26	G 5/8	0000530033	
Nº11	•		65x25	630	M 27 - M 36	1"1/8 - 1"3/8	0000530184	
Nº12	•		65x18	630	MF 27- MF 36	G 3/4 - G 1"	0000530244	

Giramachos ajustable

Adjustable tap and reamer wrenches

DIN 1814

Ref. JMC	AC	ZM	a	L1 mm	Gama de medidas/Sizes range		AC Cod.	ZM Cod.
Nº0	•	•	2,1-4,9	130	M 1 - M 8	1/16 - 1/4	0003759572	0000530304
Nº1	•	•	2,1-5,5	176	M 3 - M 10	1/16 - 3/8	0003759632	0000530465
Nº1 1/2	•	•	2,4-7	176	M 3 - M 12	1/16 - 1/2 • G 1/8	0003759783	0000530515
Nº2	•	•	3,4-8	280	M 4 - M 12	5/32 - 1/2 • G 1/8	0003759843	0000530676
Nº3	•	•	4,9-12	380	M 5 - M 20	7/32 - 3/4 • G 1/8 - G 1/2	0003760088	0000530736
Nº4	•	•	5-16	505	M 10 - M 27	3/8 1" • G 1/4 - G 3/4	0003759903	0000530896
Nº5	•		9-20	700	M 14 - M 33	9/16 - 1"1/4 • G 1/4 - G 1"	0000530947	
Nº6	•		11-24	1000	M 18 - M 42	3/4 -1"5/8 • G 1/2 - G 1"1/4	0000531036	
Nº7	•		14,5-32	1250	M 22 - M 52	7/8 - 2" • G 5/8 - G 1"3/4	0000531186	

Giramachos con crique

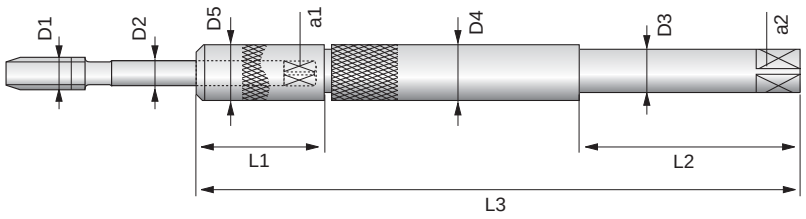
Ratchet tap holders

Ref. JMC		a	L1 mm	Gama de medidas Sizes range		Cod.
TC1	•	2,4 - 5,5	85	M 3 - M 10	1/8 - 3/8	0001070702
TC2	•	4,5 - 8	100	M 5 - M 12	7/32 - 1/2	0001070853
TL1	•	2,4 - 5,5	250	M 3 - M 10	1/8 - 3/8	0001070913
TL2	•	4,5 - 8	300	M 5 - M 12	7/32 - 1/2	0001071002

Alargos para machos.
Shank extensions for taps.

Alargo corto

Short shank extension



D1 DIN 371	D1 DIN 376		D2 mm	a1 mm	L1 mm	L3 mm	D3 mm	D4-D5 mm	a2 mm	Cod.
M2 - M2,6	M4	•	2,8	2,1	22	130	6	6,1	4,9	0002263444
M3	M4,5 - M5	•	3,5	2,7	23	130	6	7,5	4,9	0002263505
M4	M6	•	4,5	3,4	23	130	6	8,4	4,9	0002263655
M4,5 - M6	M8	•	6	4,9	26	130	7	12,1	5,5	0002263715
M7	M9 - M10	•	7	5,5	26	130	7	12,1	5,5	0002263876
M8	M11	•	8	6,2	30	130	8	13	6,2	0002263936
M9	M12	•	9	7	31	130	9	15	7	0002264015
M10		•	10	8	33	130	10	15	8	0002264175
	M14	•	11	9	36	130	11	18	9	0002264236
	M16	•	12	9	36	130	12	18	9	0002264386

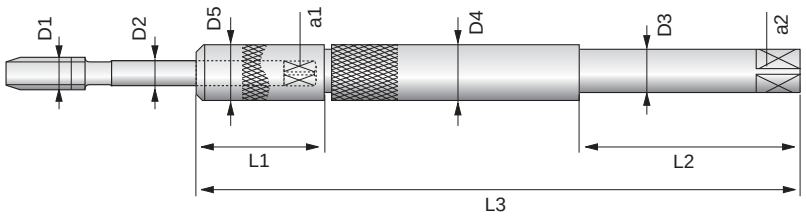
- Para utilización en máquinas CNC o convencionales
- Util también para escariadores u otras herramientas de corte
- Ejecuciones especiales, bajo demanda

- *For use on CNC and conventional machines*
- *Also usefull for reamers and other kind of cutting tools*
- *Special executions upon request*

Alargos para machos.
Shank extensions for taps.

Alargo largo

Long shank extension



D1 DIN 371	D1 DIN 376		D2 mm	a1 mm	L1 mm	L3 mm	D3 mm	D4-D5 mm	a2 mm	Cod.
M2 - M2,6	M4	•	2,8	2,1	22	230	6	6,1	4,9	0002264446
M3	M4,5 - M5	•	3,5	2,7	23	230	6	7,5	4,9	0002264507
M4	M6	•	4,5	3,4	23	230	6	8,4	4,9	0002264667
M4,5 - M6	M8	•	6	4,9	26	230	7	12,1	5,5	0002264718
M7	M9 - M10	•	7	5,5	26	230	7	12,1	5,5	0002264878
M8	M11	•	8	6,2	30	230	8	13	6,2	0002264938
M9	M12	•	9	7	31	230	9	15	7	0002265017
M10		•	10	8	33	230	10	15	8	0002265178
	M14	•	11	9	36	230	11	18	9	0002265238
	M16	•	12	9	36	230	12	18	9	0002265388

- Para utilización en máquinas CNC o convencionales
- Util también para escariadores u otras herramientas de corte
- Ejecuciones especiales, bajo demanda

- *For use on CNC and conventional machines*
- *Also usefull for reamers and other kind of cutting tools*
- *Special executions upon request*

Aceites de corte.
Cutting oils.

INOX-CUT PLUS

1

Peso *Weight*		Cod.
0,25 Kg	•	00002575143
0,50 Kg	•	00002575294
1 Kg	•	00002575354
5 kg	•	00002575414

Para el mecanizado de aceros inoxidables y materiales férricos de difícil mecanización.

For machining stainless steels and high strength materials.

INOX-CUT

2

Peso *Weight*		Cod.
0,25 Kg	•	0000408563
0,50 Kg	•	0000408623
1 Kg	•	0000408784
5 kg	•	0000408844

Para el mecanizado de aceros inoxidables y materiales férricos de difícil mecanización.

For machining stainless steels and high strength materials.

INOX-CUT GREEN

SIN CLORO *CHLORINE FREE*

3

Peso *Weight*		Cod.
0,25 Kg	•	0000408904
0,50 Kg	•	0000409083
1 Kg	•	0000409144
5 kg	•	0000409294

Para el mecanizado de aceros inoxidables y materiales férricos de difícil mecanización.

For machining stainless steels and high strength materials.

TI-CUT

4

Peso *Weight*		Cod.
0,25 Kg	•	0000409354
0,50 Kg	•	0000409415
1 Kg	•	0000409575
5 kg	•	0000409626

Para el mecanizado de titanios, aleaciones de níquel y aceros inoxidables

For machining titanium, nickel alloys and stainless steels.

TI-CUT GREEN

SIN CLORO *CHLORINE FREE*

5

Peso *Weight*		Cod.
0,25 Kg	•	0000409786
0,50 Kg	•	0000409846
1 Kg	•	0000409907
5 kg	•	0000410081

Para el mecanizado de titanios, aleaciones de níquel y aceros inoxidables

For machining titanium, nickel alloys and stainless steels.

AL-CUT GREEN

SIN CLORO *CHLORINE FREE*

6

Peso *Weight*		Cod.
0,25 Kg	•	0000410141
0,50 Kg	•	0000410292
1 Kg	•	0000410352
5 kg	•	0000410413

Para el mecanizado de aleaciones ligeras y materiales no ferreos

For machining light alloys and non ferreous materials

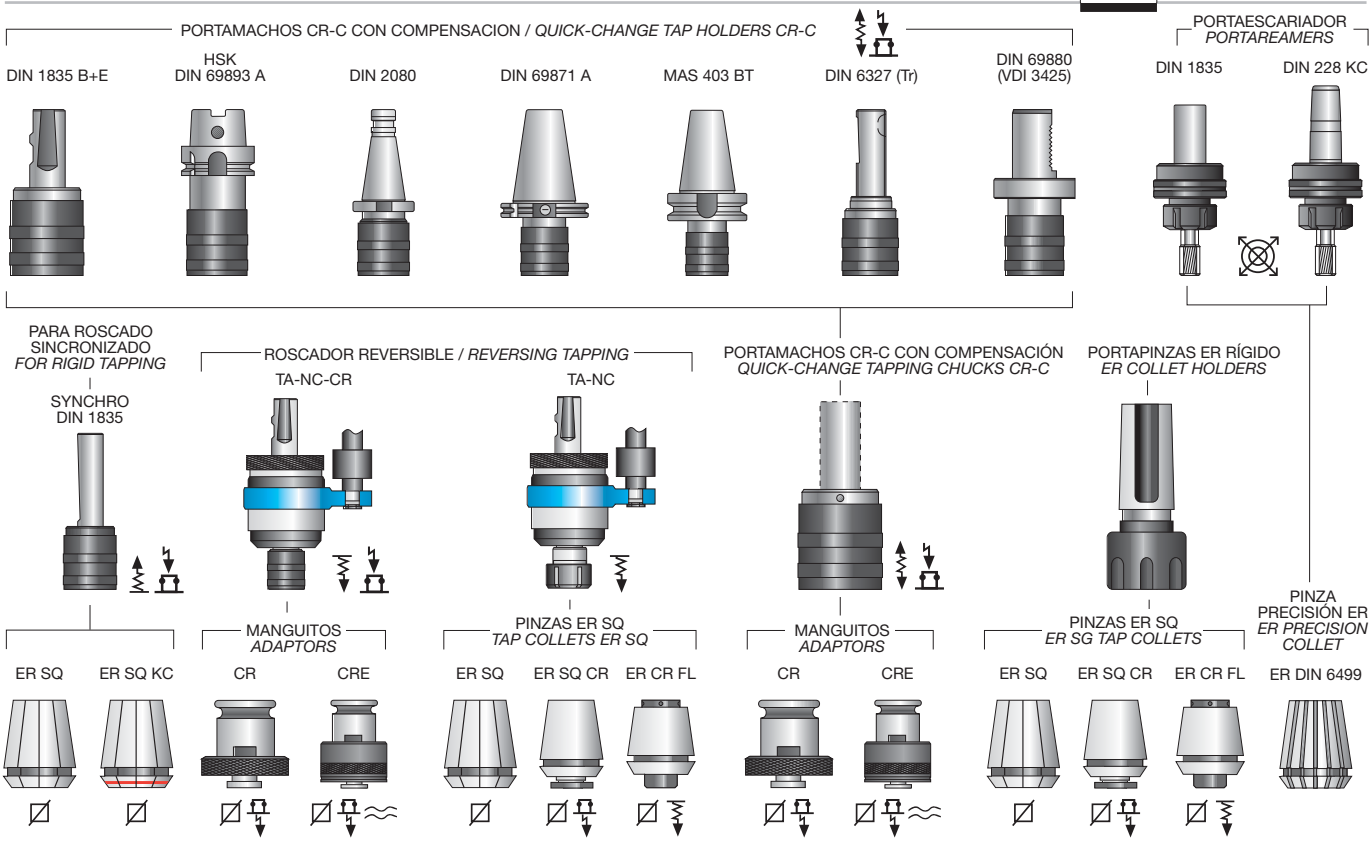
- Refrigeran y lubrican mejorando los acabados en las piezas mecanizadas
- Producen tolerancias mas ajustadas
- Prolongan la vida de la herramienta

- *Refrigerate and lubrificate improving the workpiece finish*
- *Produce more accurate tolerances*
- *Lengthens the life of the tool and the cutting performance*

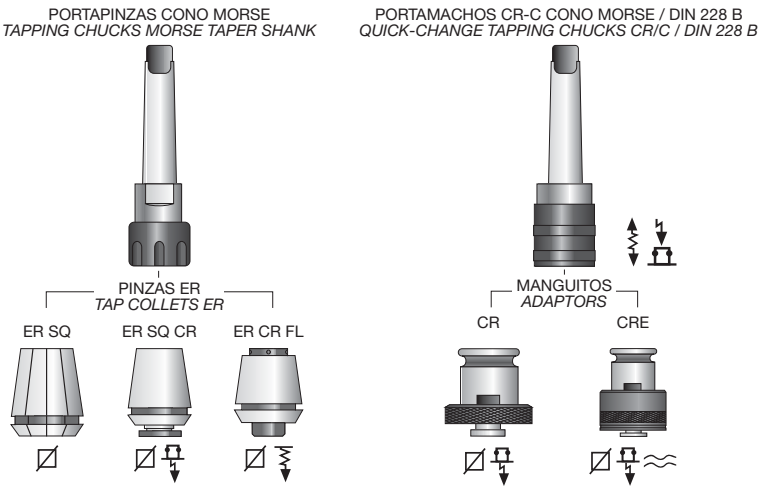
Sistemas de roscado y escariado
Tapping and reaming systems

Portaherramientas para roscado y escariado
Tool holders for tapping and reaming

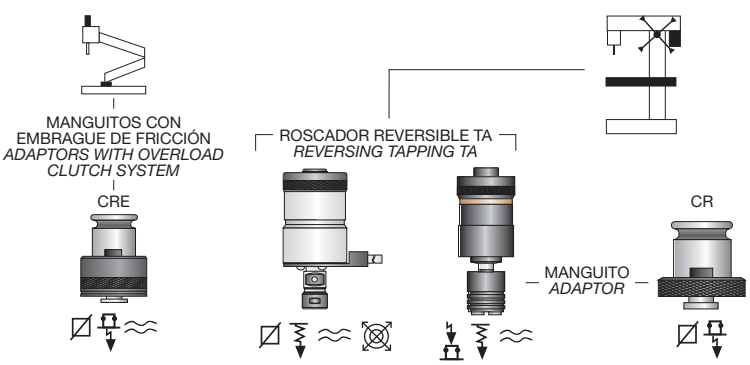
Máquinas CNC / *Machines CNC*



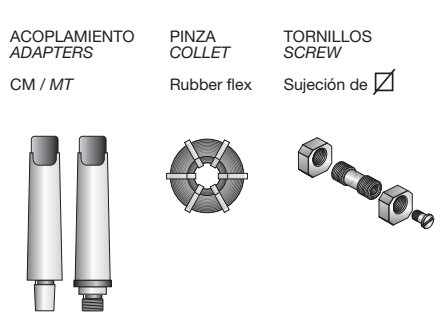
Roscadoras de paso conducido / *Lead screw tapping machines*



Máquinas manuales / Manual tapping machines

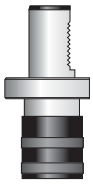
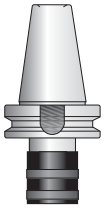
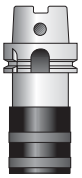


Recambios / *Spare parts*



Con arrastre por cuadrillo *With Square driving* · Cambio rápido *Quick-change* · Cambio rápido de manguito *Quick-change* · Con compensación a la tracción *With lenght compensation on tension* · Con compensación a la tracción y a la compresión / *With lenght compensation on compression and tension* · Con embrague *With clutch*

Porta machos / *Tapping chucks*

REF.		CR-C	CR-C	CR-C	CR-C	CR-C	CR-C	CR-C	CR-C	CR-C SYNCHRO
Mango / *Shank*	DIN / ISO	228 B	69880	6327 (Tr)	MAS 403 BT	69871 A	2080	HSK 69893 A	1835 B+E	1835
	Tipo / *Type*	Cónico CM *Taper MT*	Cilíndrico *Cylindrical*	Cilíndrico *Cylindrical*	Cónico *Taper*	Cónico *Taper*	Cónico *Taper*	Cono interior *Hollow taper*	Cilíndrico *Cylindrical*	Cilíndrico *Cylindrical*
	Medida / *Measure*	CM 2-3-4-5	Ø 30-40-50-60	Ø Tr 16x1,5...36x2	Ø 30-40-50	Ø 30-40-50	Ø 30-40-50	Ø HSK 50-63-100	Ø 20-25-32	Ø 25
Gama / *Range*		19-31-48	19-31-48	19-31-48	19-31-48	19-31-48	19-31-48	19-31-48	19-31-48	19-31
Capacidad / *Capacity*		M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	M3...20
										
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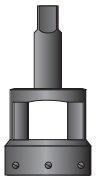
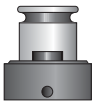
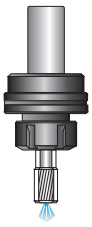
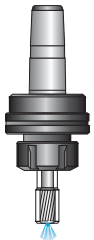
		Manguitos			Porta-cojinetes		Porta-escariadores			
REF.		CR	CRE	Reductor CR	Soporte	Adaptador CR	Flotante KC	Flotante KC		
Mango / *Shank*	DIN / ISO	371-374 376-JIS	371-374 376-JIS		DIN	223	1835 B+E	228 A		
	Tipo / *Type*	cambio rápido *Quick-change*	cambio rápido *Quick-change*	cambio rápido *Quick-change*	Cilíndrico *Cylindrical*	cambio rápido *Quick-change*	Cilíndrico *Cylindrical*	Cónico *Taper*		
	Medida / *Measure*	Ø 19-31-48	Ø 19-31-48	Ø 19-31-48	10 ~ 22	Ø 19-31-48	Ø 20-25-32	CM 2-3-4		
Gama / *Range*		Ø3 x ⍁2,5 Ø28 x ⍁22	Ø3 x ⍁2,5 Ø28 x ⍁22	Ø 13-19-31	Ø 16 ~ 65	Ø 20 ~ 65	ER 11-16-20-25-32-40	ER 11-16-20-25-32-40		
Capacidad / *Capacity*		M3...36 nº0...1"3/8	M3...36 nº0...1"3/8	-	M1...36 1/16...1"3/8	M3...36	Ø 0,5 ~ 26	Ø 0,5 ~ 26		
										
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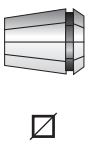
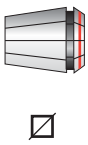
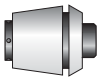
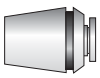
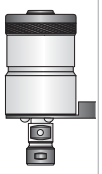
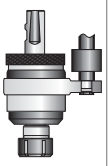
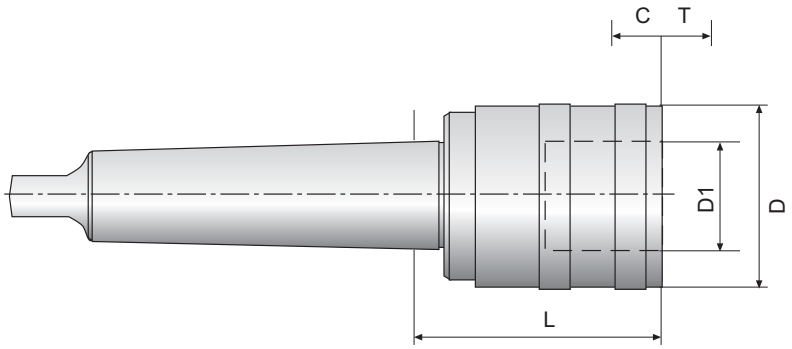
	Pinzas					Roscadores				
REF.	ER	ER SQ	ER SQ KC	ER SQ FL	ER SQ CR	TA	recambios			TA NC
DIN / ISO	6499	SIM. DIN 6499-A	SIM. DIN 6499	SIM. DIN 6499	SIM. DIN 6499		Adapters	Pinza *Collet*	Tornillos *Screw*	1835 B+E
Tipo / *Type*	ER	ER	ER	ER	ER	CM / TM	CM/TM	Rubber Flex	21-22-44	Cilíndrico *Cylindrical*
Medida / *Measure*	Ø 11-16-20-25-32-40	Ø 11-16-20-25-32-40	Ø 11-16-20-25-32-40	Ø 11-16-20-25-32-40	Ø 11-16-20-25-32-40	1-2-3-4	1-2-3-4	J R		Ø 25 - 32
Gama / *Range*	-	-	-	-	-	7-12-20-30	JT6...B24	M2...M20	M2,1... ...M20	ER 20-25-32
Capacidad / *Capacity*	Ø 0,5 ~ 26	M1...M26	M3...M20	M1...M16	M3...M20	M2...M30	M2...M30	Ø 2,5-23	⍁ 2-12	M3...M30
										
Página / *Page*	602	603, 604	603, 604	605, 606	605, 606	607	607	607	607	608

Portamachos de cambio rápido CR-C.
Quick-change tapping chucks CR-C.

DIN 228 B

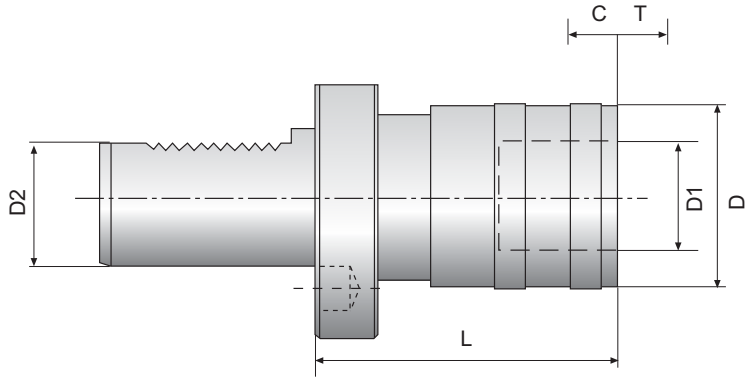
Con compensación longitudinal en compresión y tracción. Mango Cono Morse.
With length compensation on compression and tension. Morse Taper shank.



Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size* CM / *MT*	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14	2	36	46	7,5	7,5	0,30	0002269026
	•	Nº O - 1/4"	3		46			0,45	0002269187
31	•	M4,5 - M24	3	53	70	12,5	12,5	0,82	0002269237
	•	1/4" - 7/8"	4		71			1,12	0002269397
48	•	M14 - M36	4	78	104	20	20	2,20	0002269458
	•	5/8" - 1"3/8	5		104			3,10	0002269518

DIN 69880
(VDI 3425)

Con compensación longitudinal en compresión y tracción. Mango cilíndrico.
With length compensation on compression and tension. Cylindrical shank.



Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size* Ø D2 mm	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14	30	36	55	7,5	7,5	0,53	0002269729
	•	Nº O - 1/4"	40		55			0,92	0002269940
	•		50		55			1,51	0002270235
31	•	M4,5 - M24	30	53	76	12,5	12,5	0,95	0002269889
	•	1/4" - 7/8"	40		76			1,30	0002270024
	•		50		79			2,00	0002270395
48	•	M14 - M36	40	78	122	20	20	2,50	0002270184
	•	5/8" - 1"3/8	50		108			3,10	0002270456
	•		60		108			4,50	0002270516

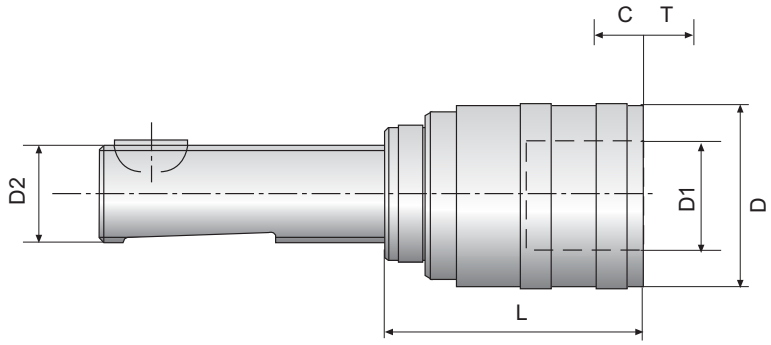
• Anillo de soporte para refrigeración bajo demanda

• *Clamping ring for coolant entry upon request*

Portamachos de cambio rápido CR-C.
Quick-change tapping chucks CR-C.

DIN 6327 (Tr)

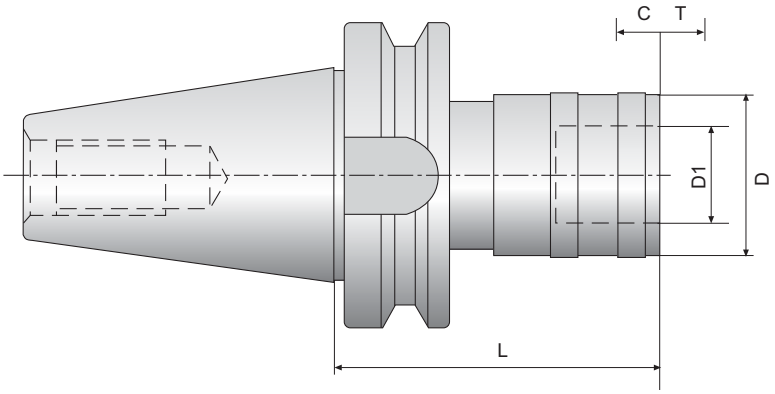
Con compensación longitudinal en compresión y tracción. Mango cilíndrico.
With length compensation on compression and tension. Cylindrical shank.



Ø D1 mm		Para rosca *For thread*	Medida Mango *Shank size* D2	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14 Nº O - 1/4"	Tr 16x1,5	36	51	7,5	7,5	0,30	0002270666
	•		Tr 20x2		51			0,39	0002270727
	•		Tr 28x2		51			0,65	0002270947
	•		Tr 36x2		53			1,22	0002271247
31	•	M4,5 - M24 1/4" - 7/8"	Tr 20x2	53	75	12,5	12,5	0,76	0002270887
	•		Tr 28x2		75			1,00	0002271026
	•		Tr 36x2		77			1,49	0002271397
48	•	M14 - M36 5/8" - 1"3/8	Tr 28x2	78	108	20	20	2,40	0002271187
	•		Tr 36x2		110			3,80	0002271458

MAS 403 BT

Con compensación longitudinal en compresión y tracción. Mango cónico.
With length compensation on compression and tension. Taper shank.

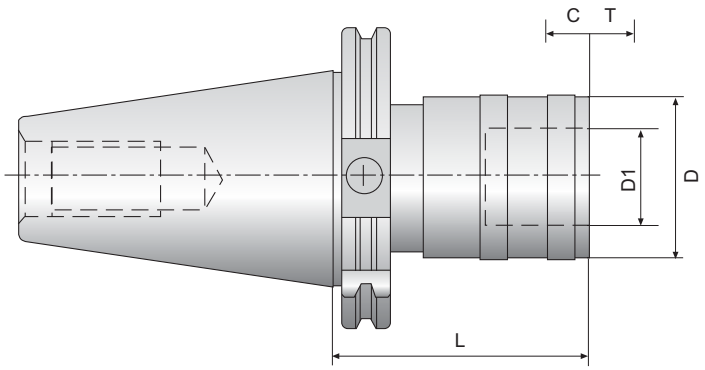


Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size*	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14 Nº O - 1/4"	ISO 30	36	61	7,5	7,5	0,80	0002271518
	•		ISO 40		66,5			1,10	0002271679
31	•	M4,5 - M24 1/4" - 7/8"	ISO 40	53	93,5	12,5	12,5	1,60	0002271729
	•		ISO 50		101,5			3,40	0002277190
48	•	M14 - M36 5/8" - 1"3/8	ISO 40	78	162,5	20	20	3,80	0002271889
	•		ISO 50		162,5			5,70	0002272029

Portamachos de cambio rápido CR-C.
Quick-change tapping chucks CR-C.

DIN 69871 A

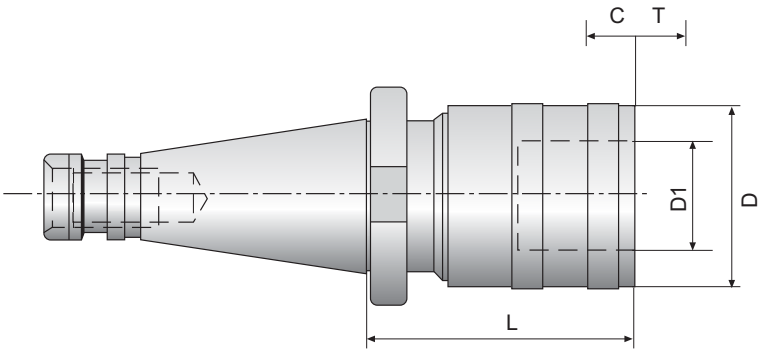
Con compensación longitudinal en compresión y tracción. Mango cónico.
With length compensation on compression and tension. Taper shank.



Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size*	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14	ISO 30	36	58	7,5	7,5	0,90	0002272189
	•	Nº O - 1/4"	ISO 40		59			1,80	0002272249
	•		ISO 50		59			1,90	0002272511
31	•	M4,5 - M24	ISO 40	53	97	12,5	12,5	2,20	0002272300
	•	1/4" - 7/8"	ISO 50		83			3,30	0002272671
48	•	M14 - M36	ISO 40	78	149	20	20	5,30	0002272450
	•	5/8" - 1"3/8	ISO 50		138			6,50	0002272731

DIN 2080

Con compensación longitudinal en compresión y tracción. Mango cónico.
With length compensation on compression and tension. Taper shank.

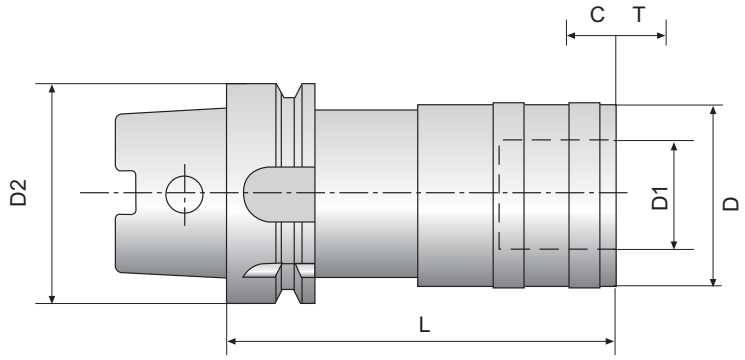


Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size*	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14	ISO 30	36	58	7,5	7,5	0,52	0002272882
	•	Nº O - 1/4"	ISO 40		50,5			0.90	0002272942
	•		ISO 50		59			1,17	0002273242
31	•	M4,5 - M24	ISO 40	53	77	12,5	12,5	3,20	0002273021
	•	1/4" - 7/8"	ISO 50		79			5,00	0002273302
48	•	M14 - M36	ISO 40	78	142	20	20	3,00	0002278524
	•	5/8" - 1"3/8	ISO 50		129			4,80	0002273452

Portamachos de cambio rápido CR-C.
Quick-change tapping chucks CR-C.

HSK DIN 69893 A

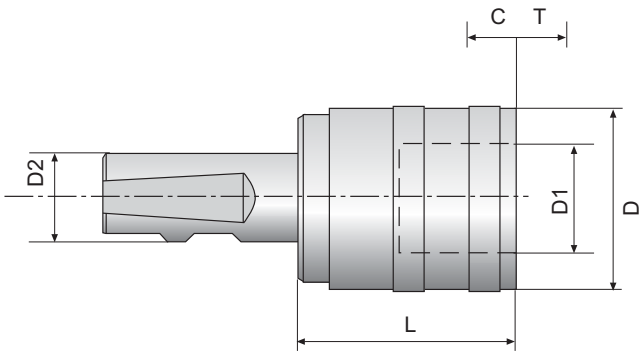
Con compensación longitudinal en compresión y tracción. Mango con cono interior.
With length compensation on compression and tension. Hollow taper shank.



Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size* Ø D2	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14	HSK 50	36	80	7,5	7,5	0.90	0002273884
	•	Nº O - 1/4"	HSK 63		80			1,20	0002274033
	•		HSK 100		82			2,30	0002277030
31	•	M4,5 - M24	HSK 50	53	130	12,5	12,5	1,70	0002273944
	•	1/4" - 7/8"	HSK 63		130			2,10	0002274184
	•		HSK 100		112			4,00	0002274675
48	•	M14 - M36	HSK 63	78	165	20	20	4,80	0002274244
	•	5/8" - 1"3/8	HSK 100		162			6,80	0002274736

DIN 1835 B+E

Con compensación longitudinal en compresión y tracción. Mango cilíndrico.
With length compensation on compression and tension. Cylindrical shank.

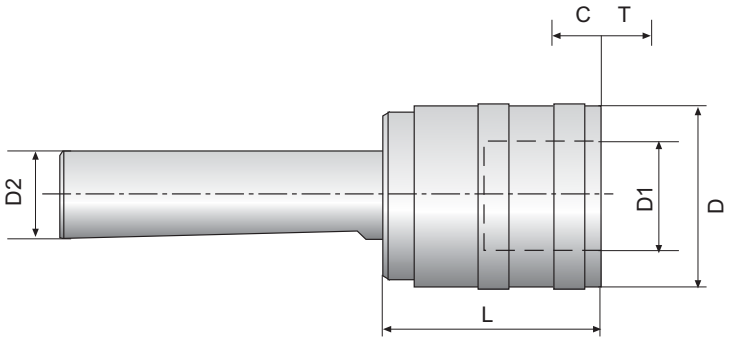


Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size* Ø D2 mm	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19	•	M3 - M14	20	36	39	7,5	7,5	0,40	0002268947
	•	Nº O - 1/4"	25		39			0,50	0002268887
31	•	M4,5 - M24	25	53	63	12,5	12,5	1,00	0002268727
	•	1/4" - 7/8"	32		63			1,20	0002268516
48	•	M14 - M36	25	78	170	20	20	2,20	0002268666
	•	5/8" - 1"3/8	32		124			2,50	0001987137

Portamachos de cambio rápido CR-C Synchro.
Quick-change tapping synchro chucks CR-C.

DIN 1835 SYN

Con compensación longitudinal en compresión y/o tracción. Mango cilíndrico.
With length compensation on compression and tension. Cylindrical shank.



Ø D1 mm		Para rosca *For thread*	Medida mango *Shank size* Ø D2 mm	Ø D mm	L mm	C mm	T mm	Peso *Weight* Kg.	Cod.
19		M3 - M12	25	35	50	0,2	0,2	0,50	0003833768
			25	36	51	0	3	0,50	0003833821
31		M8 - M20	25	53	89	0	5	0,85	0003833979

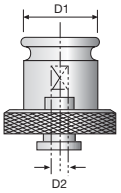
Manguitos porta-machos de cambio rápido.
Quick-change adaptors for taps.

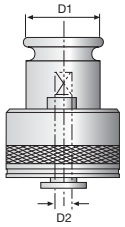
CR

Sin embrague de fricción
Without overload clutch system

CRE

Con embrague de fricción
With overload clutch system

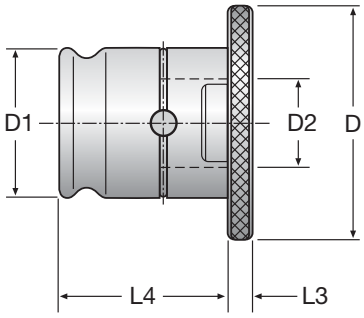




Ø D1 mm	Ø D2 mm	a1	Para machos / *For taps* DIN 371	DIN 374	DIN 376	JIS	CR Ref.	CR Cod.	CRE Ref.	CRE Cod.
19	3	2,5	-	-	-	M2	CR19030025	0003859648	CRE19030025	0003863000
	3,5	2,7	M3	M5	M5	-	CR19035027	0001639484	CRE19035027	0001639544
	4	3	M3,5	-	-	-	CR19040030	0001639605	CRE19040030	0001639755
	4	3,2	-	-	-	M3	DR19040032	0003859708	CRE19040032	0003863161
	4,5	3,4	M4	M6	M6	-	CR19045034	0001639815	CRE19045034	0001639976
	5,4	4	-	-	-	M4	CR19050040	0003859869	CRE19050040	0003391122
	5,5	4,5	-	-	-	M5	CR19055045	0003859929	CRE19055045	0003863432
	6	4,5	-	-	-	M6	CR19060045	0003860003	CRE19060045	0003113380
	6	4,9	M4,5-M5-M6	M8	M8	-	CR19060049	0001640050	CRE19060049	0001640110
	6,2	5	-	-	-	M8	CR19062050	0003860154	CRE19063050	0003391272
	7	5,5	M7	M9 - M10	M9 - M10	M10	CR19070055	0001640261	CRE19070055	0001640321
	8	6,2	M8	-	M11	-	CR19080062	0001640482	CRE19080062	0001640542
	8,5	6,5	-	-	-	M12	CR19085065	0003860214	CRE19085065	0003863221
	9	7	-	M12	M12	-	CR19090070	0001640602	CRE19090070	0001640753
	10	8	M10	-	-	-	CR19100080	0001640813	CRE19100080	0001640973
	10,5	8	-	-	-	M14	CR19105080	0003860375	CRE19105080	0003863371
31	6	4,5	-	-	-	M6	CR31060045	0003861216	CRE31060045	0003863592
	6	4,9	M4,5-M5-M6	M8	M8	-	CR31060049	0002337635	CRE31060049	0002656556
	6,2	5	-	-	-	M8	CR31062050	0003861377	CRE31062050	0003863653
	7	5,5	M7	M9 - M10	M9 - M10	M10	CR31070055	0001641052	CRE31070055	0001641113
	8	6,2	M8	-	M11	-	CR31080062	0001641323	CRE31080062	0001641484
	8,5	6,5	-	-	-	M12	CR31085065	0003861437	CRE31085065	0003863713
	9	7	M12	M12	-	-	CR31090070	0001641544	CRE31090070	0001641605
	10	8	M10	-	-	-	CR31100080	0001641755	CRE31100080	0001641815
	10,5	8	-	-	-	M14	CR31105080	0003861498	CRE31105080	0003863863
	11	9	-	M13 - M14	M14	-	CR31110090	0001641976	CRE31110090	0001642055
	12	9	-	M16	M15 - M16	-	CR31120090	0001642115	CRE31120090	0001642275
	12,5	10	-	-	-	M16	CR31125100	0003861648	CRE31125100	0003863924
	14	11	-	M18	M18	M18	CR31140110	0001642336	CRE31140110	0001642486
	15	12	-	-	-	M20	CR31150120	0003861708	CRE31150120	0003864003
	16	12	-	M20	M20	-	CR31160120	0001642546	CRE31160120	0001642607
48	10,5	8	-	-	-	M14	CR48105080	0003861869	CRE48105080	0003864163
	11	9	-	-	M14	-	CR48110090	0001642767	CRE48110090	0001642818
	12	9	-	-	M15 - M16	-	CR48120090	0001642978	CRE48120090	0001643057
	12,5	10	-	-	-	M16	CR48125100	0003862921	CRE48125100	0003864223
	14	11	-	M18	M18	M18	CR48140110	0001643117	CRE48140110	0001643278
	15	12	-	-	-	M20	CR48150120	0003861929	CRE48150120	0003864384
	16	12	-	M20	-	-	CR48160120	0001643338	CRE48160120	0001643488
	17	13	-	-	-	M22	CR48170130	0003862008	CRE48170130	0003864434
	18	14,5	-	M22 - M24	M22 - M24	-	CR48180145	0001643549	CRE48180145	0001643609
			-	M25 - M26	M25 -M26	-				
	19	15	-	-	-	M24	CR48190150	0003862168	CRE48190150	0003388541
	20	15	-	-	-	M27	CR48200150	0003862590	CRE48200150	0003864594
	20	16	-	M27 - M28	M27	-	CR48200160	0001643760	CRE48200160	0001643820
	21	17	-	-	-	M28	CR48210170	0003862379	CRE48210170	0003864655
	22	18	-	M30 - M32	M30	-	CR48220180	0001643970	CRE48220180	0001644069
	23	17	-	-	-	M27	CR48230170	0003862650	CRE48240190	0003864715
	24	19	-	-	-	M32	CR48240190	0003862430	CRE48550190	0003865015
	25	19	-	-	-	M33	CR48250190	0003862701	CRE48250190	0003865015
	25	20	-	M33	M33	-	CR48250200	0001644110	CRE48250200	0001644270
	28	21	-	-	-	M36	CR48280210	0003862861	CRE48280210	0003864926
	28	22	-	M34-M35-M36	M36	-	CR48280220	0001644330	CRE48280220	0001644491

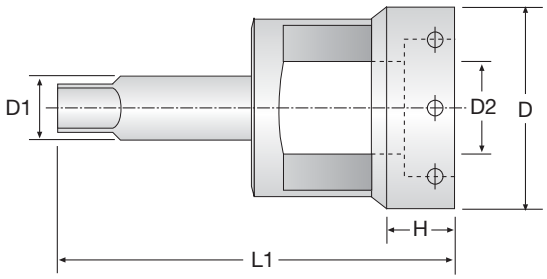
Reductor para manguito, de cambio rápido.
Quick-change tap adaptors.

CR



Ø D1 mm	Ø D2 mm	Ø D mm	L3 mm	L4 mm	Cod.
19	13	30	4	21,5	0003768588
31	13	48	5	35	0003833608
31	19	48	5	35	0003488135
48	19	70	6	55,5	0003833547
48	31	70	6	55,5	0002643692

Soporte porta-cojinetes para maquina.
Machine die holder.

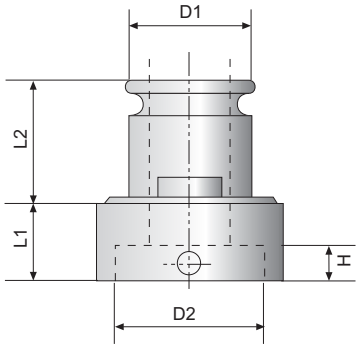


Ø D2 x H	Ø D	L1	Gama medidas		Ø D1	a	Cod.
16 x 5	30	87	M1 - M2,6	1/16 - 3/32	10	8	0003091385
20 x 5	33	87	M3 - M4	1/8 - 5/32	10	8	0003091445
20 x 7	33	87	M4,5 - M6	3/16 - 1/4	10	8	0003091716
25 x 9	39	93	M7 - M9	5/16	12	9	0003091656
30 x 11	43	113	M10 - M11	3/8 - 7/16	14	11	0003091877
38 x 14	50	113	M12 - M14	1/2 - 9/16	16	12	0003091937
45 x 18	60	115	M16 - M20	5/8 - 13/16	18	14,5	0003092016
55 x 22	68	130	M22 - M24	7/8 - 1”	20	16	0003092176
65 x 25	78	152	M27 - M36	1”1/8 - 1”3/8	22	18	0003092237

Adaptador de cambio rápido porta-cojinetes.
Quick-change adaptors for dies.

JMC

CR

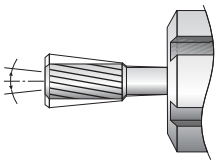


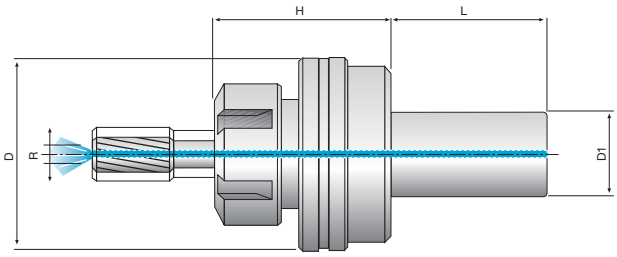
Ø D1 mm	Med. cojinete *Die size* DIN 223	Para rosca *For thread*	Ø D2 mm	H mm	D mm	L1 mm	L2 mm	Ref.	Cod.
19	20 x 5	M3 - M4	20	4,8	30	14	21,5	CR19200050	0002265931
	20 x 7	M4,5 - M6	20	6,5	30	16		CR19200070	0002266010
	25 x 9	M7 - M9	25	8,5	35	19		CR19250090	0002266170
	30 x 11	M10 - M11	30	10	40	21		CR19300110	0002266230
	38 x 10	MF12x1 - M15x1,5	38	9	48	20		CR19380100	0002266391
	38 x 14	M12 - M14	38	13	48	24		CR19380140	0002266441
31	20 x 5	M3 - M4	20	4,8	30	20	35	CR31200050	0002266501
	20 x 7	M4,5 - M6	20	6,5	30	21,5		CR31200070	0002266662
	25 x 9	M7 - M9	25	8,5	35	23,5		CR31250090	0002266722
	30 x 11	M10 - M11	30	10	40	22		CR31300110	0002266873
	38 x 10	MF12x1 - M15x1,5	38	9	48	21		CR31380100	0002266933
	38 x 14	M12 - M14	38	13	48	25		CR31380140	0002267022
	45 x 18	M16 - M20	45	17	57	29		CR31450180	0002267172
48	30 x 11	M10 - M11	30	10	60	30	55,5	CR48300110	0002267233
	38 x 10	MF12x1 - M15x1,5	38	9	60	28		CR48380100	0002267393
	38 x 14	M12 - M14	38	13	60	32		CR48380140	0002267453
	45 x 14	MF16x1 - MF20x2	45	13	60	32		CR48450140	0002267504
	45 x 18	M16 - M20	45	17	60	36		CR48450180	0002267664
	55 x 16	MF22x1 - MF26x1,5	55	15	72	30		CR48550160	0002267724
	55 x 22	M22 - M24	55	20	72	35		CR48550220	0002267885
	65 x 18	MF27x1 - MF36x2	65	17	82	32		CR48650180	0002267935
	65 x 25	M27 - M36	65	23	82	38		CR48650250	0001987076

Porta-escariador flotante. Con refrigeración interna.
Floating reamer holder. With coolant flow.

DIN 1835
KC

Para pinzas DIN 6499/B
For collets DIN 6499/B.





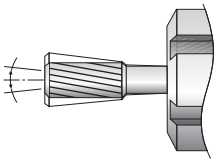
R = Capacidad de movimiento radial desde el centro.
***R** = Radial stroke from centre.*

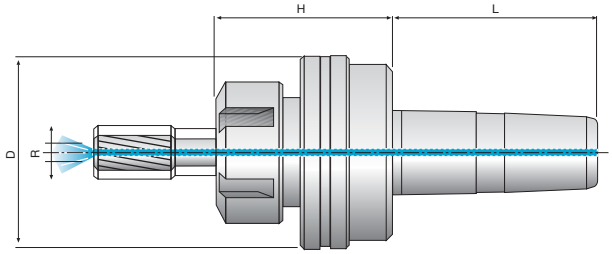
Tipo *Type*	ØD1 mm	D	H	L	R	Cod.
ER 11	20	42	40	46	1	0003834068
	25	42	40	46	1	0003834128
ER 16	20	42	44	46	1	0003834279
	25	42	44	46	1	0003834339
ER 20	20	50	50	46	1	0003834499
	25	50	50	46	1	0003834550
ER 25	20	57	53	46	1	0003834600
	25	57	53	46	1	0003834761
	32	57	53	46	1	0003834821
ER 32	25	69	58	50	1,5	0003834981
	32	69	58	50	1,5	0003835060
ER 40	25	79	64	50	1,5	0003835121
	32	79	64	50	1,5	0003835271

La oscilación sobre las bolas compensa los errores de alineamiento entre el eje de la máquina y el agujero previo. También se puede utilizar para el roscado rígido en tornos o centros de mecanizado CNC.
The free mooving ball bearing drive, allows reamers to follow the previous hole. Cold be used for synchronized tapping operations on lathes and CNC machining center.

DIN 228 A
KC

Para pinzas DIN 6499/B
For collets DIN 6499/B.





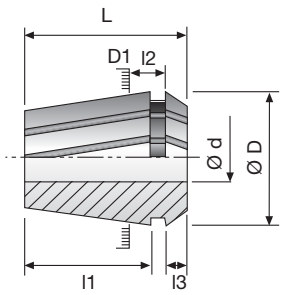
R = Capacidad de movimiento radial desde el centro.
***R** = Radial stroke from centre.*

Tipo *Type*	CM *MT*	D	H	L	R	Cod.
ER 11	2	42	40	69	1	0003836283
	3	42	40	86	1	0003836334
ER 16	2	42	44	69	1	0003836494
	3	42	44	86	1	0003836554
ER 20	2	50	50	69	1	0003836615
	3	50	50	86	1	0003836765
ER 25	2	57	53	69	1	0003836825
	3	57	53	86	1	0003836986
ER 32	3	69	58	86	1,5	0003837065
	4	69	58	109	1,5	0003837125
ER 40	3	79	64	86	1,5	0003837285
	4	79	64	109	1,5	0003837346

Pinzas de precisión para escariadores.
Precision collets for reamers.

ER DIN 6499

Precisión / *Precision*: 0,01 mm.

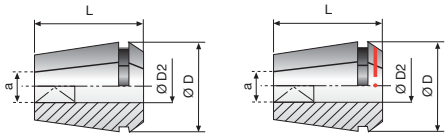


Tipo *Type*	Ød Rango *Range*	D	D1	L	l1	l2	l3	Cod.
ER 11	1 - 0,5	11,5	11	18	13,5	3,8	2,5	0003837617
	1,5 - 1							0003837557
	2 - 1,5							0003838067
	2,5 - 2							0003838127
	3 - 2,5							0003828288
	3,5 - 3							0003838348
	4 - 3,5							0003838408
	4,5 - 4							0003838559
	5 - 4,5							0003838619
	5,5 - 5							0003838770
	6 - 5,5							0003838830
	6,5 - 6							0003838980
	7 - 6,5							0003839079
ER 16	1 - 0,5	17	16	27,5	20,8	6,26	4	0003839120
	1,5 - 1							0003839280
	2 - 1,5							0003839340
	2,5 - 2							0003839401
	3 - 2,5							0003839551
	3,5 - 3							0003839612
	4 - 3,5							0003839772
	5 - 4							0003839832
	6 - 5							0003839983
	7 - 6							0003840077
	8 - 7							0003840127
	9 - 8							0003840288
	10 - 9							0003840348
ER 20	1,5 - 1	21	20	31,5	23,9	6,36	4,8	0003840408
	2 - 1,5							0003840559
	2,5 - 2							0003840619
	3 - 2,5							0003840770
	3,5 - 3							0003840830
	4 - 3,5							0003840980
	4,5 - 4							0003841077
	5 - 4,5							0003841130
	6 - 5							0003841280
	7- 6							0003841340
	8 - 7							0003841401
	9 - 8							0003841561
	10 - 9							0003841612
	11 - 10							0003841772
	12 - 11							0003841832
	13 - 12							0003841993
ER 25	1,5 - 1	26	25	34	25,9	6,66	5	0003842072
	2 - 1,5							0003842132
	2,5 - 2							0003842282
	3 - 2,5							0003842343
	3,5 - 3							0003842403
	4 - 3,5							0003842563
	4,5 - 4							0003842624
	5 - 4,5							0003842774
	5,5 - 5							0003842835
	6 - 5,5							0003842995
	6,5 - 6							0003843074
	7 - 6,5							0003843134
	8 - 7							0003843295
	9 - 8							0003843345
	10 - 9							0003843405

Tipo *Type*	Ød Rango *Range*	D	D1	L	l1	l2	l3	Cod.
ER 25	11 - 10	26	25	34	25,9	6,66	5	0003843566
	12 - 11							0003843636
	13 - 12							0003843776
	14 - 13							0003843837
	15 - 14							0003843997
	16 - 15							0003844076
ER 32	2,5 - 2	33	32	40	30,9	7,16	5,5	0003844136
	3 - 2,5							0003844297
	3,5 - 3							0003844357
	4 - 3,5							0003844408
	4,5 - 4							0003844568
	5 - 4,5							0003844628
	5,5 - 5							0003844789
	6 - 5,5							0003844839
	6,5 - 6							0003844990
	7 - 6,5							0003845078
	8 - 7							0003845139
	9 - 8							0003845410
	10 - 9							0003845350
	11 - 10							0003845621
	12 - 11							0003845560
	13 - 12							0003845841
	14 - 13							0003845781
	15 - 14							0003845992
	16 - 15							0003846081
	17 - 16							0003846131
	18 - 17							0003846291
	19 - 18							0003846352
	20 - 19							0003846412
ER 40	3,5 - 3	41	40	46	34,9	7,66	7	0003846563
	4 - 3,5							0003846623
	4,5 - 4							0003846783
	5 - 4,5							0003846844
	5,5 - 5							0003846904
	6 - 5,5							0003847083
	6,5 - 6							0003847143
	7 - 6,5							0003847294
	7,5 - 7							0003847354
	8 - 7,5							0003847414
	9 - 8							0003847575
	10 - 9							0003847625
	11 - 10							0003847786
	12 - 11							0003847846
	13 - 12							0003847906
	14 - 13							0003848085
	15 - 14							0003848146
	16 - 15							0003848206
	17 - 16							0003843556
	18 - 17							0003848417
	19 - 18							0003848577
	20 - 19							0003848637
	21 - 20							0003848788
	22 - 21							0003848848
	23 - 22							0003848909
	24 - 23							0003849087
	25 - 24							0003849148
	26 - 25							0003849208

Pinzas para machos de roscar.
Tap collets.

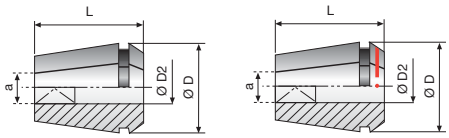
ER SQ	ER SQ KC
SIM DIN 15488	Refrigeracion interna *Internal collant*



Para machos / For taps						ØD mm	L mm	ER-SQ Cod.	ER-SQ KC Cod.
Tipo *Type*	ØD2 mm	a	DIN 371	DIN 374 DIN 376	JIS				
ER 16	2,5	2,1	M1 - M1,8	M3,5	-	16,74	27,5	0002210306	
	2,8	2,1	M2 - M2,5	M4	-			0002210527	-
	3,5	2,7	M3	M4,5 - M5	-			0002210958	-
	4	3	M3,5	-	-			0002211037	0003855588
	4	3,2	-	-	M3			0003849359	-
	4,5	3,4	M4	M6	-			0002211197	0003855649
	5	4	-	-	M4 - M4,5			0003849419	0003855799
	5,5	4,5	-	-	M5 - M5,5			0003849579	-
	6	4,5	-	-	M6			0003849630	-
	6	4,9	M4,5 - M6	M8	-			0002211248	0003855850
	6,2	5	-	-	M7 - M8			0003849780	-
	7	5,5	M7	M10	M9 - M10			0002211308	0003855910
	8	6	-	-	M11			0003849841	-
	8	6,2	M8	-	-			0002211468	-
	8,5	6,5	-	-	M12			0003851087	-
	9	7	-	M12	-			0002211529	-
	10	8	M10	-	-			0002211679	-
ER 20	2,5	2,1	M1 - M1,8	M3,5	-	20,74	31,5	0002211950	-
	2,8	2,1	M2 - M2,5	M4	-			0002212039	-
	3,5	2,7	M3	M4,5 - M5	-			0002212190	-
	4	3	M3,5	-	-			0002212250	0003856099
	4	3,2	-	-	M3			0003850085	-
	4,5	3,4	M4	M6	-			0002212300	0003856159
	5	4	-	-	M4 - M4,5			0003850146	0003856581
	5,5	4,5	-	-	M5 - M5,5			0003850206	-
	6	4,5	-	-	M6			0003850356	-
	6	4,9	M4,5 - M6	M8	-			0002212461	0003856210
	6,2	5	-	-	M7 - M8			0003850417	-
	7	5,5	M7	M10	M9 - M10			0002212521	0003856360
	8	6	-	-	M11			0003850577	-
	8	6,2	M8	-	-			0002212682	0003856420
	8,5	6,5	-	-	M12			0003850637	-
	9	7	-	M12	-			0002212732	0003605847
	10	8	M10	-	-			0002212892	0003856641
	10,5	8	-	-	M14 - M15			0003850848	-
	12,5	10	-	-	M16			0003850848	-
	13	10	-	-	M17			0003850909	-
ER 25	2,5	2,1	M1 - M1,8	M3,5	-	25,74	34	0002212953	-
	2,8	2,1	M2 - M2,5	M4	-			0002213032	-
	3,5	2,7	M3	M4,5 - M5	-			0002213192	-
	4	3	M3,5	-	-			0002213252	0003856702
	4	3,2	-	-	M3			0003851148	-
	4,5	3,4	M4	M6	-			0002213313	0003856852
	5	4	-	-	M4 - M4,5			0003851208	0003856912
	5,5	4,5	-	-	M5 - M5,5			0003851369	-
	6	4,5	-	-	M6			0003851419	-
	6	4,9	M4,5 - M6	M8	-			0002213463	0003857091
	6,2	5	-	-	M7 - M8			0003851630	-
	7	5,5	M7	M10	M9 - M10			0002213523	0003857152
	8	6	-	-	M11			0003851790	-
	8	6,2	M8	-	-			0002213684	0003857212
	8,5	6,5	-	-	M12			0003851841	-
	9	7	-	M12	-			0002213744	0003605907
	10	8	M10	-	-			0002213895	0003606357
	10,5	8	-	-	M14 - M15			0003850788	-
	11	9	-	M14	-			0002213955	0003857372
	12	9	-	M16	-			0002214034	0003857423
	12,5	10	-	-	M16			0003851901	-
	13	10	-	-	M17			0003852080	-
	14	11	-	-	M18			0003852140	-
	15	12	-	-	M20			0003852201	-

Pinzas para machos de roscar.
Tap collets.

ER SQ	ER SQ KC
SIM DIN 15488	Refrigeracion interna *Internal collant*



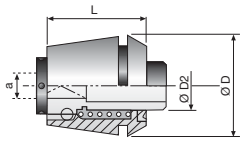
Para machos / For taps						ØD mm	L mm	ER-SQ Cod.	ER-SQ KC Cod.
Tipo *Type*	ØD2 mm	a	DIN 371	DIN 374 DIN 376	JIS				
ER 32	2,5	2,1	M1 - M1,8	M3,5	-	32,74	40	0002214194	-
	2,8	2,1	M2 - M2,5	M4	-			0002214255	-
	3,5	2,7	M3	M4,5 - M5	-			0002214315	-
	4	3	M3,5	-	-			0002214465	-
	4	3,2	-	-	M3			0003852361	-
	4,5	3,4	M4	M6	-			0002214526	0003857583
	5	4	-	-	M4 - M4,5			0003852421	0003857643
	5,5	4,5	-	-	M5 - M5,5			0003852572	-
	6	4,5	-	-	M6			0003852632	-
	6	4,9	M4,5 - M6	M8	-			0002214686	0003857704
	6,2	5	-	-	M7 - M8			0003852792	-
	7	5,5	M7	M10	M9 - M10			0002214746	0003857854
	8	6	-	-	M11			0003852853	-
	8	6,2	M8	-	-			0002214807	0003857915
	8,5	6,5	-	-	M12			0003852903	-
	9	7	-	M12	-			0002214957	0003858003
	10	8	M10	-	-			0002215196	0003858154
	10,5	8	-	-	M14-M15			0003853092	-
	11	9	-	M14	-			0002215257	0003858214
	12	9	-	M16	-			0002215317	0003858375
	12,5	10	-	-	M16			0003853142	-
	13	10	-	-	M17			0003853203	-
	14	11	-	M18	M18			0002215528	0003757296
	15	12	-	-	M20			0003853363	-
	16	12	-	M20	-			0002215749	0003858435
	17	13	-	-	M22			0003853424	-
	19	15	-	-	M24-M25			0003853574	-
	20	15	-	-	M26-M27			0003853634	-
ER 40	4	3,2	-	-	M3	40,74	46	0003853795	-
	5	4	-	-	M4 - M4,5			0003853855	-
	5,5	4,5	-	-	M5 - M5,5			0003853915	-
	6	4,5	-	-	M6			0003854094	-
	6	4,9	M4,5 - M6	M8	-			0002215809	0003858585
	6,2	5	-	-	M7 - M8			0003854155	-
	7	5,5	M7	M10	M9 - M10			0002215950	0003858646
	8	6	-	-	M11			0003854205	-
	8	6,2	M8	-	-			0002216048	0003852706
	8,5	6,5	-	-	M12			0003854365	-
	9	7	-	M12	-			0002216109	0003858866
	10	8	M10	-	-			0002216259	0003858917
	10,5	8	-	-	M14 - M15			0003854426	-
	11	9	-	M14	-			0002216310	0003859006
	12	9	-	M16	-			0002216470	0003859156
	12,5	10	-	-	M16			0003854586	0003859216
	13	10	-	-	M17			0003854637	0003859377
	14	11	-	M18	M18			0002216530	0003859437
	15	12	-	-	M20			0003854797	0003859588
	16	12	-	M20	-			0002216681	-
	17	13	-	-	M22			0003854857	-
	18	14,5	-	M22-M26	-			0002216741	-
	19	15	-	-	M24-M25			0003854918	-
	20	15	-	-	M26-M27			0003855097	-

- Con cuadrados de arrastre standards
- Medidas según DIN 6499 – A
- Adecuadas para centros de mecanizado con roscado rígido
- Medidas en pulgadas bajo demanda

- *With standard square drivings*
- *Sizes according to DIN 6499 - A*
- *For machining centers with sychronous spindle*
- *Inch sizes upon request*

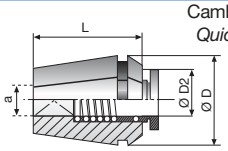
Pinzas para machos de roscar.
Tap collets.

ER SQ FL



ER SQ CR

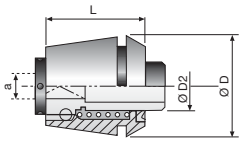
Cambio rápido
Quick change



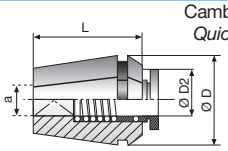
Para machos / For taps						ER-SQ FL			ER-SQ CR		
Tipo *Type*	ØD2 mm	a	DIN 371	DIN 374 DIN 376	JIS	ØD mm	L mm	Cod.	ØD mm	L mm	Cod.
ER 16	2,5	2,1	M1 - M1,8	M3,5	-	17	29	0002494644	16,74	27,5	-
	2,8	2,1	M2 - M2,5	M4	-			0002494794			-
	3,5	2,7	M3	M4,5 - M5	-			0002494854			0002216801
	4	3	M3,5	-	-			0002526717			0002216962
	4	3,2	-	-	M3			-			-
	4,5	3,4	M4	M6	-			0002494915			0002217041
	5	4	-	-	M4 - M4,5			-			-
	5,5	4,5	-	-	M5 - M5,5			-			-
	6	4,5	-	-	M6			-			-
	6	4,9	M4,5 - M6	M8	-			0002495094			0002217101
	6,2	5	-	-	M7 - M8			-			-
	7	5,5	M7	M10	M9 - M10			-			0002217251
	8	6	-	-	M11			-			-
	8	6,2	M8	-	-			-			0002217312
	8,5	6,5	-	-	M12			-			-
	9	7	-	M12	-			-			0002217472
	10	8	M10	-	-			-			0002217533
ER 20	2,5	2,1	M1 - M1,8	M3,5	-	21	32	-	20,74	31,5	-
	2,8	2,1	M2 - M2,5	M4	-			-			-
	3,5	2,7	M3	M4,5 - M5	-			0002495154			0002217683
	4	3	M3,5	-	-			0002526867			0002217743
	4	3,2	-	-	M3			-			-
	4,5	3,4	M4	M6	-			0002495214			0002217804
	5	4	-	-	M4 - M4,5			-			-
	5,5	4,5	-	-	M5 - M5,5			-			-
	6	4,5	-	-	M6			-			-
	6	4,9	M4,5 - M6	M8	-			0002495365			0002218043
	6,2	5	-	-	M7 - M8			-			-
	7	5,5	M7	M10	M9 - M10			0002495425			0002218103
	8	6	-	-	M11			-			-
	8	6,2	M8	-	-			-			0002218264
	8,5	6,5	-	-	M12			-			-
	9	7	-	M12	-			0002526927			0002218314
	10	8	M10	-	-			0002527016			0002218474
	10,5	8	-	-	M14 - M15			-			-
	12,5	10	-	-	M16			-			-
	13	10	-	-	M17			-			-
ER 25	2,5	2,1	M1 - M1,8	M3,5	-	26	35	-	25,74	34	-
	2,8	2,1	M2 - M2,5	M4	-			-			-
	3,5	2,7	M3	M4,5 - M5	-			0002495585			0002218535
	4	3	M3,5	-	-			0002527167			0002218695
	4	3,2	-	-	M3			-			-
	4,5	3,4	M4	M6	-			0002495646			0002218746
	5	4	-	-	M4 - M4,5			-			-
	5,5	4,5	-	-	M5 - M5,5			-			-
	6	4,5	-	-	M6			-			-
	6	4,9	M4,5 - M6	M8	-			0002495706			0002218806
	6,2	5	-	-	M7 - M8			-			-
	7	5,5	M7	M10	M9 - M10			0002495857			0002218966
	8	6	-	-	M11			-			-
	8	6,2	M8	-	-			0002495917			0002219045
	8,5	6,5	-	-	M12			-			-
	9	7	-	M12	-			0002496096			0002219106
	10	8	M10	-	-			0002496156			0002219326
	10,5	8	-	-	M14 - M15			-			-
	11	9	-	M14	-			-			0002219477
	12	9	-	M16	-			0002527227			0002219537
	12,5	10	-	-	M16			-			-
	13	10	-	-	M17			-			-
	14	11	-	-	M18			-			-
	15	12	-	-	M20			-			-

Pinzas para machos de roscar.
Tap collets.

ER SQ FL	ER SQ CR



Cambio rápido
Quick change



Para machos / For taps						ER-SQ FL			ER-SQ CR		
Tipo *Type*	ØD2 mm	a	DIN 371	DIN 374 DIN 376	JIS	ØD mm	L mm	Cod.	ØD mm	L mm	Cod.
ER 32	2,5	2,1	M1 - M1,8	M3,5	-	33	44	-	32,74	40	-
	2,8	2,1	M2 - M2,5	M4	-			-			-
	3,5	2,7	M3	M4,5 - M5	-			-			0002219697
	4	3	M3,5	-	-			-			0002219758
	4	3,2	-	-	M3			-			-
	4,5	3,4	M4	M6	-			0002496217			0002219808
	5	4	-	-	M4 - M4,5			-			-
	5,5	4,5	-	-	M5 - M5,5			-			-
	6	4,5	-	-	M6			-			-
	6	4,9	M4,5 - M6	M8	-			0002496377			0002219969
	6,2	5	-	-	M7 - M8			-			-
	7	5,5	M7	M10	M9 - M10			0002496427			0002220043
	8	6	-	-	M11			-			-
	8	6,2	M8	-	-			0002496588			0002220103
	8,5	6,5	-	-	M12			-			-
	9	7	-	M12	-			0002496648			0002220264
	10	8	M10	-	-			0002496708			0002220324
	11	9	-	M14	-			0002496859			0002220474
	12	9	-	M16	-			0002496919			0002220535
	14	11	-	M18	M18			-			0002220695
	16	12	-	M20	-			-			0002220756
ER 40	2,5	2,1	M1 - M1,8	M3,5	-	41	56	-	40,74	46	-
	2,8	2,1	M2 - M2,5	M4	-			-			-
	3,5	2,7	M3	M4,5 - M5	-			-			-
	4	3	M3,5	-	-			-			-
	4	3,2	-	-	M3			-			-
	4,5	3,4	M4	M6	-			-			-
	5	4	-	-	M4 - M4,5			-			-
	5,5	4,5	-	-	M5 - M5,5			-			-
	6	4,5	-	-	M6			-			-
	6	4,9	M4,5 - M6	M8	-			0002497008			-
	6,2	5	-	-	M7 - M8			-			-
	7	5,5	M7	M10	M9 - M10			0002497379			-
	8	6	-	-	M11			-			-
	8	6,2	M8	-	-			0002497219			-
	8,5	6,5	-	-	M12			-			-
	9	7	-	M12	-			0002497640			-
	10	8	M10	-	-			0002497701			-
	10,5	8	-	-	M14 - M15			-			-
	11	9	-	M14	-			0002497430			-
	12	9	-	M16	-			0002497580			-

Aparato roscador reversible.
Reversing tapping attachment.

TA

Adaptable a taladros no reversibles para roscar a derechas, con embrague de fricción regulable

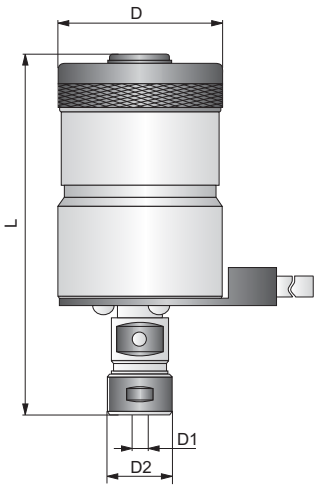
For use on drilling machines with non reversing spindles, only suitable for cutting right hand threads equipped with safety clutch

Especificaciones

- Roscador autorreversible con mecanismo de engranajes para ciclos rápidos de roscado
- Pinza ajustable por sistema Rubber-Flex y arrastre de cuadrado regulable
- Compensación longitudinal a la compresión y a la tracción
- Embrague integrado de sobrecarga por fricción para evitar roturas de macho
- Acoplamientos intercambiables incluidos en el conjunto
- Suministro del conjunto completo (roscador y accesorios) presentado en maleta compacta

Specifications

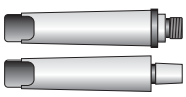
- Self reversing tapping attachment with turning gear mechanism for fast tapping cycles
- Rubber-Flex collets and adjustable drive square
- Length compensation on tension and on compression
- Integrated overload clutch to prevent tap breakage
- Interchangeable adapters inclosed in the set
- The set is supplied in a compact case and encloses tapping attachment and accessories

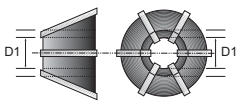


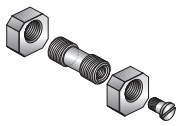
Ref.	Para rosca *For thread*	Acoplamiento / Shank Int.	CM/MT Ext.	ØD mm	ØD2 mm	L mm	Peso *Weight* Kg.	Pinza *Collet* Rubber Flex	Gama cierre *Clamping range* D1 mm	R.P.M. max.	Cod.
TA-7	M2 - M7	JT 6	1	55	23	130	1,00	J116	2,5 - 4,5	1500	0001123533
		Nº 2 - 1/4"	3					J117	4,5 - 6,5		
TA-12	M4 - M12	JT 6	3	75	28	156	2,40	J421	3,5 - 6,5	1000	0001123684
		Nº 6 - 7/16"	4					J422	6,5 - 10		
TA-20	M8 - M20	M20x2,5	3	91	40	204	4,50	R30	6,0 - 10,5	600	0001123744
		5/16" - 3/4"	4					R32-1	10,5 - 14		
								R32-2	12 - 16		
TA-30	M10 - M30	B24	5	120	55	303	7,25	J461	9- 13	350	0003648264
								J462	16-23		

Recambios

Spare parts







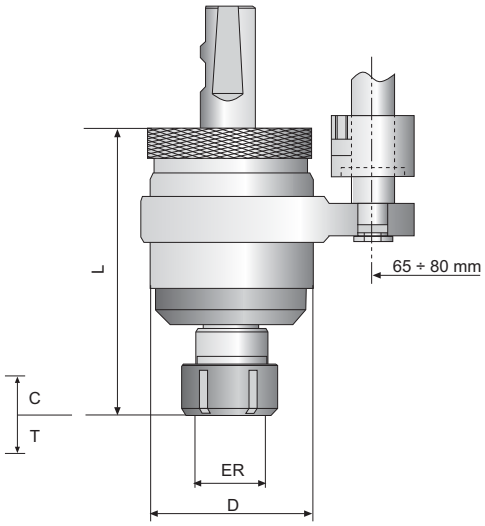
Acoplamiento / *Adapters* Ref.	Mango / Shank CM/MT	Mango / Shank Int.	Peso. *Weight* Kg.	Cod.	Pinzas / *Collets* Rubber Flex Tipo *Type*	Gama de cierre / *Clamping range* Ø D1	Cod. mm	Tornillos de fijación para cuadrado *Fastening screw for square* Ref.	Cod.
TA-7	1	JT 6	0,1	0001783748	J116	2,5 - 4,5	0001399646	21-22-44	0001405067
	2		0,17	0001783899	J117	4,5 - 6,5	0001399797		
	3		0,33	0001783959					
TA-12	2	JT 6	0,17	0001783899	J421	3,5 - 6,5	0001399857	21-22-44	0001405127
	3		0,33	0001783959	J422	6,5 - 10	0001399918		
	4		0,65	0001784038					
TA-20	3	M20x2,5	0,4	0001784198	R30	6,0 - 10,5	0001400055	21-22-44	0001405288
	4		0,7	0001784259	R32-1	10,5 - 14	0001400116		
					R32-2	12 - 16	0003619372		

Aparato roscador reversible.
Reversing tapping attachment.

TA-NC

Para utilización en máquinas CNC
For use on CN machines

TA-NC CR



Especificaciones

- Roscador autorreversible con mecanismo de engranajes para ciclos rápidos de roscado
- Bajo desgaste de motor y ahorro de energia gracias al consumo eléctrico uniforme
- Compensación longitudinal a la compresión y a la tracción para evitar posibles diferencias de paso
- Profundidades de rosca controladas
- Pinza tipo ER(SQ) de alta concentricidad
- Para utilización en máquinas CNC utilizando el ciclo de mandrinado G85 (sin tiempo de reposo)
- Bloqueador de giro ajustable (65 mm - 80 mm)
- Protegido hermeticamente a las impurezas

Specifications

- *Self reversing tapping attachment with turning gear mechanism for fast tapping cycles*
- *Care of the machine motor and saving of energy by almost constant current receipt*
- *Axial and length compensation on tension and on compression*
- *Accurate thread depths*
- *ER(SQ) collets with high concentric accuracy*
- *Adjustable self-rotation catch (65 mm - 80 mm)*
- *Use on CN machines using G85 boring cycle (without dwell)*
- *Impurity hermetical protection.*

Ref.	Para rosca *For thread*	Acomplamiento *Skank receipt*	ØD mm *Weldon*	L mm	C mm	T mm	Peso *Weight*	R.P.M. max. Kg.	TA-NC Pinza *Collet*	TA-NC Cod.	TA-NC CR Ø D1 mm	TA-NC CR Cod.
TA-NC 12	M3 - M12 Nº 5 - 7/16"	Ø25 DIN 1835 B+E	67	120	3,5	4	2,87	2500	ER 20	0001746843	19	0002268395
TA-NC 16	M8 - M16 5/16 - 5/8"	Ø25 DIN 1835 B+E	75	125	3,5	4	3,87	2000	ER 25	0002268174	31	0002268456
TA-NC 22	M10 - M22 3/8" - 7/8"	Ø32 DIN 1835 B+E	90	153	3,5	4	6,08	1000	ER 32	0002268235	31	0001769725

Condiciones de venta.
Conditions of sale.

Pago:
Los pagos deberán realizarse por el comprador según las condiciones acordadas, el impago de las mercancias suministradas , facultará a **JMC** a la aplicación de intereses de demora, así como a las acciones oportunas para el cobro de los mismos.

Reserva de dominio:
La propiedad de las mercancias no se transmitirá hasta que se haya hecho efectivo integramente el pago de las mismas.

Portes y seguros:
El material viajará por cuenta del comprador siendo siempre a cargo del mismo la prima del seguro que se realize en los casos que el cliente lo solicite.

Reclamaciones:
Solo se tramitarán las reclamaciones recibidas dentro de los 30 dias siguientes a la entrega de la mercancia.

Devoluciones:
No se aceptará ninguna devolución que no haya sido comunicada previamente. El porte del material correrá por cuenta del cliente. El valor del material devuelto corresponderá al valor de compra siendo imprescindible el Nº de albarán con el que se suministró el material y la conformidad por parte de nuestro departamento de Calidad.

Características técnicas:
Las características técnicas se hallan contenidas en este catálogo 7.0, **JMC** se reserva el derecho de modificar alguna de las características sin previo aviso.

Herramientas especiales:
Toda herramienta no coincidente en su totalidad con las características del catálogo 7.0 tendrá el caracter de especial y por consiguiente sujeta a los recargos correspondientes. Recomendamos a nuestros clientes, solicitar oferta previa para todos aquellos casos en que se presuma pueda ser de aplicación la clausula que hace referencia a herramientas especiales. Por razones técnicas de fabricación nos reservamos el derecho de entregar un 15% de más o de menos sobre las cantidades de herramientas especiales solicitadas.

Garantia:
Todas nuestras herramientas estan garantizadas contra cualquier defecto de fabricación. **JMC** no se responsabilizará de la manipulación o utilización inadecuada de los mismos. La garantia excluye cualquier responsabilidad por daños y perjuicios.

Plazos de entrega:
Los plazos de entrega se calculan lo más justo posible pero solo a título orientativo. En caso de demora no serán aceptadas ni reclamaciones ni cancelaciones de herramientas especiales.

IVA:
Los precios de esta tarifa no incluyen IVA.

Jurisdicción:
Para cualquier eventual discrepancia o litigio el juzgado competente será el de Barcelona.

Payment:
Payment shall be made in accordance with terms and conditions notified to the buyer. In default of payment of delivered goods **JMC** *may charge the buyer interest on overdue accounts and shall be entitled to take the necessary steps to ensure collection of these payments.*

Passing of property:
The Company reserves the right to repossess any goods in respect of which payment is overdue and the buyer shall co-operate in the event of the Company notifying its intentions to repossess.

Transport and insurance:
Will be payed by the buyer.

Claims:
Claims will only be registered if received within 30 days of the receipt of goods.

Return of goods:
Goods returned will only be accepted by the company provided prior arrangements have been made. The value of the returned goods will be the purchase value. The delivery note has to be handed in with the returned goods as well as the acceptance document of the quality control department.

Technical specifications:
Technical specifications can be found in this catalogue 7.0, **JMC** *reserves the right to change some of these specifications without prior notice.*

Special tools:
Any tool which should have any specification different from those indicated on the catalogue 7.0 will be considered special and therefore subject to the corresponding price increase. We recommend our customers ask for a price offer if they considerer the tool might be special. For technical reasons the company reserves the right to supply 15% in short or 15% in excess of the quantity ordered.

Warranty:
We guarantee the quality of our tools in so far as manufacture and materials are concerned, but not against improper handling. The guarantee excludes liability for damage and its consequences.

Delivery:
Any delivery date is calculated by **JMC***. as short as possible but no guarantee as to the date of delivery is given or implied. In case of delay,* **JMC** *will not accept any claim or cancellation of special tools.*

Jurisdiction:
In case of dispute the customer wil be subject to the jurisdiction of the courts of Barcelona.

Jose María Cabré S.A.

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