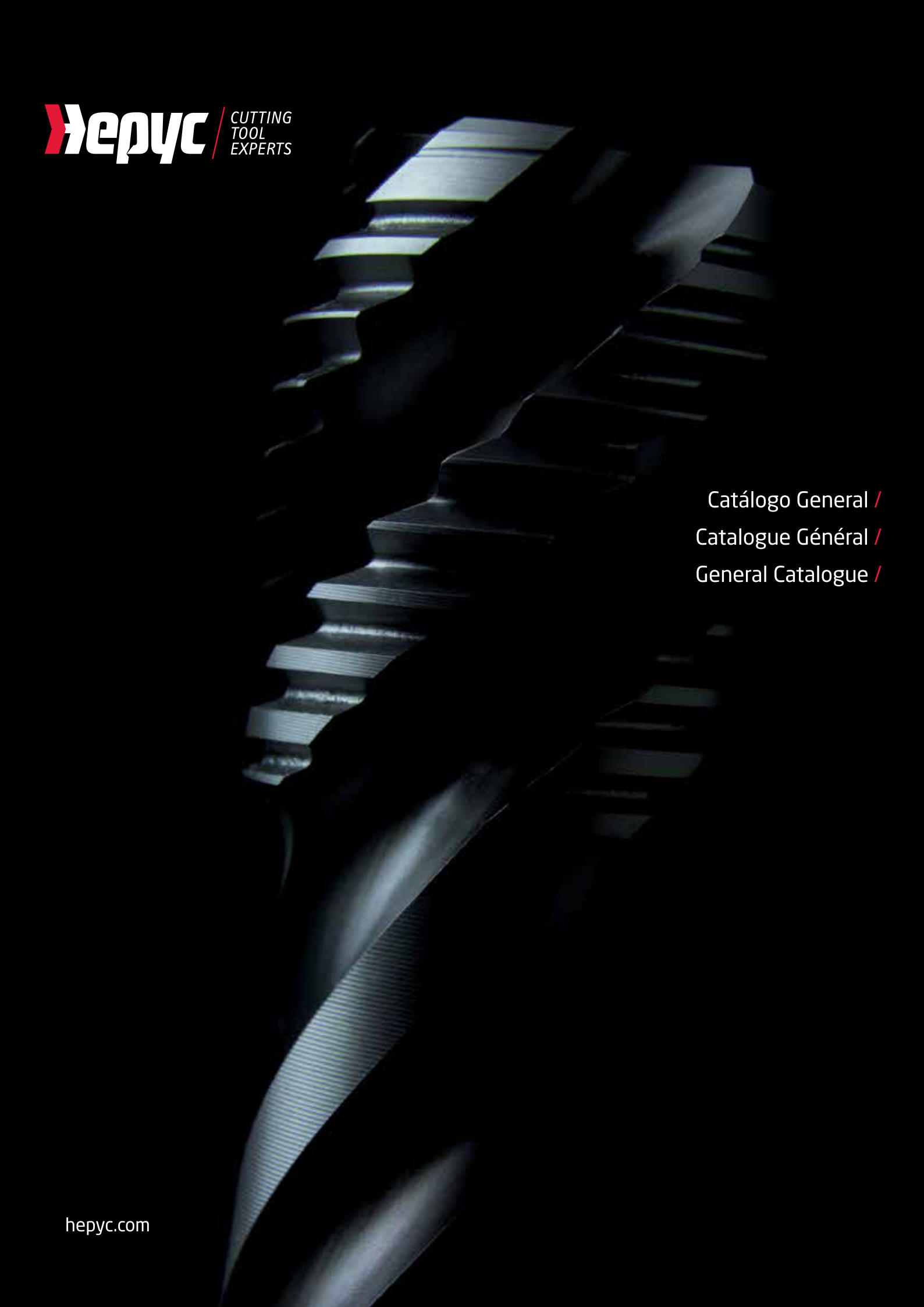
Hepyc CUTTING TOOL EXPERTS



Catálogo General /
Catalogue Général /
General Catalogue /

hepyc.com

BUREAU VERITAS
Certification

Certificación
Certification

Concedida a / Awarded to

MANUFACTURAS HEPYC SA

Bº ZIKUÑAGA,57 E IZQDA. POL. IND. IBARLUZE
20120 HERNANI
SPAIN

Bureau Veritas Certification certifica que el Sistema de Gestión ha sido auditado y encontrado conforme con los requisitos de la norma:

Bureau Veritas Certification certifies that the Management System has been audited and found to be in accordance with the requirements of standard:

NORMA / STANDARD

ISO 9001:2015

El Sistema de Gestión se aplica a:

Scope of certification:

DISEÑO, FABRICACIÓN Y DISTRIBUCIÓN DE HERRAMIENTAS DE CORTE.

DESIGN, MANUFACTURING AND DISTRIBUTION OF CUTTING TOOLS.

Número del Certificado *Certificate Number*	**ES087379-1**
Aprobación original : *Original approval date :*	**04/07/2001**
Certificado en vigor: *Effective date:*	**20/02/2018**
Caducidad del certificado: *Certificate expiration date:*	***29/11/2019***

Directora de Certificación / Certification Manager

Este certificado está sujeto a los términos y condiciones generales y particulares de los servicios de certificación
This certificate is valid, subject to the general and specific terms and conditions of certification services

Entidad de Certificación / Certification Body: Bureau Veritas Iberia S.L.
C/ Valportillo Primera 22-24, Edificio Caoba, Pol. Ind. La granja, 28108 Alcobendas – Madrid, Spain



ENAC
CERTIFICACIÓN
Nº 04/C-SC004

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- Drill bits for masonry / Drill-bits for wood / Drill-bits for metal / Pointers and chisels / Jig and sabre saws / Drill chuks and accessories



Preparados para lo que viene

Somos expertos en herramienta de corte desde hace 70 años. Hemos diseñado, fabricado y comercializado herramientas de corte de calidad desde antes de que el hombre llegase a la Luna. Y hoy, **Hepyc es una industria 4.0** con presencia en los sectores más innovadores de la producción.
Inversiones millonarias, producción robotizada, crecimiento continuado en gama y mercados internacionales.... Hepyc constituye un ejemplo de evolución constante.

Somos testigos de una nueva era en el mundo de la empresa. La industria, la construcción, y otros sectores, experimentan una transformación desconocida en nuestra generación. Hepyc lleva lustros identificando, analizando, ensayando sus productos... para dar respuesta a esta inimaginada realidad. Ahora, ya podemos aumentar la producción de roscado de nuestros clientes hasta en un 27%. Nuestro diseño e ingeniería de producto están a la vanguardia tecnológica del sector. Nuestro proceso de fabricación contempla materiales, tratamientos, geometrías y recubrimientos de última generación. Y si esto es así en la actualidad, ¿has pensado en el futuro próximo? ¿En nuevos procesos, nuevos materiales, nuevas tecnologías, nuevas industrias? ¿Lo imaginas? Nosotros sólo podemos decir una cosa: en Hepyc estamos preparados para lo que viene.



FUTURE

Prêts pour l'avenir

Nous sommes experts en outils de coupe depuis plus de 70 ans. Nous concevions, fabriquions et commercialisions des outils de coupe de qualité avant même que l'homme ne pose un pied sur la lune. Et aujourd'hui **Hepyc est une industrie 4.0** présente sur les secteurs les plus innovants de la production.
Des investissements millionnaires, une production robotisée, une croissance continue en gamme et marchés internationaux... Hepyc est un exemple authentique d'évolution constante.

Nous sommes témoins d'une nouvelle ère dans le monde de l'entreprise. L'industrie, la construction et d'autres secteurs connaissent actuellement une transformation inconnue dans notre génération. Depuis des lustres Hepyc identifie, analyse, teste ses produits... pour répondre à cette réalité inimaginable il y a peu. Nous pouvons aujourd'hui accroître la production de filetage de nos clients jusqu'à 27%. Notre design et l'ingénierie de produit sont à l'avant-garde technologique du secteur. Notre processus de fabrication porte sur les matériaux, les traitements, les géométries et les revêtements de dernière génération. Et si cela est ainsi aujourd'hui, pensez un peu à ce que nous réserve l'avenir... Avec de nouveaux processus, de nouveaux matériaux, de nouvelles technologies, de nouvelles industries ? Vous l'imaginez ? Pour résumer, en quelques mots : chez Hepyc, nous sommes prêts pour l'avenir.

Ready for what's coming

We have been experts in cutting tools for 70 years. We have designed, manufactured and commercialised quality cutting tools since before man arrived on the moon. And today, **Hepyc is a 4.0 industry** present in the most innovative sectors of production. Multi-million-euro investments, robotic production lines, continued growth in ranges and international markets .... Hepyc represents an example of constant evolution.

We are witnesses to a new era in the world of business. Industry, construction and other sectors are undergoing an unprecedented transformation in this generation. Hepyc has gone through decades identifying, analysing and testing its products ... to provide responses to this unimagined reality. Today, we are able to increase our clients' threaded production by up to 27%. Our product design and engineering are at the technological vanguard of the sector. Our manufacturing process comprehends latest-generation materials, treatments, geometries and coatings. And if this is so at present, have you thought of the near future? Of new processes, new materials, new technologies, new industries? Can you imagine it? We only have one thing to say: at Hepyc we are ready for what's coming.

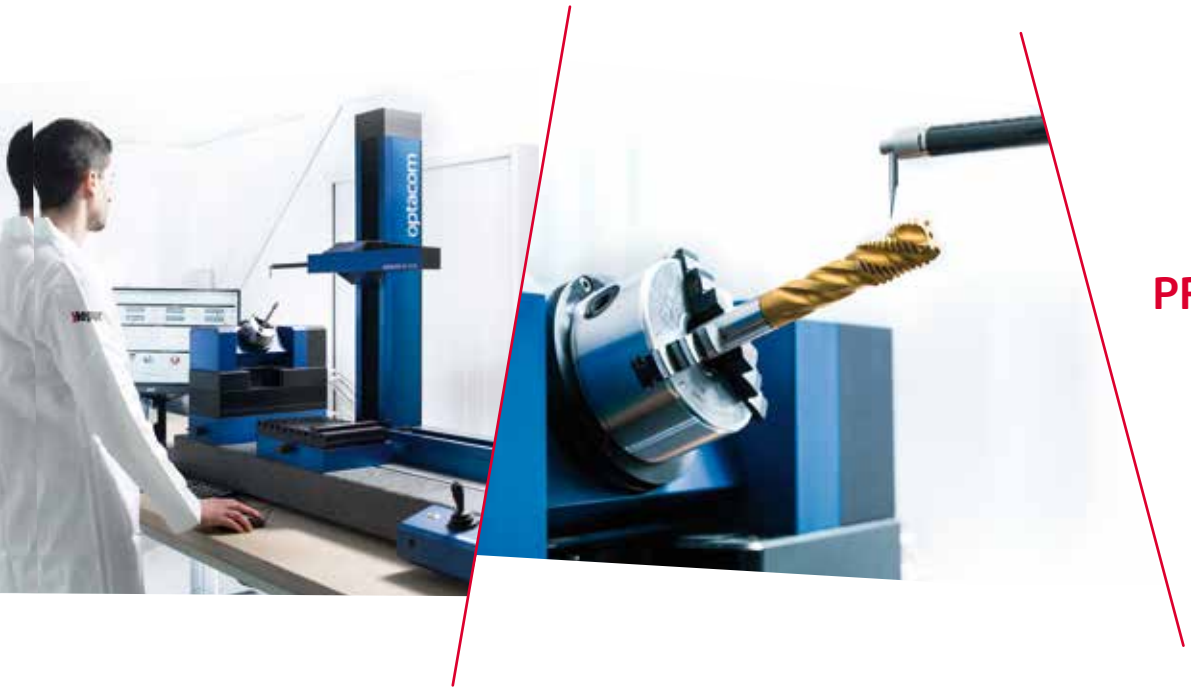


Hepyc CUTTING TOOL EXPERTS

¿Sabías que...?

¿Que el 95% de las consultas recibidas las resolvemos en la primera llamada? ¿Que si enviamos un pedido a París en sólo 16 horas está en su destino? ¿Y a Singapur en 4 días? ¿Que tenemos un stock de 25.000 referencias? ¿Que estamos certificados con el sello de calidad ISO 9001:2015? ¿Que estamos presentes en 30 países? ¿Que tenemos técnicos especializados sólo para solucionar tus problemas? ¿Que disponemos de un catálogo con más de 600 artículos y puedes consultar su stock en tiempo real? ¿Que diseñamos y fabricamos herramienta especial en 15 días?.

En Hepyc estamos preparados.



PRESENT

Saviez-vous que ?

Que nous résolvons 95% des questions qui nous sont posées dès le premier appel ? Que si nous envoyons une commande à Paris, elle arrive à destination en 16 heures à peine ? Et à Singapour en 4 jours ? Que nous disposons d'un stock de 25 000 références ? Que nous sommes certifiées par le label de qualité ISO 9001:2015 ? Que nous sommes présents dans 30 pays ? Que nos techniciens spécialisés sont à votre disposition pour résoudre vos problèmes ? Que nous disposons d'un catalogue de plus de 600 articles et que vous pouvez consulter leur stock en temps réel ? Que nous concevons et fabriquons des outils spéciaux en 15 jours ?

Chez Hepyc, nous sommes prêts.

Did you know ...?

That we resolve 95% of consultations received at the first call? That if we send an order to París, it is there in only 16 hours? And in Singapore in 4 days? That we have a stock of 25,000 references? That we are certified with the ISO 9001:2015 Quality Seal? That we are present in 30 countries? That we have technicians specialising exclusively in solving problems? That we avail of a catalogue with over 600 articles and you can consult the stock in real time? That we design and manufacture special tools in 15 days?

At Hepyc, we are prepared.



Taladrado
Perçage
Drilling

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Brocas Metal Duro / Forets Carbure / Hard Metal Drill-bits

1175	HM-MD	DIN 6537 S	TIALN		3XD	HRC 55	20
1176	HM-MD	DIN 6537 S	TIALN		3XD	HRC 55	21
1177	HM-MD	DIN 6537 L	TIALN		5XD	HRC 55	22
1178	HM-MD	DIN 6537 EL	TIALN		8XD	HRC 55	23
1179	HM-MD				1XD	HRC 55	23
1180	HM-MD				1XD	HRC 55	24
1182	HM-MD		TIN		1XD	HRC 45-55	24
1120	HM-MD	DIN 6539			2XD	1400 N/mm2	25
1109	HM-MD	DIN 338N			4XD	1400 N/mm2	26

Brocas con mango cilíndrico cortas / Forets à queue cylindrique courtes / Short straight shank drill-bits (DIN 338)

1101	HSS	DIN338N				800 N/mm2	27
1101/1	HSS	DIN338N				800 N/mm2	29
1104	HSS	DIN338N				800 N/mm2	29
1104/9	HSS	DIN338N				800 N/mm2	30
1501	HSS					800 N/mm2	30
1158	HSS	DIN338NSP				800 N/mm2	31
1158/9	HSS	DIN338NSP				800 N/mm2	32
1108	HSS	DIN338NSP	TIN			1100 N/mm2	33
1103	HSS	DIN338H				CU	34
1105	HSSCO	DIN 338N				1100 N/mm2	35

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						Pág.
Brocas con mango cilíndrico cortas / Forets à queue cylindrique courtes / Short straight shank drill-bits (DIN 338)						
1105/9	HSSCO	DIN 338N			800 N/mm2	36
1161	HSSCO	DIN338N	TIALN		1400 N/mm2	37
1107	HSSCO	DIN338N			1100 N/mm2	37
1106	HSSCO	DIN338W			INOX	38
1162	HSSCO	DIN338W	TIALN		INOX	39
1159	HSSCO	DIN338S			1100 N/mm2	40
1160	HSSCO	DIN338S	TIALN		1400 N/mm2	41
1110	WIDIA	DIN338N			1400 N/mm2	42
Brocas con mango cilíndrico largas / Forets à queue cylindrique longues / Long straight shank drill-bits (DIN 340)						
1112	HSS	DIN 340 N			800 N/mm2	43
1113	HSSCO	DIN 340 N			1100 N/mm2	44
1114	HSSCO	DIN 340 S			1100 N/mm2	45
1164	HSSCO	DIN 340 S	TIALN		1400 N/mm2	46
Brocas con mango cilíndrico extra largas / Forets à queue cylindrique extra longues / Extra-long straight shank drill-bits (DIN 1869)						
1115	HSS	DIN 1869 N			800 N/mm2	47
1165	HSSCO	DIN 1869 S			1100 N/mm2	48
Brocas con mango cilíndrico extra cortas / Forets à queue cylindrique extra-courtes / Extra-short straight shank drill-bits (DIN 1897)						
1116	HSS	DIN 1897 N			800 N/mm2	49
1117	HSS	DIN 1897 N			800 N/mm2	50
1118	HSSCO	DIN 1897 N			1100 N/mm2	50

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						Pág.
1119	HSSCO	DIN 1897 N				51
1166	HSSCO	DIN 1897 S				51
1167	HSSCO	DIN 1897 S				52

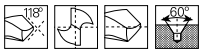
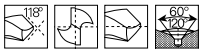
Brocas con mango cónico / Forets à queue conique / Taper straight shank drill-bits

1121	HSS	DIN 345 N				800 N/mm2	53
1121/9	HSS	DIN 345 N				800 N/mm2	55
1123	WIDIA	DIN 345 N				1400 N/mm2	56
1122	HSSCO	DIN 345 N				1100 N/mm2	57
N 1181	HSSCO					HRC 55	58
1125	HSS	DIN 341 N				800 N/mm2	59
1126	HSS	DIN 1870 N				800 N/mm2	60
N 1139	HSS	DIN 343				800 N/mm2	61

Brocas bidiametrales / Forets biétagés / Two-diameter drill-bits

1127	HSS	DIN 8376				800 N/mm2	62
1128	HSS	DIN 8374				800 N/mm2	62
1152	HSS	DIN 8378				800 N/mm2	62
1129	HSS	DIN 8377				800 N/mm2	63
1130	HSS	DIN 8375				800 N/mm2	63
1153	HSS	DIN 8379				800 N/mm2	63

Brocas de centrar / Forets à centrer / Centre drill-bits

1131	HSS					800 N/mm2	64
1132	HSS	DIN 333 A				800 N/mm2	64
1133	HSS	DIN 333 A				800 N/mm2	64
1134	HSS					800 N/mm2	65
1135	HSS	DIN 333 R				800 N/mm2	65
1137	HSS	DIN 333 B				800 N/mm2	65
1138	HSSCO	CNC	CNC			1100 N/mm2	66
1155	HSSCO	CNC	CNC			1100 N/mm2	66

Brocas fresa / Forets fraiseur / Mill drills

5114	HSS					800 N/mm2	67
5115	HSS		TIN			1100 N/mm2	67

Accesorios / Accessoires / Accessories

6110	**Espiga /** Queue à tenon / Bit shank						68
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6114	**Contrapunto /** Contrepointe / Fixed centre						68
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FORMULARIO BROCAS ESPECIALES

FICHE TECHNIQUE FORETS SPECIAUX / TECHNICAL ENQUIRY FOR SPECIAL DRILL BITS

Fecha / Date: .....

Empresa / Entreprise / Company: ..... Contacto / Contact: .....

Dirección / Adresse / Adress: ..... Población / Ville / Town: .....

Tel / Fax: ..... E-mail: .....

.....

TRABAJO A REALIZAR / TRAVAIL DEMANDE / REQUESTED WORK

Material / Matière / Material ..... Norma / Norme / Norm: .....

Dureza / Dureté / Hardness ..... HB ..... HRc Resistencia / Résistance / Resistance ..... N/mm^2

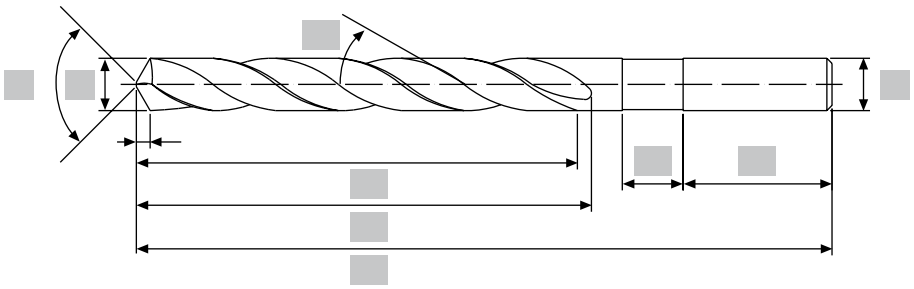
Tipo viruta: ☐ Corta ☐ Larga ☐ Polvo
Type copeau Courte Longue Poussière
Shaving Short Long Powder

Máquina / Machine ..... Refrigerante / Réfrigérant / Coolant .....

Posición / Position ☐ Horizontal ☐ Vertical ☐ V. Corte ☐ V. avance
V. Coupe Avance
Cutting Speed Feed

HERRAMIENTA / OUTIL / TOOL

Descripción / Description ..... Cantidad / Quantité / Quantity .....



Mango: ☐ Cilíndrico ☐ Weldon ☐ Cónico ☐ Rebajado
Queue: Cylindrique Weldon Conique Réduite
Shank: Straight Weldon Taper Reduced

Afilado: ☐ Convencional ☐ Corrección de labios ☐ Split Point ☐ Puntos soldadura ☐ Placa carburo
Affûtage: Normal Correction de lèvres Affûtage en croix Points de soudure plaquette carbure
Sharpened: Convencional Lip correction Split Point Welding points Carbide sheet

Material / Matière / Material: ☐ HSS ☐ HSSE ☐ HM ☐ HSS-HM

Superficie / Surface: ☐ Brillante ☐ Negra ☐ Recubrimiento
Brillant Noire Revêtement
Brilliant Black Coating

COMENTARIOS / COMMENTAIRES/ COMMENTS: .....

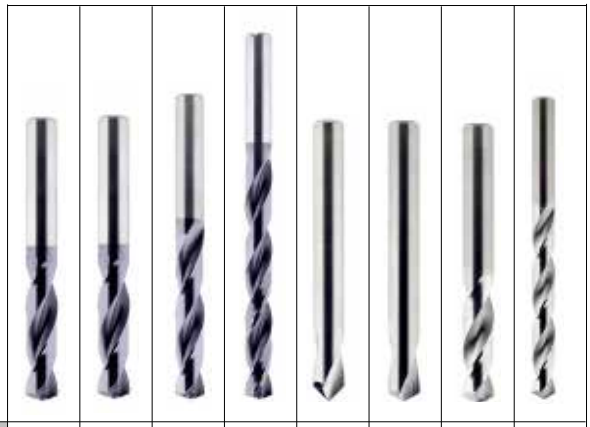
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Servicio de Herramienta Especial - Service Outils Spéciaux - Special Tools Service
Tel. (+34) 93 387 32 99 - Fax.(+ 34) 93 383 33 08 - especiales@hepycrf.com

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE



Prof	3xd	3xd	5xd	8xd	1xd	1xd	2xd	4xd
Punta	140°	140°	140°	140°	90°	120°	118°	118°
Refrig.	No	Si	Si	Si	No	No	No	No
Mat.	HM	HM	HM	HM	HM	HM	HM	HM
Rec.	TIALN	TIALN	TIALN	TIALN				
DIN	6537S	6537S	6537L	6537XL			6539	338
Ref.	1175	1176	1177	1178	1179	1180	1120	1109

Mat.	Avance (mm/rpm) Ø2	Ø5	Ø10	Ø15	Ø20	Vc (m/min)							
1.1													
1.2													
1.3	0,01-0,18	0,12-0,28	0,14-0,35	0,16-0,38	0,18-,042	40-80	45-85	45-85	45-85	45-85	45-85	30-60	30-60
1.4	0,01-0,18	0,12-0,28	0,14-0,35	0,16-0,38	0,18-,042	35-75	40-85	40-85	40-85	40-85	40-85	25-50	25-50
1.5	0,01-0,18	0,12-0,28	0,14-0,35	0,16-0,38	0,18-,042	30-50	35-55	35-55	35-55	35-55	35-55	20-40	20-40
1.6	0,01-0,15	0,10-0,16	0,12-0,25	0,14-0,25	0,15-0,30	25-40	30-45	30-45	30-45	30-45	30-45	15-25	15-25
1.7	0,01-0,15	0,10-0,16	0,12-0,25	0,14-0,25	0,15-0,30		20-35	20-35		20-35	20-35		
1.8	0,01-0,15	0,10-0,16	0,12-0,25	0,14-0,25	0,15-0,30		15-25			15-25	15-25		
2.1										40-55	40-55		
2.2										30-45	30-45		
2.3													
2.4													
3.1										40-55	40-55		
3.2	0,10-0,20	0,12-0,25	0,15-0,40	0,20-0,40	0,25-0,50	50-110	60-130	60-130	60-130	60-130	60-130		
3.3										40-55	40-55		
3.4	0,10-0,20	0,12-0,25	0,15-0,40	0,20-0,40	0,25-0,50	50-110	60-130	60-130	60-130	60-130	60-130		
4.1										40-50	40-50		
4.2	0,03-0-05	0,05-0,08	0,08-0,12	0,12-0,16	0,16-0,20		30-40	30-40	30-40	30-40	30-40		
4.3	0,03-0-05	0,05-0,08	0,08-0,12	0,12-0,16	0,16-0,20		25-30	25-30	25-30	25-30	25-30		
5.1										40-50	40-50		
5.2	0,03-0-05	0,05-0,08	0,08-0,12	0,12-0,16	0,16-0,20		30-40	30-40	30-40	30-40	30-40		
5.3	0,03-0-05	0,05-0,08	0,08-0,12	0,12-0,16	0,16-0,20		25-30	25-30	25-30	25-30	25-30		
6.1										180-220	180-220		
6.2										180-220	180-220		
6.3										180-220	180-220		
6.4										180-220	180-220		
6.5										180-220	180-220		
7.1										150-180	150-180		
7.2										150-180	150-180		
7.3										120-150	120-150		
7.4										150-180	150-180		
8.1										50-60	50-60		
8.2										80-100	80-100		

Optima / Optimun Alternativo / Alternative

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE



Punta	118°	118°	118°	118°	118°	135°	135°	135°
Ejec.	N	N	NSP	NSP	N	NSP	NSP	W
Hel.	30°	30°-LH	30°	30°	18°	30°	30°	40°
Mat.	HSS	HSS	HSS	HSS	HSS	HSSCO	HSSCO	HSSCO
Rec.				TIN			TIALN	
DIN	338	338	338	338	338	338	338	338
Ref.	1101	1101/5	1158	1108	1103	1105	1161	1106

Mat.	Avance (mm/rpm) Ø2	Ø5	Ø10	Ø15	Ø20	Vc (m/min)							
1.1	0,04-0,06	0,08-0,012	0,20-0,30	0,30-0,40	0,35-0,46	25-35	25-35	25-35	35-45		25-35	35-50	
1.2	0,04-0,06	0,08-0,012	0,20-0,30	0,30-0,40	0,35-0,46	20-30	20-30	20-30	25-40		20-30	30-45	
1.3	0,02-0,03	0,05-0,07	0,12-0,18	0,18-0,24	0,22-0,28	15-25	15-25	15-25	20-35		15-25	22-38	
1.4	0,02-0,03	0,05-0,07	0,12-0,18	0,18-0,24	0,22-0,28				15-30		12-20	18-30	
1.5	0,01-0,04	0,04-0,09	0,09-0,18	0,12-0,28	0,14-0,33						6-16	10-25	
1.6	0,01-0,04	0,04-0,09	0,09-0,18	0,12-0,28	0,14-0,33								
1.7													
1.8													
2.1	0,02-0,04	0,07-0,09	0,15-0,21	0,20-0,28	0,25-0,33						14-16	20-25	14-16
2.2	0,01-0,03	0,05-0,07	0,14-0,18	0,20-0,24	0,22-0,28						10-14	15-20	10-14
2.3	0,02-0,04	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33						8-12	12-18	8-12
2.4	0,01-0,02	0,03-0,04	0,07-0,09	0,10-0,12	0,12-0,14								
3.1	0,04-0,06	0,08-0,012	0,20-0,30	0,30-0,40	0,35-0,46	25-30	25-30	25-30	35-40		25-30	38-45	
3.2	0,04-0,06	0,08-0,012	0,20-0,30	0,30-0,40	0,35-0,46								
3.3	0,04-0,06	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33	12-16	12-16	12-16	15-20		12-16	18-25	
3.4	0,02-0,04	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33								
4.1	0,01-0,03	0,04-0,06	0,08-0,10	0,10-0,14	0,16-0,20								8-10
4.2	0,01-0,03	0,03-0,05	0,06-0,10	0,10-0,14	0,16-0,20								
4.3	0,01-0,03	0,03-0,05	0,06-0,10	0,10-0,14	0,16-0,20								
5.1	0,01-0,03	0,04-0,06	0,08-0,10	0,10-0,14	0,16-0,20								
5.2	0,01-0,03	0,03-0,05	0,06-0,10	0,10-0,14	0,16-0,20								
5.3	0,01-0,03	0,03-0,05	0,06-0,10	0,10-0,14	0,16-0,20								
6.1	0,03-0,05	0,08-0,10	0,18-0,24	0,25-0,32	0,30-0,37					40-60			
6.2	0,03-0,05	0,08-0,10	0,18-0,24	0,25-0,32	0,30-0,37					40-60			
6.3	0,02-0,04	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33	40-60	40-60	40-60	50-70		40-60	60-80	
6.4	0,03-0,05	0,08-0,010	0,18-0,24	0,25-0,32	0,30-0,37					25-30			
6.5	0,02-0,04	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33	30-50	30-50	30-50	40-65		30-50	45-75	
7.1	0,03-0,05	0,08-0,012	0,18-0,24	0,25-0,32	0,30-0,37				75-90				60-80
7.2	0,02-0,04	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33	50-60	50-60	50-60	65-75		50-60	70-80	50-60
7.3	0,02-0,04	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33								30-40
7.4	0,02-0,04	0,05-0,09	0,18-0,21	0,20-0,28	0,25-0,33				65-90				50-70
8.1	0,03-0,04	0,06-0,07	0,12-0,13	0,16-0,17	0,25-0,26	20-25	20-25	20-25	25-35		20-25	30-35	
8.2	0,03-0,04	0,06-0,07	0,12-0,13	0,16-0,17	0,25-0,26								

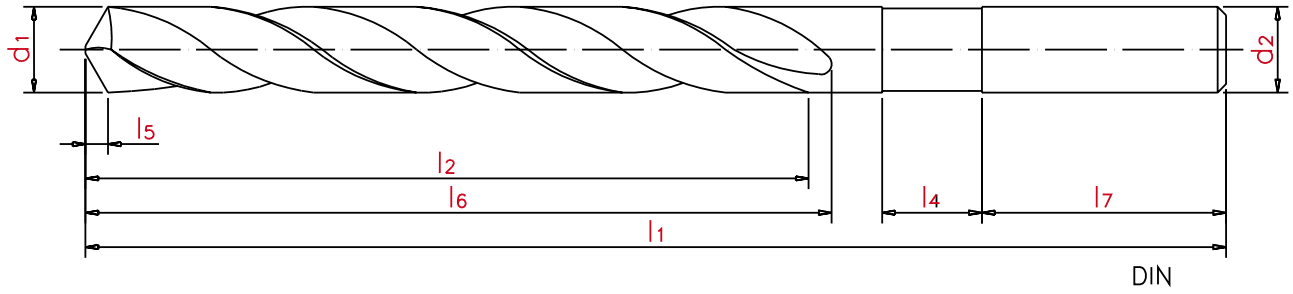
Optima / Optimun **Alternativo / Alternative**

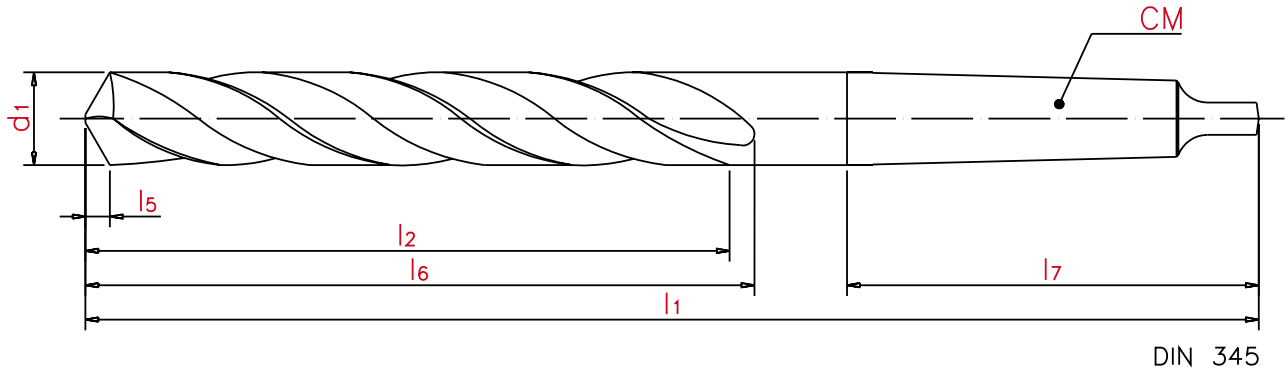
TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

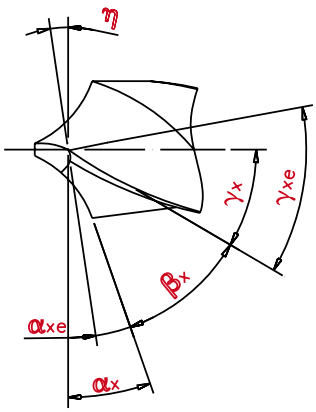


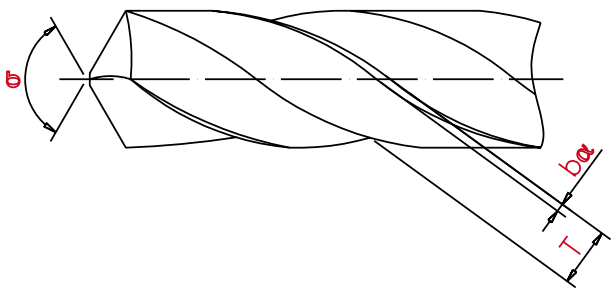
135°	135°	135°	118°	118°	135°	135°	135°	118°	135°	135°	135°	135°	135°	118°	135°	118°	128°	118°	118°
W	TS	TS	N	N	NSP	TS	TS	N	TS	N	NSP	TS	TS	N	NSP	N	N	N	N
35°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	15°	30°	30°
HSSCO	HSSCO	HSSCO	"HSS WIDIA"	HSS	HSSCO	HSSCO	HSSCO	HSS	HSSCO	HSS	HSSCO	HSSCO	HSSCO	HSS	HSSCO	"HSS WIDIA"	HSSCO	HSS	HSS
TIALN		TIALN					TIALN						TIALN						
338	338	338	338	340	340	340	340	1869	1869	1897	1897	1897	1897	345	345	345		341	1870
1162	1159	1160	1110	1112	1113	1114	1164	1115	1165	1116	1118	1166	1167	1121	1122	1123	1181	1125	1126
Vc (m/min)																			
				25-35	25-35			25-35		25-35	25-35			25-35	25-35			25-35	25-35
	20-30	30-45	30-45	20-30	20-30	20-30	30-45	20-30	20-30	20-30	20-30	20-30	30-45	20-30	20-30	30-45		20-30	20-30
	15-25	22-38	22-38	15-25	15-25	15-25	22-38	15-25	15-25	15-25	15-25	15-25	22-38	15-25	15-25	22-38		15-25	15-25
	12-20	18-30	18-30		12-20	12-20	18-30		12-20		12-20	12-20	18-30		12-20	18-30			
	6-16	10-25	10-25		6-16	6-16	10-25				6-16	6-16	10-25		6-16	10-25	6-9		
			6-9													6-9	6-9		
																	4-6		
20-25	14-16	20-25			14-16	14-16	20-25		14-16		14-16	14-16	20-25		14-16				
15-20	10-14	15-20			10-14	10-14	15-20		10-14		10-14	10-14	15-20		10-14				
12-18	8-12	12-18			8-12	8-12	12-18		8-12		8-12	8-12	12-18		8-12				
				25-30	25-30			25-30		25-30	25-30			25-30	25-30			25-30	25-30
			30-40													30-40			
				12-16	12-16			12-16		12-16	12-16			12-16	12-16			12-16	12-16
			15-20													15-20			
12-15																			
																	5-7		
																	4-6		
				40-60	40-60			40-60		40-60	40-60			40-60	40-60			40-60	40-60
				30-50	30-50			30-50		30-50	30-50			30-50	30-50			30-50	30-50
85-100	60-80	85-100				60-80	85-100		60-80			60-80	85-100						
75-90	50-60	75-90		50-60	50-60	50-60	75-90	50-60	50-60	50-60	50-60	50-60	75-90	50-60	50-60			50-60	50-60
45-60	30-40	45-60				30-40	45-60		30-40			30-40	45-60						
75-95	50-70	70-90				50-70	70-90		50-70			50-70	70-90						
			30-35	20-25	20-25			20-25		20-25	20-25			20-25	20-25	30-35		20-25	20-25
			15-20													15-20			

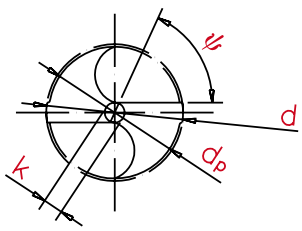
TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY



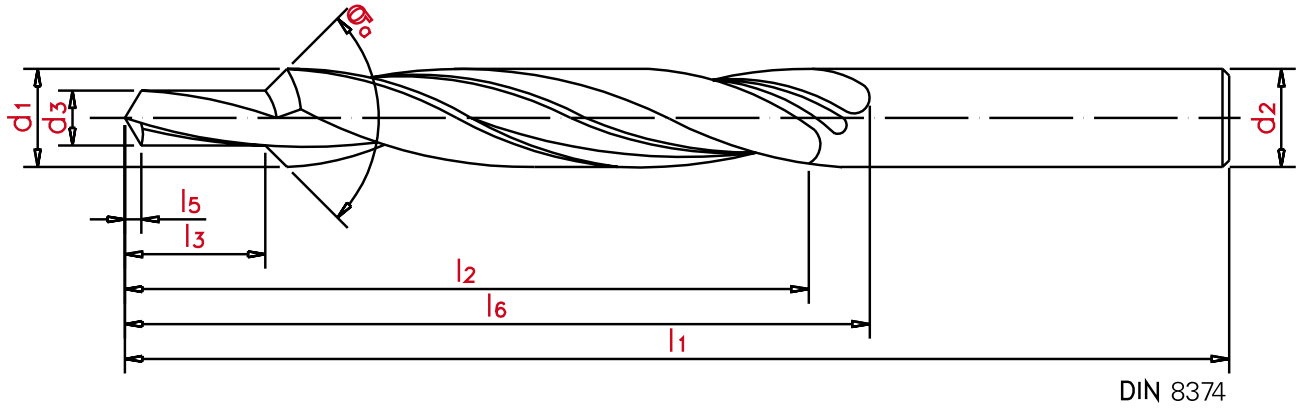




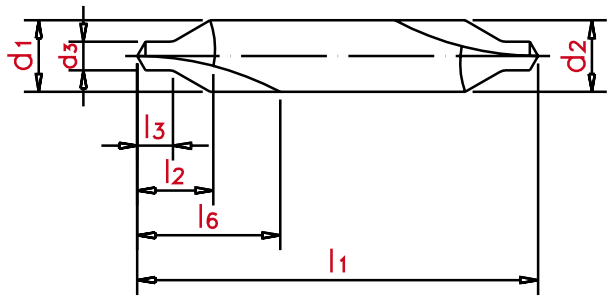




TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY



DIN 8374



DIN 333–A

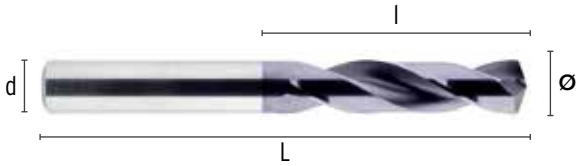
l1	**Longitud total** / Longueur totale / Total length
l2	**Longitud de corte** / Longueur de coupe / Length of cut
l3	**Longitud de corte del diámetro menor** / Longueur de coupe du plus petit diamètre / Length of cut of the smaller diametre
l7	**Longitud del mango-del cono** / Longueur de la queue du cône / Length of cone shank
l5	**Longitud de punta** / Longueur de pointe / Length of tip
l6	**Longitud de ranura** / Longueur de rainure / Length of groove
l4	**Diámetro de broca** / Diamètre de foret / Drill-bit diametre
d1	**Longitud de sangrado** / Longueur d'indentation / Bled length
d3	**Diámetro inicial** / Diamètre initial / Initial diametre
d2	**Diámetro de mango** / Diamètre de queue / Shank diametre
CM	**Tamaño del cono morse** / Taille du cône morse / Morse taper size
dp	**Diámetro posterior** / Diamètre postérieur / Rear diametre
bα	**Ancho de fase** / Largeur de phase / Phase width
T	**Ancho de alma** / Largeur d'âme / Core width
k	**Espesor del núcleo** / Épaisseur du noyau / Thickness of nucleus
σ	**Ángulo de la punta** / Angle de la pointe / Tip angle
σa	**Ángulo de avellanado** / Angle de chanfreinage / Countersink angle
ψ	**Ángulo de corte transversal** / Angle de coupe transversale / Transversal cut angle
γxe	**Ángulo de corte lateral efectivo** / Angle de coupe latérale effectif / Effective lateral cut angle
γx	**Ángulo de corte lateral** / Angle de coupe latérale / Lateral cut angle
αxe	**Ángulo de incidencia lateral efectivo** / Angle d'incidence latérale effectif / Effective lateral angle of incidence
αx	**Ángulo de incidencia lateral** / Angle d'incidence latérale / Lateral angle of incidence
βx	**Ángulo ortogonal de la herramienta** / Angle orthogonal de l'outil / Orthogonal angle of the tool
η	**Ángulo del sentido efectivo del corte** / Angle du sens effectif de la coupe / Effective direction of cut angle

BROCAS METAL DURO
FORETS CARBURE / HARD METAL DRILL-BITS

1175 HM-MD DIN 6537 S — 3XD — 140° — 30° — DIN 6535 HA — TIALN

Aceros / HRC 45-55 — Aciers / Steel

Aplicaciones / Applications



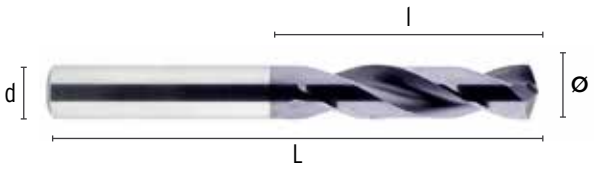
ø mm	d mm	€	L mm	l mm	
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3,10	6,00	*33,30*	62,00	20,00	1
3,20	6,00	*33,30*	62,00	20,00	1
3,30	6,00	*33,30*	62,00	20,00	1
3,40	6,00	*33,30*	62,00	20,00	1
3,50	6,00	*33,30*	62,00	20,00	1
3,60	6,00	*33,30*	62,00	20,00	1
3,70	6,00	*33,30*	62,00	20,00	1
3,80	6,00	*33,30*	66,00	24,00	1
3,90	6,00	*33,30*	66,00	24,00	1
4,00	6,00	*33,30*	66,00	24,00	1
4,10	6,00	*33,30*	66,00	24,00	1
4,20	6,00	*33,30*	66,00	24,00	1
4,30	6,00	*33,30*	66,00	24,00	1
4,40	6,00	*33,30*	66,00	24,00	1
4,50	6,00	*33,30*	66,00	24,00	1
4,60	6,00	*33,30*	66,00	24,00	1
4,70	6,00	*33,30*	66,00	24,00	1
4,80	6,00	*33,30*	66,00	28,00	1
4,90	6,00	*33,30*	66,00	28,00	1
5,00	6,00	*33,30*	66,00	28,00	1
5,10	6,00	*33,30*	66,00	28,00	1
5,20	6,00	*33,30*	66,00	28,00	1
5,30	6,00	*33,30*	66,00	28,00	1
5,40	6,00	*33,30*	66,00	28,00	1
5,50	6,00	*33,30*	66,00	28,00	1
5,60	6,00	*33,30*	66,00	28,00	1
5,70	6,00	*33,30*	66,00	28,00	1
5,80	6,00	*33,30*	66,00	28,00	1
5,90	6,00	*33,30*	66,00	28,00	1
6,00	6,00	*33,30*	66,00	28,00	1
6,10	8,00	*50,23*	79,00	34,00	1
6,20	8,00	*50,23*	79,00	34,00	1
6,30	8,00	*50,23*	79,00	34,00	1
6,40	8,00	*50,23*	79,00	34,00	1
6,50	8,00	*50,23*	79,00	34,00	1
6,60	8,00	*50,23*	79,00	34,00	1
6,70	8,00	*50,23*	79,00	34,00	1
6,80	8,00	*50,23*	79,00	34,00	1
6,90	8,00	*50,23*	79,00	34,00	1
7,00	8,00	*50,23*	79,00	34,00	1
7,10	8,00	*50,23*	79,00	41,00	1
7,20	8,00	*50,23*	79,00	41,00	1
7,30	8,00	*50,23*	79,00	41,00	1
7,40	8,00	*50,23*	79,00	41,00	1
7,50	8,00	*50,23*	79,00	41,00	1
7,60	8,00	*50,23*	79,00	41,00	1
7,70	8,00	*50,23*	79,00	41,00	1
7,80	8,00	*50,23*	79,00	41,00	1
7,90	8,00	*50,23*	79,00	41,00	1
8,00	8,00	*50,23*	79,00	41,00	1
8,10	10,00	*76,26*	89,00	47,00	1
8,20	10,00	*76,26*	89,00	47,00	1
8,30	10,00	*76,26*	89,00	47,00	1
8,40	10,00	*76,26*	89,00	47,00	1
8,50	10,00	*76,26*	89,00	47,00	1
8,60	10,00	*76,26*	89,00	47,00	1
8,70	10,00	*76,26*	89,00	47,00	1
8,80	10,00	*76,26*	89,00	47,00	1
8,90	10,00	*76,26*	89,00	47,00	1
9,00	10,00	*76,26*	89,00	47,00	1
9,10	10,00	*76,26*	89,00	47,00	1
9,20	10,00	*76,26*	89,00	47,00	1
9,30	10,00	*76,26*	89,00	47,00	1
9,40	10,00	*76,26*	89,00	47,00	1
9,50	10,00	*76,26*	89,00	47,00	1
9,60	10,00	*76,26*	89,00	47,00	1
9,70	10,00	*76,26*	89,00	47,00	1
9,80	10,00	*76,26*	89,00	47,00	1
9,90	10,00	*76,26*	89,00	47,00	1
10,00	10,00	*76,26*	89,00	47,00	1
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10,20	12,00	*109,26*	102,00	55,00	1
10,30	12,00	*109,26*	102,00	55,00	1
10,40	12,00	*109,26*	102,00	55,00	1
10,50	12,00	*109,26*	102,00	55,00	1
10,60	12,00	*109,26*	102,00	55,00	1
10,70	12,00	*109,26*	102,00	55,00	1
10,80	12,00	*109,26*	102,00	55,00	1
10,90	12,00	*109,26*	102,00	55,00	1
11,00	12,00	*109,26*	102,00	55,00	1
11,50	12,00	*109,26*	102,00	55,00	1
11,80	12,00	*109,26*	102,00	55,00	1
12,00	12,00	*109,26*	102,00	55,00	1
12,50	14,00	*146,74*	107,00	60,00	1
12,80	14,00	*146,74*	107,00	60,00	1
13,00	14,00	*146,74*	107,00	60,00	1
13,50	14,00	*146,74*	107,00	60,00	1
13,80	14,00	*146,74*	107,00	60,00	1
14,00	14,00	*146,74*	107,00	60,00	1
14,50	16,00	*192,90*	115,00	65,00	1
14,80	16,00	*192,90*	115,00	65,00	1
15,00	16,00	*192,90*	115,00	65,00	1
15,80	16,00	*192,90*	115,00	65,00	1
16,00	16,00	*192,90*	115,00	65,00	1
16,50	18,00	*247,86*	123,00	73,00	1
17,00	18,00	*247,86*	123,00	73,00	1
17,50	18,00	*247,86*	123,00	73,00	1
18,00	18,00	*247,86*	123,00	73,00	1
18,50	20,00	*306,26*	131,00	79,00	1
19,00	20,00	*306,26*	131,00	79,00	1
19,50	20,00	*306,26*	131,00	79,00	1
20,00	20,00	*306,26*	131,00	79,00	1

BROCAS METAL DURO
FORETS CARBURE / HARD METAL DRILL-BITS

1176 HM-MD DIN 6537 S | 3XD | 140° | 30° | DIN 6535 HA | TIALN

Aceros / HRC 45-55 — Aciers / Steel

Aplicaciones / Applications



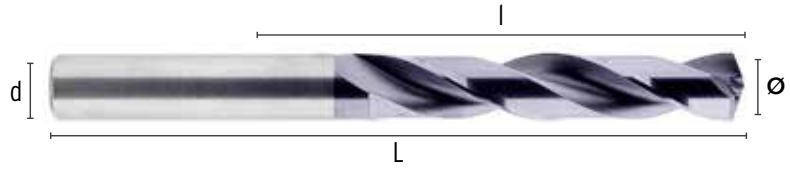
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3,20	6,00	*41,66*	62,00	20,00	1
3,30	6,00	*41,66*	62,00	20,00	1
3,40	6,00	*41,66*	62,00	20,00	1
3,50	6,00	*41,66*	62,00	20,00	1
3,60	6,00	*41,66*	62,00	20,00	1
3,70	6,00	*41,66*	62,00	20,00	1
3,80	6,00	*41,66*	66,00	24,00	1
3,90	6,00	*41,66*	66,00	24,00	1
4,00	6,00	*41,66*	66,00	24,00	1
4,10	6,00	*41,66*	66,00	24,00	1
4,20	6,00	*41,66*	66,00	24,00	1
4,30	6,00	*41,66*	66,00	24,00	1
4,40	6,00	*41,66*	66,00	24,00	1
4,50	6,00	*41,66*	66,00	24,00	1
4,60	6,00	*41,66*	66,00	24,00	1
4,70	6,00	*41,66*	66,00	24,00	1
4,80	6,00	*41,66*	66,00	28,00	1
4,90	6,00	*41,66*	66,00	28,00	1
5,00	6,00	*41,66*	66,00	28,00	1
5,10	6,00	*41,66*	66,00	28,00	1
5,20	6,00	*41,66*	66,00	28,00	1
5,30	6,00	*41,66*	66,00	28,00	1
5,40	6,00	*41,66*	66,00	28,00	1
5,50	6,00	*41,66*	66,00	28,00	1
5,60	6,00	*41,66*	66,00	28,00	1
5,70	6,00	*41,66*	66,00	28,00	1
5,80	6,00	*41,66*	66,00	28,00	1
5,90	6,00	*41,66*	66,00	28,00	1
6,00	6,00	*41,66*	66,00	28,00	1
6,10	8,00	*72,23*	79,00	34,00	1
6,20	8,00	*72,23*	79,00	34,00	1
6,30	8,00	*72,23*	79,00	34,00	1
6,40	8,00	*72,23*	79,00	34,00	1
6,50	8,00	*72,23*	79,00	34,00	1
6,60	8,00	*72,23*	79,00	34,00	1
6,70	8,00	*72,23*	79,00	34,00	1
6,80	8,00	*72,23*	79,00	34,00	1
6,90	8,00	*72,23*	79,00	34,00	1
7,00	8,00	*72,23*	79,00	34,00	1
7,10	8,00	*72,23*	79,00	41,00	1
7,20	8,00	*72,23*	79,00	41,00	1
7,30	8,00	*72,23*	79,00	41,00	1
7,40	8,00	*72,23*	79,00	41,00	1
7,50	8,00	*72,23*	79,00	41,00	1
7,60	8,00	*72,23*	79,00	41,00	1
7,70	8,00	*72,23*	79,00	41,00	1
7,80	8,00	*72,23*	79,00	41,00	1
7,90	8,00	*72,23*	79,00	41,00	1
8,00	8,00	*72,23*	79,00	41,00	1
8,10	10,00	*107,37*	89,00	47,00	1
8,20	10,00	*107,37*	89,00	47,00	1
8,30	10,00	*107,37*	89,00	47,00	1
8,40	10,00	*107,37*	89,00	47,00	1
8,50	10,00	*107,37*	89,00	47,00	1
8,60	10,00	*107,37*	89,00	47,00	1
8,70	10,00	*107,37*	89,00	47,00	1
8,80	10,00	*107,37*	89,00	47,00	1
8,90	10,00	*107,37*	89,00	47,00	1
9,00	10,00	*107,37*	89,00	47,00	1
9,10	10,00	*107,37*	89,00	47,00	1
9,20	10,00	*107,37*	89,00	47,00	1
9,30	10,00	*107,37*	89,00	47,00	1
9,40	10,00	*107,37*	89,00	47,00	1
9,50	10,00	*107,37*	89,00	47,00	1
9,60	10,00	*107,37*	89,00	47,00	1
9,70	10,00	*107,37*	89,00	47,00	1
9,80	10,00	*107,37*	89,00	47,00	1
9,90	10,00	*107,37*	89,00	47,00	1
10,00	10,00	*107,37*	89,00	47,00	1
10,10	12,00	*149,10*	102,00	55,00	1
10,20	12,00	*149,10*	102,00	55,00	1
10,30	12,00	*149,10*	102,00	55,00	1
10,40	12,00	*149,10*	102,00	55,00	1
10,50	12,00	*149,10*	102,00	55,00	1
10,60	12,00	*149,10*	102,00	55,00	1
10,70	12,00	*149,10*	102,00	55,00	1
10,80	12,00	*149,10*	102,00	55,00	1
10,90	12,00	*149,10*	102,00	55,00	1
11,00	12,00	*149,10*	102,00	55,00	1
11,50	12,00	*149,10*	102,00	55,00	1
11,80	12,00	*149,10*	102,00	55,00	1
12,00	12,00	*149,10*	102,00	55,00	1
12,50	14,00	*195,37*	107,00	60,00	1
12,80	14,00	*195,37*	107,00	60,00	1
13,00	14,00	*195,37*	107,00	60,00	1
13,50	14,00	*195,37*	107,00	60,00	1
14,00	14,00	*195,37*	107,00	60,00	1
14,50	16,00	*246,43*	115,00	65,00	1
15,00	16,00	*246,43*	115,00	65,00	1
16,00	16,00	*246,43*	115,00	65,00	1
16,50	18,00	*314,10*	123,00	73,00	1
17,00	18,00	*314,10*	123,00	73,00	1
17,50	18,00	*314,10*	123,00	73,00	1
18,00	18,00	*314,10*	123,00	73,00	1
18,50	20,00	*426,23*	131,00	79,00	1
19,00	20,00	*426,23*	131,00	79,00	1
19,50	20,00	*426,23*	131,00	79,00	1
20,00	20,00	*426,23*	131,00	79,00	1

BROCAS METAL DURO
FORETS CARBURE / HARD METAL DRILL-BITS

1177 HM-MD DIN 6537 L — 5XD — 140° — 30° — DIN 6535 HA — TIALN

Aceros / HRC 45-55 — Aciers / Steel

Aplicaciones / Applications



ø mm	d mm	€	L mm	l mm	
3,00	6,00	*53,66*	66,00	28,00	1
3,10	6,00	*53,66*	66,00	28,00	1
3,20	6,00	*53,66*	66,00	28,00	1
3,30	6,00	*53,66*	66,00	28,00	1
3,40	6,00	*53,66*	66,00	28,00	1
3,50	6,00	*53,66*	66,00	28,00	1
3,60	6,00	*53,66*	66,00	28,00	1
3,70	6,00	*53,66*	66,00	28,00	1
3,80	6,00	*53,66*	74,00	36,00	1
3,90	6,00	*53,66*	74,00	36,00	1
4,00	6,00	*53,66*	74,00	36,00	1
4,10	6,00	*53,66*	74,00	36,00	1
4,20	6,00	*53,66*	74,00	36,00	1
4,30	6,00	*53,66*	74,00	36,00	1
4,40	6,00	*53,66*	74,00	36,00	1
4,50	6,00	*53,66*	74,00	36,00	1
4,60	6,00	*53,66*	74,00	36,00	1
4,70	6,00	*53,66*	74,00	36,00	1
4,80	6,00	*53,66*	82,00	44,00	1
4,90	6,00	*53,66*	82,00	44,00	1
5,00	6,00	*53,66*	82,00	44,00	1
5,10	6,00	*53,66*	82,00	44,00	1
5,20	6,00	*53,66*	82,00	44,00	1
5,30	6,00	*53,66*	82,00	44,00	1
5,40	6,00	*53,66*	82,00	44,00	1
5,50	6,00	*53,66*	82,00	44,00	1
5,60	6,00	*53,66*	82,00	44,00	1
5,70	6,00	*53,66*	82,00	44,00	1
5,80	6,00	*53,66*	82,00	44,00	1
5,90	6,00	*53,66*	82,00	44,00	1
6,00	6,00	*53,66*	82,00	44,00	1
6,10	8,00	*80,90*	91,00	53,00	1
6,20	8,00	*80,90*	91,00	53,00	1
6,30	8,00	*80,90*	91,00	53,00	1
6,40	8,00	*80,90*	91,00	53,00	1
6,50	8,00	*80,90*	91,00	53,00	1
6,60	8,00	*80,90*	91,00	53,00	1
6,70	8,00	*80,90*	91,00	53,00	1
6,80	8,00	*80,90*	91,00	53,00	1
6,90	8,00	*80,90*	91,00	53,00	1
7,00	8,00	*80,90*	91,00	53,00	1
7,10	8,00	*80,90*	91,00	53,00	1
7,20	8,00	*80,90*	91,00	53,00	1
7,30	8,00	*80,90*	91,00	53,00	1
7,40	8,00	*80,90*	91,00	53,00	1
7,50	8,00	*80,90*	91,00	53,00	1
7,60	8,00	*80,90*	91,00	53,00	1
7,70	8,00	*80,90*	91,00	53,00	1
7,80	8,00	*80,90*	91,00	53,00	1
7,90	8,00	*80,90*	91,00	53,00	1
8,00	8,00	*80,90*	91,00	53,00	1
8,10	10,00	*119,70*	103,00	61,00	1
8,20	10,00	*119,70*	103,00	61,00	1
8,30	10,00	*119,70*	103,00	61,00	1
8,40	10,00	*119,70*	103,00	61,00	1
8,50	10,00	*119,70*	103,00	61,00	1
8,60	10,00	*119,70*	103,00	61,00	1
8,70	10,00	*119,70*	103,00	61,00	1
8,80	10,00	*119,70*	103,00	61,00	1
8,90	10,00	*119,70*	103,00	61,00	1
9,00	10,00	*119,70*	103,00	61,00	1
9,10	10,00	*119,70*	103,00	61,00	1
9,20	10,00	*119,70*	103,00	61,00	1
9,30	10,00	*119,70*	103,00	61,00	1
9,40	10,00	*119,70*	103,00	61,00	1
9,50	10,00	*119,70*	103,00	61,00	1
9,60	10,00	*119,70*	103,00	61,00	1
9,70	10,00	*119,70*	103,00	61,00	1
9,80	10,00	*119,70*	103,00	61,00	1
9,90	10,00	*119,70*	103,00	61,00	1
10,00	10,00	*119,70*	103,00	61,00	1
10,10	12,00	*163,80*	118,00	71,00	1
10,20	12,00	*163,80*	118,00	71,00	1
10,30	12,00	*163,80*	118,00	71,00	1
10,40	12,00	*163,80*	118,00	71,00	1
10,50	12,00	*163,80*	118,00	71,00	1
10,60	12,00	*163,80*	118,00	71,00	1
10,70	12,00	*163,80*	118,00	71,00	1
10,80	12,00	*163,80*	118,00	71,00	1
10,90	12,00	*163,80*	118,00	71,00	1
11,00	12,00	*163,80*	118,00	71,00	1
11,50	12,00	*163,80*	118,00	71,00	1
11,80	12,00	*163,80*	118,00	71,00	1
12,00	12,00	*163,80*	118,00	71,00	1
12,50	14,00	*219,97*	124,00	77,00	1
12,80	14,00	*219,97*	124,00	77,00	1
13,00	14,00	*219,97*	124,00	77,00	1
13,50	14,00	*219,97*	124,00	77,00	1
13,80	14,00	*219,97*	124,00	77,00	1
14,00	14,00	*219,97*	124,00	77,00	1
14,50	16,00	*281,70*	133,00	83,00	1
14,80	16,00	*281,70*	133,00	83,00	1
15,00	16,00	*281,70*	133,00	83,00	1
15,80	16,00	*281,70*	133,00	83,00	1
16,00	16,00	*281,70*	133,00	83,00	1
16,50	18,00	*370,37*	143,00	93,00	1
17,00	18,00	*370,37*	143,00	93,00	1
17,50	18,00	*370,37*	143,00	93,00	1
18,00	18,00	*370,37*	143,00	93,00	1
18,50	20,00	*474,94*	153,00	101,00	1
19,00	20,00	*474,94*	153,00	101,00	1
19,50	20,00	*474,94*	153,00	101,00	1
20,00	20,00	*474,94*	153,00	101,00	1

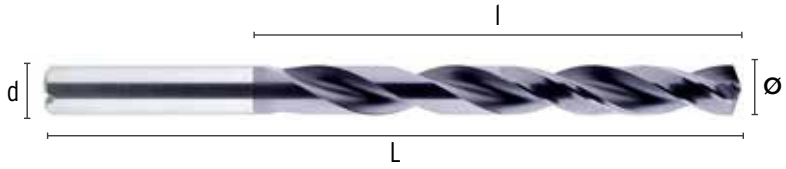
BROCAS METAL DURO
FORETS CARBURE / HARD METAL DRILL-BITS

1178 HM-MD DIN 6537 EL

8XD | 140° | 30° | DIN 6535 HA | TIALN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



ø mm	d mm	€	L mm	l mm	
3,00	6,00	*66,74*	70,00	30,00	1
3,50	6,00	*66,74*	75,00	35,00	1
4,00	6,00	*66,74*	75,00	37,00	1
4,50	6,00	*66,74*	85,00	45,00	1
5,00	6,00	*66,74*	90,00	50,00	1
5,50	6,00	*66,74*	97,00	57,00	1
6,00	6,00	*66,74*	97,00	57,00	1
6,50	8,00	*101,40*	106,00	66,00	1
7,00	8,00	*101,40*	116,00	76,00	1
7,50	8,00	*101,40*	116,00	76,00	1

ø mm	d mm	€	L mm	l mm	
8,00	8,00	*101,40*	116,00	76,00	1
8,50	10,00	*161,77*	131,00	87,00	1
9,00	10,00	*161,77*	131,00	87,00	1
9,50	10,00	*161,77*	139,00	95,00	1
10,00	10,00	*161,77*	139,00	95,00	1
10,50	12,00	*232,66*	155,00	106,00	1
11,00	12,00	*232,66*	155,00	106,00	1
11,50	12,00	*232,66*	163,00	114,00	1
12,00	12,00	*232,66*	163,00	114,00	1

1179 HM-MD

1XD | 90° | 30° | DIN 6535 HA

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



ø mm	d mm	€	L mm	l mm	
6,00	6	*23,46*	65	15	1
8,00	8	*40,40*	80	20	1

ø mm	d mm	€	L mm	l mm	
10,00	10	*58,26*	90	25	1
12,00	12	*81,74*	100	30	1

BROCAS METAL DURO
FORETS CARBURE / HARD METAL DRILL-BITS

1180 HM-MD — 1XD — 120° — 30° — DIN 6535 HA

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



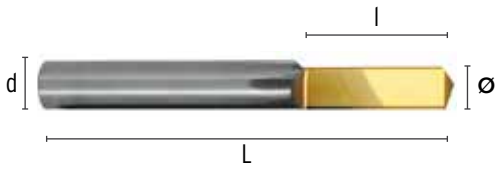
ø mm	d mm	€	L mm	l mm	
6,00	6	*23,46*	65	15	1
8,00	8	*40,40*	80	20	1

ø mm	d mm	€	L mm	l mm	
10,00	10	*58,26*	90	25	1
12,00	12	*81,74*	100	30	1

1182 HM-MD — 1XD — 120° — 0° — TIN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



"Sacar Machos rotos"
"Enlever Taraud cassés"
"Remove Broken Taps"

ø mm	M	€	L mm	l mm	d mm
2,5	M3	*78,46*	38	10	3
3,3	M4	*107,92*	46	14	4
4,2	M5	*121,46*	50	19	5
5	M6	*134,88*	50	23	6

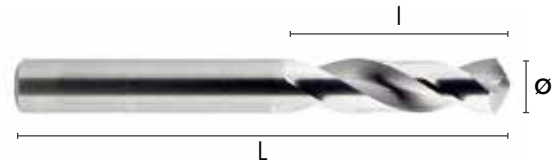
ø mm	M	€	L mm	l mm	d mm
6,8	M8	*148,42*	60	23	8
8,5	M10	*188,83*	80	25	10
10,2	M12	*281,29*	80	35	12

BROCAS METAL DURO
FORETS CARBURE / HARD METAL DRILL-BITS

1120 HM-MD DIN 6539 N — 2XD — 118° — 30°

Aceros 1100 - 1400 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*6,55*	38	12	1
2,10	*7,14*	38	12	1
2,20	*7,14*	40	13	1
2,30	*7,14*	40	13	1
2,40	*7,14*	43	14	1
2,50	*7,14*	43	14	1
2,60	*7,14*	43	14	1
2,70	*9,59*	46	16	1
2,80	*9,77*	46	16	1
2,90	*9,77*	46	16	1
3,00	*9,59*	46	16	1
3,10	*9,77*	49	18	1
3,20	*9,77*	49	18	1
3,30	*9,77*	49	18	1
3,40	*10,91*	52	20	1
3,50	*10,91*	52	20	1
3,60	*12,05*	52	20	1
3,70	*12,05*	52	20	1
3,80	*12,55*	52	20	1
3,90	*12,55*	55	22	1
4,00	*12,55*	55	22	1
4,10	*13,68*	55	22	1
4,20	*13,68*	55	22	1
4,30	*14,36*	58	24	1
4,40	*14,36*	58	24	1
4,50	*14,36*	58	24	1
4,60	*14,36*	58	24	1
4,70	*15,27*	58	24	1
4,80	*15,27*	62	26	1
4,90	*15,27*	62	26	1
5,00	*15,27*	62	26	1
5,10	*20,27*	62	26	1
5,20	*20,27*	62	26	1
5,30	*22,14*	62	26	1
5,40	*22,14*	66	28	1
5,50	*20,27*	66	28	1
5,60	*23,41*	66	28	1
5,70	*23,41*	66	28	1
5,80	*21,27*	66	28	1
5,90	*23,41*	66	28	1
6,00	*21,27*	66	28	1
6,10	*26,14*	70	31	1
6,20	*26,14*	70	31	1
6,30	*26,14*	70	31	1

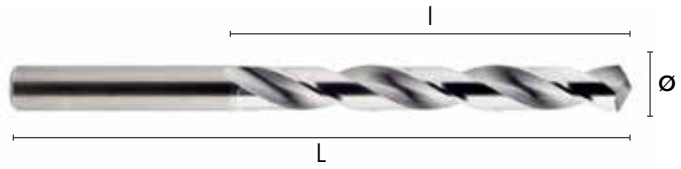
Ø mm	€	L mm	l mm	
6,40	*26,14*	70	31	1
6,50	*26,14*	70	31	1
6,60	*31,64*	70	31	1
6,70	*31,64*	70	31	1
6,80	*31,64*	74	34	1
6,90	*31,64*	74	34	1
7,00	*30,55*	74	34	1
7,10	*37,18*	74	34	1
7,20	*37,18*	74	34	1
7,30	*37,18*	74	34	1
7,40	*37,18*	74	34	1
7,50	*37,18*	74	34	1
7,60	*45,55*	79	37	1
7,70	*45,55*	79	37	1
7,80	*45,55*	79	37	1
7,90	*45,55*	79	37	1
8,00	*41,41*	79	37	1
8,10	*52,36*	79	37	1
8,20	*52,36*	79	37	1
8,30	*52,36*	79	37	1
8,40	*52,36*	79	37	1
8,50	*52,36*	79	37	1
8,60	*55,59*	84	40	1
8,70	*55,59*	84	40	1
8,80	*55,59*	84	40	1
8,90	*55,59*	84	40	1
9,00	*53,55*	84	40	1
9,10	*53,55*	84	40	1
9,20	*55,14*	84	40	1
9,30	*55,14*	84	40	1
9,40	*55,14*	84	40	1
9,50	*58,95*	84	40	1
9,60	*58,95*	89	43	1
9,70	*58,95*	89	43	1
9,80	*58,95*	89	43	1
9,90	*58,95*	89	43	1
10,00	*74,36*	89	43	1
10,20	*75,82*	89	43	1
10,50	*89,59*	89	43	1
11,00	*95,86*	95	47	1
11,50	*102,14*	95	47	1
12,00	*102,14*	102	51	1
13,00	*153,05*	102	51	1

BROCAS METAL DURO
FORETS CARBURE / HARD METAL DRILL-BITS

1109 HM-MD DIN 338 N — 4XD — 118° — 30°

Aceros 1100 - 1400 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*8,82*	49	24	1
2,10	*10,41*	49	24	1
2,20	*10,95*	53	27	1
2,30	*10,95*	53	27	1
2,40	*10,95*	57	30	1
2,50	*10,95*	57	30	1
2,60	*13,00*	57	30	1
2,70	*13,36*	61	33	1
2,80	*13,36*	61	33	1
2,90	*13,36*	61	33	1
3,00	*13,36*	61	33	1
3,10	*13,64*	65	36	1
3,20	*14,18*	65	36	1
3,30	*14,27*	65	36	1
3,40	*15,91*	70	39	1
3,50	*15,36*	70	39	1
3,60	*16,50*	70	39	1
3,70	*16,50*	70	39	1
3,80	*16,68*	75	43	1
3,90	*17,32*	75	43	1
4,00	*17,50*	75	43	1
4,10	*22,00*	75	43	1
4,20	*22,00*	75	43	1
4,30	*22,00*	80	47	1
4,40	*22,00*	80	47	1
4,50	*21,95*	80	47	1

Ø mm	€	L mm	l mm	
4,60	*25,82*	80	47	1
4,70	*25,82*	80	47	1
4,80	*25,82*	86	52	1
4,90	*25,82*	86	52	1
5,00	*25,82*	86	52	1
5,10	*31,68*	86	52	1
5,20	*31,68*	86	52	1
5,30	*31,68*	86	52	1
5,40	*31,68*	93	57	1
5,50	*31,68*	93	57	1
5,60	*34,05*	93	57	1
5,70	*34,05*	93	57	1
5,80	*34,05*	93	57	1
5,90	*34,05*	93	57	1
6,00	*34,05*	93	57	1
6,10	*42,86*	101	63	1
6,20	*42,86*	101	63	1
6,30	*42,86*	101	63	1
6,40	*42,86*	101	63	1
6,50	*42,86*	101	63	1
6,80	*53,32*	109	69	1
7,00	*53,32*	109	69	1
8,00	*73,55*	117	75	1
8,50	*84,41*	117	75	1
10,00	*136,45*	113	87	1
10,20	*136,45*	113	87	1

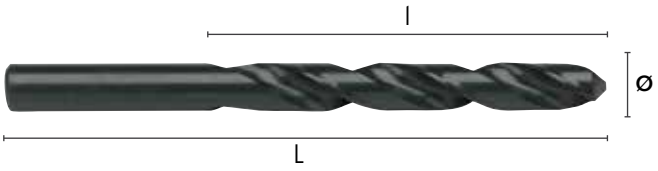
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1101 **HSS DIN 338 N**



Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
0,20	*2,42*	19	2,50	10
0,25	*2,42*	19	3	10
0,30	*2,42*	19	3	10
0,35	*2,42*	19	3	10
0,40	*2,42*	20	5	10
0,45	*2,42*	22	6	10
0,50	*1,79*	22	6	10
0,55	*1,82*	24	7	10
0,60	*1,82*	24	7	10
0,65	*1,82*	26	8	10
0,70	*1,82*	28	9	10
0,75	*1,71*	28	9	10
0,80	*1,71*	30	10	10
0,85	*1,71*	30	10	10
0,90	*1,71*	32	11	10
0,95	*1,71*	32	11	10
1,00	*1,03*	34	12	10
1,05	*1,29*	34	12	10
1,10	*1,17*	36	14	10
1,15	*1,17*	36	14	10
1,20	*1,17*	38	16	10
1,25	*0,95*	38	16	10
1,30	*1,07*	38	16	10
1,35	*1,17*	40	18	10
1,40	*1,07*	40	18	10
1,45	*1,11*	40	18	10
1,50	*0,87*	40	18	10
1,55	*1,11*	43	20	10
1,60	*1,03*	43	20	10
1,65	*1,11*	43	20	10
1,70	*1,03*	43	20	10
1,75	*0,95*	46	22	10
1,80	*1,03*	46	22	10
1,85	*1,03*	46	22	10
1,90	*1,03*	46	22	10
1,95	*1,11*	49	24	10
2,00	*0,85*	49	24	10
2,05	*1,11*	49	24	10
2,10	*1,03*	49	24	10
2,15	*1,11*	53	27	10
2,20	*1,03*	53	27	10
2,25	*0,93*	53	27	10
2,30	*1,03*	53	27	10
2,35	*1,03*	53	27	10
2,40	*1,03*	57	30	10
2,45	*1,11*	57	30	10
2,50	*0,85*	57	30	10
2,55	*1,17*	57	30	10
2,60	*1,07*	57	30	10
2,65	*1,07*	57	30	10

Ø mm	€	L mm	l mm	
2,70	*1,07*	61	33	10
2,75	*0,95*	61	33	10
2,80	*1,07*	61	33	10
2,85	*1,17*	61	33	10
2,90	*1,07*	61	33	10
2,95	*1,17*	61	33	10
3,00	*0,74*	61	33	10
3,05	*1,24*	65	36	10
3,10	*1,06*	65	36	10
3,15	*1,24*	65	36	10
3,20	*1,06*	65	36	10
3,25	*0,93*	65	36	10
3,30	*1,12*	65	36	10
3,35	*1,24*	70	39	10
3,40	*1,12*	70	39	10
3,45	*1,24*	70	39	10
3,50	*0,93*	70	39	10
3,55	*1,38*	70	39	10
3,60	*1,24*	70	39	10
3,65	*1,38*	70	39	10
3,70	*1,24*	70	39	10
3,75	*1,13*	70	39	10
3,80	*1,24*	75	43	10
3,90	*1,24*	75	43	10
3,95	*1,37*	75	43	10
4,00	*0,96*	75	43	10
4,05	*1,48*	75	43	10
4,10	*1,34*	75	43	10
4,15	*1,48*	75	43	10
4,20	*1,34*	75	43	10
4,25	*1,24*	75	43	10
4,30	*1,47*	80	47	10
4,40	*1,47*	80	47	10
4,50	*1,24*	80	47	10
4,55	*1,82*	80	47	10
4,60	*1,66*	80	47	10
4,65	*1,82*	80	47	10
4,70	*1,66*	80	47	10
4,75	*1,52*	80	47	10
4,80	*1,66*	86	52	10
4,90	*1,66*	86	52	10
5,00	*1,22*	86	52	10
5,10	*1,84*	86	52	10
5,20	*2,03*	86	52	10
5,25	*1,55*	86	52	10
5,30	*1,84*	86	52	10
5,40	*1,84*	93	57	10
5,50	*1,55*	93	57	10
5,60	*2,12*	93	57	10
5,70	*2,12*	93	57	10

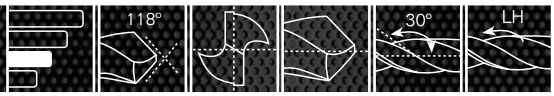
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

(continúa Ref.1101 / suite Réf.1101 / Ref.1101 cont'd)

Ø mm	€	L mm	l mm	
5,75	*1,93*	93	57	10
5,80	*2,12*	93	57	10
5,85	*2,32*	93	57	10
5,90	*2,12*	93	57	10
6,00	*1,64*	93	57	10
6,10	*2,49*	101	63	10
6,20	*2,49*	101	63	10
6,25	*2,29*	101	63	10
6,30	*2,49*	101	63	10
6,35	*2,74*	101	63	10
6,40	*2,49*	101	63	10
6,50	*2,10*	101	63	10
6,60	*2,88*	101	63	10
6,70	*2,88*	101	63	10
6,75	*2,64*	109	69	10
6,80	*2,88*	109	69	10
6,90	*2,88*	109	69	10
6,95	*3,18*	109	69	10
7,00	*2,42*	109	69	10
7,10	*3,27*	109	69	10
7,20	*3,27*	109	69	10
7,25	*3,01*	109	69	10
7,30	*3,27*	109	69	10
7,35	*3,58*	109	69	10
7,40	*3,27*	109	69	10
7,50	*2,72*	109	69	10
7,60	*3,57*	117	75	10
7,65	*3,93*	117	75	10
7,70	*3,57*	117	75	10
7,75	*3,28*	117	75	10
7,80	*3,57*	117	75	10
7,90	*3,57*	117	75	10
7,95	*3,93*	117	75	10
8,00	*2,85*	117	75	10
8,10	*4,26*	117	75	10
8,15	*4,69*	117	75	10
8,20	*4,26*	117	75	10
8,25	*3,92*	117	75	10
8,30	*4,26*	117	75	10
8,40	*4,26*	117	75	10
8,45	*4,69*	117	75	10
8,50	*3,57*	117	75	10
8,60	*4,66*	125	81	10
8,65	*5,12*	125	81	10
8,70	*4,66*	125	81	10
8,75	*4,26*	125	81	10
8,80	*4,66*	125	81	10
8,90	*5,12*	125	81	10
8,95	*5,12*	125	81	10
9,00	*3,91*	125	81	10
9,05	*5,54*	125	81	10
9,10	*5,23*	125	81	10
9,20	*5,23*	125	81	10
9,25	*5,23*	125	81	10
9,30	*5,23*	125	81	10
9,35	*5,78*	125	81	10
9,40	*5,23*	125	81	10
9,45	*5,78*	125	81	10
9,50	*4,39*	125	81	10
9,60	*5,86*	133	87	10
9,70	*5,86*	133	87	10
9,75	*5,36*	133	87	10
9,80	*5,86*	133	87	10
9,90	*5,86*	133	87	10
10,00	*4,47*	133	87	5
10,10	*6,59*	133	87	5
10,20	*6,59*	133	87	5
10,25	*6,07*	133	87	5
10,30	*6,59*	133	87	5
10,40	*6,59*	133	87	5
10,50	*5,51*	133	87	5
10,60	*7,36*	133	87	5
10,70	*7,36*	142	94	5
10,75	*6,75*	142	94	5
10,80	*7,36*	142	94	5
10,90	*7,36*	142	94	5
11,00	*6,12*	142	94	5
11,10	*8,18*	142	94	5
11,20	*8,18*	142	94	5
11,25	*7,51*	142	94	5
11,30	*8,18*	142	94	5
11,40	*8,18*	142	94	5
11,50	*6,79*	142	94	5
11,60	*8,61*	142	94	5
11,70	*8,61*	142	94	5
11,75	*7,90*	142	94	5
11,80	*8,61*	142	94	5
11,90	*8,61*	151	101	5
12,00	*7,20*	151	101	5
12,10	*9,70*	151	101	5
12,20	*9,70*	151	101	5
12,25	*8,88*	151	101	5
12,30	*9,70*	151	101	5
12,40	*9,70*	151	101	5
12,50	*8,06*	151	101	5
12,60	*10,59*	151	101	5
12,70	*10,59*	151	101	5
12,75	*9,70*	151	101	5
12,80	*10,59*	151	101	5
12,90	*10,59*	151	101	5
13,00	*8,86*	151	101	5
13,25	*12,35*	160	108	4
13,50	*11,24*	160	108	4
13,75	*13,37*	160	108	4
14,00	*12,15*	160	108	4
14,25	*15,24*	169	114	4
14,50	*13,86*	169	114	4
14,75	*17,43*	169	114	4
15,00	*15,84*	169	114	4
15,25	*21,01*	178	120	1
15,50	*19,11*	178	120	1
15,75	*21,01*	178	120	1
16,00	*19,11*	178	120	1
16,25	*27,17*	184	125	1
16,50	*24,68*	184	125	1
16,75	*27,17*	184	125	1
17,00	*24,68*	184	125	1
17,25	*30,23*	191	130	1
17,50	*27,49*	191	130	1
17,75	*30,23*	191	130	1
18,00	*27,49*	191	130	1
18,25	*33,73*	198	135	1
18,50	*30,67*	198	135	1
18,75	*33,73*	198	135	1
19,00	*30,67*	198	135	1
19,25	*40,44*	205	140	1
19,50	*36,77*	205	140	1
19,75	*40,43*	205	140	1
20,00	*36,77*	205	140	1

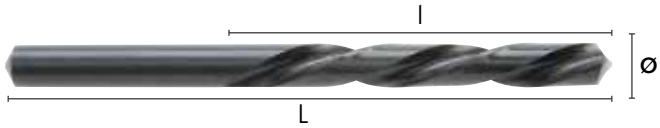
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1101/1 HSS DIN 338 N Izquierda / A gauche / Left hand



Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*4,10*	49	24	10
2,25	*4,53*	53	27	10
2,50	*4,10*	57	30	10
2,75	*4,69*	61	33	10
3,00	*3,66*	61	33	10
3,25	*4,57*	65	36	10
3,50	*4,57*	70	39	10
3,75	*5,64*	70	39	10
4,00	*4,71*	75	43	10
4,50	*6,00*	80	47	10
5,00	*5,96*	86	52	10
5,25	*7,59*	86	52	10
5,50	*7,59*	93	57	10

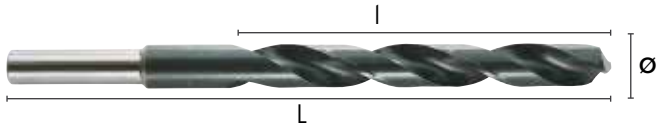
Ø mm	€	L mm	l mm	
6,00	*8,05*	93	57	10
6,50	*10,22*	101	63	10
7,00	*11,82*	109	69	10
7,50	*13,45*	109	69	10
8,00	*13,95*	117	75	10
8,50	*17,57*	117	75	10
9,00	*19,10*	125	81	10
9,50	*21,44*	125	81	10
10,00	*21,91*	133	87	5
10,50	*27,53*	133	87	5
11,00	*30,63*	142	94	5
11,50	*33,95*	142	94	5
12,00	*35,31*	151	101	5

1104 HSS DIN 338 N MR



Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
10,00	8	*7,61*	133	87	1
10,50	8	*8,74*	133	87	1
11,00	8	*8,74*	142	94	1
11,50	8	*9,77*	142	94	1
12,00	8	*9,77*	151	101	1
12,50	8	*10,78*	151	101	1
13,00	10	*11,89*	151	101	1
13,25	10	*15,15*	160	108	1
13,50	10	*15,15*	160	108	1
13,75	10	*16,47*	160	108	1
14,00	10	*15,15*	160	108	1
14,25	10	*18,99*	169	114	1
14,40	10	*18,71*	169	114	1
14,50	10	*18,65*	169	114	1
14,75	10	*26,73*	169	114	1
15,00	10	*18,65*	169	114	1
15,25	10	*24,71*	178	120	1
15,50	10	*22,08*	178	120	1

Ø mm	d mm	€	L mm	l mm	
15,75	10	*24,28*	178	120	1
16,00	12	*22,08*	178	120	1
16,25	12	*31,43*	184	125	1
16,40	12	*28,46*	184	125	1
16,50	12	*27,68*	184	125	1
16,75	12	*30,48*	184	125	1
17,00	12	*27,68*	184	125	1
17,25	12	*33,90*	191	130	1
17,50	12	*30,62*	191	130	1
17,75	12	*33,67*	191	130	1
18,00	12	*30,62*	191	130	1
18,25	12	*37,56*	198	135	1
18,50	12	*34,38*	198	135	1
18,60	12	*37,28*	198	135	1
18,75	12	*37,79*	198	135	1
19,00	12	*34,38*	198	135	1
19,25	12	*45,32*	205	140	1
19,50	12	*40,55*	205	140	1

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

Ø mm	d mm	€	L mm	l mm	
19,75	12	*44,57*	205	149	1
20,00	13	*40,55*	205	140	1
20,50	13	*47,20*	212	145	1
20,60	13	*38,86*	212	145	1
21,00	13	*47,20*	212	145	1
21,50	13	*51,42*	219	150	1
22,00	13	*51,42*	219	150	1
22,50	13	*54,37*	226	155	1
22,60	13	*49,18*	226	155	1
23,00	13	*54,37*	226	155	1
23,50	13	*60,53*	226	155	1
24,00	13	*60,53*	233	160	1

Ø mm	d mm	€	L mm	l mm	
24,50	13	*61,38*	233	160	1
25,00	13	*61,38*	233	160	1
25,50	13	*79,70*	240	165	1
26,00	13	*79,70*	240	165	1
26,50	13	*86,05*	240	165	1
27,00	13	*86,05*	247	170	1
27,50	13	*87,34*	247	170	1
28,00	13	*87,34*	247	170	1
28,50	13	*108,56*	254	175	1
29,00	13	*108,56*	254	175	1
29,50	13	*113,28*	254	175	1
30,00	13	*113,28*	254	175	1

1104/9 HSS DIN 338 N MR



Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
17/32"	1/2"	*15,15*	152	76	1
9/16"	1/2"	*15,15*	152	76	1
19/32"	1/2"	*18,65*	152	76	1
5/8"	1/2"	*22,08*	152	76	1
21/32"	1/2"	*27,68*	152	76	1
11/16"	1/2"	*30,62*	152	76	1
23/32"	1/2"	*30,62*	152	76	1
3/4"	1/2"	*34,38*	152	76	1
25/32"	1/2"	*40,55*	152	76	1

Ø mm	d mm	€	L mm	l mm	
13/16"	1/2"	*38,86*	152	76	1
27/32"	1/2"	*47,20*	152	76	1
7/8"	1/2"	*51,43*	152	76	1
29/32"	1/2"	*54,37*	152	76	1
15/16"	1/2"	*60,53*	152	76	1
31/32"	1/2"	*61,38*	152	76	1
1"	1/2"	*61,38*	152	76	1
1-1/16"	1/2"	*86,05*	152	76	1
1-1/8"	1/2"	*108,56*	152	76	1

1501 HSS Hex.



Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	L mm	l mm	€	
3,00	61	33	*6,69*	1
4,00	75	43	*7,36*	1
5,00	86	52	*7,68*	1
6,00	93	57	*8,28*	1

Ø mm	L mm	l mm	€	
7,00	109	69	*8,52*	1
8,00	117	75	*8,81*	1
9,00	125	81	*9,11*	1
10,00	133	87	*11,48*	1

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1158 HSS DIN 338 NSP

Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1,00	*1,12*	34	12	10
1,10	*1,40*	36	14	10
1,20	*1,40*	38	16	10
1,30	*1,24*	38	16	10
1,40	*1,24*	40	18	10
1,50	*0,97*	40	18	10
1,60	*1,19*	43	20	10
1,70	*1,19*	43	20	10
1,80	*1,06*	46	22	10
1,90	*1,06*	46	22	10
2,00	*0,92*	49	24	10
2,10	*1,03*	49	24	10
2,20	*1,03*	53	27	10
2,25	*1,03*	53	27	10
2,30	*1,23*	53	27	10
2,40	*1,23*	57	30	10
2,50	*0,92*	57	30	10
2,60	*1,24*	57	30	10
2,70	*1,24*	61	33	10
2,75	*1,06*	61	33	10
2,80	*1,24*	61	33	10
2,90	*1,24*	61	33	10
3,00	*0,84*	61	33	10
3,10	*1,06*	65	36	10
3,20	*1,06*	65	36	10
3,25	*1,03*	65	36	10
3,30	*1,06*	65	36	10
3,40	*1,35*	70	39	10
3,50	*1,03*	70	39	10
3,60	*1,41*	70	39	10
3,70	*1,41*	70	39	10
3,75	*1,26*	70	39	10
3,80	*1,49*	75	43	10
3,90	*1,49*	75	43	10
4,00	*1,06*	75	43	10
4,10	*1,30*	75	43	10
4,20	*1,30*	75	43	10
4,25	*1,34*	75	43	10
4,30	*1,75*	80	47	10
4,40	*1,75*	80	47	10
4,50	*1,34*	80	47	10
4,60	*1,79*	80	47	10
4,70	*1,79*	80	47	10
4,75	*1,68*	80	47	10
4,80	*1,94*	86	52	10
4,90	*1,91*	86	52	10
5,00	*1,34*	86	52	10
5,10	*1,95*	86	52	10
5,20	*1,95*	86	52	10
5,25	*1,70*	86	52	10

Ø mm	€	L mm	l mm	
5,30	*2,46*	86	52	10
5,40	*2,46*	93	57	10
5,50	*1,70*	93	57	10
5,60	*2,58*	93	57	10
5,70	*2,58*	93	57	10
5,75	*2,14*	93	57	10
5,80	*2,46*	93	57	10
5,90	*2,46*	93	57	10
6,00	*1,82*	93	57	10
6,10	*2,82*	101	63	10
6,20	*2,82*	101	63	10
6,25	*2,54*	101	63	10
6,30	*2,98*	101	63	10
6,40	*3,03*	101	63	10
6,50	*2,30*	101	63	10
6,60	*3,72*	101	63	10
6,70	*3,72*	101	63	10
6,75	*2,91*	109	69	10
6,80	*2,81*	109	69	10
6,90	*4,11*	109	69	10
7,00	*2,67*	109	69	10
7,10	*4,37*	109	69	10
7,20	*4,37*	109	69	10
7,25	*3,33*	109	69	10
7,30	*4,37*	109	69	10
7,40	*4,37*	109	69	10
7,50	*3,03*	109	69	10
7,60	*5,13*	117	75	10
7,70	*5,13*	117	75	10
7,75	*3,64*	117	75	10
7,80	*5,20*	117	75	10
7,90	*5,20*	117	75	10
8,00	*3,13*	117	75	10
8,10	*5,28*	117	75	10
8,20	*5,28*	117	75	10
8,25	*4,33*	117	75	10
8,30	*5,53*	117	75	10
8,40	*5,53*	117	75	10
8,50	*3,96*	117	75	10
8,60	*6,95*	125	81	10
8,70	*6,95*	125	81	10
8,75	*4,71*	125	81	10
8,80	*6,99*	125	81	10
8,90	*6,99*	125	81	10
9,00	*4,32*	125	81	10
9,10	*7,01*	125	81	10
9,20	*7,01*	125	81	10
9,25	*5,79*	125	81	10
9,30	*6,53*	125	81	10
9,40	*6,53*	125	81	10

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

(continúa Ref.1158 / suite Réf.1158 / Ref.1158 cont'd)

Ø mm	€	L mm	l mm	
9,50	*4,84*	125	81	10
9,60	*8,36*	133	87	10
9,70	*8,36*	133	87	10
9,75	*5,92*	133	87	10
9,80	*8,24*	133	87	10
9,90	*8,24*	133	87	10
10,00	*4,92*	133	87	5
10,50	*6,09*	133	87	5
11,00	*6,77*	142	94	5
11,50	*7,51*	142	94	5
12,00	*7,95*	151	101	5
12,50	*8,91*	151	101	5
13,00	*9,75*	151	101	5
13,50	*12,34*	151	101	4

Ø mm	€	L mm	l mm	
14,00	*13,37*	169	108	4
14,50	*15,24*	169	114	4
15,00	*17,41*	169	114	4
15,50	*21,00*	178	120	1
16,00	*21,00*	178	120	1
16,50	*27,12*	184	125	1
17,00	*27,12*	184	125	1
17,50	*30,22*	191	130	1
18,00	*30,22*	191	130	1
18,50	*33,72*	198	125	1
19,00	*33,72*	198	125	1
19,50	*40,41*	205	140	1
20,00	*40,41*	205	140	1

1158/9 HSS DIN 338 NSP



Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1/16"	*0,97*	43	20	10
5/64"	*0,92*	49	24	10
3/32"	*0,92*	57	30	10
7/64"	*1,06*	61	33	10
1/8"	*0,84*	65	36	10
9/64"	*1,03*	70	39	10
5/32"	*1,06*	75	43	10
11/64"	*1,34*	80	47	10
3/16"	*1,34*	86	52	10
13/64"	*1,34*	86	52	10
7/32"	*1,70*	93	57	10
15/64"	*1,82*	93	57	10
1/4"	*2,30*	101	63	10
17/64"	*2,67*	109	69	10
9/32"	*2,67*	109	69	10

Ø mm	€	L mm	l mm	
19/64"	*3,03*	117	75	10
5/16"	*3,13*	117	75	10
21/64"	*3,96*	117	75	10
11/32"	*4,32*	125	81	10
23/64"	*4,32*	125	81	10
3/8"	*4,84*	133	87	10
25/64"	*4,92*	133	87	10
13/32"	*6,09*	133	87	5
27/64"	*6,39*	142	94	5
7/16"	*6,77*	142	94	5
29/64"	*7,51*	142	94	5
15/32"	*7,95*	151	101	5
31/64"	*8,91*	151	101	5
1/2"	*9,75*	151	101	5

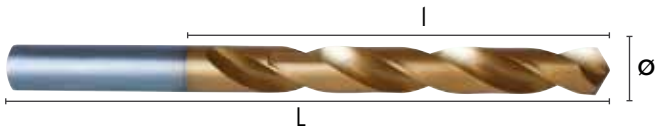
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1108 HSS DIN 338 NSP



Aceros 800 - 1100 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1,00	*2,29*	34	12	10
1,10	*2,04*	36	14	10
1,20	*2,04*	38	16	10
1,30	*2,04*	38	16	10
1,40	*2,04*	40	18	10
1,50	*1,77*	40	18	10
1,60	*2,04*	43	20	10
1,70	*2,04*	43	20	10
1,80	*2,04*	46	22	10
1,90	*2,04*	46	22	10
2,00	*1,77*	49	24	10
2,10	*2,04*	49	24	10
2,20	*2,04*	53	27	10
2,25	*2,04*	53	27	10
2,30	*2,04*	53	27	10
2,40	*2,04*	57	30	10
2,50	*1,77*	57	30	10
2,60	*2,04*	57	30	10
2,70	*2,04*	61	33	10
2,75	*1,77*	61	33	10
2,80	*2,04*	61	33	10
2,90	*2,04*	61	33	10
3,00	*1,93*	61	33	10
3,10	*2,28*	65	36	10
3,20	*2,28*	65	36	10
3,25	*1,97*	65	36	10
3,30	*2,28*	65	36	10
3,40	*2,28*	70	39	10
3,50	*2,14*	70	39	10
3,60	*2,51*	70	39	10
3,70	*2,51*	70	39	10
3,75	*2,22*	70	39	10
3,80	*2,51*	75	43	10
3,90	*2,51*	75	43	10
4,00	*2,42*	75	43	10
4,10	*3,03*	75	43	10
4,20	*3,03*	75	43	10
4,25	*2,64*	75	43	10
4,30	*2,64*	80	47	10
4,40	*2,64*	80	47	10
4,50	*2,64*	80	47	10
4,60	*2,64*	80	47	10
4,70	*2,64*	80	47	10
4,75	*2,85*	80	47	10
4,80	*2,85*	86	52	10
4,90	*2,86*	86	52	10
5,00	*2,72*	86	52	10
5,10	*3,27*	86	52	10
5,20	*3,27*	86	52	10
5,25	*3,27*	86	52	10

Ø mm	€	L mm	l mm	
5,30	*3,27*	86	52	10
5,40	*3,27*	93	57	10
5,50	*3,27*	93	57	10
5,60	*3,61*	93	57	10
5,70	*3,61*	93	57	10
5,75	*3,61*	93	57	10
5,80	*3,61*	93	57	10
5,90	*3,61*	93	57	10
6,00	*3,61*	93	57	10
6,10	*4,44*	101	63	10
6,20	*4,44*	101	63	10
6,25	*4,44*	101	63	10
6,30	*4,44*	101	63	10
6,40	*4,44*	101	63	10
6,50	*4,44*	101	63	10
6,60	*5,13*	101	63	10
6,70	*5,13*	101	63	10
6,75	*5,15*	109	69	10
6,80	*5,93*	109	69	10
6,90	*5,93*	109	69	10
7,00	*5,93*	109	69	10
7,10	*5,93*	109	69	10
7,20	*5,93*	109	69	10
7,25	*6,43*	109	69	10
7,30	*6,43*	109	69	10
7,40	*6,43*	109	69	10
7,50	*6,43*	109	69	10
7,60	*6,71*	117	75	10
7,70	*6,71*	117	75	10
7,75	*6,71*	117	75	10
7,80	*6,77*	117	75	10
7,90	*6,77*	117	75	10
8,00	*6,77*	117	75	10
8,10	*7,83*	117	75	10
8,20	*7,83*	117	75	10
8,25	*7,83*	117	75	10
8,30	*7,83*	117	75	10
8,40	*7,83*	117	75	10
8,50	*7,83*	117	75	10
8,60	*8,53*	125	81	10
8,70	*8,53*	125	81	10
8,75	*8,54*	125	81	10
8,80	*8,53*	125	81	10
8,90	*8,53*	125	81	10
9,00	*8,54*	125	81	10
9,10	*9,64*	125	81	10
9,20	*9,64*	125	81	10
9,25	*9,63*	125	81	10
9,30	*9,64*	125	81	10
9,40	*9,64*	125	81	10

(continúa Ref.1108 / suite Réf.1108 / Ref.1108 cont'd)

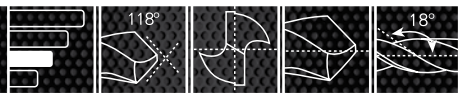
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

(continúa Ref.1108 / suite Réf.1108 / Ref.1108 cont'd)

Ø mm	€	L mm	l mm	
9,50	*9,63*	125	81	10
9,60	*10,72*	133	87	10
9,75	*10,72*	133	87	10
9,80	*10,72*	133	87	10
9,90	*10,72*	133	87	10
10,00	*10,72*	133	87	5

Ø mm	€	L mm	l mm	
10,50	*12,39*	133	87	5
11,00	*13,86*	142	94	5
11,50	*15,38*	142	94	5
12,00	*17,67*	151	101	5
12,50	*18,67*	151	101	5
13,00	*20,38*	151	101	5

1103 HSS DIN 338 H



Latón y bronce — **Laiton et Bronze / Brass and bronze**

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1,00	*3,65*	34	12	1
1,25	*4,11*	38	16	1
1,50	*3,57*	40	18	1
1,75	*4,01*	46	22	1
2,00	*3,27*	49	24	1
2,25	*3,83*	53	27	1
2,50	*3,33*	57	30	1
2,75	*4,48*	61	33	1
3,00	*3,65*	61	33	1
3,25	*4,48*	65	36	1
3,50	*3,93*	70	39	1
3,75	*5,80*	70	39	1
4,00	*4,22*	75	43	1
4,25	*6,31*	75	43	1
4,50	*5,20*	80	47	1
4,75	*7,12*	80	47	1
5,00	*5,66*	86	52	1
5,25	*8,52*	86	52	1
5,50	*6,85*	93	57	1
5,75	*10,42*	93	57	1
6,00	*7,42*	93	57	1
6,25	*10,42*	101	63	1

Ø mm	€	L mm	l mm	
6,50	*8,27*	101	63	1
6,75	*12,55*	109	69	1
7,00	*8,73*	109	69	1
7,25	*16,57*	109	69	1
7,50	*10,27*	109	69	1
7,75	*19,17*	117	75	1
8,00	*10,94*	117	75	1
8,25	*20,48*	117	75	1
8,50	*12,68*	117	75	1
8,75	*21,44*	125	81	1
9,00	*13,31*	125	81	1
9,25	*27,63*	125	81	1
9,50	*15,58*	125	81	1
9,75	*30,57*	133	87	1
10,00	*16,28*	133	87	1
10,50	*19,50*	133	87	1
11,00	*21,78*	142	94	1
11,50	*26,33*	142	94	1
12,00	*28,39*	151	101	1
12,50	*32,18*	151	101	1
13,00	*34,45*	151	101	1

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1105 HSSCO DIN 338 N



Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2 — INOX — TI

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
0,50	*2,67*	22	6	10
0,60	*2,16*	24	7	10
0,70	*2,10*	28	9	10
0,75	*2,10*	28	9	10
0,80	*1,90*	30	10	10
0,90	*1,90*	32	11	10
1,00	*1,67*	34	12	10
1,10	*1,45*	36	14	10
1,20	*1,61*	38	16	10
1,25	*1,90*	38	16	10
1,30	*1,52*	38	16	10
1,40	*1,44*	40	18	10
1,50	*1,52*	40	18	10
1,60	*1,59*	43	20	10
1,70	*1,47*	43	20	10
1,75	*2,14*	46	22	10
1,80	*1,47*	46	22	10
1,90	*1,51*	46	22	10
2,00	*1,56*	49	24	10
2,10	*1,70*	49	24	10
2,20	*1,70*	53	27	10
2,25	*2,47*	53	27	10
2,30	*1,70*	53	27	10
2,40	*1,71*	57	30	10
2,50	*1,67*	57	30	10
2,60	*1,79*	57	30	10
2,70	*1,79*	61	33	10
2,75	*1,84*	61	33	10
2,80	*1,81*	61	33	10
2,90	*1,84*	61	33	10
3,00	*1,39*	61	33	10
3,10	*1,84*	65	36	10
3,20	*1,84*	65	36	10
3,25	*1,86*	65	36	10
3,30	*1,94*	65	36	10
3,40	*1,97*	70	39	10
3,50	*1,84*	70	39	10
3,60	*2,02*	70	39	10
3,70	*2,04*	70	39	10
3,75	*2,21*	70	39	10
3,80	*2,06*	75	43	10
3,90	*2,11*	75	43	10
4,00	*1,81*	75	43	10
4,10	*2,14*	75	43	10
4,20	*2,16*	75	43	10
4,25	*2,11*	75	43	10
4,30	*2,30*	80	47	10
4,40	*2,36*	80	47	10
4,50	*2,21*	80	47	10
4,60	*2,42*	80	47	10
4,70	*2,47*	80	47	10
4,75	*2,46*	80	47	10

Ø mm	€	L mm	l mm	
4,80	*2,54*	86	52	10
4,90	*2,56*	86	52	10
5,00	*2,11*	86	52	10
5,10	*2,59*	86	52	10
5,20	*2,60*	86	52	10
5,25	*2,65*	86	52	10
5,30	*2,65*	86	52	10
5,40	*3,06*	93	57	10
5,50	*3,34*	93	57	10
5,60	*3,34*	93	57	10
5,70	*3,34*	93	57	10
5,75	*3,34*	93	57	10
5,80	*3,34*	93	57	10
5,90	*3,34*	93	57	10
6,00	*2,86*	93	57	10
6,10	*3,71*	101	63	10
6,20	*3,74*	101	63	10
6,25	*3,74*	101	63	10
6,30	*3,74*	101	63	10
6,40	*4,03*	101	63	10
6,50	*3,71*	101	63	10
6,60	*4,03*	101	63	10
6,70	*4,03*	101	63	10
6,75	*4,33*	109	69	10
6,80	*4,33*	109	69	10
6,90	*4,33*	109	69	10
7,00	*3,91*	109	69	10
7,10	*5,29*	109	69	10
7,20	*5,29*	109	69	10
7,25	*5,29*	109	69	10
7,30	*5,29*	109	69	10
7,40	*5,29*	109	69	10
7,50	*4,16*	109	69	10
7,60	*6,41*	117	75	10
7,70	*6,41*	117	75	10
7,75	*6,41*	117	75	10
7,80	*6,41*	117	75	10
7,90	*6,41*	117	75	10
8,00	*5,20*	117	75	10
8,10	*6,41*	117	75	10
8,20	*6,41*	117	75	10
8,25	*6,14*	117	75	10
8,30	*6,41*	117	75	10
8,40	*6,41*	117	75	10
8,50	*5,10*	117	75	10
8,60	*7,51*	125	81	10
8,70	*7,51*	125	81	10
8,75	*7,81*	125	81	10
8,80	*7,81*	125	81	10
8,90	*7,81*	125	81	10
9,00	*6,46*	125	81	10
9,10	*8,36*	125	81	10

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

(continúa Ref.1105 / suite Réf.1105 / Ref.1105 cont'd)

Ø mm	€	L mm	l mm	
9,20	*8,36*	125	81	10
9,25	*8,62*	125	81	10
9,30	*9,21*	125	81	10
9,40	*9,21*	125	81	10
9,50	*8,15*	125	81	10
9,60	*10,31*	133	87	10
9,70	*10,56*	133	87	10
9,75	*10,17*	133	87	10
9,80	*10,57*	133	87	10
9,90	*10,57*	133	87	10
10,00	*8,15*	133	87	5
10,10	*13,37*	133	87	5
10,20	*13,37*	133	87	5
10,25	*13,37*	133	87	5
10,30	*13,37*	133	87	5
10,40	*13,37*	133	87	5
10,50	*10,87*	133	87	5
10,60	*15,55*	133	87	5
10,70	*15,55*	142	94	5
10,75	*15,55*	142	94	5
10,80	*15,55*	142	94	5
10,90	*15,55*	142	94	5
11,00	*11,96*	142	94	5
11,10	*18,23*	142	94	5
11,20	*18,23*	142	94	5
11,25	*18,23*	142	94	5
11,30	*18,23*	142	94	5
11,40	*18,23*	142	94	5
11,50	*15,33*	142	94	5
11,60	*19,60*	142	94	5
11,70	*19,60*	142	94	5

Ø mm	€	L mm	l mm	
11,75	*19,60*	142	94	5
11,80	*19,60*	142	94	5
11,90	*19,60*	151	101	5
12,00	*15,02*	151	101	5
12,10	*23,40*	151	101	5
12,20	*23,40*	151	101	5
12,25	*23,40*	151	101	5
12,30	*23,40*	151	101	5
12,40	*23,40*	151	101	5
12,50	*20,60*	151	101	5
12,60	*24,43*	151	101	5
12,70	*24,43*	151	101	5
12,75	*24,43*	151	101	5
12,80	*24,43*	151	101	5
12,90	*24,43*	151	101	5
13,00	*20,88*	151	101	5
13,50	*23,02*	160	108	4
14,00	*22,75*	160	108	4
14,50	*32,24*	169	114	4
15,00	*32,77*	169	114	4
15,50	*37,87*	178	120	1
16,00	*39,29*	178	120	1
16,50	*44,94*	184	125	1
17,00	*44,94*	184	125	1
17,50	*49,74*	191	130	1
18,00	*54,22*	191	130	1
18,50	*59,85*	198	125	1
19,00	*59,85*	198	125	1
19,50	*66,37*	205	140	1
20,00	*76,69*	205	140	1

1105/9 HSSCO DIN 338 N



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

Aplicaciones / Applications

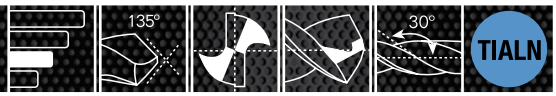


Ø mm	€	L mm	l mm	
1/16"	*1,51*	43	20	10
5/64"	*1,56*	49	24	10
3/32"	*1,67*	57	30	10
7/64"	*1,84*	61	33	10
1/8"	*1,39*	65	36	10
9/64"	*1,84*	70	39	10
5/32"	*1,81*	75	43	10
11/64"	*2,21*	80	47	10
3/16"	*2,21*	86	52	10
13/64"	*2,11*	86	52	10
7/32"	*3,34*	93	57	10
15/64"	*2,86*	93	57	10
1/4"	*3,71*	101	63	10
17/64"	*4,33*	109	69	10
9/32"	*3,91*	109	69	10

Ø mm	€	L mm	l mm	
19/64"	*4,16*	117	75	10
5/16"	*5,20*	117	75	10
21/64"	*5,10*	117	75	10
11/32"	*7,81*	125	81	10
23/64"	*6,46*	125	81	10
3/8"	*8,15*	133	87	10
25/64"	*8,15*	133	87	10
13/32"	*10,87*	133	87	5
27/64"	*15,55*	142	94	5
7/16"	*11,96*	142	94	5
29/64"	*15,33*	142	94	5
15/32"	*15,02*	151	101	5
31/64"	*20,60*	151	101	5
1/2"	*20,88*	151	101	5

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1161 HSSCO DIN 338 N



Aceros 1100 - 1400 N/mm² — **Aciers / Steel** — 800 N/mm2 · 1100 N/mm2 · INOX · TI

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*3,38*	49	24	1
2,50	*3,38*	57	30	1
3,00	*3,34*	61	33	1
3,10	*4,20*	65	36	1
3,25	*4,20*	65	36	1
3,30	*4,20*	65	36	1
3,40	*4,38*	70	39	1
3,50	*4,19*	70	39	1
4,00	*4,33*	75	43	1
4,10	*4,55*	75	43	1
4,20	*4,55*	75	43	1
4,25	*4,55*	75	43	1
4,30	*4,59*	80	47	1
4,50	*4,61*	80	47	1
5,00	*4,69*	86	52	1
5,10	*5,04*	86	52	1
5,25	*5,09*	86	52	1

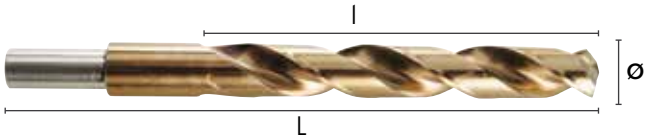
Ø mm	€	L mm	l mm	
5,50	*5,31*	93	57	1
6,00	*5,51*	93	57	1
6,50	*10,15*	101	63	1
7,00	*10,75*	109	69	1
7,50	*11,01*	109	69	1
8,00	*11,74*	117	75	1
8,50	*13,08*	117	75	1
9,00	*14,50*	125	81	1
9,50	*14,75*	125	81	1
10,00	*15,48*	133	87	1
10,50	*26,66*	133	87	1
11,00	*27,78*	142	94	1
11,50	*29,49*	142	94	1
12,00	*30,48*	151	101	1
12,50	*37,68*	151	101	1
13,00	*38,30*	151	101	1

1107 HSSCO DIN 338 MR



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 · INOX · TI

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
10,00	8	*9,69*	133	87	1
10,50	8	*12,96*	133	87	1
11,00	8	*13,97*	142	94	1
11,50	8	*17,15*	142	94	1
12,00	8	*18,18*	151	101	1
12,50	8	*22,07*	151	101	1
13,00	10	*22,37*	151	101	1
13,50	10	*24,37*	160	108	1
14,00	10	*24,12*	160	108	1
14,50	10	*33,04*	169	114	1
15,00	10	*33,50*	169	114	1

Ø mm	d mm	€	L mm	l mm	
15,50	10	*38,28*	178	120	1
16,00	12	*39,64*	178	120	1
16,50	12	*44,93*	184	125	1
17,00	12	*44,93*	184	125	1
17,50	12	*49,44*	191	130	1
18,00	12	*53,63*	191	130	1
18,50	12	*58,95*	191	130	1
19,00	12	*58,95*	191	130	1
19,50	12	*65,06*	191	130	1
20,00	12	*74,73*	191	130	1

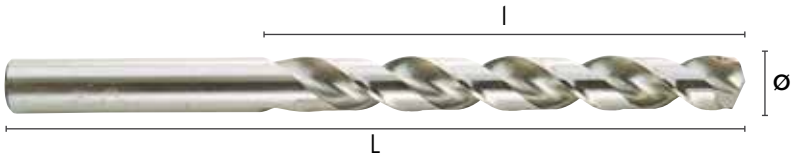
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1106 HSSCO DIN 338 W



Aceros inox / Aciers inox / Stainless steel | Aluminio / Aluminium / Aluminium

Aplicaciones / Applications

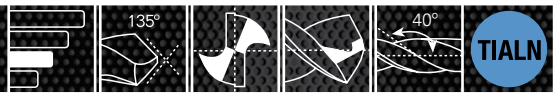


Ø mm	€	L mm	l mm	
1,00	*2,81*	34	12	10
1,25	*3,32*	38	16	10
1,50	*2,68*	40	18	10
2,00	*2,68*	49	24	10
2,25	*3,24*	53	27	10
2,50	*2,67*	57	30	10
2,75	*4,14*	61	33	10
3,00	*2,96*	61	33	10
3,10	*3,22*	65	36	10
3,20	*3,22*	65	36	10
3,25	*3,28*	65	36	10
3,30	*4,10*	65	36	10
3,40	*4,12*	70	39	10
3,50	*3,22*	70	39	10
3,75	*3,80*	70	39	10
4,00	*3,65*	75	43	10
4,10	*4,55*	75	43	10
4,20	*4,55*	75	43	10
4,25	*4,23*	75	43	10
4,50	*4,23*	80	47	10
4,75	*4,20*	80	47	10
5,00	*4,45*	86	52	10
5,10	*5,66*	86	52	10
5,20	*5,06*	86	52	10

Ø mm	€	L mm	l mm	
5,25	*5,53*	86	52	10
5,50	*5,41*	93	57	10
5,75	*6,12*	93	57	10
6,00	*6,01*	93	57	10
6,25	*6,31*	101	63	10
6,50	*7,15*	101	63	10
6,75	*7,53*	109	69	10
7,00	*8,31*	109	69	10
7,25	*9,60*	109	69	10
7,50	*9,47*	109	69	10
8,00	*10,27*	117	75	10
8,25	*11,09*	117	75	10
8,50	*12,37*	117	75	10
9,00	*13,42*	125	81	10
9,50	*15,19*	125	81	10
10,00	*16,70*	133	87	5
10,25	*23,28*	133	87	5
10,50	*19,77*	133	87	5
11,00	*21,09*	142	94	5
11,50	*24,73*	142	94	5
12,00	*24,73*	151	101	5
12,50	*31,02*	151	101	5
13,00	*31,02*	151	101	5

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1162 HSSCO DIN 338 W



Aceros inox / Aciers inox / Stainless steel | **Aluminio / Aluminium / Aluminium**

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1,00	*5,61*	34	12	1
1,25	*6,65*	38	16	1
1,50	*5,34*	40	18	1
2,00	*5,34*	49	24	1
2,25	*6,47*	53	27	1
2,50	*5,32*	57	30	1
2,75	*8,28*	61	33	1
3,00	*5,93*	61	33	1
3,10	*6,44*	65	36	1
3,20	*6,44*	65	36	1
3,25	*6,55*	65	36	1
3,30	*8,17*	65	36	1
3,40	*8,22*	70	39	1
3,50	*6,45*	70	39	1
3,75	*7,61*	70	39	1
4,00	*7,30*	75	43	1
4,10	*9,07*	75	43	1
4,20	*9,07*	75	43	1
4,25	*8,47*	75	43	1
4,50	*8,47*	80	47	1
4,75	*8,39*	80	47	1
5,00	*8,89*	86	52	1
5,10	*11,31*	86	52	1
5,20	*10,11*	86	52	1

Ø mm	€	L mm	l mm	
5,25	*11,07*	86	52	1
5,50	*10,83*	93	57	1
5,75	*12,24*	93	57	1
6,00	*12,02*	93	57	1
6,25	*12,60*	101	63	1
6,50	*14,32*	101	63	1
6,75	*15,04*	109	69	1
7,00	*16,61*	109	69	1
7,25	*19,19*	109	69	1
7,50	*18,94*	109	69	1
8,00	*20,55*	117	75	1
8,25	*22,18*	117	75	1
8,50	*24,75*	117	75	1
9,00	*26,84*	125	81	1
9,50	*30,38*	125	81	1
10,00	*33,38*	133	87	1
10,25	*46,54*	133	87	1
10,50	*39,53*	133	87	1
11,00	*42,18*	142	94	1
11,50	*49,46*	142	94	1
12,00	*49,46*	151	101	1
12,50	*62,01*	151	101	1
13,00	*62,01*	151	101	1

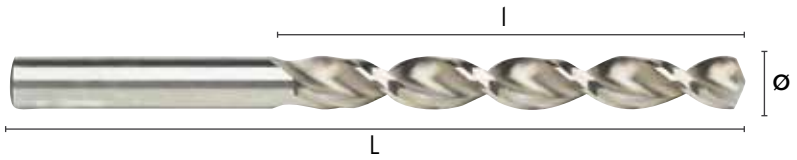
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1159 HSSCO DIN 338 S



Aceros 800-1100 N/mm² Aciers / Steel	Inox / Inox / Stainless	Aluminio / Aluminium / Aluminium	Titanio / Titane / Titanium	Fundición / Fonte / Cast Iron

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*4,18*	49	24	10
2,10	*4,01*	49	24	10
2,20	*4,01*	53	27	10
2,30	*4,01*	53	27	10
2,40	*4,01*	57	30	10
2,50	*4,18*	57	30	10
2,60	*4,32*	57	30	10
2,70	*4,32*	61	33	10
2,80	*4,57*	61	33	10
2,90	*4,57*	61	33	10
3,00	*4,57*	61	33	10
3,10	*4,66*	65	36	10
3,20	*4,66*	65	36	10
3,30	*4,66*	65	36	10
3,40	*4,66*	70	39	10
3,50	*5,20*	70	39	10
3,60	*5,09*	70	39	10
3,70	*5,09*	70	39	10
3,80	*5,88*	75	43	10
3,90	*5,88*	75	43	10
4,00	*5,69*	75	43	10
4,10	*5,88*	75	43	10
4,20	*5,88*	75	43	10
4,30	*6,01*	80	47	10
4,40	*6,01*	80	47	10
4,50	*6,07*	80	47	10
4,60	*6,48*	80	47	10
4,70	*6,48*	80	47	10
4,80	*6,68*	86	52	10
4,90	*6,68*	86	52	10
5,00	*6,42*	86	52	10
5,10	*7,26*	86	52	10
5,20	*7,59*	86	52	10
5,30	*7,59*	86	52	10
5,40	*7,59*	93	57	10
5,50	*8,60*	93	57	10
5,60	*9,08*	93	57	10
5,70	*10,11*	93	57	10
5,80	*9,08*	93	57	10
5,90	*9,08*	93	57	10

Ø mm	€	L mm	l mm	
6,00	*9,05*	93	57	10
6,10	*10,05*	101	63	10
6,20	*10,05*	101	63	10
6,30	*10,11*	101	63	10
6,40	*10,11*	101	63	10
6,50	*10,11*	101	63	10
6,60	*11,58*	101	63	10
6,70	*11,58*	101	63	10
6,80	*11,58*	109	69	10
6,90	*11,58*	109	69	10
7,00	*11,58*	109	69	10
7,10	*14,03*	109	69	10
7,20	*14,03*	109	69	10
7,30	*14,03*	109	69	10
7,40	*14,03*	109	69	10
7,50	*12,54*	109	69	10
7,60	*19,16*	117	75	10
7,70	*19,16*	117	75	10
7,80	*19,16*	117	75	10
7,90	*19,16*	117	75	10
8,00	*14,79*	117	75	10
8,10	*19,16*	117	75	10
8,20	*16,77*	117	75	10
8,30	*18,01*	117	75	10
8,40	*18,01*	117	75	10
8,50	*16,29*	117	75	10
8,60	*20,66*	125	81	10
8,70	*20,66*	125	81	10
8,80	*20,66*	125	81	10
8,90	*20,66*	125	81	10
9,00	*19,16*	125	81	10
9,50	*20,63*	125	81	10
9,80	*25,89*	133	87	10
10,00	*23,53*	133	87	5
10,50	*28,96*	133	87	5
11,00	*35,84*	142	94	5
11,50	*43,48*	142	94	5
12,00	*44,85*	151	101	5
12,50	*48,94*	151	101	5
13,00	*48,94*	151	101	5

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1160 HSSCO DIN 338 S — 135° — TYP S — TIALN

Aceros 800-1100 N/mm² / Aciers / Steel	Inox / Inox / Stainless	Aluminio / Aluminium / Aluminium	Titanio / Titane / Titanium	Fundición / Fonte / Cast Iron

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*5,85*	49	24	1
2,10	*5,63*	49	24	1
2,20	*5,63*	53	27	1
2,30	*5,63*	53	27	1
2,40	*5,63*	57	30	1
2,50	*5,85*	57	30	1
2,60	*6,03*	57	30	1
2,70	*6,03*	61	33	1
2,80	*6,39*	61	33	1
2,90	*6,39*	61	33	1
3,00	*6,39*	61	33	1
3,10	*6,53*	65	36	1
3,20	*6,53*	65	36	1
3,30	*6,53*	65	36	1
3,40	*6,53*	70	39	1
3,50	*7,27*	70	39	1
3,60	*7,13*	70	39	1
3,70	*7,13*	70	39	1
3,80	*8,23*	75	43	1
3,90	*8,23*	75	43	1
4,00	*7,95*	75	43	1
4,10	*8,23*	75	43	1
4,20	*8,23*	75	43	1
4,30	*8,41*	80	47	1
4,40	*8,51*	80	47	1
4,50	*8,51*	80	47	1
4,60	*9,07*	80	47	1
4,70	*9,07*	80	47	1
4,80	*9,35*	86	52	1
4,90	*9,35*	86	52	1
5,00	*8,98*	86	52	1
5,10	*10,15*	86	52	1
5,20	*10,64*	86	52	1
5,30	*10,64*	86	52	1
5,40	*10,64*	93	57	1
5,50	*12,04*	93	57	1
5,60	*12,73*	93	57	1
5,70	*14,14*	93	57	1
5,80	*12,73*	93	57	1
5,90	*12,73*	93	57	1

Ø mm	€	L mm	l mm	
6,00	*12,68*	93	57	1
6,10	*14,07*	101	63	1
6,20	*14,07*	101	63	1
6,30	*14,14*	101	63	1
6,40	*14,14*	101	63	1
6,50	*14,14*	101	63	1
6,60	*16,21*	101	63	1
6,70	*16,21*	101	63	1
6,80	*16,21*	109	69	1
6,90	*16,21*	109	69	1
7,00	*15,89*	109	69	1
7,10	*19,64*	109	69	1
7,20	*19,64*	109	69	1
7,30	*19,64*	109	69	1
7,40	*19,64*	109	69	1
7,50	*17,56*	109	69	1
7,60	*26,83*	117	75	1
7,70	*26,83*	117	75	1
7,80	*26,83*	117	75	1
7,90	*26,83*	117	75	1
8,00	*20,71*	117	75	1
8,10	*26,83*	117	75	1
8,20	*23,47*	117	75	1
8,30	*26,83*	117	75	1
8,40	*26,83*	117	75	1
8,50	*22,79*	117	75	1
8,60	*28,93*	125	81	1
8,70	*28,93*	125	81	1
8,80	*28,93*	125	81	1
8,90	*28,93*	125	81	1
9,00	*26,83*	125	81	1
9,50	*28,89*	125	81	1
9,80	*36,26*	133	87	1
10,00	*32,93*	133	87	1
10,50	*40,54*	133	87	1
11,00	*50,17*	142	94	1
11,50	*60,88*	142	94	1
12,00	*62,78*	151	101	1
12,50	*65,06*	151	101	1
13,00	*68,53*	151	101	1

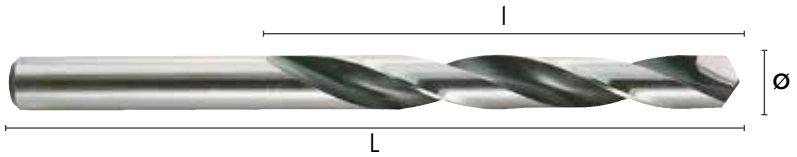
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1110 HSS DIN 338 N - WIDIA



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 800 N/mm2 — 1100 N/mm2 — PL

Aplicaciones / Applications

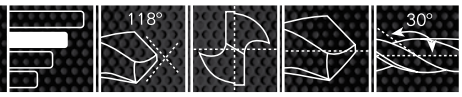


Ø mm	€	L mm	l mm	
1,50	*25,76*	40	18	1
2,00	*19,57*	49	24	1
2,50	*19,57*	57	30	1
3,00	*19,57*	61	33	1
3,50	*19,57*	70	39	1
4,00	*19,57*	75	43	1
4,50	*20,01*	80	47	1
5,00	*20,01*	86	52	1
5,50	*21,16*	93	57	1
6,00	*22,19*	93	57	1
6,50	*26,33*	101	63	1
7,00	*26,33*	109	69	1
7,50	*27,38*	109	69	1
8,00	*27,38*	117	75	1
8,50	*29,96*	117	75	1

Ø mm	€	L mm	l mm	
9,00	*29,96*	125	81	1
9,50	*32,75*	125	81	1
10,00	*32,75*	133	87	1
10,50	*42,21*	133	87	1
11,00	*42,21*	142	97	1
12,00	*48,57*	151	101	1
13,00	*58,03*	151	101	1
14,00	*67,62*	160	108	1
15,00	*77,01*	169	114	1
16,00	*88,67*	178	120	1
17,00	*97,08*	184	125	1
18,00	*104,52*	191	130	1
19,00	*129,81*	198	135	1
20,00	*147,77*	205	140	1

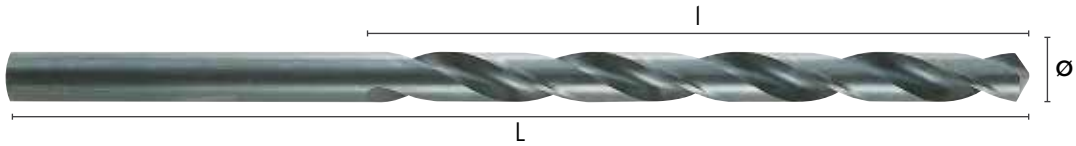
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1112 HSS DIN 340 N



Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1,00	*3,08*	56	33	10
1,10	*3,72*	60	37	10
1,20	*3,72*	65	41	10
1,25	*3,38*	65	41	10
1,30	*3,72*	65	41	10
1,40	*3,72*	70	45	10
1,50	*3,08*	70	45	10
1,60	*3,16*	76	50	10
1,70	*2,89*	76	50	10
1,75	*2,89*	80	53	10
1,80	*3,16*	80	53	10
1,90	*3,16*	80	53	10
2,00	*2,64*	85	56	10
2,10	*3,16*	85	56	10
2,20	*3,16*	85	56	10
2,25	*2,89*	90	59	10
2,30	*3,16*	90	59	10
2,40	*3,16*	95	62	10
2,50	*2,64*	95	62	10
2,60	*3,16*	100	66	10
2,70	*3,16*	100	66	10
2,75	*2,89*	100	66	10
2,80	*3,16*	100	66	10
2,90	*3,16*	100	66	10
3,00	*2,39*	100	66	10
3,10	*3,77*	106	69	10
3,20	*3,77*	106	69	10
3,25	*3,43*	106	69	10
3,30	*3,77*	106	69	10
3,40	*3,77*	112	73	10
3,50	*3,11*	112	73	10
3,60	*3,77*	112	73	10
3,70	*3,77*	112	73	10
3,75	*3,43*	112	73	10
3,80	*3,77*	119	78	10
3,90	*3,77*	119	78	10
4,00	*2,91*	119	78	10
4,10	*4,82*	119	78	10
4,20	*4,82*	119	78	10
4,25	*4,39*	119	78	10
4,30	*4,82*	126	82	10
4,40	*4,82*	126	82	10
4,50	*4,06*	126	82	10
4,60	*4,82*	126	82	10
4,70	*4,82*	126	82	10
4,75	*4,39*	126	82	10
4,80	*4,82*	132	87	10
4,90	*4,82*	132	87	10
5,00	*3,75*	132	87	10
5,10	*5,74*	132	87	10
5,20	*5,74*	132	87	10
5,25	*5,22*	132	87	10
5,30	*5,74*	132	87	10
5,40	*5,74*	139	91	10
5,50	*4,71*	139	91	10
5,60	*5,74*	139	91	10
5,70	*5,74*	139	91	10
5,75	*5,22*	139	91	10
5,80	*5,74*	139	91	10
5,90	*5,74*	139	91	10
6,00	*4,62*	139	91	10
6,10	*7,29*	148	97	10
6,20	*7,29*	148	97	10
6,25	*6,62*	148	97	10
6,30	*7,29*	148	97	10
6,40	*7,94*	148	97	10
6,50	*6,03*	148	97	10
6,60	*7,29*	148	97	10
6,70	*7,29*	148	97	10
6,75	*6,62*	156	102	10
6,80	*8,42*	156	102	10
6,90	*8,42*	156	102	10
7,00	*6,03*	156	102	10
7,10	*8,90*	156	102	10
7,20	*8,90*	156	102	10
7,25	*8,11*	156	102	10
7,30	*8,90*	156	102	10
7,40	*8,90*	156	102	10
7,50	*7,36*	156	102	10
7,60	*8,90*	165	109	10
7,70	*8,90*	165	109	10
7,75	*8,11*	165	109	10
7,80	*8,90*	165	109	10
7,90	*8,90*	165	109	10
8,00	*7,36*	165	109	10
8,10	*10,98*	165	109	10
8,20	*10,98*	165	109	10
8,25	*9,98*	165	109	10
8,30	*10,98*	165	109	10
8,40	*10,98*	165	109	10
8,50	*9,06*	165	109	10
8,75	*9,98*	175	115	10
8,80	*10,98*	175	115	10
8,90	*11,45*	175	115	10
9,00	*9,06*	175	115	10
9,25	*11,60*	175	115	10
9,30	*12,79*	175	115	10
9,40	*12,79*	175	115	10
9,50	*10,58*	175	115	10
9,70	*12,79*	184	121	10
9,75	*11,60*	184	121	10
9,90	*12,79*	184	121	10

(continúa Ref.1112 / suite Réf.1112 / Ref.1112 cont'd)

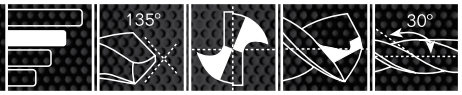
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

(continúa Ref.1112 / suite Réf.1112 / Ref.1112 cont'd)

Ø mm	€	L mm	l mm	
10,00	*10,58*	184	121	5
10,25	*15,87*	184	121	5
10,30	*22,58*	184	121	5
10,40	*17,47*	184	121	5
10,50	*14,45*	184	121	5
10,75	*15,87*	195	128	5
11,00	*14,45*	195	128	5
11,10	*20,70*	195	128	5
11,20	*20,70*	195	128	5
11,25	*18,83*	195	128	5
11,50	*17,12*	195	128	5
11,75	*18,83*	195	128	5
12,00	*17,12*	205	134	5
12,25	*22,65*	205	134	5
12,50	*20,58*	205	134	5
12,75	*22,65*	205	134	5
13,00	*20,58*	205	134	5

Ø mm	€	L mm	l mm	
13,25	*28,29*	214	140	1
13,50	*25,71*	214	140	1
13,75	*28,29*	214	140	1
14,00	*25,71*	214	140	1
14,50	*28,65*	220	144	1
15,00	*28,65*	220	144	1
15,50	*31,30*	227	149	1
16,00	*31,30*	227	149	1
16,50	*42,96*	235	154	1
17,00	*42,96*	235	154	1
17,50	*47,40*	241	158	1
18,00	*47,40*	241	158	1
18,50	*53,98*	247	162	1
19,00	*53,98*	247	162	1
19,50	*58,34*	254	166	1
20,00	*58,34*	254	166	1

1113 HSSCO DIN 340 N



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 · INOX · TI

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*6,27*	85	56	10
2,50	*6,27*	95	62	10
3,00	*6,27*	100	66	10
3,25	*10,92*	106	69	10
3,50	*7,44*	112	73	10
3,75	*7,44*	112	73	10
4,00	*7,44*	119	78	10
4,25	*8,64*	119	78	10
4,50	*9,53*	126	82	10
4,75	*11,84*	126	82	10
5,00	*9,53*	132	87	10
5,25	*20,77*	132	87	10
5,50	*10,44*	139	91	10
5,75	*14,11*	139	91	10
6,00	*10,44*	139	91	10

Ø mm	€	L mm	l mm	
6,50	*13,25*	148	97	10
7,00	*14,40*	156	102	10
7,50	*17,63*	156	102	10
8,00	*16,19*	165	109	10
8,50	*20,01*	165	109	10
9,00	*20,01*	175	115	10
9,50	*23,29*	175	115	10
10,00	*31,38*	184	121	5
10,50	*39,50*	184	121	5
11,00	*41,00*	195	128	5
11,50	*53,17*	195	128	5
12,00	*44,05*	205	134	5
12,50	*56,20*	205	134	5
13,00	*56,20*	204	134	5

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1114 HSSCO DIN 340 S



Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*9,10*	85	56	1
2,10	*8,45*	85	56	1
2,30	*8,78*	90	59	1
2,50	*9,10*	95	62	1
2,70	*9,26*	100	66	1
3,00	*9,44*	100	66	1
3,10	*10,84*	106	69	1
3,20	*10,84*	106	69	1
3,30	*10,84*	106	69	1
3,50	*10,50*	112	73	1
3,60	*11,45*	112	73	1
3,70	*11,72*	112	73	1
4,00	*10,42*	119	78	1
4,10	*13,47*	119	78	1
4,20	*13,47*	119	78	1
4,30	*15,14*	126	82	1
4,50	*12,06*	126	82	1
4,70	*14,98*	126	82	1
4,80	*15,67*	132	87	1
5,00	*12,97*	132	87	1
5,10	*16,29*	132	87	1
5,20	*16,26*	132	87	1
5,50	*15,03*	139	91	1

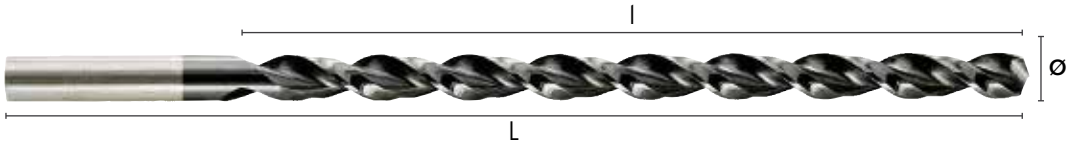
Ø mm	€	L mm	l mm	
5,60	*19,28*	139	91	1
5,80	*19,75*	139	91	1
6,00	*15,99*	139	91	1
6,20	*24,44*	148	97	1
6,50	*19,83*	148	97	1
6,80	*31,10*	156	102	1
7,00	*24,49*	156	102	1
7,20	*30,66*	156	102	1
7,50	*28,16*	156	102	1
8,00	*28,16*	165	109	1
8,20	*33,33*	165	109	1
8,50	*32,79*	165	109	1
8,80	*35,55*	175	115	1
9,00	*34,18*	175	115	1
9,50	*44,75*	175	115	1
9,80	*61,32*	184	121	1
10,00	*45,73*	184	121	1
10,50	*71,12*	184	121	1
11,00	*53,54*	195	128	1
11,50	*99,39*	195	128	1
12,00	*73,85*	195	128	1
13,00	*92,01*	195	128	1

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1164 HSSCO DIN 340 S — 135° — TYP S — TIALN

Aceros 800-1100 N/mm² / Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

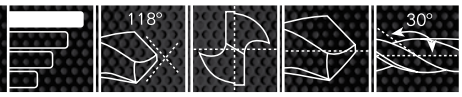


Ø mm	€	L mm	l mm	
2,00	*12,76*	85	56	1
2,10	*11,84*	85	56	1
2,30	*12,29*	90	59	1
2,50	*12,76*	95	62	1
2,70	*12,97*	100	66	1
3,00	*13,20*	100	66	1
3,10	*15,17*	106	69	1
3,20	*15,17*	106	69	1
3,30	*15,17*	106	69	1
3,50	*14,71*	112	73	1
3,60	*16,02*	112	73	1
3,70	*16,40*	112	73	1
4,00	*14,58*	119	78	1
4,10	*18,88*	119	78	1
4,20	*18,88*	119	78	1
4,30	*21,20*	126	82	1
4,50	*16,89*	126	82	1
4,70	*20,98*	126	82	1
4,80	*21,95*	132	87	1
5,00	*18,14*	132	87	1
5,10	*22,79*	132	87	1
5,20	*22,76*	132	87	1
5,50	*21,03*	139	91	1

Ø mm	€	L mm	l mm	
5,60	*27,02*	139	91	1
5,80	*27,64*	139	91	1
6,00	*22,39*	139	91	1
6,20	*34,22*	148	97	1
6,50	*27,76*	148	97	1
6,80	*43,55*	156	102	1
7,00	*34,27*	156	102	1
7,20	*42,92*	156	102	1
7,50	*39,42*	156	102	1
8,00	*39,42*	165	109	1
8,20	*46,66*	165	109	1
8,50	*45,89*	165	109	1
8,80	*49,78*	175	115	1
9,00	*47,84*	175	115	1
9,50	*62,66*	175	115	1
9,80	*85,85*	184	121	1
10,00	*64,02*	184	121	1
10,50	*99,56*	184	121	1
11,00	*74,96*	195	128	1
11,50	*139,16*	195	128	1
12,00	*103,39*	195	128	1
13,00	*128,81*	195	128	1

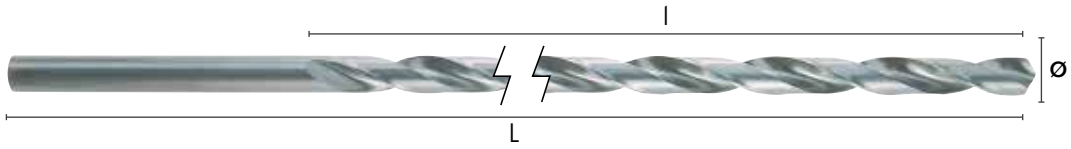
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1115 **HSS DIN 1869 N**



Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*11,45*	125	85	1
2,50	*11,96*	140	95	1
3,00	*12,36*	150	100	1
3,00	*13,22*	190	130	1
3,50	*13,95*	165	115	1
3,50	*16,08*	210	145	1
3,50	*23,02*	265	180	1
4,00	*13,95*	175	120	1
4,00	*16,47*	220	150	1
4,00	*23,46*	280	190	1
4,50	*15,46*	185	125	1
4,50	*19,32*	235	160	1
4,50	*27,64*	295	200	1
5,00	*16,35*	195	135	1
5,00	*20,76*	245	170	1
5,00	*25,54*	315	210	1
5,50	*19,37*	205	140	1
5,50	*27,64*	260	180	1
5,50	*31,93*	330	235	1
6,00	*19,37*	205	140	1
6,00	*27,64*	260	180	1
6,00	*31,93*	330	225	1
6,50	*23,02*	215	150	1
6,50	*29,74*	275	190	1
6,50	*37,07*	350	235	1
7,00	*24,40*	225	155	1
7,00	*33,97*	290	210	1
7,00	*45,90*	370	250	1
7,50	*27,48*	225	155	1
7,50	*36,59*	290	200	1
7,50	*53,33*	370	250	1
8,00	*30,36*	240	165	1

Ø mm	€	L mm	l mm	
8,00	*42,03*	305	210	1
8,00	*54,73*	390	265	1
8,50	*41,30*	240	165	1
8,50	*56,29*	305	210	1
8,50	*77,41*	390	265	1
9,00	*39,39*	250	175	1
9,00	*52,01*	320	220	1
9,00	*76,35*	410	280	1
9,50	*46,37*	250	175	1
9,50	*63,74*	320	220	1
9,50	*85,87*	410	280	1
10,00	*45,77*	265	185	1
10,00	*59,87*	340	235	1
10,00	*83,19*	430	295	1
10,50	*87,23*	265	145	1
10,50	*94,53*	340	250	1
10,50	*100,54*	430	295	1
11,00	*57,95*	280	195	1
11,00	*84,88*	365	250	1
11,00	*99,37*	455	310	1
11,50	*81,23*	280	195	1
11,50	*109,05*	365	250	1
11,50	*112,67*	455	310	1
12,00	*76,52*	295	205	1
12,00	*95,76*	375	260	1
12,00	*116,98*	480	315	1
12,50	*94,53*	295	205	1
12,50	*105,86*	375	260	1
12,50	*128,50*	480	315	1
13,00	*94,53*	295	205	1
13,00	*109,07*	375	260	1
13,00	*129,72*	480	315	1

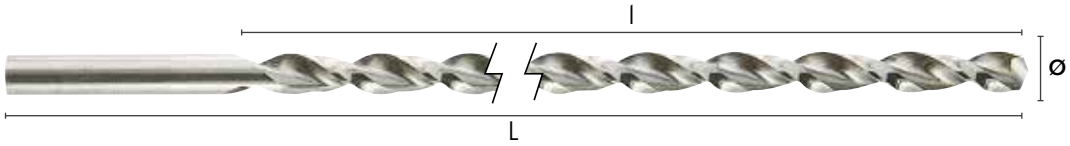
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1165 HSSCO DIN 1869 S



Aceros 800-1100 N/mm² Aciers / Steel	Inox / Inox / Stainless	Aluminio / Aluminium / Aluminium	Titanio / Titane / Titanium	Fundición / Fonte / Cast Iron

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	17,21	125	85	1
2,00	26,61	160	110	1
2,00	31,30	200	135	1
2,50	18,77	140	95	1
2,50	28,17	180	120	1
2,50	34,43	225	150	1
3,00	18,77	150	100	1
3,00	21,91	190	130	1
3,00	34,43	240	160	1
3,25	23,57	155	105	1
3,25	29,11	200	135	1
3,50	20,34	165	115	1
3,50	23,47	210	145	1
3,50	31,30	265	180	1
3,75	40,48	160	115	1
3,75	29,11	210	145	1
3,75	38,44	265	180	1
4,00	21,91	175	120	1
4,00	26,61	220	150	1
4,00	31,30	180	190	1
4,25	28,93	175	120	1
4,25	37,39	220	150	1
4,25	46,78	280	190	1
4,50	23,47	185	125	1
4,50	29,74	235	160	1
4,50	34,43	295	200	1
4,75	29,80	185	125	1
4,75	37,39	235	160	1
4,75	46,78	295	200	1
5,00	25,04	195	135	1
5,00	31,30	245	170	1
5,00	37,56	315	210	1
5,25	30,19	195	135	1
5,25	41,76	245	170	1
5,25	50,04	315	210	1
5,50	28,17	205	140	1
5,50	35,98	260	180	1
5,50	42,26	330	225	1
5,75	30,19	205	140	1
5,75	41,76	260	180	1
5,75	50,60	330	225	1
6,00	26,61	205	140	1
6,00	32,87	260	180	1
6,00	40,70	330	225	1
6,25	35,41	215	150	1
6,25	43,67	275	190	1
6,25	56,39	350	235	1
6,50	29,74	215	150	1
6,50	37,56	275	190	1
6,50	50,07	350	235	1
6,75	38,44	225	155	1
6,75	50,44	290	200	1
6,75	71,50	370	250	1
7,00	34,43	225	155	1
7,00	40,70	290	200	1
7,00	54,78	370	250	1
7,25	48,96	225	155	1
7,25	60,37	290	200	1
7,25	80,64	370	250	1
7,50	37,56	225	155	1
7,50	45,38	290	200	1
7,50	59,47	370	250	1
7,75	50,44	240	165	1
7,75	60,37	305	210	1
7,75	89,16	390	265	1
8,00	42,26	240	165	1
8,00	50,07	305	210	1
8,00	72,00	390	265	1
8,25	66,18	240	165	1
8,25	87,83	305	210	1
8,25	106,66	390	265	1
8,50	43,82	240	165	1
8,50	53,20	305	210	1
8,50	75,12	390	265	1
8,75	70,72	250	175	1
8,75	87,83	320	220	1
8,75	112,30	410	280	1
9,00	51,64	250	175	1
9,00	62,60	320	220	1
9,00	87,65	410	280	1
9,25	82,69	250	175	1
9,25	105,40	320	220	1
9,25	131,84	410	280	1
9,50	53,20	250	175	1
9,50	62,60	320	220	1
9,50	92,34	410	280	1
9,75	84,38	265	185	1
9,75	109,86	340	235	1
9,75	141,59	430	295	1
10,00	59,47	265	185	1
10,00	82,94	340	235	1
10,00	101,71	430	295	1
10,50	62,60	265	185	1
10,50	87,65	340	235	1
10,50	104,86	430	295	1
11,00	68,85	280	195	1
11,00	95,46	365	250	1
11,00	117,37	455	310	1
11,50	78,25	280	195	1
11,50	107,98	365	250	1
11,50	131,46	455	310	1
12,00	86,07	275	205	1
12,00	117,37	375	260	1
12,00	145,54	480	330	1

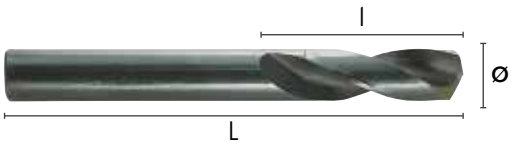
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1116 HSS DIN 1897 N



Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1,00	*1,17*	26	6	10
1,10	*2,59*	28	7	10
1,20	*2,99*	30	8	10
1,25	*1,06*	30	8	10
1,30	*3,44*	30	8	10
1,40	*3,94*	32	9	10
1,50	*1,03*	32	9	10
1,60	*2,34*	34	10	10
1,70	*2,71*	34	10	10
1,75	*1,03*	36	11	10
1,80	*2,71*	36	11	10
1,90	*2,71*	36	11	10
2,00	*1,03*	38	12	10
2,10	*1,26*	38	12	10
2,20	*1,26*	40	13	10
2,25	*1,03*	40	13	10
2,30	*1,26*	40	13	10
2,40	*1,26*	43	14	10
2,50	*1,03*	43	14	10
2,60	*1,70*	43	14	10
2,70	*1,17*	46	16	10
2,75	*1,07*	46	16	10
2,80	*1,29*	46	16	10
2,90	*1,29*	46	16	10
3,00	*1,07*	46	16	10
3,10	*1,39*	49	18	10
3,20	*1,39*	49	18	10
3,25	*1,16*	49	18	10
3,30	*1,32*	49	18	10
3,40	*1,39*	52	20	10
3,50	*1,16*	52	20	10
3,60	*1,54*	52	20	10
3,70	*1,54*	52	20	10
3,75	*1,25*	52	20	10
3,80	*1,54*	55	22	10
3,90	*1,54*	55	22	10
4,00	*1,25*	55	22	10
4,10	*1,81*	55	22	10
4,20	*1,81*	55	22	10
4,25	*1,51*	55	22	10
4,30	*1,81*	58	24	10
4,40	*1,81*	58	24	10
4,50	*1,51*	58	24	10
4,60	*2,06*	58	24	10
4,70	*2,06*	58	24	10
4,75	*1,69*	58	24	10
4,80	*2,06*	62	26	10
4,90	*2,06*	62	26	10
5,00	*1,69*	62	26	10

Ø mm	€	L mm	l mm	
5,10	*2,27*	62	26	10
5,20	*2,27*	62	26	10
5,25	*1,86*	62	26	10
5,30	*2,28*	62	26	10
5,40	*2,28*	66	28	10
5,50	*1,86*	66	28	10
5,60	*2,46*	66	28	10
5,70	*3,69*	66	28	10
5,75	*2,13*	66	28	10
5,80	*2,46*	66	28	10
5,90	*2,59*	66	28	10
6,00	*2,13*	66	28	10
6,10	*3,07*	70	31	10
6,20	*3,07*	70	31	10
6,25	*2,54*	70	31	10
6,30	*3,07*	70	31	10
6,40	*3,07*	70	31	10
6,50	*2,54*	70	31	10
6,60	*3,56*	70	31	10
6,70	*3,56*	70	31	10
6,75	*2,93*	74	34	10
6,80	*3,56*	74	34	10
6,90	*3,56*	74	34	10
7,00	*2,93*	74	34	10
7,25	*3,32*	74	34	10
7,50	*3,32*	74	34	10
7,75	*3,65*	79	37	10
8,00	*3,65*	79	37	10
8,25	*4,36*	79	37	10
8,50	*4,36*	79	37	10
8,75	*4,82*	84	40	10
9,00	*4,76*	84	40	10
9,25	*5,07*	84	40	10
9,50	*5,32*	84	40	10
9,75	*5,95*	89	43	10
10,00	*5,95*	89	43	5
10,50	*6,69*	89	43	5
11,00	*7,47*	95	47	5
11,50	*8,30*	95	47	5
12,00	*8,75*	102	51	5
13,00	*10,77*	102	51	5
14,00	*14,83*	107	54	4
15,00	*19,31*	111	56	4
16,00	*23,28*	115	58	1
17,00	*27,36*	119	60	1
18,00	*30,48*	123	62	1
19,00	*33,97*	127	64	1
20,00	*40,73*	131	66	1

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1117 HSS DIN 1897 N



Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*2,24*	38	9	10
2,25	*2,24*	40	9	10
2,50	*2,24*	43	10	10
2,75	*2,24*	46	10	10
3,00	*1,94*	46	10	10
3,25	*1,94*	49	10	10
3,30	*1,94*	49	10	10
3,50	*2,16*	52	13	10
3,75	*2,48*	52	13	10
4,00	*2,23*	55	13	10
4,10	*2,40*	55	13	10
4,20	*2,40*	55	13	10

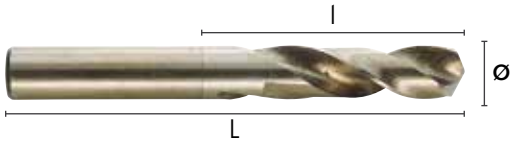
Ø mm	€	L mm	l mm	
4,25	*2,40*	55	13	10
4,50	*2,48*	58	13	10
4,75	*4,01*	58	13	10
4,80	*2,73*	58	13	10
5,00	*2,84*	62	13	10
5,25	*4,01*	62	13	10
5,50	*3,42*	66	16	10
5,75	*4,73*	66	16	10
6,00	*3,83*	66	16	10
7,00	*5,06*	74	19	10
8,00	*6,20*	79	19	10

1118 HSSCO DIN 1897 N



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*1,35*	38	12	10
2,20	*2,36*	40	13	10
2,25	*1,85*	40	13	10
2,50	*1,93*	43	14	10
2,70	*3,26*	46	16	10
2,75	*2,04*	46	16	10
3,00	*2,04*	46	16	10
3,20	*2,58*	49	18	10
3,25	*2,00*	49	18	10
3,30	*2,67*	49	18	10
3,50	*2,16*	52	20	10
3,75	*2,27*	52	20	10
4,00	*2,38*	55	22	10
4,10	*4,34*	55	22	10
4,20	*3,29*	55	22	10
4,25	*2,58*	55	22	10
4,50	*2,74*	58	24	10
4,75	*2,84*	58	24	10
4,90	*3,44*	62	26	10
5,00	*3,07*	62	26	10
5,10	*3,84*	62	26	10

Ø mm	€	L mm	l mm	
5,20	*3,73*	62	26	10
5,25	*2,92*	62	26	10
5,50	*3,20*	66	28	10
5,75	*3,31*	66	28	10
6,00	*3,45*	66	28	10
6,50	*3,94*	70	31	10
6,75	*6,73*	74	34	10
7,00	*4,42*	74	34	10
7,50	*5,61*	74	34	10
8,00	*6,23*	79	37	10
8,25	*7,93*	79	37	10
8,50	*6,73*	79	37	10
9,00	*7,47*	84	40	10
9,50	*8,06*	84	40	10
10,00	*8,94*	89	43	5
10,50	*13,45*	89	43	5
11,00	*12,42*	95	47	5
11,50	*13,93*	95	47	5
12,00	*17,10*	102	51	5
12,50	*17,94*	102	51	5
13,00	*23,45*	102	51	5

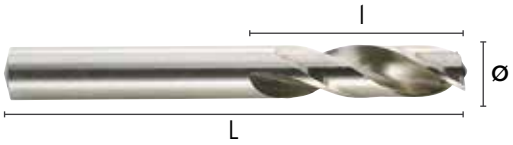
BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1119 HSSCO DIN 1897 N Soldadura / Soudure / Welding



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

Aplicaciones / Applications



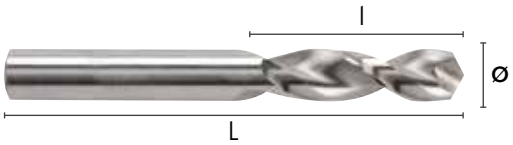
Ø mm	€	L mm	l mm	
6,00	*12,24*	66	28	1
7,00	*13,49*	74	34	1
8,00	*14,78*	79	37	1
10,00	*16,72*	89	43	1

1166 HSSCO DIN 1897 S



Aceros 800-1100 N/mm² Aciers / Steel — **Inox /** Inox / Stainless — **Aluminio /** Aluminium / Aluminium — **Titanio /** Titane / Titanium — **Fundición /** Fonte / Cast Iron

Aplicaciones / Applications



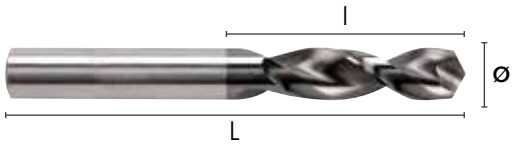
Ø mm	€	L mm	l mm	
2,00	*3,77*	38	12	10
2,50	*3,40*	43	14	10
2,80	*3,42*	46	16	10
3,00	*3,27*	46	16	10
3,10	*3,64*	49	18	10
3,20	*3,64*	49	18	10
3,30	*3,64*	49	18	10
3,40	*3,64*	52	20	10
3,50	*3,64*	52	20	10
3,60	*4,43*	52	20	10
3,70	*4,43*	52	20	10
3,80	*4,61*	55	22	10
3,90	*4,43*	55	22	10
4,00	*4,03*	55	22	10
4,10	*4,79*	55	22	10
4,20	*4,79*	55	22	10
4,30	*5,52*	58	24	10
4,40	*5,52*	58	24	10
4,50	*4,79*	58	24	10
4,60	*5,74*	58	24	10
4,70	*5,75*	58	24	10
4,80	*5,75*	62	26	10
4,90	*5,74*	62	26	10
5,00	*5,34*	62	26	10
5,10	*6,53*	62	26	10
5,20	*6,53*	62	26	10
5,30	*6,53*	62	26	10
5,40	*6,52*	66	28	10
5,50	*5,95*	66	28	10
5,60	*6,87*	66	28	10
5,70	*7,15*	66	28	10
5,80	*6,87*	66	28	10
5,90	*6,87*	66	28	10
6,00	*6,78*	66	28	10
6,10	*8,72*	66	28	10
6,20	*8,69*	70	31	10
6,50	*8,11*	70	31	10
6,80	*11,30*	70	31	10
7,00	*9,29*	74	34	10
7,20	*11,78*	74	34	10
7,50	*11,99*	74	34	10
7,80	*11,99*	74	34	10
8,00	*11,68*	79	37	10
8,20	*10,32*	79	37	10
8,50	*13,85*	79	37	10
8,80	*20,27*	79	37	10
9,00	*15,11*	84	40	10
9,20	*17,03*	84	40	10
9,50	*17,03*	84	40	10
9,80	*18,92*	84	40	10
10,00	*18,92*	89	43	10
10,50	*20,57*	89	43	5
11,00	*23,58*	89	43	5
11,50	*26,19*	95	47	5
12,00	*27,60*	95	47	5
13,00	*34,00*	102	51	5
14,00	*43,82*	102	51	5
15,00	*48,52*	107	54	4
16,00	*56,34*	111	56	4

BROCAS CON MANGO CILÍNDRICO
FORETS À QUEUE CYLINDRIQUE / STRAIGHT SHANK DRILL-BITS

1167 HSSCO DIN 1897 S — 135° — TYP S — TIALN

Aceros 800-1100 N/mm² Aciers / Steel	Inox / Inox / Stainless	Aluminio / Aluminium / Aluminium	Titanio / Titane / Titanium	Fundición / Fonte / Cast Iron

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*5,29*	38	12	1
2,50	*4,78*	43	14	1
2,80	*4,78*	46	16	1
3,00	*4,58*	46	16	1
3,10	*5,09*	49	18	1
3,20	*5,09*	49	18	1
3,30	*5,09*	49	18	1
3,40	*5,09*	52	20	1
3,50	*5,09*	52	20	1
3,60	*6,21*	52	20	1
3,70	*6,21*	52	20	1
3,80	*6,45*	55	22	1
3,90	*6,21*	55	22	1
4,00	*5,65*	55	22	1
4,10	*6,69*	55	22	1
4,20	*6,69*	55	22	1
4,30	*7,73*	58	24	1
4,40	*7,73*	58	24	1
4,50	*6,69*	58	24	1
4,60	*8,05*	58	24	1
4,70	*8,06*	58	24	1
4,80	*8,06*	62	26	1
4,90	*8,05*	62	26	1
5,00	*7,49*	62	26	1
5,10	*9,12*	62	26	1
5,20	*9,12*	62	26	1
5,30	*9,12*	62	26	1
5,40	*9,12*	66	28	1
5,50	*8,34*	66	28	1
5,60	*9,63*	66	28	1

Ø mm	€	L mm	l mm	
5,70	*10,01*	66	28	1
5,80	*9,63*	66	28	1
5,90	*9,63*	66	28	1
6,00	*9,49*	66	28	1
6,10	*12,19*	70	31	1
6,20	*12,18*	70	31	1
6,50	*11,33*	70	31	1
6,80	*15,82*	74	34	1
7,00	*13,02*	74	34	1
7,20	*16,51*	74	34	1
7,50	*16,79*	74	34	1
7,80	*16,80*	79	37	1
8,00	*16,35*	79	37	1
8,20	*14,45*	79	37	1
8,50	*19,39*	79	37	1
8,80	*28,37*	84	40	1
9,00	*21,15*	84	40	1
9,20	*23,84*	84	40	1
9,50	*23,84*	84	40	1
9,80	*26,48*	89	43	1
10,00	*26,48*	89	43	1
10,50	*28,80*	89	43	1
11,00	*33,02*	95	47	1
11,50	*36,66*	95	47	1
12,00	*38,66*	102	51	1
13,00	*47,60*	102	51	1
14,00	*61,34*	107	54	1
15,00	*67,91*	111	56	1
16,00	*78,88*	115	58	1

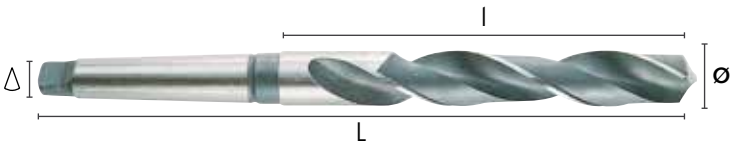
BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

1121 HSS DIN 345 N



Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



Δ	Ø mm	€	L mm	l mm	
1	5,00	*17,26*	133	52	1
1	5,25	*19,88*	133	52	1
1	5,50	*17,26*	138	57	1
1	5,75	*19,88*	138	57	1
1	6,00	*17,26*	138	57	1
1	6,25	*22,64*	144	63	1
1	6,50	*19,66*	144	63	1
1	6,75	*22,64*	150	69	1
1	7,00	*19,66*	150	69	1
1	7,25	*24,30*	150	69	1
1	7,50	*21,14*	150	69	1
1	7,75	*24,30*	156	75	1
1	8,00	*21,14*	156	75	1
1	8,25	*28,52*	156	75	1
1	8,50	*19,08*	156	75	1
1	8,75	*28,52*	162	81	1
1	9,00	*19,08*	162	81	1
1	9,25	*29,47*	162	81	1
1	9,50	*18,84*	162	81	1
1	9,75	*29,47*	168	87	1
1	10,00	*18,84*	168	87	1
1	10,25	*30,08*	168	87	1
1	10,50	*20,11*	168	87	1
1	10,75	*30,08*	175	94	1
1	11,00	*20,11*	175	94	1
1	11,25	*31,68*	175	94	1
1	11,50	*21,20*	175	94	1
1	11,75	*31,68*	175	94	1
1	12,00	*21,20*	182	101	1
1	12,25	*35,29*	182	101	1
1	12,50	*23,59*	182	101	1
1	12,75	*35,29*	182	101	1
1	13,00	*23,59*	182	101	1
1	13,25	*38,79*	189	108	1
1	13,50	*25,94*	189	108	1
1	13,75	*38,79*	189	108	1
1	14,00	*25,94*	189	108	1
2	14,25	*41,97*	212	114	1
2	14,50	*28,09*	212	114	1
2	14,75	*41,97*	212	114	1
2	15,00	*28,09*	212	114	1
2	15,25	*43,49*	218	120	1
2	15,50	*29,06*	218	120	1
2	15,75	*43,49*	218	120	1
2	16,00	*29,06*	218	120	1
2	16,25	*49,15*	223	125	1
2	16,50	*32,88*	223	125	1
2	16,75	*49,15*	223	125	1
2	17,00	*32,88*	223	125	1
2	17,25	*54,42*	228	130	1
2	17,50	*36,38*	228	130	1

Δ	Ø mm	€	L mm	l mm	
2	17,75	*54,42*	228	130	1
2	18,00	*36,38*	228	130	1
2	18,25	*59,88*	233	135	1
2	18,50	*40,05*	233	135	1
2	18,75	*59,88*	233	135	1
2	19,00	*40,05*	233	135	1
2	19,25	*65,19*	238	140	1
2	19,50	*43,58*	238	140	1
2	19,75	*65,19*	238	140	1
2	20,00	*43,58*	238	140	1
2	20,25	*67,56*	243	145	1
2	20,50	*47,10*	243	145	1
2	20,75	*67,56*	243	145	1
2	21,00	*47,10*	243	145	1
2	21,25	*74,51*	248	150	1
2	21,50	*52,00*	248	150	1
2	21,75	*74,51*	248	150	1
2	22,00	*52,00*	248	150	1
2	22,25	*82,51*	248	150	1
2	22,50	*56,89*	253	155	1
2	22,75	*81,56*	253	155	1
2	23,00	*56,89*	253	155	1
3	23,25	*89,95*	276	155	1
3	23,50	*62,78*	276	155	1
3	23,75	*89,95*	281	160	1
3	24,00	*62,78*	281	160	1
3	24,25	*98,12*	281	160	1
3	24,50	*68,44*	281	160	1
3	24,75	*98,12*	281	160	1
3	25,00	*68,44*	281	160	1
3	25,25	*106,75*	286	165	1
3	25,50	*74,48*	286	165	1
3	25,75	*106,75*	286	165	1
3	26,00	*74,48*	286	165	1
3	26,25	*115,61*	286	165	1
3	26,50	*80,65*	286	165	1
3	26,75	*115,61*	291	170	1
3	27,00	*82,80*	291	170	1
3	27,25	*123,73*	291	170	1
3	27,50	*86,35*	291	170	1
3	27,75	*123,73*	291	170	1
3	28,00	*86,35*	291	170	1
3	28,25	*132,71*	296	175	1
3	28,50	*92,58*	296	175	1
3	28,75	*132,71*	296	175	1
3	29,00	*92,58*	296	175	1
3	29,25	*145,92*	296	175	1
3	29,50	*101,65*	296	175	1
3	29,75	*145,92*	296	175	1
3	30,00	*101,80*	296	175	1
3	30,25	*162,37*	301	180	1

(continúa Ref.1121 / suite Réf.1121 / Ref.1121 cont'd)

BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

(continúa Ref.1121 / suite Réf.1121 / Ref.1121 cont'd)

△	Ø mm	€	L mm	l mm	
3	30,50	*141,20*	301	180	1
3	30,75	*162,37*	301	180	1
3	31,00	*113,30*	301	180	1
3	31,25	*171,97*	301	180	1
3	31,50	*141,28*	301	180	1
3	31,75	*171,97*	306	185	1
4	32,00	*119,97*	334	185	1
4	32,50	*170,76*	334	185	1
4	33,00	*137,01*	334	185	1
4	33,50	*185,68*	334	185	1
4	34,00	*149,02*	339	190	1
4	34,50	*202,93*	339	190	1
4	35,00	*162,86*	339	190	1
4	35,50	*217,76*	339	190	1
4	36,00	*174,68*	344	195	1
4	36,50	*229,54*	344	195	1
4	37,00	*184,16*	344	195	1
4	37,50	*241,45*	344	195	1
4	38,00	*193,75*	349	200	1
4	38,50	*257,46*	349	200	1
4	39,00	*206,60*	349	200	1
4	39,50	*271,89*	349	200	1
4	40,00	*218,15*	349	200	1
4	40,50	*285,85*	354	205	1
4	41,00	*229,36*	354	205	1
4	41,50	*303,36*	354	205	1
4	42,00	*243,38*	354	205	1
4	42,50	*318,14*	354	205	1
4	43,00	*255,28*	359	210	1
4	43,50	*333,11*	359	210	1
4	44,00	*267,25*	359	210	1
4	44,50	*347,78*	359	210	1
4	45,00	*277,55*	359	210	1
4	45,50	*362,49*	364	215	1
4	46,00	*290,82*	364	215	1
4	46,50	*377,24*	364	215	1
4	47,00	*302,70*	364	215	1
4	47,50	*389,92*	364	215	1
4	48,00	*312,86*	369	220	1
4	48,50	*404,89*	369	220	1
4	49,00	*324,87*	369	220	1
4	49,50	*419,63*	369	220	1

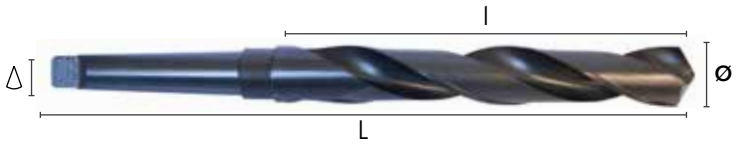
△	Ø mm	€	L mm	l mm	
4	50,00	*327,68*	369	220	1
5	51,00	*425,87*	412	225	1
5	52,00	*452,06*	412	225	1
5	53,00	*489,70*	412	225	1
5	54,00	*503,01*	417	230	1
5	55,00	*504,13*	417	230	1
5	56,00	*594,04*	417	230	1
5	57,00	*634,16*	422	235	1
5	58,00	*634,16*	422	235	1
5	59,00	*648,62*	422	235	1
5	60,00	*623,99*	422	235	1
5	61,00	*695,11*	427	240	1
5	62,00	*711,32*	427	240	1
5	63,00	*764,23*	427	240	1
5	64,00	*796,32*	432	245	1
5	65,00	*761,80*	432	245	1
5	66,00	*868,09*	432	245	1
5	67,00	*893,78*	432	245	1
5	68,00	*921,33*	437	250	1
5	69,00	*945,26*	437	250	1
5	70,00	*974,64*	437	250	1
5	71,00	*924,08*	437	250	1
5	72,00	*1.066,94*	442	255	1
5	73,00	*1.089,01*	442	255	1
5	74,00	*1.117,52*	442	255	1
5	75,00	*1.150,21*	442	255	1
5	76,00	*1.083,46*	447	260	1
6	77,00	*1.275,79*	514	260	1
6	78,00	*1.369,10*	514	260	1
6	79,00	*1.395,83*	514	260	1
6	80,00	*1.423,94*	514	260	1
6	81,00	*1.525,34*	519	265	1
6	82,00	*1.563,46*	519	265	1
6	83,00	*1.593,45*	519	265	1
6	84,00	*1.627,27*	519	265	1
6	85,00	*1.667,47*	519	265	1
6	86,00	*1.703,87*	524	270	1
6	87,00	*1.740,06*	524	270	1
6	88,00	*1.784,78*	524	270	1
6	89,00	*1.819,33*	524	270	1
6	90,00	*1.871,40*	524	270	1

BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

1121/9 **HSS DIN 345 N**



Aceros 400 - 800 N/mm² **Aciers / Steel** F



Ø mm	€	L mm	l mm	
1/2"	*23,59*	182	101	1
33/64"	*23,59*	182	101	1
17/32"	*25,94*	189	108	1
35/64"	*25,94*	189	108	1
9/16"	*28,09*	212	114	1
37/64"	*41,97*	212	114	1
19/32"	*28,09*	218	120	1
39/64"	*29,06*	218	120	1
5/8"	*29,06*	218	120	1
41/64"	*49,15*	223	125	1
21/32"	*32,88*	223	125	1
43/64"	*32,88*	223	125	1
11/16"	*36,38*	228	130	1
45/64"	*36,38*	228	130	1
23/32"	*59,88*	233	135	1
47/64"	*40,05*	233	135	1
3/4"	*40,05*	238	140	1
49/64"	*43,58*	238	140	1
25/32"	*65,19*	238	140	1
51/64"	*43,58*	243	145	1
13/16"	*47,10*	243	145	1
53/64"	*47,10*	243	145	1
27/32"	*52,00*	248	150	1
55/64"	*74,51*	248	150	1
7/8"	*52,00*	248	150	1
57/64"	*56,89*	253	155	1

Ø mm	€	L mm	l mm	
29/32"	*56,89*	253	155	1
59/64"	*62,78*	276	155	1
15/16"	*123,73*	281	160	1
61/64"	*62,78*	281	160	1
31/32"	*52,00*	281	160	1
63/64"	*68,44*	286	160	1
1"	*75,62*	290	170	1
1-1/16"	*82,80*	291	170	1
1-1/8"	*92,58*	296	175	1
1-5/32"	*92,58*	296	175	1
1-3/16"	*101,80*	301	180	1
1-7/32"	*113,30*	301	180	1
1-1/4"	*171,97*	306	185	1
1-9/32"	*170,76*	334	185	1
1-5/16"	*137,01*	334	185	1
1-11/32"	*149,02*	339	190	1
1-3/8"	*162,86*	339	190	1
1-13/32"	*174,68*	344	195	1
1-7/16"	*229,54*	344	195	1
1-1/2"	*193,75*	349	200	1
1-9/16"	*218,15*	349	200	1
1-5/8"	*229,36*	354	205	1
1-11/16"	*255,28*	359	210	1
1-3/4"	*267,25*	359	210	1
2"	*327,68*	374	225	1

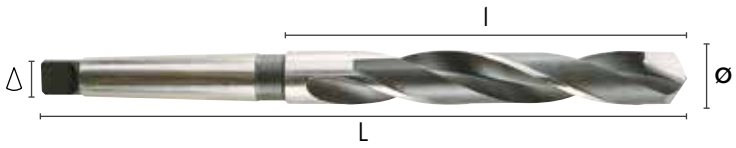
BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

1123 HSS DIN 345 N - WIDIA



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2 — PL

Aplicaciones / Applications



Δ	Ø mm	€	L mm	l mm	
1	10,00	*76,46*	168	87	1
1	11,00	*82,70*	175	94	1
1	12,00	*86,77*	182	101	1
1	13,00	*98,62*	182	101	1
1	14,00	*107,21*	189	108	1
1	14,50	*121,12*	212	114	1
2	15,00	*121,12*	212	114	1
2	15,50	*129,38*	218	120	1
2	16,00	*129,38*	218	120	1
2	16,50	*137,24*	223	125	1
2	17,00	*137,24*	223	125	1
2	17,50	*148,10*	228	130	1
2	18,00	*148,10*	228	130	1
2	18,50	*173,36*	233	135	1
2	19,00	*173,36*	233	135	1

Δ	Ø mm	€	L mm	l mm	
2	19,50	*194,84*	238	140	1
2	20,00	*194,32*	238	140	1
2	20,50	*197,68*	243	145	1
2	21,00	*197,68*	243	145	1
2	21,50	*215,79*	248	150	1
2	22,00	*215,79*	248	150	1
2	22,50	*234,62*	253	155	1
2	23,00	*234,62*	253	155	1
3	24,00	*257,84*	281	160	1
3	25,00	*263,99*	281	160	1
3	26,00	*296,77*	286	165	1
3	27,00	*316,45*	291	170	1
3	28,00	*350,43*	291	170	1
3	29,00	*373,04*	296	175	1
3	30,00	*396,91*	296	175	1

BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

1122 **HSSCO DIN 345 N**



Aceros 800 - 1100 N/mm² **Aciers / Steel** INOX TI

Aplicaciones / Applications

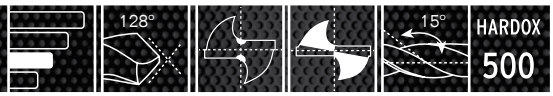


Δ	Ø mm	€	L mm	l mm	
1	10,00	*63,55*	168	87	1
1	10,50	*66,23*	168	87	1
1	11,00	*63,50*	175	94	1
1	11,50	*66,23*	175	94	1
1	12,00	*67,92*	182	101	1
1	12,50	*71,88*	182	101	1
1	13,00	*69,75*	182	101	1
1	13,50	*91,16*	189	108	1
1	14,00	*89,42*	189	108	1
2	14,50	*99,24*	212	114	1
2	15,00	*91,16*	212	114	1
2	15,50	*101,00*	218	120	1
2	16,00	*97,46*	218	120	1
2	16,50	*101,89*	223	125	1
2	17,00	*101,00*	223	125	1
2	17,50	*107,31*	228	130	1
2	18,00	*105,51*	228	130	1
2	18,50	*115,32*	233	135	1
2	19,00	*112,67*	233	135	1
2	19,50	*129,68*	238	140	1
2	20,00	*126,06*	238	140	1
2	20,50	*144,85*	243	145	1
2	21,00	*146,62*	243	145	1
2	21,50	*165,46*	248	150	1
2	22,00	*149,22*	248	150	1
2	22,50	*184,18*	253	155	1

Δ	Ø mm	€	L mm	l mm	
2	23,00	*173,54*	253	155	1
3	23,50	*184,18*	276	155	1
3	24,00	*185,96*	281	160	1
3	24,50	*198,52*	281	160	1
3	25,00	*196,43*	281	160	1
3	25,50	*243,29*	286	165	1
3	26,00	*230,54*	286	165	1
3	26,50	*255,71*	286	165	1
3	27,00	*255,71*	291	170	1
3	27,50	*305,78*	291	170	1
3	28,00	*282,90*	291	170	1
3	28,50	*312,96*	296	175	1
3	29,00	*289,20*	296	175	1
3	29,50	*320,13*	296	175	1
3	30,00	*295,33*	296	175	1
3	31,00	*295,32*	301	180	1
4	32,00	*338,42*	334	185	1
4	33,00	*386,52*	334	185	1
4	34,00	*459,29*	339	190	1
4	35,00	*459,29*	339	190	1
4	36,00	*492,81*	344	195	1
4	37,00	*509,34*	344	195	1
4	38,00	*567,33*	349	200	1
4	39,00	*582,70*	349	200	1
4	40,00	*615,39*	349	200	1

BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

1181 HSSCO (8%)



Aceros / HRC 45-55 — Aciers / Steel

Aplicaciones / Applications



Δ	Ø mm	€	L mm	l mm	
2	10	*53,28*	190	90	1
2	11	*53,28*	190	90	1
2	12	*58,35*	190	90	1
2	13	*58,35*	190	90	1
2	14	*62,12*	190	90	1
2	15	*63,34*	190	90	1
2	16	*75,36*	190	90	1
2	17	*80,34*	190	90	1
2	18	*81,55*	190	90	1
3	19	*92,66*	225	105	1
3	20	*98,51*	225	105	1
3	21	*107,28*	225	105	1
3	22	*123,33*	225	105	1
3	24	*132,86*	225	105	1
3	25	*157,44*	225	105	1
3	26	*186,56*	225	105	1
4	27	*200,63*	265	120	1
4	28	*208,33*	265	120	1
4	30	*231,73*	265	120	1

Δ	Ø mm	€	L mm	l mm	
4	32	*269,70*	265	120	1
4	35	*336,98*	265	120	1
4	36	*354,42*	265	120	1
4	40	*445,56*	265	120	1
4	45	*605,97*	265	120	1
5	50	*711,88*	340	150	1

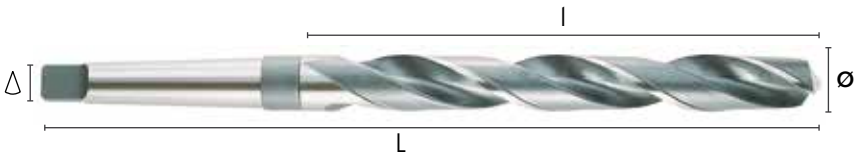
BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

1125 **HSS DIN 341 N**



Aceros 400 - 800 N/mm² **Aciers / Steel** F

Aplicaciones / Applications



△	Ø mm	€	L mm	l mm	
1	*5,00	*24,05*	155	74	1
1	*5,50	*32,51*	161	80	1
1	*6,00	*25,66*	161	80	1
1	*6,50	*27,05*	167	86	1
1	*7,00	*28,59*	174	93	1
1	*7,50	*29,84*	174	93	1
1	8,00	*30,11*	181	100	1
1	8,50	*30,11*	181	100	1
1	9,00	*32,97*	188	107	1
1	9,50	*36,77*	188	107	1
1	10,00	*35,70*	197	116	1
1	10,50	*35,91*	197	116	1
1	11,00	*35,08*	206	125	1
1	11,50	*35,08*	206	125	1
1	12,00	*37,34*	215	134	1
1	12,50	*38,79*	215	134	1
1	13,00	*38,79*	215	134	1
1	13,50	*40,56*	223	142	1
1	14,00	*44,05*	223	142	1
1	14,50	*55,43*	245	147	1
2	15,00	*55,43*	245	147	1
2	15,50	*56,69*	251	153	1
2	16,00	*57,61*	251	153	1
2	16,50	*60,88*	257	159	1
2	17,00	*61,20*	257	159	1
2	17,50	*59,73*	263	165	1
2	18,00	*66,38*	263	165	1
2	18,50	*68,20*	269	171	1
2	19,00	*70,36*	269	171	1
2	19,50	*73,87*	275	177	1
2	20,00	*74,77*	275	177	1

△	Ø mm	€	L mm	l mm	
2	20,50	*85,71*	282	184	1
2	21,00	*83,09*	282	184	1
2	21,50	*101,14*	289	191	1
2	22,00	*96,53*	289	191	1
2	22,50	*105,21*	296	198	1
2	23,00	*100,28*	296	198	1
3	23,50	*124,76*	319	198	1
3	24,00	*122,88*	327	206	1
3	24,50	*130,49*	327	206	1
3	25,00	*125,06*	327	206	1
3	25,50	*148,29*	335	214	1
3	26,00	*139,94*	335	214	1
3	26,50	*152,95*	335	214	1
3	27,00	*148,91*	343	222	1
3	27,50	*180,17*	343	222	1
3	28,00	*163,59*	343	222	1
3	28,50	*214,02*	351	230	1
3	29,00	*174,73*	351	230	1
3	29,50	*214,02*	351	230	1
3	30,00	*196,91*	351	230	1
3	31,00	*225,76*	360	239	1
4	32,00	*234,07*	397	248	1
4	33,00	*261,85*	397	248	1
4	34,00	*304,85*	406	257	1
4	35,00	*301,84*	406	257	1
4	36,00	*349,63*	416	267	1
4	37,00	*363,26*	416	267	1
4	38,00	*389,08*	426	277	1
4	39,00	*395,13*	426	277	1
4	40,00	*427,35*	426	277	1

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

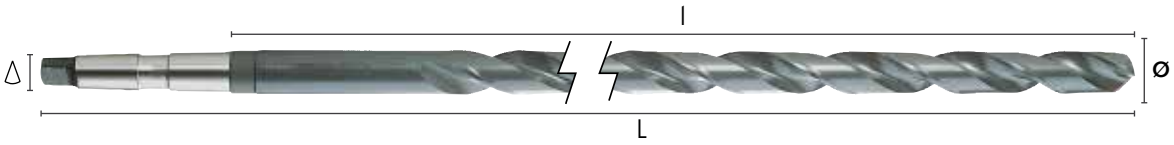
BROCAS CON MANGO CÓNICO
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

1126 HSS DIN 1870 N



Aceros 400 - 800 N/mm² — Aciers / Steel F

Aplicaciones / Applications



Δ	Ø mm	€	L mm	l mm	
1	8,00	*75,57*	265	165	1
1	8,00	*94,20*	330	210	1
1	8,50	*82,95*	265	165	1
1	8,50	*96,27*	330	210	1
1	9,00	*85,41*	275	175	1
1	9,00	*108,60*	345	220	1
1	9,50	*91,43*	275	175	1
1	9,50	*109,73*	345	220	1
1	10,00	*93,93*	285	185	1
1	10,00	*115,82*	360	235	1
1	10,50	*99,74*	285	185	1
1	10,50	*119,39*	360	235	1
1	11,00	*104,11*	300	195	1
1	11,00	*142,37*	375	250	1
1	11,50	*114,01*	300	195	1
1	11,50	*142,37*	375	250	1
1	12,00	*116,67*	310	205	1
1	12,00	*145,38*	395	260	1
1	12,50	*124,17*	310	205	1
1	12,50	*162,28*	395	260	1
1	13,00	*124,17*	310	205	1
1	13,00	*162,28*	395	260	1
1	13,50	*135,96*	325	220	1
1	13,50	*166,65*	410	275	1
1	14,00	*135,96*	325	220	1
1	14,00	*166,65*	410	275	1
2	14,50	*148,92*	340	220	1
2	14,50	*181,50*	425	275	1
2	15,00	*148,92*	340	220	1
2	15,00	*181,50*	425	275	1
2	15,50	*166,95*	355	230	1
2	15,50	*200,21*	445	295	1
2	16,00	*166,95*	355	230	1
2	16,00	*200,21*	445	295	1
2	16,50	*179,91*	355	230	1
2	16,50	*216,32*	445	295	1
2	17,00	*179,91*	355	230	1
2	17,00	*216,32*	445	295	1
2	17,50	*197,96*	370	245	1
2	17,50	*238,21*	465	310	1
2	18,00	*197,96*	370	245	1
2	18,00	*238,21*	465	310	1
2	18,50	*214,61*	370	245	1
2	18,50	*257,41*	465	310	1
2	19,00	*214,61*	370	245	1
2	19,00	*257,41*	465	310	1
2	19,50	*229,19*	385	260	1
2	19,50	*278,58*	490	325	1

Δ	Ø mm	€	L mm	l mm	
2	20,00	*229,19*	385	260	1
2	20,00	*278,58*	490	325	1
2	20,50	*259,58*	385	260	1
2	20,50	*311,71*	490	325	1
2	21,00	*259,58*	385	260	1
2	21,00	*311,71*	490	325	1
2	21,50	*276,81*	405	270	1
2	21,50	*334,55*	515	345	1
2	22,00	*276,81*	405	270	1
2	22,00	*334,55*	515	345	1
2	22,50	*315,48*	405	270	1
2	22,50	*377,63*	515	345	1
2	23,00	*315,48*	405	270	1
2	23,00	*377,63*	515	345	1
3	23,50	*346,62*	425	270	1
3	23,50	*420,28*	535	345	1
3	24,00	*346,62*	440	290	1
3	24,00	*420,28*	555	365	1
3	24,50	*359,22*	440	290	1
3	24,50	*442,94*	555	365	1
3	25,00	*359,22*	440	290	1
3	25,00	*442,94*	555	365	1
3	25,50	*371,29*	440	290	1
3	25,50	*489,29*	555	365	1
3	26,00	*371,29*	440	290	1
3	26,00	*489,29*	555	365	1
3	26,50	*380,21*	440	290	1
3	26,50	*504,85*	555	365	1
3	27,00	*380,21*	460	305	1
3	27,00	*504,85*	580	385	1
3	27,50	*405,62*	460	305	1
3	27,50	*546,15*	580	385	1
3	28,00	*405,62*	460	305	1
3	28,00	*546,15*	580	385	1
3	28,50	*420,28*	460	305	1
3	28,50	*602,61*	580	385	1
3	29,00	*420,28*	460	305	1
3	29,00	*602,61*	580	385	1
3	29,50	*435,13*	460	305	1
3	29,50	*607,57*	580	385	1
3	30,00	*435,13*	460	305	1
3	30,00	*607,57*	580	385	1
3	31,00	*487,76*	480	320	1
3	31,00	*647,78*	610	410	1
4	32,00	*510,00*	505	320	1
4	32,00	*679,64*	635	410	1
4	33,00	*555,72*	505	320	1
4	33,00	*752,42*	635	410	1

(continúa Ref.1126 / suite Réf.1126 / Ref.1126 cont'd)

BROCAS CON MANGO CÓNICO

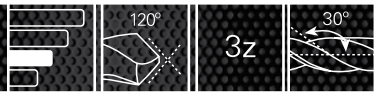
FORETS À QUEUE CONIQUE / TAPER SHANK DRILL-BITS

(continúa Ref.1126 / suite Réf.1126 / Ref.1126 cont'd)

△	Ø mm	€	L mm	l mm	
4	34,00	*602,58*	530	340	1
4	34,00	*781,38*	665	430	1
4	35,00	*620,64*	530	340	1
4	35,00	*848,40*	665	430	1
4	36,00	*669,59*	530	340	1
4	36,00	*890,89*	665	430	1
4	37,00	*686,49*	530	340	1
4	37,00	*989,89*	665	430	1
4	38,00	*748,88*	555	360	1
4	38,00	*1.048,22*	695	460	1
4	39,00	*780,49*	555	360	1
4	39,00	*1.098,23*	695	460	1

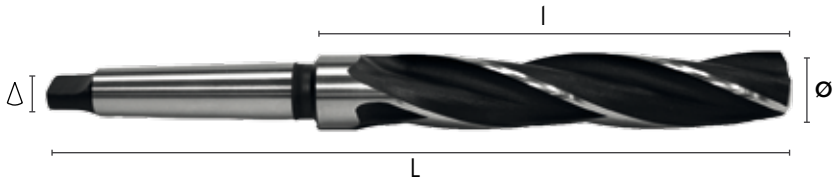
△	Ø mm	€	L mm	l mm	
4	40,00	*822,77*	555	360	1
4	40,00	*1.047,55*	695	460	1
4	41,00	*1.190,68*	695	460	1
4	42,00	*1.271,28*	695	460	1
4	43,00	*1.297,17*	735	490	1
4	44,00	*1.342,76*	735	490	1
4	45,00	*1.405,30*	735	490	1
4	46,00	*1.468,12*	735	490	1
4	47,00	*1.540,19*	735	490	1
4	48,00	*1.629,76*	765	510	1
4	49,00	*1.691,82*	765	510	1
4	50,00	*1.736,01*	765	510	1

1139 HSS DIN 343



Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



△	Ø mm	d mm	€	L mm	l mm	
1	10,00	7,00	*68,35*	168	87	1
1	11,00	7,70	*70,79*	175	94	1
1	12,00	8,40	*73,26*	182	101	1
1	13,00	9,10	*76,56*	182	101	1
1	14,00	9,80	*81,02*	189	108	1
2	15,00	10,50	*87,13*	212	114	1
2	16,00	11,20	*92,76*	218	120	1
2	17,00	11,90	*101,44*	223	125	1
2	18,00	12,60	*109,92*	228	130	1
2	19,00	13,30	*131,27*	233	135	1
2	20,00	14,00	*132,61*	238	140	1
2	21,00	15,00	*142,36*	243	145	1
2	22,00	15,50	*155,78*	248	150	1

△	Ø mm	d mm	€	L mm	l mm	
2	23,00	16,00	*166,90*	253	155	1
3	24,00	17,00	*179,62*	281	160	1
3	25,00	17,50	*192,32*	281	160	1
3	26,00	18,00	*212,35*	286	165	1
3	27,00	19,00	*228,84*	291	170	1
3	28,00	19,50	*248,08*	291	170	1
3	30,00	21,00	*287,77*	296	175	1
4	32,00	22,00	*324,42*	334	185	1
4	34,00	24,00	*359,70*	339	190	1
4	35,00	25,00	*390,18*	339	190	1
4	36,00	25,50	*397,42*	344	195	1
4	38,00	26,50	*453,82*	349	200	1
4	40,00	28,00	*499,24*	349	210	1

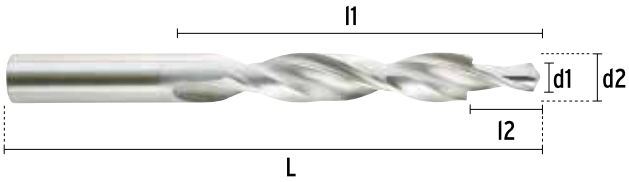
BROCAS BIDIAMETRALES Y DE CENTRAR
FORETS BIÉTAGÉS ET À CENTRER / TWO-DIAMETER AND CENTRE DRILL-BITS

1127 HSS DIN 8376



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

Aplicaciones / Applications



M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
M-3	3,40	6,00	*59,70*	93	57	9	1
M-4	4,50	8,00	*62,60*	117	75	11	1
M-5	5,50	10,00	*74,42*	133	87	13	1

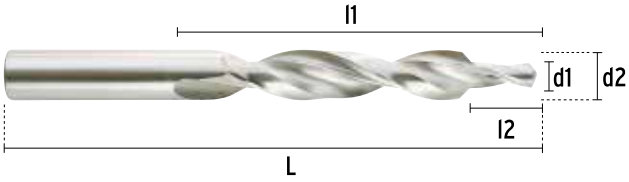
M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
M-6	6,60	11,00	*84,09*	142	94	15	1
M-8	9,00	15,00	*103,31*	169	114	19	1
M-10	11,00	18,00	*205,33*	191	130	23	1

1128 HSS DIN 8374



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

Aplicaciones / Applications



M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
M-3	3,20	6,00	*69,67*	93	57	9	1
M-4	4,30	8,00	*73,05*	117	75	11	1
M-5	5,30	10,00	*86,84*	133	87	13	1

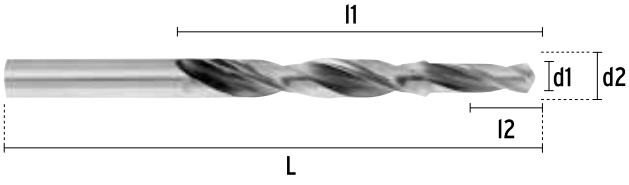
M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
M-6	6,40	11,50	*99,17*	142	94	15	1
M-8	8,40	15,00	*135,67*	169	114	19	1
M-10	10,50	19,00	*209,51*	198	130	23	1

1152 HSS DIN 8378



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

Aplicaciones / Applications



M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
M-3	2,50	3,40	*53,51*	70	39	8,80	1
M-4	3,30	4,50	*57,56*	80	47	11,40	1
M-5	4,20	5,50	*62,00*	93	57	13,60	1
M-6	5,00	6,60	*70,53*	101	63	16,50	1

M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
M-8	6,80	9,00	*84,03*	125	81	21,00	1
M-10	8,50	11,00	*98,03*	142	94	25,50	1
M-12	10,20	13,50	*122,06*	160	108	30,00	1

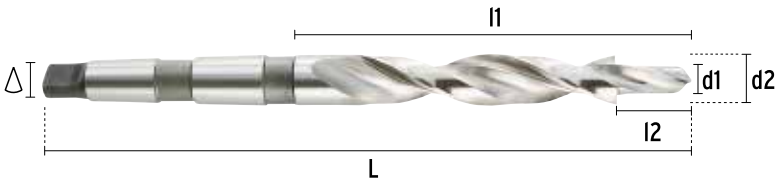
BROCAS BIDIAMETRALES Y DE CENTRAR
FORETS BIÉTAGÉS ET À CENTRER / TWO-DIAMETER AND CENTRE DRILL-BITS

1129 HSS DIN 8377

180°

Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm² — F

Aplicaciones / Applications



Δ	M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
2	M-8	9,00	15,00	*154,53*	212	114	19	1
2	M-10	11,00	18,00	*174,18*	228	130	23	1
2	M-12	14,00	20,00	*194,86*	238	140	27	1
3	M-14	16,00	24,00	*276,33*	281	160	31	1

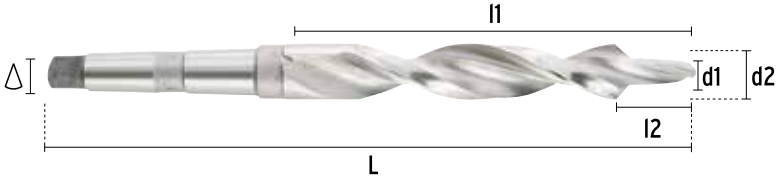
Δ	M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
3	M-16	18,00	*26,00*	*394,01*	286	165	35	1
3	M-18	20,00	*30,00*	*440,60*	296	175	39	1
4	M-20	22,00	*33,00*	*496,91*	334	185	43	1

1130 HSS DIN 8375

90°

Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm² — F

Aplicaciones / Applications



Δ	M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
1	M-5	5,50	11,00	*149,46*	175	94	13	1
1	M-6	6,60	13,00	*152,50*	182	101	15	1

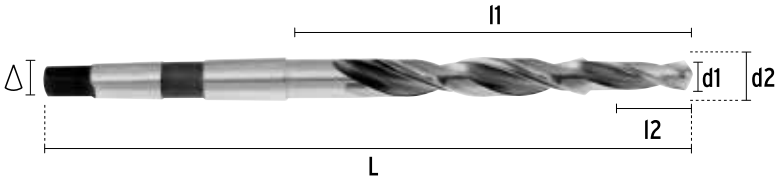
Δ	M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
2	M-8	9,00	17,20	*181,73*	228	130	19	1
2	M-10	11,00	21,50	*215,16*	248	150	23	1

1153 HSS DIN 8379

90°

Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm² — F

Aplicaciones / Applications

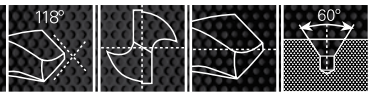


Δ	M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
1	M-8	6,80	9,00	*136,97*	162	81	21,00	1
1	M-10	8,50	11,00	*149,25*	175	94	25,50	1
1	M-12	10,20	13,50	*176,30*	189	108	30,00	1
2	M-14	12,00	15,50	*188,12*	218	120	34,50	1

Δ	M	d1 mm	d2 mm	€	L mm	l1 mm	l2 mm	
2	M-16	14,00	17,50	*203,03*	228	130	38,50	1
2	M-18	15,50	20,00	*227,05*	238	140	43,50	1
2	M-20	17,50	22,00	*274,56*	248	150	47,50	1

BROCAS BIDIAMETRALES Y DE CENTRAR
FORETS BIÉTAGÉS ET À CENTRER / TWO-DIAMETER AND CENTRE DRILL-BITS

1131 HSS



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

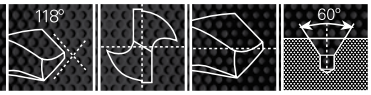
Aplicaciones / Applications



d1 mm	d2 mm	€	L mm	l mm	
1,25	4,00	*6,38*	35,50	1,90	1
1,60	5,00	*6,80*	40,00	2,40	1
2,00	6,30	*7,23*	45,00	2,90	1
2,50	8,00	*8,09*	50,00	3,60	1

d1 mm	d2 mm	€	L mm	l mm	
3,15	10,00	*8,95*	56,00	4,40	1
4,00	12,50	*11,71*	63,00	5,60	1
5,00	16,00	*28,29*	71,00	6,90	1
6,30	20,00	*36,52*	80,00	8,60	1

1132 HSS DIN 333 A



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

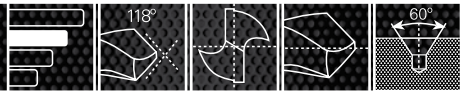
Aplicaciones / Applications



d1 mm	d2 mm	€	L mm	l mm	
1,00	*3,15*	5,78	31,50	1,60	1
1,25	*3,15*	5,78	33,50	1,90	1
1,60	*4,00*	5,78	37,50	2,40	1
2,00	*5,00*	6,23	42,00	2,90	1
2,50	*6,30*	6,91	47,00	3,60	1
3,15	*8,00*	7,62	52,00	4,40	1

d1 mm	d2 mm	€	L mm	l mm	
4,00	10,00	*9,92*	59,00	5,60	1
5,00	12,50	*16,62*	66,00	6,90	1
6,30	16,00	*23,74*	74,00	8,60	1
10,00	25,00	*71,57*	100,00	31,50	1
12,50	31,50	*170,79*	125,00	33,50	1

1133 HSS DIN 333 A



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

Aplicaciones / Applications

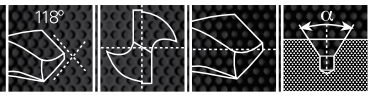


d1 mm	d2 mm	€	L mm	l mm	
1,00	4,00	*18,02*	60,00	1,30	1
1,50	5,00	*18,34*	60,00	2,00	1
2,00	6,00	*19,12*	80,00	2,50	1
2,50	8,00	*23,23*	80,00	3,10	1
3,00	8,00	*23,23*	80,00	3,90	1
1,00	4,00	*44,97*	120,00	1,30	1
1,50	5,00	*42,74*	120,00	2,00	1

d1 mm	d2 mm	€	L mm	l mm	
2,00	6,00	*42,74*	120,00	2,50	1
2,50	8,00	*49,49*	120,00	3,10	1
3,00	8,00	*49,49*	120,00	3,90	1
3,00	10,00	*56,20*	120,00	3,90	1
4,00	10,00	*56,20*	120,00	5,00	1
4,00	12,00	*67,07*	120,00	5,00	1
5,00	14,00	*80,55*	120,00	6,30	1

BROCAS BIDIAMETRALES Y DE CENTRAR
FORETS BIÉTAGÉS ET À CENTRER / TWO-DIAMETER AND CENTRE DRILL-BITS

1134 HSS



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

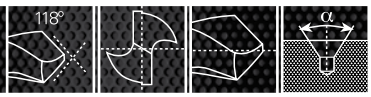
Aplicaciones / Applications



d1 mm	d2 mm	€	L mm	l mm	
1,25	4,00	*6,35*	35,50	3,75	1
1,60	5,00	*6,88*	40,00	4,75	1
2,00	6,30	*7,64*	45,00	6,00	1
2,50	8,00	*8,41*	50,00	7,50	1

d1 mm	d2 mm	€	L mm	l mm	
3,15	10,00	*10,95*	56,00	9,50	1
4,00	12,50	*18,29*	63,00	11,80	1
5,00	16,00	*26,02*	71,00	15,00	1
6,30	20,00	*46,68*	80,00	19,00	1

1135 HSS DIN 333 R



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

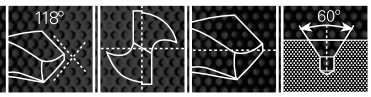
Aplicaciones / Applications



d1 mm	d2 mm	€	L mm	l mm	
1,00	3,15	*6,35*	31,50	3,00	1
1,25	3,15	*6,35*	31,50	3,35	1
1,60	4,00	*6,35*	35,50	4,25	1
2,00	5,00	*6,88*	40,00	5,30	1
2,50	6,30	*7,62*	45,00	6,70	1
3,15	8,00	*8,41*	50,00	8,50	1

d1 mm	d2 mm	€	L mm	l mm	
4,00	10,00	*10,95*	56,00	10,60	1
5,00	12,50	*18,31*	63,00	13,20	1
6,30	16,00	*26,20*	71,00	17,00	1
8,00	20,00	*49,08*	80,00	21,20	1
10,00	25,00	*78,87*	100,00	31,50	1
12,50	31,50	*188,17*	125,00	33,50	1

1137 HSS DIN 333 B



Aceros 400 - 800 N/mm² — **Aciers / Steel** — 1100 N/mm2 — F

Aplicaciones / Applications

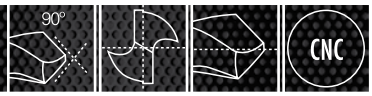


d1 mm	d2 mm	€	L mm	l mm	
1,00	4,00	10,49	35,50	1,60	1
1,25	5,00	10,49	40,00	1,90	1
1,60	6,30	10,49	45,00	2,40	1
2,00	8,00	10,49	50,00	2,90	1
2,50	10,00	12,04	56,00	3,60	1

d1 mm	d2 mm	€	L mm	l mm	
3,15	11,20	*13,80*	60,00	4,40	1
4,00	14,00	*21,21*	67,00	5,60	1
5,00	18,00	*29,57*	75,00	6,90	1
6,30	20,00	*43,16*	80,00	8,60	1

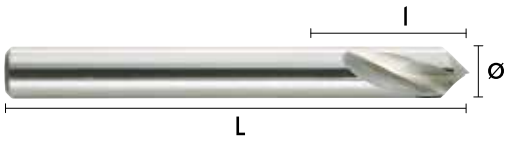
BROCAS BIDIAMETRALES Y DE CENTRAR
FORETS BIÉTAGÉS ET À CENTRER / TWO-DIAMETER AND CENTRE DRILL-BITS

1138 HSSCO CNC



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — F

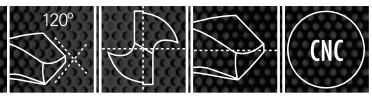
Aplicaciones / Applications



Ø mm	€	L mm	l mm	
3,00	*22,31*	50,00	10,00	1
4,00	*22,31*	52,00	12,00	1
5,00	*25,15*	60,00	15,00	1
6,00	*25,15*	66,00	20,00	1
8,00	*28,42*	79,00	25,00	1

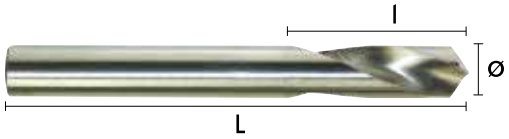
Ø mm	€	L mm	l mm	
10,00	*28,42*	89,00	25,00	1
12,00	*39,30*	102,00	30,00	1
16,00	*54,20*	115,00	35,00	1
20,00	*106,64*	131,00	40,00	1

1155 HSSCO CNC



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — F

Aplicaciones / Applications

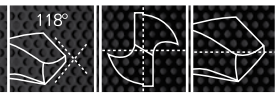


Ø mm	€	L mm	l mm	
3,00	*22,31*	46	12	1
4,00	*22,31*	55	12	1
5,00	*25,15*	62	14	1
6,00	*25,15*	66	16	1
8,00	*28,42*	79	21	1

Ø mm	€	L mm	l mm	
10,00	*28,42*	89	25	1
12,00	*39,30*	102	30	1
16,00	*54,20*	115	38	1
20,00	*106,64*	131	45	1

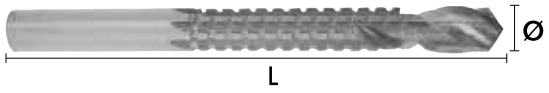
BROCAS FRESA
FORETS FRAISEUR / CUTTING DRILL-BITS

5114 HSS



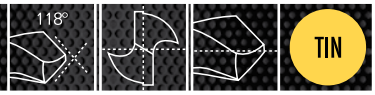
Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

Aplicaciones / Applications



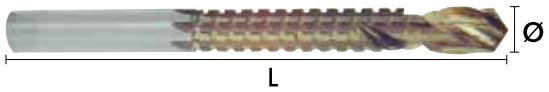
Ø mm	€	L mm	Z	
6,00	*15,91*	90	5	1
8,00	*21,76*	90	7	1

5115 HSS



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

Aplicaciones / Applications



Ø mm	€	L mm	Z	
6,00	*28,88*	90	5	1
8,00	*37,76*	90	7	1

6110 Espiga / Queue à tenon / Bit shank



DIN 228	€	L mm	gr	
B-12	*9,42*	89	65	1
B-16	*9,42*	99	80	1
B-18	*9,42*	107	110	1
B-12	*11,41*	106	140	1
B-16	*11,41*	112	160	1
B-18	*11,41*	119	185	1

DIN 228	€	L mm	gr	
B-16	*13,92*	134	305	1
B-18	*13,92*	140	330	1
B-16	*19,94*	156	120	1
B-18	*21,50*	165	640	1
B-16	*84,91*	221	1.570	1
B-18	*84,91*	221	1.590	1

6111 Casquillo DIN 2185 / Douille de réduction / Drill sleeve



€	L mm	gr	
22,96	92	90	1
28,35	99	200	1
28,35	112	180	1
39,66	124	510	1
37,28	124	420	1

€	L mm	gr	
37,28	140	370	1
65,77	180	1.550	1
62,33	156	1.200	1
62,33	156	1.150	1
72,75	171	1.023	1

€	L mm	gr	
121,07	230	3.800	1
137,36	230	3.390	1
137,36	230	2.700	1

6114 Contrapunto / Contrepointe / Fixed centre



HSS €	HM €	
14,23	-	1
18,95	-	1
29,44	*71,13*	1
46,01	*86,72*	1
64,98	*169,54*	1
250,57	-	1

6112 Alargadera / Adaptateur / Extension piece



Ext.	Int.	€	L mm	
1	1	*28,94*	145	1
1	2	*44,82*	160	1
2	1	*28,94*	160	1
2	2	*42,07*	175	1
2	3	*60,92*	196	1
3	1	*42,07*	175	1
3	2	*43,44*	194	1
3	3	*63,70*	215	1
3	4	*102,75*	240	1
4	1	*60,92*	200	1

Ext.	Int.	€	L mm	
4	2	*59,54*	215	1
4	3	*62,31*	240	1
4	4	*102,75*	265	1
4	5	*172,46*	300	1
5	1	*117,46*	232	1
5	2	*109,21*	247	1
5	3	*115,32*	268	1
5	4	*130,36*	300	1
5	5	*215,68*	335	1

6113 Expulsor / Éjecteur / Ejector

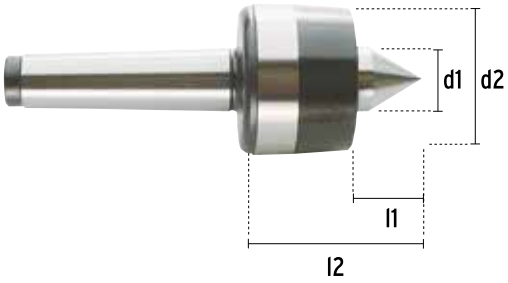


	€	gr	
1 - 2	*12,27*	50	1
2 - 3	*14,51*	80	1

	€	gr	
3 - 4	*19,14*	160	1
4 - 5	*26,01*	350	1

	€	gr	
5 - 6	*42,28*	690	1

6115 Punto giratorio / Pointe tournante / Revolving lathe centre

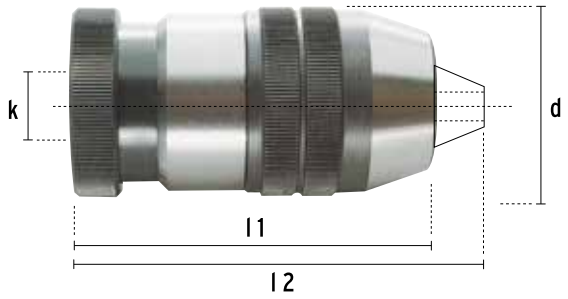


	d1 mm	d2 mm	l1 mm	l2 mm	Kg	€	
1	12	32	18	42	180	*136,43*	1
2	16	40	23	46	400	*152,18*	1
3	24	45	27	53	600	*204,58*	1
4	24	59	36	65	1200	*242,46*	1
5	38	79	41	77	1500	*350,42*	1

PORTABROCAS
MANDRINS / DRILL CHUCKS

6101 HP1

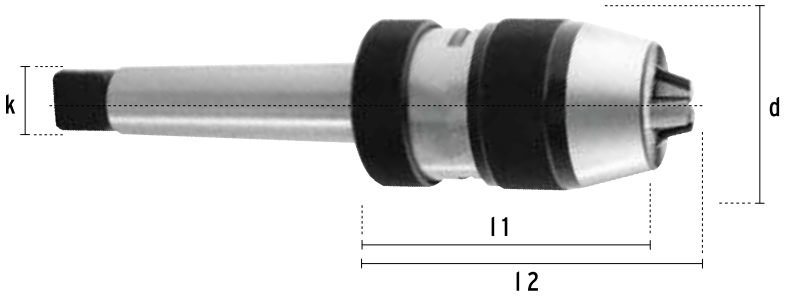
> **Componentes totalmente templados y rectificados.**
Composants entièrement trempés et rectifiés.
Fully tempered and rectified components.
> **Uso en taladros de precisión estacionarios, fresadoras.**
Pour perçages de précision stationnaires, fraiseuses.
For use with stationary precision drills, milling machines.
> **Excentricidad máxima 0,04 mm.**
Excentricité maximum de 0,04 mm.
Maximum eccentricity 0.04 mm.



Ø mm	d mm	k		Husillo Arbre Spindle €	Juego de garras Jeux de griffes Set of claws €
			Int.			l1 mm	l2 mm			
0,00 - 10,00	41	B16	1/2" - 20H	*163,56*	81	89	1	*27,98*	*37,95*
1,00 - 13,00	46	B16	1/2" - 20H	*179,58*	88	89	1	*30,05*	*40,72*
3,00 - 16,00	55	B16,B18	-	*202,86*	95	107	1	*30,05*	*42,09*

6120 HP1-CM

> **Portabrocas automático alta precisión con espiga integrada (Cono Morse)**
Mandrin automatique de haute précision avec queue à tenon integrée (Cone Morse)
High precision automatic drill chuck with bit shank (Taper Shank)

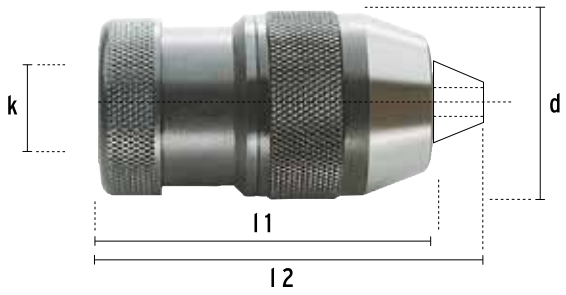


Ø mm	d mm	k	€	l1 mm	l2 mm		Husillo Arbre Spindle €	Juego de garras Jeux de griffes Set of claws €
0,00 - 10,00	43	CM2	*354,48*	73	82	1	*27,98*	*37,95*
1,00 - 13,00	48	CM2, CM3, CM4	*384,86*	80	92	1	*30,05*	*40,72*
3,00 - 16,00	54	CM2, CM3, CM4	*459,76*	85	96	1	*30,05*	*42,09*

PORTABROCAS
MANDRINS / DRILL CHUCKS

6102 HP2

> **Componentes parcialmente templados y rectificados.**
Composants partiellement trempés et rectifiés.
Partially tempered and rectified components.
> **Uso industrial para taladros fijos y portátiles.**
Usage industriel pour perceuses fixes et portables.
For industrial use with fixed and portable drills.
> **Excentricidad máxima 0,20 mm.**
Excentricité maximum de 0,20 mm.
Maximum eccentricity 0.20 mm.



Ø mm	d mm	△	k Int.	€	l1 mm	l2 mm	▣	Husillo Arbre Spindle €	Juego de garras Jeux de griffes Set of claws €
0,00 - 10,00	39	B12	1/2" - 20H 3/8" - 24H	*89,58*	73	80	1	*18,90*	*37,77*
2,00 - 13,00	42	B16	1/2" - 20H 3/8" - 24H	*112,59*	87	95	1	*21,81*	*40,82*
3,00 - 16,00	51	B16,B18	5/8" - 16H 1/2" - 20H	*149,56*	102	115	1	*21,81*	*40,82*
5,00 - 20,00	56	B18	-	*197,17*	95	110	1	*26,70*	*48,01*

6103 HP3

> **Uso industrial para taladros fijos y portátiles.**
Usage industriel pour perceuses fixes et portables.
For industrial use with fixed and portable drills.
> **Excentricidad no garantizada.**
Excentricité non garantie.
Maximum not guaranteed.



Ø mm	d mm	△	k Int.	€	l1 mm	l2 mm	▣
1,00 - 10,00	35	B12*	1/2" - 20H, 3/8" - 24H*	*60,26*	65	72	1
1,50 - 13,00	40	B16	1/2" - 20H	*69,14*	83	91	1
3,00 - 16,00	53	B16,B18	1/2" - 20H, 5/8" - 24H*	*91,32*	96	109	1

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

AFILADOR DE BROCAS
AFFÛTEUSES FORETS / TWIST DRILL SHARPENER

6122 **Afilador de Brocas** / Affûteuses forets / Twist Drill Sharpener

- **Para Brocas HSS, HSSE, HSS+TIN, HM**
  Pour Forets HSS, HSSE. HSS+TIN, HM
  For Drill-bits HSS. HSSE, HS+TIN, HM
- **Para ángulo normal afilado en cruz**
  Pour angle normal et affûtage en croix
  For normal angle and Splint point
- **Ángulo de punta de 118º**
  Angle de la point e 118º
  Point angle of 118º

Ø mm	€	
3 a 13	*151,75*	1



6123 **Porta** / Mandrins / Chuck

€	
9,19	1



6124 **Muela** / Meule / Wheel

€	
19,50	1



JUEGO DE BROCAS
COFFRETS DE FORETS / DRILL SETS

1171 **Ø 1 a 10 X 0,5 mm**

Ø mm	X mm		DIN
1 a 10	0,50	19	338

>HSS >SPEED PLUS >HSS CO >HSS CO INOX >HSS TIN



REF.	€
HSS	*44,60*
SPEED PLUS	*48,90*
HSS CO	*73,49*
HSS CO INOX	*150,84*
HSS TIN	*91,15*
VACÍO/VIDE/EMPTY	*11,81*

1172 **Ø 1 a 13 X 0,5 mm**

Ø mm	X mm		DIN
1 a 13	0,50	25	338

>HSS >SPEED PLUS >HSS CO >HSS CO INOX >HSS TIN



REF.	€
HSS	*87,26*
SPEED PLUS	*96,00*
HSS CO	*168,27*
HSS CO INOX	*303,27*
HSS TIN	*189,62*
VACÍO/VIDE/EMPTY	*15,75*

1143 **Ø 1 a 10 X 0,25 mm**

Ø mm	X mm		DIN
1 a 10	0,25	37	338

>HSS >HSS CO



REF.	€
HSS	*122,62*
HSS CO	*181,00*
VACÍO/VIDE/EMPTY	*39,91*

JUEGO DE BROCAS
COFFRETS DE FORETS / DRILL SETS

1144 Ø 6 a 10 X 0,10 mm

Ø mm	X mm		DIN
6 a 10	0,10	41	338

›HSS



›HSS CO



REF.	€
HSS	*230,46*
HSS CO	*329,96*
VACÍO/VIDE/EMPTY	*69,08*

1145 Ø 1 a 13 X 0,25 mm

Ø mm	X mm		DIN
1 a 13	0,25	49	338

›HSS



›HSS CO



REF.	€
HSS	*213,40*
HSS CO	*395,82*
VACÍO/VIDE/EMPTY	*41,45*

1146 Ø 1 a 6 X 0,10 mm

Ø mm	X mm		DIN
1 a 6	0,10	51	338

›HSS



›HSS CO



REF.	€
HSS	*93,68*
HSS CO	*133,01*
VACÍO/VIDE/EMPTY	*27,63*

JUEGO DE BROCAS
COFFRETS DE FORETS / DRILL SETS

1173 1/16" a 3/8" x 1/64"

21 | DIN 338

›HSS



›HSS CO



REF.	€
SPEED PLUS	*71,38*
HSS CO	*98,21*

1174 1/16" a 1/2" x 1/64"

29 | DIN 338

›SPEED PLUS



›HSS CO



REF.	€
SPEED PLUS	*129,69*
HSS CO	*216,56*

JUEGO DE BROCAS
COFFRETS DE FORETS / DRILL SETS

1150 Ø 1 a 10 X 0,5 mm

Ø mm	X mm	DIN
1 a 10	0,50	338

›HSS ›HSS NSP ›HSS CO ›HSS TIN



REF.	€
HSS	*516,31*
HSS NSP	*554,07*
HSS CO	*451,31*
HSS TIN	*576,14*
VACÍO/VIDE/EMPTY	*69,08*

Ø mm	HSS	HSS NSP	HSS CO	HSS TIN
1,00	20	20	10	10
1,50	10	10	5	5
2,00	20	20	10	10
2,50	10	10	5	5
3,00	20	20	10	10
3,50	10	10	5	5
4,00	20	20	10	10
4,50	10	10	5	5
5,00	20	20	10	10
5,50	10	10	5	5

Ø mm	HSS	HSS NSP	HSS CO	HSS TIN
6,00	20	20	10	10
6,50	10	10	5	5
7,00	10	10	5	5
7,50	10	10	5	5
8,00	10	10	5	5
8,50	10	10	5	5
9,00	10	10	5	5
9,50	10	10	5	5
10,00	10	10	5	5
TOTAL	250	250	125	125

1183 Ø 1 a 13 X 0,5 mm

Ø mm	X mm	DIN
1 a 10	0,50	338

›HSS ›HSS NSP ›HSS CO ›HSS TIN



REF.	€
HSS	*798,11*
HSS NSP	*858,09*
HSS CO	*993,69*
HSS TIN	*1.136,98*
VACÍO/VIDE/EMPTY	*138,16*

Ø mm	HSS	HSS NSP	HSS CO	HSS TIN
1,00	20	20	10	10
1,50	10	10	5	5
2,00	20	20	10	10
2,50	10	10	5	5
3,00	20	20	10	10
3,50	10	10	5	5
4,00	20	20	10	10
4,50	10	10	5	5
5,00	20	20	10	10
5,50	10	10	5	5
6,00	20	20	10	10
6,50	10	10	5	5
7,00	10	10	5	5

Ø mm	HSS	HSS NSP	HSS CO	HSS TIN
7,50	10	10	5	5
8,00	10	10	5	5
8,50	10	10	5	5
9,00	10	10	5	5
9,50	10	10	5	5
10,00	10	10	5	5
10,50	5	5	5	5
11,00	5	5	5	5
11,50	5	5	5	5
12,00	5	5	5	5
12,50	5	5	5	5
13,00	5	5	5	5
TOTAL	280	280	155	155

EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8201 Ø 1 a 13 mm

›HSS DIN 338 N



›HSS DIN 338 NSP



›HSSCO DIN 338 N



›HSSCO DIN 338 W



›HSSTIN DIN 338 N



Ø mm	HSS DIN 338 N	HSS DIN 338 NSP	HSSCO DIN 338 N	HSSCO DIN 338 W	HSSTIN DIN 338 N
1,00	20	20	20	-	20
1,50	20	20	10	-	10
2,00	50	50	20	-	20
2,25	20	20	20	-	10
2,50	40	40	20	-	10
3,00	50	50	20	-	20
3,25	30	30	20	10	10
3,50	40	40	20	10	20
4,00	50	50	30	10	30
4,25	30	30	20	10	10
4,50	40	40	20	10	10
5,00	50	50	30	10	30
5,25	20	20	10	10	10
5,50	30	30	20	10	20
6,00	50	50	30	10	20

Ø mm	HSS DIN 338 N	HSS DIN 338 NSP	HSSCO DIN 338 N	HSSCO DIN 338 W	HSSTIN DIN 338 N
6,50	20	20	10	10	10
7,00	20	20	10	10	10
7,50	10	10	10	10	10
8,00	40	40	20	10	10
8,50	20	20	10	10	10
9,00	20	20	10	10	10
9,50	10	10	10	10	10
10,00	20	20	10	10	10
10,50	5	5	5	5	5
11,00	5	5	5	5	5
11,50	5	5	5	5	5
12,00	10	10	5	5	5
12,50	5	5	5	5	5
13,00	5	5	5	5	5
TOTAL	735	735	430	200	360
€	*1.364,10*	*1.491,05*	*1.621,20*	*2.120,30*	*1.710,05*

EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8201/9 1/16" a 1/2" x 1/64"

›HSS DIN 338 NSP



›HSSCO DIN 338 N

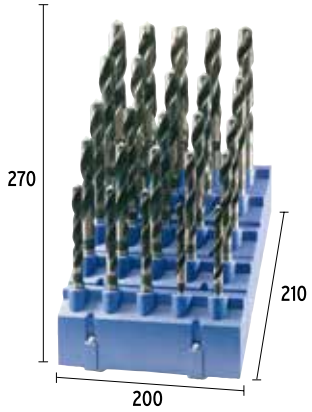


Ø mm	HSS DIN 338 NSP	HSSCO DIN 338 N
1/16"	20	20
5/64"	20	10
3/32"	50	20
7/64"	20	20
1/8"	40	20
9/64"	50	20
5/32"	30	20
11/64"	40	20
3/16"	50	30
13/64"	30	20
7/32"	40	20
15/64"	50	30
1/4"	20	10
17/64"	30	20
9/32"	50	30

Ø mm	HSS DIN 338 NSP	HSSCO DIN 338 N
19/64"	20	10
5/16"	20	10
21/64"	10	10
11/32"	40	20
23/64"	20	10
3/8"	20	10
25/64"	10	10
13/32"	20	10
27/64"	5	5
7/16"	5	5
29/64"	5	5
15/32"	10	5
31/64"	5	5
1/2"	5	5
TOTAL	735	430
€	*1767,25*	*1896,90*

EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8203 Ø 14 a 30 mm (Ref. 1121)



Ø mm	
14,00	1
14,50	1
15,00	1
15,50	1
16,00	1
16,50	1
17,00	1
17,50	1
18,00	1

Ø mm	
18,50	1
19,00	1
19,50	1
20,00	1
20,50	1
21,00	1
21,50	1
22,00	1
22,50	1

Ø mm	
23,00	1
24,00	1
25,00	1
26,00	1
27,00	1
28,00	1
30,00	1
TOTAL	25
€	*1.234,65*

8207 Ø 1 a 16 mm

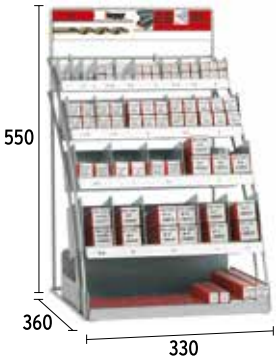
›HSS DIN 338 N



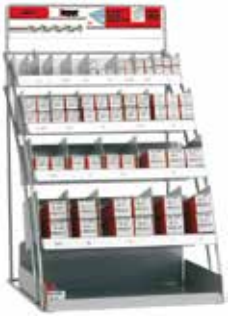
›HSS DIN 338 NSP



›HSSCO DIN 338 N



›HSSCO DIN 338 IX



›HSSTIN DIN 338 N



Ø mm	HSS DIN 338 N	HSS DIN 338 NSP	HSSCO DIN 338 N	HSSCO DIN 338 IX	HSSTIN DIN 338 N
1,00	40	40	40		40
1,50	20	20	20	-	20
2,00	40	40	40	-	40
2,25	40	40	40	-	40
2,50	40	40	40	-	40
3,00	60	60	60	60	60
3,25	40	40	40	40	40
3,50	40	40	40	40	40
4,00	60	60	60	60	60
4,25	40	40	40	40	40
4,50	40	40	40	40	40
5,00	60	60	60	60	60
5,50	40	40	40	40	40
6,00	60	60	60	60	60

Ø mm	HSS DIN 338 N	HSS DIN 338 NSP	HSSCO DIN 338 N	HSSCO DIN 338 IX	HSSTIN DIN 338 N
6,50	20	20	20	20	20
7,00	20	20	20	20	20
7,50	20	20	20	20	20
8,00	30	30	30	30	30
8,50	20	20	20	20	20
9,00	20	20	20	20	20
10,00	20	20	20	20	20
11,00	10	10	10	10	10
12,00	10	10	10	10	10
MR13,00	5	5	5	5	5
MR14,00	5	-	5	-	-
MR15,00	5	-	5	-	-
MR16,00	5	-	5	-	-
TOTAL	810	795	810	615	795
€	*1.624,75*	*1.454,05*	*2.923,55*	*4.108,80*	*2.995,50*



Roscado
Taraudage
Threading

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Machos de máquina / Tarauds machine / Machine taps (M-MF)

Entrada recta (Agujeros Ciegos y pasantes) / Entrée droite (trous borgnes et débouchants) / Straight flute (through and blind holes)

2102	HSSE	DIN 371			M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · R	800 N/mm2	118
2101	HSSE	DIN 376/374			M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · D	800 N/mm2	119
2102/5	HSSE	DIN 371			M DIN 13 · Form. C · Tol. 6H · LH · R	800 N/mm2	121
2101/5	HSSE	DIN 376/374			M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · LH · D	800 N/mm2	121
2114	HSSE	DIN 371			M DIN 13 · MF DIN 13 · Form. A · Tol. 6H · R	800 N/mm2	122
2113	HSSE	DIN 376/374			M DIN 13 · MF DIN 13 · Form. A · Tol. 6H · D	800 N/mm2	122
2190	HSSE	DIN 371			M DIN 13 · Form. E · Tol. 6H · R · MF	CU	123
2191	HSSE	DIN 376			M DIN 13 · Form. E · Tol. 6H · D · MF	CU	123
2129	HSSE	DIN 371	NIT		M DIN 13 · Form. C · Tol. 6HX · R · MF	F	124
2128	HSSE	DIN 376	NIT		M DIN 13 · Form. C · Tol. 6HX · D · MF	F	124
2180	HSSE-PM	DIN 371	TICN		M DIN 13 · Form. C · Tol. 6HX · R · MF	F	125
2179	HSSE-PM	DIN 376	TICN		M DIN 13 · Form. C · Tol. 6HX · D · MF	F	125

Entrada Corregida (Agujeros pasantes) / Entrée corrigée (Trous débouchants) / Spiral point (through holes)

2104	HSSE	DIN 371			M DIN 13 · MF DIN 13 · Form. B "Gun" · Tol. 6H · R	800 N/mm2	126
2103	HSSE	DIN 376/374			M DIN 13 · MF DIN 13 · Form. B "Gun" · Tol. 6H · D	800 N/mm2	126
2111	HSSE	DIN 371-L			M DIN 13 · Form. B "Gun" · Tol. 6H · R	800 N/mm2	127
2110	HSSE	DIN 371			M DIN 13 · Form. B "Gun" · Tol. 6H +0,1 · R	800 N/mm2	127
2109	HSSE	DIN 376			M DIN 13 · Form. B "Gun" · Tol. 6H +0,1 · D	800 N/mm2	128
2168	HSSE	DIN 371			M DIN 13 · Form. B "Gun" · Tol. 6G · R	800 N/mm2	128
2169	HSSE	DIN 376			M DIN 13 · Form. B "Gun" · Tol. 6G · D	800 N/mm2	128

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2250	HSSE	DIN 371	VAP		M DIN 13 · MF DIN 13 · Form. B "Gun" · Tol. 6H · R · MF	800 N/mm2	129
2251	HSSE	DIN 376/374	VAP		M DIN 13 · MF DIN 13 · Form. B "Gun" · Tol. 6H · D · MF	800 N/mm2	129
2116	HSSE	DIN 371	TIN		M DIN 13 · Form. B "Gun" · Tol. 6H · R · MF	800 N/mm2	130
2115	HSSE	DIN 376	TIN		M DIN 13 · Form. B "Gun" · Tol. 6H · D · MF	800 N/mm2	130
2126	HSSE-PM	DIN 371	TICN		M DIN 13 · Form. B "Gun" · Tol. 6H · R · MF	1100 N/mm2	131
2125	HSSE-PM	DIN 376/374	TICN		M DIN 13 · Form. B "Gun" · Tol. 6H · D · MF	1100 N/mm2	131
2176	HSSE-PM	DIN 371	TICN		M DIN 13 · Form. B "Gun" · Tol. 6HX · R · MF	1400 N/mm2	132
2175	HSSE-PM	DIN 376	TICN		M DIN 13 · Form. B "Gun" · Tol. 6HX · D · MF	1400 N/mm2	132
2122	HSSE	DIN 371	VAP		M DIN 13 · Form. B "Gun" · Tol. 6H · R · MF	INOX	133
2121	HSSE	DIN 376/374	VAP		M DIN 13 · Form. B "Gun" · Tol. 6H · D · MF	INOX	133
2219	HSSE	DIN 371	TIN		M DIN 13 · Form. B "Gun" · Tol. 6H · R · MF	INOX	134
2220	HSSE	DIN 376/374	TIN		M DIN 13 · Form. B "Gun" · Tol. 6H · D · MF	INOX	134
2133	HSSE	DIN 371			M DIN 13 · Form. B "Gun" · Tol. 6H · R · MF	AL	135
2132	HSSE	DIN 376			M DIN 13 · Form. B "Gun" · Tol. 6H · D · MF	AL	135
2184	HSSE	DIN 371	CrN		M DIN 13 · Form. B "Gun" · Tol. 6H · R · MF	AL	136
2183	HSSE	DIN 376	CrN		M DIN 13 · Form. B "Gun" · Tol. 6H · D · MF	AL	136
2254	HSSE-PM	DIN 371 MULTI	HL		M DIN 13 · Form. B "Gun" · Tol. 6HX · R · MF	1100 N/mm2	137
2255	HSSE-PM	DIN 371 MULTI	HL		M DIN 13 · Form. B "Gun" · Tol. 6HX · D · MF	1100 N/mm2	137
2258	HSSE-PM	DIN 371 SYNCHRO	HL		M DIN 13 · Form. B "Gun" · Tol. 6HX · CNC · R · MF	1100 N/mm2	138
2259	HSSE-PM	DIN 371 SYNCHRO	HL		M DIN 13 · Form. B "Gun" · Tol. 6HX · CNC · D · MF	1100 N/mm2	138

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Forma Helicoidal (Agujeros ciegos) / Forme helicoïdale (Trous borgnes)/ Spiral fluted (Blind holes)

2106	HSSE	DIN 371			M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · 35° · R	800 N/mm2	139
2105	HSSE	DIN 376/374			M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · 35° · D	800 N/mm2	139
2112	HSSE	DIN 371-L			M DIN 13 · Form. C · Tol. 6H · 35° · R	800 N/mm2	140
2166	HSSE	DIN 371			M DIN 13 · Form. C · Tol. 6H +0,1 · 35° · R	800 N/mm2	140
2165	HSSE	DIN 376			M DIN 13 · Form. C · Tol. 6H +0,1 · 35° · D	800 N/mm2	140
2170	HSSE	DIN 371			M DIN 13 · Form. C · Tol. 6G · 35° · R	800 N/mm2	141
2208	HSSE	DIN 376			M DIN 13 · Form. C · Tol. 6G · 35° · D	800 N/mm2	141
2108	HSSE	DIN 371			M DIN 13 · Form. C · Tol. 6H · 15° · R	800 N/mm2	142
2107	HSSE	DIN 376/374			M DIN 13 · Form. C · Tol. 6H · 15° · D	800 N/mm2	142
2252	HSSE	DIN 371	VAP		M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · 35° · R · MF	800 N/mm2	143
2253	HSSE	DIN 376/374	VAP		M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · 35° · D · MF	800 N/mm2	143
2118	HSSE	DIN 371	TIN		M DIN 13 · Form. C · Tol. 6H · 35° · R · MF	800 N/mm2	144
2117	HSSE	DIN 376/374	TIN		M DIN 13 · Form. C · Tol. 6H · 35° · D · MF	800 N/mm2	144
2124	HSSE-PM	DIN 371	TICN		M DIN 13 · Form. C · Tol. 6H · 35° · R · MF	1100 N/mm2	145
2123	HSSE-PM	DIN 376/374	TICN		M DIN 13 · Form. C · Tol. 6H · 35° · D · MF	1100 N/mm2	145
2178	HSSE-PM	DIN 371	TICN		M DIN 13 · Form. C · Tol. 6HX · 15° · R · MF	1400 N/mm2	146
2177	HSSE-PM	DIN 376	TICN		M DIN 13 · Form. C · Tol. 6HX · 15° · D · MF	1400 N/mm2	146
2120	HSSE	DIN 371	VAP		M DIN 13 · Form. C · Tol. 6H · 35° · R · MF	INOX	147
2119	HSSE	DIN 376/374	VAP		M DIN 13 · Form. C · Tol. 6H · 35° · D · MF	INOX	147

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2221	HSSE	DIN 371	TiN		M DIN 13	Form. C		Tol. 6H	35°	R	MF	INOX	148
2222	HSSE	DIN 376/374	TiN		M DIN 13	Form. C		Tol. 6H	35°	D	MF	INOX	148
2182	HSSE	DIN 371			M DIN 13	Form. C		Tol. 6H	45°	R	MF	AL	149
2181	HSSE	DIN 376			M DIN 13	Form. C		Tol. 6H	45°	D	MF	AL	149
2186	HSSE	DIN 371	CrN		M DIN 13	Form. C		Tol. 6H	45°	R	MF	AL	150
2185	HSSE	DIN 376	CrN		M DIN 13	Form. C		Tol. 6H	45°	D	MF	AL	150
2256	HSSE-PM	DIN 371 MULTI	HL		M DIN 13	Form. C		Tol. 6HX	45°	R	MF	1100 N/mm2	151
2257	HSSE-PM	DIN 376 MULTI	HL		M DIN 13	Form. C		Tol. 6HX	45°	D	MF	1100 N/mm2	151
2260	HSSE-PM	DIN 371 SYNCHRO	HL		M DIN 13	CNC	Form. C		Tol. 6HX	45°	R	MF	1100 N/mm2	152
2261	HSSE-PM	DIN 376 SYNCHRO	HL		M DIN 13	CNC	Form. C		Tol. 6HX	45°	D	MF	1100 N/mm2	152

Laminación / Tarauds à refouler / Forming taps

2188	HSSE-PM	DIN 371	TiN		M DIN 13	Form. C		Tol. 6HX	A>12%	R	MF	1100 N/mm2	153
2187	HSSE-PM	DIN 376	TiN		M DIN 13	Form. C		Tol. 6HX	A>12%	D	MF	1100 N/mm2	153
2214	HSSE-PM	DIN 371	TiN		M DIN 13		Form. C	Tol. 6HX	A>12%	R	MF	1100 N/mm2	154
2213	HSSE-PM	DIN 376	TiN		M DIN 13		Form. C	Tol. 6HX	A>12%	D	MF	1100 N/mm2	154
2216	HSSE-PM	DIN 371	TiN		M DIN 13	Form. C		Tol. 6GX	A>12%	R	MF	1100 N/mm2	155
2215	HSSE-PM	DIN 376	TiN		M DIN 13	Form. C		Tol. 6GX	A>12%	D	MF	1100 N/mm2	155
2218	HSSE-PM	DIN 371	TiN		M DIN 13		Form. C	Tol. 6GX	A>12%	R	MF	1100 N/mm2	156
2217	HSSE-PM	DIN 376	TiN		M DIN 13		Form. C	Tol. 6GX	A>12%	D	MF	1100 N/mm2	156

Otros / Autres / Others

2199	HSSE	DIN 357			M DIN 13	16-18h		Tol. 6H		R	800 N/mm2	157

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2134	HSSE		NIT		M DIN 13 · 16-18h · Tol. 6H · D · 800 N/mm2	157
2806	HSSE	DIN 13			M DIN 13 · Tol. 6H · 800 N/mm2	158
1504	HSS	Hex			M DIN 13 · Tol. 6H · 1/4" · 800 N/mm2	158
2248	HSS	ISO 529			M DIN 13 · Form. B "Gun" · Tol. 6H · 800 N/mm2	159
2249	HSS	ISO 529			M DIN 13 · Form. C · Tol. 6H · 35° · 800 N/mm2	159
N 2266	HSSE	JIS			M DIN 13 · MF DIN 13 · Form. B "Gun" · Tol. 6H · D · 800 N/mm2	160
N 2267	HSSE	JIS			M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · 35° · D · 800 N/mm2	160
N 2268	HSSE	JIS	VAP		M DIN 13 · MF DIN 13 · Form. B "Gun" · Tol. 6H · D · MF · 800 N/mm2	161
N 2269	HSSE	JIS	VAP		M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · 35° · D · MF · 800 N/mm2	161
N 2270	HSSE	JIS	TIN		M DIN 13 · MF DIN 13 · Form. B "Gun" · Tol. 6H · D · MF · 800 N/mm2	162
N 2271	HSSE	JIS	TIN		M DIN 13 · MF DIN 13 · Form. C · Tol. 6H · 35° · D · MF · 800 N/mm2	162

Machos de máquina / Tarauds machine / Machine taps (UNC-UNF-UN-UNS-UNEF)

2148	HSSE	DIN 371			UNC · Form. C · Tol. 2B · R · 800 N/mm2	163
2147	HSSE	DIN 376			UNC · Form. C · Tol. 2B · D · 800 N/mm2	163
2147/5	HSSE	DIN 376			UNC · Form. C · LH · D · 800 N/mm2	163
2150	HSSE	DIN 371			UNC · Form. B "Gun" · Tol. 2B · R · 800 N/mm2	164
2149	HSSE	DIN 376			UNC · Form. B "Gun" · Tol. 2B · D · 800 N/mm2	164
N 2262	HSSE	DIN371	VAP		UNC · Form. B "Gun" · Tol. 2B · R · MF · 800 N/mm2	165
N 2263	HSSE		VAP		UNC · Form. B "Gun" · Tol. 2B · D · MF · 800 N/mm2	165
2234	HSSE	DIN 371	TIN		UNC · Form. B "Gun" · Tol. 2B · R · MF · 800 N/mm2	166

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2235	HSSE	DIN 376	TIN		UNC ANSI/ASME B1.1 · Form. B "Gun" · Tol. 2B · D · MF · 800 N/mm2	166
2238	HSSE	DIN 371	VAP		UNC ANSI/ASME B1.1 · Form. B "Gun" · Tol. 2B · R · MF · INOX	167
2239	HSSE	DIN 376	VAP		UNC ANSI/ASME B1.1 · Form. B "Gun" · Tol. 2B · D · MF · INOX	167
2152	HSSE	DIN 371			UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · R · 800 N/mm2	168
2151	HSSE	DIN 376			UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · D · 800 N/mm2	168
N 2264	HSSE	DIN 371	VAP		UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · R · MF · 800 N/mm2	169
N 2265	HSSE	DIN 371	VAP		UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · D · MF · 800 N/mm2	169
2236	HSSE	DIN 371	TIN		UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · R · MF · 800 N/mm2	170
2237	HSSE	DIN 376	TIN		UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · D · MF · 800 N/mm2	170
2240	HSSE	DIN 371	VAP		UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · R · MF · INOX	171
2241	HSSE	DIN 376	VAP		UNC ANSI/ASME B1.1 · Form. C · Tol. 2B · 35° · D · MF · INOX	171
2154	HSSE	DIN 371			UNF ANSI/ASME B1.1 · Form. C · Tol. 2B · R · 800 N/mm2	172
2153	HSSE	DIN 374			UNF ANSI/ASME B1.1 · Form. C · Tol. 2B · D · 800 N/mm2	172
2153/5	HSSE	DIN 374			UNF ANSI/ASME B1.1 · Form. C · Tol. 2B · LH · D · 800 N/mm2	173
2156	HSSE	DIN 371			UNF ANSI/ASME B1.1 · Form. B "Gun" · Tol. 2B · R · 800 N/mm2	174
2155	HSSE	DIN 374			UNF ANSI/ASME B1.1 · Form. B "Gun" · Tol. 2B · D · 800 N/mm2	174
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Micro Acabado > MAXI VENTAJAS
MICROFINISH > MAXI AVANTAGES
MICROFINISH > MAXI ADVANTAGES

¿Por qué conformarse con menos?

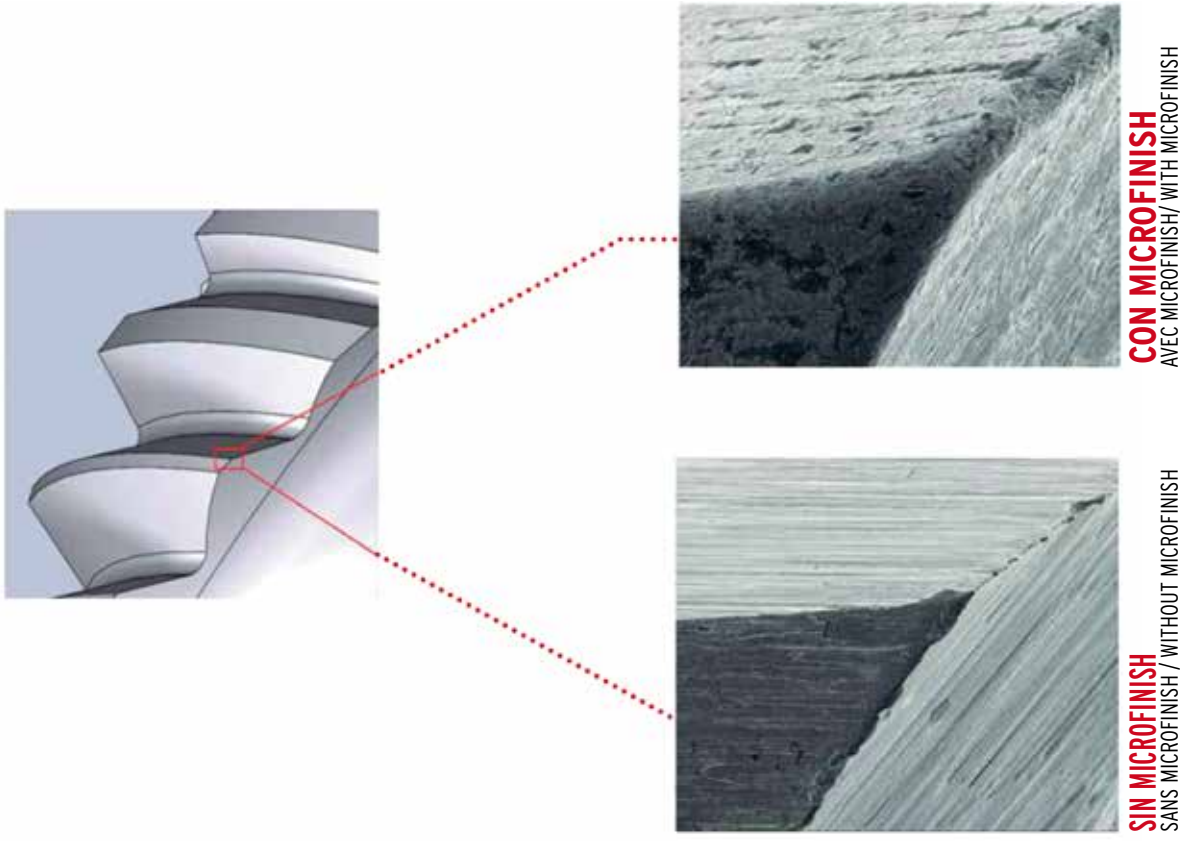
• La tecnología MICROFINISH consiste en que una vez el macho de roscar es rectificado, se limpia de rebabas y se redondean las aristas de corte.
• Se logra un mayor control y estabilidad del desgaste de la herramienta.
• Ello se traduce en un notable incremento de su rendimiento.
• Y en la mejora de los acabados de la rosca.

Pourquoi se satisfaire de peu?

• La technologie MICROFINISH agit après le surfaçage du taraud, qui est nettoyé des bavures et dont les arêtes de coupe sont arrondies.
• L'usure de l'outil est alors mieux contrôlée et plus stable.
• Cela se traduit par une augmentation significative de son rendement.
• Et une amélioration des finitions du filetage.

Why settle for less?

• With MICROFINISH technology once the thread of the tap is rectified, it is cleaned from burrs and the cutting edges are rounded.
• Greater control and stability of wear on the tool is achieved.
• This translates into a notable increase in performance.
• And improves the finishes of the thread.



CON MICROFINISH
AVEC MICROFINISH/ WITH MICROFINISH



SIN MICROFINISH
SANS MICROFINISH / WITHOUT MICROFINISH



1. UNA ROSCA CON CALIDAD SUPERFICIAL SUPERIOR

Las roscas obtenidas tienen una calidad superficial superior, gracias a dos efectos:

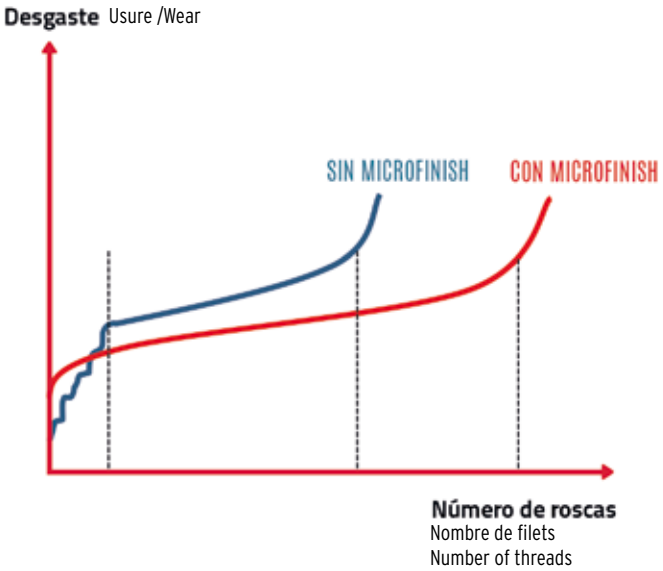
• La geometría redondeada de forma constante a lo largo de todo el filo de corte del macho, permite un corte continuo y homogéneo de la rosca de la pieza.

• La menor rugosidad superficial de la rosca del macho reduce la fricción durante el roscado para obtener a su vez, una rosca con mejor calidad superficial.

2. MAYOR VIDA ÚTIL DE LA HERRAMIENTA

• Gracias a su nuevo acabado redondeado y a que el filo de corte se va desgastando de manera más controlada y constante, se evita el salto de partículas de cualquier forma y tamaño.

• Ello impide que se produzcan roturas prematuras con el uso.



1. UN FILET D'UNE QUALITÉ DE SURFACE SUPÉRIEURE

Les filets obtenus présentent une qualité de surface supérieure, grâce à deux effets :

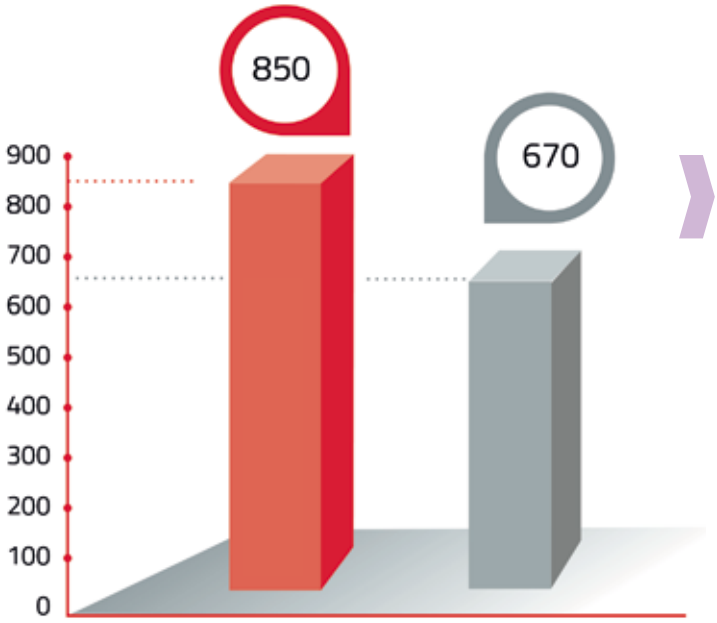
• La géométrie arrondie de manière constante tout au long du fil de coupe du taraud apporte une coupe continue et homogène sur le filetage de la pièce.

• La plus faible rugosité de surface du taraud réduit la friction lors du taraudage, permettant ainsi d'obtenir un filet de meilleure qualité de surface.

2. UNE DURÉE DE VIE UTILE DE L'OUTIL PROLONGÉE

• Grâce à sa nouvelle finition arrondie et grâce à un fil de coupe qui s'use de manière mieux contrôlée et plus homogène, le décrochement de particules de toute forme et dimension est évité.

• Cela évite les ruptures prématurées à l'usage.



Rosca/Filet/Thread: M6 6H
Material/Matériau/Material: F114 (C45)
Profundidad/Profondeur/Depth: 12mm
Velocidad/Vitesse/Speed: 10 m/min

1. A THREAD WITH HIGHER SERVICE QUALITY

The threads obtained have a higher service quality, thanks to two effects:

• The constant rounded geometry over the entire cutting edge of the tap enables continuous and even cutting of the part's thread.

• The lower surface roughness of the thread on the tap reduces friction during threading, which obtains a thread with a higher surface quality.

2. LONGER SERVICE LIFE OF THE TOOL

• Thanks to its new rounded finish and that the cutting-edge is worn in a controlled and constant manner, the release of particles of any shape and size is avoided.

• This avoids premature breakage with use.

FORMULARIO MACHOS ESPECIALES

FICHE TECHNIQUE TARAUDS SPECIAUX / TECHNICAL ENQUIRY FOR SPECIAL TAPS

Fecha / Date: .....

Empresa / Entreprise / Company: ..... Contacto / Contact: .....

Dirección / Adresse / Adress: ..... Población / Ville / Town: .....

Tel / Fax: ..... E-mail: .....

.....

TRABAJO A REALIZAR / TRAVAIL DEMANDE / REQUESTED WORK

Material / Matière / Material ..... Norma / Norme / Norm: .....

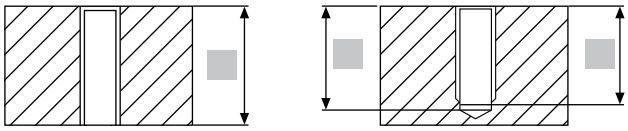
Dureza / Dureté / Hardness ..... HB ..... HRc Resistencia / Résistance / Resistance ..... N/mm^2

Tipo viruta: ☐ Corta ☐ Larga ☐ Polvo
Type copeau: Courte Longue Poussière
Shaving: Short Long Powder

Máquina / Machine ..... Refrigerante / Réfrigérant / Coolant .....

Posición / Position: ☐ Horizontal ☐ Vertical ☐ V. Corte / V. Coupe / Cutting Speed ☐ V. avance / Avance / Feed

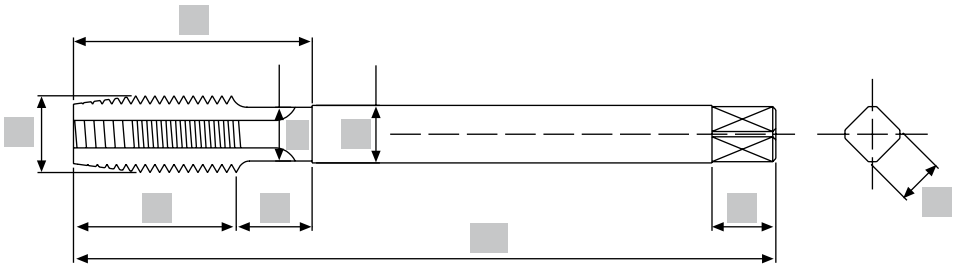
Agujero / Trou / Hole:



HERRAMIENTA / OUTIL / TOOL

Descripción / Description ..... Tolerancia / Tolérance / Tolerance .....

Cantidad / Quantité / Quantity ..... Número ranuras / Rainures / Grooves .....



Mango: ☐ Cilíndrico ☐ Weldon ☐ Cónico ☐ Rebajado
Queue: Cylindrique Weldon Conique Réduite
Shank: Straight Weldon Taper Reduced

Entrada: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ Otra
Entrée: A B C D E Autres
Entry: A B C D E Others

Material / Matière / Material: ☐ HSS ☐ HSSE ☐ HM ☐ HSS-HM

Superficie / Surface: ☐ Brillante / Brillant / Brilliant ☐ Recubrimiento / Revêtement / Coating

COMENTARIOS / COMMENTAIRES/ COMMENTS: .....

.....

.....

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Servicio de Herramienta Especial - Service Outils Spéciaux - Special Tools Service
Tel. (+34) 93 387 32 99 - Fax.(+ 34) 93 383 33 08 - especiales@hepycrf.com

FORMULARIO COJINETES ESPECIALES

FICHE TECHNIQUE FILIERES SPECIAUX / TECHNICAL ENQUIRY FOR SPECIAL DIES

Fecha / Date: .....

Empresa / Entreprise / Company: ..... Contacto / Contact: .....

Dirección / Adresse / Adress: ..... Población / Ville / Town: .....

Tel / Fax: ..... E-mail: .....

.....

TRABAJO A REALIZAR / TRAVAIL DEMANDE / REQUESTED WORK

Material / Matière / Material ..... Norma / Norme / Norm: .....

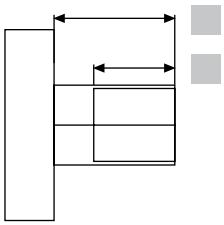
Dureza / Dureté / Hardness ..... HB ..... HRc Resistencia / Résistance / Resistance ..... N/mm^2

Tipo viruta: ☐ Corta ☐ Larga ☐ Polvo
Type copeau Courte Longue Poussière
Shaving Short Long Powder

Máquina / Machine ..... Refrigerante / Réfrigérant / Coolant .....

Posición / Position: ☐ Horizontal ☐ Vertical ☐ V. Corte ☐ V. avance
V. Coupe Avance
Cutting Speed Feed

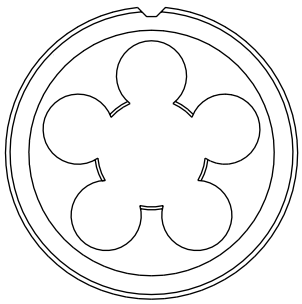
Eje / Axe / Axis:

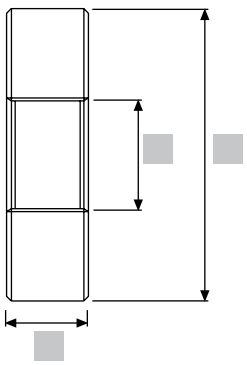


HERRAMIENTA / OUTIL / TOOL

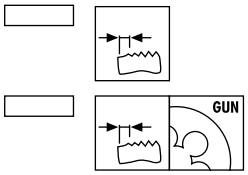
Descripción / Description ..... Tolerancia / Tolérance / Tolerance .....

Cantidad / Quantité / Quantity ..... Número ranuras / Rainures / Grooves .....





Entrada / Entrée / Entry



Material / Matière / Material: ☐ HSS ☐ HSSE ☐ HM ☐ HSS-HM

Superficie / Surface: ☐ Brillante ☐ Recubrimiento
Brillant Revêtement
Brilliant Coating

COMENTARIOS / COMMENTAIRES/ COMMENTS: .....

.....

.....

.....

Servicio de Herramienta Especial - Service Outils Spéciaux - Special Tools Service
Tel. (+34) 93 387 32 99 - Fax.(+ 34) 93 383 33 08 - especiales@hepycrf.com

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

ENTRADA RECTA / ENTRÉE DROITE / STRAIGHT FRUTE



Prof	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd
Form.	C(2-3)	C(2-3)	C(2-3)	C(2-3)	A(6-8)	A(6-8)	E(1,2-2)	E(1,2-2)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)
Ejec.			LH	LH											LH			LH	
Tol.	6H	6H	6H	6H	6H	6H	6H	6H	6HX	6HX	6HX	6HX	2B	2B	2B	2B	2B	2B	2B
Mat.	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE
Rec									NIT	NIT	TICN	TICN							
Rosca	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	UNC	UNC	UNC	UNF	UNF	UNF	UN
Ref.	2102	2101	2102/5	2101/5	2114	2113	2190	2191	2129	2128	2180	2179	2148	2147	2147/5	2154	2153	2153/5	2189
MF							MF	MF	MF	MF	MF	MF							
Mat.	Vc (m/min)																		
1.1	15-25	15-25	15-25	15-25	15-25	15-25							15-25	15-25	15-25	15-25	15-25	15-25	15-25
1.2	10-20	10-20	10-20	10-20	10-20	10-20							10-20	10-20	10-20	10-20	10-20	10-20	10-20
1.3	12-18	12-18	12-18	12-18	12-18	12-18							12-18	12-18	12-18	12-18	12-18	12-18	12-18
1.4	10-15	10-15	10-15	10-15	10-15	10-15							10-15	10-15	10-15	10-15	10-15	10-15	10-15
1.5																			
1.6																			
1.7																			
1.8																			
2.1																			
2.2																			
2.3																			
2.4																			
3.1									10-15	10-15	15-30	15-30							
3.2									6-12	6-12	10-20	10-20							
3.3	10-15	10-15	10-15	10-15	10-15	10-15							10-15	10-15	10-15	10-15	10-15	10-15	10-15
3.4																			
4.1																			
4.2																			
4.3																			
5.1																			
5.2																			
5.3																			
6.1																			
6.2							25-35	25-35	25-35	25-35	35-50	35-50							
6.3	15-20	15-20	15-20	15-20	15-20	15-20							15-20	15-20	15-20	15-20	15-20	15-20	15-20
6.4							25-35	25-35	25-35	25-35	35-50	35-50							
6.5	10-15	10-15	10-15	10-15	10-15	10-15							10-15	10-15	10-15	10-15	10-15	10-15	10-15
7.1																			
7.2																			
7.3																			
7.4																			
8.1																			
8.2																			

Optima / Optimun **Alternativo / Alternative**

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

																		
<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd	<1,5xd
C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	E(1,2-2)	E(1,2-2)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)
				LH	LH				LH						LH			
2B	2B										+0,1			7H	7H			
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE
UNS	UNEF	BSW	BSW	BSW	BSW	BSF	BSF	BSP	BSP	BSP	BSP	BSPT	NPT	TR	TR	PG	VG	VG
2143	2160	2136	2135	2136/5	2135/5	2141	2142	2144	2144/5	2192	2206	2159	2164	2212	2212/5	2163	2242	2243
Vc (m/min)																		
15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25			10-15	10-15	3-8	3-8	15-25	15-25	15-25
10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20			7-14	7-14	2-6	2-6	10-20	10-20	10-20
12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18			8-12	8-12	2-6	2-6	12-18	12-18	12-18
10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15			7-10	7-10	1-5	1-5	10-15	10-15	10-15
10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15			7-10	7-10			10-15	10-15	10-15
										25-35	25-35							
15-20	15-20	15-20	15-20	15-20	15-20	15-20	15-20	15-20	15-20			10-15	10-15	2-6	2-6	15-20	15-20	15-20
										25-35	25-35							
10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15			7-10	7-10	2-6	2-6	10-15	10-15	10-15
															2-6			

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

ENTRADA CORREGIDA / ENTRÉE CORRIGÉE / SPIRAL POINT



Prof	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	2xd	2xd	3xd	3xd	3xd
Form.	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)
Ejec.	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN
Tol.	6H	6H	6H	6H+01	6H+0,1	6G	6G	6H	6H	6H	6H	6H	6H	6HX	6HX	6H	6H	6H
Mat.	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE	HSSE	HSSE
Rec								VAP	VAP	TIN	TIN	TICN	TICN	TICN	TICN	VAP	VAP	TIN
Rosca	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF
Ref.	2104	2103	2111	2110	2109	2168	2169	2250	2251	2116	2115	2126	2125	2176	2175	2122	2121	2219
MF								MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
Mat.	Vc (m/min)																	
1.1	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	20-30					15-25	15-25	20-30
1.2	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	15-25					10-20	10-20	15-25
1.3	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	15-25					12-18	12-18	15-25
1.4	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	12-18	10-15	10-15					
1.5												6-10	6-10	6-10	6-10			
1.6												4-6	4-6	4-6	4-6			
1.7																		
1.8																		
2.1	7-10	7-10	7-10	7-10	7-10	7-10	7-10	7-10	7-10	7-10	9-12					7-10	7-10	10-15
2.2	5-8	5-8	5-8	5-8	5-8	5-8	5-8	5-8	5-8	5-8	6-10					5-8	5-8	10-15
2.3																5-8	5-8	10-15
2.4												6-12	6-12					6-10
3.1																		
3.2																		
3.3	10-15	10-15	10-15	10-15	10-15	10-15	10-15			10-15	15-20							
3.4												10-20	10-20	10-20	10-20			
4.1																10-15	10-15	20-30
4.2												6-8	6-8	6-8	6-8			
4.3												4-6	4-6	4-6	4-6			
5.1																		
5.2																		
5.3																		
6.1																6-8	6-8	
6.2																		
6.3	15-20	15-20	15-20	15-20	15-20	15-20	15-20			15-20	20-25							
6.4																		
6.5	10-15	10-15	10-15	10-15	10-15	10-15	10-15			10-15	15-20							
7.1																		
7.2	10-15	10-15	10-15	10-15	10-15	10-15	10-15			10-15	12-18							
7.3																		
7.4																		
8.1	10-15	10-15	10-15	10-15	10-15	10-15	10-15			10-15	12-18							
8.2												10-15	10-15	10-15	10-15			

Optima / Optimun **Alternativo / Alternative**

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

																					
3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd
B(3,5-5)	B(3,5-5)-AZ	B(3,5-5)-AZ	B(3,5-5)-AZ	B(3,5-5)-AZ	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)	B(3,5-5)
GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN	GUN
6H	6H	6H	6H	6H	6HX	6HX	6HX	6HX	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B			
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE
TIN			CrN	CrN	HL	HL	HL	HL			VAP	VAP	TIN	TIN	VAP	VAP					
M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNF	UNF	BSW	BSW	BSP
2220	2133	2132	2184	2183	2254	2255	2258	2259	2150	2149	2262	2263	2234	2235	2238	2239	2156	2155	2138	2137	2145
MF	MF	MF	MF	MF	MF	MF	MF	MF			MF	MF	MF	MF	MF	MF					
		Vc (m/min)																			
20-30					20-40	20-40	20-50	20-50	15-25	15-25	15-25	15-25	20-30	20-30	15-25	15-25	15-25	15-25	15-25	15-25	15-25
15-25					20-40	20-40	20-50	20-50	10-20	10-20	10-20	10-20	15-25	15-25	10-20	10-20	10-20	10-20	10-20	10-20	10-20
15-25					15-40	15-40	15-40	15-40	12-18	12-18	12-18	12-18	15-25	15-25	12-18	12-18	12-18	12-18	12-18	12-18	12-18
					15-30	15-30	15-30	15-30	10-15	10-15	10-15	10-15	12-18	12-18			10-15	10-15	10-15	10-15	10-15
					10-20	10-20	10-20	10-20													
					5-10	5-10															
10-15					5-15	5-15	5-15	5-15	7-10	7-10	7-10	7-10	9-12	9-12	7-10	7-10	7-10	7-10	7-10	7-10	7-10
10-15					5-15	5-15	5-15	5-15	5-8	5-8	5-8	5-8	6-10	6-10	5-8	5-8	5-8	5-8	5-8	5-8	5-8
10-15					5-10	5-10	5-10	5-10							5-8	5-8					
6-10					5-10	5-10															
					15-25	15-25															
					10-20	10-20															
					15-25	15-25	15-25	15-25	10-15	10-15	10-15	10-15	15-20	15-20			10-15	10-15	10-15	10-15	10-15
					10-20	10-20	10-20	10-20													
20-30					5-15	5-15									10-15	10-15					
	6-8	6-8	8-12	8-12	10-30	10-30	20-30	20-30							6-8	6-8					
					10-30	10-30															
					10-30	10-30	20-30	20-30	15-20	15-20	15-20	15-20	20-25	20-25			15-20	15-20	15-20	15-20	15-20
					10-30	10-30															
					10-30	10-30	20-30	20-30	10-15	10-15	10-15	10-15	15-20	15-20			10-15	10-15	10-15	10-15	10-15
	10-20	10-20	12-18	12-18	10-30	10-30															
	10-15	10-15	12-18	12-18	10-30	10-30	20-30	20-30	10-15	10-15	10-15	10-15	12-18	12-18			10-15	10-15	10-15	10-15	10-15
					10-30	10-30															
	10-20	10-20	12-18	12-18	10-30	10-30															
	10-15	10-15	12-18	12-18					10-15	10-15	10-15	10-15	12-18	12-18			10-15	10-15	10-15	10-15	10-15

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

FORMA HELICOIDAL / FORME HELICOIDAL / SPIRAL FLUTED



Prof	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	2xd	2xd	3xd	3xd	3xd
Form.	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)
Ejec.	R35°	R35°	R35°	R35°	R35°	R35°	R35°	R15°	R15°	R35°	R35°	R35°	R35°	R35°	R35°	R15°	R15°	R35°	R35°	R35°
Tol.	6H	6H	6H	6H+01	6H+0,1	6G	6G	6H	6H	6H	6H	6H	6H	6H	6H	6HX	6HX	6H	6H	6H
Mat.	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE	HSSE	HSSE
Rec										VAP	VAP	TIN	TIN	TICN	TICN	TICN	TICN	VAP	VAP	TIN
Rosca	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF
Ref.	2106	2105	2112	2166	2165	2170	2208	2108	2107	2252	2253	2118	2117	2124	2123	2178	2177	2120	2119	2221
MF										MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
Mat.	**Vc (m/min)**																			
1.1	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	20-30	20-30					15-25	15-25	20-30
1.2	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20	15-25	15-25					10-20	10-20	15-25
1.3	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	15-25	15-25					12-18	12-18	15-25
1.4	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	12-18	12-18	10-15	10-15					
1.5														6-10	6-10	6-10	6-10			
1.6														4-6	4-6	4-6	4-6			
1.7																				
1.8																				
2.1	7-10	7-10	7-10	7-10	7-10	7-10	7-10	7-10	7-10	7-10	7-10	9-12	9-12					7-10	7-10	10-15
2.2	5-8	5-8	5-8	5-8	5-8	5-8	5-8	5-8	5-8	5-8	5-8	6-10	6-10					5-8	5-8	10-15
2.3																		5-8	5-8	10-15
2.4														6-12	6-12					6-10
3.1																				
3.2																				
3.3	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15			15-20	15-20							
3.4														10-20	10-20	10-20	10-20			
4.1																		10-15	10-15	20-30
4.2														6-8	6-8	6-8	6-8			
4.3														4-6	4-6	4-6	4-6			
5.1																				
5.2																				
5.3																				
6.1																		6-8	6-8	
6.2																				
6.3	15-20	15-20	15-20	15-20	15-20	15-20	15-20	15-20	15-20			20-25	20-25							
6.4																				
6.5	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15			15-20	15-20							
7.1																				
7.2	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15			12-18	12-18							
7.3																				
7.4																				
8.1	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15	10-15			12-18	12-18							
8.2														10-15	10-15	10-15	10-15			

Optima / Optimun **Alternativo / Alternative**

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE



3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd	3xd
C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)
R35°	R45°	R45°	R45°	R45°	R45°	R45°	R45°	R45°	R35°	R35°	R35°	R35°	R35°	R35°	R35°	R35°	R35°	R35°	R35°	R35°	R35°
6H	6H	6H	6H	6H	6HX	6HX	6HX	6HX	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B			
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE
TIN			CrN	CrN	HL	HL	HL	HL			VAP	VAP	TIN	TIN	VAP	VAP					
M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	M-MF	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNF	UNF	BSW	BSW	BSP
2222	2182	2181	2186	2185	2256	2257	2260	2261	2152	2151	2264	2265	2236	2237	2240	2241	2158	2157	2140	2139	2146
MF	MF	MF	MF	MF	MF	MF	MF	MF			MF	MF	MF	MF	MF	MF					
Vc (m/min)																					
20-30					20-40	20-40	20-50	20-50	15-25	15-25	15-25	15-25	20-30	20-30	15-25	15-25	15-25	15-25	15-25	15-25	15-25
15-25					20-40	20-40	20-50	20-50	10-20	10-20	10-20	10-20	15-25	15-25	10-20	10-20	10-20	10-20	10-20	10-20	10-20
15-25					15-40	15-40	15-40	15-40	12-18	12-18	12-18	12-18	15-25	15-25	12-18	12-18	12-18	12-18	12-18	12-18	12-18
					15-30	15-30	15-30	15-30	10-15	10-15	10-15	10-15	12-18	12-18			10-15	10-15	10-15	10-15	10-15
					10-20	10-20	10-20	10-20													
					5-10	5-10															
10-15					5-15	5-15	5-15	5-15	7-10	7-10	7-10	7-10	9-12	9-12	7-10	7-10	7-10	7-10	7-10	7-10	7-10
10-15					5-15	5-15	5-15	5-15	5-8	5-8	5-8	5-8	6-10	6-10	5-8	5-8	5-8	5-8	5-8	5-8	5-8
10-15					5-10	5-10	5-10	5-10							5-8	5-8					
6-10					5-10	5-10															
					15-25	15-25															
					10-20	10-20															
					15-25	15-25	15-25	15-25	10-15	10-15	10-15	10-15	15-20	15-20			10-15	10-15	10-15	10-15	10-15
					10-20	10-20	10-20	10-20													
20-30					5-15	5-15									10-15	10-15					
	6-8	6-8	8-12	8-12	10-30	10-30	20-30	20-30							6-8	6-8					
					10-30	10-30															
					10-30	10-30	20-30	20-30	15-20	15-20	15-20	15-20	20-25	20-25			15-20	15-20	15-20	15-20	15-20
					10-30	10-30															
					10-30	10-30	20-30	20-30	10-15	10-15	10-15	10-15	15-20	15-20			10-15	10-15	10-15	10-15	10-15
	10-20	10-20	12-18	12-18	10-30	10-30															
	10-15	10-15	12-18	12-18	10-30	10-30	20-30	2 0-30	10-15	10-15	10-15	10-15	12-18	12-18			10-15	10-15	10-15	10-15	10-15
					10-30	10-30															
	10-20	10-20	12-18	12-18	10-30	10-30															
	10-15	10-15	12-18	12-18					10-15	10-15	10-15	10-15	12-18	12-18			10-15	10-15	10-15	10-15	10-15

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

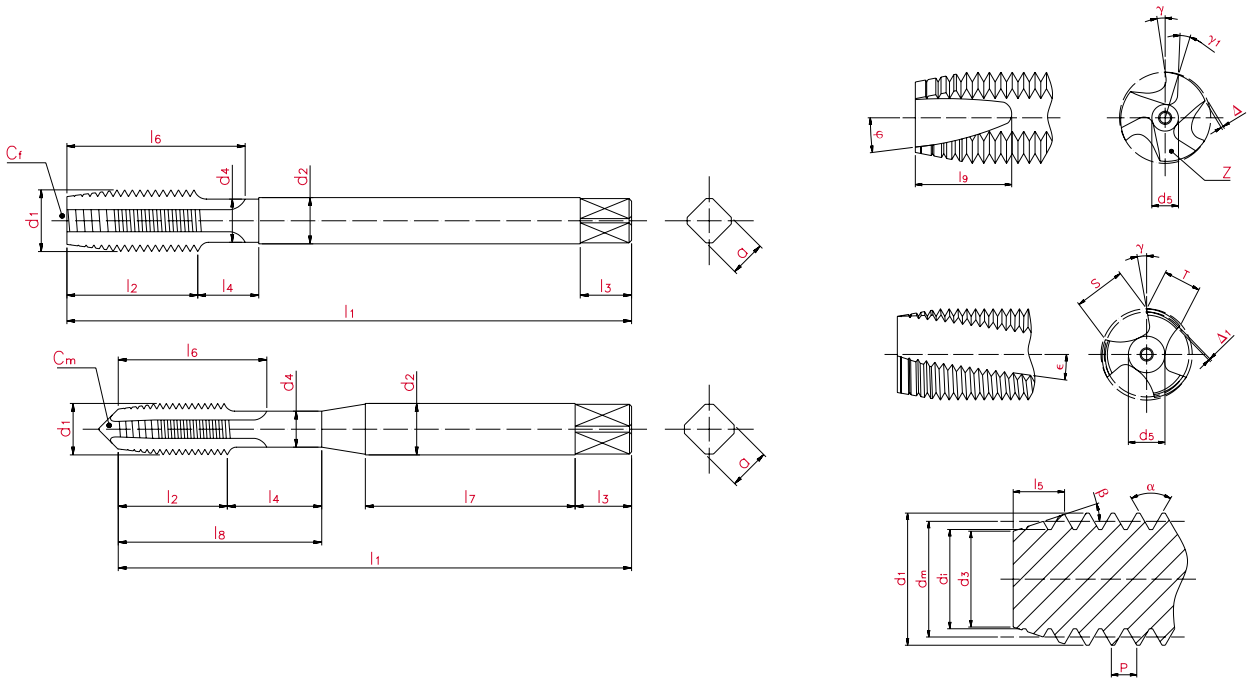
LAMINACIÓN / Á REFOULER / FORMING TAPS



Prof	1,5xd	1,5xd	3xd	3xd	1,5xd	1,5xd	3xd	3xd	1,5xd	1,5xd
Form.	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	C(2-3)	(16-18)	(16-18)
Ejec.	A>12%	A>12%	A>12%	A>12%	A>12%	A>12%	A>12%	A>12%		
Tol.	6HX	6HX	6HX	6HX	6GX	6GX	6GX	6GX	6H	6H
Mat.	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE	HSSE
Rec	TIN	TIN	TIN	TIN	TIN	TIN	TIN	TIN		NIT
Rosca	M	M	M	M	M	M	M	M	M	M
Ref.	2188	2187	2214	2213	2216	2215	2218	2217	2199	2134
MF	MF	MF	MF	MF	MF	MF	MF	MF		
Mat.	Vc (m/min)									
1.1	25-45	25-45	25-45	25-45	25-45	25-45	25-45	25-45		
1.2	20-40	20-40	20-40	20-40	20-40	20-40	20-40	20-40	10-20	10-20
1.3	15-35	15-35	15-35	15-35	15-35	15-35	15-35	15-35	12-18	12-18
1.4	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25	10-15	10-15
1.5										
1.6										
1.7										
1.8										
2.1	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25		
2.2	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20		
2.3	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20		
2.4										
3.1										
3.2										
3.3										
3.4										
4.1	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20		
4.2										
4.3										
5.1										
5.2										
5.3										
6.1	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30		
6.2										
6.3	20-30	20-30	20-30	20-30	20-30	20-30	20-30	20-30		
6.4										
6.5	15-25	15-25	15-25	15-25	15-25	15-25	15-25	15-25		
7.1	20-40	20-40	20-40	20-40	20-40	20-40	20-40	20-40		
7.2	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30		
7.3	10-20	10-20	10-20	10-20	10-20	10-20	10-20	10-20		
7.4	20-40	20-40	20-40	20-40	20-40	20-40	20-40	20-40		
8.1										
8.2										

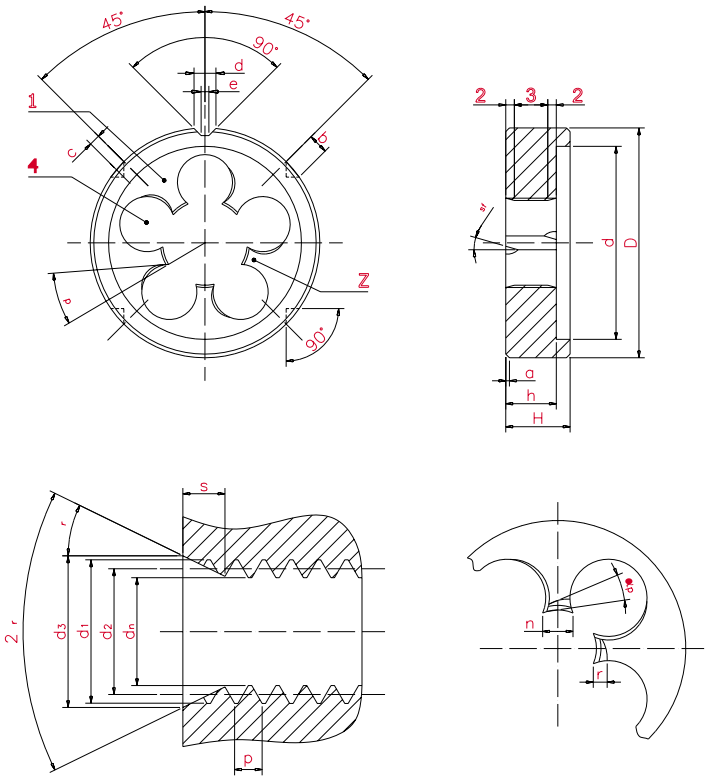
Optima / Optimun Alternativo / Alternative

TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY



l1	**Longitud total** / Longueur totale / Total length
l2	**Longitud de rosca** / Longueur de filetage / Thread length
l7	**Longitud de mango** / Longueur de queue / Shank length
l3	**Longitud de cuadro** / Longueur du carré / Square length
l4	**Longitud de sangrado** / Longueur d'indentation / Neck length
l5	**Longitud de entrada** / Longueur d'entrée / Chamfer length
l6	**Longitud de ranura** / Longueur de rainure / Flute Length
l8	**Longitud útil de corte** / Longueur utile de coupe / Useful length of cut
l9	**Longitud de la entrada en hélice** / Longueur de l'entrée en hélice / Spiral point length
d1	**Diámetro exterior** / Diamètre extérieur / External diameter
d2	**Diámetro de mango** / Diamètre de queue / Shank diameter
d3	**Diámetro de entrada** / Diamètre d'entrée / Chamfer diameter
d4	**Diámetro de sangrado** / Diamètre d'indentation / Neck diameter
d5	**Diámetro del alma** / Diamètre de l'âme / Core diameter
dm	**Diámetro medio** / Diamètre moyen / Pitch diameter
di	**Diámetro interno** / Diamètre interne / Internal diameter
a	**Cuadradillo** / Carré / Square
Cm	**Punto macho** / Pointe mâle / Male point
Cf	**Punto hembra** / Pointe femelle / Female point
P	**Paso de la rosca** / Pas de filetage / Pitch of thread
S	**Ancho de la ranura** / Largeur de la rainure / Flute width
T	**Ancho del diente** / Largeur de la dent / Width of land
Z	**Número de ranuras** / Nombre de rainures / Number of flutes
α	**Ángulo de flancos** / Angle de flancs / Angle of thread
β	**Ángulo de la entrada** / Angle de l'entrée / Chamfer angle
γ	**Ángulo de corte** / Angle de coupe / Rake angle
$\gamma 1$	**Ángulo de corte de la entrada corregida** / Angle de coupe de l'entrée corrigée / Spiral point rake angle
φ	**Ángulo de la entrada corregida** / Angle de l'entrée corrigée / Spiral point angle
ε	**Ángulo de la ranura** / Angle de la rainure / Flute angle
Δ	**Ángulo de destalonado de la entrada** / Angle de détalonnage de l'entrée / Chamfer relief angle
$\Delta 1$	**Ángulo de destalonado de flancos** / Angle de détalonnage des flancs / Flank relief angle

TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY



1	**Cuerpo del cojinete** / Corps de la filière / Die body
2	**Parte cortante - Entrada cónica** / Partie coupante - Entrée conique / Cutting part - Conical entry
3	**Hilos enteros** / Fils entiers / Entire threads
4	**Alojamiento para viruta** / Logement pour copeau / Void for shavings
d1	**Diámetro nominal de rosca** / Diamètre nominal de filetage / Nominal diameter of thread
d2	**Diámetro de flancos** / Diamètre de flancs / Flank Diameter
dn	**Diámetro de núcleo** / Diamètre du noyau / Nucleus diameter
d3	**Diámetro de la entrada cónica** / Diamètre de l'entrée conique / Diameter of conical chamfer
P	**Paso de la rosca** / Pas de filetage / Thread pitch
D	**Diámetro exterior del cojinete** / Diamètre extérieur de la filière / Exterior diameter of die
d	**Diámetro de la parte rebajada** / Diamètre de la partie chanfreinée / Diameter of the reduced part
H	**Diámetro de sangrado** / Diamètre d'indentation / Bled diameter
h	**Ancho del cojinete** / Largeur de la filière / Die width
Z	**Ancho útil del cojinete** / Largeur utile de la filière / Useful width of the die
n	**Número de dientes** / Nombre de dents / Number of teeth
r	**Ancho del diente** / Largeur de la dent / Tooth width
s	**Destalonado de la entrada cónica** / Détalonnage de l'entrée conique / Conical chamfer relief
a	**Longitud de la entrada cónica** / Longueur de l'entrée conique / Conical chamfer length
b	**Chaflán** / Chanfrein / Bevel
c	**Diámetro del agujero de fijación** / Diamètre du trou de fixation / Mounting hole diameter
d	**Desplazamiento del agujero de fijación** / Déplacement du trou de fixation / Mounting hole displacement
e	**Ancho de preranura** / Largeur de pré-rainure / Pre-groove width
γp	**Ángulo de la ranura** / Angle de la rainure / Groove angle
χr	**Ángulo de desprendimiento (de corte)** / Angle de dégagement (de coupe) / Rake angle (of cut)
2χr	**Ángulo de la entrada cónica** / Angle de l'entrée conique / Conical chamfer angle
αp	**Ángulo de destalonado de la entrada cónica** / Angle de détalonnage de l'entrée conique / Conical chamfer relief angle
γsf	**Ángulo de la entrada en hélice (rompevirutas)** / Longueur de l'entrée en hélice (brise-copeaux) / Blade chamfer angle (chip cap)

TABLAS DE ROSCAS Y PASOS

GRILLES DES FILETAGES ET DES PAS / TABLE OF THREADS AND PITCHES

› **Roscas más usuales en pulgadas.**
Filetages les plus courants en pouces.
Most common threads in inches.

Ø	W 55º	BF 55º	GAS 55º	BSB BRASS 55º	UNC 60º	UNF 60º	UNEF NEF 60º	NPS NPT API 60º	UN 60º						UNS 60º					
Nº 0	-	-	-	-	-	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 1	-	-	-	-	64	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 2	-	-	-	-	56	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 3	-	-	-	-	48	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 4	-	-	-	-	40	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 5	-	-	-	-	40	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 6	-	-	-	-	32	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 8	-	-	-	-	32	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nº 10	-	-	-	-	24	32	-	-	-	-	-	-	-	-	28	36	40	48	56	-
Nº 12	-	-	-	-	24	28	32	-	-	-	-	-	-	-	36	40	48	56	-	-
1/16	60	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-	-	-	-
3/32	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/8	40	-	28	-	-	-	-	27	-	-	-	-	-	-	-	-	-	-	-	-
5/32	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/16	24	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/32	24	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/4	20	26	19	26	20	28	32	18	-	-	-	-	-	-	24	27	26	40	48	56
9/32	20	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/16	18	22	-	26	18	24	32	-	20	28	-	-	-	-	27	36	40	48	-	-
3/8	16	20	19	26	16	24	32	18	20	28	-	-	-	-	18	27	36	40	-	-
7/16	14	18	-	26	14	20	28	-	16	32	-	-	-	-	18	24	27	-	-	-
1/2	12	16	14	26	13	20	28	14	16	32	-	-	-	-	12	14	18	24	27	-
9/16	12	16	-	26	12	18	24	-	16	20	28	32	-	-	14	27	-	-	-	-
5/8	11	14	14	26	11	18	24	14	12	16	20	28	32	-	14	27	-	-	-	-
11/16	11	14	-	-	-	-	24	-	12	16	20	28	32	-	-	-	-	-	-	-
3/4	10	12	14	26	10	16	20	14	12	28	32	-	-	-	14	18	24	27	-	-
13/16	10	12	-	-	-	-	20	-	12	16	28	32	-	-	-	-	-	-	-	-
7/8	9	11	14	26	9	14	20	-	12	16	28	32	-	-	10	18	24	27	-	-
15/16	-	-	-	-	-	-	20	-	16	28	32	-	-	-	-	-	-	-	-	-
1”	8	10	11	26	8	12	20	11,5	16	28	16	-	28	-	10	14	18	24	27	-
1”1/16	-	-	-	-	-	-	18	-	8	16	20	28	-	-	-	-	-	-	-	-
1”1/8	7	9	11	26	7	12	18	-	8	16	20	28	-	-	10	14	24	-	-	-
1”3/16	-	-	-	-	-	-	18	-	8	16	20	28	-	-	-	-	-	-	-	-
1”1/4	7	9	11	26	7	12	18	11,5	8	16	20	28	-	-	10	14	24	-	-	-
1”5/16	-	-	-	-	-	-	18	-	8	16	20	28	-	-	-	-	-	-	-	-
1”3/8	6	8	11	26	6	12	18	-	6	8	12	16	20	28	10	14	24	-	-	-
1”7/16	-	-	-	-	-	-	18	-	8	16	20	28	-	-	-	-	-	-	-	-
1”1/2	6	8	11	26	6	12	18	11,5	6	8	16	20	-	-	10	14	24	-	-	-
1”9/16	-	-	-	-	-	-	18	-	6	8	12	16	20	-	-	-	-	-	-	-
1”5/8	5	8	11	26	-	-	18	-	6	8	12	16	20	-	10	14	24	-	-	-
1”11/16	-	-	-	-	-	-	18	-	6	8	12	16	20	-	-	-	-	-	-	-
1”3/4	5	7	11	26	5	-	-	-	6	8	12	16	20	-	10	14	24	-	-	-
1”13/16	-	-	-	-	-	-	-	-	6	8	12	16	20	-	-	-	-	-	-	-
1”7/8	4,5	-	-	26	-	-	-	-	6	8	12	16	20	-	10	14	24	-	-	-
1”15/16	-	-	-	-	-	-	-	-	6	8	12	16	20	-	-	-	-	-	-	-
2”	4,5	7	11	26	4,5	-	-	11,5	6	8	12	16	20	-	10	14	24	-	-	-

TABLAS DE ROSCAS Y PASOS
GRILLES DES FILETAGES ET DES PAS / TABLE OF THREADS AND PITCHES

> Equivalencias en mm de los diámetros de las siguientes roscas.
Équivalences en mm des diamètres des filetages suivants.
Equivalents in mm of the diameters of the following threads.

BSW/BSF			UNC/UNF			BSP (GAS)			NSP/NPT			PG		
3/32	=	2,381mm	5/8	=	15,875 mm	G1/8	=	9,728 mm	G1"3/8	=	44,323 mm	1/8	=	10,287 mm	PG7	=	12,50 mm
1/8	=	3,175 mm	3/4	=	19,050 mm	G1/4	=	13,157 mm	G1"1/2	=	47,803 mm	1/4	=	13,716 mm	PG9	=	15,20 mm
5/32	=	3,969 mm	7/8	=	22,225 mm	G3/8	=	16,662 mm	G1"5/8	=	51,988 mm	3/8	=	17,145 mm	PG11	=	18,60 mm
3/16	=	4,762 mm	1"	=	25,400 mm	G1/2	=	20,955 mm	G1"3/4	=	53,746 mm	1/2	=	21,336 mm	PG13,5	=	20,40 mm
7/32	=	5,556 mm	1"1/8	=	28,575 mm	G5/8	=	22,911 mm	G2"	=	59,614 mm	3/4	=	26,670 mm	PG16	=	22,50 mm
1/4	=	6,350 mm	1"1/4	=	31,750 mm	G3/4	=	26,441 mm	G2"1/4	=	65,710 mm	1"	=	33,401 mm	PG21	=	28,30 mm
9/32	=	7,144 mm	1"3/8	=	34,925 mm	G7/8	=	30,201 mm	G2"3/8	=	69,390 mm	1"1/4	=	42,164 mm	PG29	=	37,00 mm
5/16	=	7,938 mm	1"1/2	=	38,100 mm	G1"	=	33,249 mm	G2"1/2	=	75,184 mm	1"1/2	=	48,260 mm	PG36	=	47,00 mm
3/8	=	9,525 mm	1"5/8	=	41,275 mm	G1"1/8	=	37,897 mm	G2"3/4	=	81,534 mm	2"	=	60,325 mm	PG42	=	54,00 mm
7/16	=	11,112 mm	1"3/4	=	44,450 mm	G1"1/4	=	41,910 mm	G3"	=	87,844 mm	2"1/2	=	73,025 mm	PG48	=	59,30 mm
1/2	=	12,700 mm	1"7/8	=	47,625 mm							3"	=	88,900 mm			
9/16	=	14,288 mm	2"	=	50,800 mm												

> Equivalencia del paso en hilos por pulgada a mm.
Équivalence du pas en fils par pouce en mm.
Equivalents of pitch in threads per inch to mm.

PASO h/1" PAS h/1" PITCH h/1"	**EQUIV. mm** ÉQUIV. mm EQUIV. mm	**PASO h/1"** PAS h/1" PITCH h/1"	**EQUIV. mm** ÉQUIV. mm EQUIV. mm	**PASO h/1"** PAS h/1" PITCH h/1"	**EQUIV. mm** ÉQUIV. mm EQUIV. mm	**PASO h/1"** PAS h/1" PITCH h/1"	**EQUIV. mm** ÉQUIV. mm EQUIV. mm	**PASO h/1"** PAS h/1" PITCH h/1"	**EQUIV. mm** ÉQUIV. mm EQUIV. mm
80	0,317	44	0,577	26	0,976	16	1,587	9	2,822
72	0,352	40	0,636	24	1,058	14	1,814	8	3,174
64	0,396	36	0,705	22	1,154	13	1,953	7	3,628
60	0,423	32	0,793	20	1,270	12	2,116	6	4,233
56	0,453	28	0,907	19	1,336	11,5	2,208	5	5,080
48	0,523	27	0,940	18	1,411	11	2,309	4,5	5,644

> Equivalencia de las roscas PG a MF.
Équivalence du pas PG à MF.
Equivalents of threads PG to MF.

PG	MF	PG	MF
7 x 20 h.	12 x 1,50	21 x 16 h.	32 x 1,50
9 x 18 h.	16 x 1,50	29 x 16 h.	40 x 1,50
11 x 18 h.	20 x 1,50	36 x 16 h.	50 x 1,50
13,5 x 18 h.	20 x 1,50	48 x 16 h.	63 x 1,50
16 x 18 h.	25 x 1,50		

DIÁMETROS PREVIOS AL ROSCADO

DIAMÈTRES PRÉALABLES AU FILETAGE / DIAMETERS BEFORE THREAD

M d1 x p (mm)	Ø a
M 1 x 0,25	0,75
M 1,1 x 0,25	0,85
M 1,2 x 0,25	0,95
M 1,4 x 0,3	1,10
M 1,6 x 0,35	1,25
M 1,7 x 0,35	1,30
M 1,8 x 0,35	1,45
M 2 x 0,4	1,60
M 2,2 x 0,45	1,75
M 2,3 x 0,4	1,90
M 2,5 x 0,45	2,05
M 2,6 x 0,45	2,10
M 3 x 0,5	2,50
M 3,5 x 0,6	2,90
M 4 x 0,7	3,30
M 4,5 x 0,75	3,70
M 5 x 0,8	4,20
M 6 x 1	5,00
M 7 x 1	6,00
M 8 x 1,25	6,80
M 9 x 1,25	7,80
M 10 x 1,5	8,50
M 11 x 1,5	9,50
M 12 x 1,75	10,20
M 14 x 2	12,00
M 16 x 2	14,00
M 18 x 2,5	15,50
M 20 x 2,5	17,50
M 22 x 2,5	19,50
M 24 x 3	21,00
M 27 x 3	24,00
M 30 x 3,5	26,50
M 33 x 3,5	29,50
M 36 x 4	32,00
M 39 x 4	35,00
M 42 x 4,5	37,50
M 45 x 4,5	40,50
M 48 x 5	43,00
M 52 x 5	47,00
M 56 x 5,5	50,50
M 60 x 5,5	54,50
M 64 x 6	58,00
M 68 x 6	62,00

M d1 x p (mm)	Ø a
M 3 x 0,6	2,40
M 3,5 x 0,75	2,75
M 4 x 0,75	3,25
M 4 x 0,8	3,20
M 5 x 0,9	4,10
M 5 x 1	4,00
M 5,5 x 0,9	4,60
M 6 x 1,25	4,75
M 8 x 1,5	6,50
M 13 x 1,75	11,25
M 15 x 2	13,00

MF d1 x p (mm)	Ø a
M 1 x 0,2	0,80
M 1,1 x 0,2	0,90
M 1,2 x 0,2	1,00
M 1,4 x 0,2	1,20
M 1,6 x 0,2	1,40
M 1,7 x 0,2	1,50
M 1,8 x 0,2	1,60
M 2 x 0,25	1,75
M 2,2 x 0,25	1,95
M 2,3 x 0,25	2,05
M 2,5 x 0,35	2,15
M 2,6 x 0,35	2,25
M 3 x 0,35	2,65
M 3,5 x 0,35	3,15
M 4 x 0,35	3,65
M 4 x 0,5	3,50
M 4,5 x 0,5	4,00
M 5 x 0,5	4,50
M 5,5 x 0,5	5,00
M 6 x 0,5	5,50
M 6 x 0,75	5,20
M 7 x 0,5	6,50
M 7 x 0,75	6,20
M 8 x 0,5	7,50
M 8 x 0,75	7,20
M 8 x 1	7,00
M 9 x 0,75	8,20
M 9 x 1	8,00
M 10 x 0,5	9,50
M 10 x 0,75	9,20
M 10 x 1	9,00
M 10 x 1,25	8,80
M 11 x 0,75	10,20
M 11 x 1	10,00
M 11 x 1,25	9,75
M 12 x 0,75	11,25
M 12 x 1	11,00
M 12 x 1,25	10,80
M 12 x 1,5	10,50
M 13 x 0,75	12,25
M 13 x 1	12,00
M 13 x 1,25	11,75
M 13 x 1,5	11,50
M 14 x 0,75	13,25
M 14 x 1	13,00
M 14 x 1,25	12,80
M 14 x 1,5	12,50
M 15 x 1	14,00
M 15 x 1,25	13,75
M 15 x 1,5	13,50
M 16 x 1	15,00
M 16 x 1,25	14,75
M 16 x 1,5	14,50
M 17 x 1	16,00
M 17 x 1,25	15,75
M 17 x 1,5	15,50
M 18 x 1	17,00
M 18 x 1,25	16,75
M 18 x 1,5	16,50

MF d1 x p (mm)	Ø a
M 18 x 2	16,00
M 19 x 1	18,00
M 19 x 1,25	17,75
M 19 x 1,5	17,50
M 20 x 1	19,00
M 20 x 1,25	18,75
M 20 x 1,5	18,50
M 20 x 2	18,00
M 21 x 1	20,00
M 21 x 1,25	19,75
M 21 x 1,5	19,50
M 22 x 1	21,00
M 22 x 1,25	20,75
M 22 x 1,5	20,50
M 22 x 2	20,00
M 23 x 1	22,00
M 23 x 1,5	21,50
M 24 x 1	23,00
M 24 x 1,25	22,75
M 24 x 1,5	22,50
M 24 x 2	22,00
M 25 x 1	24,00
M 25 x 1,25	23,75
M 25 x 1,5	23,50
M 25 x 2	23,00
M 26 x 1	25,00
M 26 x 1,5	24,50
M 26 x 2	24,00
M 27 x 1	26,00
M 27 x 1,5	25,50
M 27 x 2	25,00
M 28 x 1	27,00
M 28 x 1,5	26,50
M 28 x 2	26,00
M 30 x 1	29,00
M 30 x 1,5	28,50
M 30 x 2	28,00
M 30 x 3	27,00
M 32 x 1	31,00
M 32 x 1,5	30,50
M 32 x 2	30,00
M 33 x 1	32,00
M 33 x 1,5	31,50
M 33 x 2	31,00
M 33 x 3	30,00
M 34 x 1,5	32,50
M 34 x 2	32,00
M 35 x 1,5	33,50
M 36 x 1,5	34,50
M 36 x 2	34,00
M 36 x 3	33,00
M 38 x 1,5	36,50
M 38 x 2	36,00
M 39 x 1,5	37,50
M 39 x 2	37,00
M 39 x 3	36,00
M 40 x 1,5	38,50
M 40 x 2	38,00
M 40 x 3	37,00

MF d1 x p (mm)	Ø a
M 42 x 1,5	40,50
M 42 x 2	40,00
M 42 x 3	39,00
M 44 x 1,5	42,50
M 45 x 1,5	43,50
M 45 x 2	43,00
M 45 x 3	42,00
M 45 x 4	41,00
M 48 x 1,5	46,50
M 48 x 2	46,00
M 48 x 3	45,00
M 48 x 4	44,00
M 50 x 1,5	48,50
M 50 x 2	48,00
M 50 x 3	47,00
M 52 x 1,5	50,50
M 52 x 2	50,00
M 52 x 3	49,00
M 52 x 4	48,00
M 56 x 1,5	54,50
M 56 x 2	54,00
M 56 x 3	53,00
M 56 x 4	52,00
M 60 x 1,5	58,50
M 60 x 2	58,00
M 60 x 3	57,00
M 60 x 4	56,00
M 63 x 1,5	61,50

BSW d1 (") - p (tpi)	Ø a
W 1/16 - 60	1,15
W 3/32 - 48	1,80
W 1/8 - 40	2,50
W 5/32 - 32	3,10
W 3/16 - 24	3,60
W 7/32 - 24	4,40
W 1/4 - 20	5,10
W 9/32 - 20	5,90
W 5/16 - 18	6,50
W 3/8 - 16	7,90
W 7/16 - 14	9,30
W 1/2 - 12	10,50
W 9/16 - 12	12,00
W 5/8 - 11	13,50
W 11/16 - 11	15,00
W 3/4 - 10	16,50
W 13/16 - 10	18,00
W 7/8 - 9	19,25
W 1" - 8	22,00
W 1"1/8 - 7	24,75
W 1"1/4 - 7	27,75
W 1"3/8 - 6	30,50
W 1"1/2 - 6	33,50
W 1"5/8 - 5	35,50
W 1"3/4 - 5	39,00
W 1"7/8 - 4,5	41,50

DIÁMETROS PREVIOS AL ROSCADO

DIAMÈTRES PRÉALABLES AU FILETAGE / DIAMETERS BEFORE THREAD

BSW

d1 (") - p (tpi)				⌀a
W	2"	-	4,5	44,50
W	2"1/4	-	4	50,00
W	2"1/2	-	4	56,50
W	2"3/4	-	3,5	62,00
W	3"	-	3,5	68,50

UNC

d1 (") - p (tpi)				⌀a
UNC	1"3/4	-	5	39,50
UNC	2"	-	4,5	45,00
UNC	2"1/4	-	4,5	51,50
UNC	2"1/2	-	4	57,25
UNC	2"3/4	-	4	63,50
UNC	3"	-	4	70,00

UNEF

d1 (") - p (tpi)				⌀a
UNEF	1"7/16	-	18	35,10
UNEF	1"1/2	-	18	36,70
UNEF	1"9/16	-	18	38,30
UNEF	1"5/8	-	18	39,90

BSF

d1 (") - p (tpi)				⌀a
BSF	3/16	-	32	4,00
BSF	7/32	-	28	4,50
BSF	1/4	-	26	5,20
BSF	9/32	-	26	6,00
BSF	5/16	-	22	6,60
BSF	3/8	-	20	8,10
BSF	7/16	-	18	9,50
BSF	1/2	-	16	11,00
BSF	9/16	-	16	12,50
BSF	5/8	-	14	14,00
BSF	11/16	-	14	15,60
BSF	3/4	-	12	16,50
BSF	13/16	-	12	18,25
BSF	7/8	-	11	19,50
BSF	1"	-	10	22,50
BSF	1"1/8	-	9	25,50
BSF	1"1/4	-	9	28,75
BSF	1"3/8	-	8	31,50
BSF	1"1/2	-	8	34,50
BSF	1"5/8	-	8	37,50
BSF	1"3/4	-	7	40,50
BSF	2"	-	7	46,50

UNF

d1 (") - p (tpi)				⌀a
UNF	N.0	-	80	1,30
UNF	N.1	-	72	1,60
UNF	N.2	-	64	1,90
UNF	N.3	-	56	2,10
UNF	N.4	-	48	2,40
UNF	N.5	-	44	2,70
UNF	N.6	-	40	3,00
UNF	N.8	-	36	3,50
UNF	N.10	-	32	4,10
UNF	N.12	-	28	4,70
UNF	1/4	-	28	5,50
UNF	5/16	-	24	6,90
UNF	3/8	-	24	8,50
UNF	7/16	-	20	9,90
UNF	1/2	-	20	11,50
UNF	9/16	-	18	12,90
UNF	5/8	-	18	14,50
UNF	3/4	-	16	17,50
UNF	7/8	-	14	20,40
UNF	1"	-	12	23,25
UNF	1"1/8	-	12	26,50
UNF	1"1/4	-	12	29,50
UNF	1"3/8	-	12	32,75
UNF	1"1/2	-	12	36,00

G (BSP)

d1 (") - p (tpi)			⌀a
G1/16	-	28	6,80
G1/8	-	28	8,80
G1/4	-	19	11,80
G3/8	-	19	15,25
G1/2	-	14	19,00
G5/8	-	14	21,00
G3/4	-	14	24,50
G7/8	-	14	28,25
G1"	-	11	30,75
G1"1/8	-	11	35,30
G1"1/4	-	11	39,25
G1"3/8	-	11	41,90
G1"1/2	-	11	45,25
G1"3/4	-	11	51,30
G2"	-	11	57,00
G2"1/4	-	11	63,10
G2"1/2	-	11	72,60
G2"3/4	-	11	79,10
G3"	-	11	85,50
G3"1/4	-	11	91,50
G3"1/2	-	11	97,70
G3"3/4	-	11	104,00
G4"	-	11	110,50

UNC

d1 (") - p (tpi)				⌀a
UNC	N.1	-	64	1,50
UNC	N.2	-	56	1,80
UNC	N.3	-	48	2,10
UNC	N.4	-	40	2,30
UNC	N.5	-	40	2,60
UNC	N.6	-	32	2,85
UNC	N.8	-	32	3,50
UNC	N.10	-	24	3,90
UNC	N.12	-	24	4,50
UNC	1/4	-	20	5,20
UNC	5/16	-	18	6,60
UNC	3/8	-	16	8,00
UNC	7/16	-	14	9,40
UNC	1/2	-	13	10,75
UNC	9/16	-	12	12,20
UNC	5/8	-	11	13,50
UNC	3/4	-	10	16,50
UNC	7/8	-	9	19,50
UNC	1"	-	8	22,25
UNC	1"1/8	-	7	25,00
UNC	1"1/4	-	7	28,25
UNC	1"3/8	-	6	30,75
UNC	1"1/2	-	6	34,00

UNEF

d1 (") - p (tpi)				⌀a
UNEF	N.12	-	32	4,70
UNEF	1/4	-	32	5,55
UNEF	5/16	-	32	7,15
UNEF	3/8	-	32	8,70
UNEF	7/16	-	28	10,20
UNEF	1/2	-	28	11,80
UNEF	9/16	-	24	13,20
UNEF	5/8	-	24	14,80
UNEF	11/16	-	24	16,40
UNEF	3/4	-	20	17,80
UNEF	13/16	-	20	19,40
UNEF	7/8	-	20	20,95
UNEF	15/16	-	20	22,50
UNEF	1"	-	20	24,10
UNEF	1"1/16	-	18	25,60
UNEF	1"1/8	-	18	27,15
UNEF	1"3/16	-	18	28,75
UNEF	1"1/4	-	18	30,35
UNEF	1"5/16	-	18	31,90
UNEF	1"3/8	-	18	33,60

BA

d1 (") - p (tpi)				
BA 7	2,5	-	0,48	2,00
BA 8	2,2	-	0,43	1,80
BA 9	1,9	-	0,39	1,50
BA 10	1,7	-	0,35	1,30
BA 11	1,5	-	0,31	1,20
BA 12	1,3	-	0,28	1,00
BA 13	1,2	-	0,25	0,95
BA 14	1	-	0,23	0,75

PG

d1 (") - p (tpi)				
Pg 7	12,5	-	20	11,40
Pg 9	15,2	-	18	14,00
Pg 11	18,6	-	18	17,25
Pg 13,5	20,4	-	18	19,00
Pg 16	22,5	-	18	21,25
Pg 21	28,3	-	16	26,75
Pg 29	37,0	-	16	35,50
Pg 36	47,0	-	16	45,50
Pg 42	54,0	-	16	52,50
Pg 48	59,3	-	16	58,00

DIÁMETROS PREVIOS AL ROSCADO
DIAMÈTRES PRÉALABLES AU FILETAGE / DIAMETERS BEFORE THREAD

BA

d1 (") - p (tpi)	⌀a
Rp1/16 - 28	6,60
Rp1/8 - 28	8,60
Rp1/4 - 19	11,50
Rp3/8 - 19	15,00
Rp1/2 - 14	18,50
Rp3/4 - 14	24,00
Rp1" - 11	30,25
Rp1"1/4 - 11	39,00
Rp1"1/2 - 11	45,00
Rp2" - 11	56,50
Rp2"1/2 - 11	72,25
Rp3" - 11	85,00

NPSM

d1 (") - p (tpi)	⌀a
NPSM 1/8 - 27	9,10
NPSM 1/4 - 18	12,00
NPSM 3/8 - 18	15,50
NPSM 1/2 - 14	19,00
NPSM 3/4 - 14	24,50
NPSM 1" - 11,5	30,50
NPSM 1"1/4 - 11,5	39,25
NPSM 1"1/2 - 11,5	45,50
NPSM 2" - 11,5	57,50
NPSM 2"1/2 - 8	69,00
NPSM 3" - 8	85,00

M (Laminación Laminage/Lamination)

d1 - p (mm)	○a ± 0,02
M 3 x 0,5	2,76
M 4 x 0,7	3,67
M 5 x 0,8	4,62
M 6 x 1	5,52
M 8 x 1,25	7,40
M 10 x 1,5	9,28
M 12 x 1,75	11,16
M 14 x 2	13,04
M 16 x 2	15,03

Rp

d1 (") - p (tpi)	⌀a
BA 0 6 - 1	5,10
BA 1 5,3 - 0,9	4,50
BA 2 4,7 - 0,81	4,00
BA 3 4,1 - 0,73	3,40
BA 4 3,6 - 0,66	3,00
BA 5 3,2 - 0,59	2,60
BA 6 2,8 - 0,53	2,30

NPT

d1 (") - p (tpi)	L min	⌀a	⌀b	⌀c
NPT 1/16 - 27	12,00	6,20	6,00	6,39
NPT 1/8 - 27	12,00	8,50	8,30	8,74
NPT 1/4 - 18	17,50	11,00	10,70	11,36
NPT 3/8 - 18	17,60	14,50	14,20	14,80
NPT 1/2 - 14	22,80	17,80	17,40	18,32
NPT 3/4 - 14	23,00	23,00	22,50	23,67
NPT 1" - 11,5	27,40	29,00	28,50	29,69
NPT 1"1/4 - 11,5	28,00	37,50	37,00	38,45
NPT 1"1/2 - 11,5	28,40	44,00	43,50	44,52
NPT 2" - 11,5	28,00	56,00	55,50	56,56
NPT 2"1/2 - 8	40,80	66,50	66,00	67,62
NPT 3" - 8	43,00	82,50	82,00	83,53

NPTF

d1 (") - p (tpi)	L min	⌀a	⌀b	⌀c
NPTF 1/16 - 27	12,00	6,20	6,00	6,41
NPTF 1/8 - 27	12,00	8,50	8,30	8,76
NPTF 1/4 - 18	17,50	11,00	10,70	11,40
NPTF 3/8 - 18	17,60	14,50	14,20	14,84
NPTF 1/2 - 14	22,80	17,80	17,40	18,33
NPTF 3/4 - 14	23,00	23,00	22,50	23,68
NPTF 1" - 11,5	27,40	29,00	28,50	29,72
NPTF 1"1/4 - 11,5	28,00	37,50	37,00	38,48
NPTF 1"1/2 - 11,5	28,40	44,00	43,50	44,55
NPTF 2" - 11,5	28,00	56,00	55,50	56,59
NPTF 2"1/2 - 8	40,80	66,50	66,00	67,67
NPTF 3" - 8	43,00	82,50	82,00	83,58

RC

d1 (") - p (tpi)	L min	⌀a	⌀b	⌀c
Rc 1/16 - 28	10,10	6,30	6,00	6,50
Rc 1/8 - 28	10,10	8,30	8,00	8,50
Rc 1/4 - 19	15,00	11,00	10,70	11,35
Rc 3/8 - 19	15,40	14,50	14,15	14,85
Rc 1/2 - 14	20,50	18,10	17,60	18,50
Rc 3/4 - 14	21,80	23,50	23,00	24,00
Rc 1" - 11	26,00	29,60	29,00	30,20
Rc 1"1/4 - 11	28,30	38,10	37,50	38,80
Rc 1"1/2 - 11	28,30	44,00	43,35	44,70
Rc 2" - 11	32,70	55,60	54,90	56,50

EJES PREVIOS AL ROSCADO
AXES PRÉALABLES AU FILETAGE / SHAFTS BEFORE THREAD

M	d1 x p (mm)	⌀a
M	1 x 0,25	0,97
M	1,1 x 0,25	1,07
M	1,2 x 0,25	1,17
M	1,4 x 0,3	1,36
M	1,6 x 0,35	1,54
M	1,7 x 0,35	1,64
M	1,8 x 0,35	1,74
M	2 x 0,4	1,93
M	2,2 x 0,45	2,13
M	2,3 x 0,4	2,23
M	2,5 x 0,45	2,43
M	2,6 x 0,45	2,53
M	3 x 0,5	2,92
M	3,5 x 0,6	3,41
M	4 x 0,7	3,91
M	4,5 x 0,75	4,41
M	5 x 0,8	4,90
M	6 x 1	5,88
M	7 x 1	6,88
M	8 x 1,25	7,87
M	9 x 1,25	8,87
M	10 x 1,5	9,85
M	11 x 1,5	10,85
M	12 x 1,75	11,83
M	14 x 2	13,82
M	16 x 2	15,82
M	18 x 2,5	17,79
M	20 x 2,5	19,79
M	22 x 2,5	21,79
M	24 x 3	23,77
M	27 x 3	26,77
M	30 x 3,5	29,73
M	33 x 3,5	32,73
M	36 x 4	35,70
M	39 x 4	38,70
M	42 x 4,5	41,69
M	45 x 4,5	44,69
M	48 x 5	47,66
M	52 x 5	51,66
M	56 x 5,5	55,65
M	60 x 5,5	59,65
M	64 x 6	63,62
M	68 x 6	67,62

M	d1 x p (mm)	⌀a
M	3 x 0,6	2,40
M	3,5 x 0,75	2,75
M	4 x 0,75	3,25
M	4 x 0,8	3,20
M	5 x 0,9	4,10
M	5 x 1	4,00
M	5,5 x 0,9	4,60
M	6 x 1,25	4,75
M	8 x 1,5	6,50
M	13 x 1,75	11,25
M	15 x 2	13,00

MF	d1 x p (mm)	⌀a
M	2 x 0,25	1,97
M	2,2 x 0,25	2,17
M	2,3 x 0,25	2,27
M	2,5 x 0,35	2,44
M	2,6 x 0,35	2,54
M	3 x 0,35	2,94
M	3,5 x 0,35	3,44
M	4 x 0,35	3,94
M	4 x 0,5	3,93
M	4,5 x 0,5	4,42
M	5 x 0,5	4,93
M	5,5 x 0,5	5,42
M	6 x 0,5	5,93
M	6 x 0,75	5,90
M	7 x 0,5	6,92
M	7 x 0,75	6,90
M	8 x 0,5	7,93
M	8 x 0,75	7,90
M	8 x 1	7,88
M	9 x 0,75	8,90
M	9 x 1	8,88
M	10 x 0,5	9,93
M	10 x 0,75	9,90
M	10 x 1	9,88
M	10 x 1,25	9,86
M	11 x 0,75	10,90
M	11 x 1	10,88
M	11 x 1,25	10,87
M	12 x 0,75	11,90
M	12 x 1	11,88
M	12 x 1,25	11,86
M	12 x 1,5	11,85
M	13 x 0,75	12,90
M	13 x 1	12,88
M	13 x 1,25	12,87
M	13 x 1,5	12,85
M	14 x 0,75	13,90
M	14 x 1	13,88
M	14 x 1,25	13,86
M	14 x 1,5	13,85
M	15 x 1	14,88
M	15 x 1,25	14,87
M	15 x 1,5	14,85
M	16 x 1	15,88
M	16 x 1,25	15,87
M	16 x 1,5	15,85
M	17 x 1,25	16,87
M	17 x 1,5	16,85
M	18 x 1	17,88
M	18 x 1,25	17,85
M	18 x 1,5	17,85
M	18 x 2	17,82
M	19 x 1	18,88
M	19 x 1,25	18,87
M	19 x 1,5	18,85
M	20 x 1	19,88
M	20 x 1,25	19,87
M	20 x 1,5	19,85
M	20 x 2	19,82

MF	d1 x p (mm)	⌀a
M	21 x 1	20,88
M	21 x 1,25	20,87
M	21 x 1,5	20,85
M	22 x 1	21,88
M	22 x 1,25	21,87
M	22 x 1,5	21,85
M	22 x 2	21,82
M	23 x 1	22,88
M	23 x 1,5	22,85
M	24 x 1	23,88
M	24 x 1,25	23,87
M	24 x 1,5	23,85
M	24 x 2	23,82
M	25 x 1	24,88
M	25 x 1,25	24,87
M	25 x 1,5	24,85
M	25 x 2	24,82
M	26 x 1	25,88
M	26 x 1,5	25,85
M	26 x 2	25,82
M	27 x 1	26,88
M	27 x 1,5	26,85
M	27 x 2	26,82
M	28 x 1	27,88
M	28 x 1,5	27,85
M	28 x 2	27,82
M	30 x 1	29,88
M	30 x 1,5	29,85
M	30 x 2	29,82
M	30 x 3	29,76
M	32 x 1	31,88
M	32 x 1,5	31,85
M	32 x 2	31,82
M	33 x 1	32,88
M	33 x 1,5	32,85
M	33 x 2	32,82
M	33 x 3	32,76
M	34 x 1,5	33,85
M	34 x 2	33,82
M	35 x 1,5	34,85
M	36 x 1,5	35,85
M	36 x 2	35,82
M	36 x 3	35,76
M	38 x 1,5	37,85
M	38 x 2	37,82
M	39 x 1,5	38,85
M	39 x 2	38,82
M	39 x 3	38,76
M	40 x 1,5	39,85
M	40 x 2	39,82
M	40 x 3	39,76
M	42 x 1,5	41,85
M	42 x 2	41,82
M	42 x 3	41,76
M	44 x 1,5	43,75
M	45 x 1,5	44,85
M	45 x 2	44,82
M	45 x 3	44,76
M	45 x 4	44,70

MF	d1 x p (mm)	⌀a
M	48 x 1,5	47,85
M	48 x 2	47,82
M	48 x 3	47,76
M	48 x 4	47,70
M	50 x 1,5	49,85
M	50 x 2	49,82
M	50 x 3	49,76
M	52 x 1,5	51,85
M	52 x 2	51,82
M	52 x 3	51,76
M	52 x 4	51,70
M	56 x 1,5	55,85
M	56 x 2	55,82
M	56 x 3	55,76
M	56 x 4	55,70
M	60 x 1,5	59,75
M	60 x 2	59,82
M	60 x 3	59,76
M	60 x 4	59,70
M	63 x 1,5	62,85

BSW	d1 (") - p (tpi)	⌀a
W	1/16 - 60	1,49
W	3/32 - 48	2,28
W	1/8 - 40	3,06
W	5/32 - 32	3,85
W	3/16 - 24	4,63
W	7/32 - 24	5,42
W	1/4 - 20	6,18
W	5/16 - 18	7,78
W	3/8 - 16	9,35
W	7/16 - 14	10,90
W	1/2 - 12	12,47
W	9/16 - 12	13,92
W	5/8 - 11	15,66
W	11/16 - 11	17,20
W	3/4 - 10	18,80
W	7/8 - 9	21,92
W	1" - 8	25,11
W	1"1/8 - 7	28,28
W	1"1/4 - 7	31,45
W	1"3/8 - 6	34,57
W	1"1/2 - 6	37,76
W	1"5/8 - 5	40,91
W	1"3/4 - 5	44,05
W	1"7/8 - 4,5	47,27
W	2" - 4,5	50,38
W	2"1/4 - 4	56,90
W	2"1/2 - 4	63,20
W	2"3/4 - 3,5	69,60
W	3" - 3,5	76,20

EJES PREVIOS AL ROSCADO
AXES PRÉALABLES AU FILETAGE / SHAFTS BEFORE THREAD

UNC

d1 (") - p (tpi)	⌀a
UNC N.1- 64	1,79
UNC N.2- 56	2,12
UNC N.3- 48	2,44
UNC N.4- 40	2,76
UNC N.5- 40	3,09
UNC N.6- 32	3,41
UNC N.8- 32	4,07
UNC N.10- 24	4,71
UNC N.12- 24	5,37
UNC 1/4- 20	6,22
UNC 5/16- 18	7,8
UNC 3/8- 16	9,37
UNC 7/16- 14	10,95
UNC 1/2- 13	12,52
UNC 9/16- 12	14,10
UNC 5/8- 11	15,68
UNC 3/4- 10	18,84
UNC 7/8- 9	22,00
UNC 1"- 8	25,16
UNC 1"1/8- 7	28,31
UNC 1"1/4- 7	31,49
UNC 1"3/8- 6	34,63
UNC 1"1/2- 6	37,81
UNC 1"3/4- 5	44,12
UNC 2"- 4,5	50,45
UNC 2"1/4- 4,5	56,80
UNC 2"1/2- 4	63,10
UNC 2"3/4- 4	69,45
UNC 3"- 4	75,80

UNF

d1 (") - p (tpi)	⌀a
UNF N.0- 80	1,47
UNF N.1- 72	1,79
UNF N.2- 64	2,12
UNF N.3- 56	2,44
UNF N.4- 48	2,77
UNF N.5- 44	3,10
UNF N.6- 40	3,42
UNF N.8- 36	4,08
UNF N.10- 32	4,73
UNF N.12- 28	5,38
UNF 1/4- 28	6,24
UNF 5/16- 24	7,82
UNF 3/8- 24	9,41
UNF 7/16- 20	10,98
UNF 1/2- 20	12,56
UNF 9/16- 18	14,14
UNF 5/8- 18	15,73
UNF 3/4- 16	18,89
UNF 7/8- 14	22,05
UNF 1"- 12	25,21
UNF 1"1/8- 12	28,38
UNF 1"1/4- 12	31,56
UNF 1"3/8- 12	34,73
UNF 1"1/2- 12	37,91

UNEF

d1 (") - p (tpi)	⌀a
UNEF N.12- 32	5,39
UNEF 1/4- 32	6,25
UNEF 5/16- 32	7,84
UNEF 3/8- 32	9,42
UNEF 7/16- 28	11,00
UNEF 1/2- 28	12,59
UNEF 9/16- 24	14,18
UNEF 5/8- 24	15,75
UNEF 3/4- 20	18,91
UNEF 7/8- 20	22,09
UNEF 1"- 20	25,26
UNEF 1"1/8- 18	28,40
UNEF 1"1/4- 18	31,59
UNEF 1"3/8- 18	34,76
UNEF 1"1/2- 18	37,94

G (BSP)

d1 (") - p (tpi)	⌀a
G 1/16- 28	7,61
G 1/8- 28	9,62
G 1/4- 19	13,03
G 3/8- 19	16,53
G 1/2- 14	20,81
G 5/8- 14	22,77
G 3/4- 14	26,30
G 7/8- 14	30,06
G 1"- 11	33,07
G 1"1/8- 11	37,71
G 1"1/4- 11	41,73
G 1"3/8- 11	44,14
G 1"1/2- 11	47,62
G 1"3/4- 11	53,56
G 2"- 11	59,43
G 2"1/4- 11	65,49
G 2"1/2- 11	74,94
G 2"3/4- 11	81,27
G 3"- 11	87,57
G 3"1/4- 11	93,68
G 3"1/2- 11	100,01
G 3"3/4- 11	106,35
G 4"- 11	112,68

BA

d1 (") - p (tpi)	⌀a
BA 0 6-1	5,93
BA 1 5,3- 0,9	5,23
BA 2 4,7- 0,81	4,64
BA 3 4,1- 0,73	4,04
BA 4 3,6- 0,66	3,55
BA 5 3,2- 0,59	3,15
BA 6 2,8- 0,53	2,76
BA 7 2,5- 0,48	2,46
BA 8 2,2- 0,43	2,16

PG

d1 (") - p (tpi)	⌀a
Pg 7 12,5- 20	12,40
Pg 9 15,2- 18	15,10
Pg 11 18,6- 18	18,50
Pg 13,5 20,4- 18	20,30
Pg 16 22,5- 18	22,40
Pg 21 28,3- 16	28,15
Pg 29 37,0- 16	36,85
Pg 36 47,0- 16	46,85
Pg 42 54,0- 16	53,85
Pg 48 59,3- 16	59,15

NPSM

d1 (") - p (tpi)	⌀a
NPSM 1/8- 27	4,99
NPSM 1/4- 18	13,24
NPSM 3/8- 18	16,70
NPSM 1/2- 14	20,77
NPSM 3/4- 14	26,13
NPSM 1"- 11,5	32,68
NPSM 1"1/4- 11,5	41,45
NPSM 1"1/2- 11,5	47,52
NPSM 2" - 11,5	59,56

NPT

d1 (") - p (tpi)	L min	⌀a
NPT 1/16- 27	8,40	7,58
NPT 1/8- 27	8,50	9,93
NPT 1/4- 18	12,70	13,18
NPT 3/8- 18	12,90	16,60
NPT 1/2- 14	16,80	20,63
NPT 3/4- 14	17,10	25,95
NPT 1"- 11,5	21,30	32,51
NPT 1"1/4- 11,5	21,90	41,23
NPT 1"1/2- 11,5	22,30	47,30
NPT 2" - 11,5	23,10	59,31

NPTF

d1 (") - p (tpi)	L min	⌀a
NPTF 1/16- 27	8,40	7,58
NPTF 1/8- 27	8,50	9,93
NPTF 1/4- 18	12,70	13,18
NPTF 3/8- 18	12,90	16,60
NPTF 1/2- 14	16,80	20,63
NPTF 3/4- 14	17,10	25,95
NPTF 1"- 11,5	21,30	32,51
NPTF 1"1/4- 11,5	21,90	41,23
NPTF 1"1/2- 11,5	22,30	47,30
NPTF 2" - 11,5	23,10	59,31

R

d1 (") - p (tpi)	L min	⌀a
R 1/8- 28	8,20	9,48
R 1/4- 19	12,10	12,78
R 3/8- 19	12,50	16,26
R 1/2- 14	16,40	20,44
R 3/4- 14	17,70	25,85
R 1"- 11	20,90	32,60
R 1"1/4- 11	23,20	41,12
R 1"1/2- 11	23,20	47,01
R 2" - 11	27,50	58,62

BSF



d1 (") - p (tpi)	⌀a
BSF 3/16 - 32	4,67
BSF 7/32 - 28	5,47
BSF 1/4 - 26	6,25
BSF 5/16 - 22	7,82
BSF 3/8 - 20	9,39
BSF 7/16 - 18	10,97
BSF 1/2 - 16	12,54
BSF 9/16 - 16	14,12
BSF 5/8 - 14	15,71
BSF 11/16 - 14	17,30
BSF 3/4 - 12	18,85
BSF 7/8 - 11	22,02
BSF 1" - 10	25,17
BSF 1"1/8 - 9	24,40
BSF 1"1/4 - 9	31,60
BSF 1"3/8 - 8	34,70
BSF 1"1/2 - 8	37,90
BSF 1"5/8 - 8	41,10
BSF 1"3/4 - 7	44,20
BSF 2" - 7	50,60

TABLA DE CONVERSIÓN DE PULGADAS A MILÍMETROS

Calculado: 1 pulgada = 25,4 mm. (exactos), ver DIN 4890 (edición 2/75)

	Milímetros											
Parte de pulgadas	0	1	2	3	4	5	6	7	9	10	11	12
0	0	0	25,400 0	50,800 0	76,200 0	101,600 0	127,000 0	152,400 0	177,800 0	228,600 0	254,000 0	279,400 0	203,200 0
1/64	0,015 625	0,396 9	25,796 9	51,196 9	76,596 9	101,996 9	127,396 9	152,796 9	178,196 9	228,996 9	254,396 9	279,796 9	203,596 9
1/32	0,031 25	0,793 8	26,193 8	51,593 8	76,993 8	102,393 8	127,793 8	153,193 8	178,593 8	229,393 8	254,793 8	280,193 8	203,393 8
3/64	0,046 875	1,190 6	26,590 6	51,990 6	77,390 6	102,790 6	128,190 6	153,590 6	178,990 6	229,790 6	255,190 6	280,590 6	204,390 6
1/16	0,062 5	1,587 5	26,987 5	52,387 5	77,787 5	103,187 5	128,587 5	153,987 5	179,387 5	260,187 5	255,587 5	280,987 5	204,787 5
5/64	0,078 125	1,984 4	27,384 4	52,784 4	78,181 4	103,584 4	128,984 4	154,384 4	179,784 4	230,584 4	255,984 4	281,384 4	205,180 4
3/32	0,093 75	2,381 2	27,781 2	53,181 2	78,581 2	103,981 2	129,381 2	154,781 2	180,181 2	230,981 2	256,381 2	281,781 2	205,581 2
7/64	0,109 375	2,778 1	28,178 1	53,578 1	78,978 1	104,378 1	129,778 1	155,178 1	180,578 1	231,378 1	256,778 1	282,178 1	205,578 1
1/8	0,125	3,175 0	28,575 0	53,975 0	79,375 2	104,775 0	130,175 0	155,575 0	150,975 0	231,775 0	257,175 0	282,575 0	206,375 0
9/64	0,140 625	3,571 9	28,971 9	54,361 9	79,771 9	105,171 9	130,571 9	155,971 9	181,371 9	232,171 9	257,571 9	282,971 9	206,771 9
5/32	0,156 25	3,968 8	29,368 8	54,768 8	80,186 8	105,568 8	130,968 8	156,368 8	181,768 8	232,568 8	257,968 8	283,368 8	207,168 8
11/64	0,171 875	4,365 6	29,765 6	55,165 6	80,565 6	105,965 6	131,365 6	156,765 6	182,165 6	232,965 6	258,365 6	283,765 6	207,565 6
3/16	0,187 5	4,762 5	30,162 5	55,562 5	80,962 5	106,362 5	131,762 5	157,162 5	182,562 5	233,362 5	258,762 5	284,162 5	207,962 5
13/64	0,203 125	5,159 4	30,559 4	55,959 4	81,359 4	106,759 4	132,159 4	157,559 4	182,959 4	233,759 4	259,159 4	284,559 4	208,359 4
7/32	0,218 75	5,556 2	30,956 2	56,356 2	81,756 2	107,156 2	132,556 2	157,956 2	183,353 2	234,156 2	259,556 2	284,956 2	208,756 2
15/64	0,234 375	5,953 1	31,353 1	56,753 1	82,153 1	107,553 1	132,953 1	158,353 1	183,753 1	234,553 1	259,953 1	285,353 1	209,153 1
1/4	0,25	6,350 0	31,750 0	56,150 0	82,550 0	107,950 0	133,350 0	158,750 0	184,150 0	234,950 0	260,350 0	285,750 0	209,550 0
17/64	0,265 625	6,746 9	32,146 9	57,546 9	82,946 9	108,346 9	133,746 9	159,146 9	184,546 9	235,346 9	260,746 9	286,146 9	209,946 9
9/32	0,281 25	7,143 8	32,543 8	57,943 8	83,343 8	108,743 8	134,143 8	159,543 8	184,943 8	235,743 8	261,143 8	286,543 8	210,343 8
19/64	0,296 875	7,540 6	32,940 6	58,340 6	83,740 6	109,140 6	134,540 6	159,940 6	185,340 6	236,140 6	261,540 6	286,940 6	210,740 6
5/16	0,312 5	7,937 5	33,337 5	58,737 5	84,137 5	109,537 5	134,937 5	160,337 5	185,737 5	236,537 5	261,937 5	287,337 5	211,137 5
21/64	0,328 125	8,334 4	33,734 4	59,134 4	84,534 4	109,934 4	135,334 4	160,734 4	186,134 4	236,934 4	262,334 4	287,734 4	211,534 4
11/32	0,343 75	8,731 2	34,131 2	59,531 2	84,931 2	110,331 2	135,731 2	161,131 2	186,531 2	237,331 2	262,731 2	288,131 2	211,931 2
23/64	0,359 375	9,128 1	34,528 1	59,928 1	85,328 1	110,728 1	136,128 1	161,528 1	186,928 1	237,728 1	263,128 1	288,528 1	212,328 1
3/8	0,375	9,525 0	34,925 0	60,325 0	85,725 0	111,125 0	136,525 0	161,925 0	187,625 0	238,125 0	263,525 0	288,925 0	212,725 0
25/64	0,390 625	9,921 9	35,321 9	60,721 9	86,121 9	111,521 9	136,921 9	162,321 9	187,721 9	238,521 9	263,921 9	289,321 9	213,121 9
13/32	0,406 25	10,318 8	35,718 8	61,118 8	86,518 8	111,918 8	137,318 8	162,718 8	188,118 8	238,918 8	264,318 8	289,718 8	213,518 8
27/64	0,421 875	10,715 6	36,115 6	61,515 6	86,915 6	112,315 6	137,715 6	163,115 6	188,515 6	239,315 6	264,715 6	290,115 6	213,915 6
7/16	0,437 5	11,112 5	36,512 5	61,912 5	87,312 5	112,712 5	138,112 5	163,512 5	188,912 5	239,712 5	265,112 5	290,512 5	214,312 5
29/64	0,453 125	11,509 4	36,909 4	62,309 4	87,709 4	113,109 4	138,509 4	163,909 4	189,309 4	240,109 4	265,509 4	290,909 4	214,709 4
15/32	0,468 75	11,906 2	37,306 2	62,706 2	88,106 2	113,506 2	138,906 2	164,306 2	189,706 2	240,506 2	265,906 2	291,306 2	215,106 2
31/64	0,484 375	12,303 1	37,703 1	63,103 1	88,503 1	113,903 1	139,303 1	164,703 1	190,103 1	240,903 1	266,303 1	291,703 1	215,503 1
1/2	0,5	12,700 0	38,100 0	63,500 0	88,900 0	114,300 0	139,700 0	165,100 0	190,500 0	241,300 0	266,700 0	292,100 0	215,900 0
33/64	0,515 625	13,096 9	38,496 9	63,896 9	89,296 9	114,696 9	140,096 9	165,496 9	190,896 9	241,696 9	267,096 9	292,496 9	216,296 9
17/32	0,531 25	13,493 8	38,893 8	64,293 8	89,693 8	115,093 8	140,493 8	165,893 8	191,293 8	242,093 8	267,493 8	292,893 8	216,693 8
35/64	0,546 875	13,890 6	39,290 6	64,690 6	90,090 6	115,490 6	140,890 6	166,290 6	191,690 6	242,490 6	267,890 6	293,290 6	217,090 6
9/16	0,562 5	14,287 5	39,687 5	65,087 5	90,487 5	115,887 5	141,287 5	166,687 5	192,087 5	242,887 5	268,287 5	293,687 5	217,487 5
37/64	0,578 125	14,684 4	40,084 4	65,484 4	90,884 4	116,284 4	141,684 4	167,084 4	192,484 4	243,284 4	268,684 4	294,084 4	217,884 4
19/32	0,593 75	15,081 2	40,481 2	65,8812	91,281 2	116,681 2	142,081 2	167,481 2	192,881 2	243,681 2	269,081 2	294,481 2	218,281 2
39/64	0,609 375	15,478 1	40,878 1	66,278 1	91,678 1	117,078 1	142,478 1	167,878 1	193,278 1	244,078 1	269,478 1	294,878 1	218,678 1
5/8	0,625	15,875 0	41,275 0	66,675 0	92,075 0	117,475 0	142,875 0	168,275 0	193,675 0	244,475 0	269,875 0	295,275 0	219,075 0
41/64	0,640 625	16,271 9	41,761 9	67,071 9	92,471 9	117,871 9	143,271 9	168,671 9	194,071 9	244,871 9	270,271 9	295,671 9	219,471 9
21/32	0,656 25	16,668 9	42,068 8	67,468 8	92,868 8	118,268 8	143,668 8	169,068 8	194,468 8	245,268 8	270,668 8	296,068 8	219,868 8
43/64	0,671 875	15,065 6	42,465 6	67,865 6	93,265 6	118,665 6	144,065 6	169,465 6	194,865 6	245,665 6	271,065 6	296,465 6	220,265 6
11/16	0,687 5	17,462 5	42,862 5	68,262 5	93,662 5	119,062 5	144,462 5	169,862 5	195,262 5	246,062 5	271,462 5	296,862 5	220,662 5
45/64	0,703 125	15,859 4	43,259 4	68,659 4	94,059 4	119,459 4	144,859 4	170,259 4	195,659 4	246,459 4	271,859 4	297,259 4	221,059 4
23/32	0,718 75	18,256 2	43,656 2	69,056 2	94,456 2	119,856 2	145,256 2	170,652 2	196,056 2	246,856 2	272,256 2	297,656 2	221,456 2
47/64	0,734 375	18,653 1	44,053 1	69,4531	94,853 1	120,253 1	145,653 1	171,053 1	196,453 1	247,253 1	272,653 1	298,053 1	221,853 1
3/4	0,75	19,050 0	44,450 0	69,850 0	95,250 0	120,650 0	146,050 0	171,450 0	196,850 0	247,650 0	273,050 0	298,450 0	222,250 0
49/64	0,765 625	19,446 9	44,846 9	70,246 9	95,646 9	121,046 9	146,446 9	171,846 9	197,246 9	248,046 9	273,466 9	298,846 9	222,646 9
25/32	0,781 25	19,843 8	45,243 8	70,643 8	96,043 8	121,443 8	146,843 8	172,243 8	197,643 8	248,443 8	273,843 8	299,243 8	223,043 8
51/64	0,796 875	20,240 6	45,640 6	71,040 6	96,440 6	121,840 6	147,240 6	172,640 6	198,040 6	248,340 6	274,240 6	299,640 6	223,440 6
13/16	0,812 5	20,637 5	46,037 5	71,437 5	96,837 5	122,237 5	147,637 5	173,077 5	198,437 5	249,237 5	274,637 5	300,037 5	223,837 5
53/64	0,828 125	21,034 4	46,434 4	71,834 4	97,234 4	122,634 4	148,034 4	173,434 4	198,834 4	249,634 4	275,034 4	300,434 4	224,234 4
0/32	0,843 75	21,431 2	46,831 2	72,231 2	97,631 2	123,031 2	148,431 2	173,831 2	199,231 2	250,031 2	275,431 2	300,831 2	224,631 2
55/64	0,859 375	21,828 1	47,228 1	72,628 1	98,028 1	123,428 1	148,828 1	174,228 1	199,628 1	250,428 1	275,828 1	301,228 1	225,028 1
7/8	0,875	22,225 0	47,625 0	73,025 0	98,425 0	123,825 0	149,225 0	174,625 2	200,025 0	250,825 0	276,225 0	301,625 0	225,425 0
57/64	0,890 625	22,621 9	48,021 9	73,421 9	98,821 9	124,221 9	149,621 9	175,021 9	200,421 9	251,221 9	276,621 9	302,021 9	225,821 9
29/32	0,906 25	23,018 8	48,418 8	73,818 8	99,218 8	124,618 8	150,018 8	175,418 8	200,818 8	251,618 8	277,018 8	302,418 8	226,218 8
59/64	0,921 875	23,415 6	48,815 6	74,215 6	99,615 6	125,015 6	150,415 6	175,815 6	201,215 6	252,015 6	277,415 6	302,815 6	226,615 6
15/16	0,937 5	23,812 5	49,212 5	74,612 5	100,012 5	125,412 5	150,812 5	176,212 5	201,612 5	252,412 5	277,812 5	303,212 5	227,012 5
61/64	0,953 125	24,209 4	49,609 4	75,009 4	100,409 4	125,809 4	151,209 4	176,609 4	202,009 4	252,809 4	278,209 4	303,609 4	227,409 4
31/32	0,968 75	24,606 2	50,006 2	75,406 2	100,806 2	126,206 2	151,606 2	177,006 2	202,406 2	253,206 2	278,606 2	304,006 2	227,806 2
63/64	0,984 375	25,003 1	50,403 1	75,803 1	101,203 1	126,603 1	152,003 1	177,403 1	202,803 1	253,603 1	279,003 1	304,403 1	228,203 1

12" = 304,800 0

Ejemplo: 2"1/8 = 53,975

	Milímetros											
Parte de pulgadas	0	1	2	3	4	5	6	7	9	10	11	12
0	0	0	25,400 0		76,200 0	101,600 0	127,000 0	152,400 0	177,800 0	203,200 0	228,600 0	254,000 0	279,400 0
1/64	0,015 625	0,396 9	25,796 9		76,596 9	101,996 9	127,396 9	152,796 9	178,196 9	203,596 9	228,996 9	254,396 9	279,796 9
1/32	0,031 25	0,793 8	26,193 8		76,993 8	102,393 8	127,793 8	153,193 8	178,593 8	203,393 8	229,393 8	254,7938	280,193 8
3/64	0,046 875	1,190 6	26,590 6		77,390 6	102,790 6	128,190 6	153,590 6	178,990 6	204,390 6	229,790 6	255,190 6	280,590 6
1/16	0,062 5	1,587 5	26,987 5		77,787 5	103,187 5	128,587 5	153,987 5	179,387 5	204,787 5	230,187 5	255,587 5	280,987 5
5/64	0,078 125	1,984 4	27,384 4		78,181 4	103,584 4	128,984 4	154,384 4	179,784 4	205,184 4	230,584 4	255,984 4	281,384 4
3/32	0,093 75	2,381 2	27,781 2		78,581 2	103,981 2	129,381 2	154,781 2	180,181 2	205,581 2	230,981 2	256,381 2	281,781 2
7/64	0,109 375	2,778 1	28,178 1		78,978 1	104,378 1	129,778 1	155,178 1	180,578 1	205,978 1	231,378 1	256,778 1	282,178 1
1/8				53,975 0	79,375 0	104,775 0	130,175 0	155,575 0	180,975 0	206,375 0	231,775 0	257,175 0	282,575 0
9/64	0,140 625	3,571 9	28,971 9	54,371 9	79,771 9	105,171 9	130,571 9	155,971 9	181,371 9	206,371 9	232,171 9	257,571 9	282,971 9
5/32	0,156 25	3,968 8	29,368 8	54,768 8	80,168 8	105,568 8	130,968 8	156,368 8	181,768 8	207,168 8	232,568 8	257,968 8	283,368 8
11/64	0,171 875	4,365 6	29,765 6	55,165 6	80,565 6	105,965 6	131,365 6	156,765 6	182,165 6	207,165 6	232,965 6	258,365 6	283,765 6

TABLA DE DATOS TÉCNICOS PARA LA INSTALACIÓN DE INSERTOS ROSCADOS DIN 8140

INFORMATION TECHNIQUE POUR L' INSTALLATION DE FILETS RAPPORTES DIN 8140 / TECHNICAL DATA SHEET FOR THE INSTALLATION OF WIRE THREAD INSERTS DIN 8140

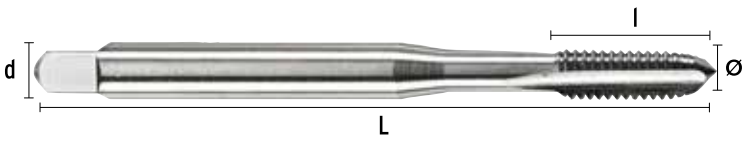
Dxp	TALADRO						ROSCA								INSERTO						
		Longitud mínima (Lt) mm					Diam. ext. (Dr ext) min.	Diam. int. (Dr int) min.	Diam. int. (Dr int) max.	Longitud mínima (Lr) mm					Diam. ext.(d1) min.	Diam. ext.(d1) max.	nº de hilos				
	mm	1xd	1,5xd	2xd	2,5xd	3xd	mm	mm	mm	1xd	1,5xd	2xd	2,5xd	3xd	mm	mm	1xd	1,5xd	2xd	2,5xd	3xd
M 2 x 0,40	2,10	3,80	4,80	5,80	6,80	7,80	2,52	2,09	2,18	2,00	3,00	4,00	5,00	6,00	2,60	2,80	2,90	4,90	6,90	8,90	10,90
M 2,5 x 0,45	2,60	4,52	5,77	7,02	8,27	9,52	3,03	2,60	2,70	2,50	3,75	5,00	6,25	7,50	3,20	3,70	3,50	5,90	8,10	10,50	12,90
M 3 x 0,50	3,20	5,25	6,75	8,25	9,75	11,25	3,65	3,11	3,22	3,00	4,50	6,00	7,50	9,00	3,80	4,35	3,90	6,30	8,70	11,10	13,50
M 3,5 x 0,60	3,70	6,20	7,95	9,70	11,45	13,20	4,28	3,63	3,76	3,50	5,25	7,00	8,75	10,50	4,55	4,75	3,70	6,30	8,70	11,20	13,30
M 4 x 0,70	4,20	7,15	9,15	11,15	13,15	15,15	4,91	4,15	4,29	4,00	6,00	8,00	10,00	12,00	5,05	5,60	3,70	6,10	8,40	10,90	13,20
M 5 x 0,80	5,20	8,60	11,10	13,60	16,10	18,60	6,04	5,17	5,33	5,00	7,50	10,00	12,50	15,00	6,25	6,80	4,30	6,90	9,70	12,30	14,80
M 6 x 1,00	6,30	10,50	13,50	16,50	19,50	22,50	7,30	6,22	6,41	6,00	9,00	12,00	15,00	18,00	7,40	7,95	4,20	6,90	9,60	12,30	14,60
M 7 x 1,00	7,30	11,50	15,00	18,50	22,00	25,50	8,30	7,22	7,41	7,00	10,50	14,00	17,50	21,00	8,65	9,20	5,30	8,20	11,10	14,30	17,40
M 8 x 1,25	8,30	13,62	17,62	21,62	25,62	29,62	9,62	8,27	8,48	8,00	12,00	16,00	20,00	24,00	9,80	10,35	4,70	7,40	10,60	13,50	16,40
M 8 x 1,00	8,30	12,50	16,50	20,50	24,50	28,50	9,30	8,22	8,41	8,00	12,00	16,00	20,00	24,00	9,70	10,25	6,10	9,50	12,90	16,50	19,90
M 9 x 1,25	9,30	14,62	19,12	23,62	28,13	32,62	10,62	9,27	9,48	9,00	13,50	18,00	22,50	27,00	10,85	11,10	5,30	8,60	11,90	15,30	18,10
M 10 x 1,50	10,40	16,75	21,75	26,75	31,75	36,75	11,95	10,32	10,56	10,00	15,00	20,00	25,00	30,00	11,95	12,50	5,00	8,10	11,20	14,20	17,20
M 10 x 1,25	10,30	15,62	20,62	25,62	30,62	35,62	11,62	10,27	10,48	10,00	15,00	20,00	25,00	30,00	12,10	12,65	6,00	9,70	13,10	16,90	20,10
M 10 x 1,00	10,30	14,50	19,50	24,50	29,50	34,50	11,30	10,22	10,41	10,00	15,00	20,00	25,00	30,00	12,10	12,50	7,60	12,10	16,30	20,70	25,00
M 11 x 1,50	11,40	17,75	23,25	28,75	34,25	39,75	12,95	11,33	11,56	11,00	16,50	22,00	27,50	33,00	13,10	13,50	5,60	9,00	12,30	15,70	19,10
M 12 x 1,75	12,40	19,87	25,87	31,87	37,87	43,87	14,27	12,38	12,64	12,00	18,00	24,00	30,00	36,00	14,30	15,00	5,20	8,40	11,70	14,70	18,00
M 12 x 1,50	12,40	18,75	24,75	30,75	36,75	42,75	14,10	12,32	12,56	12,00	18,00	24,00	30,00	36,00	14,25	14,95	6,20	9,80	13,50	17,10	20,80
M 12 x 1,25	12,30	17,62	23,62	29,62	35,62	41,62	13,62	12,27	12,48	12,00	18,00	24,00	30,00	36,00	14,30	15,00	7,40	11,60	15,90	20,00	24,30
M 12 x 1,00	12,30	16,50	22,50	28,50	34,50	40,50	13,30	12,22	12,41	12,00	18,00	24,00	30,00	36,00	14,40	14,80	9,30	14,50	19,50	24,80	30,00
M 14 x 2,00	14,50	23,00	30,00	37,00	44,00	51,00	16,60	14,43	14,73	14,00	21,00	28,00	35,00	42,00	16,65	17,35	5,60	8,80	12,00	15,20	18,40
M 14 x 1,50	14,40	20,75	27,75	34,75	41,75	48,75	15,95	14,35	14,56	14,00	21,00	28,00	35,00	42,00	15,96	16,64	7,40	11,60	15,70	19,90	24,10
M 14 x 1,25	14,40	19,62	26,62	33,62	40,62	47,62	15,62	14,27	14,48	14,00	21,00	28,00	35,00	42,00	15,74	16,00	8,40	13,30	18,20	23,10	28,00
M 14 x 1,00	14,30	18,50	25,50	32,50	39,50	46,50	15,30	14,22	14,41	14,00	21,00	28,00	35,00	42,00	15,35	15,65	11,20	17,20	23,20	29,20	35,20
M 16 x 2,00	16,50	25,00	33,00	41,00	49,00	57,00	18,60	16,43	16,73	16,00	24,00	32,00	40,00	48,00	18,90	19,80	6,50	10,10	13,80	17,50	21,10
M 16 x 1,50	16,40	22,75	30,75	38,75	46,75	54,75	17,95	16,32	16,56	16,00	24,00	32,00	40,00	48,00	18,10	18,40	8,70	13,40	18,10	22,90	27,60
M 18 x 2,50	18,60	29,25	38,25	47,25	56,25	65,25	21,25	18,54	18,90	18,00	27,00	36,00	45,00	54,00	21,30	22,00	5,60	9,00	12,30	15,70	19,00
M 18 x 2,00	18,50	27,00	36,00	45,00	54,00	63,00	20,80	18,43	18,73	18,00	27,00	36,00	45,00	54,00	20,80	21,45	7,10	11,20	15,20	19,20	23,20
M 18 x 1,50	18,50	24,75	33,75	42,75	51,75	60,75	19,95	18,32	18,56	18,00	27,00	36,00	45,00	54,00	20,15	20,80	9,50	14,90	20,20	25,50	30,80
M 20 x 2,50	20,60	31,25	41,25	51,25	61,25	71,25	23,25	20,54	20,90	20,00	30,00	40,00	50,00	60,00	23,55	24,40	6,30	10,00	13,70	17,40	21,10
M 20 x 2,00	20,50	29,00	39,00	49,00	59,00	69,00	22,60	20,43	20,73	20,00	30,00	40,00	50,00	60,00	22,80	23,45	8,00	12,50	16,80	21,20	25,60
M 20 x 1,50	20,50	26,75	36,75	46,75	56,75	66,75	21,95	20,32	20,56	20,00	30,00	40,00	50,00	60,00	22,20	22,80	10,70	16,70	22,40	28,30	34,20
M 22 x 2,50	22,60	33,25	44,25	55,25	66,25	77,25	25,25	22,54	22,90	22,00	33,00	44,00	55,00	66,00	25,90	26,90	6,90	10,90	15,00	19,10	23,10
M 22 x 2,00	22,50	31,00	42,00	53,00	64,00	75,00	24,60	22,43	22,73	22,00	33,00	44,00	55,00	66,00	24,85	25,50	8,70	13,60	18,50	23,40	28,30
M 22 x 1,50	22,50	28,75	39,75	50,75	61,75	72,75	23,95	22,32	22,56	22,00	33,00	44,00	55,00	66,00	24,20	24,60	11,70	18,10	24,50	30,90	37,30
M 24 x 3,00	24,75	37,50	49,50	61,50	73,50	85,50	27,90	24,65	25,05	24,00	36,00	48,00	60,00	72,00	28,00	29,00	6,20	10,00	14,00	17,90	21,90
M 24 x 2,00	24,50	33,00	45,00	57,00	69,00	81,00	26,60	24,43	24,73	24,00	36,00	48,00	60,00	72,00	26,85	27,50	9,60	15,00	20,20	25,10	30,00
M 24 x 1,50	24,50	30,75	42,75	54,75	66,75	78,75	26,02	24,33	24,58	24,00	36,00	48,00	60,00	72,00	26,20	26,80	12,90	19,80	26,70	33,60	40,50
UNC N.2 x 56	2,40	4,80	5,90	7,00	8,10	9,20	2,84	2,28	2,44	2,20	3,30	4,40	5,50	6,60	2,70	2,90	3,00	5,25	7,40	9,60	11,80
UNC N.4 x 40	3,10	6,30	7,70	9,20	10,60	12,10	3,67	3,00	3,15	2,90	4,30	5,80	7,20	8,70	3,60	4,00	2,80	4,80	6,80	8,60	10,80
UNC N.5 x 40	3,40	6,60	8,20	9,80	11,10	13,00	4,00	3,33	3,48	3,20	4,80	6,40	7,90	9,60	4,00	4,40	3,30	5,50	7,80	10,00	10,30
UNC N.6 x 32	3,70	7,20	9,50	11,20	13,20	14,70	4,54	3,68	3,89	3,50	5,30	7,00	8,80	10,50	4,50	4,90	2,80	4,80	6,70	8,70	10,70
UNC N.8 x 32	4,40	8,40	10,50	12,50	14,70	16,80	5,11	4,34	4,52	4,20	6,30	8,40	10,50	12,60	5,20	5,60	3,50	5,90	8,30	10,70	13,10
UNC N°10x24	5,20	9,90	12,30	14,70	17,20	19,50	6,20	5,06	5,28	4,80	7,20	9,60	12,10	14,40	6,20	6,60	2,90	5,00	7,10	9,20	11,30
UNC N°12x24	5,80	10,60	13,30	16,10	18,80	21,60	6,86	5,72	5,92	5,50	8,20	11,00	13,70	16,50	6,80	7,20	3,50	5,90	8,30	10,70	13,10
UNC 1/4 x 20	6,70	12,60	15,70	18,90	22,10	25,40	8,00	6,62	6,86	6,40	9,50	12,70	15,90	19,20	8,00	8,40	3,40	5,70	8,00	10,30	12,60
UNC 5/16 x 18	8,30	15,20	19,20	23,20	27,10	31,00	9,77	8,24	8,49	7,90	11,90	15,90	19,80	23,70	9,70	10,20	4,00	6,60	9,30	11,90	14,50
UNC 3/8 x 16	9,90	16,80	21,60	26,40	31,10	35,80	11,59	9,89	10,12	9,50	14,30	19,10	23,80	28,50	11,50	12,00	4,40	7,20	10,10	12,90	15,70
UNC 7/16 x 14	11,60	19,40	25,00	30,50	36,10	41,60	13,47	11,51	11,78	11,10	16,70	22,20	27,80	33,30	13,40	14,00	4,50	7,40	10,30	13,10	15,90
UNC 1/2 x 13	13,00	22,00	28,40	34,70	41,10	47,40	15,23	13,12	13,40	12,70	19,10	25,40	31,80	38,10	15,20	15,80	4,80	7,90	10,90	13,90	16,90
UNC 9/16 x12	14,80	23,60	30,80	37,90	45,00	52,20	17,04	14,75	15,03	14,30	21,50	28,60	35,70	42,90	17,00	17,60	5,10	8,30	11,50	14,70	17,90
UNC 5/8 x11	16,50	27,10	35,00	43,00	50,90	58,90	18,87	16,38	16,68	15,90	23,80	31,80	39,70	47,70	18,90	19,50	5,30	8,30	11,80	15,00	18,20
UNC 3/4 x10	19,75	30,30	39,80	49,30	58,80	68,50	22,35	19,60	19,91	19,10	28,60	38,10	47,60	57,30	22,40	23,00	5,90	9,40	13,00	16,60	20,20
UNC 7/8 x 9	23,00	35,30	46,40	57,60	68,70	79,70	25,89	22,84	23,16	22,20	33,30	44,50	55,60	66,60	26,00	26,70	6,30	10,00	13,70	17,40	21,10
UNC 1"x8	26,25	38,50	51,20	63,90	76,60	89,30	29,52	26,09	26,47	25,40	38,10	50,80	63,50	76,20	29,60	30,40	6,40	10,20	14,00	17,80	21,60
UNC 1"1/8 x 7	29,50	43,80	58,10	72,40	86,70	101,00	33,23	29,36	29,74	28,60	42,90	57,20	71,50	85,80	33,40	34,40	6,30	10,00	13,80	17,60	21,40
UNC 1"1/4 x 7	33,00	47,00	62,80	78,70	94,70	110,60	36,46	32,54	32,92	31,80	47,60	63,50	79,50	95,40	36,70	37,70	7,10	11,30	15,40	19,60	23,70
UNC 1"3/8 x 6	36,00	51,70	69,20	86,70	104,05	121,50	40,42	35,84	36,35	34,90	52,40	69,90	87,25	104,70	40,60	41,70	6,60	10,60	14,40	18,30	22,30
UNC 1"1/2 x 6	39,50	54,90	74,00	93,00	112,05	131,10	43,60	39,02	39,53	38,10	57,20	76,20	95,25	114,30	43,90	45,00	7,40	11,60	15,90	20,10	24,30
UNF N.4 x 40	3,00	5,60	7,10	8,50	9,90	11,20	3,53	2,97	3,12	2,80	4,30	5,70	7,10	8,40	3,70	4,10	3,40	5,60	7,90	10,30	27,70
UNF N.6 x 32	3,80	6,90	8,70	10,40	12,20	13,90	4,23	3,66	3,81	3,50	5,30	7,00	8,80	10,50	4,50	4,90	3,60	6,00	8,40	10,80	13,20
UNF N.8 x 36	4,40	8,00	10,10	12,10	14,30	16,40	5,68	4,32	4,47	4,20	6,30	8,30	10,50	12,60	5,30	5,70	4,00	6,60	9,10	11,70	14,30
UNF N.10 x 32	5,10	9,00	11,40	13,80	16,30	18,60	5,66	5,00	5,16	4,80	7,20	9,60	12,10	14,40	6,10	6,50	4,10	6,80	9,50	12,10	14,70
UNF 1/4 x 28	6,70	11,50	14,60	17,80	21,00	24,30	7,53	6,55	6,72	6,40	9,50	12,70	15,90	19,20	7,80	8,30	5,00	8,10	11,30	14,40	17,50
UNF 5/16 x 24	8,30	13,00	17,00	21,00	24,90	28,80	9,31	8,17	8,35	7,90	11,90	15,90	19,80	23,70	9,70	10,20	5,50	8,90	12,20	15,60	19,00
UNF 3/8 x 24	9,80	14,60	19,40	24,20	28,90	33,60	10,90	9,75	9,93	9,50	14,30	19,10	23,80	28,50	11,40	11,90	6,90	10,90	14,90	19,00	23,10
UNF 7/16 x 20	11,50	17,30	22,90	28,40	34,00	39,50	12,76	11,39	11,59	11,10	16,70	22,20	27,80	33,30	13,40	13,90	6,60	10,60	14,50	18,40	22,30
UNF 1/2 x 20	13,00	18,90	25,30	31,60	38,00	44,30	14,35	12,97	13,16	12,70	19,10	25,40	31,80	38,10	15,10	15,70	7,80	12,30	16,80	21,30	25,80
UNF 9/16 x 18	14,80	21,60	28,80	35,90	43,00	50,20	16,12	14,59	14,79	14,30	21,50	28,60	35,70	42,90	16,90	17,60	7,90	12,50	17,10	21,60	26,20
UNF 5/8 x 18	16,25	23,20	31,10	39,10	47,00	55,00	17,70	16,18	16,38	15,90	23,80	31,80	39,70	47,70	18,60	19,30	8,90	14,10	19,10	24,30	29,50
UNF 3/4 x 16	19,50	26,40	35,90	45,40	55,00	64,60	21,11	19,39	19,60	19,10	28,60	38,10	47,70	57,30	22,20	22,90	9,70	15,10	20,60	26,00	31,40
UNF 7/8 x 14	22,75	30,50	41,60	52,80	63,90	74,90	24,58	22,62	22,84	22,20	33,30	44,50	55,60	66,60	26,00	26,70	9,90	15,40	21,00	26,60	32,20
UNF 1" x 12	26,00	34,70	47,40	60,10	72,80	85,50	28,15	25,86	26,11	25,40	38,10	50,80	63,50	76,20	29,70	30,40	9,70	15,10	20,60	26,10	31,40
UNF 1"1/8 x 12	29,00	37,90	52,20	66,50	80,80	95,10	31,33	29,03	29,29	28,60	42,90	57,20	71,50	85,80	33,20	33,90	10,10	17,30	24,40	31,50	38,60
UNF 1"1/4 x 12	32,50	41,10	56,90	72,80	88,80	104,70	34,50	32,21	32,46	31,80	47,60	63,50	79,50	95,40	36,60	37,30	12,40	19,30	26,10	33,00	39,90
UNF 1"3/8 x 12	35,50	44,20	61,70	79,20	96,55	114,00	37,68	35,38	35,63	34,90	52,40	69,90	87,25	104,70	40,00	40,90	13,80	21,30	28,90	36,40	43,90
UNF 1"1/2 x 12	38,50	47,40	66,50	85,50	104,55	123,60	40,85	38,56	38,81	38,10	57,20	76,20	95,25	114,30	43,40	44,30	15,20	23,40	31,60	39,80	48,00
BSW 1/8 x 40	3,40	6,60	9,20	9,80	11,10	13,00	3,93	3,28	3,43	3,20	4,80	6,40	7,90	9,60	4,00	4,40	3,40	5,60	7,90	10,30	12,50
BSW 3/16 x 24	5,00	9,90	12,20	14,70	17,00	19,50	6,01	4,98	5,13	4,80	7,10	9,60	11,90	14,40	6,10	6,50	2,90	5,10	7,20	9,30	11,50
BSW 1/4 x 20	6,70	12,60	15,70	18,90	26,10	25,40	7,80	6,63	6,76	6,40	9,50	12,70	15,90	19,20	7,90	8,40	3,40	5,90	8,10	10,50	12,90
BSW 5/16 x 18	8,30	15,20	19,20	23,20	27,10	31,00	9,60	8,33	8,48	7,90	11,90	15,90	19,80	23,70	9,70	10,20	4,10	6,70	9,40	12,00	14,60
BSW 3/8 x 16	9,90	16,80	21,60	26,40	31,10	35,80	11,40	9,91	10,11	9,50	14,30	19,10	23,80	28,50	11,50	12,00	4,50	7,30	10,20	13,00	15,80
BSW 7/16 x 14	11,50	19,40	25,00	30,50	36,10	41,60	13,20	11,51	11,76	11,10	16,70	22,20	27,80	33,30	13,50	14,00	4,60	7,50	10,40	13,30	16,20
BSW 1/2 x 12	13,00	22,00	28,40	34,70	41,10	47,40	15,20	13,08	13,34	12,70	19,10	25,40	31,80	38,10	15,40	16,00	4,40	7,30	10,10	13,00	15,90
BSW 9/16 x 12	14,80	23,60	30,80	37,90	45,00	52,20	16,80	14,68	14,94	14,30	21,50	28,60	35,70	42,90	17,00	17,60	5,20	8,40	11,60	14,80	18,00
BSW 5/8 x 11	16,70	27,10	35,00	43,00	50,90	58,90	18,60	16,59	16,84	15,90	23,80	31,80	39,70	47,70	18,90	19,50	5,40	8,70	11,90	15,30	18,70
BSW 3/4 x 10	20,00	30,30	39,80	49,30	58,80	68,50	22,00	19,84	20,09	19,10	28,60	38,10	47,60	57,30	22,40	23,00	6,00	9,60	13,20	16,80	20,40
BSW 7/8 x 9	23,00	35,30	46,40	57,60	68,70	79,70	25,50	23,01	23,27	22,20	33,30	44,50	55,60	66,60	26,00	26,70	6,40	10,10	13,90	17,70	21,40
BSW 1" x 8	26,50	38,50	51,20	63,90	76,60	89,30	29,10	26,19	26,52	25,40	38,10	50,80	63,50	76,20	27,70	30,40	6,50	10,30	14,10	17,90	21,70

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2102 **HSSE DIN 371** | M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
*M1,20 x 0,25	*34,85*	40	5	2,10	2,5
*M1,40 x 0,30	*34,85*	40	7	2,10	2,5
M1,60 x 0,35	*34,23*	40	8	2,10	2,5
M1,70 x 0,35	*31,28*	40	8	2,10	2,5
M1,80 x 0,35	*32,14*	40	8	2,10	2,5
M2,00 x 0,40	*14,95*	45	8	2,10	2,8
M2,20 x 0,45	*15,46*	45	9	2,10	2,8
M2,30 x 0,40	*15,46*	45	9	2,10	2,8
M2,50 x 0,45	*14,95*	50	9	2,10	2,8
M2,60 x 0,45	*14,95*	50	9	2,10	2,8
M3,00 x 0,50	*10,27*	56	11	2,70	3,5
MF3,00 x 0,60	*17,21*	56	11	2,70	3,5
M3,50 x 0,60	*13,57*	56	11	3,00	4,0

***Tol. 4H**

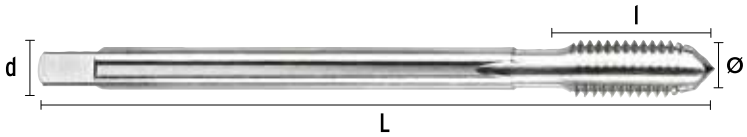
Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF3,50 x 0,75	*19,62*	56	11	3,00	4,0
MF4,00 x 0,50	*21,44*	63	13	3,40	4,5
M4,00 x 0,70	*10,50*	63	13	3,40	4,5
M4,50 x 0,75	*18,71*	70	14	4,90	6,0
MF5,00 x 0,50	*22,04*	70	16	4,90	6,0
MF5,00 x 0,75	*22,50*	70	16	4,90	6,0
M5,00 x 0,80	*10,53*	70	16	4,90	6,0
M6,00 x 1,00	*11,96*	80	19	4,90	6,0
M7,00 x 1,00	*14,47*	80	19	5,50	7,0
M8,00 x 1,25	*13,45*	90	22	6,20	8,0
M9,00 x 1,25	*21,85*	90	22	7,00	9,0
M10,00 x 1,50	*15,08*	100	24	8,00	10,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2101 | **HSSE DIN 376/374** | M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | D

Aceros 400 - 800 N/mm² | **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3,00 x 0,50	*10,08*	**56**	**11**	**2,00**	2,2
M3,50 x 0,60	*13,57*	**56**	**11**	**2,10**	2,5
M4,00 x 0,70	*10,50*	**63**	**13**	**2,10**	2,8
M5,00 x 0,80	*10,53*	**70**	**16**	**2,70**	3,5
MF6,00 x 0,50	*26,45*	80	19	3,40	4,5
MF6,00 x 0,75	*17,40*	80	19	3,40	4,5
M6,00 x 1,00	*11,96*	**80**	19	**3,40**	4,5
MF7,00 x 0,50	*30,10*	80	19	4,30	5,5
MF7,00 x 0,75	*23,22*	80	19	4,90	5,5
M7,00 x 1,00	*14,47*	**80**	**19**	**4,30**	5,5
MF8,00 x 0,50	*28,99*	80	18	4,90	6,0
MF8,00 x 0,75	*21,18*	**80**	18	4,90	6,0
MF8,00 x 1,00	*17,15*	90	22	4,90	6,0
M8,00 x 1,25	*13,45*	**90**	**22**	**4,90**	6,0
MF9,00 x 0,75	*31,42*	90	22	5,50	7,0
MF9,00 x 1,00	*26,16*	90	22	5,50	7,0
M9,00 x 1,25	*21,85*	**90**	**22**	**5,50**	7,0
MF10,00 x 0,50	*83,27*	90	20	5,50	7,0
MF10,00 x 0,75	*33,88*	90	20	5,50	7,0
MF10,00 x 1,00	*19,05*	90	20	5,50	7,0
MF10,00 x 1,25	*21,79*	100	24	5,50	7,0
M10,00 x 1,50	*15,08*	**100**	**24**	**5,50**	7,0
MF11,00 x 1,00	*33,46*	90	22	6,20	8,0
MF11,00 x 1,25	*33,46*	100	24	6,20	8,0
M11,00 x 1,50	*27,50*	**100**	**24**	**6,20**	8,0
MF12,00 x 0,75	*52,27*	100	22	7,00	9,0
MF12,00 x 1,00	*26,02*	100	22	7,00	9,0
MF12,00 x 1,25	*26,31*	100	22	7,00	9,0
MF12,00 x 1,50	*23,53*	100	22	7,00	9,0
M12,00 x 1,75	*19,42*	**110**	**29**	**7,00**	9,0
MF13,00 x 0,75	*89,44*	100	22	9,00	11,0
MF13,00 x 1,00	*48,32*	100	22	9,00	11,0
MF13,00 x 1,25	*48,32*	100	22	9,00	11,0
MF13,00 x 1,50	*48,32*	100	22	9,00	11,0
M13,00 x 1,75	*48,32*	**110**	**29**	**9,00**	11,0
MF14,00 x 0,75	*89,44*	100	22	9,00	11,0
MF14,00 x 1,00	*41,83*	100	22	9,00	11,0
MF14,00 x 1,25	*34,39*	100	22	9,00	11,0
MF14,00 x 1,50	*27,12*	100	22	9,00	11,0
M14,00 x 2,00	*26,90*	**110**	**30**	**9,00**	11,0
MF15,00 x 1,00	*53,87*	100	22	9,00	12,0
MF15,00 x 1,25	*58,84*	100	22	9,00	12,0
MF15,00 x 1,50	*47,83*	100	22	9,00	12,0
M15,00 x 2,00	*58,52*	**110**	**30**	**9,00**	12,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF16,00 x 1,00	*50,76*	100	22	9,00	12,0
MF16,00 x 1,25	*55,37*	100	22	9,00	12,0
MF16,00 x 1,50	*30,97*	100	22	9,00	12,0
M16,00 x 2,00	*31,63*	**110**	**30**	**9,00**	12,0
MF17,00 x 1,00	*100,97*	100	22	9,00	12,0
MF17,00 x 1,25	*100,97*	100	22	9,00	12,0
MF17,00 x 1,50	*100,97*	100	22	9,00	12,0
MF18,00 x 1,00	*56,84*	110	25	11,00	14,0
MF18,00 x 1,25	*71,85*	110	25	11,00	14,0
MF18,00 x 1,50	*44,39*	110	25	11,00	14,0
MF18,00 x 2,00	*63,85*	125	34	11,00	14,0
M18,00 x 2,50	*45,59*	**125**	**34**	**11,00**	14,0
MF19,00 x 1,00	*132,66*	110	25	11,00	14,0
MF19,00 x 1,25	*132,58*	110	25	11,00	14,0
MF19,00 x 1,50	*132,65*	110	25	11,00	14,0
MF20,00 x 1,00	*75,04*	125	25	12,00	16,0
MF20,00 x 1,25	*132,66*	125	25	12,00	16,0
MF20,00 x 1,50	*50,27*	125	25	12,00	16,0
MF20,00 x 2,00	*65,87*	140	34	12,00	16,0
M20,00 x 2,50	*48,45*	**140**	**34**	**12,00**	16,0
MF21,00 x 1,00	*192,59*	125	25	12,00	16,0
MF21,00 x 1,25	*192,59*	125	25	12,00	16,0
MF21,00 x 1,50	*141,38*	125	25	12,00	16,0
MF22,00 x 1,00	*84,13*	125	25	14,50	18,0
MF22,00 x 1,25	*132,66*	125	25	14,50	18,0
MF22,00 x 1,50	*60,50*	125	25	14,50	18,0
MF22,00 x 2,00	*84,13*	140	34	14,50	18,0
M22,00 x 2,50	*61,42*	**140**	**34**	**14,50**	18,0
MF23,00 x 1,00	*192,50*	125	25	14,50	18,0
MF23,00 x 1,50	*192,50*	125	25	14,50	18,0
MF24,00 x 1,00	*91,72*	140	28	14,50	18,0
MF24,00 x 1,25	*192,59*	140	28	14,50	18,0
MF24,00 x 1,50	*74,40*	140	28	14,50	18,0
MF24,00 x 2,00	*94,06*	140	28	14,50	18,0
M24,00 x 3,00	*73,56*	**160**	**38**	**14,50**	18,0
MF25,00 x 1,00	*249,13*	140	28	14,50	18,0
MF25,00 x 1,50	*115,78*	140	28	14,50	18,0
MF25,00 x 2,00	*249,13*	140	28	14,50	18,0
MF26,00 x 1,00	*249,13*	140	28	14,50	18,0
MF26,00 x 1,50	*100,34*	140	28	14,50	18,0
MF26,00 x 2,00	*249,13*	140	28	14,50	18,0
MF27,00 x 1,00	*126,02*	140	28	16,00	20,0
MF27,00 x 1,50	*109,58*	140	28	16,00	20,0
MF27,00 x 2,00	*131,14*	140	28	16,00	20,0

(**continúa Ref.2101** / suite Réf.2101 / Ref.2101 cont'd)

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

(**continúa Ref.2101** / suite Réf.2101 / Ref.2101 cont'd)

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M27,00 x 3,00	*91,81*	**160**	**38**	**16,00**	20,0
MF28,00 x 1,00	*249,13*	140	28	16,00	20,0
MF28,00 x 1,50	*109,58*	140	28	16,00	20,0
MF28,00 x 2,00	*249,13*	140	28	16,00	20,0
MF30,00 x 1,00	*140,17*	150	28	18,00	22,0
MF30,00 x 1,50	*114,22*	150	28	18,00	22,0
MF30,00 x 2,00	*141,38*	150	28	18,00	22,0
MF30,00 x 3,00	*155,46*	180	45	18,00	22,0
M30,00 x 3,50	*117,66*	**180**	**45**	**18,00**	22,0
MF32,00 x 1,00	*305,80*	150	28	18,00	22,0
MF32,00 x 1,50	*144,49*	150	28	18,00	22,0
MF32,00 x 2,00	*305,93*	150	28	18,00	22,0
MF33,00 x 1,00	*305,93*	160	30	20,00	25,0
MF33,00 x 1,50	*158,34*	160	30	20,00	25,0
MF33,00 x 2,00	*266,84*	160	30	20,00	25,0
MF33,00 x 3,00	*293,39*	180	50	20,00	25,0
M33,00 x 3,50	*141,38*	**180**	**50**	**20,00**	25,0
MF34,00 x 1,50	*186,07*	170	30	22,00	28,0
MF34,00 x 2,00	*335,79*	170	30	22,00	28,0
MF35,00 x 1,50	*185,57*	170	30	22,00	28,0
MF36,00 x 1,50	*180,98*	170	30	22,00	28,0
MF36,00 x 2,00	*244,45*	170	30	22,00	28,0
MF36,00 x 3,00	*280,43*	200	56	22,00	28,0
M36,00 x 4,00	*180,70*	**200**	**56**	**22,00**	28,0
MF38,00 x 1,50	*192,94*	170	30	22,00	28,0
MF38,00 x 2,00	*395,48*	170	30	22,00	28,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF39,00 x 1,50	*292,40*	170	30	24,00	32,0
MF39,00 x 2,00	*292,40*	170	30	24,00	32,0
MF39,00 x 3,00	*395,92*	200	60	24,00	32,0
M39,00 x 4,00	*230,71*	**200**	**60**	**24,00**	32,0
MF40,00 x 1,50	*252,39*	170	30	24,00	32,0
MF40,00 x 2,00	*293,18*	170	30	24,00	32,0
MF40,00 x 3,00	*293,18*	200	60	24,00	32,0
MF42,00 x 1,50	*256,18*	170	30	24,00	32,0
MF42,00 x 2,00	*335,37*	170	30	24,00	32,0
MF42,00 x 3,00	*335,37*	200	60	24,00	32,0
M42,00 x 4,50	*296,58*	**200**	**60**	**24,00**	32,0
MF45,00 x 1,50	*317,17*	180	32	29,00	36,0
MF45,00 x 2,00	*402,67*	180	32	29,00	36,0
MF45,00 x 3,00	*402,67*	200	50	29,00	36,0
M45,00 x 4,50	*324,08*	**220**	**65**	**29,00**	36,0
MF48,00 x 1,50	*324,08*	190	32	29,00	36,0
MF48,00 x 2,00	*488,02*	190	32	29,00	36,0
MF48,00 x 3,00	*487,99*	225	50	29,00	36,0
M48,00 x 5,00	*398,48*	**250**	**70**	**29,00**	36,0
MF50,00 x 1,50	*378,98*	190	32	29,00	36,0
MF52,00 x 1,50	*383,65*	190	32	32,00	40,0
MF52,00 x 2,00	*586,16*	190	32	32,00	40,0
MF52,00 x 3,00	*601,84*	225	50	32,00	40,0
M52,00 x 5,00	*408,11*	**250**	**70**	**32,00**	40,0
MF63,00 x 1,50	*879,28*	**275**	**40**	**39,00**	50,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2102/5 HSSE DIN 371

M DIN 13 | Form. C | Tol. 6H | LH | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	20,54	56	11	2,70	3,5
M4 x 0,70	20,97	63	13	3,40	4,5
M5 x 0,80	21,07	70	16	4,90	6,0

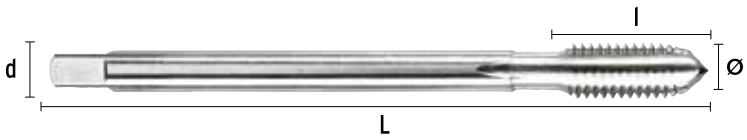
Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	23,90	80	19	4,90	6,0
M8 x 1,25	26,91	90	22	6,20	8,0
M10 x 1,50	30,14	100	24	8,00	10,0

2101/5 HSSE DIN 376/374

M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | LH | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M5 x 0,80	21,07	70	16	2,70	3,5
M6 x 1,00	23,90	80	19	3,40	4,5
M7 x 1,00	28,94	80	19	4,30	5,5
MF8 x 1,00	34,30	90	22	4,90	6,0
M8 x 1,25	26,91	90	22	4,90	6,0
M9 x 1,25	43,71	90	22	5,50	7,0
MF10 x 1,00	38,06	90	20	5,50	7,0
MF10 x 1,25	30,14	100	24	5,50	7,0
M10 x 1,50	30,14	100	24	5,50	7,0
MF12 x 1,25	52,60	100	22	7,00	7,0
MF12 x 1,50	47,05	100	22	7,00	9,0
M12 x 1,75	38,86	110	29	7,00	9,0
MF14 x 1,50	54,24	100	22	9,00	9,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M14 x 2,00	53,80	110	30	9,00	11,0
MF16 x 1,50	61,92	100	22	9,00	11,0
M16 x 2,00	63,24	110	30	9,00	12,0
MF18 x 1,50	88,78	110	25	11,00	12,0
M18 x 2,50	95,58	125	34	11,00	14,0
MF20 x 1,50	100,53	125	25	12,00	14,0
M20 x 2,50	101,51	140	35	12,00	16,0
MF22 x 1,50	121,02	125	25	14,50	18,0
M22 x 2,50	122,87	140	34	14,50	18,0
MF24 x 1,50	148,82	140	28	14,50	18,0
M24 x 3,00	147,13	160	38	14,50	18,0
M27 x 3,00	183,60	160	38	16,00	20,0
M30 x 3,50	235,29	180	45	18,00	22,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2114 HSSE DIN 371

M DIN 13 | MF DIN 13 | Form. A | Tol. 6H | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M2,00 x 0,40	*15,86*	45	8	2,10	2,8
M2,20 x 0,45	*17,17*	45	9	2,10	2,8
M2,30 x 0,40	*16,35*	45	9	2,10	2,8
M2,50 x 0,45	*15,86*	50	9	2,10	2,8
M2,60 x 0,45	*15,86*	50	9	2,10	2,8
M3,00 x 0,50	*11,30*	56	11	2,70	3,5
M3,50 x 0,60	*14,40*	56	11	3,00	4,0
M4,00 x 0,70	*11,53*	63	13	3,40	4,5

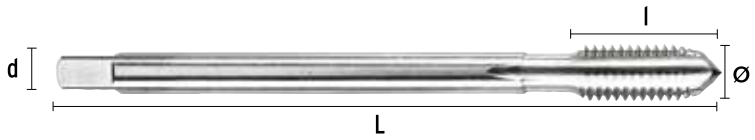
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M4,50 x 0,75	*19,83*	70	14	4,90	6,0
M5,00 x 0,80	*11,59*	70	16	4,90	6,0
M6,00 x 1,00	*13,15*	80	19	4,90	6,0
M7,00 x 1,00	*15,04*	80	19	5,50	7,0
M8,00 x 1,25	*14,79*	90	22	6,20	8,0
M9,00 x 1,25	*23,17*	90	22	7,00	9,0
M10,00 x 1,50	*16,56*	100	24	8,00	10,0

2113 HSSE DIN 376/374

M DIN 13 | MF DIN 13 | Form. A | Tol. 6H | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00 x 0,50	*11,30*	56	11	2,00	2,2
M3,50 x 0,60	*14,40*	56	11	2,10	2,5
M4,00 x 0,70	*11,53*	63	13	2,10	2,8
M5,00 x 0,80	*11,59*	70	16	2,70	3,5
M6,00 x 1,00	*13,15*	80	19	3,40	4,5
M7,00 x 1,00	*15,04*	80	19	4,30	5,5
M8,00 x 1,25	*14,79*	90	22	4,90	6,0
M9,00 x 1,25	*23,17*	90	22	5,50	7,0
M10,00 x 1,50	*16,56*	100	24	5,50	7,0
M11,00 x 1,50	*29,18*	100	24	6,20	8,0
M12,00 x 1,75	*21,38*	110	29	7,00	9,0
M13,00 x 1,75	*51,21*	110	29	9,00	11,0
M14,00 x 2,00	*27,96*	110	30	9,00	11,0
M15,00 x 2,00	*62,01*	110	30	9,00	12,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16,00 x 2,00	*32,85*	110	30	9,00	12,0
M18,00 x 2,50	*50,64*	125	35	11,00	14,0
M20,00 x 2,50	*53,79*	140	35	12,00	16,0
M22,00 x 2,50	*65,08*	140	35	14,50	18,0
M24,00 x 3,00	*77,95*	160	38	14,50	18,0
M27,00 x 3,00	*97,27*	160	38	16,00	20,0
M30,00 x 3,50	*124,66*	180	45	18,00	22,0
M33,00 x 3,50	*149,80*	180	50	20,00	25,0
M36,00 x 4,00	*191,48*	200	56	22,00	28,0
M39,00 x 4,00	*244,44*	200	60	24,00	32,0
M42,00 x 4,50	*314,25*	200	60	24,00	32,0
M45,00 x 4,50	*343,36*	220	65	29,00	36,0
M48,00 x 5,00	*422,21*	250	70	29,00	36,0
M52,00 x 5,00	*432,39*	250	70	32,00	40,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2190 HSSE DIN 371

M DIN 13 | Form. E | Tol. 6H | R

Latón y bronce — Laiton et Bronze / Brass and bronze

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*11,48*	56	11	3,50	3,5
M4 x 0,70	*11,72*	63	13	3,40	4,5
M5 x 0,80	*11,76*	70	16	4,90	6,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*13,38*	80	19	4,90	6,0
M8 x 1,25	*17,16*	90	22	6,20	8,0
M10 x 1,50	*22,14*	100	24	8,00	10,0

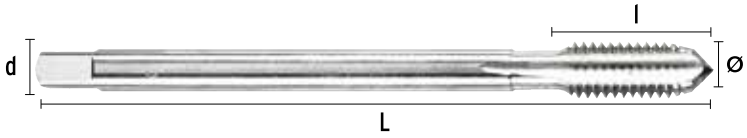
2191 HSSE DIN 376

M DIN 13 | Form. E | Tol. 6H | D

Latón y bronce — Laiton et Bronze / Brass and bronze

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*13,38*	80	19	3,40	4,5
M8 x 1,25	*17,16*	90	22	4,90	6,0
M10 x 1,50	*22,14*	100	24	5,50	7,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M12 x 1,75	*29,49*	110	29	7,00	9,0
M14 x 2,00	*34,68*	110	30	9,00	11,0
M16 x 2,00	*41,60*	110	30	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2129 HSSE DIN 371

M DIN 13 | Form. C | Tol. 6HX | R | NIT

Fundición — **Fonte / Cast Iron**

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M3 x 0,50	*13,60*	56	11	2,70	3,5
M4 x 0,70	*13,05*	63	13	3,40	4,5
M5 x 0,80	*13,05*	70	16	4,90	6,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M6 x 1,00	*14,33*	80	19	4,90	6,0
M8 x 1,25	*16,33*	90	22	6,20	8,0
M10 x 1,50	*19,39*	100	24	8,00	10,0

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

2128 HSSE DIN 376

M DIN 13 | Form. C | Tol. 6HX | D | NIT

Fundición — **Fonte / Cast Iron**

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M6 x 1,00	*14,33*	80	19	3,40	4,5
M8 x 1,25	*16,33*	90	22	4,90	6,0
M10 x 1,50	*19,39*	100	24	5,50	7,0
M12 x 1,75	*25,00*	110	29	7,00	9,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M14 x 2,00	*34,82*	110	30	9,00	11,0
M16 x 2,00	*42,24*	110	30	9,00	12,0
M18 x 2,50	*78,74*	125	34	11,00	14,0
M20 x 2,50	*78,74*	140	34	12,00	16,0

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2180 **HSSE-PM DIN 371** | M DIN 13 | Form. C | Tol. 6HX | R | TICN

Fundición — **Fonte / Cast Iron**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*20,62*	56	11	2,70	3,5
M4 x 0,70	*21,05*	63	13	3,40	4,5
M5 x 0,80	*21,05*	70	16	4,90	6,0

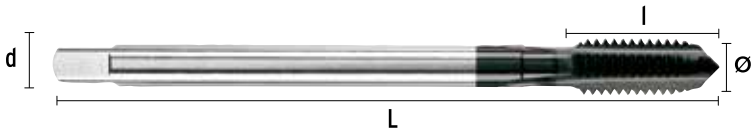
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*22,31*	80	19	4,90	6,0
M8 x 1,25	*26,59*	90	22	6,20	8,0
M10 x 1,50	*32,17*	100	24	8,00	10,0

2179 **HSSE-PM DIN 376** | M DIN 13 | Form. C | Tol. 6HX | D | TICN

Fundición — **Fonte / Cast Iron**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M8 x 1,25	*26,59*	90	24	4,90	6,0
M10 x 1,50	*32,17*	100	24	5,50	7,0
M12 x 1,75	*40,51*	110	29	7,00	9,0
M14 x 2,00	*51,64*	110	30	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16 x 2,00	*59,55*	110	30	9,00	12,0
M18 x 2,50	*99,96*	125	34	11,00	14,0
M20 x 2,50	*112,95*	140	34	12,00	16,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2104 HSSE DIN 371

M DIN 13 | MF DIN 13 | Form. B "Gun" | Tol. 6H | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M2,00 x 0,40	*16,34*	**45**	**8**	**2,10**	2,8
M2,50 x 0,45	*16,26*	**50**	**9**	**2,10**	2,8
M2,60 x 0,45	*16,26*	**50**	**9**	**2,10**	2,8
M3,00 x 0,50	*11,58*	**56**	**11**	**2,70**	3,5
MF3,00 x 0,60	*19,22*	56	11	2,70	3,5
M3,50 x 0,60	*14,83*	56	11	3,40	4,0
MF4,00 x 0,50	*23,59*	63	13	3,00	4,5
M4,00 x 0,70	*11,84*	**63**	**13**	**3,40**	4,5
MF4,00 x 0,75	*16,91*	63	13	3,40	6,0

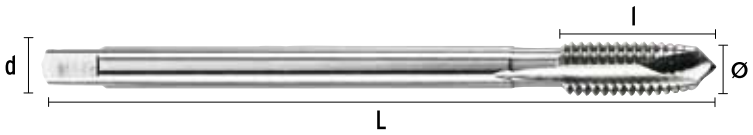
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M4,50 x 0,75	*20,76*	**70**	**14**	**4,90**	6,0
MF5,00 x 0,50	*24,25*	70	16	4,90	6,0
M5,00 x 0,80	*11,86*	**70**	**16**	**4,90**	6,0
M6,00 x 1,00	*13,01*	**80**	**19**	**4,90**	6,0
M7,00 x 1,00	*17,02*	**80**	**19**	**5,50**	7,0
M8,00 x 1,25	*14,35*	**90**	**22**	**6,20**	8,0
M9,00 x 1,25	*22,28*	**90**	**22**	**7,00**	10,0
M10,00 x 1,50	*17,61*	**100**	**24**	**8,00**	10,0

2103 HSSE DIN 376/374

M DIN 13 | MF DIN 13 | Form. B "Gun" | Tol. 6H | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00 x 0,50	*11,58*	**56**	**11**	**2,00**	2,2
M3,50 x 0,60	*14,84*	**56**	**13**	**2,10**	2,5
M4,00 x 0,70	*11,84*	**63**	**13**	**2,10**	2,8
M4,50 x 0,75	*20,76*	**70**	**16**	**2,70**	3,5
M5,00 x 0,80	*11,86*	**70**	**16**	**2,70**	3,5
MF6,00 x 0,75	*19,71*	80	19	3,40	4,5
M6,00 x 1,00	*13,01*	**80**	**19**	**3,40**	4,5
MF7,00 x 0,75	*25,73*	80	19	4,90	5,5
M7,00 x 1,00	*17,02*	**80**	**19**	**4,30**	5,5
MF8,00 x 0,75	*24,34*	90	22	4,90	6,0
MF8,00 x 1,00	*18,86*	90	22	4,90	6,0
M8,00 x 1,25	*14,35*	**90**	**22**	**4,90**	6,0
MF9,00 x 1,00	*28,77*	90	22	5,50	7,0
M9,00 x 1,25	*22,28*	**90**	**22**	**5,50**	7,0
MF10,00 x 0,75	*34,58*	90	20	5,50	7,0
MF10,00 x 1,00	*21,01*	90	20	5,50	7,0
MF10,00 x 1,25	*25,03*	100	24	5,50	7,0
M10,00 x 1,50	*17,61*	**100**	**24**	**5,50**	7,0
MF11,00 x 1,00	*36,83*	90	20	6,20	8,0
MF11,00 x 1,25	*36,83*	100	24	6,20	8,0
M11,00 x 1,50	*30,25*	**100**	**24**	**6,20**	8,0
MF12,00 x 1,00	*28,63*	100	22	7,00	9,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF12,00 x 1,25	*28,94*	100	22	7,00	9,0
MF12,00 x 1,50	*25,85*	100	22	7,00	9,0
M12,00 x 1,75	*22,48*	**110**	**29**	**7,00**	9,0
MF13,00 x 1,00	*53,15*	100	22	9,00	11,0
MF13,00 x 1,25	*53,11*	100	22	9,00	11,0
MF13,00 x 1,50	*53,11*	100	22	9,00	11,0
M13,00 x 1,75	*53,15*	**110**	**29**	**9,00**	11,0
MF14,00 x 1,00	*46,01*	100	22	9,00	11,0
MF14,00 x 1,25	*37,54*	100	22	9,00	11,0
MF14,00 x 1,50	*29,86*	100	22	9,00	11,0
M14,00 x 2,00	*29,60*	**110**	**30**	**9,00**	11,0
MF15,00 x 1,00	*59,12*	100	22	9,00	12,0
MF15,00 x 1,25	*64,74*	100	22	9,00	12,0
MF15,00 x 1,50	*52,59*	100	22	9,00	12,0
M15,00 x 2,00	*64,38*	**110**	**30**	**9,00**	12,0
MF16,00 x 1,00	*55,82*	100	22	9,00	12,0
MF16,00 x 1,25	*61,88*	100	22	9,00	12,0
MF16,00 x 1,50	*37,21*	100	22	9,00	12,0
M16,00 x 2,00	*36,36*	**110**	**30**	**9,00**	12,0
MF18,00 x 1,00	*62,49*	110	25	11,00	14,0
MF18,00 x 1,50	*48,83*	110	25	11,00	14,0
MF18,00 x 2,00	*70,26*	125	34	11,00	14,0

(**continúa Ref.2103** / suite Réf.2103 / Ref.2103 cont'd)

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

(**continúa Ref.2103** / suite Réf.2103 / Ref.2103 cont'd)

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M18,00 x 2,50	*49,41*	**125**	**34**	**11,00**	14,0
MF20,00 x 1,00	*82,56*	125	25	12,00	16,0
MF20,00 x 1,50	*55,27*	125	25	12,00	16,0
MF20,00 x 2,00	*72,44*	140	34	12,00	16,0
M20,00 x 2,50	*53,30*	**140**	**34**	**12,00**	16,0
MF22,00 x 1,00	*92,54*	125	25	14,50	18,0
MF22,00 x 1,50	*66,54*	125	25	14,50	18,0
MF22,00 x 2,00	*92,54*	140	34	14,50	18,0
M22,00 x 2,50	*67,56*	**140**	**34**	**14,50**	18,0
MF24,00 x 1,00	*115,29*	140	28	14,50	18,0
MF24,00 x 1,50	*81,80*	140	28	14,50	18,0
MF24,00 x 2,00	*103,46*	140	28	14,50	18,0
M24,00 x 3,00	*80,46*	**160**	**38**	**14,50**	18,0
MF25,00 x 1,50	*127,11*	140	28	14,50	18,0
MF25,00 x 2,00	*274,05*	140	28	14,50	18,0
MF26,00 x 1,50	*105,21*	140	28	14,50	18,0
MF26,00 x 2,00	*274,05*	140	28	14,50	18,0
MF27,00 x 1,50	*120,26*	140	28	16,00	20,0
MF27,00 x 2,00	*143,40*	140	28	16,00	20,0
M27,00 x 3,00	*100,65*	**160**	**38**	**16,00**	20,0
MF28,00 x 1,50	*120,26*	140	28	16,00	20,0
MF28,00 x 2,00	*274,05*	140	28	16,00	20,0
MF30,00 x 1,00	*171,07*	150	28	18,00	22,0
MF30,00 x 1,50	*125,67*	150	28	18,00	22,0
MF30,00 x 2,00	*155,51*	150	28	18,00	22,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M30,00 x 3,50	*129,33*	**180**	**45**	**18,00**	22,0
MF32,00 x 1,50	*158,86*	150	28	18,00	22,0
MF32,00 x 2,00	*336,54*	150	28	18,00	22,0
MF33,00 x 1,50	*171,91*	160	30	20,00	25,0
MF33,00 x 2,00	*293,48*	160	30	20,00	25,0
M33,00 x 3,50	*162,69*	**180**	**50**	**20,00**	25,0
MF34,00 x 1,50	*199,08*	170	30	22,00	28,0
MF35,00 x 1,50	*210,35*	170	30	22,00	28,0
MF36,00 x 1,50	*199,08*	170	30	22,00	28,0
MF36,00 x 2,00	*268,89*	170	30	22,00	28,0
MF36,00 x 3,00	*308,47*	200	56	22,00	28,0
M36,00 x 4,00	*198,76*	**200**	**56**	**22,00**	28,0
MF38,00 x 1,50	*217,36*	170	30	22,00	28,0
MF38,00 x 2,00	*435,05*	170	30	22,00	28,0
M39,00 x 4,00	*253,80*	**200**	**60**	**24,00**	32,0
MF40,00 x 1,50	*277,67*	170	30	24,00	32,0
MF40,00 x 3,00	*342,94*	200	60	24,00	32,0
MF42,00 x 1,50	*282,26*	170	30	24,00	32,0
M42,00 x 4,50	*326,29*	**200**	**60**	**24,00**	32,0
MF45,00 x 1,50	*345,62*	180	32	29,00	36,0
M45,00 x 4,50	*356,44*	**220**	**65**	**29,00**	36,0
M48,00 x 5,00	*438,30*	**250**	**70**	**29,00**	36,0
MF50,00 x 1,50	*421,25*	190	32	29,00	36,0
M52,00 x 5,00	*448,69*	**250**	**70**	**32,00**	40,0

2111 HSSE DIN 371

M DIN 13 | Form. B "Gun" | Tol. 6H | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm²

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*26,64*	100	11	2,70	3,5
M4 x 0,70	*26,64*	100	13	3,40	4,5
M5 x 0,80	*30,09*	120	16	4,90	6,0
M6 x 1,00	*30,09*	120	19	4,90	6,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M8 x 1,25	*39,72*	150	22	6,20	8,0
M10 x 1,50	*48,21*	150	24	8,00	10,0
M12 x 1,75	*54,18*	150	29	9,00	12,0

2110 HSSE DIN 371

M DIN 13 | Form. B "Gun" | Tol. 6H +0,1 | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm²

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*18,41*	56	11	2,70	3,5
M4 x 0,70	*18,80*	63	13	3,40	4,5
M5 x 0,80	*18,85*	70	16	4,90	6,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*21,42*	80	19	4,90	6,0
M8 x 1,25	*24,11*	90	22	6,20	8,0
M10 x 1,50	*30,36*	100	24	8,00	10,0

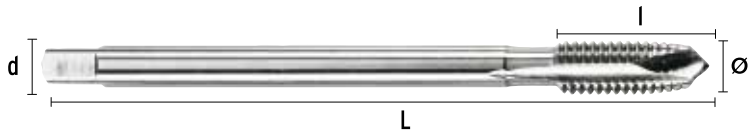
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2109 HSSE DIN 376

M DIN 13 | Form. B "Gun" | Tol. 6H +0,1 | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M8 x 1,25	*24,11*	90	22	4,90	6,0
M10 x 1,50	*30,36*	100	24	5,50	7,0
M12 x 1,75	*38,77*	110	29	7,00	9,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M14 x 2,00	*48,67*	110	30	9,00	11,0
M16 x 2,00	*58,89*	110	30	9,00	12,0

2168 HSSE DIN 371

M DIN 13 | Form. B "Gun" | Tol. 6G | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M3 x 0,50	*18,20*	56	11	2,70	3,5
M4 x 0,70	*18,20*	63	13	3,40	4,5
M5 x 0,80	*18,20*	70	16	4,90	6,0

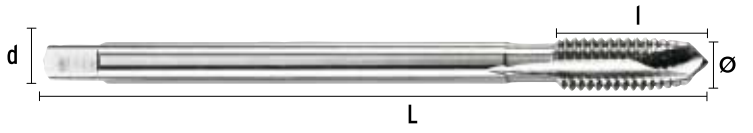
Ø x P mm	€	L mm	l mm	☒ mm	d mm
M6 x 1,00	*18,35*	80	19	4,90	6,0
M8 x 1,25	*22,02*	90	22	6,20	8,0
M10 x 1,50	*25,88*	100	24	8,00	10,0

2169 HSSE DIN 376

M DIN 13 | Form. B "Gun" | Tol. 6G | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M8 x 1,25	*22,02*	90	22	4,90	6,0
M10 x 1,50	*25,88*	100	24	5,50	7,0
M12 x 1,75	*32,34*	110	29	7,00	9,0
M14 x 2,00	*40,56*	110	30	9,00	11,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M16 x 2,00	*49,07*	110	30	9,00	12,0
M18 x 2,50	*67,40*	125	34	11,00	14,0
M20 x 2,50	*70,46*	140	34	12,00	16,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2250 **HSSE DIN 371** | M DIN 13 | MF DIN 13 | Form. B "Gun" | Tol. 6H | R | VAP

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00x0,50	*12,96*	56	11	2,70	3,5
M4,00x0,70	*13,27*	63	13	3,40	4,5
M5,00x0,80	*13,28*	70	16	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6,00x1,00	*14,57*	80	19	4,90	6,0
M8,00x1,25	*16,07*	90	22	6,20	8,0
M10,00x1,50	*19,73*	100	24	8,00	10,0

2251 **HSSE DIN 376/374** | M DIN 13 | MF DIN 13 | Form. B "Gun" | Tol. 6H | D | VAP

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF8,00x1,00	*21,13*	90	22	4,90	6,0
M8,00x1,25	*16,07*	90	22	4,90	6,0
MF10,00x1,00	*23,53*	90	20	5,50	7,0
MF10,00x1,25	*28,03*	100	24	5,50	7,0
M10,00x1,50	*19,73*	100	24	5,50	7,0
MF12,00x1,00	*32,08*	100	22	7,00	9,0
MF12,00x1,25	*32,41*	100	22	7,00	9,0
MF12,00x1,50	*33,22*	100	22	7,00	9,0
M12,00x1,75	*25,18*	110	29	7,00	9,0
MF14,00x1,25	*42,03*	100	22	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF14,00x1,50	*33,45*	100	22	9,00	11,0
M14,00x2,00	*33,15*	110	30	9,00	11,0
MF16,00x1,50	*41,68*	100	22	9,00	12,0
M16,00x2,00	*40,72*	110	30	9,00	12,0
MF18,00x1,50	*54,69*	125	34	11,00	14,0
M18,00x2,50	*55,34*	125	34	11,00	14,0
MF20,00x1,50	*61,90*	125	25	12,00	16,0
M20,00x2,50	*59,70*	140	34	12,00	16,0
M22,00x2,50	*75,66*	140	34	14,50	18,00
M24,00x3,00	*90,13*	160	38	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2116 HSSE DIN 371 | M DIN 13 | Form. B "Gun" | Tol. 6H | R | TIN

Aceros 400 - 800 N/mm² — Aciers / Steel — 800 N/mm2 | F | AL | CU | PL

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	▨ mm	d mm
M3 x 0,50	*16,21*	56	11	2,70	3,5
M4 x 0,70	*17,32*	63	13	3,40	4,5
M5 x 0,80	*17,33*	70	16	4,90	6,0

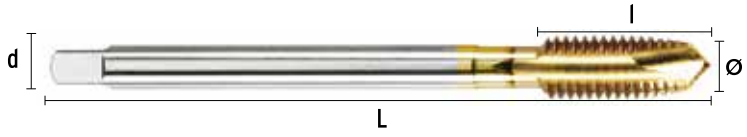
Ø x P mm	€	L mm	l mm	▨ mm	d mm
M6 x 1,00	*18,49*	80	19	4,90	6,0
M8 x 1,25	*21,40*	90	22	6,20	8,0
M10 x 1,50	*28,07*	100	24	8,00	10,0

2115 HSSE DIN 376/374 | M DIN 13 | Form. B "Gun" | Tol. 6H | D | TIN

Aceros 400 - 800 N/mm² — Aciers / Steel — 800 N/mm2 | F | AL | CU | PL

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	▨ mm	d mm
MF8,00x1,00	*25,92*	90	22	4,90	6,0
M8,00x1,25	*21,40*	90	22	4,90	6,0
MF10,00x1,00	*31,46*	90	20	5,50	7,0
MF10,00x1,25	*35,48*	100	24	5,50	7,0
M10,00x1,50	*28,07*	100	24	5,50	7,0
MF12,00x1,00	*40,16*	100	22	7,00	9,0
MF12,00x1,25	*37,82*	100	22	7,00	9,0
MF12,00x1,50	*38,57*	100	22	7,00	9,0
M12,00x1,75	*33,99*	100	29	7,00	9,0
MF14,00x1,25	*62,68*	100	22	9,00	11,0

Ø x P mm	€	L mm	l mm	▨ mm	d mm
MF14,00x1,50	*42,93*	100	22	9,00	11,0
M14,00x2,00	*42,66*	110	30	9,00	11,0
MF16,00x1,50	*51,57*	100	22	9,00	12,0
M16,00x2,00	*50,72*	110	30	9,00	12,0
MF18,00x1,50	*63,02*	125	34	11,00	14,0
M18,00x2,50	*63,77*	125	34	11,00	14,0
MF20,00x1,50	*69,62*	125	25	12,00	16,0
M20,00x2,50	*67,66*	140	34	12,00	16,0
M22,00x2,50	*81,92*	140	34	14,50	18,00
M24,00x3,00	*94,82*	160	38	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2126 HSSE-PM DIN 371

M DIN 13 | Form. B "Gun" | Tol. 6H | R | TICN

Aceros 800 - 1100 N/mm² — Aciers / Steel — TI F

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M3 x 0,50	*24,45*	56	11	2,70	3,5
M4 x 0,70	*24,73*	63	13	3,40	4,5
M5 x 0,80	*26,70*	70	14	4,90	6,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M6 x 1,00	*27,57*	80	18	4,90	6,0
M8 x 1,25	*33,01*	90	20	6,20	8,0
M10 x 1,50	*43,43*	100	20	8,00	10 0

2125 HSSE-PM DIN 376/374

M DIN 13 | Form. B "Gun" | Tol. 6H | D | TICN

Aceros 800 - 1100 N/mm² — Aciers / Steel — TI F

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☒ mm	d mm
MF8,00x1,00	*42,50*	90	22	4,90	6,0
M8,00x1,25	*37,99*	90	22	4,90	6,0
MF10,00x1,00	*51,18*	90	20	5,50	7,0
MF10,00x1,25	*55,20*	100	24	5,50	7,0
M10,00x1,50	*47,79*	100	24	5,50	7,0
MF12,00x1,00	*66,55*	100	22	7,00	9,0
MF12,00x1,25	*66,86*	100	22	7,00	9,0
MF12,00x1,50	*67,42*	100	22	7,00	9,0
M12,00x1,75	*60,40*	110	29	7,00	9,0
MF14,00x1,25	*101,36*	100	22	9,00	11,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
MF14,00x1,50	*80,20*	100	22	9,00	11,0
M14,00x2,00	*79,93*	110	30	9,00	11,0
MF16,00x1,50	*87,38*	100	22	9,00	12,0
M16,00x2,00	*86,52*	110	30	9,00	12,0
MF18,00x1,50	*111,60*	125	34	11,00	14,0
M18,00x2,50	*112,93*	125	34	11,00	14,0
MF20,00x1,50	*123,17*	125	25	12,00	16,0
M20,00x2,50	*121,20*	140	34	12,00	16,0
M22,00x2,50	*135,46*	140	34	14,50	18,00
M24,00x3,00	*148,37*	160	38	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2176 HSSE-PM DIN 371 | M DIN 13 | Form. B "Gun" | Tol. 6HX | R | TICN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — TI | 1100 N/mm2 | INOX | F | PL

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M3 x 0,50	*34,74*	56	5	2,70	3,5
M4 x 0,70	*34,74*	63	13	3,40	4,5
M5 x 0,80	*31,45*	70	14	4,90	6,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M6 x 1,00	*32,31*	80	18	4,90	6,0
M8 x 1,25	*38,46*	90	20	6,20	8,0
M10 x 1,50	*50,39*	100	20	8,00	10,0

2175 HSSE-PM DIN 376 | M DIN 13 | Form. B "Gun" | Tol. 6HX | D | TICN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — TI | 1100 N/mm2 | INOX | F | PL

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M8 x 1,25	*42,28*	90	22	4,90	6,0
M10 x 1,50	*55,43*	100	24	5,50	7,0
M12 x 1,75	*70,36*	110	29	7,00	9,0
M14 x 2,00	*97,47*	110	30	9,00	11,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M16 x 2,00	*101,12*	110	32	9,00	12,0
M18 x 2,50	*146,52*	125	34	11,00	14,0
M20 x 2,50	*165,10*	140	34	12,00	16,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2122 **HSSE DIN 371** | M DIN 13 | Form. B "Gun" | Tol. 6H | R | VAP

Aceros inox / **Aciers inox / Stainless Steel** | 800 N/mm2 | 1100 N/mm2 | TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*17,17*	56	11	2,70	3,5
M4 x 0,70	*17,17*	63	13	3,40	4,5
M5 x 0,80	*17,17*	70	14	4,90	6,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*18,86*	80	19	4,90	6,0
M8 x 1,25	*21,47*	90	22	6,20	8,0
M10 x 1,50	*25,20*	100	24	8,00	10,0

2121 **HSSE DIN 376/374** | M DIN 13 | Form. B "Gun" | Tol. 6H | D | VAP

Aceros inox / **Aciers inox / Stainless Steel** | 800 N/mm2 | 1100 N/mm2 | TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF8,00x1,00	*25,99*	90	22	4,90	6,0
M8,00x1,25	*21,47*	90	22	4,90	6,0
MF10,00x1,00	*28,59*	90	20	5,50	7,0
MF10,00x1,25	*32,61*	100	24	5,50	7,0
M10,00x1,50	*25,20*	100	24	5,50	7,0
MF12,00x1,00	*39,00*	100	22	7,00	9,0
MF12,00x1,25	*39,30*	100	22	7,00	9,0
MF12,00x1,50	*39,62*	100	22	7,00	9,0
M12,00x1,75	*32,84*	110	29	7,00	9,0
MF14,00x1,25	*53,05*	100	22	9,00	11,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF14,00x1,50	*42,09*	100	22	9,00	11,0
M14,00x2,00	*41,83*	110	30	9,00	11,0
MF16,00x1,50	*50,08*	100	22	9,00	12,0
M16,00x2,00	*49,22*	110	30	9,00	12,0
MF18,00x1,50	*69,00*	125	34	11,00	14,0
M18,00x2,50	*69,83*	125	34	11,00	14,0
MF20,00x1,50	*103,82*	125	25	12,00	16,0
M20,00x2,50	*75,32*	140	34	12,00	16,0
M22,00x2,50	*81,34*	140	34	14,50	18,00
M24,00x3,00	*87,85*	160	38	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2219 HSSE DIN 371 | M DIN 13 | Form. B "Gun" | Tol. 6H | R | TIN

Aceros inox / Aciers inox / Stainless Steel — 800 N/mm2 | 1100 N/mm2 | TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*21,29*	56	11	2,70	3,5
M4 x 0,70	*22,08*	63	13	3,40	4,5
M5 x 0,80	*22,08*	70	16	4,90	6,0

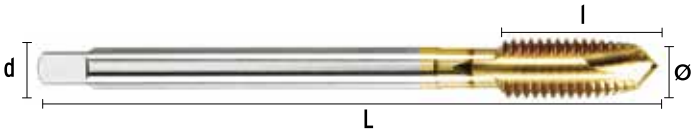
Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*23,78*	80	19	4,90	6,0
M8 x 1,25	*27,45*	90	22	6,20	8,0
M10 x 1,50	*33,85*	100	24	8,00	10,0

2220 HSSE DIN 376/374 | M DIN 13 | Form. B "Gun" | Tol. 6H | D | TIN

Aceros inox / Aciers inox / Stainless Steel — 800 N/mm2 | 1100 N/mm2 | TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF8,00x1,00	*31,96*	90	22	4,90	6,0
M8,00x1,25	*27,45*	90	22	4,90	6,0
MF10,00x1,00	*37,25*	90	20	5,50	7,0
MF10,00x1,25	*41,27*	100	24	5,50	7,0
M10,00x1,50	*33,85*	100	24	5,50	7,0
MF12,00x1,00	*46,51*	100	22	7,00	9,0
MF12,00x1,25	*46,81*	100	22	7,00	9,0
MF12,00x1,50	*47,13*	100	22	7,00	9,0
M12,00x1,75	*40,36*	110	29	7,00	9,0
MF14,00x1,25	*62,91*	100	22	9,00	11,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF14,00x1,50	*49,87*	100	22	9,00	11,0
M14,00x2,00	*49,61*	110	30	9,00	11,0
MF16,00x1,50	*57,05*	100	22	9,00	12,0
M16,00x2,00	*56,20*	110	30	9,00	12,0
MF18,00x1,50	*75,79*	125	34	11,00	14,0
M18,00x2,50	*76,69*	125	34	11,00	14,0
MF20,00x1,50	*119,07*	125	25	12,00	16,0
M20,00x2,50	*90,56*	140	34	12,00	16,0
M22,00x2,50	*96,59*	140	34	14,50	18,00
M24,00x3,00	*103,09*	160	38	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2133 **HSSE DIN 371** | M DIN 13 | B-AZ | Tol. 6H | R

Aluminio — **Aluminium**

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*18,68*	56	11	2,70	3,5
M4 x 0,70	*18,68*	63	13	3,40	4,5
M5 x 0,80	*18,68*	70	16	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*19,67*	80	19	4,90	6,0
M8 x 1,25	*23,53*	90	22	6,20	8,0
M10 x 1,50	*27,72*	100	24	8,00	10,0

2132 **HSSE DIN 376** | M DIN 13 | B-AZ | Tol. 6H | D

Aluminio — **Aluminium**

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M4 x 0,70	*18,68*	63	13	2,10	2,8
M5 x 0,80	*18,68*	70	16	2,70	3,5
M6 x 1,00	*19,67*	80	19	3,40	4,5
M8 x 1,25	*23,53*	90	22	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M10 x 1,50	*27,72*	100	24	5,50	7,0
M12 x 1,75	*34,98*	110	29	7,00	9,0
M14 x 2,00	*43,56*	110	30	9,00	11,0
M16 x 2,00	*57,76*	110	30	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2184 HSSE DIN 371 | M DIN 13 | B-AZ | Tol. 6H | R | CrN

Aluminio — **Aluminium**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*26,44*	56	11	2,70	3,5
M4 x 0,70	*27,40*	63	13	3,40	4,5
M5 x 0,80	*27,73*	70	16	4,90	6,0

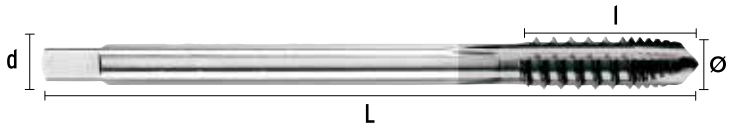
Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*28,74*	80	19	4,90	6,0
M8 x 1,25	*33,89*	90	22	6,20	8,0
M10 x 1,50	*38,99*	100	24	8,00	10,0

2183 HSSE DIN 376 | M DIN 13 | B-AZ | Tol. 6H | D | CrN

Aluminio — **Aluminium**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M4 x 0,70	*27,40*	63	13	2,10	2,8
M5 x 0,80	*27,73*	70	16	2,70	3,5
M6 x 1,00	*28,74*	80	19	3,40	4,5
M8 x 1,25	*33,89*	90	22	4,90	6,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M10 x 1,50	*38,99*	100	24	5,50	7,0
M12 x 1,75	*47,21*	110	29	7,00	9,0
M14 x 2,00	*57,33*	110	30	9,00	11,0
M16 x 2,00	*73,69*	110	30	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2254 HSSE-PM DIN 371 MULTI

M DIN 13 | Form. B "Gun" | Tol. 6HX | R | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M3,00x0,50	*29,86*	56	5	2,70	3,5
M4,00x0,70	*31,47*	63	7	3,40	4,5
M5,00x0,80	*34,14*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M6,00x1,00	*35,41*	80	10	4,90	6,0
M8,00x1,25	*42,51*	90	13	6,20	8,0
M10,00x1,50	*55,93*	100	15	8,00	10,0

2255 HSSE-PM DIN 376 MULTI

M DIN 13 | Form. B "Gun" | Tol. 6HX | D | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M12,00x1,75	*82,39*	110	18	7,00	9,0
M14,00x2,00	*107,97*	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M16,00x2,00	*116,15*	110	20	9,00	12,0

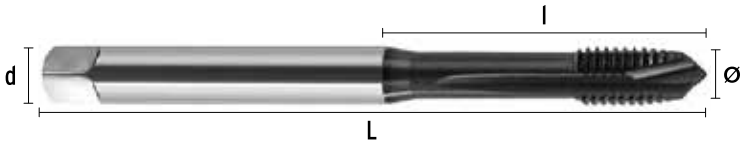
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2258 HSSE-PM DIN 371 SYNCHRO | M DIN 13 | Form. B "Gun" | Tol. 6HX | CNC | R | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00x0,50	*22,47*	56	5	2,70	3,5
M4,00x0,70	*24,95*	63	7	3,40	4,5
M5,00x0,80	*26,07*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6,00x1,00	*27,14*	80	10	4,90	6,0
M8,00x1,25	*32,83*	90	13	6,20	8,0
M10,00x1,50	*43,19*	100	15	8,00	10,0

2259 HSSE-PM DIN 376 SYNCHRO | M DIN 13 | Form. B "Gun" | Tol. 6HX | CNC | D | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12,00x1,75	*64,25*	110	18	7,00	9,0
M14,00x2,00	*86,86*	110	20	9,00	11,0

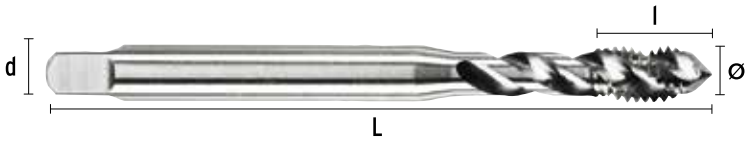
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16,00x2,00	*91,43*	110	20	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2106 HSSE DIN 371 — M DIN 13 | MF DIN 13 | Form. C | Tol. 6HX | 35° | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



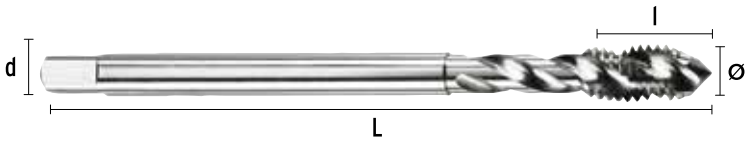
Ø x P mm	€	L mm	l mm	▨ mm	d mm
M2,00 x 0,40	32,13	45	5	2,10	2,8
M2,50 x 0,45	32,13	50	5	2,10	2,8
M2,60 x 0,45	32,13	50	5	2,10	2,8
M3,00 x 0,50	14,28	56	6	2,70	3,5
M3,50 x 0,60	17,62	56	6	3,00	4,0
M4,00 x 0,70	14,28	63	7	3,40	4,5

Ø x P mm	€	L mm	l mm	▨ mm	d mm
M4,50 x 0,75	24,32	70	7	4,90	6,0
M5,00 x 0,80	13,80	70	8	4,90	6,0
M6,00 x 1,00	15,13	80	10	4,90	6,0
M7,00 x 1,00	18,52	80	10	5,50	7,0
M8,00 x 1,25	18,04	90	14	6,20	8,0
M10,00 x 1,50	20,98	100	16	8,00	10,0

2105 HSSE DIN 376/374 — M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | 35° | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	▨ mm	d mm
M3,00 x 0,50	14,28	56	6	2,00	2,2
M4,00 x 0,70	14,28	63	7	2,10	2,8
M5,00 x 0,80	13,80	70	8	2,70	3,5
M6,00 x 1,00	15,13	80	10	3,40	4,5
M7,00 x 1,00	18,52	80	10	4,30	5,5
MF8,00 x 1,00	22,32	90	14	4,90	6,0
M8,00 x 1,25	18,04	90	14	4,90	6,0
MF9,00 x 1,00	28,76	90	14	5,50	7,0
M9,00 x 1,25	27,40	90	14	5,50	7,0
MF10,00 x 1,00	26,35	90	10	5,50	7,0
MF10,00 x 1,25	28,65	100	16	5,50	7,0
M10,00 x 1,50	20,98	100	16	5,50	7,0
MF11,00 x 1,00	83,90	90	11	6,20	8,0
MF11,00 x 1,25	74,84	100	16	6,20	8,0
M11,00 x 1,50	61,13	100	16	6,20	8,0
MF12,00 x 1,00	33,89	100	15	7,00	9,0
MF12,00 x 1,25	32,41	100	15	7,00	9,0
MF12,00 x 1,50	31,21	100	15	7,00	9,0
M12,00 x 1,75	28,02	110	18	7,00	9,0
MF14,00 x 1,00	54,72	100	15	9,00	11,0
MF14,00 x 1,25	46,73	100	15	9,00	11,0
MF14,00 x 1,50	35,19	100	15	9,00	11,0
M14,00 x 2,00	35,97	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	▨ mm	d mm
MF15,00 x 1,50	52,58	100	15	9,00	12,0
MF16,00 x 1,00	114,60	100	15	9,00	12,0
MF16,00 x 1,25	95,11	100	15	9,00	12,0
MF16,00 x 1,50	45,92	100	15	9,00	12,0
M16,00 x 2,00	43,44	110	20	9,00	12,0
MF18,00 x 1,50	58,13	110	22	11,00	14,0
MF18,00 x 2,00	109,55	125	25	11,00	14,0
M18,00 x 2,50	58,41	125	25	11,00	14,0
MF20,00 x 1,50	66,43	125	22	12,00	16,0
M20,00 x 2,50	62,23	140	25	12,00	16,0
MF22,00 x 1,50	71,69	125	22	14,50	18,0
M22,00 x 2,50	76,74	140	25	14,50	18,0
MF24,00 x 1,50	97,41	140	25	14,50	18,0
M24,00 x 3,00	93,69	160	30	14,50	18,0
MF26,00 x 1,50	105,18	140	25	14,50	18,0
MF27,00 x 1,50	120,21	140	25	16,00	20,0
M27,00 x 3,00	114,75	160	30	16,00	20,0
MF28,00 x 1,50	120,21	140	25	16,00	20,0
MF30,00 x 1,50	149,78	150	25	18,00	22,0
MF30,00 x 2,00	316,44	150	25	18,00	22,0
M30,00 x 3,50	147,03	180	35	18,00	22,0
M33,00 x 3,50	176,66	180	35	20,00	25,0
M36,00 x 4,00	238,39	200	40	22,00	28,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2112 HSSE DIN 371 | M DIN 13 | Form. C | Tol. 6H | 35° | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*31,47*	100	6	2,70	3,5
M4 x 0,70	*31,47*	100	7	3,40	4,5
M5 x 0,80	*36,29*	120	8	4,90	6,0
M6 x 1,00	*36,29*	120	10	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M8 x 1,25	*45,94*	150	14	6,20	8,0
M10 x 1,50	*55,57*	150	16	8,00	10,0
M12 x 1,75	*57,83*	150	18	9,00	12,0

2166 HSSE DIN 371 | M DIN 13 | Form. C | Tol. 6H +0,1 | 35° | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*23,06*	56	6	2,70	3,5
M4 x 0,70	*23,06*	63	7	3,40	4,5
M5 x 0,80	*22,26*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*24,41*	80	10	4,90	6,0
M8 x 1,25	*29,13*	90	14	6,20	8,0
M10 x 1,50	*34,54*	110	16	8,00	10,0

2165 HSSE DIN 376 | M DIN 13 | Form. C | Tol. 6H +0,1 | 35° | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M8 x 1,25	*29,13*	90	14	4,90	6,0
M10 x 1,50	*34,54*	100	16	5,50	7,0
M12 x 1,75	*38,77*	110	18	7,00	9,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M14 x 2,00	*55,50*	110	20	9,00	11,0
M16 x 2,00	*67,01*	110	20	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2170 **HSSE DIN 371** | M DIN 13 | Form. C | Tol. 6G | 35° | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



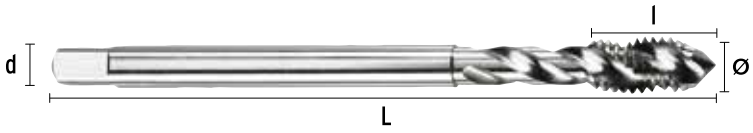
Ø x P mm	€	L mm	l mm	☒ mm	d mm
M3 x 0,50	*20,05*	56	5	2,70	3,5
M4 x 0,70	*20,05*	63	7	3,40	4,5
M5 x 0,80	*19,33*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M6 x 1,00	*21,21*	80	10	4,90	6,0
M8 x 1,25	*25,32*	90	14	6,20	8,0
M10 x 1,50	*30,01*	100	16	8,00	10,0

2208 **HSSE DIN 376** | M DIN 13 | Form. C | Tol. 6G | 35° | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
M8 x 1,25	*25,32*	90	13	4,90	6,0
M10 x 1,50	*30,01*	100	16	5,50	7,0
M12 x 1,75	*40,05*	110	18	7,00	9,0
M14 x 2,00	*46,26*	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
M16 x 2,00	*55,86*	110	20	9,00	12,0
M18 x 2,50	*76,10*	125	25	11,00	14,0
M20 x 2,50	*80,06*	140	25	12,00	16,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2108 HSSE DIN 371

M DIN 13 | Form. C | Tol. 6H | 15° | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M2,00 x 0,40	*18,06*	45	8	2,10	2,8
M3,00 x 0,50	*15,15*	56	11	2,70	3,5
M4,00 x 0,70	*14,54*	63	13	3,40	4,5
M5,00 x 0,80	*14,02*	70	14	4,90	6,0

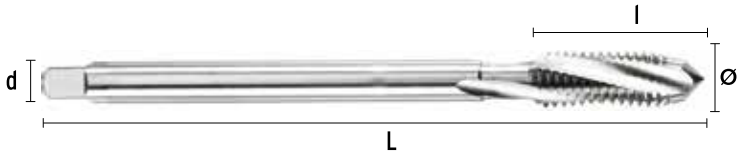
Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6,00 x 1,00	*15,37*	80	19	4,90	6,0
M7,00 x 1,00	*18,64*	80	19	5,50	7,0
M8,00 x 1,25	*18,36*	90	22	6,20	8,0
M10,00 x 1,50	*21,75*	100	24	8,00	10,0

2107 HSSE DIN 376/374

M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | 15° | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M4,00 x 0,70	*14,41*	63	13	2,10	2,8
M5,00 x 0,80	*13,92*	70	16	2,70	3,5
M6,00 x 0,70	*15,37*	80	19	3,40	4,5
M7,00 x 0,80	*18,64*	80	19	4,30	5,5
M8,00 x 0,70	*18,36*	90	22	4,90	6,0
M10,00 x 0,80	*21,75*	100	24	5,50	7,0
M12,00 x 0,70	*29,05*	110	29	7,00	9,0
M14,00 x 0,80	*34,54*	110	30	9,00	11,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
M16,00 x 2,00	*41,73*	110	30	9,00	12,0
M18,00 x 2,50	*56,14*	125	34	11,00	14,0
M20,00 x 2,50	*59,81*	140	34	12,00	16,0
M22,00 x 2,50	*73,76*	140	34	14,50	18,0
M24,00 x 3,00	*89,62*	160	38	14,50	18,0
M27,00 x 3,00	*110,31*	160	38	16,00	20,0
M30,00 x 3,50	*141,33*	180	45	18,00	22,0
M36,00 x 4,00	*227,90*	200	56	22,00	28,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2252 **HSSE DIN 371** | M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | 35° | R | VAP

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00x0,50	*16,01*	56	6	2,70	3,5
M4,00x0,70	*16,01*	63	7	3,40	4,5
M5,00x0,80	*15,46*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6,00x1,00	*16,94*	80	10	4,90	6,0
M8,00x1,25	*20,21*	90	14	6,20	8,0
M10,00x1,50	*23,51*	100	16	8,00	10,0

2253 **HSSE DIN 376/374** | M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | 35° | D | VAP

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF8,00x1,00	*25,01*	90	14	4,90	6,0
M8,00x1,25	*20,21*	90	14	4,90	6,0
MF10,00x1,00	*29,52*	90	10	5,50	7,0
MF10,00x1,25	*32,09*	100	16	5,50	7,0
M10,00x1,50	*23,51*	100	16	5,50	7,0
MF12,00x1,00	*37,95*	100	15	7,00	9,0
MF12,00x1,25	*36,31*	100	15	7,00	9,0
MF12,00x1,50	*36,92*	100	15	7,00	9,0
M12,00x1,75	*31,38*	110	18	7,00	9,0
MF14,00x1,25	*52,33*	100	22	9,00	11,00

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF14,00x1,50	*39,41*	100	15	9,00	11,0
M14,00x2,00	*40,29*	110	20	9,00	11,0
MF16,00x1,50	*51,43*	100	15	9,00	12,0
M16,00x2,00	*48,65*	110	20	9,00	12,0
MF18,00x1,50	*65,10*	125	34	11,00	14,0
M18,00x2,50	*65,42*	125	25	11,00	14,0
MF20,00x1,50	*74,40*	125	22	12,00	16,0
M20,00x2,50	*69,70*	140	25	12,00	16,0
M22,00x2,50	*85,94*	140	25	14,50	18,00
M24,00x3,00	*104,93*	160	30	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2118 HSSE DIN 371 | M DIN 13 | Form. C | Tol. 6H | 35° | R | TIN

Aceros 400 - 800 N/mm² — Aciers / Steel — 800 N/mm2 | F | AL | CU | PL

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*19,15*	56	6	2,70	3,5
M4 x 0,70	*20,03*	63	7	3,40	4,5
M5 x 0,80	*19,55*	70	8	4,90	6,0

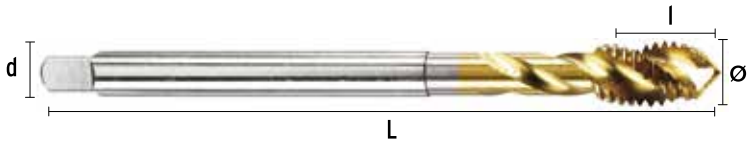
Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*20,87*	80	10	4,90	6,0
M8 x 1,25	*25,43*	90	14	6,20	8,0
M10 x 1,50	*31,93*	100	16	8,00	10,0

2117 HSSE DIN 376/374 | M DIN 13 | Form. C | Tol. 6H | 35° | D | TIN

Aceros 400 - 800 N/mm² — Aciers / Steel — 800 N/mm2 | F | AL | CU | PL

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF8,00x1,00	*29,71*	90	14	4,90	6,0
M8,00x1,25	*25,43*	90	14	4,90	6,0
MF10,00x1,00	*37,30*	90	10	5,50	7,0
MF10,00x1,25	*39,60*	100	16	5,50	7,0
M10,00x1,50	*31,93*	100	16	5,50	7,0
MF12,00x1,00	*45,95*	100	15	7,00	9,0
MF12,00x1,25	*44,48*	100	15	7,00	9,0
MF12,00x1,50	*45,69*	100	15	7,00	9,0
M12,00x1,75	*40,09*	110	18	7,00	9,0
MF14,00x1,25	*64,50*	100	22	9,00	11,00

Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF14,00x1,50	*48,88*	100	15	9,00	11,0
M14,00x2,00	*49,66*	110	20	9,00	11,0
MF16,00x1,50	*60,97*	100	15	9,00	12,0
M16,00x2,00	*58,49*	110	20	9,00	12,0
MF18,00x1,50	*73,10*	125	34	11,00	14,0
M18,00x2,50	*73,46*	125	25	11,00	14,0
MF20,00x1,50	*81,46*	125	22	12,00	16,0
M20,00x2,50	*77,28*	140	25	12,00	16,0
M22,00x2,50	*91,77*	140	25	14,50	18,00
M24,00x3,00	*108,73*	160	30	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2124 **HSSE-PM DIN 371** | M DIN 13 | Form. C | Tol. 6H | 35° | R | TICN

Aceros 800 - 1100 N/mm² — Aciers / Steel — TI F

Aplicaciones / Applications

MICRO FINISH



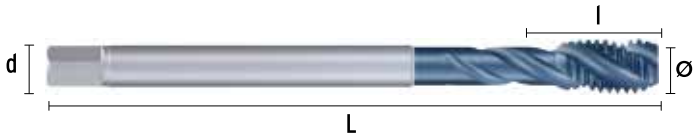
Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*26,46*	56	5	2,70	3,5
M4 x 0,70	*26,88*	63	7	3,40	4,5
M5 x 0,80	*29,01*	70	8	4,90	6,0
M6 x 1,00	*29,89*	80	10	4,90	6,0
M8 x 1,25	*38,51*	90	13	6,20	8,0
M10 x 1,50	*46,68*	100	15	8,00	10,0

2123 **HSSE-PM DIN 376/374** | M DIN 13 | Form. C | Tol. 6H | 35° | D | TICN

Aceros 800 - 1100 N/mm² — Aciers / Steel — TI F

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
MF8,00x1,00	*42,79*	90	14	4,90	6,0
M8,00x1,25	*38,51*	90	14	4,90	6,0
MF10,00x1,00	*52,06*	90	10	5,50	7,0
MF10,00x1,25	*54,35*	100	16	5,50	7,0
M10,00x1,50	*46,68*	100	16	5,50	7,0
MF12,00x1,00	*77,51*	100	15	7,00	9,0
MF12,00x1,25	*76,03*	100	15	7,00	9,0
MF12,00x1,50	*77,58*	100	15	7,00	9,0
M12,00x1,75	*71,65*	110	18	7,00	9,0
MF14,00x1,25	*112,15*	100	22	9,00	11,00
MF14,00x1,50	*85,56*	100	15	9,00	11,0
M14,00x2,00	*86,34*	110	20	9,00	11,0
MF16,00x1,50	*96,01*	100	15	9,00	12,0
M16,00x2,00	*93,52*	110	20	9,00	12,0
MF18,00x1,50	*118,34*	125	34	11,00	14,0
M18,00x2,50	*118,91*	125	25	11,00	14,0
MF20,00x1,50	*131,56*	125	22	12,00	16,0
M20,00x2,50	*127,36*	140	25	12,00	16,0
M22,00x2,50	*141,87*	140	25	14,50	18,00
M24,00x3,00	*158,82*	160	30	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2178 HSSE-PM DIN 371 | M DIN 13 | Form. C | Tol. 6HX | 15º | R | TICN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — TI | 1100 N/mm2 | INOX | F | PL

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*29,60*	56	11	2,70	3,5
M4 x 0,70	*29,60*	63	13	3,40	4,5
M5 x 0,80	*31,45*	70	15	4,90	6,0

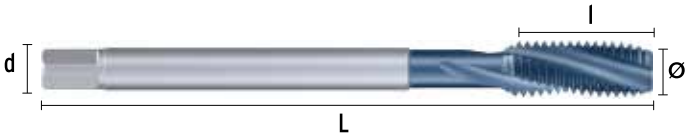
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*33,65*	80	17	4,90	6,0
M8 x 1,25	*38,51*	90	20	6,20	8,0
M10 x 1,50	*50,39*	100	20	8,00	10,0

2177 HSSE-PM DIN 376 | M DIN 13 | Form. C | Tol. 6HX | 15º | D | TICN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — TI | 1100 N/mm2 | INOX | F | PL

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M8 x 1,25	*42,28*	90	22	4,90	6,0
M10 x 1,50	*55,43*	100	24	5,50	7,0
M12 x 1,75	*70,31*	110	29	7,00	9,0
M14 x 2,00	*97,47*	110	30	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16 x 2,00	*101,05*	110	32	9,00	12,0
M18 x 2,50	*137,76*	125	34	11,00	14,0
M20 x 2,50	*154,22*	140	34	12,00	16,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2120 **HSSE DIN 371** | M DIN 13 | Form. C | Tol. 6H | 35° | R | VAP

Aceros inox — Aciers inox / Stainless Steel | 800 N/mm2 | 1100 N/mm2 | TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*18,86*	56	6	2,70	3,5
M4 x 0,70	*18,86*	63	7	3,40	4,5
M5 x 0,80	*18,86*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*20,14*	80	10	4,90	6,0
M8 x 1,25	*23,65*	90	14	6,20	8,0
M10 x 1,50	*28,86*	100	16	8,00	10,0

2119 **HSSE DIN 376/374** | M DIN 13 | Form. C | Tol. 6H | 35° | D | VAP

Aceros inox — Aciers inox / Stainless Steel | 800 N/mm2 | 1100 N/mm2 | TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF8,00x1,00	*27,93*	90	14	4,90	6,0
M8,00x1,25	*23,65*	90	14	4,90	6,0
MF10,00x1,00	*34,23*	90	10	5,50	7,0
MF10,00x1,25	*36,53*	100	16	5,50	7,0
M10,00x1,50	*28,86*	100	16	5,50	7,0
MF12,00x1,00	*44,89*	100	15	7,00	9,0
MF12,00x1,25	*43,42*	100	15	7,00	9,0
MF12,00x1,50	*44,99*	100	15	7,00	9,0
M12,00x1,75	*39,03*	110	18	7,00	9,0
MF14,00x1,25	*63,02*	100	22	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF14,00x1,50	*47,74*	100	15	9,00	11,0
M14,00x2,00	*48,52*	110	20	9,00	11,0
MF16,00x1,50	*61,12*	100	15	9,00	12,0
M16,00x2,00	*58,64*	110	20	9,00	12,0
MF18,00x1,50	*78,27*	125	34	11,00	14,0
M18,00x2,50	*78,81*	125	25	11,00	14,0
MF20,00x1,50	*88,18*	125	22	12,00	16,0
M20,00x2,50	*83,98*	140	25	12,00	16,0
M22,00x2,50	*89,49*	140	25	14,50	18,00
M24,00x3,00	*94,87*	160	30	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2221 HSSE DIN 371 | M DIN 13 | Form. C | Tol. 6H | 35° | R | TIN

Aceros inox — Aciers inox / Stainless Steel — 800 N/mm2 — 1100 N/mm2 — TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*22,97*	56	6	2,70	3,5
M4 x 0,70	*23,78*	63	7	3,40	4,5
M5 x 0,80	*23,78*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*25,04*	80	10	4,90	6,0
M8 x 1,25	*29,63*	90	14	6,20	8,0
M10 x 1,50	*37,51*	100	16	8,00	10,0

2222 HSSE DIN 376/374 | M DIN 13 | Form. C | Tol. 6H | 35° | D | TIN

Aceros inox — Aciers inox / Stainless Steel — 800 N/mm2 — 1100 N/mm2 — TI

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF8,00x1,00	*33,92*	90	14	4,90	6,0
M8,00x1,25	*29,64*	90	14	4,90	6,0
MF10,00x1,00	*63,88*	90	10	5,50	7,0
MF10,00x1,25	*66,18*	100	16	5,50	7,0
M10,00x1,50	*37,52*	100	16	5,50	7,0
MF12,00x1,00	*52,41*	100	15	7,00	9,0
MF12,00x1,25	*50,93*	100	15	7,00	9,0
MF12,00x1,50	*52,32*	100	15	7,00	9,0
M12,00x1,75	*46,55*	110	18	7,00	9,0
MF14,00x1,25	*73,13*	100	22	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF14,00x1,50	*55,52*	100	15	9,00	11,0
M14,00x2,00	*56,30*	110	20	9,00	11,0
MF16,00x1,50	*68,09*	100	15	9,00	12,0
M16,00x2,00	*65,61*	110	20	9,00	12,0
MF18,00x1,50	*85,26*	125	34	11,00	14,0
M18,00x2,50	*85,66*	125	25	11,00	14,0
MF20,00x1,50	*103,43*	125	22	12,00	16,0
M20,00x2,50	*99,23*	140	25	12,00	16,0
M22,00x2,50	*104,74*	140	25	14,50	18,00
M24,00x3,00	*110,11*	160	30	14,50	18,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2182 HSSE DIN 371

M DIN 13 | Form. C | Tol. 6H | 45° | R

Aluminio — **Aluminium**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*16,91*	56	11	2,70	3,5
M4 x 0,70	*16,91*	63	13	3,40	4,5
M5 x 0,80	*17,25*	70	16	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*18,71*	80	19	4,90	6,0
M8 x 1,25	*22,34*	90	22	6,20	8,0
M10 x 1,50	*26,39*	100	24	8,00	10,0

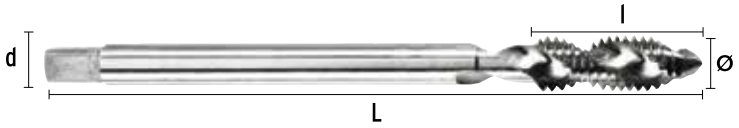
2181 HSSE DIN 376

M DIN 13 | Form. C | Tol. 6H | 45° | D

Aluminio — **Aluminium**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*18,71*	80	19	3,40	4,5
M8 x 1,25	*22,34*	90	22	4,90	6,0
M10 x 1,50	*26,39*	100	24	5,50	7,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12 x 1,75	*31,38*	110	29	7,00	9,0
M14 x 2,00	*45,87*	110	30	9,00	11,0
M16 x 2,00	*61,86*	110	30	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2186 HSSE DIN 371 | M DIN 13 | Form. C | Tol. 6H | 45° | R | CrN

Aluminio — **Aluminium**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*24,67*	56	11	2,70	3,5
M4 x 0,70	*25,63*	63	13	3,40	4,5
M5 x 0,80	*26,32*	70	16	4,90	6,0

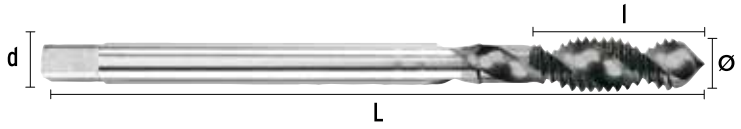
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*27,78*	80	19	4,90	6,0
M8 x 1,25	*32,72*	90	22	6,20	8,0
M10 x 1,50	*37,66*	100	24	8,00	10,0

2185 HSSE DIN 376 | M DIN 13 | Form. C | Tol. 6H | 45° | D | CrN

Aluminio — **Aluminium**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*27,78*	80	19	3,40	4,5
M8 x 1,25	*32,72*	90	22	4,90	6,0
M10 x 1,50	*37,66*	100	24	5,50	7,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12 x 1,75	*43,59*	110	29	7	9,0
M14 x 2,00	*59,66*	110	30	9	11,0
M16 x 2,00	*77,83*	110	30	9	12,0

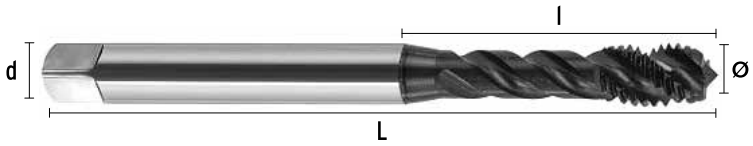
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2256 HSSE-PM DIN 371 MULTI | M DIN 13 | Form. C | Tol. 6HX | 45° | R | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00x0,50	*33,17*	56	5	2,70	3,5
M4,00x0,70	*34,97*	63	7	3,40	4,5
M5,00x0,80	*37,93*	70	8	4,90	6,0

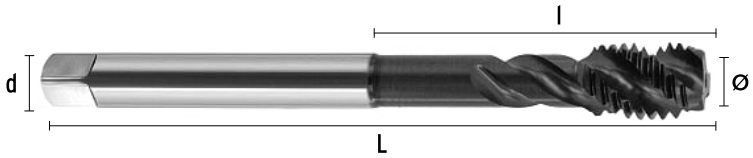
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6,00x1,00	*39,30*	80	10	4,90	6,0
M8,00x1,25	*47,27*	90	13	6,20	8,0
M10,00x1,50	*62,11*	100	15	8,00	10,0

2257 HSSE-PM DIN 376 MULTI | M DIN 13 | Form. C | Tol. 6HX | 45° | D | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12,00x1,75	*91,54*	110	18	7,00	9,0
M14,00x2,00	*119,99*	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16,00x2,00	*128,99*	110	20	9,00	12,0

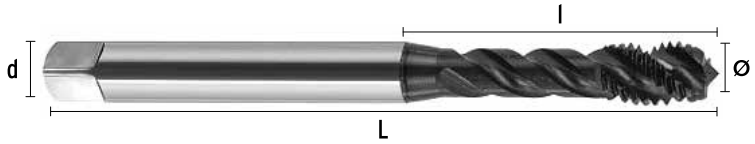
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2260 HSSE-PM DIN 371 SYNCHRO | M DIN 13 | Form. C | Tol. 6HX | 45° | CNC | R | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00x0,50	*26,56*	56	5	2,70	3,5
M4,00x0,70	*27,97*	63	7	3,40	4,5
M5,00x0,80	*30,35*	70	8	4,90	6,0

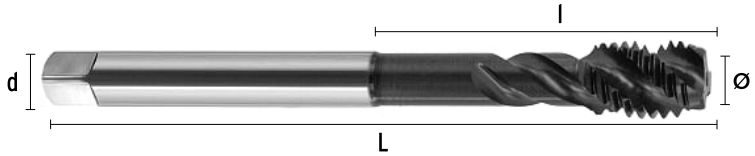
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6,00x1,00	*31,47*	80	10	4,90	6,0
M8,00x1,25	*37,79*	90	13	6,20	8,0
M10,00x1,50	*49,70*	100	15	8,00	10,0

2261 HSSE-PM DIN 376 SYNCHRO | M DIN 13 | Form. C | Tol. 6HX | 45° | CNC | D | HL

Aceros 800-1100 N/mm² Aciers / Steel | Inox / Inox / Stainless | Aluminio / Aluminium / Aluminium | Titanio / Titane / Titanium | Fundición / Fonte / Cast Iron

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12,00x1,75	*79,81*	110	18	7,00	9,0
M14,00x2,00	*104,57*	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16,00x2,00	*155,93*	110	20	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2188 HSSE-PM DIN 371 | A>12% | M DIN 13 | Form. C | Tol. 6HX | R | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*27,51*	56	10	2,70	3,5
M4 x 0,70	*27,51*	63	7	3,40	4,5
M5 x 0,80	*30,90*	70	8	4,90	6,0

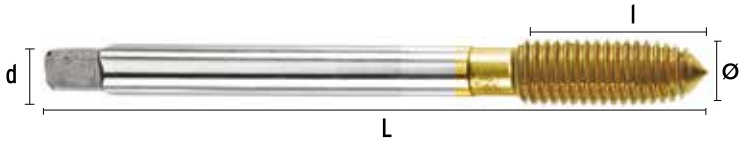
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*33,69*	80	10	4,90	6,0
M8 x 1,25	*45,37*	90	13	6,20	8,0
M10 x 1,50	*55,18*	100	15	8,00	10,0

2187 HSSE-PM DIN 376 | A>12% | M DIN 13 | Form. C | Tol. 6HX | D | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12 x 1,75	*68,59*	110	18	7,00	9,0
M14 x 2,00	*94,52*	110	26	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16 x 2,00	*114,86*	110	27	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2214 | HSSE-PM DIN 371 | A>12% | M DIN 13 | Form. C | Tol. 6HX | R | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*28,86*	56	10	2,70	3,5
M4 x 0,70	*28,86*	63	7	3,40	4,5
M5 x 0,80	*32,34*	70	8	4,90	6,0

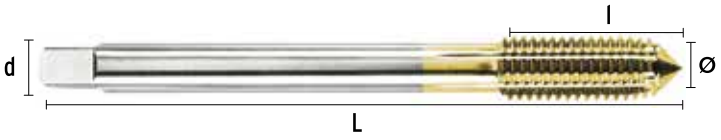
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*35,12*	80	10	4,90	6,0
M8 x 1,25	*47,11*	90	13	6,20	8,0
M10 x 1,50	*57,13*	100	15	8,00	10,0

2213 | HSSE-PM DIN 376 | A>12% | M DIN 13 | Form. C | Tol. 6HX | D | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF8,00x1,00	*74,60*	90	22	4,90	6,0
M8,00x1,25	*47,11*	90	22	4,90	6,0
MF10,00x1,00	*54,25*	90	20	5,50	7,0
MF10,00x1,25	*84,60*	100	24	5,50	7,0
M10,00x1,50	*57,13*	100	24	5,50	7,0
MF12,00x1,00	*62,95*	100	22	7,00	9,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
MF12,00x1,25	*87,02*	100	22	7,00	9,0
MF12,00x1,50	*85,15*	100	22	7,00	9,0
M12,00x1,75	*73,33*	110	29	7,00	9,0
M14,00x2,00	*103,17*	110	26	9,00	11,0
MF16,00x1,50	*128,50*	100	22	9,00	12,0
M16,00x2,00	*123,53*	110	27	9,00	12,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2216 HSSE-PM DIN 371 | A>12% | M DIN 13 | Form. C | Tol. 6GX | R | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M3 x 0,50	*27,51*	56	10	2,70	3,5
M4 x 0,70	*27,51*	63	7	3,40	4,5
M5 x 0,80	*30,90*	70	8	4,90	6,0

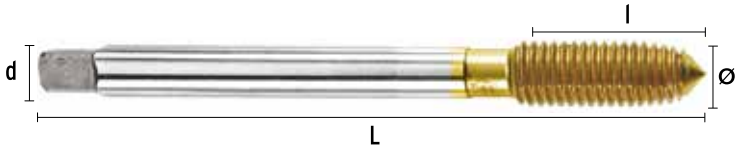
Ø x P mm	€	L mm	l mm	☐ mm	d mm
M6 x 1,00	*33,69*	80	10	4,90	6,0
M8 x 1,25	*45,37*	90	13	6,20	8,0
M10 x 1,50	*55,18*	100	15	8,00	10,0

2215 HSSE-PM DIN 376 | A>12% | M DIN 13 | Form. C | Tol. 6GX | D | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
M12 x 1,75	*68,59*	110	18	7,00	9,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2218 HSSE-PM DIN 371 | A>12% | M DIN 13 | Form. C | Tol. 6GX | R | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3 x 0,50	*28,86*	56	10	2,70	3,5
M4 x 0,70	*28,86*	63	7	3,40	4,5
M5 x 0,80	*32,34*	70	8	4,90	6,0

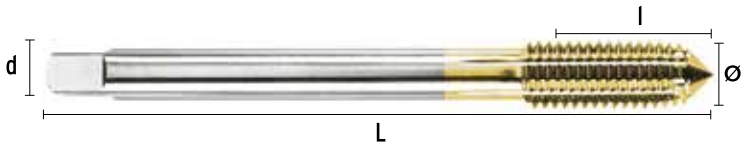
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M6 x 1,00	*35,12*	80	10	4,90	6,0
M8 x 1,25	*47,11*	90	13	6,20	8,0
M10 x 1,50	*57,13*	100	15	8,00	10,0

2217 HSSE-PM DIN 376 | A>12% | M DIN 13 | Form. C | Tol. 6GX | D | TIN

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL inox

Aplicaciones / Applications

MICRO FINISH



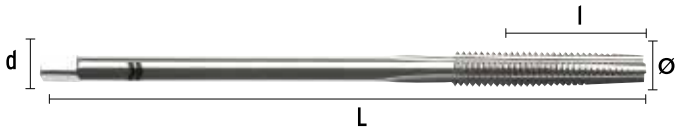
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12 x 1,75	*73,33*	110	18	7,00	9,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2199 **HSSE DIN 357** | M DIN 13 | Tol. 6H | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



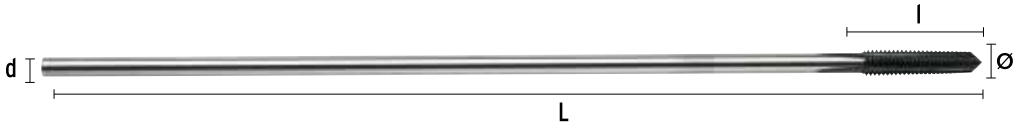
Ø x P mm	€	L mm	l mm	☒ mm	Z	d mm
M3 x 0,50	*25,21*	70	22	-	3	2,2
M4 x 0,70	*25,21*	90	25	2,10	3	2,8
M5 x 0,80	*25,93*	100	28	2,70	3	3,5
M6 x 1,00	*24,04*	110	32	3,40	3	4,5
M8 x 1,25	*28,09*	125	40	4,90	3	6,0
M10 x 1,50	*43,21*	140	45	5,50	3	7,0
M12 x 1,75	*51,84*	180	50	7,00	3	9,0

Ø x P mm	€	L mm	l mm	☒ mm	Z	d mm
M14 x 2,00	*57,59*	200	56	9,00	3	11,0
M16 x 2,00	*70,57*	200	63	9,00	3	12,0
M18 x 2,50	*86,40*	220	63	11,00	4	14,0
M20 x 2,50	*100,07*	250	70	12,00	4	16,0
M22 x 2,50	*128,14*	280	80	14,50	4	18,0
M24 x 3,00	*151,17*	280	80	14,50	4	18,0

2134 **HSSE** | M DIN 13 | 16-18 tpi | Tol. 6H | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	d mm
M3 x 0,50	*69,10*	280	12	2,5
M4 x 0,70	*68,13*	280	17	3,0
M5 x 0,80	*68,13*	280	20	3,8
M6 x 1,00	*68,13*	280	25	4,5
M8 x 1,25	*72,27*	280	31	6,1
M10 x 1,50	*83,77*	280	37	7,8
M12 x 1,75	*130,63*	420	43	9,4

Ø x P mm	€	L mm	l mm	d mm
M14 x 2,00	*126,17*	420	50	11,0
M16 x 2,00	*177,44*	420	50	12,9
M18 x 2,50	*219,13*	530	62	14,2
M20 x 2,50	*289,79*	530	63	16,1
M22 x 2,50	*334,73*	530	62	18,0
M24 x 3,00	*468,84*	530	75	19,2

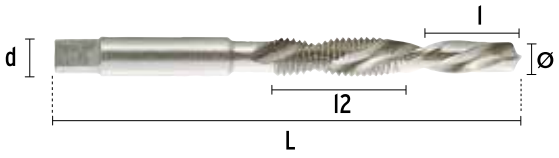
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2806 HSSE DIN 13

M DIN 13 | Tol. 6H

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications

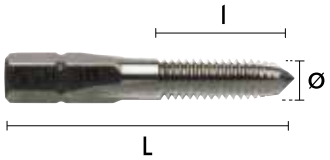


Ø x P mm	€	L mm	l mm	l2 mm	▨ mm	d mm
M3 x 0,50	*34,17*	56	16	11	2,40	3,0
M4 x 0,70	*34,17*	63	18	14	3,00	4,0
M5 x 0,80	*34,17*	71	20	18	3,80	5,0
M6 x 1,00	*37,76*	80	22	22	4,90	6,0

Ø x P mm	€	L mm	l mm	l2 mm	▨ mm	d mm
M8 x 1,25	*42,66*	95	26	25	6,20	8,0
M10 x 1,50	*46,94*	106	30	31	8,00	10,0
M12 x 1,75	*55,40*	115	32	35	9,00	12,0

1504 HSS Hex.

M DIN 13 | Tol. 6H | 1/4"



Ø mm	L mm	l mm	€	▨ mm
M3,00 x 0,50	33	11	*6,98*	1/4"
M4,00 x 0,70	35	12	*6,98*	1/4"
M5,00 x 0,80	36	15	*6,98*	1/4"

Ø mm	L mm	l mm	€	▨ mm
M6,00 x 1,00	39	18	*6,98*	1/4"
M8,00 x 1,25	40	19	*9,67*	1/4"
M10,00 x 1,50	41	21	*11,07*	1/4"

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2248 **HSS ISO 529** | M DIN 13 | Form. B "Gun" | Tol. 6H

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00x0,50	*5,67*	48	11	2,50	3,15
M4,00x0,70	*5,75*	53	13	3,15	4,00
M5,00x0,80	*7,29*	58	16	4,00	5,00
M6,00x1,00	*7,63*	66	19	5,00	6,30
M8,00x1,25	*7,88*	72	22	6,30	8,00
M10,00x1,50	*9,63*	80	24	8,00	10,00
M12,00x1,75	*17,88*	89	29	7,10	10,20
M14,00x2,00	*15,29*	95	30	9,00	11,20

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16,00x2,00	*17,88*	102	32	10,00	12,50
M18,00x2,50	*22,33*	112	37	11,20	14,00
M20,00x2,50	*24,96*	112	37	11,20	14,00
M22,00x2,50	*28,29*	118	38	12,50	16,00
M24,00x3,00	*35,75*	130	45	14,00	18,00
M27,00x3,00	*48,00*	135	45	16,00	20,00
M30,00x3,50	*89,08*	138	48	16,00	20,00

2249 **HSS ISO 529** | M DIN 13 | Form. C | 35° | Tol. 6H

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3,00x0,50	*7,08*	48	11	2,50	3,15
M4,00x0,70	*7,33*	53	13	3,15	4,00
M5,00x0,80	*9,08*	58	16	4,00	5,00
M6,00x1,00	*9,42*	66	19	5,00	6,30
M8,00x1,25	*10,04*	72	22	6,30	8,00
M10,00x1,50	*12,04*	80	24	8,00	10,00
M12,00x1,75	*18,21*	89	29	7,10	10,20
M14,00x2,00	*20,54*	95	30	9,00	11,20

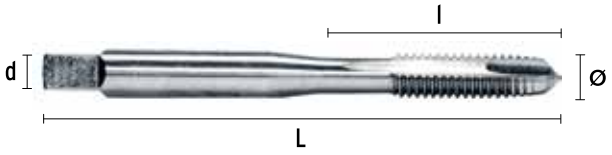
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M16,00x2,00	*22,33*	102	32	10,00	12,50
M18,00x2,50	*28,04*	112	37	11,20	14,00
M20,00x2,50	*31,42*	112	37	11,20	14,00
M22,00x2,50	*35,29*	118	38	12,50	16,00
M24,00x3,00	*44,58*	130	45	14,00	18,00
M27,00x3,00	*59,92*	135	45	16,00	20,00
M30,00x3,50	*100,67*	138	48	16,00	20,00

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2266 **HSSE JIS** | M DIN 13 | MF DIN 13 | Form. B "Gun" | Tol. 6H | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



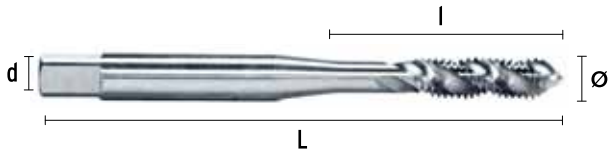
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3x0.50	*11,58*	46	11	3.2	4,0
M4x0.70	*11,84*	52	13	4,0	5,0
M5x0.80	*11,86*	60	16	4.5	5.5
M6x1,00	*13,01*	62	19	4.5	6,0
M8x1,25	*14,35*	70	22	5,0	6.2
M10x1,50	*17,61*	75	24	5.5	7,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12x1,75	*22,48*	82	29	6.5	8.5
M14x2,00	*29,60*	88	30	8,0	10.5
M16x2,00	*36,36*	95	32	10,0	12.5
M18x2,50	*49,41*	100	37	11,0	14,0
M20x2,50	*53,30*	105	37	12,0	15,0

2267 **HSSE JIS** | M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | 35° | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3x0.50	*14,28*	46	11	3.2	4,0
M4x0.70	*14,28*	52	13	4,0	5,0
M5x0.80	*13,80*	60	16	4.5	5.5
M6x1,00	*15,13*	62	19	4.5	6,0
M8x1,25	*18,04*	70	22	5,0	6.2
M10x1,50	*20,98*	75	24	5.5	7,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12x1,75	*28,02*	82	29	6.5	8.5
M14x2,00	*35,97*	88	30	8,0	10.5
M16x2,00	*43,44*	95	32	10,0	12.5
M18x2,50	*58,41*	100	37	11,0	14,0
M20x2,50	*62,23*	105	37	12,0	15,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2268 HSSE JIS | M DIN 13 | MF DIN 13 | Form. B "Gun" | Tol. 6H | D | VAP

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm²

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3x0.50	*12,96*	46	11	3.2	4,0
M4x0.70	*13,27*	52	13	4,0	5,0
M5x0.80	*13,28*	60	16	4.5	5.5
M6x1,00	*14,57*	62	19	4.5	6,0
M8x1,25	*16,07*	70	22	5,0	6.2
M10x1,50	*19,73*	75	24	5.5	7,0

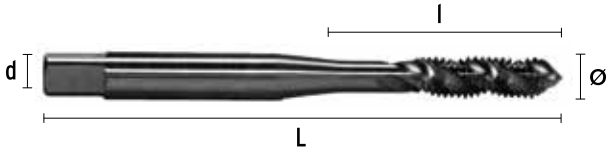
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12x1,75	*25,18*	82	29	6.5	8.5
M14x2,00	*33,15*	88	30	8,0	10.5
M16x2,00	*40,72*	95	32	10,0	12.5
M18x2,50	*55,34*	100	37	11,0	14,0
M20x2,50	*59,70*	105	37	12,0	15,0

2269 HSSE JIS | M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | 35° | D | VAP

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm²

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3x0.50	*16,01*	46	11	3.2	4,0
M4x0.70	*16,01*	52	13	4,0	5,0
M5x0.80	*15,46*	60	16	4.5	5.5
M6x1,00	*16,94*	62	19	4.5	6,0
M8x1,25	*20,21*	70	22	5,0	6.2
M10x1,50	*23,51*	75	24	5.5	7,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12x1,75	*31,38*	82	29	6.5	8.5
M14x2,00	*40,29*	88	30	8,0	10.5
M16x2,00	*48,65*	95	32	10,0	12.5
M18x2,50	*65,42*	100	37	11,0	14,0
M20x2,50	*69,70*	105	37	12,0	15,0

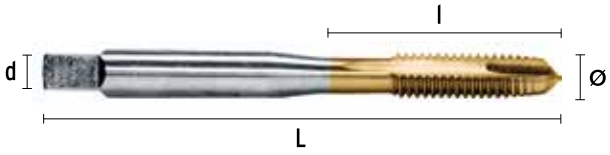
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2270 | **HSSE JIS** | M DIN 13 | MF DIN 13 | Form. B "Gun" | Tol. 6H | D | TIN

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3x0.50	*16,21*	46	11	3.2	4,0
M4x0.70	*17,32*	52	13	4,0	5,0
M5x0.80	*17,33*	60	16	4.5	5.5
M6x1,00	*18,49*	62	19	4.5	6,0
M8x1,25	*21,40*	70	22	5,0	6.2
M10x1,50	*28,07*	75	24	5.5	7,0

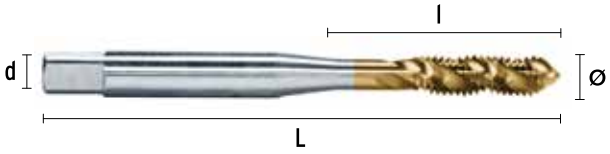
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12x1,75	*33,99*	82	29	6.5	8.5
M14x2,00	*42,66*	88	30	8,0	10.5
M16x2,00	*50,72*	95	32	10,0	12.5
M18x2,50	*63,77*	100	37	11,0	14,0
M20x2,50	*67,66*	105	37	12,0	15,0

2271 | **HSSE JIS** | M DIN 13 | MF DIN 13 | Form. C | Tol. 6H | 35° | D | TIN

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M3x0.50	*19,15*	46	11	3.2	4,0
M4x0.70	*20,03*	52	13	4,0	5,0
M5x0.80	*19,55*	60	16	4.5	5.5
M6x1,00	*20,87*	62	19	4.5	6,0
M8x1,25	*25,43*	70	22	5,0	6.2
M10x1,50	*31,93*	75	24	5.5	7,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
M12x1,75	*40,09*	82	29	6.5	8.5
M14x2,00	*49,66*	88	30	8,0	10.5
M16x2,00	*58,49*	95	32	10,0	12.5
M18x2,50	*73,46*	100	37	11,0	14,0
M20x2,50	*77,28*	105	37	12,0	15,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2148 HSSE DIN 371

UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | R

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº4 - 40h	22,82	56	11	2,70	3,5
Nº5 - 40h	22,82	56	11	2,70	3,5
Nº6 - 32h	21,72	56	11	3,00	4,0
Nº8 - 32h	21,72	63	13	3,40	4,5

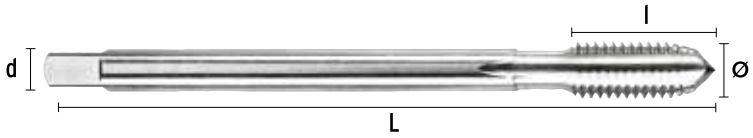
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº10 - 24h	22,82	70	16	4,90	6,0
Nº12 - 24h	23,94	80	19	4,90	6,0
1/4 - 20h	20,26	80	19	5,50	7,0
5/16 - 18h	21,54	90	22	6,20	8,0

2147 HSSE DIN 376

UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | D

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4 - 20h	20,26	80	19	3,40	4,5
5/16 - 18h	22,92	90	22	4,90	6,0
3/8 - 16h	26,15	100	24	5,50	7,0
7/16 - 14h	35,95	100	24	6,20	8,0
1/2 - 13h	39,45	110	29	7,00	9,0
9/16 - 12h	53,72	110	30	9,00	11,0
5/8 - 11h	52,18	110	30	9,00	12,0

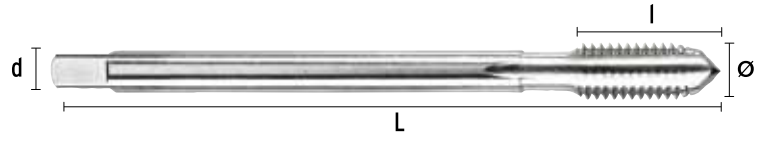
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
3/4 - 10h	68,96	125	35	11,00	14,0
7/8 - 9h	90,85	140	36	14,50	18,0
1" - 8h	119,31	160	38	14,50	18,0
1"1/8 - 7h	150,65	180	45	18,00	22,0
1"1/4 - 7h	184,71	180	45	18,00	22,0
1"1/2 - 6h	311,46	200	55	24,00	32,0

2147/5 HSSE DIN 376

UNC ANSI/ASME B1.1 | Form. C | LH | Tol. 2B | D

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4 - 20h	40,50	80	19	3,40	4,5
5/16 - 18h	45,84	90	22	4,90	6,0
3/8 - 16h	52,32	100	24	5,50	7,0
7/16 - 14h	71,91	100	24	6,20	8,0
1/2 - 13h	78,89	110	29	7,00	9,0

Ø x P mm	€	L mm	l mm	mm	d mm
9/16 - 12h	107,45	110	30	9,00	11,0
5/8 - 11h	104,36	110	30	9,00	12,0
3/4 - 10h	137,92	125	35	11,00	14,0
7/8 - 9h	181,72	140	36	14,50	18,0
1" - 8h	238,60	160	38	14,50	18,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2150 HSSE DIN 371

UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | R

Aceros 400 - 800 N/mm² — Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº4 - 40h	*27,38*	56	11	2,70	3,5
Nº5 - 40h	*27,38*	56	11	2,70	3,5
Nº6 - 32h	*26,09*	56	11	3,00	4,0
Nº8 - 32h	*26,09*	63	13	3,40	4,5

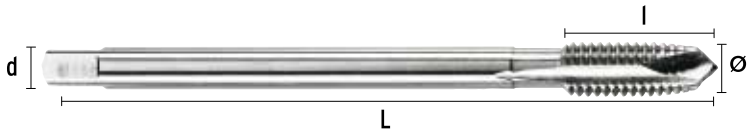
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº10 - 24h	*27,38*	70	16	4,90	6,0
Nº12 - 24h	*28,71*	80	19	4,90	6,0
1/4 - 20h	*22,11*	80	19	5,50	7,0
5/16 - 18h	*25,23*	90	22	6,20	8,0

2149 HSSE DIN 376

UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | D

Aceros 400 - 800 N/mm² — Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4 - 20h	*22,11*	80	19	3,40	4,5
5/16 - 18h	*25,26*	90	22	4,90	6,0
3/8 - 16h	*39,46*	100	24	5,50	7,0
7/16 - 14h	*39,46*	100	24	6,20	8,0
1/2 - 13h	*43,26*	110	29	7,00	9,0
9/16 - 12h	*57,42*	110	30	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
5/8 - 11h	*57,42*	110	30	9,00	12,0
3/4 - 10h	*75,94*	125	35	11,00	14,0
7/8 - 9h	*99,83*	140	36	14,50	18,0
1" - 8h	*131,03*	160	38	14,50	18,0
1"1/8 - 7h	*166,52*	180	45	18,00	22,0
1"1/4 - 7h	*204,19*	180	45	18,00	22,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2262 **HSSE DIN 371** | UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | R | VAP

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº5-40h	*32,04*	56	11	2,70	3,5
Nº8-32h	*30,52*	63	13	3,40	4,5
Nº10-24h	*32,04*	70	14	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4-20h	*25,86*	80	18	5,50	7,0
5/16-18h	*29,52*	90	20	6,20	8,0
3/8-16h	*46,17*	100	21	8,00	10,0

2263 **HSSE DIN 376** | UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | D | VAP

Aceros 800 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/2-13h	*50,61*	110	27	7,00	9,0
9/16-12h	*67,18*	110	30	9,00	11,0
5/8-11h	*67,18*	110	30	9,00	12,0
3/4-10h	*88,85*	125	35	11,00	14,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2234 **HSSE DIN 371** | UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | R | TIN

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	☒ mm	d mm
Nº 5-40 h	*32,03*	56	11	2,70	3,5
Nº 8-32 h	*31,58*	63	13	3,40	4,5
Nº 10-24 h	*32,86*	70	16	4,90	6,0

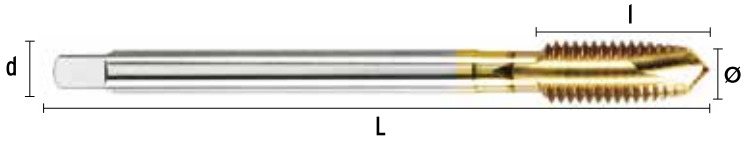
Ø x P mm	€	L mm	l mm	☒ mm	d mm
1/4-20h	27,60	80	18	5,50	7,0
5/16-18h	32,29	90	20	6,20	8,0
3/8-16h	49,90	100	21	8,00	10,0

2235 **HSSE DIN 376** | UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | D | TIN

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH THREADING TECHNOLOGY



Ø x P mm	€	L mm	l mm	☒ mm	d mm
1/2-13h	56,32	110	29	7,00	9,0
9/16-12h	70,48	110	30	9,00	11,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
5/8-11h	71,76	110	30	9,00	12,0
3/4-10h	98,41	125	35	11,00	14,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2238 HSSE DIN 371

UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | R | VAP

Aceros inoxidables — **Aciers inox / Stainless Steel** | F | 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº 5-40 h	*34,22*	56	11	2,70	3,5
Nº 8-32 h	*32,61*	63	13	3,40	4,5
Nº 10-24 h	*34,22*	70	14	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4-20h	*27,64*	80	18	5,50	7,0
5/16-18h	*31,54*	90	20	6,20	8,0
3/8-16h	*49,33*	100	21	8,00	10,0

2239 HSSE DIN 376

UNC ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | D | VAP

Aceros inoxidables — **Aciers inox / Stainless Steel** | F | 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/2-13h	54,08	110	29	7,00	9,0
9/16-12h	71,76	110	30	9,00	11,0

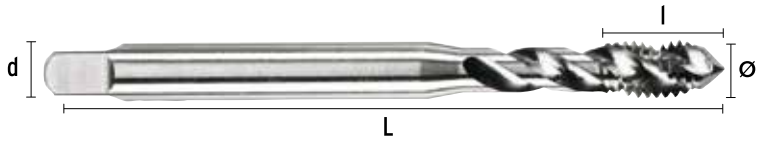
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
5/8-11h	71,76	110	30	9,00	12,0
3/4-10h	94,92	125	35	11,00	14,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2152 **HSSE DIN 371** | UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



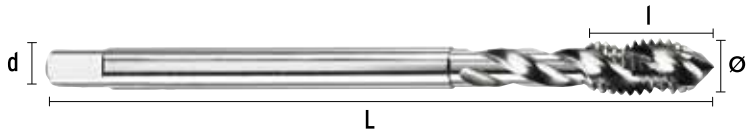
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº4 - 40h	*31,20*	56	6	2,70	3,5
Nº5 - 40h	*31,20*	56	6	2,70	3,5
Nº6 - 32h	*29,75*	56	6	3,00	4,0
Nº8 - 32h	*29,75*	63	7	3,40	4,5

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº10 - 24h	*31,20*	70	8	4,90	6,0
Nº12 - 24h	*30,02*	80	10	4,90	6,0
1/4 - 20h	*24,02*	80	10	5,50	7,0
5/16 - 18h	*33,93*	90	14	6,20	8,0

2151 **HSSE DIN 376** | UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4 - 20h	*30,02*	80	10	3,40	4,5
5/16 - 18h	*33,95*	90	14	4,90	6,0
3/8 - 16h	*37,97*	100	16	5,50	7,0
7/16 - 14h	*46,30*	100	16	6,20	8,0
1/2 - 13h	*50,65*	110	18	7,00	9,0
9/16 - 12h	*68,75*	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
5/8 - 11h	*66,88*	110	20	9,00	12,0
3/4 - 10h	*88,55*	125	25	11,00	14,0
7/8 - 9h	*138,58*	140	28	14,50	18,0
1" - 8h	*173,86*	160	32	14,50	18,0
1"1/8 - 7h	*190,34*	180	35	18,00	22,0
1"1/4 - 7h	*241,19*	180	35	18,00	22,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2264 **HSSE DIN 371** | UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | R | VAP

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
Nº 5-40 h	*36,51*	56	6	2,70	3,5
Nº 8-32 h	*34,80*	63	7	3,40	4,5
Nº 10-24 h	*36,51*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
1/4-20h	*28,11*	80	10	5,50	7,0
5/16-18h	*39,70*	90	14	6,20	8,0
3/8-16h	*44,43*	100	15	8,00	10,0

2265 **HSSE DIN 376** | UNC ANSI/ASME | Form. C | Tol. 2B | 35° | D | VAP

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	☐ mm	d mm
1/2-13h	*59,26*	110	18	7,00	9,0
9/16-12h	*80,43*	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
5/8-11h	*78,24*	110	20	9,00	12,0
3/4-10h	*103,61*	125	25	11,00	14,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2236 HSSE DIN 371 | UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | R | TIN

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº 5-40 h	*35,85*	56	6	2,70	3,5
Nº 8-32 h	*35,24*	63	7	3,00	4,5
Nº 10-24 h	*36,68*	70	8	4,90	6,0

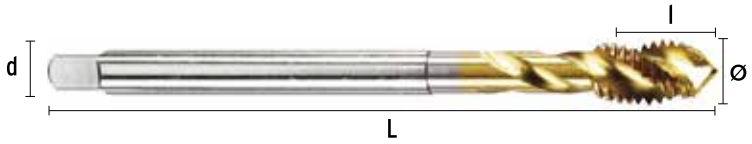
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4-20h	29,50	80	10	5,50	7,0
5/16-18h	40,98	90	14	6,20	8,0
3/8-16h	48,43	100	15	8,00	10,0

2237 HSSE DIN 376 | UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | D | TIN

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/2-13 h	63,73	110	18	7,00	9,0
9/16-12 h	81,81	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
5/8-11 h	81,23	110	20	9,00	12,0
3/4-10 h	111,02	125	25	11,00	14,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2240 HSSE DIN 371 | UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | R | VAP

Aceros inoxidables — Aciers inox / Stainless Steel | F | 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº 5-40 h	*39,00*	56	6	2,70	3,5
Nº 8-32 h	*37,19*	63	7	3,00	4,5
Nº 10-24 h	*39,00*	70	8	4,90	6,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4-20h	*30,03*	80	10	5,50	7,0
5/16-18h	*42,41*	90	14	6,20	8,0
3/8-16h	*47,47*	100	15	8,00	10,0

2241 HSSE DIN 376 | UNC ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | D | VAP

Aceros inoxidables — Aciers inox / Stainless Steel | F | 1100 N/mm2

Aplicaciones / Applications

MICRO FINISH



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/2-13 h	63,32	110	18	7,00	9,0
9/16-12 h	85,93	110	20	9,00	11,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
5/8-11 h	83,59	110	20	9,00	12,0
3/4-10 h	110,70	125	25	11,00	14,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2154 **HSSE DIN 371** — UNF ANSI/ASME B1.1 — Form. C — Tol. 2B — R

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F — 1000 N/mm2

Aplicaciones / Applications



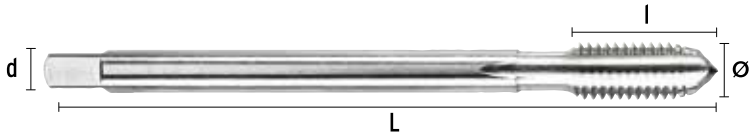
Ø x P mm	€	L mm	l mm	☐ mm	d mm
Nº4 - 48h	*25,00*	56	11	2,70	3,5
Nº5 - 44h	*25,00*	56	11	2,70	3,5
Nº6 - 40h	*23,96*	56	11	3,00	4,0
Nº8 - 36h	*23,96*	63	13	3,40	4,5

Ø x P mm	€	L mm	l mm	☐ mm	d mm
Nº10 - 32h	*23,96*	70	16	4,90	6,0
Nº12 - 28h	*25,00*	80	19	4,90	6,0
1/4 - 28h	*19,24*	80	19	5,50	7,0
5/16 - 24h	*22,11*	90	22	6,20	8,0

2153 **HSSE DIN 374** — UNF ANSI/ASME B1.1 — Form. C — Tol. 2B — D

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F — 1000 N/mm2

Aplicaciones / Applications



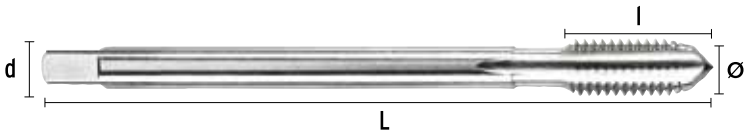
Ø x P mm	€	L mm	l mm	☐ mm	d mm
1/4 - 28h	*19,24*	80	19	3,40	4,5
5/16 - 24h	*22,11*	90	22	4,90	6,0
3/8 - 24h	*25,52*	90	20	5,50	7,0
7/16 - 20h	*32,70*	90	22	6,20	8,0
1/2 - 20h	*34,81*	100	22	7,00	9,0
9/16 - 18h	*42,74*	100	22	9,00	11,0
5/8 - 18h	*48,13*	100	22	9,00	12,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
3/4 - 16h	*61,58*	110	25	11,00	14,0
7/8 - 14h	*77,47*	125	25	14,50	18,0
1" - 12h	*101,54*	140	28	14,50	18,0
1"1/8 - 12h	*152,50*	150	28	18,00	22,0
1"1/4 - 12h	*192,74*	150	28	18,00	22,0
1"1/2 - 12h	*323,44*	170	30	24,00	32,0

2153/5 HSSE DIN 374 | UNF ANSI/ASME B1.1 | Form. C | LH | Tol. 2B | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
1/4 - 28h	*38,45*	80	19	3,40	4,5
5/16- 24h	*44,21*	90	22	4,90	6,0
3/8 - 24h	*51,04*	90	20	5,50	7,0
7/16- 20h	*65,38*	90	22	6,20	8,0
1/2 - 20h	*69,60*	100	22	7,00	9,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
9/16- 18h	*85,47*	100	22	9,00	11,0
5/8 - 18h	*96,26*	100	22	9,00	12,0
3/4 - 16h	*123,16*	110	25	11,00	14,0
7/8 - 14h	*154,94*	125	25	14,50	18,0
1" - 12h	*203,10*	140	28	14,50	18,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2156 HSSE DIN 371

UNF ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº4 - 48h	*24,54*	56	11	2,70	3,5
Nº5 - 44h	*24,54*	56	11	2,70	3,5
Nº6 - 40h	*28,68*	56	12	3,00	4,0
Nº8 - 36h	*28,68*	63	13	3,40	4,5

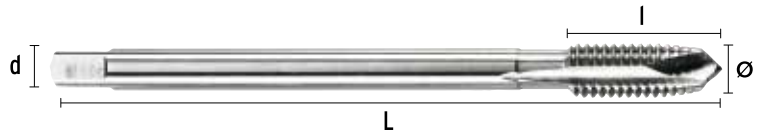
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Nº10 - 32h	*28,68*	70	16	4,90	6,0
Nº12 - 28h	*30,02*	80	19	4,90	6,0
1/4 - 28h	*21,16*	80	19	5,50	7,0
5/16 - 24h	*24,31*	90	22	6,20	8,0

2155 HSSE DIN 376

UNF ANSI/ASME B1.1 | Form. B "Gun" | Tol. 2B | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
1/4 - 28h	*21,15*	80	19	3,40	4,5
5/16 - 24h	*24,34*	90	22	4,90	6,0
3/8 - 24h	*28,03*	90	20	5,50	7,0
7/16 - 20h	*35,95*	90	22	6,20	8,0
1/2 - 20h	*38,30*	100	22	7,00	9,0

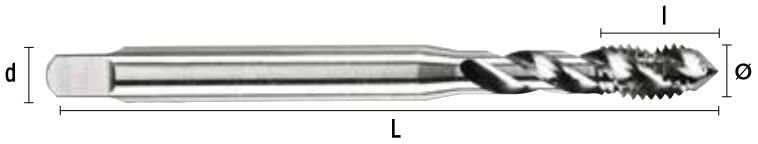
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
9/16- 18h	*46,99*	100	22	9,00	11,0
5/8 - 18h	*52,89*	100	22	9,00	12,0
3/4 - 16h	*67,77*	110	25	11,00	14,0
7/8 - 14h	*85,19*	125	25	14,50	18,0
1" - 12h	*111,67*	140	28	14,50	18,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2158 **HSSE DIN 371** | UNF ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | R

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



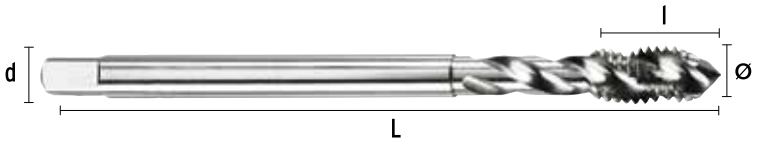
Ø x P mm	€	L mm	l mm	☒ mm	d mm
Nº4 - 48h	*34,19*	56	6	2,70	3,5
Nº5 - 44h	*34,19*	56	6	2,70	3,5
Nº6 - 40h	*23,89*	56	6	3,00	4,0
Nº8 - 36h	*23,89*	63	7	3,40	4,5

Ø x P mm	€	L mm	l mm	☒ mm	d mm
Nº10 - 32h	*23,89*	70	8	4,90	6,0
Nº12 - 28h	*34,19*	80	10	4,90	6,0
1/4 - 28h	*24,02*	80	10	5,50	7,0
5/16 - 24h	*27,69*	90	14	6,20	8,0

2157 **HSSE DIN 374** | UNF ANSI/ASME B1.1 | Form. C | Tol. 2B | 35° | D

Aceros 400 - 800 N/mm² — **Aciers / Steel** | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
1/4 - 28h	*24,00*	80	12	3,40	4,5
5/16 - 24h	*27,69*	90	15	4,90	6,0
3/8 - 24h	*31,88*	90	18	5,50	7,0
7/16 - 20h	*41,89*	90	15	6,20	8,0
1/2 - 20h	*44,58*	100	18	7,00	9,0

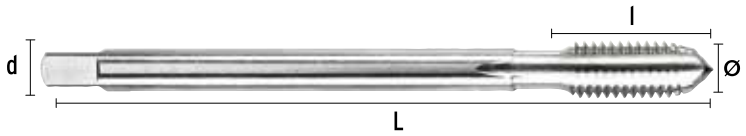
Ø x P mm	€	L mm	l mm	☒ mm	d mm
9/16 - 18h	*55,21*	100	15	9,00	11,0
5/8 - 18h	*61,69*	100	15	9,00	12,0
3/4 - 16h	*76,98*	110	17	11,00	14,0
7/8 - 14h	*120,70*	125	17	14,50	18,0
1" - 12h	*148,57*	140	20	14,50	18,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2189 HSSE DIN 374 | UN ANSI/ASME B1.1 | Form. C | Tol. 2B | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm2

Aplicaciones / Applications



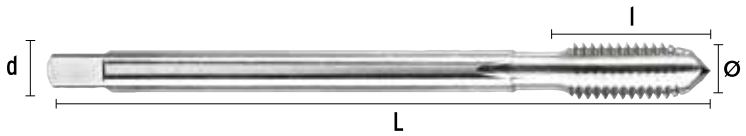
Ø x P mm	€	L mm	l mm	☐ mm	d mm
UN1"1/8 - 8h	*398,59*	180	45	18,00	22,0
UN1"1/4 - 8h	*514,25*	180	45	18,00	22,0
UN1"3/8 - 8h	*428,37*	200	56	22,00	28,0
UN1"1/2 - 8h	*490,46*	200	60	24,00	32,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
UN1"5/8 - 8h	*499,29*	200	60	24,00	32,0
UN1"3/4 - 8h	*625,92*	200	50	29,00	36,0
UN2" - 8h	*1.017,42*	225	50	32,00	40,0

2160 HSSE DIN 374 | UNEF ANSI/ASME B1.1 | Form. C | Tol. 2B | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
1/4 - 32h	*82,02*	80	19	3,40	4,5
5/16 - 32h	*95,53*	90	22	4,90	6,0
3/8 - 32h	*109,50*	90	20	5,50	7,0
7/16 - 28h	*139,38*	90	22	6,20	8,0
1/2 - 28h	*149,14*	100	22	7,00	9,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
9/16 - 24h	*179,14*	100	22	9,00	11,0
5/8 - 24h	*208,32*	100	22	9,00	12,0
3/4 - 20h	*276,07*	110	25	11,00	14,0
1" - 20h	*452,35*	140	28	14,50	18,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2136 HSSE DIN 371

BSW BS 84 | Form. C | R

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W3/32 - 48h	*19,28*	50	9	2,10	2,8
W1/8 - 40h	*16,10*	56	11	2,70	3,5
W5/32 - 32h	*16,10*	63	13	3,40	4,5
W3/16 - 24h	*16,10*	70	16	4,90	6,0

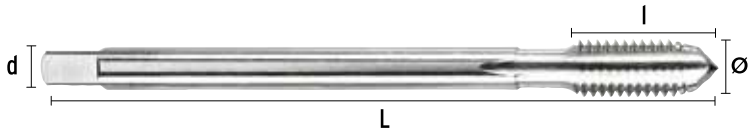
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W7/32 - 24h	*24,48*	80	19	4,90	6,0
W1/4 - 20h	*17,55*	80	19	5,50	7,0
W5/16 - 18h	*21,54*	90	22	6,20	8,0
W3/8 - 16h	*23,80*	100	24	8,00	10,0

2135 HSSE DIN 376

BSW BS 84 | Form. C | D

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W1/8 - 40h	*16,10*	56	11	2,00	2,2
W5/32 - 32h	*16,10*	63	13	2,10	2,8
W3/16 - 24h	*16,10*	70	16	2,70	3,5
W7/32 - 24h	*24,48*	80	19	3,40	4,5
W1/4 - 20h	*17,55*	80	19	3,40	4,5
W5/16 - 18h	*21,54*	90	22	4,90	6,0
W3/8 - 16h	*23,80*	100	24	5,50	7,0
W7/16 - 14h	*31,40*	100	24	6,20	8,0
W1/2 - 12h	*30,11*	110	29	7,00	9,0
W9/16 - 12h	*43,19*	110	30	9,00	11,0
W5/8 - 11h	*40,85*	110	30	9,00	12,0
W3/4 - 10h	*54,67*	125	35	11,00	14,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W7/8 - 9h	*74,04*	140	36	14,50	18,0
W1" - 8h	*93,11*	160	38	14,50	18,0
W1"1/8 - 7h	*123,52*	180	45	18,00	22,0
W1"1/4 - 7h	*179,28*	180	45	18,00	22,0
W1"3/8 - 6h	*294,74*	200	55	22,00	28,0
W1"1/2 - 6h	*319,95*	200	55	24,00	32,0
W1"5/8 - 5h	*466,85*	220	60	24,00	32,0
W1"3/4 - 5h	*503,65*	220	62	29,00	36,0
W1"7/8 - 4,5h	*558,36*	250	70	29,00	36,0
W2" - 4,5h	*720,81*	250	70	32,00	40,0
W2"1/4 - 4h	*785,58*	280	78	35,00	45,0
W2"1/2 - 4h	*907,46*	315	90	39,00	50,0

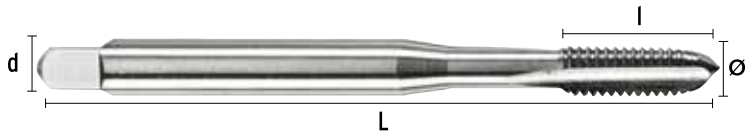
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2136/5 HSSE DIN 371

BSW BS 84 | Form. C | LH | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
W 1/8 - 40h	*32,22*	56	11	2,70	3,5
W 5/32 - 32h	*32,22*	63	13	3,40	4,5
W 3/16 - 24h	*32,22*	70	16	4,90	6,0

2135/5 HSSE DIN 376

BSW BS 84 | Form. C | LH | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
W1/4 - 20h	*35,10*	80	19	3,40	4,5
W5/16 - 18h	*43,09*	90	22	4,90	6,0
W3/8 - 16h	*47,60*	100	24	5,50	7,0
W7/16 - 14h	*62,79*	100	24	6,20	8,0
W1/2 - 12h	*60,21*	110	29	7,00	9,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
W9/16 - 12h	*86,37*	110	30	9,00	11,0
W5/8 - 11h	*81,72*	110	30	9,00	12,0
W3/4 - 10h	*109,32*	125	35	11,00	14,0
W7/8 - 9h	*148,08*	140	36	14,50	18,0
W1" - 8h	*186,22*	160	38	14,50	18,0

2138 HSSE DIN 371

BSW BS 84 | Form. B "Gun" | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm²

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W1/8 - 40h	*17,79*	56	11	2,70	3,5
W5/32 - 32h	*17,79*	63	13	3,40	4,5
W3/16 - 24h	*17,79*	70	16	4,90	6,0

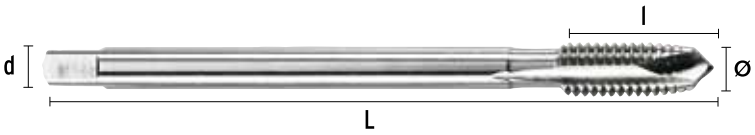
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W1/4 - 20h	*20,21*	80	16	5,50	7,0
W5/16 - 18h	*27,31*	90	18	6,20	8,0

2137 HSSE DIN 376

BSW BS 84 | Form. B "Gun" | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm²

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W 1/4 - 20h	*20,21*	80	19	3,40	4,5
W 5/16 - 18h	*23,66*	90	22	4,90	6,0
W 3/8 - 16h	*26,15*	100	24	5,50	7,0
W 7/16 - 14h	*33,02*	100	24	6,20	8,0
W 1/2 - 12h	*34,57*	110	29	7,00	9,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
W 9/16 - 12h	*47,49*	110	30	9,00	11,0
W 5/8 - 11h	*44,88*	110	30	9,00	12,0
W 3/4 - 10h	*60,19*	125	35	11,00	14,0
W 7/8 - 9h	*81,41*	140	36	14,50	18,0
W 1" - 8h	*102,36*	160	38	14,50	18,0

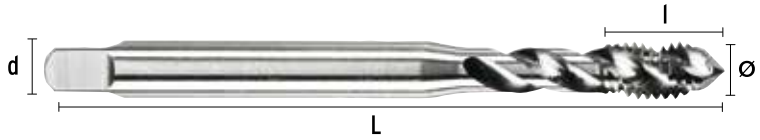
MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2140 HSSE DIN 371

BSW BS 84 | Form. C | 35° | R

Aceros 400 - 800 N/mm² — Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
W1/8 - 40h	*20,21*	56	6	2,70	3,5
W5/32 - 32h	*20,21*	63	7	3,40	4,5
W3/16 - 24h	*20,21*	70	8	4,90	6,0

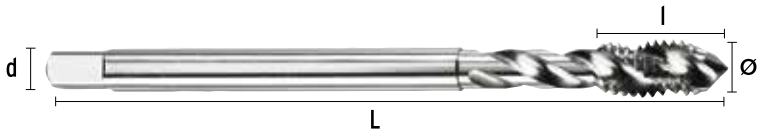
Ø x P mm	€	L mm	l mm	☐ mm	d mm
W1/4 - 20h	*27,38*	80	10	5,50	7,0
W5/16 - 18h	*33,58*	90	14	6,20	8,0

2139 HSSE DIN 376

BSW BS 84 | Form. C | 35° | D

Aceros 400 - 800 N/mm² — Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
W 3/16 - 24h	*20,21*	70	8	2,70	3,5
W 1/4 - 20h	*27,38*	80	10	3,40	4,5
W 5/16 - 18h	*32,10*	90	14	4,90	6,0
W 3/8 - 16h	*35,45*	100	16	5,50	7,0
W 7/16 - 14h	*40,26*	100	16	6,20	8,0
W 1/2 - 12h	*38,59*	110	18	7,00	9,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
W 9/16 - 12h	*55,31*	110	20	9,00	11,0
W 5/8 - 11h	*52,33*	110	20	9,00	12,0
W 3/4 - 10h	*70,07*	125	25	11,00	14,0
W 7/8 - 9h	*94,84*	140	28	14,50	18,0
W 1" - 8h	*119,06*	160	32	14,50	18,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2141 **HSSE DIN 371** | BSF BS 84 | Form. C | R

Aceros 400 - 800 N/mm² — Aciers / Steel | F | 1000 N/mm²

Aplicaciones / Applications



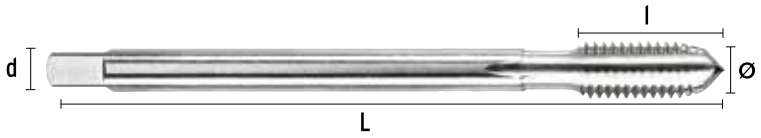
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
BSF 3/16 - 32h	*69,12*	70	14	4,90	6,0
BSF 1/4 - 26h	*29,43*	80	19	5,50	7,0

Ø x P mm	€	L mm	l mm	mm	d mm
BSF 5/16 - 22h	*34,96*	90	22	6,20	8,0
BSF 3/8 - 20h	*36,72*	100	24	8,00	10,0

2142 **HSSE DIN 374** | BSF BS 84 | Form. C | D

Aceros 400 - 800 N/mm² — Aciers / Steel | F | 1000 N/mm²

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
BSF 7/16 - 18h	*49,56*	90	22	6,20	8,0
BSF 1/2 - 16h	*56,07*	100	22	7,00	9,0
BSF 9/16 - 16h	*59,34*	100	22	9,00	11,0
BSF 5/8 - 14h	*79,09*	100	22	9,00	12,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
BSF 3/4 - 12h	*93,61*	110	25	11,00	14,0
BSF 7/8 - 11h	*130,15*	125	25	14,50	18,0
BSF 1" - 10h	*155,41*	140	28	14,50	18,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2144 HSSE DIN 5156

G ISO 228 | Form. C | D

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G 1/8 - 28h	*27,21*	90	20	5,50	7,0
G 1/4 - 19h	*38,79*	100	22	9,00	11,0
G 3/8 - 19h	*46,42*	100	22	9,00	12,0
G 1/2 - 14h	*58,66*	125	25	12,00	16,0
G 5/8 - 14h	*73,11*	125	25	14,50	18,0
G 3/4 - 14h	*91,84*	140	28	16,00	20,0
G 7/8 - 14h	*123,46*	150	28	18,00	22,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G 1" - 11h	*142,50*	160	30	20,00	25,0
G 1"1/8 - 11h	*216,58*	170	30	22,00	28,0
G 1"1/4 - 11h	*254,10*	170	30	24,00	32,0
G 1"3/8 - 11h	*317,82*	180	32	29,00	36,0
G 1"1/2 - 11h	*403,32*	190	32	29,00	36,0
G 1"3/4 - 11h	*479,36*	190	32	32,00	40,0
G 2" - 11h	*610,85*	220	40	35,00	45,0

2144/5 HSSE DIN 5156

G ISO 228 | Form. C | LH | D

Aceros 400 - 800 N/mm² | Aciers / Steel | F | 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G1/8 - 28h	*54,43*	90	20	5,50	7,0
G1/4 - 19h	*77,59*	100	22	9,00	11,0
G3/8 - 19h	*92,81*	100	22	9,00	12,0
G1/2 - 14h	*117,30*	125	25	12,00	16,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G5/8 - 14h	*146,24*	125	25	14,50	18,0
G3/4 - 14h	*183,68*	140	28	16,00	20,0
G1" - 11h	*285,01*	160	30	20,00	25,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2192 **HSSE DIN 5156** | G ISO 228 | Form. E | D

Latón y bronce — **Laiton et Bronze / Brass and bronze**

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G1/8 - 28h	*33,00*	90	20	5,50	7,0
G1/4 - 19h	*50,68*	100	22	9,00	11,0
G3/8 - 19h	*69,98*	100	22	9,00	12,0
G1/2 - 14h	*94,43*	125	25	12,00	16,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G5/8 - 14h	*98,66*	125	25	14,50	18,0
G3/4 - 14h	*138,58*	140	28	16,00	20,0
G7/8 - 14h	*169,38*	150	28	18,00	22,0
G1" - 11h	*211,39*	160	30	20,00	25,0

2206 **HSSE DIN 5156** | +0,1 | G ISO 228 | Form. E | D

Latón y bronce — **Laiton et Bronze / Brass and bronze**

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G 1/8 - 28h	*40,23*	90	20	5,50	7,0
G 1/4 - 19h	*59,94*	100	22	9,00	11,0
G 3/8 - 19h	*83,98*	100	22	9,00	12,0
G 1/2 - 14h	*114,65*	125	25	12,00	16,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
G 5/8 - 14h	*119,90*	125	25	14,50	18,0
G 3/4 - 14h	*166,30*	140	28	16,00	20,0
G 7/8 - 14h	*196,48*	150	28	18,00	22,0
G 1" - 11h	*245,20*	160	30	20,00	25,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2145 HSSE DIN 5156 — G ISO 228 — Form. B "Gun" — D

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
G 1/8 - 28h	*31,94*	90	20	5,50	7,0
G 1/4 - 19h	*42,69*	100	22	9,00	11,0
G 3/8 - 19h	*51,06*	100	22	9,00	12,0
G 1/2 - 14h	*64,54*	125	25	12,00	16,0
G 5/8 - 14h	*80,45*	125	25	14,50	18,0
G 3/4 - 14h	*101,05*	140	28	16,00	20,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
G 7/8 - 14h	*135,82*	150	28	18,00	22,0
G 1" - 11h	*153,96*	160	30	20,00	25,0
G 1"1/8 - 11h	*253,94*	170	30	22,00	28,0
G 1"1/4 - 11h	*287,47*	170	30	24,00	32,0
G 1"1/2 - 11h	*577,91*	190	32	29,00	36,0
G 1"3/8 - 11h	*361,15*	180	32	29,00	36,0

2146 HSSE DIN 5156 — G ISO 228 — Form. C — 35° — D

Aceros 400 - 800 N/mm² — Aciers / Steel — F 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
G 1/8 - 28h	*34,76*	90	10	5,50	7,0
G 1/4 - 19h	*49,95*	100	14	9,00	11,0
G 3/8 - 19h	*59,60*	100	15	9,00	12,0
G 1/2 - 14h	*75,18*	125	17	12,00	16,0
G 5/8 - 14h	*93,66*	125	17	14,50	18,0
G 3/4 - 14h	*117,70*	140	20	16,00	20,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
G 7/8 - 14h	*158,25*	150	22	18,00	22,0
G 1" - 11h	*179,33*	160	25	20,00	25,0
G 1"1/8 - 11h	*285,99*	170	25	22,00	28,0
G 1"1/4 - 11h	*335,01*	170	27	24,00	32,0
G 1"3/8 - 11h	*453,18*	180	27	29,00	36,0
G 1"1/2 - 11h	*582,47*	190	27	29,00	36,0

2159 HSSE DIN 5156

Rc DIN 2999 | Form. C | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm²

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
Rc 1/8 - 28h	*45,85*	90	18	5,50	7,0
Rc 1/4 - 19h	*66,38*	100	22	9,00	11,0
Rc 3/8 - 19h	*91,54*	100	22	9,00	12,0
Rc 1/2 - 14h	*127,59*	125	25	12,00	16,0

Ø x P mm	€	L mm	l mm	☒ mm	d mm
Rc 3/4 - 14h	*197,77*	140	28	16,00	20,0
Rc 7/8 - 14h	*341,45*	150	28	18,00	22,0
Rc 1" - 11h	*284,31*	160	30	20,00	25,0

2164 HSSE DIN 374

NPT ANSI/ASME B1.20.1 | Form. C | Tol. 6H | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm²

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
1/16 - 27h	*50,29*	90	12	4,90	6,0
1/8 - 27h	*39,77*	90	12	5,50	7,00
1/4 - 18h	*54,39*	100	18	11,00	14,0
3/8 - 18h	*70,53*	110	18	11,00	14,0
1/2 - 14h	*94,03*	140	23	12,00	16,0

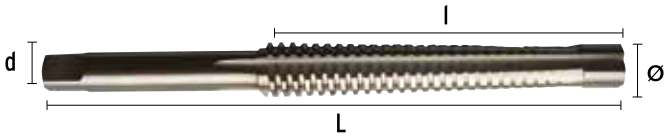
Ø x P mm	€	L mm	l mm	☒ mm	d mm
3/4 - 14h	*146,41*	150	24	16,00	20,0
1" - 11,5h	*312,48*	160	35	20,00	25,0
1"1/ 4 - 11,5h	*367,36*	190	35	25,00	31,5
1"1/ 2 - 11,5h	*620,20*	200	35	29,00	36,0
2" - 11,5h	*853,95*	220	35	35,00	45,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2212 HSSE — Tr DIN 103 — Tol. 7H

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



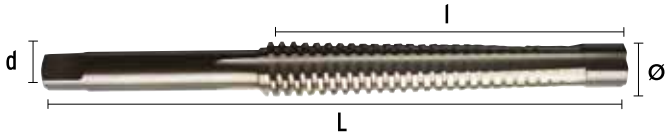
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Tr 10x2	*356,63*	110	63	5,50	7,0
Tr 10x3	*356,63*	125	75	5,50	7,0
Tr 12x3	*417,17*	165	111	6,20	8,0
Tr 14x3	*427,68*	140	85	8,00	10,0
Tr 14x4	*461,84*	170	112	8,00	10,0
Tr 16x4	*461,84*	180	116	9,00	11,0
Tr 18x4	*495,00*	190	120	9,00	12,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Tr 20x4	*538,92*	200	124	11,00	14,0
Tr 22x5	*538,92*	235	155	12,00	16,0
Tr 24x5	*583,01*	245	160	14,50	18,0
Tr 26x5	*605,06*	255	165	16,00	20,0
Tr 28x5	*660,00*	265	170	18,00	22,0
Tr 30x6	*715,11*	290	185	18,00	22,0
Tr 32x6	*702,73*	300	191	20,00	25,0

2212/5 HSSE — Tr DIN 103 — Tol. 7H — LH

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Tr 10x2	*445,74*	110	63	5,50	7,0
Tr 10x3	*445,74*	125	75	5,50	7,0
Tr 12x3	*521,45*	165	111	6,20	8,0
Tr 14x3	*534,59*	140	85	8,00	10,0
Tr 14x4	*577,33*	170	112	8,00	10,0
Tr 16x4	*577,33*	180	116	9,00	11,0
Tr 18x4	*618,70*	190	120	9,00	12,0

Ø x P mm	€	L mm	l mm	⊠ mm	d mm
Tr 20x4	*673,65*	200	124	11,00	14,0
Tr 22x5	*673,65*	235	155	12,00	16,0
Tr 24x5	*728,77*	245	160	14,50	18,0
Tr 26x5	*756,33*	255	165	16,00	20,0
Tr 28x5	*824,91*	265	170	18,00	22,0
Tr 30x6	*893,93*	290	185	18,00	22,0
Tr 32x6	*878,42*	300	191	20,00	25,0

MACHOS DE MÁQUINA
TARAUDS MACHINE / MACHINE TAPS

2163 HSSE DIN 40433

PG DIN 40430 | Form. C | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm		€	L mm	l mm	☒ mm	d mm
Pg.7	(12,50 x 20h)	*42,17*	100	22	7,00	9,0
Pg.9	(15,20 x 18h)	*58,35*	100	22	9,00	12,0
Pg.11	(18,60 x 18h)	*75,94*	110	25	11,00	14,0
Pg.13,50	(20,40 x 18h)	*85,23*	125	25	12,00	16,0
Pg.16	(22,50 x 18h)	*100,33*	125	25	14,50	18,0

Ø x P mm		€	L mm	l mm	☒ mm	d mm
Pg.21	(28,30 x 16h)	*159,29*	150	28	18,00	22,0
Pg.29	(37,00 x 16h)	*269,29*	170	30	22,00	28,0
Pg.36	(47,00 x 16h)	*472,47*	190	32	29,00	36,0
Pg.42	(54,00 x 16h)	*769,24*	190	32	32,00	40,0
Pg.48	(59,30 x 16h)	*937,81*	220	40	35,00	45,0

2242 HSSE DIN 371

Vg DIN 7756 | Form. C | R

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
5,00 x 36h	*88,03*	80	19	4,90	6,00
5,20 x 24h	*88,03*	80	19	4,90	6,00

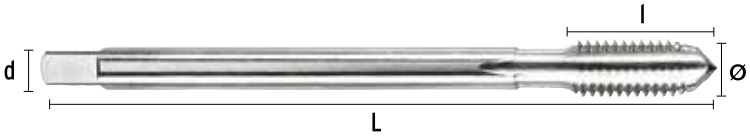
Ø x P mm	€	L mm	l mm	☒ mm	d mm
6,00 x 32h	*100,22*	80	19	5,50	7,00
8,00 x 32h	*111,50*	90	22	6,20	8,00

2243 HSSE DIN 374

Vg DIN 7756 | Form. C | D

Aceros 400 - 800 N/mm² — Aciers / Steel — F — 1000 N/mm2

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☒ mm	d mm
9,60 x 1	*161,90*	90	20	5,50	7,00
10,00 x 28h	*140,49*	90	22	6,20	8,00

Ø x P mm	€	L mm	l mm	☒ mm	d mm
12,00 x 26h	*152,85*	100	22	7,00	9,00

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

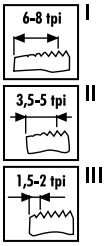
2301 HSS DIN 352/2181 | M DIN 13 | MF DIN 13 | Tol. 6H

Aceros 400 - 800 N/mm² — Aciers / Steel F

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/3 < M (€/3) MF (€/2)





Ø x P mm	Nº	€	L mm	l mm	☐ mm
*M1,00 x 0,25	3	72,79	32	5,50	2,10
*M1,10 x 0,25	3	72,79	32	5,50	2,10
*M1,20 x 0,25	3	72,79	32	5,50	2,10
*M1,40 x 0,30	3	72,79	32	7	2,10
M1,60 x 0,35	3	66,42	32	8	2,10
M1,70 x 0,35	3	41,94	32	8	2,10
M1,80 x 0,35	3	62,35	32	8	2,10
M2,00 x 0,40	3	33,08	36	8	2,10
M2,20 x 0,45	3	35,63	36	9	2,10
M2,30 x 0,40	3	35,67	36	9	2,10
M2,50 x 0,45	3	34,21	40	9	2,10
M2,60 x 0,45	3	31,48	40	9	2,10
M3,00 x 0,50	3	18,11	40	1	2,70
MF3,00 x 0,60	3	34,73	40	12	2,70
M3,50 x 0,60	3	25,07	45	13	3,00
MF3,50 x 0,75	3	41,95	45	14	3,40
MF4,00 x 0,50	2	35,32	45	10	3,40
M4,00 x 0,70	3	16,68	45	13	3,40
M4,50 x 0,75	3	32,32	50	16	4,90
MF5,00 x 0,50	2	37,56	50	12	4,90
MF5,00 x 0,75	2	35,00	50	12	4,90
M5,00 x 0,80	3	18,12	50	16	4,90
MF5,00 x 1,00	2	20,12	50	14	4,90
MF5,50 x 0,90	3	122,46	51	18	4,90
MF6,00 x 0,50	2	37,52	50	14	4,90
MF6,00 x 0,75	2	21,13	50	14	4,90
MF6,00 x 0,90	2	122,35	50	19	4,90
M6,00 x 1,00	3	18,12	50	19	4,90
MF7,00 x 0,75	2	26,68	50	14	4,90
M7,00 x 1,00	3	25,01	50	19	4,90
MF8,00 x 0,50	2	40,06	50	19	4,90
MF8,00 x 0,75	2	31,21	50	19	4,90
MF8,00 x 1,00	2	20,75	56	22	4,90
M8,00 x 1,25	3	21,82	56	22	4,90
MF9,00 x 1,00	2	26,82	63	20	5,50
M9,00 x 1,25	3	38,71	63	22	5,50
MF10,00 x 0,50	2	101,77	63	18	5,50
MF10,00 x 0,75	2	44,73	63	20	5,50
MF10,00 x 1,00	2	22,50	63	20	5,50
MF10,00 x 1,25	2	22,91	70	24	5,50
M10,00 x 1,50	3	27,55	70	24	5,50
MF11,00 x 0,75	2	111,41	63	20	6,20
MF11,00 x 1,00	2	39,77	63	20	6,20
MF11,00 x 1,25	2	39,77	63	22	6,20
M11,00 x 1,50	3	53,39	70	24	6,20
MF12,00 x 0,75	2	63,66	70	22	7,00
MF12,00 x 1,00	2	39,29	70	22	7,00
MF12,00 x 1,25	2	39,45	70	22	7,00
MF12,00 x 1,50	2	33,56	70	22	7,00
M12,00 x 1,75	3	35,82	76	29	7,00
MF13,00 x 0,75	2	111,41	70	20	9,00
MF13,00 x 1,00	2	64,41	70	22	9,00
MF13,00 x 1,25	2	64,41	70	22	9,00
MF13,00 x 1,50	2	64,41	70	22	9,00
M13,00 x 1,75	3	81,13	80	30	9,00
MF14,00 x 0,75	2	111,51	70	22	9,00
MF14,00 x 1,00	2	58,78	70	22	9,00
MF14,00 x 1,25	2	48,22	70	22	9,00
MF14,00 x 1,50	2	37,46	70	22	9,00
M14,00 x 2,00	3	47,13	80	30	9,00
MF15,00 x 1,00	2	86,89	70	22	9,00
MF15,00 x 1,25	2	91,44	70	22	9,00
MF15,00 x 1,50	2	88,95	70	22	9,00
M15,00 x 2,00	3	92,95	80	32	9,00
MF16,00 x 1,00	2	82,26	70	22	9,00
MF16,00 x 1,25	2	86,59	70	22	9,00
MF16,00 x 1,50	2	46,70	70	22	9,00
M16,00 x 2,00	3	66,36	80	32	9,00
MF17,00 x 1,00	2	132,55	70	22	9,00
MF17,00 x 1,25	2	132,55	70	22	9,00
MF17,00 x 1,50	2	132,55	70	22	9,00
MF18,00 x 1,00	2	91,43	80	40	11,00
MF18,00 x 1,25	2	130,66	80	22	11,00
MF18,00 x 1,50	2	61,92	80	22	11,00
MF18,00 x 2,00	2	98,52	80	22	11,00
M18,00 x 2,50	3	88,70	95	40	11,00
MF19,00 x 1,00	2	192,40	80	22	11,00
MF19,00 x 1,25	2	192,23	80	22	11,00
MF19,00 x 1,50	2	192,40	80	22	11,00
MF20,00 x 1,00	2	121,76	80	22	12,00
MF20,00 x 1,25	2	192,40	80	22	12,00
MF20,00 x 1,50	2	77,27	80	22	12,00
MF20,00 x 2,00	2	102,11	80	22	12,00
M20,00 x 2,50	3	99,69	95	40	12,00

*Tol. 4H

(continúa Ref.2301 / suite Réf.2301 / Ref.2301 cont'd)

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

(**continúa Ref.2301** / suite Réf.2301 / Ref.2301 cont'd)

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
MF21,00 x 1,00	2	*248,64*	80	22	12,00
MF21,00 x 1,25	2	*248,64*	80	22	12,00
MF21,00 x 1,50	2	*196,61*	80	22	12,00
MF22,00 x 1,00	2	*135,83*	80	22	14,50
MF22,00 x 1,25	2	*192,40*	80	22	14,50
MF22,00 x 1,50	2	*84,48*	80	22	14,50
MF22,00 x 2,00	2	*135,84*	80	22	14,50
M22,00 x 2,50	**3**	*122,21*	**100**	**40**	**14,50**
MF23,00 x 1,00	2	*248,40*	80	22	14,50
MF23,00 x 1,50	2	*248,40*	80	22	14,50
MF24,00 x 1,00	2	*151,87*	90	22	14,50
MF24,00 x 1,25	2	*248,64*	90	22	14,50
MF24,00 x 1,50	2	*107,84*	90	22	14,50
MF24,00 x 2,00	2	*151,87*	90	22	14,50
M24,00 x 3,00	**3**	*153,94*	**110**	**50**	**14,50**
MF25,00 x 1,00	2	*217,55*	90	22	14,50
MF25,00 x 1,25	2	*354,21*	90	22	14,50
MF25,00 x 1,50	2	*188,10*	90	22	14,50
MF25,00 x 2,00	2	*364,34*	90	22	14,50
MF26,00 x 1,00	2	*354,56*	90	22	14,50
MF26,00 x 1,50	2	*171,81*	90	22	14,50
MF26,00 x 2,00	2	*354,56*	90	22	14,50
MF27,00 x 1,00	2	*213,50*	90	22	16,00
MF27,00 x 1,50	2	*190,37*	90	22	16,00
MF27,00 x 2,00	2	*210,51*	90	22	16,00
M27,00 x 3,00	**3**	*198,26*	**110**	**50**	**16,00**
MF28,00 x 1,00	2	*354,54*	90	22	16,00
MF28,00 x 1,50	2	*190,88*	90	22	16,00
MF28,00 x 2,00	2	*354,54*	90	22	16,00
MF30,00 x 1,00	2	*219,99*	90	22	18,00
MF30,00 x 1,50	2	*198,00*	90	22	18,00
MF30,00 x 2,00	2	*228,27*	90	22	18,00
M30,00 x 3,50	**3**	*251,71*	**125**	**56**	**18,00**
MF32,00 x 1,00	2	*460,66*	90	22	18,00
MF32,00 x 1,50	2	*243,79*	90	22	18,00
MF32,00 x 2,00	2	*461,07*	90	22	18,00
MF33,00 x 1,00	2	*461,07*	100	25	20,00
MF33,00 x 1,50	2	*268,60*	100	25	20,00
MF33,00 x 2,00	2	*319,35*	100	25	20,00
M33,00 x 3,50	**3**	*319,35*	**125**	**56**	**20,00**
MF34,00 x 1,50	2	*290,65*	100	25	22,00
MF35,00 x 1,50	2	*373,26*	100	25	22,00
MF3600 x 1,50	2	*311,35*	100	25	22,00
MF36,00 x 2,00	2	*398,43*	125	40	22,00
MF36,00 x 3,00	2	*543,53*	125	40	22,00
M36,00 x 4,00	**3**	*411,27*	**150**	**63**	**22,00**
MF38,00 x 1,50	2	*350,23*	100	25	22,00
MF38,00 x 2,00	2	*628,88*	125	40	22,00
MF39,00 x 1,50	2	*469,72*	110	25	24,00
MF39,00 x 2,00	2	*469,72*	125	40	24,00
MF39,00 x 3,00	2	*457,08*	125	40	24,00
M39,00 x 4,00	**3**	*456,99*	150	63	24,00
MF40,00 x 1,50	2	*411,33*	110	25	24,00
MF40,00 x 2,00	2	*477,78*	125	40	24,00
MF40,00 x 3,00	2	*473,34*	125	40	24,00
MF42,00 x 1,50	2	*454,98*	110	25	24,00
MF42,00 x 2,00	2	*546,62*	125	40	24,00
MF42,00 x 3,00	2	*546,62*	125	40	24,00
M42,00 x 4,50	**3**	*572,59*	**150**	**63**	**24,00**
MF45,00 x 1,50	2	*512,21*	110	25	29,00
MF45,00 x 2,00	2	*650,77*	125	40	29,00
MF45,00 x 3,00	2	*650,77*	125	40	29,00
M45,00 x 4,50	**3**	*664,16*	**160**	**70**	**29,00**
MF48,00 x 1,50	2	*577,20*	140	40	29,00
MF48,00 x 2,00	2	*856,21*	140	40	29,00
MF48,00 x 3,00	2	*787,86*	140	40	29,00
M48,00 x 5,00	**3**	*797,66*	**180**	**75**	**29,00**
MF50,00 x 1,50	2	*631,22*	140	40	29,00
MF52,00 x 1,50	2	*669,62*	140	40	32,00
MF52,00 x 2,00	2	*963,35*	140	40	32,00
MF52,00 x 3,00	2	*894,41*	140	40	32,00
M52,00 x 5,00	**3**	*1.040,90*	**180**	**75**	**32,00**
M56,00 x 5,50	**3**	*1.503,45*	**200**	**85**	**35,00**
M60,00 x 5,50	**3**	*1.884,09*	**200**	**85**	**35,00**
MF63,00 x 1,50	2	*1.497,53*	160	32	39,00
M64,00 x 6,00	**3**	*2.352,83*	**220**	**90**	**39,00**

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

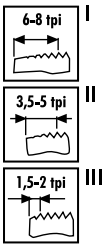
2301/5 **HSS DIN 352** Izquierda / A gauche / Left hand — M DIN 13 | MF DIN 13 | Tol. 6H | LH

Aceros 400 - 800 N/mm² — Aciers / Steel F

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/3





Ø x P mm	Nº	€	L mm	l mm	☐ mm
M3,00 x 0,50	**3**	*36,21*	**40**	**11**	**2,70**
M4,00 x 0,70	**3**	*33,35*	**45**	**13**	**3,40**
M5,00 x 0,80	**3**	*36,25*	**50**	**16**	**4,90**
M6,00 x 1,00	**3**	*36,25*	**50**	**19**	**4,90**
M7,00 x 1,00	**3**	*50,03*	**50**	**19**	**4,90**
MF8,00 x 1,00	2	*41,50*	56	22	4,90
M8,00 x 1,25	**3**	*43,65*	**56**	**22**	**4,90**
M9,00 x 1,25	**3**	*77,43*	**63**	**22**	**5,50**
MF10,00 x 1,00	2	*44,99*	63	20	5,50
MF10,00 x 1,25	2	*45,83*	70	24	5,50
M10,00 x 1,50	**3**	*55,11*	**70**	**24**	**5,50**
MF12,00 x 1,25	2	*78,92*	70	22	7,00
MF12,00 x 1,50	2	*67,12*	70	22	7,00
M12,00 x 1,75	**3**	*71,64*	**75**	**29**	**7,00**

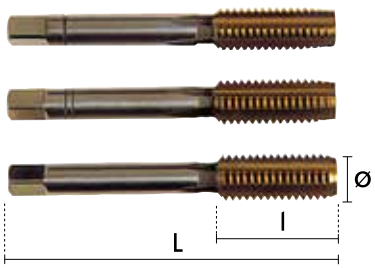
Ø x P mm	Nº	€	L mm	l mm	☐ mm
MF14,00 x 1,25	2	*96,44*	70	22	9,00
MF14,00 x 1,50	2	*74,93*	70	22	9,00
M14,00 x 2,00	**3**	*94,25*	**80**	**30**	**9,00**
MF16,00 x 1,50	2	*93,40*	70	22	9,00
M16,00 x 2,00	**3**	*132,71*	**80**	**32**	**9,00**
M18,00 x 2,50	**3**	*177,42*	**95**	**40**	**11,00**
MF20,00 x 1,50	2	*154,55*	80	22	12,00
M20,00 x 2,50	**3**	*199,36*	**95**	**40**	**12,00**
MF22,00 x 1,50	2	*168,96*	80	22	14,50
M22,00 x 2,50	**3**	*244,43*	**100**	**40**	**14,50**
MF24,00 x 1,50	2	*215,65*	90	22	14,50
M24,00 x 3,00	**3**	*307,89*	**110**	**50**	**14,50**
M27,00 x 3,00	**3**	*396,52*	**110**	**50**	**16,00**
M30,00 x 3,50	**3**	*503,41*	**125**	**56**	**18,00**

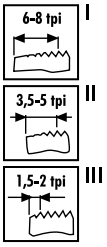
2302 **HSS DIN 352** — M DIN 13 | Tol. 6H | TIN

Aceros 400 - 800 N/mm² — Aciers / Steel F

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/3





Ø x P mm	Nº	€	L mm	l mm	☐ mm
M3,00 x 0,50	3	*40,51*	40	11	2,70
M4,00 x 0,70	3	*41,53*	45	13	3,40
M5,00 x 0,80	3	*42,46*	50	16	4,90
M6,00 x 1,00	3	*42,54*	50	19	4,90
M8,00 x 1,25	3	*51,12*	56	22	4,90

Ø x P mm	Nº	€	L mm	l mm	☐ mm
M10,00 x 1,50	3	*60,70*	70	24	5,50
M12,00 x 1,75	3	*93,31*	75	29	7,00
M14,00 x 2,00	3	*111,07*	80	30	9,00
M16,00 x 2,00	3	*138,68*	80	32	9,00
M20,00 x 2,50	3	*150,38*	95	40	12,00

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

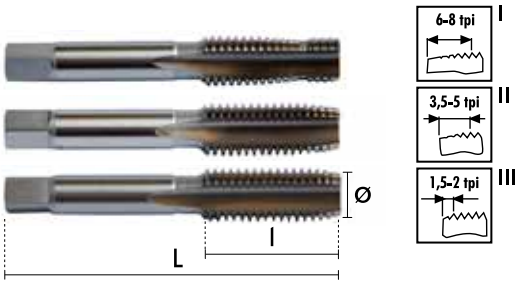
2314 HSSE DIN 352

M DIN 13 | Tol. 6HX

Aceros 800 - 1100 N/mm² — **Aciers / Steel** 800 N/mm2

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/3



Ø x P mm	Nº	€	L mm	l mm	☐ mm
M3,00 x 0,50	3	*26,54*	40	10	2,70
M4,00 x 0,70	3	*26,49*	45	12	3,40
M5,00 x 0,80	3	*27,74*	50	14	4,90
M6,00 x 1,00	3	*27,84*	56	16	4,90
M8,00 x 1,25	3	*31,97*	63	20	4,90

Ø x P mm	Nº	€	L mm	l mm	☐ mm
M10,00 x 1,50	3	*41,17*	70	22	5,50
M12,00 x 1,75	3	*58,51*	75	24	7,00
M14,00 x 2,00	3	*77,48*	80	26	9,00
M16,00 x 2,00	3	*85,46*	80	27	9,00

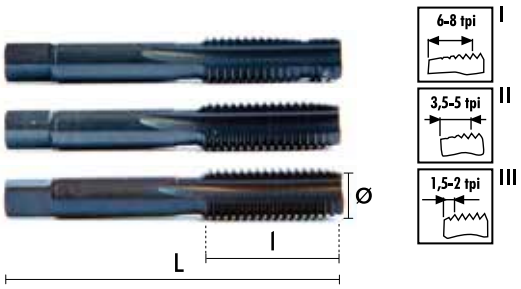
2303 HSSE DIN 352

M DIN 13 | Tol. 6HX | VAP

Aceros inox — **Aciers inox / Stainless Steel** F 800 N/mm2 1100 N/mm2

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/3



Ø x P mm	Nº	€	L mm	l mm	☐ mm
M3,00 x 0,50	3	*27,07*	40	11	2,70
M4,00 x 0,70	3	*27,07*	45	13	3,40
M5,00 x 0,80	3	*28,16*	50	16	4,90
M6,00 x 1,00	3	*28,16*	56	19	4,90
M8,00 x 1,25	3	*32,69*	63	22	4,90
M10,00 x 1,50	3	*42,07*	70	24	5,50

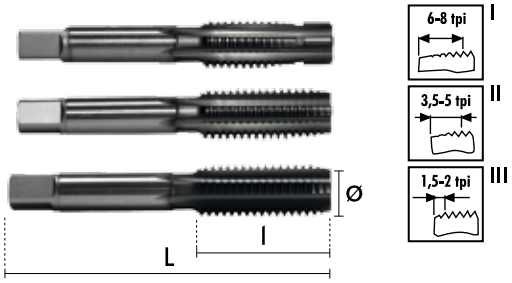
Ø x P mm	Nº	€	L mm	l mm	☐ mm
M12,00 x 1,75	3	*60,20*	75	29	7,00
M14,00 x 2,00	3	*66,69*	80	30	9,00
M16,00 x 2,00	3	*91,35*	80	32	9,00
M18,00 x 2,50	3	*124,81*	95	40	11,00
M20,00 x 2,50	3	*138,55*	95	40	12,00

2324 HSSE-PM DIN 352 | M DIN 13 | Tol. 6HX | TICN

Aceros 1100 - 1400 N/mm² — Aciers / Steel 800 N/mm2

Aplicaciones / Applications

Macho 3º
Taraud 3º
Tap 3º
} PVP = €/3



Ø x P mm	Nº	€	L mm	l mm	⊠ mm
M4x0.70	3	*96,37*	45	12	2,70
M5x0.80	3	*97,57*	50	14	4,90
M6x1,00	3	*97,57*	56	16	4,90
M8x1,25	3	*109,98*	63	20	4,90

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
M10x1,50	3	*135,95*	70	22	5,50
M12x1,75	3	*165,26*	75	24	7,00
M14x2,00	3	*242,97*	80	26	9,00
M16x2,00	3	*242,97*	80	27	9,00

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

2304 HSS DIN 352

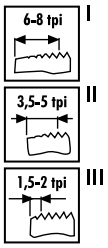
BSW
BS 84

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } PVP = €/3
Tap 3º





Ø x P mm	Nº	€	L mm	l mm	☒ mm
W3/32 - 48h	3	*33,65*	36	10	2,10
W1/8 - 40h	3	*23,21*	40	12	2,70
W5/32 - 32h	3	*23,44*	45	14	3,40
W3/16 - 24h	3	*23,21*	50	18	4,90
W7/32 - 24h	3	*41,29*	50	18	4,90
W1/4 - 20h	3	*26,15*	50	19	4,90
W5/16 - 18h	3	*31,91*	56	22	4,90
W3/8 - 16h	3	*35,08*	70	24	5,50
W7/16 - 14h	3	*46,64*	70	24	6,20
W1/2 - 12h	3	*50,52*	75	29	7,00
W9/16 - 12h	3	*68,72*	80	30	9,00
W5/8 - 11h	3	*78,99*	80	32	9,00
W3/4 - 10h	3	*112,47*	95	40	11,00
W7/8 - 9h	3	*164,54*	100	40	14,50

Ø x P mm	Nº	€	L mm	l mm	☒ mm
W1" - 8h	3	*200,94*	110	50	14,50
W1"1/8 - 7h	3	*299,42*	132	56	18,00
W1"1/4 - 7h	3	*362,20*	132	56	18,00
W1"3/8 - 6h	3	*450,46*	150	63	22,00
W1"1/2 - 6h	3	*542,30*	150	63	24,00
W1"5/8 - 5h	3	*813,54*	160	70	24,00
W1"3/4 - 5h	3	*1.001,27*	160	70	29,00
W1"7/8 - 4,5h	3	*1.293,23*	190	80	29,00
W2" - 4,5h	3	*1.357,64*	190	80	32,00
W2"1/4 - 4h	3	*1.794,63*	220	80	35,00
W2"1/2 - 4h	3	*2.183,18*	220	80	39,00
W2"3/4 - 3,5h	3	*3.117,32*	240	80	39,00
W3" - 3,5h	3	*3.606,40*	240	80	39,00

2304/5 HSS DIN 352 Izquierda / A gauche / Left hand

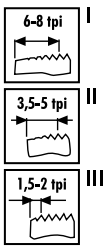
BSW
BS 84
LH

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } PVP = €/3
Tap 3º





Ø x P mm	Nº	€	L mm	l mm	☒ mm
W1/8 - 40h	3	*46,43*	40	12	2,70
W5/32 - 32h	3	*46,89*	45	14	3,40
W3/16 - 24h	3	*46,43*	50	18	4,90
W1/4 - 20h	3	*52,28*	50	19	4,90
W5/16 - 18h	3	*63,82*	56	22	4,90
W3/8 - 16h	3	*70,14*	70	24	4,90
W7/16 - 14h	3	*93,28*	70	24	6,20

Ø x P mm	Nº	€	L mm	l mm	☒ mm
W1/2 - 12h	3	*101,03*	75	29	7,00
W9/16 - 12h	3	*137,45*	80	30	9,00
W5/8 - 11h	3	*158,00*	80	32	9,00
W3/4 - 10h	3	*224,93*	95	40	11,00
W7/8 - 9h	3	*329,06*	100	40	14,50
W1" - 8h	3	*401,89*	110	50	14,50

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

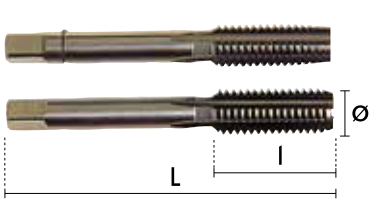
2305 HSS DIN 2181

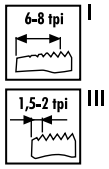
BSF
BS 84

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } PVP = €/2
Tap 3º





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
BSF3/16 - 32h	2	*88,92*	50	14	4,90
BSF1/4 - 26h	2	*36,65*	50	18	4,90
BSF5/16 - 22h	2	*42,76*	56	22	4,90
BSF3/8 - 20h	2	*49,47*	63	22	5,50
BSF7/16 - 18h	2	*59,36*	63	22	6,20
BSF1/2 - 16h	2	*67,11*	75	24	7,00
BSF9/16 - 16h	2	*80,49*	80	28	9,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
BSF5/8 - 14h	2	*105,08*	50	28	9,00
BSF3/4 - 12h	2	*161,01*	95	32	11,00
BSF7/8 - 11h	2	*192,15*	100	36	14,50
BSF1" - 10h	2	*269,72*	110	40	14,50
BSF1"1/8 - 9h	2	*556,56*	125	40	18,00
BSF1"1/4 - 9h	2	*635,46*	125	40	18,00
BSF1"1/2 - 8h	2	*968,43*	125	40	24,00

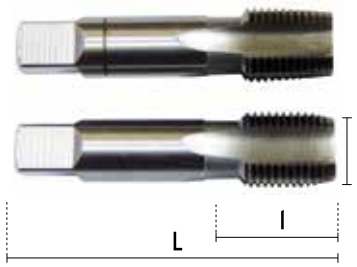
2306 HSS DIN 5157

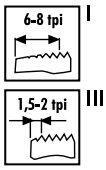
G
ISO 228

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } PVP = €/2
Tap 3º





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G1/8 - 28h	2	*29,68*	63	20	5,50
G1/4 - 19h	2	*41,80*	70	22	9,00
G3/8 - 19h	2	*52,64*	70	22	9,00
G1/2 - 14h	2	*73,62*	80	22	12,00
G5/8 - 14h	2	*97,24*	80	22	14,50
G3/4 - 14h	2	*114,95*	90	22	16,00
G7/8 - 14h	2	*158,12*	90	22	18,00
G1" - 11h	2	*182,99*	100	25	20,00
G1"1/8 - 11h	2	*271,85*	125	40	22,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G1"1/4 - 11h	2	*296,19*	125	40	24,00
G1"3/8 - 11h	2	*402,35*	140	40	29,00
G1"1/2 - 11h	2	*447,70*	140	40	29,00
G1"3/4 - 11h	2	*744,30*	140	40	32,00
G2" - 11h	2	*825,10*	160	40	35,00
G2"1/4 - 11h	2	*1.403,80*	160	40	39,00
G2"1/2 - 11h	2	*2.110,09*	160	40	39,00
G2"3/4 - 11h	2	*2.558,49*	160	40	39,00
G3" - 11h	2	*2.662,67*	160	40	39,00

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

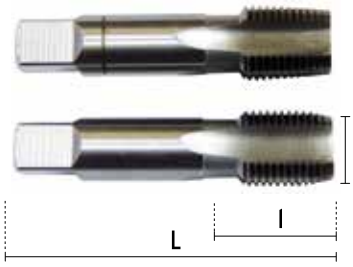
2306/5 HSS DIN 5157 Izquierda / A gauche / Left hand

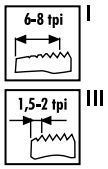
G ISO 228 — LH

Aceros 400 - 800 N/mm² — Aciers / Steel F

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/2





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G1/8 - 28h	2	*59,37*	63	20	5,50
G1/4 - 19h	2	*83,59*	70	22	9,00
G3/8 - 19h	2	*105,26*	70	22	9,00
G1/2 - 14h	2	*147,23*	80	22	12,00

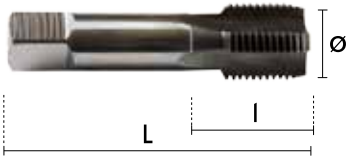
Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G5/8 - 14h	2	*194,47*	80	22	14,50
G3/4 - 14h	2	*229,90*	90	22	16,00
G1" - 11h	2	*366,01*	100	25	20,00

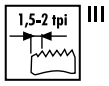
2316 HSSE DIN 5157

G ISO 228

Latón y bronce — Laiton et Bronze / Brass and bronze

Aplicaciones / Applications





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G1/8 - 28h	1	*17,55*	63	20	5,50
G1/4 - 19h	1	*28,58*	70	22	9,00
G3/8 - 19h	1	*31,26*	70	22	9,00
G1/2 - 14h	1	*50,01*	80	22	12,00

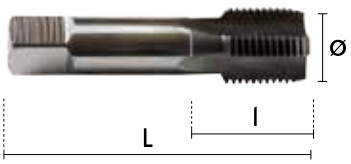
Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G5/8 - 14h	1	*66,85*	80	22	14,50
G3/4 - 14h	1	*78,19*	90	22	16,00
G7/8 - 14h	1	*113,03*	90	22	18,00
G1" - 11h	1	*129,57*	100	25	20,00

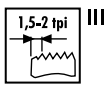
2317 HSSE DIN 5157

G ISO 228 — +0,1

Latón y bronce — Laiton et Bronze / Brass and bronze

Aplicaciones / Applications





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G1/8 - 28h	1	*19,28*	63	20	5,50
G1/4 - 19h	1	*31,46*	70	22	9,00
G3/8 - 19h	1	*34,51*	70	22	9,00
G1/2 - 14h	1	*57,15*	80	22	12,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
G5/8 - 14h	1	*73,52*	80	22	14,50
G3/4 - 14h	1	*85,98*	90	22	16,00
G7/8 - 14h	1	*124,33*	90	22	18,00
G1" - 11h	1	*142,52*	100	25	20,00

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

2307 HSS DIN 352

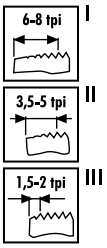
UNC ANSI/ASME B1.1 | Tol. 2B

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } PVP = €/3
Tap 3º





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
Nº4 - 40h	3	*45,82*	40	12	2,70
Nº5 - 40h	3	*43,81*	40	12	2,70
Nº6 - 32h	3	*43,81*	45	14	3,00
Nº8 - 32h	3	*43,81*	45	14	3,40
Nº10 - 24h	3	*43,81*	50	16	4,90
Nº12 - 24h	3	*43,81*	50	18	4,90
1/4 - 20h	3	*35,46*	50	19	4,90
5/16 - 18h	3	*40,50*	56	22	4,90
3/8 - 16h	3	*45,79*	70	24	5,50
7/16 - 14h	3	*59,60*	70	24	6,20
1/2 - 13h	3	*68,60*	75	29	7,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
9/16 - 12h	3	*80,99*	80	30	9,00
5/8 - 11h	3	*111,72*	80	32	9,00
3/4 - 10h	3	*152,10*	95	40	11,00
7/8 - 9h	3	*187,34*	100	40	14,50
1" - 8h	3	*253,01*	110	50	14,50
1"1/8 - 7h	3	*386,23*	132	56	18,00
1"1/4 - 7h	3	*486,16*	132	56	18,00
1"3/8 - 6h	3	*616,73*	150	63	22,00
1"1/2 - 6h	3	*757,24*	150	63	24,00
1"3/4 - 5h	3	*943,36*	160	70	29,00
2" - 4,5h	3	*1.084,49*	190	85	32,00

2307/5 HSS DIN 352 Izquierda / A gauche / Left hand

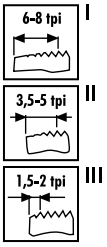
UNC ANSI/ASME B1.1 | Tol. 2B | LH

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } PVP = €/3
Tap 3º





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
1/4 - 20h	3	*70,91*	50	19	4,90
5/16 - 18h	3	*80,99*	56	22	4,90
3/8 - 16h	3	*91,58*	70	24	5,50
7/16 - 14h	3	*119,23*	70	24	6,20
1/2 - 13h	3	*137,20*	75	29	7,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
9/16 - 12h	3	*161,98*	80	30	9,00
5/8 - 11h	3	*223,42*	80	32	9,00
3/4 - 10h	3	*304,21*	95	40	11,00
7/8 - 9h	3	*374,66*	100	40	14,50
1" - 8h	3	*506,02*	110	50	14,50

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

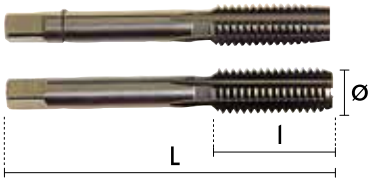
2308 HSS DIN 2181

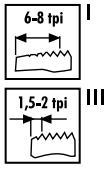
UNF ANSI/ASME B1.1 | Tol. 2B

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º
Tap 3º
} PVP = €/2





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
Nº4 - 48h	2	*34,80*	36	11	2,70
Nº5 - 44h	2	*34,80*	36	11	2,70
Nº6 - 40h	2	*33,25*	40	12	3,00
Nº8 - 36h	2	*33,25*	40	12	3,40
Nº10 - 32h	2	*33,25*	45	14	4,90
Nº12 - 28h	2	*34,80*	50	14	4,90
1/4 - 28h	2	*23,97*	50	18	4,90
5/16 - 24h	2	*25,65*	56	22	4,90
3/8 - 24h	2	*29,66*	63	22	5,50
7/16 - 20h	2	*39,38*	63	22	6,20

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
1/2 - 20h	2	*40,27*	75	24	7,00
9/16 - 18h	2	*52,45*	80	28	9,00
5/8 - 18h	2	*67,74*	80	28	9,00
3/4 - 16h	2	*91,01*	95	32	11,00
7/8 - 14h	2	*116,95*	100	36	14,50
1" - 12h	2	*155,06*	110	40	14,50
1"1/8 - 12h	2	*241,46*	110	50	18,00
1"1/4 - 12h	2	*304,57*	132	56	18,00
1"3/8 - 12h	2	*386,80*	132	56	22,00
1"1/2 - 12h	2	*473,61*	150	63	24,00

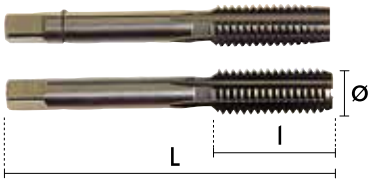
2308/5 HSS DIN 2181 Izquierda / A gauche / Left hand

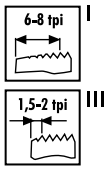
UNF ANSI/ASME B1.1 | Tol. 2B | LH

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º
Tap 3º
} PVP = €/2





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
1/4 - 28h	2	*47,92*	50	18	4,90
5/16 - 24h	2	*51,31*	56	22	4,90
3/8 - 24h	2	*59,31*	63	22	5,50
7/16 - 20h	2	*78,74*	63	22	6,20
1/2 - 20h	2	*80,51*	75	24	7,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
9/16 - 18h	2	*104,88*	80	28	9,00
5/8 - 18h	2	*135,45*	80	28	9,00
3/4 - 16h	2	*182,03*	95	32	11,00
7/8 - 14h	2	*233,92*	100	36	14,50
1" - 12h	2	*310,11*	110	40	14,50

MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

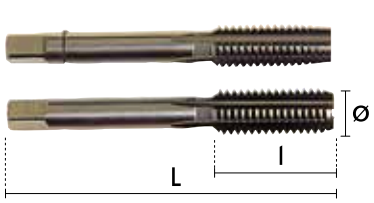
2315 HSS DIN 2184

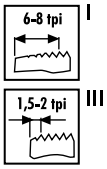
UN ANSI/ASME B1.1 — Tol. 2B

Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/2





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
UN1"1/8 - 8h	2	*213,86*	125	45	18,00
UN1"1/4 - 8h	2	*275,90*	125	45	18,00
UN1"3/8 - 8h	2	*312,96*	125	40	22,00
UN1"1/2 - 8h	2	*410,92*	125	40	24,00

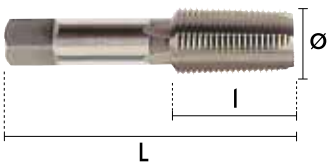
Ø x P mm	Nº	€	L mm	l mm	⊠ mm
UN1"5/8 - 8h	2	*480,67*	125	40	24,00
UN1"3/4 - 8h	2	*585,54*	125	40	29,00
UN2" - 8h	2	*627,39*	140	40	32,00

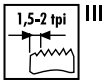
2309 HSS DIN 5157

Rc DIN 2999

Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
Rc1/8 - 28h	1	*31,28*	65	19	5,50
Rc1/4 - 19h	1	*44,11*	70	25	9,00
Rc3/8 - 19h	1	*61,26*	75	25	9,00
Rc1/2 - 14h	1	*85,74*	80	21	12,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
Rc5/8 - 14h	1	*156,91*	80	36	14,00
Rc3/4 - 14h	1	*145,52*	100	33	17,00
Rc7/8 - 14h	1	*261,52*	85	36	17,00
Rc1" - 11h	1	*221,53*	110	38	21,50

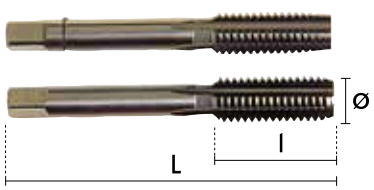
2310 HSS DIN 2181

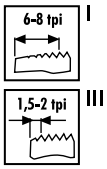
UNEF ANSI/ASME B1.1 — Tol. 2B

Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications

Macho 3º / Taraud 3º / Tap 3º } PVP = €/2





Ø x P mm	Nº	€	L mm	l mm	⊠ mm
1/4 - 32h	2	*98,55*	50	18	4,90
5/16 - 32h	2	*110,11*	56	22	4,90
3/8 - 32h	2	*125,99*	63	22	5,50
7/16 - 28h	2	*160,37*	63	22	6,20
1/2 - 28h	2	*181,21*	75	24	7,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
9/16 - 24h	2	*211,98*	80	28	9,00
5/8 - 24h	2	*295,05*	80	28	9,00
3/4 - 20h	2	*436,93*	95	32	11,00
1" - 20h	2	*625,17*	110	40	14,50

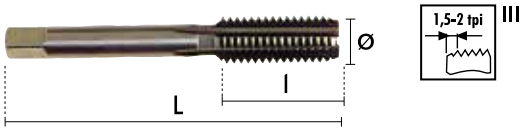
MACHOS DE MANO
TARAUDS À MAIN / HANDS TAPS

2312 HSS DIN 40432

PG
DIN 40430

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø x P mm		Nº	€	L mm	l mm	▨ mm
Pg.7	(12,50 x 20h)	1	*32,90*	70	22	7,00
Pg.9	(15,20 x 18h)	1	*41,83*	70	22	9,00
Pg.11	(18,60 x 18h)	1	*58,08*	80	22	11,00
Pg.13,5	(20,40 x 18h)	1	*63,70*	80	22	12,00
Pg.16	(22,50 x 18h)	1	*76,48*	80	22	14,50

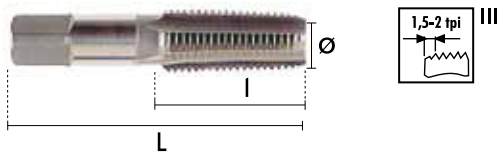
Ø x P mm		Nº	€	L mm	l mm	▨ mm
Pg.21	(28,30 x 16h)	1	*112,49*	90	22	18,00
Pg.29	(37,00 x 16h)	1	*223,32*	100	25	22,00
Pg.36	(47,00 x 16h)	1	*373,05*	140	40	29,00
Pg.42	(54,00 x 16h)	1	*443,03*	140	40	32,00
Pg.48	(59,30 x 16h)	1	*558,71*	160	40	35,00

2313 HSS

NPT
ANSI/ASME B1.20.1

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø x P mm		Nº	€	L mm	l mm	▨ mm
1/16	- 27h	1	*27,14*	65	19	5,50
1/8	- 27h	1	*27,14*	65	19	5,50
1/4	- 18h	1	*38,07*	70	25	9,00
3/8	- 18h	1	*52,52*	75	25	9,00
1/2	- 14h	1	*73,46*	80	31	12,00

Ø x P mm		Nº	€	L mm	l mm	▨ mm
3/4	- 14h	1	*112,31*	100	33	16,00
1"	- 11,5h	1	*125,06*	110	38	20,00
1"1/4	- 11,5h	1	*205,05*	125	41	24,00
1"1/2	- 11,5h	1	*311,58*	140	42	29,00
2"	- 11,5h	1	*486,41*	160	44	29,00

MACHOS DE MANO PERFIL COMPLETO
TARAUDS À MAIN PROFIL COMPLET / HANDS TAPS NON SERIAL FORM

2321 HSS DIN 352 | M DIN 13 | MF DIN 13 | Tol. 6H

Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications

Macho 3º
Taraud 3º
Tap 3º
} PVP = €/3



Ø x P mm	Nº	€	L mm	l mm	⊠ mm
M2,00 x 0,40	3	*33,08*	36	8	2,10
M2,50 x 0,45	3	*34,21*	40	9	2,10
M3,00 x 0,50	3	*18,11*	40	11	2,70
M4,00 x 0,70	3	*16,68*	45	13	3,40
M5,00 x 0,80	3	*18,12*	50	16	4,90
M6,00 x 1,00	3	*18,12*	50	19	4,90
M7,00 x 1,00	3	*25,01*	50	19	4,90
M8,00 x 1,00	2	*20,75*	56	22	4,90
M8,00 x 1,25	3	*21,82*	56	22	4,90
M9,00 x 1,00	2	*26,82*	63	10	5,50
M9,00 x 1,25	3	*38,71*	63	22	5,50
M10,00 x 1,00	2	*22,50*	63	20	5,50
M10,00 x 1,25	2	*22,91*	70	24	5,50
M10,00 x 1,50	3	*27,55*	70	24	5,50
M11,00 x 1,00	2	*39,77*	63	20	6,20
M11,00 x 1,25	2	*39,77*	63	22	6,20
M11,00 x 1,50	3	*53,39*	70	24	6,20
M12,00 x 1,00	2	*39,29*	70	22	7,00
M12,00 x 1,25	2	*39,45*	70	22	7,00
M12,00 x 1,50	2	*33,56*	70	22	7,00
M12,00 x 1,75	3	*35,82*	75	29	7,00
M14,00 x 1,00	2	*58,78*	70	22	9,00
M14,00 x 1,25	2	*48,22*	70	22	9,00
M14,00 x 1,50	2	*37,46*	70	22	9,00
M14,00 x 2,00	3	*47,13*	80	30	9,00

Ø x P mm	Nº	€	L mm	l mm	⊠ mm
M16,00 x 1,00	2	*82,26*	70	22	9,00
M16,00 x 1,25	2	*86,59*	70	22	9,00
M16,00 x 1,50	2	*46,70*	70	22	9,00
M16,00 x 2,00	3	*66,36*	80	32	9,00
M18,00 x 1,50	2	*61,92*	80	22	11,00
M18,00 x 2,00	2	*98,52*	80	22	11,00
M18,00 x 2,50	3	*88,70*	95	40	11,00
M20,00 x 1,50	2	*77,27*	80	22	12,00
M20,00 x 2,00	2	*102,11*	80	22	12,00
M20,00 x 2,50	3	*99,69*	95	40	12,00
M22,00 x 1,50	2	*84,48*	80	22	14,50
M22,00 x 2,00	2	*135,84*	80	22	14,50
M22,00 x 2,50	3	*122,21*	100	40	14,50
M24,00 x 1,50	2	*107,84*	90	22	14,50
M24,00 x 2,00	2	*151,87*	90	22	14,50
M24,00 x 3,00	3	*153,94*	110	50	14,50
M26,00 x 1,50	2	*171,81*	90	22	14,50
M26,00 x 2,00	2	*354,56*	90	22	14,50
M27,00 x 3,00	3	*198,26*	110	50	16,00
M28,00 x 1,50	2	*190,88*	90	22	16,00
M30,00 x 3,50	3	*251,71*	125	56	18,00
M33,00 x 3,50	3	*319,35*	125	56	20,00
M36,00 x 4,00	3	*411,27*	150	63	22,00
M39,00 x 4,00	3	*456,99*	150	63	24,00
M42,00 x 4,50	3	*572,59*	150	63	24,00

MACHOS DE MANO PERFIL COMPLETO
TARAUDS À MAIN PROFIL COMPLET / HANDS TAPS NON SERIAL FORM

2322 HSS DIN 352

UNC ANSI/ASME B1.1 | Tol. 2B

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } **PVP = €/3**
Tap 3º



Ø x P mm	Nº	€	L mm	l mm	☐ mm
UNC4-40	3	*45,82*	40	12	2,70
UNC5-40	3	*43,81*	40	12	2,70
UNC6-32	3	*43,81*	45	14	3,00
UNC8-32	3	*43,81*	45	14	3,40
UNC10-24	3	*43,81*	50	16	4,90
UNC12-24	3	*43,81*	50	18	4,90
UNC1/4-20	3	*35,46*	50	19	4,90
UNC5/16-18	3	*40,50*	56	22	4,90
UNC3/8-16	3	*45,79*	70	24	5,50
UNC7/16-14	3	*59,60*	70	24	6,20
UNC1/2-13	3	*68,60*	75	29	7,00

Ø x P mm	Nº	€	L mm	l mm	☐ mm
UNC9/16-12	3	*80,99*	80	30	9,00
UNC5/8-11	3	*111,72*	80	32	9,00
UNC3/4-10	3	*152,10*	95	40	11,00
UNC7/8-9	3	*187,34*	100	40	14,50
UNC1"-8	3	*253,01*	110	50	14,50
UNC1",1/8-7	3	*386,23*	132	56	18,00
UNC1",1/4-7	3	*486,16*	132	56	18,00
UNC1",3/8-6	3	*616,73*	150	63	22,00
UNC1",1/2-6	3	*757,24*	150	63	24,00
UNC 1"3/4-5	3	*943,36*	160	70	29,00
UNC2"	3	*1.084,49*	190	85	32,00

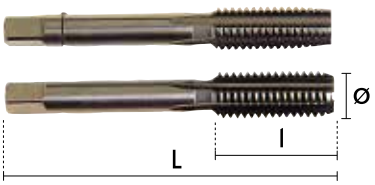
2323 HSS DIN 352 Perfil completo / Profil complet / Non serial form

UNF ANSI/ASME B1.1 | Tol. 2B

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications

Macho 3º
Taraud 3º } **PVP = €/2**
Tap 3º



Ø x P mm	Nº	€	L mm	l mm	☐ mm
UNF4-48	2	*34,80*	36	11	2,70
UNF5-44	2	*34,80*	36	11	2,70
UNF6-40	2	*33,25*	40	12	3,00
UNF8-36	2	*33,25*	40	12	3,40
UNF10-32	2	*33,25*	45	14	4,90
UNF12-28	2	*34,80*	50	14	4,90
UNF1/4-28	2	*23,97*	50	18	4,90
UNF5/16-24	2	*25,65*	56	22	4,90
UNF3/8-24	2	*29,66*	63	22	5,50
UNF7/16-20	2	*39,38*	63	22	6,20

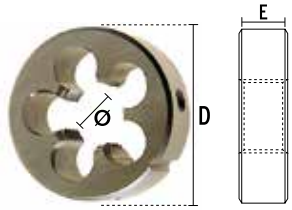
Ø x P mm	Nº	€	L mm	l mm	☐ mm
UNF1/2-20	2	*40,27*	75	24	7,00
UNF9/16-18	2	*52,45*	80	28	9,00
UNF5/8-18	2	*67,74*	80	28	9,00
UNF3/4-16	2	*91,01*	95	32	11,00
UNF7/8-14	2	*116,95*	100	36	14,50
UNF1"-12	2	*155,06*	110	40	14,50
UNF1",1/8-12	2	*241,46*	110	50	18,00
UNF1",1/4-12	2	*304,57*	132	56	18,00
UNF1"3/8-12	2	*386,80*	132	56	22,00
UNF1",1/2-12	2	*473,61*	150	63	24,00

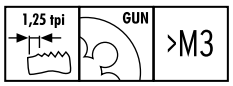
2501 HSS DIN EN 22568

M DIN 13 | MF DIN 13 | Tol. 6g

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
** **M1,00 x 0,25**	*48,49*	**16**	**5**	**1**
** **M1,10 x 0,25**	*80,06*	**16**	**5**	**1**
** **M1,20 x 0,25**	*75,11*	**16**	**5**	**1**
** **M1,40 x 0,30**	*68,82*	**16**	**5**	**1**
M1,60 x 0,35	*65,03*	**16**	**5**	**1**
M1,70 x 0,35	*65,03*	**16**	**5**	**1**
M1,80 x 0,35	*65,03*	**16**	**5**	**1**
M2,00 x 0,40	*27,52*	**16**	**5**	**1**
M2,20 x 0,45	*64,42*	**16**	**5**	**1**
M2,30 x 0,40	*27,52*	**16**	**5**	**1**
M2,50 x 0,45	*27,52*	**16**	**5**	**1**
M2,60 x 0,45	*27,52*	**16**	**5**	**1**
M3,00 x 0,50	*23,67*	**20**	**5**	**1**
MF3,00 x 0,60	*30,73*	20	5	1
MF3,50 x 0,60	*24,43*	20	5	1
MF3,50 x 0,75	*79,29*	20	5	1
MF4,00 x 0,50	*29,23*	20	5	1
M4,00 x 0,70	*23,67*	**20 / 25**	**5/9**	**1**
M4,50 x 0,75	*31,91*	**20**	5	**1**
MF5,00 x 0,50	*32,24*	20	5	1
MF5,00 x 0,75	*34,23*	20	7	1
M5,00 x 0,80	*23,67*	**20**	**7**	**1**
MF5,50 x 0,90	*79,29*	20	7	1
MF6,00 x 0,50	*31,37*	20	7	1
MF6,00 x 0,75	*28,97*	20	7	1
M6,00 x 1,00	*23,67*	**20**	**7**	**1**
MF7,00 x 0,75	*30,56*	25	9	1
M7,00 x 1,00	*25,80*	**25**	**9**	**1**
MF8,00 x 0,50	*37,67*	25	9	1
MF8,00 x 0,75	*30,56*	25	9	1
MF8,00 x 1,00	*30,56*	25	9	1
M8,00 x 1,25	*24,72*	**25**	**9**	**1**
MF9,00 x 1,00	*34,07*	25	9	1
M9,00 x 1,25	*36,39*	**25**	**9**	**1**
MF10,00 x 0,50	*64,25*	30	11	1
MF10,00 x 0,75	*47,59*	30	11	1
MF10,00 x 1,00	*32,40*	30	11	1
MF10,00 x 1,25	*40,58*	30	11	1
M10,00 x 1,50	*35,29*	**30**	**11**	**1**
MF11,00 x 0,75	*87,98*	30	11	1
MF11,00 x 1,00	*47,33*	30	11	1
MF11,00 x 1,25	*50,72*	30	11	1
M11,00 x 1,50	*47,31*	**30**	**11**	**1**
MF12,00 x 0,75	*54,99*	38	10	1
MF12,00 x 1,00	*47,31*	38	10	1
MF12,00 x 1,25	*47,31*	38	10	1
MF12,00x 1,50	*42,26*	38	10	1
M12,00 x 1,75	*38,79*	**38**	**14**	**1**
MF13,00x 0,75	*87,98*	38	10	1
MF13,00x 1,00	*55,62*	38	10	1
MF13,00x 1,50	*58,01*	38	10	1
M13,00 x 1,75	*58,01*	**38**	**14**	**1**
MF14,00x 0,75	*86,43*	38	10	1
MF14,00x 1,00	*51,91*	38	10	1
MF14,00x 1,25	*51,58*	38	10	1
MF14,00x 1,50	*44,18*	38	10	1
M14,00 x 2,00	*38,79*	**38**	**14**	**1**
MF15,00x 1,00	*63,05*	38	10	1
MF15,00x 1,50	*63,05*	38	10	1
M15,00 x 2,00	*77,74*	**38**	**14**	**1**
MF16,00x 1,00	*65,63*	45	14	1
MF16,00x 1,25	*59,67*	45	14	1
MF16,00x 1,50	*49,18*	45	14	1
M16,00 x 2,00	*52,11*	**45**	**14**	**1**
MF17,00x 1,00	*93,83*	45	14	1
MF17,00x 1,25	*93,83*	45	14	1
MF17,00x 1,50	*93,83*	45	14	1
MF18,00x 1,00	*68,62*	45	14	1
MF18,00x 1,25	*78,00*	45	14	1
MF18,00x 1,50	*60,69*	45	14	1
MF18,00x 2,00	*68,62*	45	14	1
M18,00 x 2,50	*52,11*	**45**	**18**	**1**
MF19,00x 1,00	*152,09*	45	14	1
MF19,00x 1,25	*152,09*	45	14	1
MF19,00x 1,50	*154,81*	45	14	1
MF20,00x 1,00	*68,33*	45	14	1
MF20,00x 1,25	*152,09*	45	14	1
MF20,00x 1,50	*62,63*	45	14	1
MF20,00x 2,00	*68,83*	45	14	1
M20,00 x 2,50	*52,11*	**45**	**18**	**1**
MF21,00x 1,00	*176,41*	45	14	1
MF21,00x 1,25	*176,41*	45	14	1
MF21,00x 1,50	*145,40*	45	14	1
MF22,00x 1,00	*93,31*	55	16	1
MF22,00x 1,25	*152,09*	55	16	1
MF22,00x 1,50	*80,28*	55	16	1
MF22,00x 2,00	*89,31*	55	16	1
M22,00 x 2,50	*76,67*	**55**	**22**	**1**
MF23,00x 1,50	*176,41*	55	16	1
MF24,00x 1,00	*89,31*	55	16	1
MF24,00x 1,25	*152,09*	55	16	1
MF24,00x 1,50	*80,28*	55	16	1
MF24,00x 2,00	*89,31*	55	16	1
M24,00 x 3,00	*76,67*	**55**	**22**	**1**
MF25,00x 1,00	*138,12*	55	16	1
MF25,00x 1,50	*116,62*	55	16	1
MF26,00x 1,00	*200,36*	55	16	1
MF26,00x 1,50	*110,39*	55	16	1

**Tol. 6h

(**continúa Ref.2501** / suite Réf.2501 / Ref.2501 cont'd)

COJINETES
FILIÉRES / DIES

(**continúa Ref.2501** / suite Réf.2501 / Ref.2501 cont'd)

Ø x P mm	€	D mm	E mm	
MF26,00 x 2,00	*200,36*	55	16	1
MF27,00 x 1,00	*123,30*	65	18	1
MF27,00 x 1,50	*121,40*	65	18	1
MF27,00 x 2,00	*132,03*	65	18	1
M27,00 x 3,00	*110,39*	**65**	**25**	**1**
MF28,00 x 1,00	*200,36*	65	18	1
MF28,00 x 1,50	*121,40*	65	18	1
MF28,00 x 2,00	*200,36*	65	18	1
MF30,00 x 1,00	*135,57*	65	18	1
MF30,00 x 1,50	*121,37*	65	18	1
MF30,00 x 2,00	*135,57*	65	18	1
M30,00 x 3,50	*113,89*	**65**	**25**	**1**
MF32,00 x 1,00	*203,93*	65	18	1
MF32,00 x 1,50	*128,27*	65	18	1
MF32,00 x 2,00	*200,36*	65	18	1
MF33,00 x 1,50	*121,40*	65	18	1
MF33,00 x 2,00	*132,20*	65	18	1
M33,00 x 3,50	*113,89*	**65**	**25**	**1**
MF34,00 x 1,50	*126,65*	65	18	1
MF34,00 x 2,00	*284,12*	65	18	1
MF35,00 x 1,50	*131,38*	65	18	1
MF35,00 x 2,00	*284,12*	65	18	1
MF36,00 x 1,50	*124,35*	65	18	1
MF36,00 x 2,00	*132,20*	65	18	1
MF36,00 x 3,00	*143,88*	65	25	1
M36,00 x 4,00	*118,08*	**65**	**25**	**1**
MF38,00 x 1,50	*188,09*	75	20	1
MF38,00 x 2,00	*360,05*	75	20	1

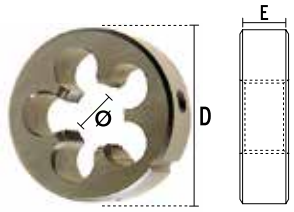
Ø x P mm	€	D mm	E mm	
MF39,00 x 1,50	*189,00*	75	20	1
MF39,00 x 2,00	*199,57*	75	20	1
MF39,00 x 3,00	*226,79*	75	30	1
M39,00 x 4,00	*177,24*	**75**	**30**	**1**
MF40,00 x 1,50	*196,23*	75	20	1
MF40,00 x 2,00	*199,57*	75	20	1
MF40,00 x 3,00	*217,67*	75	30	1
MF42,00 x 1,50	*257,95*	75	20	1
MF42,00 x 2,00	*288,35*	75	20	1
MF42,00 x 3,00	*300,84*	75	30	1
M42,00 x 4,50	*177,24*	**75**	**30**	**1**
MF45,00 x 1,50	*257,95*	90	22	1
MF45,00 x 2,00	*288,35*	90	22	1
MF45,00 x 3,00	*300,84*	90	36	1
M45,00 x 4,50	*271,07*	**90**	**36**	**1**
MF48,00 x 1,50	*259,58*	90	22	1
MF48,00 x 2,00	*265,36*	90	22	1
MF48,00 x 3,00	*288,35*	90	36	1
M48,00 x 5,00	*271,39*	**90**	**36**	**1**
MF50,00 x 1,50	*257,95*	90	22	1
MF52,00 x 1,50	*257,95*	90	36	1
MF52,00 x 2,00	*299,79*	90	22	1
MF52,00 x 3,00	*327,17*	90	36	1
M52,00 x 5,00	*271,39*	**90**	**36**	**1**
M56,00 x 5,50	*484,51*	**105**	**36**	**1**
M60,00 x 5,50	*484,51*	**105**	**36**	**1**
MF63 x 1,50	*914,47*	105	22	1
M64,00 x 6,00	*579,34*	**120**	**36**	**1**

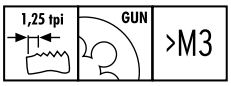
2501/5 HSS DIN EN 22568 Izquierda / A gauche / Left hand

M DIN 13 | MF DIN 13 | Tol. 6g | LH

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
M3 x 0,50	*47,33*	**20**	**5**	**1**
M4 x 0,70	*47,33*	**20**	**5**	**1**
M5 x 0,80	*47,33*	**20**	**7**	**1**
M6 x 1,00	*47,33*	**20**	**7**	**1**
M7 x 1,00	*51,60*	**25**	**9**	**1**
MF8 x 1,00	*61,09*	25	9	1
M8 x 1,25	*49,44*	**25**	**9**	**1**
MF10 x 1,00	*64,82*	30	11	1
MF10 x 1,25	*81,17*	30	11	1
M10 x 1,50	*70,58*	**30**	**11**	**1**
MF12 x 1,25	*94,63*	38	10	1
MF12 x 1,50	*70,58*	38	10	1
M12 x 1,75	*77,57*	**38**	**14**	**1**
MF14 x 1,50	*88,39*	38	10	1

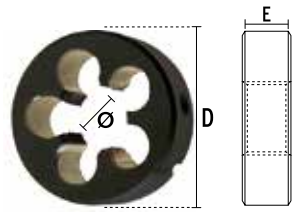
Ø x P mm	€	D mm	E mm	
M14 x 2,00	*77,56*	**38**	**14**	**1**
MF16 x 1,50	*98,37*	45	14	1
M16 x 2,00	*104,23*	**45**	**18**	**1**
MF18 x 1,50	*121,37*	45	14	1
M18 x 2,50	*104,23*	**45**	**18**	**1**
MF20 x 1,50	*125,25*	45	14	1
M20 x 2,50	*104,23*	**45**	**18**	**1**
MF22 x 1,50	*160,57*	55	16	1
M22 x 2,50	*153,33*	**55**	**22**	**1**
MF24 x 1,50	*160,57*	55	16	1
M24 x 3,00	*153,33*	**55**	**22**	**1**
M27 x 3,00	*220,76*	**65**	**25**	**1**
M30 x 3,50	*227,77*	**65**	**25**	**1**

2514 HSSE DIN EN 22568

M DIN 13 | MF DIN 13 | Tol. 6g | NIT | 2 tpi | GUN

Aceros 800 - 1100 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



Ø x P mm	€	D mm	E mm	
M3 x 0,50	*37,93*	20	5	1
M4 x 0,70	*37,93*	20	5	1
M5 x 0,80	*37,93*	20	7	1
M6 x 1,00	*37,93*	20	7	1
M8 x 1,25	*39,63*	25	9	1

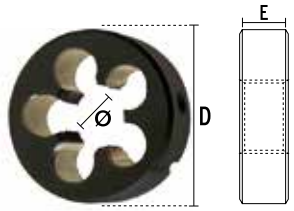
Ø x P mm	€	D mm	E mm	
M10 x 1,50	*56,53*	30	11	1
M12 x 1,75	*62,15*	38	14	1
M14 x 2,00	*64,64*	38	14	1
M16 x 2,00	*86,80*	45	18	1

2512 HSSE DIN EN 22568

M DIN 13 | Tol. 6g | VAP | 2 tpi | GUN

Aceros inoxidables — **Aciers inox / Stainless Steel** 1100 N/mm2

Aplicaciones / Applications



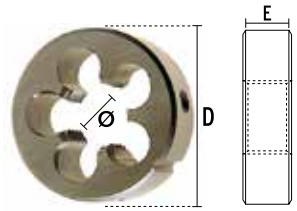
Ø x P mm	€	D mm	E mm	
M3,00 x 0,50	*32,21*	20	5	1
M4,00 x 0,70	*32,21*	20	5	1
M5,00 x 0,80	*32,21*	20	7	1
M6,00 x 1,00	*32,21*	20	7	1
M8,00 x 1,25	*33,65*	25	9	1
M10,00 x 1,50	*48,05*	30	11	1

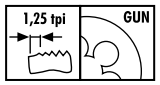
Ø x P mm	€	D mm	E mm	
M12,00 x 1,75	*52,82*	38	14	1
M14,00 x 2,00	*53,88*	38	14	1
M16,00 x 2,00	*72,33*	45	18	1
M18,00 x 2,50	*72,33*	45	18	1
M20,00 x 2,50	*72,33*	45	18	1

2502 HSS DIN EN 22568 — BSW BS 84

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

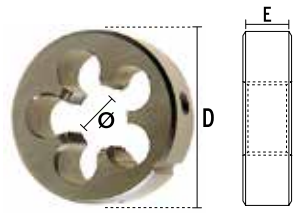
Ø x P mm	€	D mm	E mm	
W3/32 - 48h	*32,60*	16	5	1
W1/8 - 40h	*26,43*	20	5	1
W5/32 - 32h	*26,43*	20	5	1
W3/16 - 24h	*26,43*	20	7	1
W7/32 - 24h	*26,43*	20	7	1
W1/4 - 20h	*26,43*	20	7	1
W5/16 - 18h	*27,56*	25	9	1
W3/8 - 16h	*39,92*	30	11	1
W7/16 - 14h	*39,92*	38	14	1
W1/2 - 12h	*39,92*	38	14	1
W9/16 - 12h	*47,83*	38	14	1
W5/8 - 11h	*58,09*	45	14	1

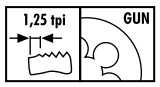
Ø x P mm	€	D mm	E mm	
W3/4 - 10h	*58,08*	45	18	1
W7/8 - 9h	*85,42*	55	22	1
W1" - 8h	*85,42*	55	22	1
W1" 1/8 - 7h	*134,48*	65	25	1
W1" 1/4 - 7h	*134,48*	65	25	1
W1" 3/8 - 6h	*136,96*	65	25	1
W1" 1/2 - 6h	*208,17*	75	30	1
W1" 5/8 - 5h	*276,70*	75	30	1
W1" 3/4 - 5h	*348,22*	90	36	1
W1" 7/8 - 4,5h	*381,00*	90	36	1
W2" - 4,5h	*362,70*	90	36	1

2502/5 HSS DIN EN 22568 Izquierda / A gauche / Left hand — BSW BS 84 LH

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

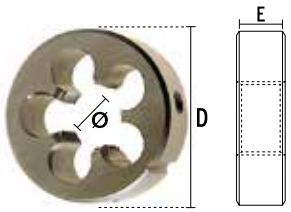
Ø x P mm	€	D mm	E mm	
W1/8 - 40h	*52,86*	20	5	1
W5/32 - 32h	*52,86*	20	5	1
W3/16 - 24h	*52,86*	20	7	1
W1/4 - 20h	*52,86*	20	7	1
W5/16 - 18h	*55,13*	25	9	1
W3/8 - 16h	*79,85*	30	11	1

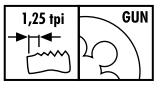
Ø x P mm	€	D mm	E mm	
W7/16 - 14h	*79,85*	38	14	1
W1/2 - 12h	*79,85*	38	14	1
W9/16 - 12h	*95,66*	38	14	1
W5/8 - 11h	*116,19*	45	18	1
W7/8 - 9h	*170,86*	55	22	1
W1" - 8h	*170,86*	55	22	1

2503 HSS DIN EN 22568 — BSF / BS 84

Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
BSF3/16 - 32h	*119,61*	20	7	1
BSF1/4 - 26h	*41,65*	20	7	1
BSF5/16 - 22h	*41,52*	25	9	1
BSF3/8 - 20h	*72,82*	30	11	1
BSF7/16 - 18h	*72,82*	30	11	1
BSF1/2 - 16h	*72,82*	38	10	1

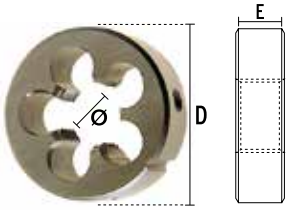
Ø x P mm	€	D mm	E mm	
BSF9/16 - 16h	*81,20*	38	10	1
BSF5/8 - 14h	*102,60*	45	14	1
BSF3/4 - 12h	*102,60*	45	14	1
BSF7/8 - 11h	*151,70*	55	22	1
BSF1" - 10h	*151,70*	55	22	1

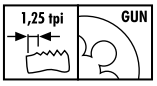
***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

2504 HSS DIN EN 24231 — G / ISO 228

Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
G1/8 - 28h	*42,53*	30	10	1
G1/4 - 19h	*42,53*	38	10	1
G3/8 - 19h	*54,99*	45	14	1
G1/2 - 14h	*54,99*	45	14	1
G5/8 - 14h	*76,25*	55	16	1
G3/4 - 14h	*113,97*	55	16	1
G7/8 - 14h	*119,30*	65	18	1

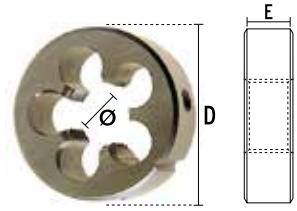
Ø x P mm	€	D mm	E mm	
G1" - 11h	*119,30*	65	18	1
G1"1/8 - 11h	*170,06*	75	20	1
G1"1/4 - 11h	*167,37*	75	20	1
G1"3/8 - 11h	*263,83*	90	22	1
G1"1/2 - 11h	*256,39*	90	22	1
G1"3/4 - 11h	*263,83*	105	22	1
G2" - 11h	*317,52*	105	22	1

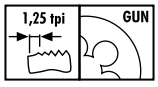
***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

2504/5 HSS DIN EN 24231 — Izquierda / A gauche / Left hand — G / ISO 228 — LH

Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
G1/8 - 28h	*85,04*	30	10	1
G1/4 - 19h	*85,04*	38	10	1
G3/8 - 19h	*109,97*	45	14	1
G1/2 - 14h	*109,97*	45	14	1

Ø x P mm	€	D mm	E mm	
G5/8 - 14h	*152,52*	55	16	1
G3/4 - 14h	*227,96*	55	16	1
G7/8 - 14h	*238,62*	65	18	1
G1" - 11h	*238,62*	65	18	1

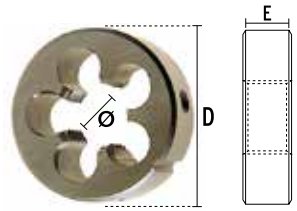
***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

2522 HSS DIN EN 24231

1,5 tpi | GUN | G ISO 228

Latón y bronce — Laiton et Bronze / Brass and bronze

Aplicaciones / Applications



Ø x P mm	€	D mm	E mm	
G 1/8 - 28h	*50,56*	30	11	1
G 1/4 - 19h	*50,56*	38	10	1
G 3/8 - 19h	*65,43*	45	14	1
G 1/2 - 14h	*65,43*	45	14	1

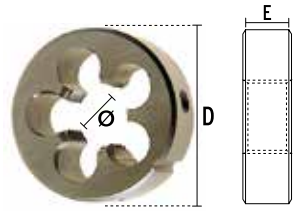
Ø x P mm	€	D mm	E mm	
G 5/8 - 14h	*103,32*	55	16	1
G 3/4 - 14h	*135,50*	55	16	1
G 7/8 - 14h	*141,86*	65	18	1
G 1" - 11h	*141,86*	65	18	1

2521 HSS DIN EN 24231

2 tpi | GUN | - 0,1 | G ISO 228

Latón y bronce — Laiton et Bronze / Brass and bronze

Aplicaciones / Applications



Ø x P mm	€	D mm	E mm	
G 1/8 - 28h	*55,61*	30	11	1
G 1/4 - 19h	*55,61*	38	10	1
G 3/8 - 19h	*71,96*	45	14	1
G 1/2 - 14h	*71,96*	45	14	1

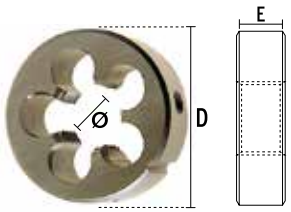
Ø x P mm	€	D mm	E mm	
G 5/8 - 14h	*143,56*	55	16	1
G 3/4 - 14h	*149,06*	55	16	1
G 7/8 - 14h	*181,21*	65	18	1
G 1" - 11h	*181,21*	65	18	1

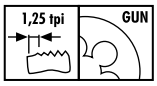
2505 HSS DIN EN 22568

UNC ANSI/ASME B1.1 | Tol. 2A

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
Nº4 - 40h	*33,97*	20	5	1
Nº5 - 40h	*33,97*	20	5	1
Nº6 - 32h	*33,97*	20	5	1
Nº8 - 32h	*33,97*	20	7	1
Nº10 - 24h	*33,97*	20	7	1
Nº12 - 24h	*33,97*	20	7	1
1/4 - 20h	*31,27*	20	7	1
5/16 - 18h	*30,56*	25	9	1
3/8 - 16h	*45,00*	30	11	1
7/16 - 14h	*45,00*	30	11	1
1/2 - 13h	*46,31*	38	14	1

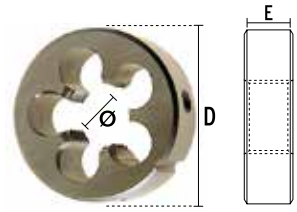
Ø x P mm	€	D mm	E mm	
9/16 - 12h	*48,46*	38	14	1
5/8 - 11h	*63,59*	45	18	1
3/4 - 10h	*63,59*	45	18	1
7/8 - 9h	*83,18*	55	22	1
1" - 8h	*83,18*	55	22	1
1"1/8 - 7h	*123,54*	65	25	1
1"1/4 - 7h	*123,54*	65	25	1
1"3/8 - 6h	*123,54*	65	25	1
1"1/2 - 6h	*192,64*	75	25	1
1"3/4 - 5h	*412,79*	90	36	1
2" - 4,5h	*418,36*	90	36	1

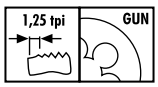
2505/5 HSS DIN EN 22568 Izquierda / A gauche / Left hand

UNC ANSI/ASME B1.1 | Tol. 2A | LH

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
UNC 1/4 - 20h	*62,54*	20	7	1
UNC 5/16 - 18h	*61,09*	25	9	1
UNC 3/8 - 16h	*90,01*	30	11	1
UNC 7/16 - 14h	*90,01*	30	11	1
UNC 1/2 - 13h	*92,61*	38	14	1

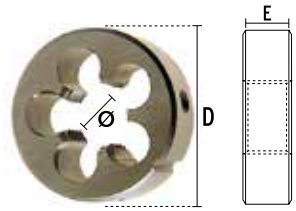
Ø x P mm	€	D mm	E mm	
UNC 9/16 - 12h	*96,94*	38	14	1
UNC 5/8 - 11h	*127,18*	45	18	1
UNC 3/4 - 10h	*127,18*	45	18	1
UNC 7/8 - 9h	*166,39*	55	22	1
UNC 1" - 7h	*166,39*	55	22	1

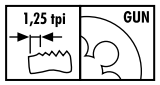
2506 HSS DIN EN 22568

UNF ANSI/ASME B1.1 | Tol. 2A

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
Nº4 - 48h	*34,27*	16	5	1
Nº5 - 44h	*34,27*	20	5	1
Nº6 - 40h	*34,27*	20	5	1
Nº8 - 36h	*34,27*	20	5	1
Nº10 - 32h	*34,27*	20	7	1
Nº12 - 28h	*33,60*	20	7	1
1/4 - 28h	*27,14*	20	7	1
5/16 - 24h	*32,27*	25	9	1
3/8 - 24h	*45,29*	30	11	1
7/16 - 20h	*41,64*	30	11	1

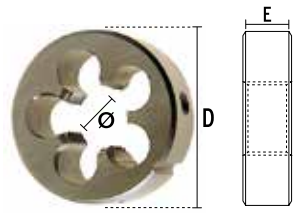
Ø x P mm	€	D mm	E mm	
1/2 - 20h	*47,54*	38	10	1
9/16 - 18h	*51,20*	38	10	1
5/8 - 18h	*65,44*	45	14	1
3/4 - 16h	*65,44*	45	14	1
7/8 - 14h	*87,89*	55	16	1
1" - 12h	*87,89*	55	16	1
1"1/8 - 12h	*135,35*	65	18	1
1"1/4 - 12h	*135,35*	65	18	1
1"3/8 - 12h	*202,44*	65	18	1
1"1/2 - 12h	*202,44*	75	20	1

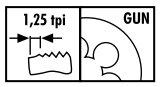
2506/5 HSS DIN EN 22568 Izquierda / A gauche / Left hand

UNF ANSI/ASME B1.1 | Tol. 2A | LH

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
UNF 1/4 - 28h	*54,30*	20	7	1
UNF 5/16 - 24h	*64,54*	25	9	1
UNF 3/8 - 24h	*90,56*	30	11	1
UNF 7/16 - 20h	*83,28*	30	11	1
UNF 1/2 - 20h	*95,08*	38	10	1

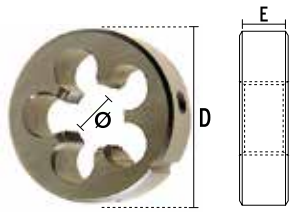
Ø x P mm	€	D mm	E mm	
UNF 9/16 - 18h	*102,40*	38	10	1
UNF 5/8 - 18h	*130,87*	45	14	1
UNF 3/4 - 16h	*130,87*	45	14	1
UNF 7/8 - 14h	*175,76*	55	16	1
UNF 1" - 12h	*175,76*	55	16	1

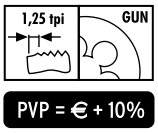
2507 HSS DIN EN 24230

R DIN 2999

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
R1/8 - 28h	*100,08*	30	11	1
R1/4 - 19h	*100,08*	38	14	1
R3/8 - 19h	*130,35*	45	18	1

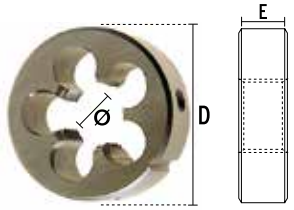
Ø x P mm	€	D mm	E mm	
R1/2 - 14h	*130,35*	55	22	1
R3/4 - 14h	*246,11*	55	22	1
R1" - 11h	*262,23*	65	25	1

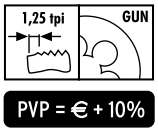
2508 HSS DIN EN 22568

UNEF ANSI/ASME B1.1 — Tol. 2A

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
1/4 - 32h	*102,30*	20	7	1
5/16 - 32h	*102,30*	25	9	1
3/8 - 32h	*158,84*	30	11	1
7/16 - 28h	*158,84*	30	11	1
1/2 - 28h	*158,84*	38	10	1

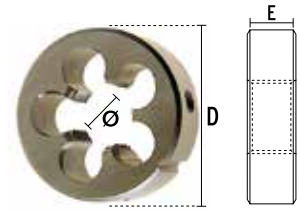
Ø x P mm	€	D mm	E mm	
9/16 - 24h	*158,84*	38	10	1
5/8 - 24h	*254,59*	45	14	1
3/4 - 20h	*254,59*	45	14	1
1" - 20h	*311,16*	55	16	1

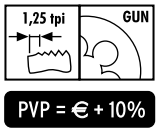
2520 HSS DIN EN 22568

UN ANSI/ASME B1.1 — Tol. 2A

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
UN 1"1/8 - 8h	*338,52*	65	25	1
UN 1"1/4 - 8h	*338,52*	65	25	1
UN 1"3/8 - 8h	*363,15*	65	25	1
UN 1"1/2 - 8h	*384,35*	75	30	1

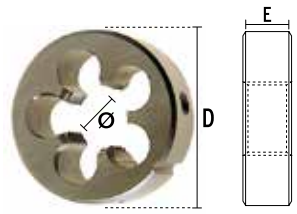
Ø x P mm	€	D mm	E mm	
UN 1"5/8 - 8h	*484,73*	75	30	1
UN 1"3/4 - 8h	*589,62*	90	36	1
UN 2" - 8h	*589,62*	90	36	1

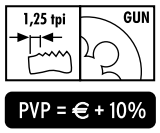
2510 HSS DIN 40434

PG DIN 40430

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
Pg.7 (12,50 x 20h)	*60,76*	38	10	1
Pg.9 (15,20 x 18h)	*60,76*	45	14	1
Pg.11 (18,60 x 18h)	*76,10*	45	14	1
Pg.13,5 (20,40 x 18h)	*76,10*	45	14	1
Pg.16 (22,50 x 18h)	*98,12*	55	16	1

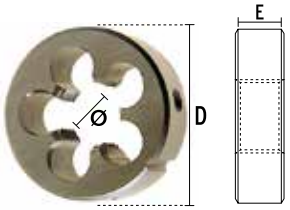
Ø x P mm	€	D mm	E mm	
Pg.21 (28,30 x 16h)	*139,47*	65	18	1
Pg.29 (37,00 x 16h)	*139,47*	65	18	1
Pg.36 (47,00 x 16h)	*357,45*	90	22	1
Pg.42 (54,00 x 16h)	*357,45*	105	22	1
Pg.48 (59,30 x 16h)	*474,05*	105	22	1

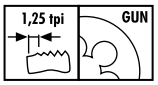
2509 HSS DIN EN 24230

NPT ANSI/ASME B1.20.1

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications





PVP = € + 10%

Ø x P mm	€	D mm	E mm	
1/16 - 27h	*77,35*	25	9	1
1/8 - 27h	*63,82*	30	10	1
1/4 - 18h	*63,82*	38	14	1
3/8 - 18h	*83,34*	45	18	1
1/2 - 14h	*83,34*	45	18	1

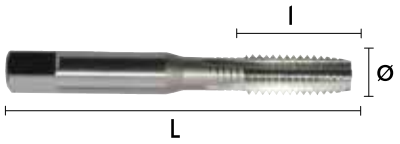
Ø x P mm	€	D mm	E mm	
3/4 - 14h	*152,42*	55	22	1
1" - 11,50h	*183,27*	65	25	1
1"1/4 - 11,50h	*227,73*	75	26	1
1"1/2 - 11,50h	*317,69*	90	27	1
2" - 11,50h	*442,31*	105	28	1

INSERTOS ROSCADOS
FILETS RAPPORTES / WIRE THREAD INSERTS

2701 HSS ISO 529 — M DIN 13 — Form. D

Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	Z	d mm
M2,00 x 0,40	12,50	44,50	9,50	2,24	3	2,8
M2,20 x 0,45	12,50	44,50	9,50	2,24	3	2,8
M2,50 x 0,45	12,50	48	11	2,50	3	3,2
M3,00 x 0,50	8,11	53	13	3,15	3	4,0
M3,50 x 0,60	8,11	53	13	3,55	3	4,5
M4,00 x 0,70	9,85	58	16	4,00	3	5,0
M5,00 x 0,80	10,17	66	19	5,00	3	6,3
M6,00 x 1,00	10,17	72	22	6,30	3	8,0
M7,00 x 1,00	16,37	72	22	7,10	3	9,0
M8,00 x 1,00	16,37	80	24	8,00	3	10,0
M8,00 x 1,25	14,06	80	24	8,00	3	10,0
M9,00 x 1,25	20,34	85	25	6,30	3	8,0
M10,00 x 1,00	19,85	85	25	6,30	3	8,0
M10,00 x 1,25	19,85	85	25	6,30	3	8,0
M10,00 x 1,50	18,28	89	29	7,10	3	9,0
M11,00 x 1,50	23,32	89	29	7,10	3	9,0
M12,00 x 1,00	28,37	95	30	9,00	3	11,2
M12,00 x 1,25	28,37	95	30	9,00	3	11,2
M12,00 x 1,50	28,37	95	30	9,00	3	11,2
M12,00 x 1,75	20,10	95	30	9,00	3	11,2

Ø x P mm	€	L mm	l mm	⊠ mm	Z	d mm
M14,00 x 1,25	33,24	102	32	10,00	3	10,0
M14,00 x 1,50	33,24	102	32	10,00	3	10,0
M14,00 x 1,75	33,24	102	32	10,00	3	10,0
M14,00 x 2,00	27,86	102	32	10,00	3	10,0
M15,00 x 1,50	34,95	102	32	10,00	3	10,0
M15,00 x 2,00	34,95	112	37	11,20	3	11,2
M16,00 x 1,50	34,95	112	37	11,20	4	14,0
M16,00 x 2,00	34,95	112	37	11,20	4	14,0
M18,00 x 1,50	34,95	104	29	11,20	4	11,2
M18,00 x 2,00	43,70	104	29	11,20	4	14,0
M18,00 x 2,50	43,70	118	38	12,50	4	16,0
M20,00 x 1,50	48,48	113	33	12,50	4	16,0
M20,00 x 2,00	48,48	113	33	12,50	4	16,0
M20,00 x 2,50	48,48	118	38	12,50	4	16,0
M22,00 x 1,50	54,77	120	35	14,00	4	18,0
M22,00 x 2,00	54,77	120	35	14,00	4	18,0
M22,00 x 2,50	54,77	130	45	14,00	4	18,0
M24,00 x 1,50	69,03	120	35	14,00	4	18,0
M24,00 x 2,00	69,03	127	37	16,00	4	20,0
M24,00 x 3,00	69,03	138	48	16,00	4	20,0

2702 HSS ISO 529 — UNC ANSI/ASME B1.1 — Form. D

Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	⊠ mm	d mm
UNC No.2 x 56	20,51	48	9,50	2,50	3,2
UNC No.4 x 40	20,51	53	13	3,15	4,0
UNC No.6 x 32	20,51	58	16	4,00	5,0
UNC No.8 x 32	20,51	62	17	4,50	5,6
UNC No.10 x 24	13,72	66	19	5,00	6,3
UNC No.12 x 24	13,72	66	19	5,60	7,1
UNC 1/4 x 20	13,72	72	22	6,30	8,0
UNC 5/16 x 18	14,48	80	24	8,00	10,0
UNC 3/8 x 16	15,63	85	25	6,30	8,0

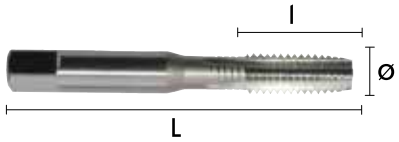
Ø x P mm	€	L mm	l mm	⊠ mm	d mm
UNC 7/16 x 14	22,08	95	30	9,00	11,2
UNC 1/2 x 13	23,74	102	32	10,00	12,5
UNC 9/16 x 12	36,88	112	37	11,20	14,0
UNC 5/8 x 11	44,25	112	37	11,20	14,0
UNC 11/16 x 11	58,87	112	37	11,20	14,0
UNC 3/4 x 10	58,87	118	38	12,50	16,0
UNC 7/8 x 9	68,13	130	45	14,00	18,0
UNC 1" x 8	68,13	138	48	16,00	20,0

INSERTOS ROSCADOS
FILETS RAPPORTES / WIRE THREAD INSERTS

2703 HSS ISO 529 — UNF ANSI/ASME B1.1 — Form. D

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



Ø x P mm	€	L mm	l mm	☐ mm	d mm
UNF No.4 x 48	*20,51*	53	13	3,15	4,0
UNF No.6 x 40	*20,51*	53	13	3,55	4,5
UNF No.8 x 36	*20,51*	62	17	4,50	5,6
UNF No.10x 32	*13,72*	66	19	5,00	6,3
UNF 1/4 x 28	*13,72*	69	19	6,30	8,0
UNF 5/16 x 24	*14,48*	76	20	8,00	10,0
UNF 3/8 x 24	*15,63*	82	22	6,30	8,0
UNF 7/16 x 20	*22,08*	84	24	7,10	9,0

Ø x P mm	€	L mm	l mm	☐ mm	d mm
UNF 1/2 x 20	*23,74*	90	25	9,00	11,2
UNF 9/16 x 18	*36,88*	104	29	10,00	12,5
UNF 5/8 x 18	*44,25*	104	29	11,20	12,5
UNF 3/4 x 16	*58,87*	104	29	11,20	14,0
UNF 7/8 x 14	*68,13*	120	35	14,00	18,0
UNF 1" x 14	*68,13*	127	37	16,00	20,0
UNF 1" x 12	*68,13*	127	37	16,00	20,0

2704 HSS ISO 529 — BSW BS 84 — Form. D

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



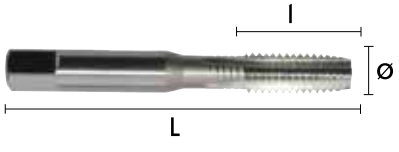
Ø x P mm	€	L mm	l mm	☐ mm	d mm
BSW 1/8 x 40	*13,72*	53	13	3,15	4,0
BSW 3/16 x 24	*13,72*	66	19	5,00	6,3
BSW 1/4 x 20	*13,72*	72	22	6,30	8,0
BSW 5/16 x 18	*14,48*	80	24	8,00	10,0
BSW 3/8 x 16	*15,63*	85	25	6,30	8,0
BSW 7/16 x 14	*22,08*	95	30	9,00	11,2
BSW 1/2 x 12	*23,74*	102	32	10,00	12,5

Ø x P mm	€	L mm	l mm	☐ mm	d mm
BSW 9/16 x 12	*36,88*	102	32	10,00	12,5
BSW 5/8 x 11	*44,25*	112	37	11,20	14,0
BSW 11/16x 11	*58,87*	112	37	11,20	14,0
BSW 3/4 x 10	*58,87*	118	38	12,50	12,5
BSW 7/8 x 9	*68,13*	130	45	14,00	18,0
BSW 1" x 8	*68,13*	138	48	16,00	20,0

2715 HSS ISO 529 — G ISO 229 — Form. D

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



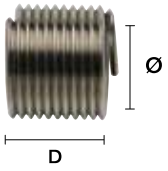
Ø x P mm	€	L mm	l mm	☐ mm	d mm
G 1/8x28	*15,45*	59	15	6,3	8,0
G 1/4x19	*18,10*	67	19	9,0	11,2

Ø x P mm	€	L mm	l mm	☐ mm	d mm
G 3/8x19	*23,83*	75	21	11,2	14,0
G 1/2x14	*36,60*	87	26	12,5	16,0

2705 DIN 8140 | M DIN 13 | Tol. 6H

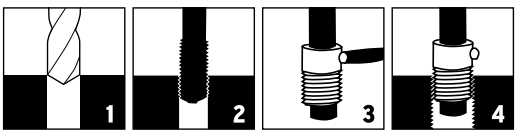
Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø x P mm	Dmm. 1,0 Ø €	1,5 Ø €	2,0 Ø €	2,5 Ø € *	3,0 Ø € *	
M2,00 x 0,40	0,36	0,38	0,39	0,41	0,46	10
M2,20 x 0,45	0,34	0,36	0,38	0,39	0,34	10
M2,50 x 0,45	0,29	0,32	0,34	0,36	0,39	10
M3,00 x 0,50	0,26	0,27	0,29	0,36	0,39	10
M3,50 x 0,60	0,34	0,36	0,38	0,39	0,43	10
M4,00 x 0,70	0,26	0,27	0,29	0,34	0,38	10
M5,00 x 0,80	0,26	0,27	0,29	0,34	0,38	10
M6,00 x 1,00	0,26	0,27	0,29	0,34	0,38	10
M7,00 x 1,00	0,29	0,32	0,34	0,41	0,46	10
M8,00 x 1,00	0,32	0,36	0,43	0,60	0,70	10
M8,00 x 1,25	0,29	0,36	0,41	0,51	0,62	10
M9,00 x 1,25	0,45	0,51	0,63	0,79	0,91	10
M10,00 x 1,00	0,34	0,41	0,54	0,76	0,91	10
M10,00 x 1,25	0,34	0,41	0,54	0,76	0,91	10
M10,00 x 1,50	0,34	0,41	0,54	0,67	0,81	10
M11,00 x 1,50	0,46	0,72	0,97	1,32	1,64	10
M12,00 x 1,00	0,41	0,65	0,87	1,32	1,64	10
M12,00 x 1,25	0,41	0,65	0,87	1,32	1,64	10
M12,00 x 1,50	0,41	0,65	0,87	1,32	1,64	10
M12,00 x 1,75	0,41	0,65	0,87	1,17	1,46	10
M14,00 x 1,00	1,01	1,28	1,64	2,03	2,33	10
M14,00 x 1,25	1,01	1,28	1,64	2,03	2,33	10
M14,00 x 1,50	1,01	1,28	1,64	2,03	2,33	10
M14,00 x 2,00	0,71	0,90	1,15	2,03	2,33	10
M16,00 x 1,50	1,35	1,68	2,08	2,51	2,95	10
M16,00 x 2,00	0,95	1,18	1,46	2,51	2,98	10
M18,00 x 1,50	1,84	2,40	2,92	3,47	3,98	10
M18,00 x 2,00	1,84	2,40	2,94	3,47	3,96	10
M18,00 x 2,50	1,47	1,94	2,34	3,47	3,96	10
M20,00 x 1,50	2,22	2,90	3,52	4,55	5,23	10
M20,00 x 2,00	2,22	2,90	3,52	4,55	5,23	10
M20,00 x 2,50	1,78	2,32	2,82	4,55	5,23	10
M22,00 x 1,50	3,07	3,84	4,75	6,16	7,17	5
M22,00 x 2,00	3,07	3,84	4,75	6,16	7,17	5
M22,00 x 2,50	2,46	3,07	3,80	6,16	7,17	5
M24,00 x 1,50	3,84	5,03	6,11			5
M24,00 x 2,00	3,84	5,03	6,11			5
M24,00 x 3,00	3,84	5,03	6,11			5

*** Bajo pedido**
Sur commande
To-order



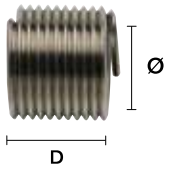
MODO DE EMPLEO / MODE D´EMPLOI / HOW TO USE
1- Taladrado previo / Perçage préalable / Previous drilling
2- Roscado previo / Taraudage préalable / Previous threading
3- Instalación del inserto en la herramienta / Pose de l'insert dans l'outil / Placement of the insert in the tool
4- Introducción del inserto en la rosca / Introduction de l'insert dans le filet / Introduction of the insert in the coil

INSERTOS ROSCADOS
FILETS RAPPORTES / WIRE THREAD INSERTS

2706 DIN 8140 | UNC ANSI/ASME B1.1 | Tol. 2B

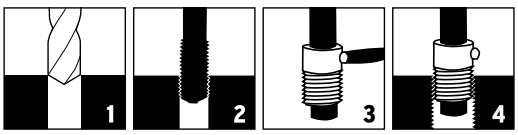
Aceros 400 - 800 N/mm² | Aciers / Steel

Aplicaciones / Applications



Ø x P mm	Dmm. 1,0 Ø €	1,5 Ø €	2,0 Ø €	2,5 Ø €*	3,0 Ø €*	
UNC Nº 2 x 56	*0,60*	*0,51*	*0,72*	*0,79*	*0,86*	10
UNC Nº 4 x 40	*0,46*	*0,41*	*0,51*	*0,62*	*0,67*	10
UNC Nº 5 x 40	*0,50*	*0,46*	*0,58*	*0,67*	*0,75*	10
UNC Nº 6 x 32	*0,46*	*0,41*	*0,51*	*0,62*	*0,67*	10
UNC Nº 8 x 32	*0,46*	*0,41*	*0,51*	*0,63*	*0,72*	10
UNC Nº 10 x 24	*0,46*	*0,50*	*0,51*	*0,63*	*0,72*	10
UNC Nº 12 x 24	*0,51*	*0,54*	*0,63*	*0,62*	*0,67*	10
UNC 1/4 x 20	*0,46*	*0,41*	*0,51*	*0,65*	*0,65*	10
UNC 5/16 x 18	*0,51*	*0,50*	*0,62*	*1,01*	*1,08*	10
UNC 3/8 x 16	*0,60*	*0,60*	*0,95*	*1,30*	*1,56*	10
UNC 7/16 x 14	*0,68*	*0,68*	*1,11*	*1,56*	*1,86*	10
UNC 1/2 x 13	*0,75*	*0,92*	*1,52*	*2,25*	*2,79*	10
UNC 9/16 x 12	*1,41*	*1,58*	*2,65*	*3,26*	*3,78*	5
UNC 5/8 x 11	*1,92*	*2,05*	*3,36*	*4,03*	*4,79*	5
UNC 3/4 x 10	*2,59*	*2,95*	*4,73*	*5,57*	*6,41*	5
UNC 7/8 x 9	*4,12*	*3,93*	*6,36*	*7,53*	*8,77*	5
UNC 1" x 8	*5,17*	*5,11*	*8,20*	*10,72*	*12,32*	5

*** Bajo pedido**
Sur commande
To-order



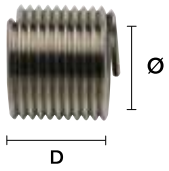
MODO DE EMPLEO / MODE D´EMPLOI / HOW TO USE
1- Taladrado previo / Perçage préalable / Previous drilling
2- Roscado previo / Taraudage préalable / Previous threading
3- Instalación del inserto en la herramienta / Pose de l'insert dans l'outil / Placement of the insert in the tool
4- Introducción del inserto en la rosca / Introduction de l'insert dans le filet / Introduction of the insert in the coil

INSERTOS ROSCADOS
FILETS RAPPORTES / WIRE THREAD INSERTS

2707 DIN 8140 | UNF ANSI/ASME B1.1 | Tol. 2B

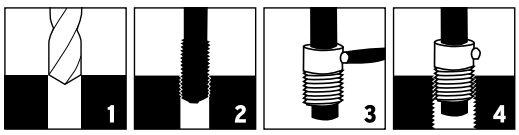
Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø x P mm	Dmm. 1,0 Ø €	1,5 Ø €	2,0 Ø €	2,5 Ø €*	3,0 Ø €*	
UNF 4 x 48	0,46	0,41	0,51	0,62	0,67	10
UNF 6 x 40	0,46	0,41	0,51	0,62	0,67	10
UNF 8 x 36	0,51	0,41	0,58	0,63	0,72	10
UNF 10 x 32	0,46	0,41	0,51	0,65	0,72	10
UNF 1/4 x 28	0,46	0,41	0,51	0,63	0,72	10
UNF 5/16 x 24	0,51	0,51	0,75	1,01	1,19	10
UNF 3/8 x 24	0,60	0,60	0,95	1,30	1,56	10
UNF 7/16 x 20	0,68	0,68	1,11	1,54	1,86	10
UNF 1/2 x 20	0,72	0,92	1,52	2,25	2,79	10
UNF 9/16 x 18	1,49	1,58	2,65	3,26	3,78	5
UNF 5/8 x 18	2,00	2,05	3,36	4,03	4,79	5
UNF 3/4 x 16	2,71	2,95	4,73	5,57	6,41	5
UNF 7/8 x 14	4,12	3,93	6,36	7,53	8,77	5
UNF 1" x 12	5,17	5,11	8,20	10,72	12,32	5
UNF 1" 1/8 x 12	8,65	8,60	13,04			5
UNF 1" 1/4 x 12	9,56	14,85				5
UNF 1" 3/8 x 12	11,34	10,68				5
UNF 1" 1/2 x 12	11,96	12,92				5

*** Bajo pedido**
Sur commande
To-order



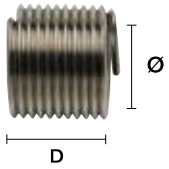
MODO DE EMPLEO / MODE D´EMPLOI / HOW TO USE
1- Taladrado previo / Perçage préalable / Previous drilling
2- Roscado previo / Taraudage préalable / Previous threading
3- Instalación del inserto en la herramienta / Pose de l'insert dans l'outil / Placement of the insert in the tool
4- Introducción del inserto en la rosca / Introduction de l'insert dans le filet / Introduction of the insert in the coil

INSERTOS ROSCADOS
FILETS RAPPORTES / WIRE THREAD INSERTS

2708 DIN 8140 | BSW BS 84 | Tol. 2B

Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications



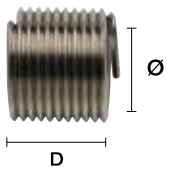
Ø x P mm	Dmm. 1,0 Ø €	1,5 Ø €	2,0 Ø €	2,5 Ø €*	3,0 Ø €*	
BSW 1/8 x 48	0,58	0,46	0,63	0,67	0,75	10
BSW 3/16 x 24	0,51	0,41	0,58	0,67	0,75	10
BSW 1/4 x 20	0,51	0,41	0,58	0,70	0,81	10
BSW 5/16 x 18	0,58	0,51	0,82	1,11	1,30	10
BSW 3/8 x 16	0,65	0,60	1,05	1,41	1,71	10
BSW 7/16 x 14	0,75	0,68	1,23	1,71	2,05	10
BSW 1/2 x 12	0,72	1,11	1,52	2,46	3,06	10
BSW 9/16 x 12	1,64	1,76	2,65	3,57	4,14	5
BSW 5/8 x 11	2,19	2,05	3,36	4,43	5,23	5
BSW 3/4 x 10	3,00	2,95	3,98	5,15	7,04	5
BSW 7/8 x 9	3,74	3,14	5,79	7,50	8,75	5
BSW 1" x 8	4,70	4,10	7,47	9,74	11,20	5

*** Bajo pedido**
Sur commande
To-order

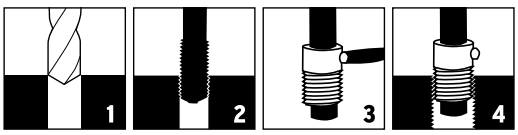
2716 DIN 8140 | G ISO 229 | Tol. 2B

Aceros 400 - 800 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø x P mm	Dmm. 1,0 Ø €	1,5 Ø €	2,0 Ø €	
G 1/8x28	0,54	0,78	0,86	10
G 1/4x19	0,73	1,06	1,19	10
G 3/8x19	0,65	1,20	1,36	10
G 1/2x14	1,14	1,73	1,82	10



MODO DE EMPLEO / MODE D´EMPLOI / HOW TO USE
1- Taladrado previo / Perçage préalable / Previous drilling
2- Roscado previo / Taraudage préalable / Previous threading
3- Instalación del inserto en la herramienta / Pose de l'insert dans l'outil / Placement of the insert in the tool
4- Introducción del inserto en la rosca / Introduction de l'insert dans le filet / Introduction of the insert in the coil

2709 Insertador / Appareil de pose manuel / Insert Tool



nº	M	UNC/UNF/BSW/BSF/BSP		€
2	M 2,00 x 0,40 M 2,20 x 0,45	UNC Nº 2	1	*23,57*
3	M 2,50 x 0,45		1	*23,57*
4	M 3,00 x 0,50	UNC Nº 5, UNC/UNF Nº 4, BSW 18	1	*17,79*
5	M 3,50 x 0,60	UNC/UNF Nº 6	1	*17,79*
6	M 4,00 x 0,70	UNC, UNF Nº 8	1	*17,79*
7		BSW 3/16, UNC Nº 10	1	*17,79*
8	M 5,00 x 0,80	UNF Nº 10, UNC Nº 12, BSF 3/16	1	*17,79*
9	M 6,00 x 1,00	UNC, UNF 1/4, BSW, BSF 1/4	1	*17,79*
10	M 7,00 x 1,00		1	*17,79*
11	M 8,00 x 1,00 M 8,00 x 1,25	UNF, BSF 5/16 UNC, BSW 5/16	1	*17,79*
12	M 9,00 x 1,00 M 9,00 x 1,25		1	*17,79*
13	M 10,00 x 1,00 M 10,00 x 1,25 M 10,00 x 1,50	UNF, BSF 3/8 UNC, BSW 3/8 G 1/18	1	*17,79*
14	M 11,00 x 1,25 M 11,00 x 1,50	UNC, UNF 7/16, BSW, BSF 7/16	1	*18,97*
15	M 12,00 x 1,00 M 12,00 x 1,25 M 12,00 x 1,50 M 12,00 x 1,75	UNC, UNF 1/2, BSW, BSF 1/2	1	*21,29*
16	M 14,00 x 1,50 M 14,00 x 2,00	UNC, UNF 9/16, BSW, BSF 9/16 G 1/4, G 3/8	1	*23,69*
17	M 14,00 x 1,00 M 14,00 x 1,25		1	*23,69*
18	M 16,00 x 1,50 M 16,00 x 2,00	UNC, UNF 5/8, BSW, BSF 5/8	1	*23,69*
20	M 18,00 x 1,50 M 18,00 x 2,00 M 18,00 x 2,50	UNC 3/4, BSW, BSF 3/4	1	*29,56*
21	M 20,00 x 1,50 M 20,00 x 2,00 M 20,00 x 2,50	UNF 3/4	1	*29,56*
22	M 22,00 x 1,50 M 22,00 x 2,00 M 22,00 x 2,50	UNC, UNF 7/8, BSW, BSF 7/8 G 1/2	1	*29,56*
23	M 24,00 x 1,50 M 24,00 x 2,00 M 24,00 x 3,00	UNC, UNF 1", BSW, BSF 1"	1	*47,39*

2710 Rompe Arrastre / Rupteur / Tang break tool



nº	M	UNC/UNF/BSW/BSF/BSP		€
2	M 2,00 x 0,40 M 2,20 x 0,45	UNC Nº 2	1	*5,63*
3	M 2,50 x 0,45		1	*5,63*
4	M 3,00 x 0,50	UNC, UNF Nº 4	1	*5,63*
5	M 3,50 x 0,60	UNC, UNF Nº 6	1	*5,63*
6	M 4,00 x 0,70	UNC Nº 10, UNC/UNF Nº 8, BSF 3/16	1	*5,63*
8	M 5,00 x 0,80		1	*7,07*
9	M 6,00 x 1,00	UNC/UNF 1/4, BSW/BSF 1/4	1	*7,07*
11	M 7,00 x 1,00 M 8,00 x 1,00 M 8,00 x 1,25	UNC/UNF 5/16, BSW/BSF 5/16	1	*9,22*
12	M 9,00 x 1,00 M 9,00 x 1,25	BSF 3/8	1	*9,22*
13	M 10,00 x 1,00 M 10,00 x 1,25 M 10,00 x 1,50	UNF 3/8 UNC, BSW 3/8 G 1/8	1	*9,22*
14	M 11,00 x 1,25 M 11,00 x 1,50	UNC/UNF 7/16, BSW/BSF 7/16	1	*9,22*
15	M 12,00 x 1,00 M 12,00 x 1,25 M 12,00 x 1,50 M 12,00 x 1,75	UNC/UNF 1/2, BSW/BSF 1/2 G 1/4	1	*9,22*

2711 Kits / Kits

M
DIN 13



Ø x P				1,5D	€
M2 x 0,40	2,10	No. 2	No. 2	10	*57,92*
M2,50 x 0,45	2,60	No. 3	No. 3	10	*57,39*
M3 x 0,50	3,20	No. 4	No. 4	10	*47,00*
M3,50 x 0,60	3,70	No. 5	No. 5	10	*47,75*
M4 x 0,70	4,20	No. 6	No. 6	10	*48,85*
M5 x 0,80	5,20	No. 8	No. 8	10	*51,62*
M6 x 1,00	6,30	No. 9	No. 9	10	*51,66*
M7 x 1,00	7,30	No. 10	No. 11	10	*61,10*
M8 x 1,25	8,30	No. 11	No. 11	10	*60,09*
M8 x 1,00	8,30	No. 11	No. 11	10	*62,40*
M9 x 1,25	9,30	No. 12		10	*59,70*
M10 x 1,50	10,40	No. 13		10	*57,77*
M10 x 1,25	10,30	No. 13		10	*59,34*
M10 x 1,00	10,30	No. 13		10	*59,34*
M11 x 1,50	11,40	No. 14		5	*65,00*
M12 x 1,75	12,40	No. 15		5	*65,11*
M12 x 1,50	12,40	No. 15		5	*73,38*
M12 x 1,25	12,30	No. 15		5	*73,38*
M12 x 1,00	12,30	No. 15		5	*73,38*
M14 x 2,00		No. 16		5	*64,38*
M14 x 1,50		No. 16		5	*74,93*
M14 x 1,25		No. 17		5	*74,93*
M14 x 1,00		No. 17		5	*74,93*
M16 x 2,00		No. 18		5	*78,58*
M16 x 1,50		No. 18		5	*78,58*
M18 x 2,50		No. 20		5	*96,94*
M18 x 2,00		No. 20		5	*96,94*
M18 x 1,50		No. 20		5	*96,94*
M20 x 2,50		No. 21		5	*104,12*
M20 x 2,00		No. 21		5	*104,12*
M20 x 1,50		No. 21		5	*104,12*
M22 x 2,50		No. 22		5	*115,16*
M22 x 2,00		No. 22		5	*115,16*
M22 x 1,50		No. 22		5	*115,16*
M24 x 3,00,		No. 23		5	*153,09*
M24 x 2,00		No. 23		5	*153,09*
M24 x 1,50		No. 23		5	*153,09*

2712 Kits / Kits

UNC ANSI/ASME B1.1



Ø x P					1,5D	€
No. 2	x 56	2,40	No. 2	No. 2	10	*67,42*
No. 4	x 40	3,10	No. 4	No. 4	10	*60,55*
No. 6	x 32	3,80	No. 5	No. 5	10	*60,70*
No. 8	x 32	4,40	No. 6	No. 6	10	*60,91*
No. 10	x 24	5,20	No. 7	No. 6	10	*55,59*
No. 12	x 24	5,80	No. 8	No. 8	10	*57,49*
1/4	x 20	6,70	No. 9	No. 9	10	*56,88*
5/16	x 18	8,30	No. 11	No. 11	10	*61,98*
3/8	x 16	9,90	No. 13	No. 13	10	*56,30*
7/16	x 14	11,60	No. 14		5	*63,97*
1/2	x 13	13,00	No. 15		5	*69,37*
9/16	x 12		No. 16		5	*80,05*
5/8	x 11		No. 18		5	*89,73*
3/4	x 10		No. 20		5	*114,81*
7/8	x 9		No. 22		5	*128,91*
1"	x 8		No. 23		4	*152,67*

2713 Kits / Kits

UNF ANSI/ASME B1.1



Ø x P				1,5 D	€
No. 4	x 48	3,00	No. 4	No. 4	10	*62,58*
No. 6	x 40	3,80	No. 5	No. 5	10	*63,02*
No. 8	x 36	4,40	No. 6	No. 6	10	*63,23*
No. 10	x 32	5,10	No. 8	No. 8	10	*58,24*
1/4	x 28	6,70	No. 9	No. 9	10	*59,19*
5/16	x 24	8,30	No. 11	No. 11	10	*64,48*
3/8	x 24	9,80	No. 13	No. 13	10	*58,62*
7/16	x 20	11,50	No. 14		5	*73,88*
1/2	x 20	13,00	No. 15		5	*80,94*
9/16	x 18		No. 16		5	*91,63*
5/8	x 18		No. 18		5	*101,30*
3/4	x 16		No. 21		5	*149,53*
7/8	x 14		No. 22		5	*163,63*
1"	x 12		No. 23		4	*187,40*

2714 Kits / Kits

BSW BS 84



Ø x P				1,5 D	€
1/8	x 40	3,40	No. 4	No. 4	10	*56,70*
3/16	x 24	5,00	No. 8	No. 8	10	*59,19*
1/4	x 20	6,70	No. 9	No. 9	10	*59,19*
5/16	x 18	8,30	No. 11	No. 11	10	*64,48*
3/8	x 16	9,90	No. 13	No. 13	10	*58,62*
7/16	x 14	11,50	No. 14		5	*73,88*
1/2	x 12	13,00	No. 15		5	*81,88*
9/16	x 12		No. 16		5	*92,56*
5/8	x 11		No. 18		5	*101,30*
3/4	x 10		No. 20		5	*149,53*
7/8	x 9		No. 22		5	*159,72*
1"	x 8		No. 23		4	*182,29*

2717 Kits / Kits

G
ISO 229



Ø x P				1,5 D	€
G 1/8x28	9,90	N°13	N°13	5	*93,72*
G 1/4x19	13,50	N°16	N°15	5	*98,97*
G 3/8x19	17,00	N°16		5	*113,74*
G 1/2x14				5	*149,51*

7167 Multi-kits / Multi-kits

ISO
529



Ø x P				1,5 D
M5 x 0,80	5,20	No. 8	No. 8	10
M6 x 1,00	6,30	No. 9	No. 9	10
M8 x 1,25	8,30	No. 11	No. 11	10
M10 x 1,50	10,40	No. 13	-	10
M12 x 1,75	12,40	No. 15	-	10
			€	*364,96*

2901/1 DIN ISO 1502

PASA NO PASA | CTPNP | M DIN 13 | MF DIN 13 | Tol. 6H



Ø x P mm	€	
M1,00 x 0,25	318,50	1
M1,10 x 0,25	318,50	1
M1,20 x 0,25	304,28	1
M1,40 x 0,30	304,28	1
M 1,60 x 0,35	255,94	1
M 1,80 x 0,35	224,66	1
M 2,00 x 0,40	145,03	1
M 2,20 x 0,45	207,59	1
M 2,50 x 0,45	127,97	1
M 3,00 x 0,50	119,44	1
MF 4,00 x 0,50	213,28	1
M 4,00 x 0,70	113,75	1
M 4,50 x 0,75	113,75	1
MF 5,00 x 0,50	207,59	1
M 5,00 x 0,80	110,91	1
MF 6,00 x 0,50	207,59	1
MF 6,00 x 0,75	142,19	1
M 6,00 x 1,00	105,22	1
M 7,00 x 1,00	105,22	1
MF 8,00 x 0,50	207,59	1
MF 8,00 x 0,75	150,72	1
MF 8,00 x 1,00	136,50	1
M 8,00 x 1,25	110,91	1
M 9,00 x 1,25	113,75	1
MF 10,00 x 0,50	221,81	1
MF 10,00 x 0,75	153,56	1
MF 10,00 x 1,00	142,19	1
MF 10,00 x 1,25	167,78	1
M 10,00 x 1,50	116,59	1
MF 12,00 x 0,50	238,88	1

Ø x P mm	€	
MF 12,00 x 0,75	162,09	1
MF 12,00 x 1,00	153,56	1
MF 12,00 x 1,25	162,09	1
MF 12,00 x 1,50	142,19	1
M 12,00 x 1,75	122,28	1
MF 14,00 x 1,00	162,09	1
MF 14,00 x 1,25	173,47	1
MF 14,00 x 1,50	150,72	1
M 14,00 x 2,00	130,81	1
MF 16,00 x 1,00	173,47	1
MF 16,00 x 1,50	156,41	1
M 16,00 x 2,00	139,34	1
MF 18,00 x 1,00	176,31	1
MF 18,00 x 1,50	164,94	1
M 18,00 x 2,50	150,72	1
MF 20,00 x 1,00	190,53	1
MF 20,00 x 1,50	173,47	1
MF 20,00 x 2,00	173,47	1
M 20,00 x 2,50	162,09	1
MF 22,00 x 1,00	210,44	1
MF 22,00 x 1,50	193,38	1
M 22,00 x 2,50	167,78	1
MF 24,00 x 1,00	224,66	1
MF 24,00 x 1,50	204,75	1
MF 24,00 x 2,00	204,75	1
M 24,00 x 3,00	187,69	1
MF 25,00 x 1,00	230,34	1
MF 25,00 x 1,50	210,44	1
MF 25,00 x 2,00	210,44	1
MF 27,00 x 1,00	241,72	1

Ø x P mm	€	
MF 27,00 x 1,50	221,81	1
MF 27,00 x 2,00	221,81	1
M 27,00 x 3,00	204,75	1
MF 30,00 x 1,00	273,00	1
MF 30,00 x 1,50	244,56	1
MF 30,00 x 2,00	244,56	1
MF 30,00 x 3,00	281,53	1
M 30,00 x 3,50	224,66	1
MF 32,00 x 1,00	273,00	1
MF 32,00 x 1,50	250,25	1
MF 32,00 x 2,00	250,25	1
MF 33,00 x 1,00	275,84	1
MF 33,00 x 1,50	255,94	1
MF 33,00 x 2,00	255,94	1
MF 33,00 x 3,00	287,22	1
M 33,00 x 3,50	247,41	1
MF 36,00 x 1,00	295,75	1
MF 36,00 x 1,50	273,00	1
MF 36,00 x 2,00	273,00	1
MF 36,00 x 3,00	273,00	1
M 36,00 x 4,00	267,31	1
MF39,00 x 1,50	295,75	1
MF 39,00 x 2,00	295,75	1
MF 39,00 x 3,00	346,94	1
M 39,00 x 4,00	290,06	1
MF 40,00 x 1,50	312,81	1
MF 40,00 x 2,00	312,81	1
MF 40,00 x 3,00	352,63	1

2901/4 DIN ISO 1502

PASA | CTP | M DIN 13 | MF DIN 13 | Tol. 6H



Ø x P mm	€	
MF 42,00 x 1,50	*184,84*	1
MF 42,00 x 2,00	*184,84*	1
MF 42,00 x 3,00	*207,59*	1
M 42,00 x 4,50	*182,00*	1
MF 45,00 x 1,50	*196,22*	1
MF 45,00 x 2,00	*196,22*	1
MF 45,00 x 3,00	*224,66*	1

Ø x P mm	€	
M 45,00 x 4,50	*196,22*	1
MF 48,00 x 1,50	*210,44*	1
MF 48,00 x 2,00	*210,44*	1
MF 48,00 x 3,00	*236,03*	1
M 48,00 x 5,00	*207,59*	1
MF 50,00 x 1,50	*213,28*	1
MF 50,00 x 2,00	*213,28*	1

Ø x P mm	€	
MF 50,00 x 3,00	*244,56*	1
MF 52,00 x 1,50	*221,81*	1
MF 52,00 x 2,00	*221,81*	1
MF 52,00 x 3,00	*258,78*	1
M 52,00 x 5,00	*221,81*	1

2901/5 DIN ISO 1502

NO PASA | CTNP | M DIN 13 | MF DIN 13 | Tol. 6H



Ø x P mm	€	
MF 42,00 x 1,50	*184,84*	1
MF 42,00 x 2,00	*184,84*	1
MF 42,00 x 3,00	*207,59*	1
M 42,00 x 4,50	*182,00*	1
MF 45,00 x 1,50	*196,22*	1
MF 45,00 x 2,00	*196,22*	1
MF 45,00 x 3,00	*224,66*	1

Ø x P mm	€	
M 45,00 x 4,50	*196,22*	1
MF 48,00 x 1,50	*210,44*	1
MF 48,00 x 2,00	*210,44*	1
MF 48,00 x 3,00	*236,03*	1
M 48,00 x 5,00	*207,59*	1
MF 50,00 x 1,50	*213,28*	1
MF 50,00 x 2,00	*213,28*	1

Ø x P mm	€	
MF 50,00 x 3,00	*244,56*	1
MF 52,00 x 1,50	*221,81*	1
MF 52,00 x 2,00	*221,81*	1
MF 52,00 x 3,00	*258,78*	1
M 52,00 x 5,00	*221,81*	1

2901/2 DIN ISO 1502

PASA | CAP | M DIN 13 | MF DIN 13 | Tol. 6g



Ø x P mm	€	
M 2,00 x 0,40	*145,03*	1
M 2,20 x 0,45	*170,63*	1
M 2,50 x 0,45	*113,75*	1
M 3,00 x 0,50	*110,91*	1
MF 4,00 x 0,50	*227,50*	1
M 4,00 x 0,70	*102,38*	1
M 4,50 x 0,75	*102,38*	1
MF 5,00 x 0,50	*227,50*	1
M 5,00 x 0,80	*102,38*	1
MF 6,00 x 0,50	*227,50*	1
MF 6,00 x 0,75	*167,78*	1
M 6,00 x 1,00	*102,38*	1
M 7,00 x 1,00	*130,81*	1
MF 8,00 x 0,50	*218,97*	1
MF 8,00 x 0,75	*159,25*	1
MF 8,00 x 1,00	*122,28*	1
M 8,00 x 1,25	*102,38*	1
M 9,00 x 1,25	*142,19*	1
MF 10,00 x 0,50	*253,09*	1
MF 10,00 x 0,75	*176,31*	1
MF 10,00 x 1,00	*136,50*	1
MF 10,00 x 1,25	*167,78*	1
M 10,00 x 1,50	*116,59*	1
MF 12,00 x 0,50	*287,22*	1
MF 12,00 x 0,75	*210,44*	1
MF 12,00 x 1,00	*153,56*	1
MF 12,00 x 1,25	*187,69*	1
MF 12,00 x 1,50	*145,03*	1
M 12,00 x 1,75	*133,66*	1
MF 14,00 x 1,00	*164,94*	1
MF 14,00 x 1,25	*201,91*	1
MF 14,00 x 1,50	*150,72*	1
M 14,00 x 2,00	*145,03*	1
MF 16,00 x 1,00	*176,31*	1

Ø x P mm	€	
MF 16,00 x 1,50	*164,94*	1
MF 16,00 x 2,00	*159,25*	1
MF 18,00 x 1,00	*190,53*	1
MF 18,00 x 1,50	*176,31*	1
M 18,00 x 2,50	*182,00*	1
MF 20,00 x 1,00	*201,91*	1
MF 20,00 x 1,50	*190,53*	1
MF 20,00 x 2,00	*201,91*	1
M 20,00 x 2,50	*201,91*	1
MF 22,00 x 1,00	*247,41*	1
MF 22,00 x 1,50	*201,91*	1
M 22,00 x 2,50	*216,13*	1
MF 24,00 x 1,00	*236,03*	1
MF 24,00 x 1 ,50	*204,75*	1
MF 24,00 x 2,00	*227,50*	1
M 24,00 x 3,00	*230,34*	1
MF 25,00 x 1,00	*275,84*	1
MF 25,00 x 1,50	*224,66*	1
MF 25,00 x 2,00	*227,50*	1
MF 27,00 x 1,00	*295,75*	1
MF 27,00 x 1,50	*236,03*	1
MF 27,00 x 2,00	*247,41*	1
M 27,00 x 3,00	*255,94*	1
MF 30,00 x 1,00	*281,53*	1
MF 30,00 x 1,50	*253,09*	1
MF 30,00 x 2,00	*253,09*	1
MF 30,00 x 3,00	*284,38*	1
M 30,00 x 3,50	*281,53*	1
MF 32,00 x 1,00	*301,44*	1
MF 32,00 x 1,50	*270,16*	1
MF 32,00 x 2,00	*270,16*	1
MF 33,00 x 1,00	*309,97*	1
MF 33,00 x 1,50	*275,84*	1
MF 33,00 x 2,00	*281,53*	1

Ø x P mm	€	
MF 33,00 x 3,00	*298,59*	1
M 33,00 x 3,50	*304,28*	1
MF 36,00 x 1,00	*332,72*	1
MF 36,00 x 1,50	*292,91*	1
MF 36,00 x 2,00	*309,97*	1
MF 36,00 x 3,00	*327,03*	1
M 36,00 x 4,00	*327,03*	1
MF39,00 x 1,50	*324,19*	1
MF 39,00 x 2,00	*335,56*	1
MF 39,00 x 3,00	*349,78*	1
M 39,00 x 4,00	*355,47*	1
MF 40,00 x 1,50	*324,19*	1
MF 40,00 x 2,00	*344,09*	1
MF 40,00 x 3,00	*358,31*	1
MF 42,00 x 1,50	*335,56*	1
MF42,00 x 2,00	*281,53*	1
MF 42,00 x 3,00	*369,69*	1
M42,00 x 4,50	*383,91*	1
MF 45,00 x 1,50	*355,47*	1
MF 45,00 x 2,00	*287,22*	1
MF 45,00 x 3,00	*375,38*	1
M45,00 x 4,50	*406,66*	1
MF 48,00 x 1,50	*375,38*	1
MF 48,00 x 2,00	*292,91*	1
MF 48,00 x 3,00	*386,75*	1
M48,00 x 5,00	*429,41*	1
MF 50,00 x 1,50	*386,75*	1
MF 50,00 x 2,00	*307,13*	1
MF 50,00 x 3,00	*398,13*	1
MF 52,00 x 1,50	*406,66*	1
MF 52,00 x 2,00	*312,81*	1
MF 52,00 x 3,00	*432,25*	1
M52,00 x 5,00	*463,53*	1

2901/3 DIN ISO 1502

NO PASA | CANP | M DIN 13 | MF DIN 13 | Tol. 6g



Ø x P mm	€	
M 2,00 x 0,40	145,03	1
M 2,20 x 0,45	170,63	1
M 2,50 x 0,45	113,75	1
M 3,00 x 0,50	110,91	1
MF 4,00 x 0,50	227,50	1
M 4,00 x 0,70	102,38	1
M 4,50 x 0,75	102,38	1
MF 5,00 x 0,50	227,50	1
M 5,00 x 0,80	102,38	1
MF 6,00 x 0,50	227,50	1
MF 6,00 x 0,75	167,78	1
M 6,00 x 1,00	102,38	1
M 7,00 x 1,00	130,81	1
MF 8,00 x 0,50	218,97	1
MF 8,00 x 0,75	159,25	1
MF 8,00 x 1,00	122,28	1
M 8,00 x 1,25	102,38	1
M 9,00 x 1,25	142,19	1
MF 10,00 x 0,50	253,09	1
MF 10,00 x 0,75	176,31	1
MF 10,00 x 1,00	136,50	1
MF 10,00 x 1,25	167,78	1
M 10,00 x 1,50	116,59	1
MF 12,00 x 0,50	287,22	1
MF 12,00 x 0,75	210,44	1
MF 12,00 x 1,00	153,56	1
MF 12,00 x 1,25	187,69	1
MF 12,00 x 1,50	145,03	1
M 12,00 x 1,75	133,66	1
MF 14,00 x 1,00	164,94	1
MF 14,00 x 1,25	201,91	1
MF 14,00 x 1,50	150,72	1
M 14,00 x 2,00	145,03	1
MF 16,00 x 1,00	176,31	1

Ø x P mm	€	
MF 16,00 x 1,50	164,94	1
M 16,00 x 2,00	159,25	1
MF 18,00 x 1,00	190,53	1
MF 18,00 x 1,50	176,31	1
M 18,00 x 2,50	182,00	1
MF 20,00 x 1,00	201,91	1
MF 20,00 x 1,50	190,53	1
MF 20,00 x 2,00	201,91	1
M 20,00 x 2,50	201,91	1
MF 22,00 x 1,00	247,41	1
MF 22,00 x 1,50	201,91	1
M 22,00 x 2,50	216,13	1
MF 24,00 x 1,00	236,03	1
MF 24,00 x 1 ,50	204,75	1
MF 24,00 x 2,00	227,50	1
M 24,00 x 3,00	230,34	1
MF 25,00 x 1,00	275,84	1
MF 25,00 x 1,50	224,66	1
MF 25,00 x 2,00	227,50	1
MF 27,00 x 1,00	295,75	1
MF 27,00 x 1,50	236,03	1
MF 27,00 x 2,00	247,41	1
M 27,00 x 3,00	255,94	1
MF 30,00 x 1,00	281,53	1
MF 30,00 x 1,50	253,09	1
MF 30,00 x 2,00	253,09	1
MF 30,00 x 3,00	284,38	1
M 30,00 x 3,50	281,53	1
MF 32,00 x 1,00	301,44	1
MF 32,00 x 1,50	270,16	1
MF 32,00 x 2,00	270,16	1
MF 33,00 x 1,00	309,97	1
MF 33,00 x 1,50	275,84	1
MF 33,00 x 2,00	281,53	1

Ø x P mm	€	
MF 33,00 x 3,00	298,59	1
M 33,00 x 3,50	304,28	1
MF 36,00 x 1,00	332,72	1
MF 36,00 x 1,50	292,91	1
MF 36,00 x 2,00	309,97	1
MF 36,00 x 3,00	327,03	1
M 36,00 x 4,00	327,03	1
MF 39,00 x 1,50	324,19	1
MF 39,00 x 2,00	335,56	1
MF 39,00 x 3,00	349,78	1
M 39,00 x 4,00	355,47	1
MF 40,00 x 1,50	324,19	1
MF 40,00 x 2,00	344,09	1
MF 40,00 x 3,00	358,31	1
MF42,00 x 1,50	335,56	1
MF 42,00 x 2,00	281,53	1
MF 42,00 x 3,00	369,69	1
M 42,00 x 4,50	383,91	1
MF 45,00 x 1,50	355,47	1
MF 45,00 x 2,00	287,22	1
MF 45,00 x 3,00	375,38	1
M 45,00 x 4,50	406,66	1
MF 48,00 x 1,50	375,38	1
MF 48,00 x 2,00	292,91	1
MF 48,00 x 3,00	386,75	1
MF 48,00 x 5,00	429,41	1
MF 50,00 x 1,50	386,75	1
MF 50,00 x 2,00	307,13	1
MF 50,00 x 3,00	398,13	1
MF 52,00 x 1,50	406,66	1
MF 52,00 x 2,00	312,81	1
MF 52,00 x 3,00	432,25	1
M 52,00 x 5,00	463,53	1

2902/1 ISO 228-2

PASA NO PASA | CTPNP | G ISO 228



Ø x P mm	€	
G 1/8 - 28	150,72	1
G 1/4 - 19	162,09	1
G 3/8 - 19	187,69	1

Ø x P mm	€	
G 1/2 - 14	213,28	1
G 5/8 - 14	224,66	1
G 3/4 - 14	244,56	1

Ø x P mm	€	
G 7/8 - 14	273,00	1
G 1" - 11	287,22	1
G 1" 1/8 - 11	327,03	1

2902/4 ISO 228-2

PASA | CTP | G ISO 228



Ø x P mm	€	
G 1" 1/4 - 11	204,75	1
G 1" 1/2 - 11	236,03	1

Ø x P mm	€	
G 1" 3/4 - 11	264,47	1
G 2" - 11	290,06	1

Ø x P mm	€	
G 2" 1/4 - 11	315,66	1
G 2" 1/2 - 11	364,00	1

2902/5 ISO 228-2

NO PASA | CTNP | G ISO 228



Ø x P mm	€	
G 1" 1/4 - 11	204,75	1
G 1" 1/2 - 11	236,03	1

Ø x P mm	€	
G 1" 3/4 - 11	264,47	1
G 2" - 11	290,06	1

Ø x P mm	€	
G 2" 1/4 - 11	315,66	1
G 2" 1/2 - 11	364,00	1

2902/2 DIN ISO 228-2

PASA | CAP | Tol. A | G ISO 228



Ø x P mm		€	
G 1/8	- 28	167,78	1
G 1/4	- 19	193,38	1
G 3/8	- 19	233,19	1
G 1/2	- 14	224,66	1
G 5/8	- 14	241,72	1

Ø x P mm		€	
G 3/4	- 14	258,78	1
G 7/8	- 14	290,06	1
G 1"	- 11	318,50	1
G 1" 1/8	- 11	361,16	1
G 1" 1/4	- 11	395,28	1

Ø x P mm		€	
G 1" 1/2	- 11	443,63	1
G 1" 3/4	- 11	489,13	1
G 2"	- 11	540,31	1
G 2" 1/4	- 11	582,97	1
G 2" 1/2	- 11	662,59	1

2902/3 DIN ISO 228-2

NO PASA | CANP | Tol. A | G ISO 228



Ø x P mm		€	
G 1/8	- 28	167,78	1
G 1/4	- 19	193,38	1
G 3/8	- 19	233,19	1
G 1/2	- 14	224,66	1
G 5/8	- 14	241,72	1

Ø x P mm		€	
G 3/4	- 14	258,78	1
G 7/8	- 14	290,06	1
G 1"	- 11	318,50	1
G 1" 1/8	- 11	361,16	1
G 1" 1/4	- 11	395,28	1

Ø x P mm		€	
G 1" 1/2	- 11	443,63	1
G 1" 3/4	- 11	489,13	1
G 2"	- 11	540,31	1
G 2" 1/4	- 11	582,97	1
G 2" 1/2	- 11	662,59	1

2903/1 BS 919

PASA NO PASA | CTPNP | BSW BS 84



Ø x P mm	€	
W 1/8 - 40	224,66	1
W 1/4 - 20	196,22	1
W 3/8 - 16	207,59	1

Ø x P mm	€	
W 1/2 - 12	224,66	1
W 5/8 - 11	253,09	1
W 3/4 - 10	290,06	1

Ø x P mm	€	
W 7/8 - 9	324,19	1
W 1" - 8	372,53	1

2903/2 BS 919

PASA | CAP | BSW BS 84



Ø x P mm	€	
W 1/8 - 40	187,69	1
W 1/4 - 20	159,25	1
W 3/8 - 16	179,16	1

Ø x P mm	€	
W 1/2 - 12	199,06	1
W 5/8 - 11	233,19	1
W 3/4 - 10	270,16	1

Ø x P mm	€	
W 7/8 - 9	309,97	1
W 1" - 8	344,09	1

2903/3 BS 919

NO PASA | CANP | BSW BS 84



Ø x P mm	€	
W 1/8 - 40	187,69	1
W 1/4 - 20	159,25	1
W 3/8 - 16	179,16	1

Ø x P mm	€	
W 1/2 - 12	199,06	1
W 5/8 - 11	233,19	1
W 3/4 - 10	270,16	1

Ø x P mm	€	
W 7/8 - 9	309,97	1
W 1" - 8	344,09	1

2904/1 ANSI / ASME B1.2

PASA NO PASA | CTPNP | UNC ANSI/ASME B1.1 | Tol. 2B | CERTIFIED CALIBRATION



Ø x P mm	€	
UNC N.4 - 40	230,34	1
UNC N.5 - 40	241,72	1
UNC N.6 - 32	145,03	1
UNC N.8 - 32	142,19	1
UNC N.10 - 24	139,34	1
UNC N.12 - 24	133,66	1
UNC 1/4 - 20	133,66	1

Ø x P mm	€	
UNC 5/16 - 18	139,34	1
UNC 3/8 - 16	139,34	1
UNC 7/16 - 14	145,03	1
UNC 1/2 - 13	156,41	1
UNC 9/16 - 12	162,09	1
UNC 5/8 - 11	173,47	1
UNC 3/4 - 10	193,38	1

Ø x P mm	€	
UNC 7/8 - 9	218,97	1
UNC 1" - 8"	244,56	1
UNC 1" 1/8 - 7	270,16	1
UNC 1" 1/4 - 7	292,91	1
UNC 1" 3/8 - 6	315,66	1
UNC 1" 1/2 - 6	349,78	1

2904/2 ANSI / ASME B1.2

PASA | CAP | UNC ANSI/ASME B1.1 | Tol. 2A | CERTIFIED CALIBRATION



Ø x P mm	€	
UNC N.4 - 40	213,28	1
UNC N.5 - 40	159,25	1
UNC N.6 - 32	156,41	1
UNC N.8 - 32	145,03	1
UNC N.10 - 24	142,19	1
UNC N.12 - 24	136,50	1
UNC 1/4 - 20	136,50	1

Ø x P mm	€	
UNC 5/16 - 18	145,03	1
UNC 3/8 - 16	156,41	1
UNC 7/16 - 14	167,78	1
UNC 1/2 - 13	187,69	1
UNC 9/16 - 12	207,59	1
UNC 5/8 - 11	224,66	1
UNC 3/4 - 10	255,94	1

Ø x P mm	€	
UNC 7/8 - 9	295,75	1
UNC 1" - 8"	332,72	1
UNC 1" 1/8 - 7	366,84	1
UNC 1" 1/4 - 7	420,88	1
UNC 1" 3/8 - 6	463,53	1
UNC 1" 1/2 - 6	494,81	1

2904/3 ANSI / ASME B1.2

NO PASA | CANP | UNC ANSI/ASME B1.1 | Tol. 2A | CERTIFIED CALIBRATION



Ø x P mm	€	
UNC N.4 - 40	213,28	1
UNC N.5 - 40	159,25	1
UNC N.6 - 32	156,41	1
UNC N.8 - 32	145,03	1
UNC N.10 - 24	142,19	1
UNC N.12 - 24	136,50	1
UNC 1/4 - 20	136,50	1

Ø x P mm	€	
UNC 5/16 - 18	145,03	1
UNC 3/8 - 16	156,41	1
UNC 7/16 - 14	167,78	1
UNC 1/2 - 13	187,69	1
UNC 9/16 - 12	207,59	1
UNC 5/8 - 11	224,66	1
UNC 3/4 - 10	255,94	1

Ø x P mm	€	
UNC 7/8 - 9	295,75	1
UNC 1" - 8	332,72	1
UNC 1" 1/8 - 7	366,84	1
UNC 1" 1/4 - 7	420,88	1
UNC 1" 3/8 - 7	463,53	1
UNC 1" 1/2 - 7	494,81	1

2905/1 ANSI / ASME B1.2

PASA NO PASA | CTPNP | UNF ANSI/ASME B1.1 | Tol. 2B



Ø x P mm	€	
UNF N.4 - 48	230,34	1
UNF N.5 - 44	150,72	1
UNF N.6 - 40	145,03	1
UNF N.8 - 36	142,19	1
UNF N.10 - 32	139,34	1
UNF N.12 - 28	156,41	1
UNF 1/4 - 28	133,66	1

Ø x P mm	€	
UNF 3/8 - 24	139,34	1
UNF 5/16 - 24	139,34	1
UNF 1/2 - 20	156,41	1
UNF 7/16 - 20	145,03	1
UNF 5/8 - 18	167,78	1
UNF 9/16 - 18	162,09	1
UNF 3/4 - 16	184,84	1

Ø x P mm	€	
UNF 7/8 - 14	201,91	1
UNF 1" - 12	224,66	1
UNF 1" 1/8 - 12	244,56	1
UNF 1" 1/4 - 12	258,78	1
UNF 1" 3/8 - 12	281,53	1
UNF 1" 1/2 - 12	309,97	1

2905/2 ANSI / ASME B1.2

PASA | CAP | UNF ANSI/ASME B1.1 | Tol. 2A



Ø x P mm	€	
UNF N.4 - 48	210,44	1
UNF N.5 - 44	159,25	1
UNF N.6 - 40	156,41	1
UNF N.8 - 36	145,03	1
UNF N.10 - 32	142,19	1
UNF N.12 - 28	142,19	1
UNF 1/4 - 28	136,50	1

Ø x P mm	€	
UNF 3/8 - 24	156,41	1
UNF 5/16 - 24	145,03	1
UNF 1/2 - 20	187,69	1
UNF 7/16 - 20	167,78	1
UNF 5/8 - 18	224,66	1
UNF 9/16 - 18	207,59	1
UNF 3/4 - 16	255,94	1

Ø x P mm	€	
UNF 7/8 - 14	295,75	1
UNF 1" - 12	332,72	1
UNF 1" 1/8 - 12	386,75	1
UNF 1" 1/4 - 12	420,88	1
UNF 1" 3/8 - 12	463,53	1
UNF 1" 1/2 - 12	480,59	1

2905/3 ANSI / ASME B1.2

NO PASA | CANP | UNF ANSI/ASME B1.1 | Tol. 2A



Ø x P mm		€	
UNF N.4	- 48	*210,44*	1
UNF N.5	- 44	*159,25*	1
UNF N.6	- 40	*156,41*	1
UNF N.8	- 36	*145,03*	1
UNF N.10	- 32	*142,19*	1
UNF N.12	- 28	*142,19*	1
UNF 1/4	- 28	*136,50*	1

Ø x P mm		€	
UNF 3/8	- 24	*156,41*	1
UNF 5/16	- 24	*145,03*	1
UNF 1/2	- 20	*187,69*	1
UNF 7/16	- 20	*167,78*	1
UNF 5/8	- 18	*224,66*	1
UNF 9/16	- 18	*207,59*	1
UNF 3/4	- 16	*255,94*	1

Ø x P mm		€	
UNF 7/8	- 14	*295,75*	1
UNF 1"	- 12	*332,72*	1
UNF 1" 1/8	- 12	*386,75*	1
UNF 1" 1/4	- 12	*420,88*	1
UNF 1" 3/8	- 12	*463,53*	1
UNF 1" 1/2	- 12	*480,59*	1

2906/1 ANSI / ASME B1.20.1

PASA NO PASA | CTPNP | NPT ANSI/ASME B1.1



Ø x P mm		€	
NPT 1/16	-27	*304,95*	1
NPT 1/8	-27	*321,34*	1
NPT 1/4	-18	*338,41*	1
NPT 3/8	-18	*364,00*	1
NPT 1/2	-14	*395,28*	1

Ø x P mm		€	
NPT 3/4	-14	*440,78*	1
NPT 1"	-11,5	*506,19*	1
NPT 1" 1/4	-11,5	*602,88*	1
NPT 1" 1/2	-11,5	*673,97*	1
NPT 2"	-11,5	*877,17*	1

2906/2 ANSI / ASME B1.20.1

PASA NO PASA | CAPNP | NPT ANSI/ASME B1.1



Ø x P mm		€	
NPT 1/16	-27	*508,57*	1
NPT 1/8	-27	*534,63*	1
NPT 1/4	-18	*560,22*	1
NPT 3/8	-18	*531,78*	1
NPT 1/2	-14	*574,44*	1

Ø x P mm		€	
NPT 3/4	-14	*628,47*	1
NPT 1"	-11,5	*708,09*	1
NPT 1" 1/4	-11,5	*827,53*	1
NPT 1" 1/2	-11,5	*912,84*	1
NPT 2"	-11,5	*1.109,06*	1

2907/1 DIN 7162

PASA NO PASA | H7 | CTLPNP



Ø x P mm	€	
1	*76,78*	1
2	*76,78*	1
3	*76,78*	1
4	*71,09*	1
5	*71,09*	1
6	*71,09*	1
7	*65,41*	1
8	*65,41*	1
9	*65,41*	1
10	*65,41*	1
11	*73,94*	1
12	*73,94*	1
13	*73,94*	1
14	*73,94*	1
15	*79,63*	1
16	*79,63*	1
17	*79,63*	1
18	*79,63*	1

Ø x P mm	€	
19	*91,00*	1
20	*91,00*	1
21	*91,00*	1
22	*91,00*	1
23	*96,69*	1
24	*96,69*	1
25	*96,69*	1
26	*96,69*	1
27	*96,69*	1
28	*105,22*	1
30	*105,22*	1
32	*105,22*	1
33	*119,44*	1
34	*119,44*	1
35	*119,44*	1
36	*119,44*	1
37	*119,44*	1
38	*119,44*	1

Ø x P mm	€	
40	*125,13*	1
42	*125,13*	1
44	*142,19*	1
45	*142,19*	1
46	*142,19*	1
47	*142,19*	1
48	*142,19*	1
50	*173,47*	1
52	*173,47*	1
55	*173,47*	1
58	*173,47*	1
60	*173,47*	1
62	*173,47*	1
65	*173,47*	1
68	*173,47*	1
70	*173,47*	1

2907/4 DIN 7162

PASA | H7 | CTLP



Ø x P mm	€	
72	*190,53*	1
75	*190,53*	1
78	*230,34*	1
80	*230,34*	1

2907/5 DIN 7162

NO PASA | H7 | CTLNP



Ø x P mm	€	
72	*190,53*	1
75	*190,53*	1
78	*230,34*	1
80	*230,34*	1

2907/2 DIN 2250-C

CAL



Ø x P mm	€	
4	*236,03*	1
5	*236,03*	1
6	*236,03*	1
7	*190,53*	1
8	*190,53*	1
9	*190,53*	1
10	*190,53*	1
11	*193,38*	1
12	*193,38*	1
13	*193,38*	1
14	*193,38*	1
15	*213,28*	1
16	*213,28*	1
17	*213,28*	1
18	*213,28*	1
19	*218,97*	1
20	*218,97*	1
21	*218,97*	1
22	*218,97*	1

Ø x P mm	€	
23	*233,19*	1
24	*233,19*	1
25	*233,19*	1
26	*233,19*	1
27	*233,19*	1
28	*244,56*	1
30	*244,56*	1
32	*244,56*	1
33	*264,47*	1
34	*264,47*	1
35	*264,47*	1
36	*264,47*	1
37	*264,47*	1
38	*264,47*	1
40	*287,22*	1
42	*287,22*	1
44	*301,44*	1
45	*301,44*	1
46	*301,44*	1

Ø x P mm	€	
47	*301,44*	1
48	*301,44*	1
50	*318,50*	1
52	*318,50*	1
55	*318,50*	1
58	*335,56*	1
60	*335,56*	1
62	*335,56*	1
65	*355,47*	1
68	*355,47*	1
70	*355,47*	1
72	*378,22*	1
75	*378,22*	1
78	*412,34*	1
80	*412,34*	1
82	*412,34*	1
85	*455,00*	1
90	*455,00*	1

2801 Giramachos / Tourne-à-gauche / Tap turners



Ø	Nº	€	mm	
M1 - M10	1	*16,93*	2,00 - 6,30	1
M1 - M12	1,50	*18,03*	2,10 - 8,00	1
M4 - M12	2	*22,63*	3,00 - 9,00	1
M5 - M20	3	*32,20*	4,90 - 12,00	1
M10 - M27	4	*51,37*	5,50 - 16,00	1

Ø	Nº	€	mm	
M13 - M32	5	*107,98*	7,00 - 20,00	1
M18 - M42	6	*107,98*	11,00 - 24,00	1
M25 - M52	7	*187,22*	16,00 - 32,00	1
M45 - M64	8	*270,57*	25,00 - 64,00	1

2802 Volvedor / Porte-filières / Tap wrench



Ø Ext.	H mm	€	
16,00	5,00	*9,39*	1
20,00	5,00	*9,60*	1
20,00	7,00	*9,62*	1
20,60	6,35	*9,60*	1
25,00	9,00	*11,42*	1
25,40	9,50	*11,42*	1
30,00	11,00	*12,87*	1
38,00	14,00	*16,96*	1
38,10	12,70	*16,96*	1
45,00	14,00	*21,08*	1
45,00	18,00	*21,08*	1

Ø Ext.	H mm	€	
50,80	15,90	*27,59*	1
55,00	16,00	*27,59*	1
55,00	22,00	*27,59*	1
65,00	18,00	*42,38*	1
65,00	25,00	*42,38*	1
75,00	20,00	*67,79*	1
75,00	30,00	*67,78*	1
90,00	22,00	*85,86*	1
90,00	36,00	*85,87*	1
105,00	22,00	*91,68*	1
105,00	36,00	*91,69*	1

2803 Giramacho T / Tourne-à-gauche en T / Tap turner in T



M DIN	M ISO	€	L mm	gr	mm	
M3 - 10	M3 - 6	*19,60*	85	180	2,60 - 5,50	1
M5 - 12	M6 - 12	*25,57*	110	300	4,60 - 8,00	1
M13 - 20	M14 - 20	*99,14*	117	400	9,00 - 12,50	1

2804 Giramacho T / Tourne-à-gauche en T / Tap turner in T



M DIN	M ISO	€	L mm	gr	⊠ mm	▣
M3-10	M3-6	*31,38*	250	250	2,60 - 5,50	1
M5-12	M6-12	*37,40*	300	440	4,60 - 8,00	1

2805 Extractor / Extracteur



M	Z	€	▣
M3	3	*31,71*	1
M4	3	*31,71*	1
M5	3	*31,71*	1
M6	3	*32,51*	1
M8	4,3	*34,27*	1

M	Z	€	▣
M10	4,3	*35,55*	1
M12	4,3	*38,29*	1
M14	4,3	*52,73*	1
M16	4,3	*57,50*	1

2808 Alargador / Adaptateur / Extension piece



M Mano T. à main Hand taps	M Máquina T. Machine Machine taps	€	⊠ mm	L mm	▣
M1 - 2,60	-	*6,14*	2,10	60	1
-	M4	*6,14*	2,40	60	1
M3	-	*6,14*	2,70	80	1
M3,50	-	*6,14*	3,00	90	1
M4	M6	*9,62*	3,40	95	1
M4,5	-	*10,08*	3,80	95	1
-	M7	*10,74*	4,30	110	1
M5 - M6	M8	*11,21*	4,90	110	1
M7	M9-M10	*11,74*	5,50	115	1
M8	M11	*15,14*	6,20	120	1
M9	M12	*15,78*	7,00	125	1

M Mano T. à main Hand taps	M Máquina T. Machine Machine taps	€	⊠ mm	L mm	▣
M10	-	*17,89*	8,00		1
-	M4 - M16	*21,15*	9,00	130	1
-	-	*25,55*	10,00	130	1
-	M18	*29,61*	11,00	150	1
-	M20	*31,91*	12,00	155	1
-	-	*44,09*	13,00	155	1
-	M22 - M24	*50,63*	14,50	175	1
-	M27	*53,54*	16,00	180	1
-	M30	*61,04*	18,00	200	1
-	M33	*81,35*	20,00	220	1

2834 Extractor / Extracteur



M	ø mm	€	L mm	mm	
M3 - 6	1,80 - 7,00	*2,12*	50	2,70	1
M6 - 8	3,20 - 10,00	*2,12*	57	3,80	1
M8 - 11	4,50 - 13,00	*2,51*	64	4,90	1
M11 - 14	6,50 - 16,00	*3,10*	71	7,00	1
M14 - 18	8,50 - 21,00	*4,02*	79	9,00	1
M18 - 24	12,00	*6,47*	85	12,00	1
M24 - 33	15,30	*9,93*	92	14,50	1
M33 - 45	20,00	*14,52*	100	18,00	1

JUEGOS / JEUX / SETS

M	Nº	€	
M3 - 18	5	*15,96*	1
M3 - 24	6	*22,53*	1
M3 - 45	8	*47,21*	1

2846 Aceite de corte uso general / Huile de coupe usage général / Cutting oil for general uses



Envase /Emballage/ Packaging	Litr.	€	
Aerosol /Pulvérisateur/ Spray	400 ml	*18,13*	1
Granel /Vrac/ Bulk	1 l.	*24,53*	1
Granel /Vrac/ Bulk	5 l.	*89,03*	1

2821 Macho Nº3 / Taraud / Tap

M
DIN 13

HSS



HSSCO



HSSCO INOX



	Machos Tarauds / Taps	Brocas Forets / Drill-bits	Giramachos nº Tourne-à-gauche nº Tap turner nº	€
HSS	M3-4-5-6-8-10-12	2,50-3,30-4,20-5,00-6,80-8,50-10,20	1,50	*85,94*
HSSCO	M3-4-5-6-8-10-12	2,50-3,30-4,20-5,00-6,80-8,50-10,20	1,50	*147,01*
HSSCO INOX	M3-4-5-6-8-10-12	2,50-3,30-4,20-5,00-6,80-8,50-10,20	1,50	*148,71*

2822/2840 Juegos de machos / Jeux de taraud / Tap set

M
DIN 13

>2822



>2840



Ref.	Machos Tarauds / Taps	Brocas Forets / Drill-bits	€
2822	M3-4-5-6-8-10-12	-	*130,67*
2840	M3-4-5-6-8-10-12	2,50-3,30-4,20-5,00-6,80-8,50-10,20	*190,74*

ESTUCHES
COFFRETS / CASES

2824 M3-12

Form. B "Gun" | M 3-4-5-6-8-10-12 | 7

>HSS E



>HSSE-PM



>HSSE VAP



>HSSE TIN



>HSSE ALU



REF.	€
HSS E	*128,38*
HSSE-PM	*250,78*
HSSE VAP (INOX)	*162,08*
HSSE TIN	*164,25*
HSSE ALU	*174,89*

2825 M3-12

35° | M 3-4-5-6-8-10-12 | 7

>HSS E



>HSSE-PM



>HSSE VAP



>HSSE TIN



>HSSE ALU



REF.	€
HSS E	*132,86*
HSSE-PM	*279,03*
HSSE VAP (INOX)	*180,13*
HSSE TIN	*180,13*
HSSE ALU	*163,04*

2850 M3-12

Form B | M 3-4-5-6-8-10-12 | Ø 2,5-3,3-4,2-5-6, 8-8,5-10,2 | 14

>HSSE + HSSCO



>HSSEVAP + HSSCO



REF.	€
HSSE+HSSCO	*159,04*
HSSEVAP(INOX)+HSSCO	*192,74*

2851 M3-12

35° | M 3-4-5-6-8-10-12 | Ø 2,5-3,3-4,2-5-6, 8-8,5-10,2 | 14

>HSSE + HSSCO



>HSSEVAP + HSSCO



REF.	€
HSSE+HSSCO	*163,52*
HSSEVAP(INOX)+HSSCO	*210,79*

ESTUCHES
COFFRETS / CASES

2809/2810 M3-12 — M DIN 13

›2809



›2810



Ref.	**Machos y cojinetes** Tarauds et filières Taps and bearing	**Brocas** Forets/Drill-bits	**Volvedores** Porte-filières Tap wrench	**Giramachos nº** Tourne-à-gauche nº Tap turner nº	**Carraca nº** Cliquet nº Ratchet nº	€
2809	M3-4-5-6-8-10-12	2,50-3,30-4,20-5,00-6,80-8,50-10,20	20x5-20x7-25x9-30x11-38x40	1-2	-	*322,71*
2810	M3-4-5-6-8-10-12	-	25x9	1-1/2	1	*220,51*

2811/2812 M3-20 / M5-20 — M DIN 13

›2811/2812



Ref.	**Machos y cojinetes** Tarauds et filières Taps and bearing	**Volvedores** Porte-filières Tap wrench	**Giramachos nº** Tourne-à-gauche nº Tap turner nº	**Carraca nº** Cliquet nº Ratchet nº	€
2811	M3-4-5-6-8-10-12-14-16-18-20	20x5-20x7-25x9-30x11-38x14-45x18	1 - 3	1 - 2	*645,40*
2812	M5-6-8-10-12-14-16-18-20	20x7-25x9-30x11-38x14-45x18	1 - 3	1 - 2	*613,14*

ESTUCHES
COFFRETS / CASES

2813/2814 M3-24 / M5-30 — M DIN 13

›2813/2814



Ref.	**Machos y cojinetes** Tarauds et filières Taps and bearing	**Volvedores** Porte-filières Tap wrench	**Giramachos nº** Tourne-à-gauche nº Tap turner nº	€
2813	M3-4-5-6-8-10-12-14-16-18-20-22-24	20x5-20x7-25x9-30x11-38x14-45x18-55x22	1 - 4	*1.008,43*
2814	M5-6-8-10-12-14-16-18-20-22-24-27-30	20x7-25x9-30x11-38x14-45x18-55x22-65x25	3 - 5	*1.711,36*

2841/2842 MF3-12 / MF6-20 — MF DIN 13

›2841



›2842



Ref.	**Machos y cojinetes** Tarauds et filières Taps and bearing	**Volvedores** Porte-filières Tap wrench	**Giramachos nº** Tourne-à-gauche nº Tap turner nº	**Carraca nº** Cliquet nº Ratchet nº	€
2841	M3x0,35-4x0,50-5x0,50-6x0,75-8x0,75 8x1,00-10x1,00-12x1,50	20x5-25x9-30x11-38x10	1 - 2	1	*662,21*
2842	M6x0,75-8x0,75-8x1,00-10x1,00-12x1,00-12x1,50 14x1,25-14x1,50-16x1,50-18x1,50-20x1,50	20x7-25x9-30x11-38x10-45x14	1 - 3	1	*1.110,97*

2815/2816/2817 W1/8-1/2, W1/4-1/2, W1/4-1"

BSW
BS 84

›2815



›2816



›2817



Ref.	**Machos y cojinetes** Tarauds et filières Taps and bearing	**Volvedores** Porte-filières Tap wrench	**Giramachos nº** Tourne-à-gauche nº Tap turner nº	**Carraca nº** Cliquet nº Ratchet nº	€
2815	W1/8-3/16-1/4-5/16-3/8-7/16-1/2	20x5-20x7-25x9-30x11-38x14	1 - 2	1	*529,22*
2816	W1/4-5/16-3/8-7/16-1/2	20x7-25x9-30x11-38x14	1 - 2	1	*448,55*
2817	W1/4-5/16-3/8-7/16-1/2-5/8-3/4-7/8-1"	20x7-25x9-30x11-38x14-45x18-55x22	1 - 4	-	*1.237,02*

2843/2818 UNC1/4", UNF1/4-1"

UNC ANSI/ASME B1.1

UNF ANSI/ASME B1.1

›2843/2818



Ref.	**Machos y cojinetes** Tarauds et filières Taps and bearing	**Volvedores** Porte-filières Tap wrench	**Giramachos nº** Tourne-à-gauche nº Tap turner nº	€
2843	UNC1/4-5/16-3/8-7/16-1/2-5/8-3/4-7/8-1"	20x7-25x9-30x11-38x14-45x18-55x22	1 - 4	*1.781,78*
2818	UNF1/4-5/16-3/8-7/16-1/2-5/8-3/4-7/8-1"	20x7-25x9-30x11-38x10-45x14-55x16	1 - 4	*1.129,43*

2819/2820 BSP1/8-1", BSP1/4-1"1/2

G
ISO 228

›2819



›2820



Ref.	**Machos y cojinetes** Tarauds et filières Taps and bearing	**Volvedores** Porte-filières Tap wrench	**Giramachos nº** Tourne-à-gauche nº Tap turner nº	€
2819	BSP1/8-1/4-3/8-1/2-3 4-1"	30x11-38x10-45x14-65x18-55x18	1 - 3 - 5	*871,28*
2820	BSP1/4-3/8-1/2-3/4-1"-1"1/4-1"1/2	38x10-45x14-65x18-75x20-90x22	2 - 4 - 7	*2.033,00*



Escariado
Alésage
Reaming

ÍNDICE
SOMMAIRE / INDEX

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Escariadores de mano / Alésoirs à main / Hand reamers

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4102	HSS	DIN 9			Form. B	8°		2%	ISO 3465	800 N/mm2	252
4119	HSS				Form. B	8°			C. 1:16 (NPT-BSPT)	800 N/mm2	252

Escariadores de máquina / Alésoirs machine / Machine reamers

4118	HM-MD	DIN 212	TIALN		Form. B-D	8°	Tol. H7	ISO 521		1400 N/mm2	253
4104	HSSCO	DIN 212			Form. B	8°	Tol. H7	ISO 521		1100 N/mm2	254
4105	HSSCO	DIN 212			Form. E	45°	Tol. H7	ISO 521		1100 N/mm2	255
4103	HSSCO	DIN 2179			Form. E	45°		2%	ISO 3466	1100 N/mm2	256
4106	HSSCO	DIN 208			Form. B	8°	Tol. H7	ISO 521		1100 N/mm2	256
4107	HSSCO	DIN 208			Form. C	45°	Tol. H7	ISO 521		1100 N/mm2	257
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Escariadores de máquina entrada cónica / Alésoirs machine pour goupilles coniques / Machine reamers for taper holes

4115	HSSCO	DIN 212				45°		5%		800 N/mm2	258
4116	HSSCO	DIN 212				45°		8%		800 N/mm2	258
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4109	HSS	DIN 219			Form. B	8°	Tol. H7		ISO 2402	800 N/mm2	259
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4110	HSS				Form. A			REFORZ. RENFORC. RINFORC.		800 N/mm2	260
4111	HSS				Form. A					800 N/mm2	260

FORMULARIO ESCARIADORES / AVELLANADORES ESPECIALES
FFICHE TECNIQUE ALESOIRS ET FRAISES A TROU SPECIAUX
TECHNICAL ENQUIRY FOR SPECIAL REAMERS AND COUNTERSINK CUTTERS

Fecha / Date: .....

Empresa / Entreprise / Company: ..... Contacto / Contact: .....

Dirección / Adresse / Adress: ..... Población / Ville / Town: .....

Tel / Fax: ..... E-mail: .....

.....

TRABAJO A REALIZAR / TRAVAIL DEMANDE / REQUESTED WORK

Material / Matière / Material ..... Norma / Norme / Norm: .....

Dureza / Dureté / Hardness ..... HB ..... HRc Resistencia / Résistance / Resistance ..... N/mm^2

Tipo viruta: ☐ Corta ☐ Larga ☐ Polvo
Type copeau Courte Longue Poussière
Shaving Short Long Powder

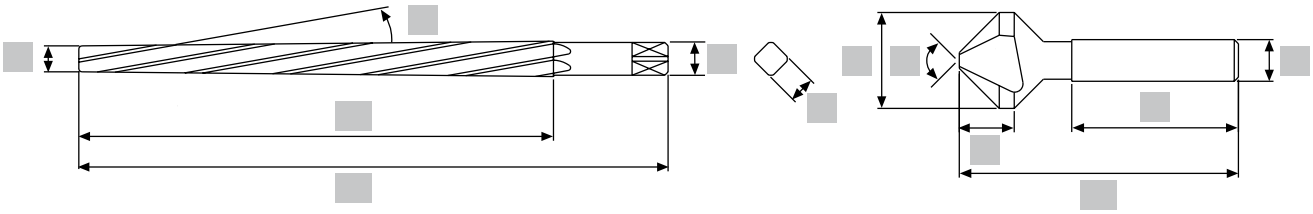
Máquina / Machine ..... Refrigerante / Réfrigérant / Coolant .....

Posición / Position ☐ Horizontal ☐ Vertical ☐ V. Corte ☐ V. avance
V. Coupe Avance
Cutting Speed Feed

HERRAMIENTA / OUTIL / TOOL

Descripción / Description ..... Tolerancia / Tolérance / Tolerance .....

Cantidad / Quantité / Quantity ..... Número ranuras / Rainures / Grooves .....



Mango: ☐ Cilíndrico ☐ Weldon ☐ Cónico ☐ Rebajado
Queue: Cylindrique Weldon Conique Réduite
Shank: Straight Weldon Taper Reduced

Material / Matière / Material: ☐ HSS ☐ HSSE ☐ HM ☐ HSS-HM

Superficie / Surface: ☐ Brillante ☐ Negra ☐ Recubrimiento
Brillant Noire Revêtement
Brilliant Black Coating

COMENTARIOS / COMMENTAIRES/ COMMENTS: .....

.....

.....

.....

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TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE



Z	B	B	E	E
Punta	8°	8°	45°	45°
Mat.	HM	HSSCO	HSSCO	HSSCO
Rec.	TIALN			
DIN	212	212	212	2179
Form.	H7	H7	H7	
Ref.	4118	4104	4105	4103

Mat.	HSS/HSSE									HM									Vc (m/min)			
	Avance (mm/rpm)																					
	Ø2	Ø5	Ø10	Ø15	Ø20	Ø25	Ø30	Ø35	Ø40	Ø2	Ø5	Ø10	Ø15	Ø20	Ø25	Ø30	Ø35	Ø40				
1.1	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	14-18	10-14	12-16	8-12
1.2	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	12-16	8-12	10-14	8-12
1.3	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	12-16	8-12	10-14	6-8
1.4	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	10-14	6-8		4-6
1.5	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	6-10	4-6		
1.6										0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	4-6			
1.7										0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	3-4			
1.8										0,02	0,05	0,1	0,12	0,16	0,2	0,23	0,25	0,27	3-4			
2.1	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	8-12	6-8		4-6
2.2	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	8-12	6-8		4-6
2.3	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	8-12	6-8		4-6
2.4	0,02	0,05	0,1	0,12	0,16	0,2	0,23	0,25	0,27	0,02	0,05	0,1	0,12	0,16	0,2	0,23	0,25	0,27	6-10	4-6		
3.1	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	25-30	12-16		10-14
3.2	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	8-12	6-8		
3.3	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	14-18	10-12		6-8
3.4										0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	6-10			
4.1	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	8-12	6-8		4-6
4.2	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	6-10	2-6		
4.3	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	6-10	2-6		
5.1	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	6-10	2-6		1-3
5.2	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	0.05	0,1	0,2	0,26	0,33	0,4	0,45	0,5	0,55	4-6	1-3		
5.3	0,03	0,06	0,12	0,16	0,2	0,25	0,28	0,32	0,35	0,04	0,08	0,16	0,2	0,25	0,32	0,36	0,4	0,43	4-6	1-3		
6.1	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	20-25	12-20		10-16
6.2	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	30-35	20-25		16-22
6.3	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	20-25	16-22	14-20	12-18
6.4	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	30-35	20-25		16-22
6.5	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	20-25	16-22	14-20	12-18
7.1	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	30-35	20-25	20-25	16-22
7.2	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	25-30	16-22	16-22	14-20
7.3	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	20-30	14-20	14-20	8-12
7.4	0,63	0,12	0,25	0,3	0,4	0,5	0,53	0,56	0,6	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	20-25	12-16		
8.1	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	15-20	10-14	12-16	16-22
8.2	0,08	0,16	0,3	0,4	0,5	0,6	0,7	0,75	0,8	0,1	0,2	0,4	0,5	0,65	0,8	0,9	0,95	1	12-18	8-10	10-14	14-20

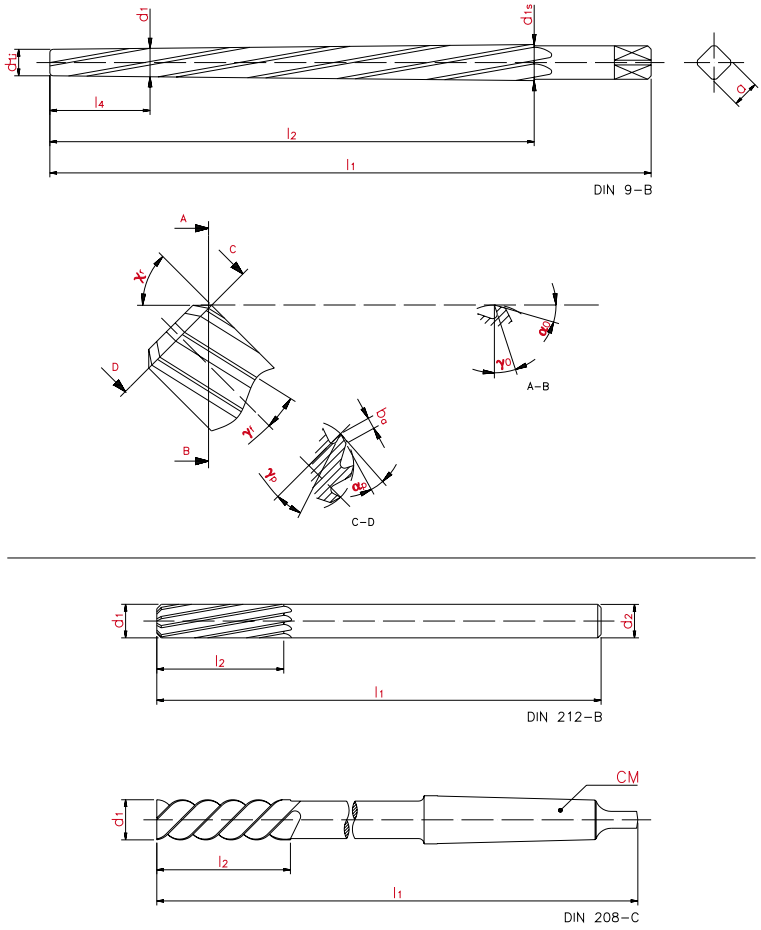
					
B	C				
8º	45º	25º	45º	46º	47º
HSSCO	HSSCO	HSSCO	HSSCO	HSSCO	HSSCO
208	208	311	212	212	212
H7	H7				
4106	4107	4108	4115	4116	4117
Vc (m/min)					
10-14	12-16	8-12	8-12	8-12	8-12
8-12	10-14	8-12	8-12	8-12	8-12
8-12	10-14	6-8	6-8	6-8	6-8
6-8		4-6	4-6	4-6	4-6
4-6					
6-8		4-6	4-6	4-6	4-6
6-8		4-6	4-6	4-6	4-6
6-8		4-6	4-6	4-6	4-6
4-6					
12-16		10-14	10-14	10-14	10-14
6-8					
10-12		6-8	6-8	6-8	6-8
6-8		4-6	4-6	4-6	4-6
2-6					
2-6					
2-6		1-3	1-3	1-3	1-3
1-3					
1-3					
12-20		10-16	10-16	10-16	10-16
20-25		16-22	16-22	16-22	16-22
16-22	14-20	12-18	12-18	12-18	12-18
20-25		16-22	16-22	16-22	16-22
16-22	14-20	12-18	12-18	12-18	12-18
20-25	20-25	16-22	16-22	16-22	16-22
16-22	16-22	14-20	14-20	14-20	14-20
14-20	14-20	8-12	8-12	8-12	8-12
12-16					
10-14	12-16	16-22	16-22	16-22	16-22
8-10	10-14	14-20	14-20	14-20	14-20

SOBREESPESORES PREVIOS / SURÉPAISSEURS PRÉALABLES / PREVIOUS ALLOWANCES

Excedentes mínimas para escariar (mm) /
Excédents minimums à aléser (mm) /
Minimum surplus to ream (mm)

	< Ø 6	< Ø 10	< Ø 16	< Ø 25	> Ø 25
800 N/mm2	0,10 - 0,20	0,10 - 0,20	0,20 - 0,30	0,30 - 0,40	0,40 - 0,50
1100 N/mm2	0,10 - 0,20	0,10 - 0,20	0,20 - 0,30	0,30 - 0,40	0,40 - 0,50
F	0,10 - 0,20	0,10 - 0,20	0,20 - 0,30	0,30 - 0,40	0,40 - 0,50
CU	0,10 - 0,20	0,20 - 0,30	0,30 - 0,40	0,40 - 0,50	0,30 - 0,40
AL	0,10 - 0,20	0,20 - 0,30	0,30 - 0,40	0,40 - 0,50	0,30 - 0,40

TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY



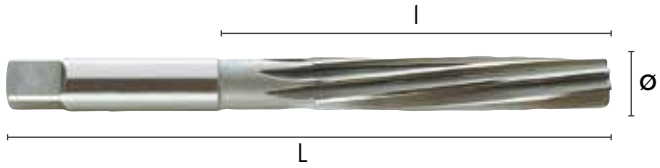
l1	**Longitud total** / Longueur totale / Total length
l2	**Longitud de corte** / Longueur de coupe / Length of cut
l4	**Longitud hasta el diámetro nominal** / Longueur jusqu'au diamètre nominal / Length to the nominal diametre
a	**Cuadradillo** / Carré / Square
ba	**Ancho de fase** / Largeur de phase / Phase width
d1	**Diámetro nominal** / Diamètre nominal / Nominal diametre
d1i	**Diámetro inferior** / Diamètre inférieur / Inferior diametre
d1s	**Diámetro superior** / Diamètre supérieur / Superior diametre
d2	**Diámetro de mango** / Diamètre de queue / Shank diametre
di	**Diámetro interior** / Diamètre intérieur / Interior diametre
CM	**Tamaño del cono morse** / Taille du cône morse / Morse taper size
α**0**	**Ángulo de destalonado** / Angle de détalonnage / Relief angle
$\alpha\pi$	**Ángulo de destalonado del corte seco** / Angle de détalonnage de la coupe sèche / Dry cut relief angle
γ**0**	**Ángulo corte ortogonal** / Angle coupe orthogonale / Orthogonal cut angle
$\gamma\phi$	**Ángulo de corte lateral** / Angle de coupe latérale / Lateral cut angle
$\gamma\pi$	**Ángulo corte posterior** / Angle coupe postérieure / Rear cut angle
$\chi\rho$	**Ángulo de posición** / Angle de position / Angle of position

ESCARIADORES DE MANO
ALÉSOIRS À MAIN / HAND REAMERS

4101 **HSS DIN 206** | Form. B | 7° | Tol. H7 | ISO 236

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
1,50	*27,41*	41	20	1
2,00	*20,41*	50	25	1
2,25	*22,44*	54	27	1
2,50	*20,41*	58	29	1
2,75	*22,44*	62	31	1
3,00	*20,41*	62	31	1
3,25	*22,44*	66	33	1
3,50	*20,41*	71	35	1
3,75	*22,44*	71	35	1
4,00	*20,41*	76	38	1
4,25	*23,44*	76	38	1
4,50	*21,33*	81	41	1
4,75	*23,44*	81	41	1
5,00	*21,33*	87	44	1
5,25	*23,44*	87	44	1
5,50	*21,33*	93	47	1
5,75	*23,44*	93	47	1
6,00	*21,33*	93	47	1
6,25	*23,44*	100	50	1
6,50	*21,33*	100	50	1
6,75	*23,44*	107	54	1
7,00	*21,33*	107	54	1
7,25	*24,76*	107	54	1
7,50	*22,50*	107	54	1
7,75	*24,76*	115	58	1
8,00	*22,50*	115	58	1
8,25	*26,00*	115	58	1
8,50	*23,65*	115	58	1
8,75	*25,94*	124	62	1
9,00	*23,65*	124	62	1
9,25	*27,13*	124	62	1
9,50	*24,64*	124	62	1
9,75	*27,13*	133	66	1
10,00	*24,64*	133	66	1
10,25	*34,29*	133	66	1
10,50	*31,23*	133	66	1
10,75	*34,29*	142	71	1
11,00	*31,23*	142	71	1
11,25	*36,95*	142	71	1
11,50	*33,56*	142	71	1
11,75	*36,95*	142	71	1
12,00	*33,56*	152	76	1
12,50	*42,85*	152	76	1
13,00	*42,85*	152	76	1
13,50	*45,76*	163	81	1
14,00	*45,76*	163	81	1
14,50	*50,00*	163	81	1
15,00	*50,00*	163	81	1
15,50	*54,39*	175	87	1

Ø mm	€	L mm	l mm	
16,00	*54,39*	175	87	1
16,50	*65,49*	175	87	1
17,00	*65,49*	175	87	1
17,50	*73,11*	188	93	1
18,00	*78,51*	188	93	1
18,50	*78,51*	188	93	1
19,00	*78,51*	188	93	1
19,50	*84,93*	201	100	1
20,00	*84,93*	201	100	1
20,50	*106,67*	201	100	1
21,00	*106,67*	201	100	1
21,50	*110,52*	215	107	1
22,00	*110,52*	215	107	1
22,50	*115,44*	215	107	1
23,00	*115,44*	215	107	1
23,50	*127,48*	215	107	1
24,00	*127,48*	231	115	1
24,50	*135,29*	231	115	1
25,00	*135,29*	231	115	1
25,50	*165,06*	231	115	1
26,00	*147,83*	231	115	1
26,50	*178,09*	231	115	1
27,00	*161,16*	247	124	1
27,50	*182,36*	247	124	1
28,00	*166,85*	247	124	1
28,50	*191,76*	247	124	1
29,00	*220,84*	247	124	1
29,50	*212,90*	247	124	1
30,00	*212,34*	247	124	1
30,50	*248,03*	265	133	1
31,00	*215,67*	265	133	1
31,50	*268,17*	265	133	1
32,00	*246,02*	265	133	1
32,50	*282,89*	265	133	1
33,00	*258,01*	265	133	1
33,50	*296,67*	265	133	1
34,00	*258,00*	284	142	1
34,50	*306,18*	284	142	1
35,00	*266,27*	284	142	1
35,50	*334,61*	284	142	1
36,00	*290,99*	284	142	1
36,50	*361,82*	284	142	1
37,00	*337,33*	284	142	1
37,50	*387,97*	284	142	1
38,00	*337,38*	305	152	1
38,50	*387,97*	305	152	1
39,00	*337,38*	305	152	1
39,50	*387,97*	305	152	1
40,00	*337,38*	305	152	1

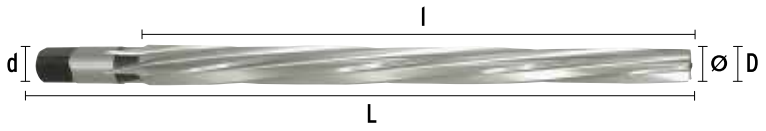
ESCARIADORES DE MANO
ALÉSOIRS À MAIN / HAND REAMERS

4102 HSS DIN 9

Form. B | 7° | 2% | ISO 3465

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

Aplicaciones / Applications



Ø Nom.	D mm	d mm	€	L mm	l mm	
1,50	2,14	1,40	*47,69*	57	37	1
2,00	2,86	1,90	*36,71*	68	48	1
2,50	3,36	2,40	*36,71*	68	48	1
3,00	4,06	2,90	*36,71*	80	58	1
3,50	4,56	3,40	*40,30*	87	63	1
4,00	5,26	3,90	*22,21*	93	68	1
4,50	5,76	4,40	*28,83*	93	68	1
5,00	6,36	4,90	*22,84*	100	73	1
5,50	7,18	5,40	*36,18*	118	89	1

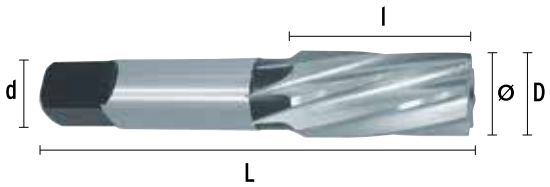
Ø Nom.	D mm	d mm	€	L mm	l mm	
6,00	8,00	5,90	*27,00*	135	105	1
6,50	8,50	6,40	*37,50*	135	105	1
7,00	9,00	6,90	*31,15*	135	105	1
8,00	10,80	7,90	*41,92*	180	145	1
10,00	13,40	9,90	*52,02*	215	175	1
12,00	16,00	11,80	*69,96*	255	210	1
14,00	18,30	13,80	*98,13*	270	225	1
16,00	20,40	15,80	*108,72*	280	230	1
20,00	24,80	19,80	*149,67*	310	250	1

4119 HSS

Form. B | 8° | C. 1:16 (NPT/BSPT)

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

Aplicaciones / Applications



Ø Nom.	D1 mm	d2 mm	d mm	€	L mm	l mm	
1/16	5,91	6,98	6	*78,26*	70	17	1
1/8	8,92	9,08	7	*98,92*	70	17	1
1/4	10,28	11,97	11	*115,54*	80	27	1
3/8	13,70	15,39	12	*129,72*	85	27	1

Ø Nom.	D1 mm	d2 mm	d mm	€	L mm	l mm	
1/2	16,91	19,1	16	*171,11*	95	35	1
3/4	22,29	24,42	20	*209,43*	105	35	1
1"	27,97	30,66	25	*288,25*	130	43	1

4118 **HM-MD DIN 212** | Form. B-D | 8° | Tol. H7 | ISO 521 | TIALN

Aceros 1100 - 1400 N/mm² — **Aciers / Steel** | INOX | F

Aplicaciones / Applications



Ø mm	€	L mm	l mm	
2,00	*61,68*	49	11	1
2,50	*70,51*	57	14	1
3,00	*67,06*	61	15	1
3,50	*78,03*	70	18	1
4,00	*74,31*	75	19	1
4,50	*84,55*	80	21	1
5,00	*78,35*	86	23	1
5,50	*93,93*	93	26	1
6,00	*93,06*	101	28	1
6,50	*114,40*	101	28	1

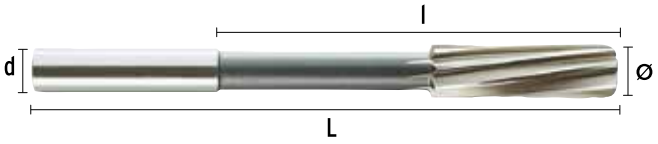
Ø mm	€	L mm	l mm	
7,00	*120,16*	109	31	1
8,00	*136,23*	117	33	1
8,50	*157,70*	117	33	1
9,00	*157,18*	125	36	1
9,50	*174,85*	125	36	1
10,00	*173,24*	133	38	1
10,50	*193,91*	133	38	1
11,00	*254,73*	142	41	1
11,50	*279,12*	142	41	1
12,00	*268,15*	151	44	1

ESCARIADORES DE MÁQUINA
ALÉSOIRS MACHINE / MACHINE REAMERS

4104 HSSCO DIN 212 | Form. B Ø ≤ 3,70 | Form. D Ø > 3,70 | 10° | Tol. H7 | ISO 521

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2 — F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
1,00	1,00	*46,71*	34	7	1
1,20	1,20	*40,60*	34	7	1
1,40	1,40	*37,71*	40	8	1
1,50	1,50	*20,24*	40	8	1
1,60	1,60	*24,68*	43	9	1
1,80	1,80	*24,68*	46	10	1
1,90	1,90	*24,68*	46	10	1
2,00	2,00	*20,24*	49	11	1
2,10	2,10	*20,79*	49	11	1
2,20	2,20	*20,79*	53	12	1
2,30	2,30	*20,79*	53	12	1
2,40	2,40	*20,79*	57	14	1
2,50	2,50	*20,24*	57	14	1
2,60	2,60	*21,37*	57	14	1
2,70	2,70	*21,37*	61	15	1
2,80	2,80	*21,37*	61	15	1
2,90	2,90	*21,37*	61	15	1
3,00	3,00	*20,24*	61	15	1
3,10	3,10	*21,17*	65	16	1
3,20	3,20	*21,17*	65	16	1
3,30	3,30	*21,17*	65	16	1
3,40	3,40	*21,17*	70	18	1
3,50	3,50	*20,24*	70	18	1
3,60	3,60	*21,17*	70	18	1
3,70	3,70	*21,17*	70	18	1
3,80	4,00	*21,17*	75	19	1
3,90	4,00	*21,17*	75	19	1
4,00	4,00	*20,24*	75	19	1
4,10	4,00	*21,17*	75	19	1
4,20	4,00	*21,17*	75	19	1
4,30	4,50	*21,17*	80	21	1
4,40	4,40	*21,17*	80	21	1
4,50	4,50	*20,24*	80	21	1
4,60	4,50	*21,17*	80	21	1
4,70	4,50	*21,17*	80	21	1
4,80	5,00	*21,17*	86	23	1
4,90	5,00	*21,17*	86	23	1
5,00	5,00	*20,24*	86	23	1
5,10	5,00	*21,17*	86	23	1
5,20	5,00	*21,17*	86	23	1
5,30	5,00	*21,17*	86	23	1
5,40	5,60	*21,17*	93	26	1
5,50	5,60	*20,24*	93	26	1
5,60	5,60	*21,17*	93	26	1
5,70	5,60	*21,17*	93	26	1
5,80	5,60	*21,17*	93	26	1
5,90	5,60	*21,17*	93	26	1
6,00	5,60	*22,20*	93	26	1
6,10	6,30	*23,25*	101	28	1

Ø mm	d mm	€	L mm	l mm	
6,20	6,30	*23,25*	101	28	1
6,30	6,30	*23,25*	101	28	1
6,40	6,30	*23,25*	101	28	1
6,50	6,30	*22,20*	101	28	1
6,60	6,30	*23,25*	101	28	1
6,70	6,30	*23,25*	101	28	1
6,80	7,10	*23,25*	109	31	1
6,90	7,10	*23,25*	109	31	1
7,00	7,10	*22,20*	109	31	1
7,10	7,10	*23,25*	109	31	1
7,20	7,10	*23,25*	109	31	1
7,30	7,10	*23,25*	109	31	1
7,40	7,10	*23,25*	109	31	1
7,50	7,10	*24,08*	109	31	1
7,60	8,00	*25,69*	117	33	1
7,70	8,00	*25,69*	117	33	1
7,80	8,00	*25,69*	117	33	1
7,90	8,00	*25,69*	117	33	1
8,00	8,00	*24,54*	117	33	1
8,10	8,00	*29,54*	117	33	1
8,20	8,00	*29,54*	117	33	1
8,30	8,00	*29,54*	117	33	1
8,40	8,00	*29,54*	117	33	1
8,50	8,00	*26,87*	117	33	1
8,60	9,00	*29,54*	125	36	1
8,70	9,00	*29,54*	125	36	1
8,80	9,00	*29,54*	125	19	1
8,90	9,00	*29,54*	125	36	1
9,00	9,00	*29,54*	125	36	1
9,10	9,00	*29,54*	125	36	1
9,20	9,00	*29,54*	125	36	1
9,30	9,00	*29,54*	125	36	1
9,40	9,00	*29,54*	125	36	1
9,50	9,00	*30,01*	125	36	1
9,60	10,00	*32,48*	133	38	1
9,70	10,00	*32,48*	133	38	1
9,80	10,00	*32,48*	133	38	1
9,90	10,00	*32,48*	133	38	1
10,00	10,00	*30,01*	133	38	1
11,00	10,00	*35,46*	142	41	1
12,00	10,00	*34,66*	151	44	1
13,00	10,00	*59,58*	151	44	1
14,00	12,50	*56,97*	160	47	1
15,00	12,50	*62,21*	162	50	1
16,00	12,50	*66,59*	170	52	1
17,00	14,00	*76,79*	175	54	1
18,00	14,00	*80,07*	182	56	1
19,00	16,00	*85,07*	189	58	1
20,00	16,00	*85,67*	195	60	1

ESCARIADORES DE MÁQUINA
ALÉSOIRS MACHINE / MACHINE REAMERS

4104/1 HSSCO DIN 212

Form. B Ø ≤ 3,70 | Form. D Ø > 3,70 | 8° | ISO 521

Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 F

Aplicaciones / Applications

Ø mm	€	L mm	l mm	
0,95 - 1,31	*38,79*	34	5-7	1
1,32 - 1,54	*34,78*	40	8	1
1,55 - 1,70	*34,78*	43	9	1
1,71 - 1,90	*34,78*	46	10	1
1,91 - 2,12	*34,78*	49	11	1
2,13 - 2,36	*34,78*	53	12	1
2,37 - 2,66	*30,71*	57	14	1
2,67 - 3,05	*28,44*	61	15	1
3,06 - 3,35	*28,44*	65	16	1
3,36 - 3,75	*31,93*	70	18	1
3,76 - 4,25	*31,93*	75	19	1
4,26 - 4,75	*31,12*	80	21	1
4,76 - 5,30	*31,12*	86	23	1
5,31 - 5,95	*31,50*	93	26	1
5,96 - 6,00	*32,28*	93	26	1
6,01 - 6,70	*32,28*	101	28	1
6,71 - 7,29	*35,56*	109	31	1

Ø mm	€	L mm	l mm	
7,30 - 7,55	*39,97*	109	32	1
7,56 - 8,50	*39,97*	117	33	1
8,51 - 9,25	*45,14*	125	36	1
9,26 - 9,50	*51,52*	125	36	1
9,51 - 10,64	*49,56*	133	38	1
10,65 - 11,25	*58,19*	142	41	1
11,26 - 11,80	*59,75*	142	41	1
11,81 - 12,02	*59,75*	151	44	1
12,03 - 13,02	*82,16*	151	44	1
13,03 - 13,20	*82,16*	151	44	1
13,21 - 14,00	*99,88*	160	47	1
14,01 - 14,02	*99,88*	162	50	1
14,03 - 15,00	*121,81*	162	50	1
15,01 - 15,02	*121,81*	170	52	1
15,03 - 16,00	*130,40*	170	52	1
16,01 - 16,02	*130,40*	175	54	1

4105 HSSCO DIN 212

Form. E | 45° | Tol. H7 | ISO 521

Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
3,00	3,00	*27,76*	61	15	1
3,50	3,50	*27,76*	70	18	1
4,00	4,00	*27,76*	75	19	1
4,50	4,50	*28,28*	80	21	1
5,00	5,00	*28,28*	86	23	1
5,50	5,60	*28,28*	93	26	1
6,00	5,60	*28,28*	93	26	1
6,50	6,30	*28,76*	101	28	1
7,00	7,10	*28,76*	109	31	1
7,50	7,10	*29,30*	109	31	1
8,00	8,00	*29,30*	117	33	1

Ø mm	d mm	€	L mm	l mm	
8,50	8,00	*32,57*	117	33	1
9,00	9,00	*32,57*	125	36	1
9,50	9,00	*32,57*	125	36	1
10,00	10,00	*32,57*	133	38	1
11,00	10,00	*50,17*	142	41	1
12,00	10,00	*48,30*	151	44	1
13,00	10,00	*56,79*	151	44	1
14,00	12,50	*61,11*	160	47	1
15,00	12,50	*82,13*	162	50	1
16,00	12,50	*89,42*	170	52	1

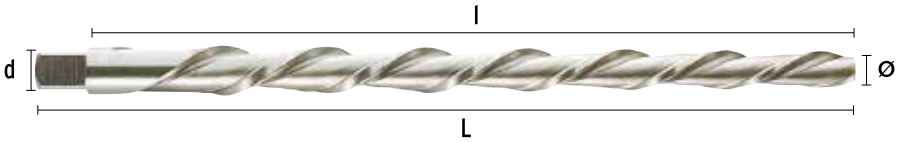
ESCARIADORES DE MÁQUINA
ALÉSOIRS MACHINE / MACHINE REAMERS

4103 HSSCO DIN 2179

Form. E | 45° | 2% | ISO 3466

Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 F

Aplicaciones / Applications



Ø Nom.	D mm	d mm	€	L mm	l mm	
3,00	4,06	2,90	*26,25*	100	58	1
4,00	5,26	3,90	*42,67*	112	68	1
5,00	6,36	4,90	*40,67*	122	73	1

Ø Nom.	D mm	d mm	€	L mm	l mm	
6,00	8,00	5,90	*47,21*	160	105	1
8,00	10,80	7,90	*75,80*	207	145	1
10,00	13,40	9,90	*150,41*	245	175	1

4106 HSSCO DIN 208

Form. B | 10° | Tol. H7 | ISO 521

Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 F

Aplicaciones / Applications



△	Ø mm	€	L mm	l mm	
1	4,00	*50,99*	129	19	1
1	5,00	*36,95*	133	23	1
1	5,50	*39,73*	138	26	1
1	6,00	*37,49*	138	26	1
1	6,50	*40,52*	144	28	1
1	7,00	*38,13*	150	31	1
1	7,50	*27,52*	150	31	1
1	8,00	*39,04*	156	33	1
1	8,50	*43,94*	156	33	1
1	9,00	*41,75*	162	36	1
1	9,50	*44,36*	162	36	1
1	10,00	*39,61*	168	38	1
1	10,50	*44,95*	168	38	1
1	11,00	*40,13*	175	41	1
1	11,50	*47,37*	175	41	1
1	12,00	*40,13*	182	44	1
1	12,50	*55,53*	182	44	1
1	13,00	*52,66*	182	44	1
1	13,50	*57,18*	189	47	1
1	14,00	*54,14*	189	47	1
2	14,50	*60,21*	204	50	1
2	15,00	*55,78*	204	50	1
2	15,50	*63,27*	210	52	1

△	Ø mm	€	L mm	l mm	
2	16,00	*60,73*	210	52	1
2	16,50	*70,30*	214	54	1
2	17,00	*67,89*	214	54	1
2	18,00	*72,14*	219	56	1
2	19,00	*75,51*	223	58	1
2	20,00	*78,40*	228	60	1
2	21,00	*97,27*	232	62	1
2	22,00	*103,48*	237	64	1
2	23,00	*108,09*	241	66	1
3	24,00	*131,00*	268	68	1
3	25,00	*133,61*	268	68	1
3	26,00	*139,92*	273	70	1
3	27,00	*161,00*	277	71	1
3	28,00	*161,00*	277	71	1
3	29,00	*175,41*	281	73	1
3	30,00	*175,41*	281	73	1
3	31,00	*224,05*	285	75	1
4	32,00	*209,94*	317	77	1
4	34,00	*220,54*	321	78	1
4	35,00	*254,03*	321	78	1
4	36,00	*326,39*	325	79	1
4	38,00	*347,53*	329	81	1
4	40,00	*354,59*	329	81	1

ESCARIADORES DE MÁQUINA
ALÉSOIRS MACHINE / MACHINE REAMERS

4107 HSSCO DIN 208

Form. C | 45° | Tol. H7 | ISO 521

Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — F

Aplicaciones / Applications



Δ	Ø mm	€	L mm	l mm	
1	5,00	*62,57*	133	23	1
1	6,00	*62,57*	138	26	1
1	7,00	*62,57*	150	31	1
1	8,00	*62,57*	156	33	1
1	9,00	*60,28*	162	36	1
1	10,00	*60,28*	168	38	1
1	11,00	*62,93*	175	41	1
1	12,00	*62,93*	182	44	1
1	13,00	*93,62*	182	44	1
1	14,00	*96,53*	189	47	1
2	15,00	*105,69*	204	50	1
2	16,00	*110,81*	210	52	1

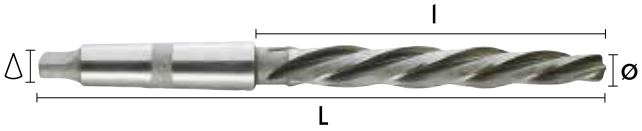
Δ	Ø mm	€	L mm	l mm	
2	17,00	*119,92*	214	54	1
2	18,00	*127,40*	219	56	1
2	19,00	*135,15*	223	58	1
2	20,00	*142,09*	228	60	1
2	21,00	*153,55*	232	62	1
2	22,00	*163,88*	237	64	1
2	23,00	*175,74*	241	66	1
3	24,00	*185,37*	268	68	1
3	25,00	*196,78*	268	68	1
3	26,00	*207,67*	273	70	1
3	28,00	*229,58*	277	71	1
3	29,00	*241,58*	281	73	1

4108 HSS DIN 311

25° | ISO 2238

Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

Aplicaciones / Applications

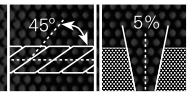


Δ	Ø mm	€	L mm	l mm	
1	10,00	*59,26*	171	95	1
1	11,00	*60,88*	176	100	1
2	12,00	*63,05*	199	105	1
2	13,00	*68,66*	199	105	1
2	14,00	*75,63*	209	115	1
2	15,00	*79,45*	219	125	1
2	16,00	*83,41*	229	135	1
3	17,00	*107,73*	251	135	1
3	18,00	*111,47*	261	145	1
3	19,00	*114,65*	261	145	1
3	20,00	*116,72*	271	155	1
3	21,00	*128,45*	271	155	1
3	22,00	*134,05*	281	165	1
3	23,00	*143,73*	281	165	1

Δ	Ø mm	€	L mm	l mm	
3	24,00	*153,77*	296	180	1
3	25,00	*163,91*	296	180	1
3	26,00	*178,99*	296	180	1
3	27,00	*192,14*	311	195	1
3	28,00	*209,90*	311	195	1
3	29,00	*225,28*	311	195	1
3	30,00	*225,70*	311	195	1
3	31,00	*229,48*	326	210	1
4	32,00	*249,80*	354	210	1
4	33,00	*333,43*	364	220	1
4	34,00	*352,39*	364	220	1
4	35,00	*370,50*	364	220	1
4	36,00	*430,57*	364	220	1
4	37,00	*449,52*	364	220	1

ESCARIADORES DE MÁQUINA
ALÉSOIRS MACHINE / MACHINE REAMERS

4115 HSSCO 5%



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — F

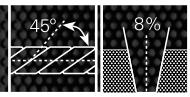
Aplicaciones / Applications



Ø Nom.	€	D mm	d mm	L mm	l mm	
3,00	*98,72*	3	6	110	60	1
4,00	*132,94*	4	8	130	80	1
5,00	*163,20*	5	10	155	100	1

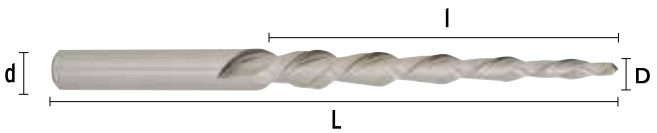
Ø Nom.	€	D mm	d mm	L mm	l mm	
6,00	*201,04*	6	12	180	120	1
7,00	*258,83*	7	14	200	140	1

4116 HSSCO 8%



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — F

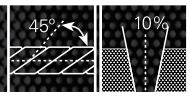
Aplicaciones / Applications



Ø Nom.	€	D mm	d mm	L mm	l mm	
3,00	*81,82*	3	8	110	62	1
4,00	*100,60*	4	10	130	75	1

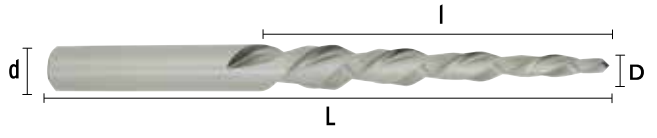
Ø Nom.	€	D mm	d mm	L mm	l mm	
5,00	*132,59*	5	12	150	90	1
6,00	*152,00*	6	14	160	100	1

4117 HSSCO 10%



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — F

Aplicaciones / Applications



Ø Nom.	€	D mm	d mm	L mm	l mm	
2,00	*77,60*	2	6	90	40	1
3,00	*96,38*	3	8	100	50	1
4,00	*121,03*	4	10	115	60	1

Ø Nom.	€	D mm	d mm	L mm	l mm	
5,00	*122,07*	5	12	130	70	1
6,00	*213,95*	6	14	140	80	1

ESCARIADORES DE MÁQUINA
ALÉSOIRS MACHINE / MACHINE REAMERS

4109 HSS DIN 219

Form. B | 8° | Tol. H7 | ISO 2402

Aceros 400 - 800 N/mm² — Aciers / Steel F

Aplicaciones / Applications



Ø mm	Ø int.	€	L mm	l mm	
32,00	16,00	*96,50*	50	36	1
34,00	16,00	*107,00*	50	36	1
36,00	19,00	*122,50*	56	40	1
38,00	19,00	*130,50*	56	40	1
42,00	19,00	*148,50*	56	40	1
45,00	22,00	*174,50*	63	45	1
47,00	22,00	*185,00*	63	45	1
48,00	22,00	*196,00*	63	45	1
52,00	27,00	*238,00*	71	50	1

Ø mm	Ø int.	€	L mm	l mm	
55,00	27,00	*264,00*	71	50	1
58,00	27,00	*278,50*	71	50	1
62,00	32,00	*339,50*	80	56	1
65,00	32,00	*374,00*	80	56	1
70,00	32,00	*410,00*	80	56	1
72,00	40,00	*472,00*	90	63	1
75,00	40,00	*514,00*	90	63	1
80,00	40,00	*559,50*	90	63	1

4114 Mandrino / Mandrin / Mandrel



	Ø mm	D mm	€	L mm	
3	31,00 - 35,00	16	*215,33*	260	1
4	36,00 - 42,00	19	*248,99*	298	1
4	43,00 - 50,00	22	*316,27*	310	1

	Ø mm	D mm	€	L mm	
5	51,00 - 60,00	27	*467,68*	325	1
5	61,00 - 71,00	32	*561,89*	376	1
5	72,00 - 85,00	40	*713,32*	396	1

ESCARIADORES EXTENSIBLES
ALÉSOIRS EXTENSIBLES / EXTENDABLE REAMERS

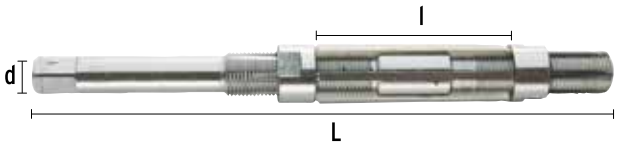
4110 Extensible / Extendible

Form. A

REFORZ. RENFORC. REINFORC.

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm		€ J.CUCHILLAS J.LAMES/SET OF BLADES
8,00-9,00	4,50	*112,51*	100	35	1	*70,98*
9,00-10,00	5,50	*112,51*	120	39	1	*70,98*
10,00-11,00	5,90	*112,51*	125	40	1	*70,98*
11,00-12,00	6,50	*112,51*	130	43	1	*70,98*
12,00-13,50	7,50	*112,51*	135	46	1	*70,98*
13,50-15,50	8,00	*112,51*	140	51	1	*70,98*
15,50-18,00	9,50	*119,72*	165	61	1	*74,32*
18,00-21,00	12,00	*123,93*	185	66	1	*78,34*

Ø mm	d mm	€	L mm	l mm		€ J.CUCHILLAS J.LAMES/SET OF BLADES
21,00-24,00	13,50	*144,19*	195	7 0	1	*90,18*
24,00-27,50	15,00	*157,00*	215	83	1	*94,95*
27,50-31,50	18,50	*171,69*	240	88	1	*104,42*
31,50-37,00	21,00	*223,80*	265	91	1	*128,46*
37,00-45,00	25,00	*333,69*	310	110	1	*198,82*
45,00-55,00	32,00	*480,09*	380	128	1	*305,76*
55,00-67,00	42,00	*872,95*	440	150	1	*463,31*
67,00-80,00	45,00	*1.323,63*	490	170	1	*704,00*

4111 Extensible guía / Extensible guide / Extendible guide

Form. A

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm		€ J.CUCHILLAS J.LAMES/SET OF BLADES
8,00-9,00	4,50	*144,60*	175	35	1	*70,98*
9,00-10,00	5,50	*144,60*	185	35	1	*70,98*
10,00-11,00	5,90	*144,60*	195	40	1	*70,98*
11,00-12,00	6,50	*144,60*	200	41	1	*70,98*
12,00-13,50	7,50	*144,60*	220	44	1	*70,98*
13,50-15,50	8,00	*144,60*	243	53	1	*70,98*
15,50-18,00	9,50	*153,28*	274	61	1	*74,32*
18,00-21,00	12,00	*153,28*	300	66	1	*78,34*

Ø mm	d mm	€	L mm	l mm		€ J.CUCHILLAS J.LAMES/SET OF BLADES
21,00-24,00	13,50	*160,57*	320	70	1	*90,18*
24,00-27,50	15,00	*170,71*	350	83	1	*94,95*
27,50-31,50	18,50	*218,52*	385	88	1	*104,42*
31,50-37,00	21,00	*326,11*	424	91	1	*128,46*
37,00-45,00	25,00	*474,83*	490	110	1	*198,82*
45,00-55,00	32,00	*680,55*	600	128	1	*305,76*
55,00-67,00	42,00	*1.085,81*	740	150	1	*463,31*
67,00-80,00	45,00	*1.493,80*	830	170	1	*704,00*


Avellanado
Chanfreinage
Counterboring

ÍNDICE
SOMMAIRE / INDEX

Pág.

Brocas avellanadoras / Fraises coniques / Counterbore drill-bits

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5103	HSS		TIALN		1100 N/mm2	267

Brocas escalonadas / Fraises étagées / Step drill-bits

5157	HSS				800 N/mm2	268
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5105	HSS				800 N/mm2	269
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Avellanadores / Fraises à trou et à chanfreiner / Countersink cutters

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Avellanadores con agujero / Fraises à trou et à chanfreiner / Countersink cutters

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Avellanadores Allen / Fraises à trou et à chanfreiner / Countersink cutters

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GUIDE D'APPLICATION / APPLICATION GUIDE



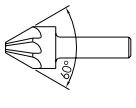
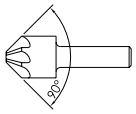
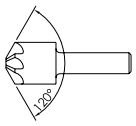
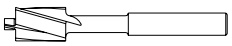
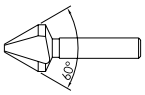
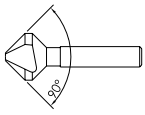
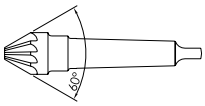
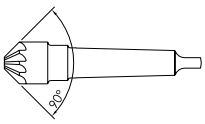
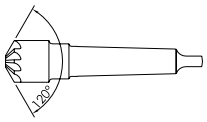
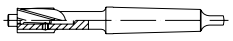
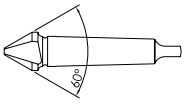
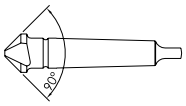
Z	3	3	3	3
Punta	90°	90°	90°	90°
Mat.	HM	HSS	HSSCO	HSS
Rec.	TIALN			TIALN
DIN	335	335	335	335
Form.	C	C	C	C
Ref.	5159	5116	5117	5118

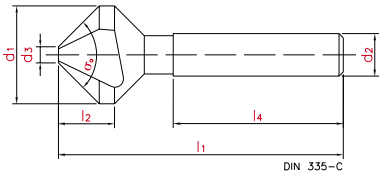
Mat.	HSS/HSSE									HM									Vc (m/min)			
	Avance (mm/rpm)																					
	Ø2	Ø5	Ø10	Ø15	Ø20	Ø25	Ø30	Ø35	Ø40	Ø2	Ø5	Ø10	Ø15	Ø20	Ø25	Ø30	Ø35	Ø40				
1.1	0,05	0,08	0,12	0,14	0,16	0,2	0,2	0,25	0,25	0,05	0,08	0,12	0,15	0,2	0,25	0,3	0,35	0,4	40-80	25-30	25-30	30-35
1.2	0,04	0,07	0,1	0,12	0,14	0,18	0,2	0,22	0,22	0,03	0,05	0,06	0,1	0,15	0,18	0,22	0,26	0,3	35-60	20-25	20-25	25-30
1.3	0,04	0,07	0,1	0,12	0,14	0,18	0,2	0,22	0,22	0,03	0,05	0,06	0,1	0,15	0,18	0,22	0,26	0,3	35-60	20-25	20-25	25-30
1.4	0,03	0,04	0,05	0,06	0,08	0,1	0,1	0,12	0,12	0,02	0,04	0,04	0,08	0,12	0,16	0,18	0,2	0,22	30-40	12-18	12-18	15-20
1.5	0,03	0,04	0,05	0,06	0,08	0,1	0,1	0,12	0,12	0,02	0,04	0,04	0,08	0,12	0,16	0,18	0,2	0,22	15-25		4-8	
1.6										0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	10-15			
1.7										0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	6-10			
1.8										0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	4-8			
2.1	0,04	0,05	0,06	0,07	0,08	0,09	0,1	0,11	0,12	0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	20-30	4-10	4-10	
2.2	0,04	0,05	0,06	0,07	0,08	0,09	0,1	0,11	0,12	0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	20-30	4-10	4-10	
2.3	0,04	0,05	0,06	0,07	0,08	0,09	0,1	0,11	0,12	0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	20-30	4-10	4-10	
2.4										0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	15-25			
3.1	0,08	0,1	0,12	0,16	0,2	0,25	0,25	0,3	0,3	0,04	0,05	0,08	0,12	0,16	0,2	0,25	0,3	0,35	40-70	15-24	15-24	20-30
3.2	0,06	0,07	0,08	0,12	0,16	0,2	0,2	0,25	0,25	0,03	0,04	0,06	0,1	0,14	0,18	0,22	0,25	0,3	25-35	9-13	9-13	12-16
3.3	0,06	0,07	0,08	0,12	0,16	0,2	0,2	0,25	0,25	0,03	0,04	0,06	0,1	0,14	0,18	0,22	0,25	0,3	25-35	9-13	9-13	12-16
3.4										0,02	0,04	0,04	0,08	0,12	0,16	0,18	0,2	0,22	20-30			
4.1	0,04	0,07	0,1	0,12	0,14	0,18	0,2	0,22	0,22	0,02	0,04	0,04	0,08	0,12	0,16	0,18	0,2	0,22	20-30	4-10	6-10	8-12
4.2	0,04	0,07	0,1	0,12	0,14	0,18	0,2	0,22	0,22	0,02	0,04	0,04	0,08	0,12	0,16	0,18	0,2	0,22	15-25		4-6	
4.3	0,03	0,04	0,05	0,06	0,08	0,1	0,1	0,12	0,12	0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	10-15		2-5	
5.1	0,05	0,08	0,12	0,14	0,16	0,2	0,2	0,25	0,25	0,02	0,04	0,04	0,08	0,12	0,16	0,18	0,2	0,22	20-30	4-10	6-10	8-12
5.2	0,04	0,07	0,1	0,12	0,14	0,18	0,2	0,22	0,22	0,02	0,04	0,04	0,08	0,12	0,16	0,18	0,2	0,22	15-25		4-6	
5.3	0,03	0,04	0,05	0,06	0,08	0,1	0,1	0,12	0,12	0,01	0,03	0,03	0,06	0,08	0,1	0,12	0,14	0,16	10-15		2-5	
6.1	0,06	0,07	0,08	0,12	0,16	0,2	0,2	0,25	0,25	0,03	0,05	0,06	0,1	0,15	0,18	0,22	0,26	0,3	40-80	25-35	25-35	30-45
6.2	0,1	0,12	0,14	0,18	0,2	0,24	0,3	0,35	0,4	0,05	0,08	0,12	0,15	0,2	0,25	0,3	0,35	0,4	60-100	40-60	40-60	50-75
6.3	0,1	0,12	0,14	0,18	0,2	0,24	0,3	0,35	0,4	0,03	0,05	0,06	0,1	0,15	0,18	0,22	0,26	0,3	50-90	30-50	30-50	40-65
6.4	0,1	0,12	0,14	0,18	0,2	0,24	0,3	0,35	0,4	0,05	0,08	0,12	0,15	0,2	0,25	0,3	0,35	0,4	60-100	40-60	40-60	50-75
6.5	0,1	0,12	0,14	0,18	0,2	0,24	0,3	0,35	0,4	0,03	0,05	0,06	0,1	0,15	0,18	0,22	0,26	0,3	50-90	30-50	30-50	40-65
7.1	0,1	0,12	0,14	0,18	0,2	0,24	0,3	0,35	0,4	0,05	0,08	0,12	0,15	0,2	0,25	0,3	0,35	0,4	60-120	50-80	50-80	65-100
7.2	0,08	0,1	0,12	0,16	0,2	0,25	0,25	0,3	0,3	0,05	0,08	0,12	0,15	0,2	0,25	0,3	0,35	0,4	50-90	30-50	30-50	40-65
7.3	0,08	0,1	0,12	0,16	0,2	0,25	0,25	0,3	0,3	0,04	0,06	0,1	0,13	0,16	0,2	0,25	0,3	0,35	40-80	15-30	15-30	20-40
7.4	0,1	0,13	0,16	0,2	0,25	0,3	0,3	0,35	0,35	0,05	0,08	0,12	0,15	0,2	0,25	0,3	0,35	0,4	80-140	60-90	60-90	75-115
8.1	0,1	0,12	0,14	0,18	0,2	0,24	0,3	0,35	0,4	0,05	0,08	0,12	0,15	0,2	0,25	0,3	0,35	0,4	60-100	35-70	35-70	45-90
8.2	0,04	0,06	0,08	0,1	0,12	0,16	0,2	0,2	0,25	0,04	0,06	0,1	0,13	0,16	0,2	0,25	0,3	0,35	30-60	12-24	12-24	15-30

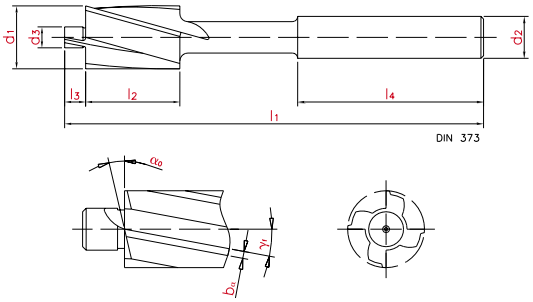
Optima / Optimun **Alternativo / Alternative**

																
3	3	3	3	3	3	1	>4	>4	3	3	3					
90°	90°	120°	60°	75°	30°	90°	60°	90°	90°	60°	120°	90°	90°	75°	ALLEN	ALLEN
HSSCO	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSSCO	HSS	HSS	HSS
TIALN																
335	335	335	334	335		335	334	335	335	334	334	335				
C	C	C	C	C		C	A	A	D	D	D					
5119	5121	5122	5123	5124	5161	5125	5126	5127	5129	5130	5132	5133	5134	5135	5136	5137
Vc (m/min)																
30-35	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30	25-30
25-30	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25
25-30	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25	20-25
15-20	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18
6-10																
6-12	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10
6-12	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10
6-12	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10
4-6																
20-30	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24	15-24
12-16	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13
12-16	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13	9-13
6-10																
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6-8																
3-6																
8-12	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10	4-10
6-8																
3-6																
30-45	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35	25-35
50-75	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60
40-65	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50
50-75	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60
40-65	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50
65-100	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80	50-80
40-65	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50	30-50
20-40	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30	15-30
75-115	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90	60-90
45-90	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70	35-70
15-30	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24

TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY

MANGO QUEUE SHANK	RANURA RAINURE GROOVE	FORMA FORME FORM	DIN 334	DIN 335	DIN 347	PLANOS PLANES FLAT	
			60º	90º	120º		
CILÍNDRICO CYLINDRIQUE CYLINDRICAL	>4	A				DIN 373	
	3	C					
CÓNICO CONIQUE TAPERED	>4	B				DIN 375	
	3	D					

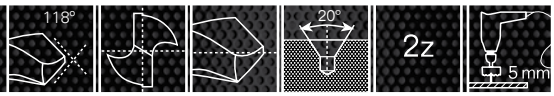




l1	**Longitud total** / Longueur totale / Total length
l2	**Longitud diámetro mayor** / Longueur du plus grand diamètre / Greater diametre length
l3	**Longitud diámetro menor** / Longueur du plus petit diamètre / Lesser diametre length
l4	**Longitud mango** / Longueur queue / Shank length
ba	**Ancho de fase** / Largeur de phase / Phase width
d2	**Diámetro de mango** / Diamètre de queue / Shank diametre
d1	**Diámetro mayor** / Plus grand diamètre / Greater diametre
d3	**Diámetro menor** / Plus petit diamètre / Lesser diametre
d6	**Diámetro interno** / Diamètre interne / Interior diametre
σa	**Ángulo de avellanado** / Angle de chanfreinage / Countersink angle
α0	**Ángulo de destalonado** / Angle de détalonnage / Relief angle
γ0	**Ángulo corte ortogonal** / Angle coupe orthogonale / Orthogonal cut angle
γf	**Ángulo de corte lateral** / Angle de coupe latérale / Lateral cut angle
γp	**Ángulo corte posterior** / Angle coupe postérieure / Rear cut angle
χr	**Ángulo de posición** / Angle de position / Angle of position

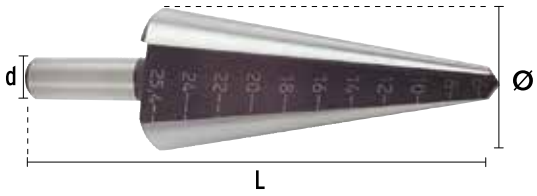
BROCAS AVELLANADORAS
FRAISES CONIQUES / COUNTERBORE DRILL-BITS

5101 HSS



Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

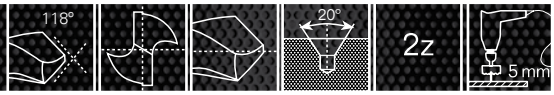
Aplicaciones / Applications



Ø mm	d mm	€	L mm	
3,00 - 14,00	6	*19,09*	62	1
6,00 - 20,00	8	*26,64*	70	1
16,00 - 30,00	10	*54,21*	78	1
26,00 - 40,00	12	*114,75*	86	1
36,00 - 50,00	12	*176,77*	90	1

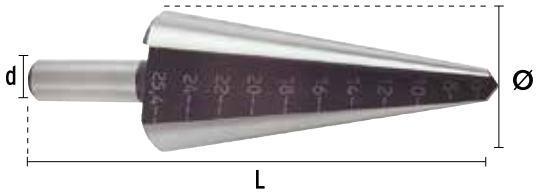
Ø mm	d mm	€	L mm	
46,00 - 60,00	13	*343,92*	94	1
6,00 - 30,00	10	*66,62*	106	1
6,00 - 22,50	8	*48,12*	80	1
6,00 - 25,40	8	*53,70*	84	1

5102 HSSCO



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

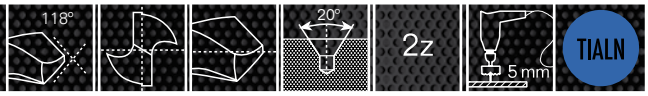
Aplicaciones / Applications



Ø mm	d mm	€	L mm	
3,00 - 14,00	6	*26,84*	62	1
6,00 - 20,00	8	*34,97*	70	1

Ø mm	d mm	€	L mm	
16,00 - 30,00	10	*67,02*	78	1
26,00 - 40,00	12	*137,73*	86	1

5103 HSS



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
3,00 - 14,00	6	*52,38*	62	1
6,00 - 20,00	8	*62,18*	70	1
6,00 - 30,00	10	*114,20*	106	1
16,00 - 30,00	10	*99,93*	78	1

Ø mm	d mm	€	L mm	
26,00 - 40,00	12	*176,97*	86	1
36,00 - 50,00	12	*252,09*	90	1
46,00 - 60,00	13	*434,22*	94	1

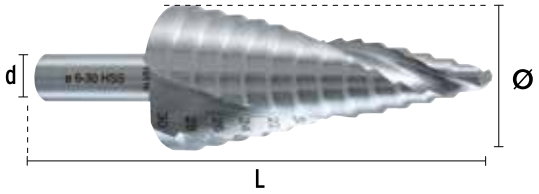
BROCAS ESCALONADAS
FRAISES ÉTAGÉES / STEP DRILL-BITS

5157 HSS



Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

Aplicaciones / Applications



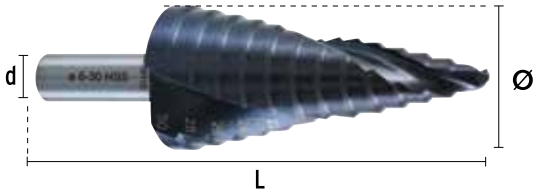
Ø mm	d mm	Grad. mm	€	L mm	
4,00 - 12,00	6	1	*56,94*	70	1
4,00 - 20,00	8	2	*83,57*	77	1
6,00 - 30,00	10	2	*116,49*	98	1
6,00 - 37,00	10	PG	*181,72*	100	1

5158 HSS TIALN



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

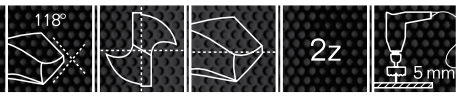
Aplicaciones / Applications



Ø mm	d mm	Grad. mm	€	L mm	
4,00 - 12,00	6	1	*85,42*	70	1
4,00 - 20,00	8	2	*125,34*	77	1
6,00 - 30,00	10	2	*174,73*	98	1

BROCAS ESCALONADAS
FRAISES ÉTAGÉES / STEP DRILL-BITS

5105 HSS



Aceros 400 - 800 N/mm² — **Aciers / Steel** — F

Aplicaciones / Applications



Ø mm	d mm	Grad. mm	€	L mm	
4,00 - 12,00	6	1	*39,06*	69	1
4,00 - 12,00	6	2	*40,80*	69	1
4,00 - 20,00	8	2	*52,70*	75	1
6,00 - 30,00	10	2	*80,05*	95	1
12,00 - 20,00	9	1	*72,00*	75	1

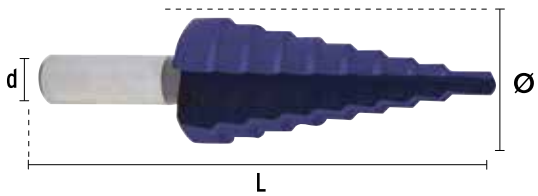
Ø mm	d mm	Grad. mm	€	L mm	
20,00 - 30,00	12	1	100,23	*95,46*	1
30,00 - 40,00	12	1	181,48	*172,84*	1
40,00 - 50,00	12	1	263,13	*250,60*	1
50,00 - 60,00	13	1	382,88	*364,65*	1

5106 HSS



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — INOX — TI

Aplicaciones / Applications



Ø mm	d mm	Grad. mm	€	L mm	
4,00 - 12,00	6	1	*91,93*	69	1
4,00 - 12,00	6	2	*95,19*	69	1
4,00 - 20,00	8	2	*120,92*	75	1
6,00 - 30,00	10	2	*173,67*	95	1

Ø mm	d mm	Grad. mm	€	L mm	
12,00 - 20,00	9	1	*109,31*	75	1
20,00 - 30,00	12	1	*162,77*	93	1
30,00 - 40,00	12	1	*294,83*	93	1

BROCAS ESCALONADAS
FRAISES ÉTAGÉES / STEP DRILL-BITS

5160 HSS MULTI

135° | 2z | 5 mm

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



M	Ciego Borgne Bling	Pasante Debouchant Bushing	d mm	€	L mm	
M8	-	Ø 8,5	12		97	
M10	Ø 8,5	Ø 10,5	12		97	
M12	Ø 10,5	Ø 12,5	12		97	
M16	Ø 14,5	Ø 16,5	12	*168,00*	97	1
M20	Ø 18,5	Ø 20,5	12		97	
M25	Ø 23,5	Ø 25,5	12		97	
M32	Ø 30,5	Ø 32,5	12		97	
M40	Ø 38,5	Ø 40,5	12		97	

5109 HSS

118° | 4z | 5 mm

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
9,00 - 36,00	10	*209,90*	88	1
25,00 - 58,00	10	*515,01*	91	1

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

5112 Broca piloto / Foret pilote / Pilot drill-bit



Ø mm	d mm	€	L mm	
7,00	4	*34,57*	40	1

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

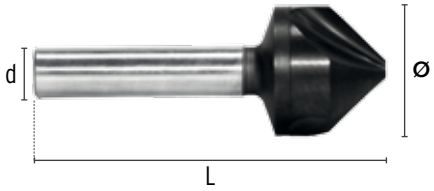
AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5159 HM-MD DIN335C

90° | 3z | TIALN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — INOX 800 N/mm2 F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
6,30	6	*73,00*	50	1
8,30	6	*80,58*	50	1
10,40	8	*84,14*	50	1
12,40	8	*90,57*	50	1

Ø mm	d mm	€	L mm	
16,50	10	*100,80*	60	1
20,50	10	*110,96*	60	1
25,00	10	*151,78*	67	1
31,00	12	*204,92*	71	1

5116 HSS DIN 335 C

90° | 3z

Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
4,30	4	*16,04*	40	1
5,00	4	*16,04*	40	1
5,30	4	*16,04*	40	1
5,80	5	*16,04*	45	1
6,00	5	*11,57*	45	1
6,30	5	*11,39*	45	1
7,00	6	*16,04*	50	1
7,30	6	*16,04*	50	1
8,00	6	*16,04*	50	1
8,30	6	*11,05*	50	1
9,40	6	*18,70*	50	1
10,00	6	*13,09*	50	1
10,40	6	*12,85*	50	1
11,50	8	*18,80*	56	1

Ø mm	d mm	€	L mm	
12,40	8	*12,92*	56	1
13,40	8	*20,32*	56	1
15,00	10	*25,80*	60	1
16,50	10	*17,76*	60	1
19,00	10	*37,99*	63	1
20,50	10	*26,13*	63	1
23,00	10	*46,74*	67	1
25,00	10	*32,97*	67	1
26,00	10	*55,46*	67	1
28,00	12	*68,24*	71	1
30,00	12	*50,76*	71	1
31,00	12	*75,53*	71	1
40,00	13	*108,24*	80	1

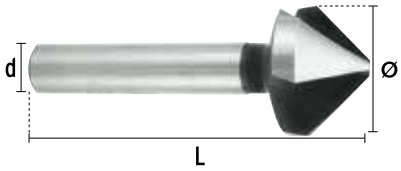
AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5117 HSSCO DIN 335 C

90° 3z

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 INOX F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
6,00	5	*14,94*	45	1
6,30	5	*14,94*	45	1
8,00	6	*20,65*	50	1
8,30	6	*20,66*	50	1
9,40	6	*24,13*	50	1
10,00	6	*24,13*	50	1
10,40	6	*24,13*	50	1
11,50	8	*26,59*	56	1
12,40	8	*26,59*	56	1

Ø mm	d mm	€	L mm	
15,00	10	*36,38*	60	1
16,50	10	*36,39*	60	1
19,00	10	*53,58*	63	1
20,50	10	*53,58*	63	1
25,00	10	*67,69*	57	1
30,00	12	*102,26*	71	1
31,00	12	*109,00*	71	1
40,00	13	*133,43*	80	1

5118 HSS DIN 335 C

90° 3z TIALN

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
4,30	4	*31,76*	40	1
5,00	4	*31,76*	40	1
5,30	4	*31,76*	40	1
5,80	5	*27,91*	45	1
6,00	5	*27,29*	45	1
6,30	5	*27,29*	45	1
7,00	6	*36,42*	50	1
7,30	6	*36,42*	50	1
8,00	6	*36,42*	50	1
8,30	6	*36,42*	50	1
9,40	6	*41,13*	50	1
10,00	6	*41,13*	50	1
10,40	6	*41,13*	50	1
11,50	8	*43,55*	56	1

Ø mm	d mm	€	L mm	
12,40	8	*43,55*	56	1
13,40	8	*44,99*	56	1
15,00	10	*60,46*	60	1
16,50	10	*62,10*	60	1
19,00	10	*75,76*	63	1
20,50	10	*77,37*	63	1
23,00	10	*88,15*	67	1
25,00	10	*89,38*	67	1
26,00	12	*96,93*	71	1
28,00	12	*113,61*	71	1
30,00	12	*117,88*	71	1
31,00	12	*122,18*	71	1
40,00	13	*186,50*	80	1

AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5119 HSSCO DIN 335 C

90° | 3z | TIALN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — 800 N/mm2 | INOX | F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
6,30	5	*30,68*	45	1
8,30	6	*41,13*	50	1
10,40	6	*46,83*	50	1
12,40	8	*51,35*	56	1

Ø mm	d mm	€	L mm	
16,50	10	*72,82*	60	1
20,50	10	*93,06*	63	1
25,00	10	*109,22*	67	1
30,00	12	*147,66*	71	

1505 HSS DIN 335 C Hex.

90° | 1/4" | 3z



Ø mm	L mm	€	
6,30	31	*9,33*	1
8,30	32	*10,79*	1
10,40	34	*12,83*	1

Ø mm	L mm	€	
12,40	36	*15,12*	1
16,50	40	*22,34*	1
20,50	43	*27,05*	1

5120 HSS DIN 335 C

90° | 3z

Aceros 400 - 800 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



Ø mm	L mm	€	
12,00	120	*18,54*	1
12,40	130	*23,89*	1
15,00	150	*32,26*	1
16,00	150	*24,74*	1

Ø mm	L mm	€	
16,50	150	*33,06*	1
19,00	150	*45,30*	1
20,50	150	*45,30*	1
25,00	150	*54,90*	1

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5121 HSS DIN 335 C EL

90° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
10,40	6	*60,95*	112	1
12,40	8	*74,31*	120	1
16,50	10	*89,55*	120	1

Ø mm	d mm	€	L mm	
20,50	10	*120,05*	124	1
25,00	10	*144,80*	128	1
31,00	12	*169,60*	133	1

5122 HSS DIN 335 C

120° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
6,30	5	*15,94*	45	1
8,30	6	*21,97*	50	1
10,40	6	*25,65*	50	1
12,40	8	*30,71*	56	1

Ø mm	d mm	€	L mm	
16,50	10	*38,87*	60	1
20,50	10	*57,34*	63	1
25,00	10	*72,30*	71	1

AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5123 HSS DIN 334 C

60° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
6,30	5	*19,44*	45	1
8,00	6	*21,38*	50	1
10,00	6	*23,32*	53	1
12,50	8	*25,84*	56	1

Ø mm	d mm	€	L mm	
16,00	10	*33,06*	63	1
20,00	10	*46,64*	67	1
25,00	10	*65,10*	71	1

5124 HSS DIN 335 C

75° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
6,30	5	*14,96*	45	1
8,30	6	*20,40*	50	1
10,40	6	*24,11*	50	1
12,40	8	*26,63*	56	1

Ø mm	d mm	€	L mm	
16,50	10	*33,41*	60	1
20,50	10	*49,17*	63	1
25,00	10	*61,98*	67	1

5161 HSS

30° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
6,30	5	*35,00*	50	1
12,40	8	*49,00*	65	1
16,50	10	*59,50*	73	1

Ø mm	d mm	€	L mm	
20,50	10	*80,50*	83	1
25,00	10	*108,50*	90	1
31,00	12	*154,00*	98	1

AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5125 HSS DIN 335 C

90° 1z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
10,00	8	*12,57*	46	1
12,00	8	*13,91*	46	1
16,00	8	*19,05*	47	1
20,00	8	*29,15*	47	1

Ø mm	d mm	€	L mm	
25,00	10	*40,04*	50	1
30,00	12	*68,03*	71	1
31,00	12	*72,02*	71	1

5126 HSS DIN 334 A

60° z ≥ 4

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
12,50	8	*23,55*	50	1
16,00	10	*39,53*	60	1

Ø mm	d mm	€	L mm	
20,00	10	*50,99*	60	1
25,00	10	*71,35*	65	1

5127 HSS DIN 335 A

90° z ≥ 4

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
8,00	8	*12,87*	48	1
12,50	8	*18,84*	48	1
16,00	10	*31,68*	56	1

Ø mm	d mm	€	L mm	
20,00	10	*40,79*	60	1
25,00	10	*57,12*	65	1

AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5129 HSS DIN 335 D

90° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



△	Ø mm	€	L mm	
2	20,50*	*97,19*	100	1
2	23,00*	*100,99*	106	1
2	25,00	*100,99*	106	1
2	26,00	*100,99*	106	1
2	28,00	*102,89*	112	1
2	30,00	*108,61*	112	1
2	31,00	*112,42*	112	1

△	Ø mm	€	L mm	
2	34,00	*118,13*	118	1
2	37,00	*129,56*	118	1
3	40,00	*161,96*	140	1
3	50,00	*203,87*	150	1
4	63,00	*329,63*	180	1
4	80,00	*564,01*	190	1

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

5130 HSS DIN 334 D

60° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



△	Ø mm	€	L mm	
3	40,00	*207,86*	150	1
3	50,00	*296,97*	160	1
4	63,00	*467,69*	190	1

AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5132 HSS DIN 334 D

120° 3z

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



	Ø mm	€	L mm	
3	40,00	*178,16*	134	1
3	50,00	*230,15*	142	1
4	63,00	*375,76*	178	1

5133 HSS DIN 335 D

90°

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
2,00 - 5,00	6	*16,33*	45	1
5,00 - 10,00	8	*20,40*	48	1
10,00 - 15,00	10	*36,55*	65	1

Ø mm	d mm	€	L mm	
15,00 - 20,00	12	*65,29*	85	1
20,00 - 25,00	15	*110,19*	95	1
25,00 - 30,00	15	*169,26*	100	1

5134 HSSCO

90°

Aceros 800 - 1100 N/mm² — **Aciers / Steel** 800 N/mm2 F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
2,00 - 5,00	6	*19,44*	45	1
5,00 - 10,00	8	*24,31*	48	1

Ø mm	d mm	€	L mm	
10,00 - 15,00	10	*43,37*	65	1
15,00 - 20,00	12	*77,74*	85	1

AVELLANADORES
FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTERS

5135 HSS

75°

Aceros 400 - 800 N/mm² | Aciers / Steel | F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	
2,00 - 5,00	6	*19,44*	45	1
5,00 - 10,00	8	*24,31*	48	1
10,00 - 15,00	10	*43,53*	65	1

5136 HSS DIN 373

ALLEN | ISO 4206

Aceros 400 - 800 N/mm² | Aciers / Steel | F

Aplicaciones / Applications



M	Ø mm	P mm	€	L mm	
M3	6,00	3,20	*22,74*	71	1
M4	8,00	4,30	*23,79*	71	1
M5	10,00	5,30	*22,96*	80	1
M6	11,00	6,40	*24,26*	80	1

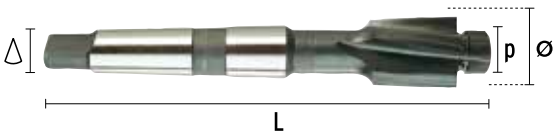
M	Ø mm	P mm	€	L mm	
M8	15,00	8,40	*31,70*	100	1
M10	18,00	10,50	*41,35*	100	1
M12	20,00	13,00	*51,45*	100	1

5137 HSS DIN 375

ALLEN

Aceros 400 - 800 N/mm² | Aciers / Steel | F

Aplicaciones / Applications



△	M	Ø mm	P mm	€	L mm	
2	M10	18,00	10,50	*57,41*	140	1
2	M12	20,00	13,00	*69,73*	140	1
2	M14	24,00	15,00	*91,42*	150	1
3	M16	26,00	17,00	*110,25*	180	1

△	M	Ø mm	P mm	€	L mm	
3	M18	30,00	19,00	*118,88*	1	1
3	M20	33,00	21,00	*151,60*	1	1
3	M22	36,00	23,00	*170,43*	1	1
3	M24	40,00	25,00	*187,89*	1	1

JUEGOS DE AVELLANADORES
JEUX DE FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTER SETS

5142 | **Ø 6 a 19 mm** | Ø mm: 6 - 8 - 10 - 11,5 - 15 - 19 | 6

›HSS ›HSS CO ›HSS TIALN



REF.	€
HSS	*130,66*
HSS CO	*180,78*
HSS TIALN	*272,01*

5143 | **Ø 6,3 a 20,5 mm** | Ø mm: 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 | 6

›HSS ›HSS CO ›HSS TIALN



REF.	€
HSS	*101,94*
HSS CO	*183,16*
HSS TIALN	*290,43*

JUEGOS DE AVELLANADORES
JEUX DE FRAISES À TROU ET À CHANFREINER / COUNTERSINK CUTTER SETS

5151 Ø 2-5 a 10-20 mm

Ø mm	4
2-5/5-10/10-15/15-20	

›HSS



REF.	€	
HSS	*165,57*	4

5155 M3 - M10

Ø mm	6
M3/M4/M5/M6/M8/M10	

›HSS



REF.	€	
HSS	*224,81*	6

JUEGO DE BROCAS
COFFRETS DE FORETS / DRILL SETS

5138 Ø 3 a 14 / 6 a 20 / 16 a 30 mm

Ø mm	
3-14,6-20,16-30	3

›HSS



›HSS CO



›HSS TIALN



REF.	€
HSS	*112,67*
HSS CO	*141,55*
HSS TIALN	*241,48*

5139 Ø 4 a 12 / 12 a 20 / 20 a 30 mm

Ø mm	X mm	
4-12,12-20,20-30	1	3

›HSS



›HSS TIALN



REF.	€
HSS	*235,21*
HSS TIALN	*377,37*

JUEGO DE BROCAS
COFFRETS DE FORETS / DRILL SETS

5140 | **Ø 4 a 12 / 4 a 20 / 6 a 30 mm** | Ø mm: 4-12,4-20,6-30 | X mm: 2 | 3

›HSS



›HSS TIALN



›HSS (35º)



›HSS TIALN (35º)



REF.	€
HSS	*195,93*
HSS TIALN	*403,16*
HSS (35º)	*270,38*
HSS TIALN (35º)	*398,87*

5141 | **Ø 4 a 20 / 6 a 30 mm** | Ø mm: 4-20,6-30 | X mm: 2 | 2

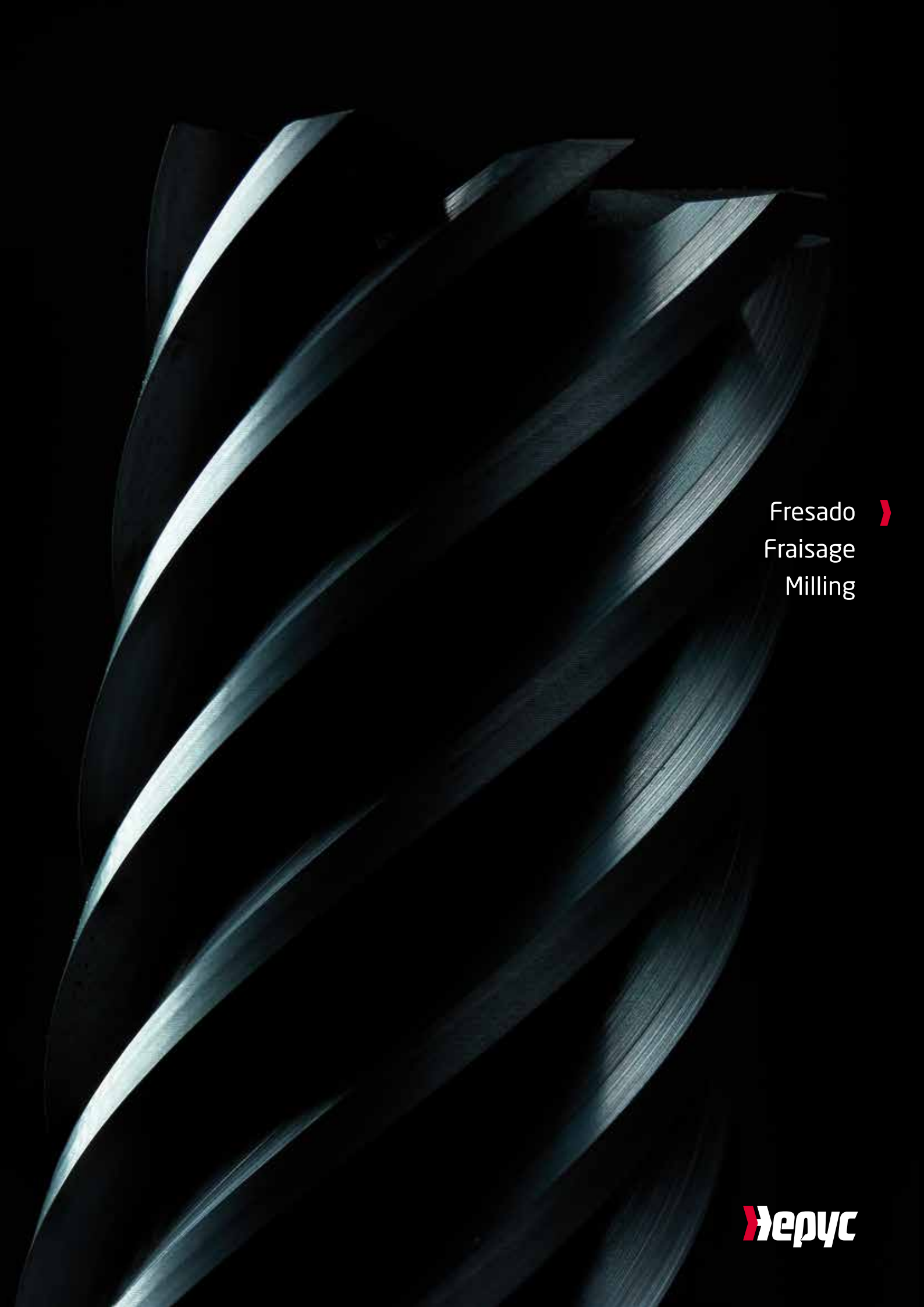
›HSS



›HSS TIALN



REF.	€
HSS	*153,19*
HSS TIALN	*307,97*



Fresado
Fraisage
Milling

Hepyc

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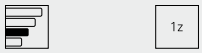
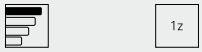
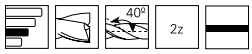
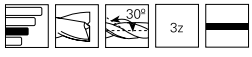
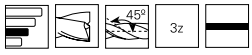
Fresas Metal duro / Fraises carbure / Hard metal mills

3141	HM-MD				1z	AL	303
3189	HM-MD				2z 45° DIN 6535 HA	AL	303
3167	HM-MD	DIN 6527S	TIALN		2z 30° DIN 6535 HA	HRC 55	304
3168	HM-MD	DIN 6527L	TIALN		2z 30° DIN 6535 HA	HRC 55	304
3169	HM-MD	DIN 6527S	TIALN		2z 30° DIN 6535 HA	HRC 55	305
3170	HM-MD	DIN 6527L	TIALN		2z 30° DIN 6535 HA	HRC 55	305
3171	HM-MD	DIN 6527S	TIALN		3z 30° DIN 6535 HA	HRC 55	306
3172	HM-MD	DIN 6527L	TIALN		3z 30° DIN 6535 HA	HRC 55	306
3173	HM-MD	DIN 6527S	TIALN		3z 45° DIN 6535 HA	HRC 55	307
3174	HM-MD	DIN 6527L	TIALN		3z 45° DIN 6535 HA	HRC 55	307
3175	HM-MD	DIN 6527S	TIALN		4z 30° DIN 6535 HA	HRC 55	308
3176	HM-MD	DIN 6527L	TIALN		4z 30° DIN 6535 HA	HRC 55	308
3177	HM-MD	DIN 6527L	TIALN		4z 35°38' DIN 6535 HA	HRC 55	309
3178	HM-MD	DIN 6527L	AlCrN		4z 35°38' DIN 6535 HA	HRC 55	309
3179	HM-MD	DIN 6527L	TIALN		6,8z 45° DIN 6535 HA	HRC 55	310
3180	HM-MD	DIN 6527EL	TIALN		6,8z 45° DIN 6535 HA	HRC 55	310
3181	HM-MD	DIN 6527L	TIALN		3,4,5,6 z 45° DIN 6535 HA	HRC 55	311
3183	HM-MD		TIALN		60° 4z DIN 6535 HA	HRC 55	311
3184	HM-MD		TIALN		90° 4z DIN 6535 HA	HRC 55	312

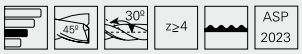
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3105	HM-MD		TICN			1400 N/mm2	313
3107	HM-MD		TICN			1400 N/mm2	314

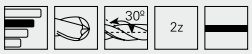
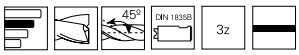
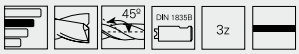
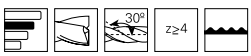
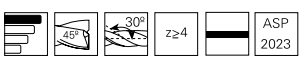
Fresas HSSE mango cilíndrico cortas / Fraises HSSE queue cylindrique courtes / HSSE Straight short shank mills

3120	HSSE					AL	315
3121	HSSE					AL	315
3122	HSSE					AL	316
3186	HSSE					AL	316
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3187	HSSE	DIN 327 N				1100 N/mm2	319
3187/1	HSSE	DIN 327 N	TIALN			1400 N/mm2	319
3114	HSSE	DIN 844 W				AL	320
3114/1	HSSE	DIN 844 W	TIALN			AL	320
3115	HSSE	DIN 844 N				1100 N/mm2	321
3115/1	HSSE	DIN 844 N	TIALN			1400 N/mm2	321
3117	HSSE	DIN 844 NR				1100 N/mm2	322

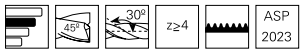
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3119	HSSE	DIN 844 NRF				1100 N/mm2	323
3119/1	HSSE	DIN 844 NRF	TIALN			1400 N/mm2	323
3162	HSSE-PM	DIN 844 N	TIALN			1400 N/mm2	324
3157	HSSE-PM	DIN 844 NR	TIALN			1400 N/mm2	324
3159	HSSE-PM	DIN 844 NRF	TIALN			1400 N/mm2	324

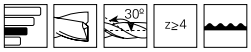
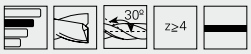
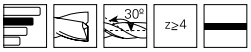
Fresas HSSE mango cilíndrico largas / Fraises HSSE queue cylindrique longues / HSSE Straight long shank mills

3111	HSSE	DIN 844				1100 N/mm2	325
3111/1	HSSE	DIN 844				1400 N/mm2	325
3113	HSSE	DIN 844				1100 N/mm2	326
3113/1	HSSE	DIN 844	TIALN			1400 N/mm2	326
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3188/1	HSSE	DIN 327 N	TIALN			1400 N/mm2	327
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3116/1	HSSE	DIN 844 N	TIALN			1400 N/mm2	329
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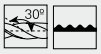
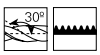
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Fresas mango cónico / Fraises queue conique / Tapered shank mills

3144	HSSE	DIN 326 N				1100 N/mm2	332
3144/1	HSSE	DIN 326 N	TiAlN			1400 N/mm2	332
3145	HSSE	DIN 845 N				1100 N/mm2	333
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3146	HSSE	DIN 845 NR				1100 N/mm2	334
3146/1	HSSE	DIN 845 NR	TiAlN			1400 N/mm2	334
3147	HSSE	DIN 845 N				1100 N/mm2	335
3147/1	HSSE	DIN 845 N	TiAlN			1400 N/mm2	335
3148	HSSE	DIN 845 NR				1100 N/mm2	336
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3149	HSSE	DIN 1880 N				1100 N/mm2	337
3150	HSSE	DIN 1880 NR				1100 N/mm2	337
3165	HSSE	DIN 1880 NRF				1100 N/mm2	338
3151	HSSE	DIN 885 D				1100 N/mm2	338
3161	HSSE	DIN 885 A				1100 N/mm2	339
3166	HSSE	DIN 1834 A				1100 N/mm2	339

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Fresas HSSE especiales / Fraises HSSE spéciales / HSSE Special mills

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3155	HSSE	DIN 1833 A		Tol, ISO 3859	1100 N/mm2	341
3156	HSSE	DIN 1833 B		Tol, ISO 3859	1100 N/mm2	342
3164	HSSE	DIN 6518 N		Tol	1100 N/mm2	342

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3202	HM-MD	Cilíndrica con corte Cylindrique taillée Straight with cut		DIAM CRUZ ALU	1100 N/mm2	343
3203	HM-MD	Cilíndrica radio Cylindrique à rayon Straight radius		DIAM CRUZ ALU	1100 N/mm2	344
3204	HM-MD	Esférica Sphérique Spherical		DIAM CRUZ ALU	1100 N/mm2	344
3205	HM-MD	Oval Ovale		DIAM CRUZ ALU	1100 N/mm2	345
3206	HM-MD	Árbol con radio Arbre à rayon Arc with radius		DIAM CRUZ ALU	1100 N/mm2	345
3207	HM-MD	Árbol Arbre Arc		DIAM CRUZ ALU	1100 N/mm2	346
3208	HM-MD	Llama Flamme Flame		DIAM CRUZ ALU	1100 N/mm2	346
3209	HM-MD	Cónica Conique Tapered		DIAM CRUZ ALU	1100 N/mm2	347
3210	HM-MD	Cónica 90º Conique 90º Tapered 90º		DIAM CRUZ ALU	1100 N/mm2	347
3211	HM-MD	Cónica radio Conique à rayon Tapered radius		DIAM CRUZ ALU	1100 N/mm2	348
3212	HM-MD	Cono invertido Cône inversé Inverted taper		DIAM CRUZ ALU	1100 N/mm2	348

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3216	HM-MD	Cilíndrica radio L Cylindrique à rayon L Straight L radius			DIAM CRUZ ALU	1100 N/mm2	350
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N	7172	HSS				WELDON 19 QUICK CHANGE	L=30	800 N/mm2	352
N	7172	HSS				WELDON 19 QUICK CHANGE	L=50	800 N/mm2	353
	7137	HSSE				WELDON 19 QUICK CHANGE	L=30	1100 N/mm2	354
	7137	HSSE				WELDON 19 QUICK CHANGE	L=50	1100 N/mm2	355
	7137	HSSE				WELDON 19 QUICK CHANGE	L=100	1100 N/mm2	355
	7138	HSSE		TIALN		WELDON 19 QUICK CHANGE	L=30	1100 N/mm2	356
	7138	HSSE		TIALN		WELDON 19 QUICK CHANGE	L=50	1100 N/mm2	357
	7139	TCT				WELDON 19 QUICK CHANGE	L=35	INOX	358
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	7140		CONO MORSE CONE MORSE MORSE TAPER						359
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FORMULARIO FRESAS ESPECIALES

FICHE TECHIQUE FRAISES SPECIAUX / TECHNICAL ENQUIRY FOR SPECIAL MILLS

Fecha / Date: .....

Empresa / Entreprise / Company: ..... **Contacto /** Contact: .....

Dirección / Adresse / Adress: ..... **Población /** Ville / Town: .....

Tel / Fax: ..... **E-mail:** .....

.....

TRABAJO A REALIZAR / TRAVAIL DEMANDE / REQUESTED WORK

Material / Matière / Material ..... **Norma /** Norme / Norm: .....

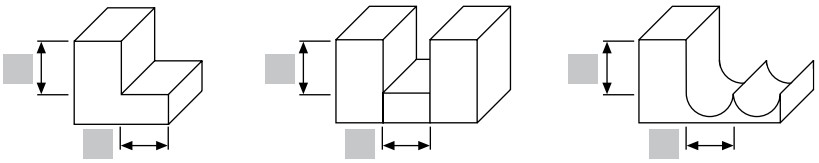
Dureza / Dureté / Hardness ..... **HB** ..... **HRc** **Resistencia /** Résistance / Resistance .....N/mm²

Tipo viruta: ☐ **Corta** ☐ **Larga** ☐ **Polvo**
Type copeau — Courte — Longue — Poussière
Shaving — Short — Long — Powder

Máquina / Machine ..... **Refrigerante /** Réfrigérant / Coolant .....

Posición / Position: ☐ **Horizontal** ☐ **Vertical** ☐ **V. Corte** (V. Coupe / Cutting Speed) ☐ **V. avance** (Avance / Feed)

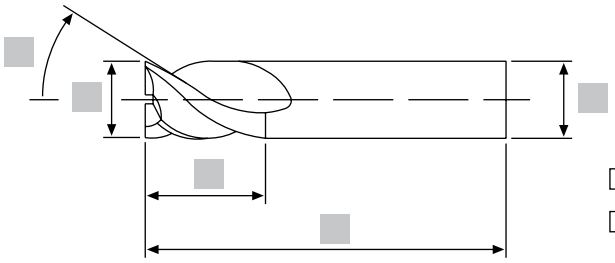
Forma / Forme / Form:



HERRAMIENTA / OUTIL / TOOL

Descripción / Description .....

Cantidad / Quantité / Quantity..... **Número ranuras /** Rainures / Grooves .....



☐ **Corte al centro /** Coupe au centre / Cut to the center

☐ **Sin corte al centro /** Sans coupe au centre / Without cut to the center

Mango: ☐ **Cilíndrico** ☐ **Weldon** ☐ **Cónico** ☐ **Rebajado**
Queue: — Cylindrique — Weldon — Conique — Réduite
Shank: — Straight — Weldon — Taper — Reduced

Tipos de punta: ☐ **Recta** ☐ **Chaflán** ☐ **Radial**
Types de pointe: — Droite — Chanfrein — Radiale
Types of tips: — Straight — Chamfered — Radial

Labios: ☐ **Desbaste** ☐ **Desbaste fino** ☐ **Acabado**
Lèvres: — Dégrossissage — Dégrossissage fin — Finition
Lips: — Grinding — Fine grinding — Finishing

Material / Matière / Material: ☐ **HSS** ☐ **HSSE** ☐ **HM** ☐ **HSS-HM**

Superficie / Surface: ☐ **Brillante** (Brillant / Brilliant) ☐ **Recubrimiento** (Revêtement / Coating)

COMENTARIOS / COMMENTAIRES/ COMMENTS: .....

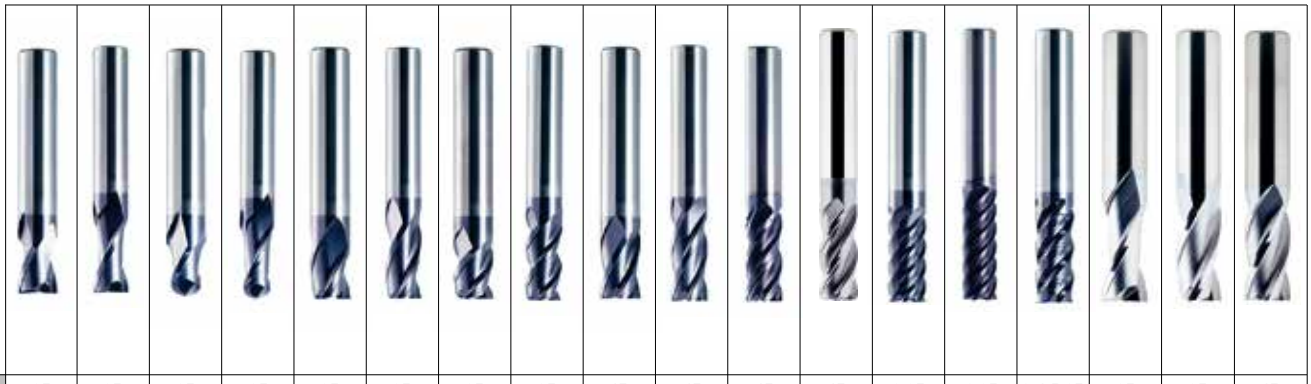
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Servicio de Herramienta Especial - Service Outils Spéciaux - Special Tools Service
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TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE



Z	2Z	2Z	2Z	2Z	3Z	3Z	3Z	3Z	4Z	4Z	4Z	4Z	6,8Z	6,8Z	3,4,5,6Z	2Z	3Z	4Z
Ejec.	N	N	N	N	N	N	W	W	N	N	N	N	W	W	WR	N	N	N
Hel.	30°	30°	30°	30°	30°	30°	45°	45°	30°	30°	35°-38°	35°-38°	45°	45°	45°	30°	30°	30°
Mat.	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Rec.	TIALN	TIALN	TIALN	TIALN	TIALN	TIALN	TIALN	TIALN	TIALN	TIALN	TIALN	ALCrN	TIALN	TIALN	TIALN	TICN	TICN	TICN
DIN	6527S	6527L	6527S	6527L	6527S	6527L	6527S	6527L	6527S	6527L	6527L	6527L	6527S	6527L	6527S			
Ref.	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3101	3105	3107
Mat.	Vc (m/min)																	
1.1																		
1.2	140-250	120-220	140-250	140-250	140-250	120-220	140-250	120-220	140-250	120-220	120-220	120-220	120-220	120-220	120-220	85-155	85-155	85-155
1.3																		
1.4																		
1.5	75-180	70-150	75-180	75-180	75-180	70-150	75-180	70-150	75-180	70-150	70-150	70-150	70-150	70-150	70-150	50-105	50-105	50-105
1.6	60-120	60-90	60-120	60-120	60-120	60-90	60-120	60-90	60-120	60-90	60-90	60-90	60-90	60-90	60-90	45-65	45-65	45-65
1.7	40-80		40-80	40-80	40-80		40-80		40-80		40-80	40-80	60-90	60-90				
1.8																		
2.1	80-140	70-110	70-110	70-110	80-140	70-110	80-140	70-110	80-140	70-110	70-110	70-110	70-110	70-110	70-110	50-80	50-80	50-80
2.2	80-140	70-110	70-110	70-110	80-140	70-110	80-140	70-110	80-140	70-110	70-110	70-110	70-110	70-110	70-110	50-80	50-80	50-80
2.3	80-140	70-110	70-110	70-110	80-140	70-110	80-140	70-110	80-140	70-110	70-110	70-110	70-110	70-110	70-110	50-80	50-80	50-80
2.4	60-120	60-100	60-100	60-100	60-120	60-100	60-120	60-100	60-120	60-100	60-100	60-100	60-100	60-100	60-100	45-70	45-70	45-70
3.1																		
3.2	120-180	100-160	120-180	120-180	120-180	100-160	120-180	100-160	120-180	100-160	100-160	100-160	100-160	100-160	100-160	70-115	70-115	70-115
3.3																		
3.4	100-140	80-120	100-140	100-140	100-140	80-120	100-140	80-120	100-140	80-120	80-120	80-120	80-120	80-120	80-120	60-85	60-85	60-85
4.1																		
4.2																		
4.3	60-90	60-80			60-90	60-80	60-90	60-80	60-90	60-80	60-80	60-80	60-80	60-80	60-80	45-60	45-60	45-60
5.1																		
5.2																		
5.3	40-75	40-60			40-75	40-60	40-75	40-60	40-75	40-60	40-60	40-60	40-60	40-60	40-60	30-45	30-45	30-45
6.1	120-350	110 - 310	120-350	120-350	120-350	120-350										70-210	70-210	
6.2	120-350	110 - 310	120-350	120-350	120-350	120-350										70-210	70-210	
6.3	120-350	110 - 310	120-350	120-350	120-350	120-350										70-210	70-210	
6.4	120-350	110 - 310	120-350	120-350	120-350	120-350										70-210	70-210	
6.5	120-350	110 - 310	120-350	120-350	120-350	120-350										70-210	70-210	
7.1	150 - 450	135-400	150 - 450	150 - 450	150 - 450	150 - 450										90-270	90-270	
7.2	150 - 450	135-400	150 - 450	150 - 450	150 - 450	150 - 450										90-270	90-270	
7.3	150 - 450	135-400	150 - 450	150 - 450	150 - 450	150 - 450										90-270	90-270	
7.4	150 - 450	135-400	150 - 450	150 - 450	150 - 450	150 - 450										90-270	90-270	
6.1																		
6.2																		

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE



Prof	1Z	1Z	1Z	2Z	2Z	2Z	2Z	3Z	3Z	3Z	3Z	Z>4	Z>4	Z>4	Z>4	Z>4
Form.	N	N	N	N	N	N	N	N	N	W	W	N	N	N	NR	NRF
Ejec.				30°	30°	30°	30°	30°	30°	45°	45°	30°	30°	30°	30°	30°
Tol.	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE-PM
Mat.					TIALN		TIALN		TIALN		TIALN		TIALN	TIALN	TIALN	TIALN
Rec				327	327	327	327			844	844	844	844	844	844	844
Ref.	3120	3121	3122	3110	3110/1	3112	3112/5	3187	3187/1	3114	3114/1	3115	3115/1	3162	3157	3159
Mat.	Vc (m/min)															
1.1				45-50	70-80	45-50	70-80	45-50	70-80	45-50	70-80	45-50	70-80	80-85	85-90	80-85
1.2				32-36	55-65	32-36	55-65	32-35	55-65	32-36	55-65	32-36	55-65	60-65	65-70	60-65
1.3				30-34	48-55	30-34	48-55	30-34	48-55	30-34	48-55	30-34	48-55	55-60	60-65	55-60
1.4				30-34	48-55	30-34	48-55	30-34	48-55	30-34	48-55	30-34	48-55	55-60	60-65	55-60
1.5					30-35		30-35	20-24	30-35				30-35	35-40	45-50	35-40
1.6																
1.7																
1.8																
2.1				25-30	40-48	25-30	40-48	15-20	22-30			25-30	40-45			
2.2				25-30	40-48	25-30	40-48	15-20	22-30			25-30	40-45			
2.3									18-25					35-40		
2.4														28-35		
3.1				34-38	55-60	34-38	55-60	34-38	55-60			34-38	55-60	55-60	60-65	55-60
3.2					30-35		30-35		35-40				30-35	40-45	45-50	40-45
3.3				20-24	55-60	20-24	55-60					20-24	55-60	55-60	60-65	55-60
3.4					30-35		30-35						30-35	40-45	45-50	40-45
4.1				25-30	40-48	25-30	40-48					25-30	40-48	35-40		
4.2					30-35		30-35	15-20	25-30				30-35	30-35	35-40	30-35
4.3									15-20							
5.1				50-60	80-90	50-60	80-90					50-60	80-90			
5.2					25-30		25-30						25-30	35-40	40-45	35-40
5.3														15-20	20-25	15-20
6.1				55-75	90-120	55-75	90-120					55-75	90-120	110-130		
6.2				55-75	90-120	55-75	90-120	55-75	90-120			55-75	90-120	110-130	110-130	100-120
6.3				75-95	120-140	75-95	120-140	75-95	120-140			75-95	120-140	110-130		
6.4				55-75	90-120	55-75	90-120	55-75	90-120			55-75	90-120		110-130	100-120
6.5				75-95	120-140	75-95	120-140	75-95	120-140			75-95	120-140			
7.1	100-150	100-150	100-150	100-150	130-200	100-150	130-200					100-150	130-200			
7.2	100-150	100-150	100-150	100-150	130-200	100-150	130-200	100-150	130-200	150-200	220-300	100-150	130-200			
7.3	60-100	60-100	60-100	60-100	90-130	60-100	90-130	60-100	90-130	100-150	150-220	60-100	90-130			
7.4	60-100	60-100	60-100	60-100	90-130	60-100	90-130					60-100	90-130			
8.1	50-150	50-150	50-150	50-150	75-190	50-150	75-190					50-150	75-190			
8.2																

Optima / Optimun Alternativo / Alternative

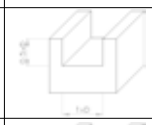
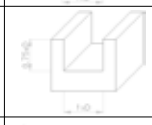
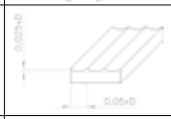
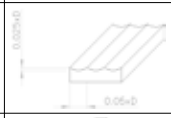
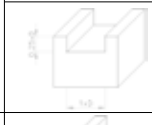
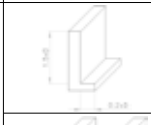
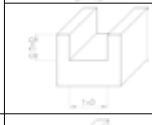
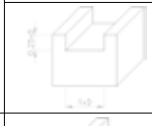
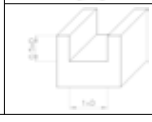
TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE



Z>4	Z>4	Z>4	Z>4	2Z	2Z	2Z	2Z	3Z	3Z	3Z	3Z	Z>4	Z>4	Z>4	Z>4	Z>4	Z>4	Z>4
NR	NR	NRF	NRF	N	N	N	N	N	N	W	W	N	N	NR	NR	N	NR	NRF
30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	45°	45°	30°	30°	30°	30°	30°	30°	30°
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE-PM
	TIALN		TIALN		TIALN		TIALN		TIALN		TIALN		TIALN		TIALN	TIALN	TIALN	TIALN
844	844	844	844	844-L	844-L	844-L	844-L			844-L	844-L	844-L	844-L	844-L	844-L	844-L	844-L	844-L
3117	3117/1	3119	3119/1	3111	3111/1	3113	3113/1	3188	3188/1	3182	3182/1	3116	3116/1	3118	3118/1	3163	3158	3160
Vc (m/min)																		
50-55	80-85	45-50	70-80	40-45	65-70	40-45	65-70	40-45	65-70	40-45	65-70	40-45	65-70	45-50	70-75	70-75	80-85	70-75
40-45	60-65	32-36	55-65	30-33	50-55	30-33	50-55	30-35	50-55	30-33	50-55	30-33	50-55	35-40	55-65	50-55	60-65	50-55
35-40	55-60	30-34	48-55	27-30	45-50	27-30	45-50	27-30	45-50	27-30	45-50	27-30	45-50	30-35	48-55	45-50	50-55	45-50
	55-60		48-55	27-30	45-50	27-30	45-50	27-30	45-50	27-30	45-50	27-30	45-50		48-55	45-50	50-55	45-50
	35-40		30-35		25-30		25-30		25-30				25-30		30-35	25-30	35-40	25-30
				22-27	35-40	22-27	37-45	12-18	20-25			22-27	35-40					
				22-27	35-40	22-27	37-45	12-18	20-25			22-27	35-40					
									15-22									
38-42	55-60	34-38	48-55	30-35	50-55	30-35	50-55	30-35	50-55			30-35	50-55	35-38	48-55	45-50	55-60	45-50
	30-35		27-32		30-35		30-35		30-35				30-35		27-32	35-40	40-45	35-40
38-42	55-60	34-38	48-55	30-35	50-55	30-35	50-55					30-35	50-55	35-38	48-55	45-50	55-60	45-50
	30-35		27-32		30-35		30-35						30-35		27-32	35-40	40-45	35-40
				23-27	35-40	23-27	35-40					23-27	35-40			30-35		
	30-35		27-32		30-35		30-35	12-18	20-25				30-35		27-32	25-30	30-35	25-30
									12-18									
				45-55	70-80	45-55	70-80					45-55	70-80					
	40-45		35-40		22-27		22-27						22-27		35-40	30-35	35-40	30-35
	15-22		13-20												13-20	13-18	15-20	13-18
				50-65	80-100	50-65	80-100	50-55	80-100			50-65	80-100			95-110		
65-80	90-120	55-75	70-80	50-65	80-100	50-65	80-100	65-80	100-110			50-65	80-100	55-75	90-120	95-110	100-120	95-110
				65-80	100-110	65-80	100-110	50-65	80-100			65-80	100-110			95-110		
65-80	90-120	55-75	70-80	50-65	80-100	50-65	80-100	65-80	100-110			50-65	80-100	55-75	90-120		100-120	
				65-80	100-110	65-80	100-110					65-80	100-110					
				90-130	130-190	90-130	130-190	90-130	130-190	90-130	130-190	90-130	130-190					
				90-130	130-190	90-130	130-190	55-90	80-130	90-130	130-190	90-130	130-190					
				55-90	80-13	55-90	80-13					55-90	80-13					
				55-90	80-13	55-90	80-13					55-90	80-13					
				45-130	65-190	45-130	65-190					45-130	65-190					

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

AVANCE / FEED (Fz = mm / Z)

Ref.	ICONO	3	4	5	6	8	10	12	14	16	18	20
3167		0,010	0,015	0,020	0,025	0,030	0,035	0,040	0,045	0,050	0,055	0,060
3168		0,010	0,012	0,015	0,017	0,020	0,025	0,030	0,035	0,040	0,045	0,050
3169		0,050	0,065	0,080	0,095	0,120	0,140	0,180	0,215	0,250	0,275	0,300
3170		0,045	0,060	0,075	0,090	0,110	0,130	0,160	0,180	0,200	0,225	0,250
3171		0,015-0,025	0,020-0,030	0,025-0,035	0,030-0,045	0,035-0,050	0,040-0,060	0,050-0,075	0,058-0,085	0,065-0,095	0,073-0,108	0,080-0,120
		0,010	0,012	0,020	0,025	0,030	0,035	0,040	0,043	0,045	0,050	0,055
3172		0,010-0,020	0,015-0,025	0,020-0,030	0,025-0,040	0,030-0,045	0,035-0,055	0,045-0,070	0,053-0,080	0,060-0,090	0,068-0,013	0,075-0,115
		0,010	0,012	0,015	0,020	0,025	0,030	0,035	0,038	0,040	0,045	0,050
3173		0,025-0,035	0,030-0,040	0,035-0,045	0,040-0,055	0,045-0,060	0,050-0,070	0,060-0,090	0,075-0,105	0,090-0,120	0,100-0,135	0,110-0,150
		0,015	0,017	0,025	0,030	0,035	0,040	0,050	0,058	0,065	0,068	0,080
3174		0,020-0,030	0,025-0,035	0,030-0,040	0,035-0,050	0,040-0,055	0,045-0,065	0,060-0,090	0,070-0,100	0,080-0,110	0,090-0,125	0,100-0,140
		0,010	0,012	0,017	0,025	0,030	0,035	0,040	0,043	0,045	0,050	0,055

Grupo de Material/Catégories de matériel/Group of material	**Coef.**	**vf (mm/min)=r.p.m x Z x fz**
1.6 - 1.7 - 1.8 - 2.4 - 4.3- 5.3	fz x 0,7	
7.1 - 7.2 - 7.3 - 7.4	fz x 1,3	

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

AVANCE / FEED (Fz = mm / Z)

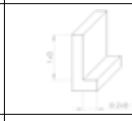
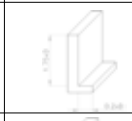
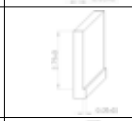
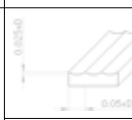
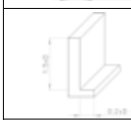
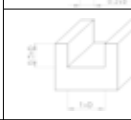
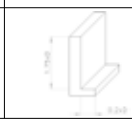
Ref.	ICONO	3	4	5	6	8	10	12	14	16	18	20
3175		0,015-0,025	0,020-0,030	0,025-0,035	0,030-0,045	0,035-0,050	0,040-0,060	0,050-0,075	0,058-0,085	0,065-0,095	0,073-0,108	0,080-0,120
3176		0,010-0,015	0,015-0,020	0,020-0,025	0,025-0,040	0,030-0,045	0,035-0,055	0,040-0,070	0,050-0,080	0,060-0,090	0,068-0,103	0,075-0,115
3177		0,012-0,025	0,015-0,030	0,019-0,040	0,020-0,045	0,030-0,060	0,040-0,070	0,050-0,085	0,060-0,098	0,070-0,110	0,080-0,112	0,090-0,114
3178		0,012-0,025	0,015-0,030	0,019-0,040	0,020-0,045	0,030-0,060	0,040-0,070	0,050-0,085	0,060-0,098	0,070-0,110	0,080-0,112	0,090-0,114
3179		0,015-0,025	0,020-0,030	0,025-0,035	0,030-0,040	0,040-0,060	0,050-0,090	0,070-0,100	0,080-0,110	0,090-0,120	0,100-0,130	0,100-0,140
3180		0,015-0,020	0,018-0,022	0,020-0,025	0,020-0,025	0,030-0,035	0,035-0,045	0,040-0,060	0,045-0,063	0,050-0,065	0,055-0,075	0,060-0,085
3181		0,008-0,018	0,010-0,025	0,012-0,030	0,015-0,035	0,025-0,050	0,030-0,060	0,035-0,075	0,040-0,083	0,045-0,090	0,050-0,105	0,055-0,120
3101		0,007	0,009	0,012	0,014	0,019	0,023	0,028	0,033	0,037	0,042	0,047
3103		0,040	0,055	0,065	0,080	0,100	0,120	0,150	0,175	0,200	0,225	0,250
3105		0,007-0,014	0,009-0,019	0,012-0,023	0,014-0,028	0,019-0,037	0,023-0,047	0,028-0,056	0,033-0,065	0,037-0,075	0,042-0,085	0,047-0,093
		0,007	0,009	0,012	0,014	0,019	0,023	0,028	0,033	0,037	0,042	0,047
3107		0,007-0,014	0,009-0,019	0,012-0,023	0,014-0,028	0,019-0,037	0,023-0,047	0,028-0,056	0,033-0,065	0,037-0,075	0,042-0,085	0,047-0,093

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

Avances fz/rev (mm/min) feed

Ref.	ICONO	3	4	5	6	8	10	12	14	16	18	20	25	32
3120		0,018	0,024	0,032	0,040	0,060	0,080							
3121		0,018	0,024	0,032	0,040	0,060	0,080							
3122		0,018	0,024	0,032	0,040	0,060	0,080							
3110		0,009	0,013	0,016	0,022	0,029	0,036	0,044	0,051	0,058	0,065	0,073	0,091	0,116
3110/1		0,012	0,017	0,021	0,029	0,038	0,047	0,057	0,066	0,075	0,085	0,095	0,118	0,151
3112		0,009	0,013	0,016	0,022	0,029	0,036	0,044	0,051	0,058	0,065	0,073	0,091	0,116
3112/1		0,012	0,017	0,021	0,029	0,038	0,047	0,057	0,066	0,075	0,085	0,095	0,118	0,151
3114		0,006	0,008	0,011	0,015	0,021	0,028	0,034	0,040	0,044	0,051	0,057	0,071	0,091
		0,009	0,013	0,016	0,022	0,029	0,036	0,044	0,051	0,058	0,065	0,073	0,091	0,116
3114/1		0,008	0,010	0,014	0,020	0,027	0,036	0,044	0,052	0,057	0,066	0,074	0,092	0,118
		0,012	0,017	0,021	0,029	0,038	0,047	0,057	0,066	0,075	0,085	0,095	0,118	0,151
3115		0,011	0,015	0,018	0,020	0,025	0,035	0,040	0,060	0,070	0,080	0,090	0,100	0,120
3115/1		0,014	0,020	0,023	0,026	0,033	0,046	0,052	0,078	0,091	0,104	0,117	0,130	0,156
3117		0,011	0,015	0,018	0,020	0,025	0,035	0,040	0,060	0,070	0,080	0,090	0,100	0,120
3117/1		0,014	0,020	0,023	0,026	0,033	0,046	0,052	0,078	0,091	0,104	0,117	0,130	0,156

Grupo de Material/Catégories de matériel/Group of material	Coef.	vf (mm/min)=r.p.m x Z x fz
1.6 - 1.7 - 1.8 - 2.4 - 4.3 - 5.3	fz x 0,7	
7.1 - 7.2 - 7.3 - 7.4	fz x 1,3	

TABLA DE APLICACIONES
GUIDE D'APPLICATION / APPLICATION GUIDE

Avances fz/rev (mm/min) feed

Ref.	ICONO	3	4	5	6	8	10	12	14	16	18	20	25	32
3119		0,011	0,015	0,018	0,020	0,025	0,035	0,040	0,060	0,070	0,080	0,090	0,100	0,120
3119/1		0,014	0,020	0,023	0,026	0,033	0,046	0,052	0,078	0,091	0,104	0,117	0,130	0,156
3111		0,012	0,016	0,019	0,022	0,029	0,036	0,044	0,051	0,058	0,065	0,073	0,091	0,116
3111/1		0,016	0,021	0,025	0,029	0,038	0,047	0,057	0,066	0,075	0,085	0,095	0,118	0,151
3113		0,012	0,016	0,019	0,022	0,029	0,036	0,044	0,051	0,058	0,065	0,073	0,091	0,116
3113/1		0,016	0,021	0,025	0,029	0,038	0,047	0,057	0,066	0,075	0,085	0,095	0,118	0,151
3116		0,012	0,016	0,019	0,022	0,029	0,036	0,044	0,051	0,058	0,065	0,073	0,091	0,116
3116/1		0,016	0,021	0,025	0,029	0,038	0,047	0,057	0,066	0,075	0,085	0,095	0,118	0,151
3118		0,011	0,015	0,018	0,020	0,025	0,035	0,040	0,060	0,070	0,080	0,090	0,100	0,120
3118/1		0,014	0,020	0,023	0,026	0,033	0,046	0,052	0,078	0,091	0,104	0,117	0,130	0,156
3162		0,016	0,021	0,026	0,029	0,036	0,050	0,057	0,086	0,100	0,114	0,129	0,143	0,172
3157		0,016	0,021	0,026	0,029	0,036	0,050	0,057	0,086	0,100	0,114	0,129	0,143	0,172
3159		0,016	0,021	0,026	0,029	0,036	0,050	0,057	0,086	0,100	0,114	0,129	0,143	0,172
3163		0,017	0,023	0,027	0,031	0,041	0,051	0,063	0,073	0,083	0,093	0,104	0,130	0,166
3158		0,016	0,021	0,026	0,029	0,036	0,050	0,057	0,086	0,100	0,114	0,129	0,143	0,172
3160		0,016	0,021	0,026	0,029	0,036	0,050	0,057	0,086	0,100	0,114	0,129	0,143	0,172

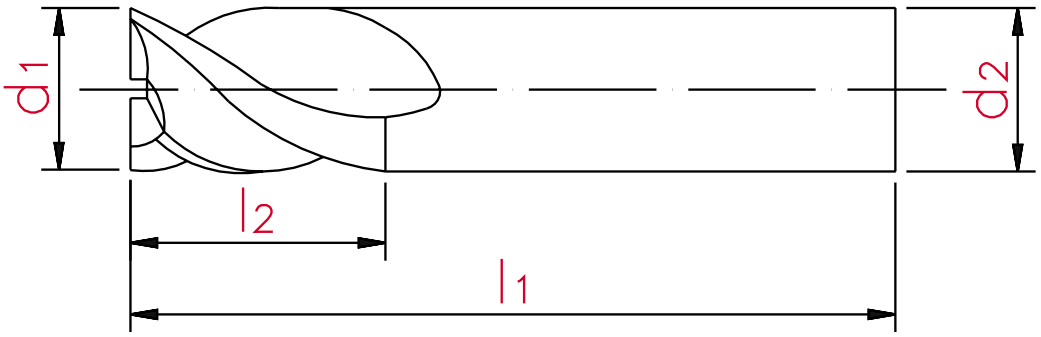
CONDICIONES DE CORTE DE FRESAS ROTATIVAS

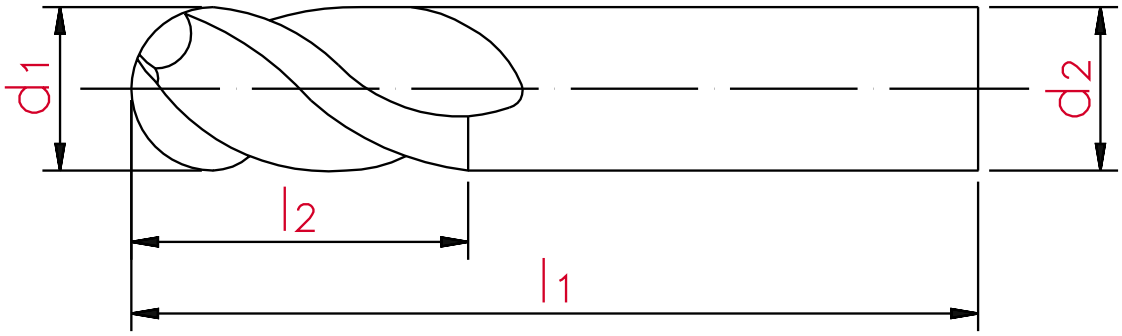
CONDITIONS DE COUPE DE FRAISES ROTATIVES / ROTATING MILL CUTTING CONDITIONS



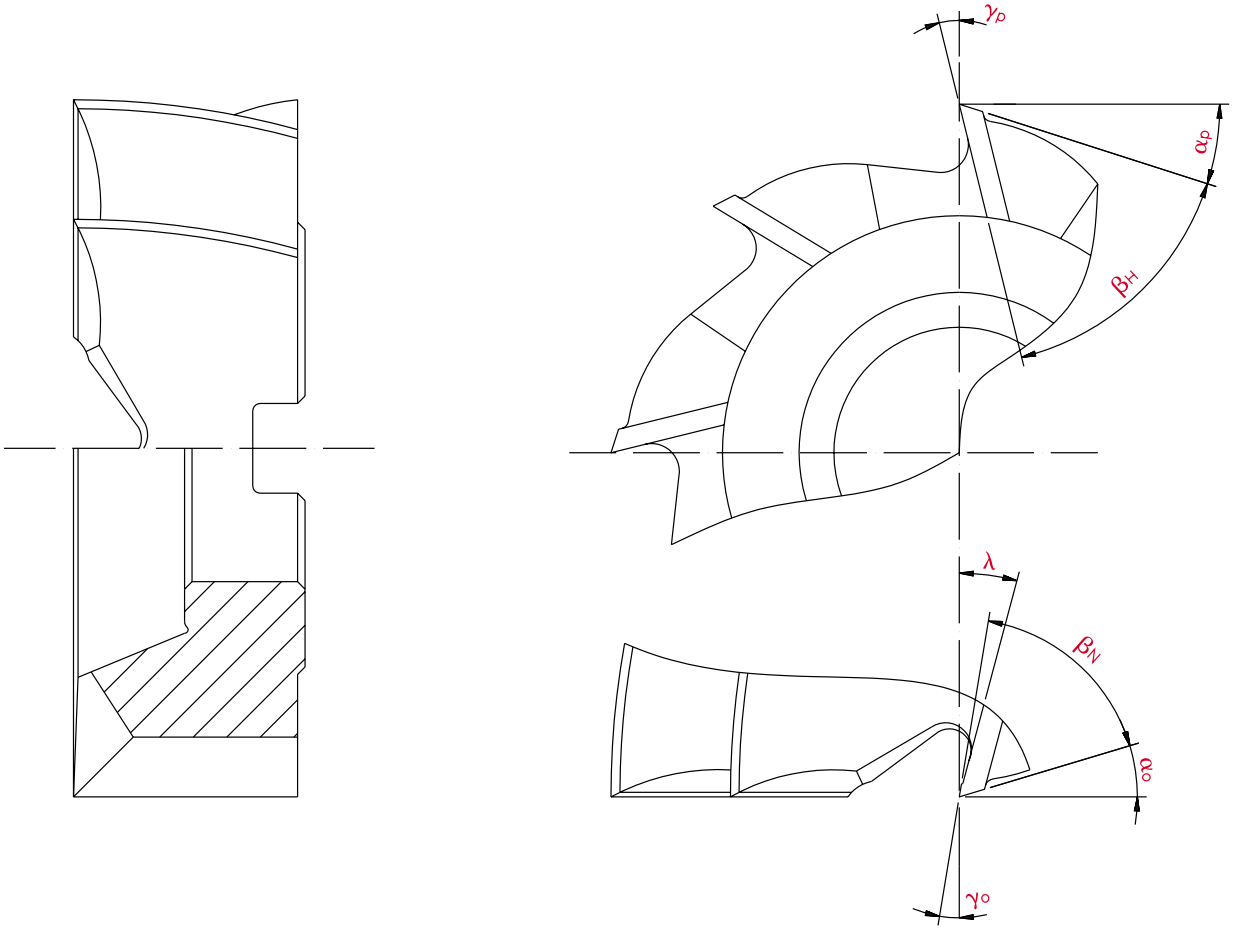
		Material / Matières / Material	N/mm²	ALU	DIAM	CRUZ
800 N/mm2	1	**Aceros poco aleados o de construcción** Aciers peu alliés ou pour le bâtiment Low-alloy or construction steels	<400	-	400-800 m/min	400-800 m/min
	2	**Aceros aleados y tratados** Aciers alliés et traités Alloy or treated steels	400-800		400-800 m/min	400-800 m/min
1100 N/mm2	1	**Aceros aleados y tratados** Aciers alliés et traités Alloy or treated steels	800-950	-	400-800 m/min	-
	2	**Aceros aleados y tratados** Aciers alliés et traités Alloy or treated steels	950-1200		300-700 m/min	
INOX	1	**Aceros inoxidables, ferríticos** Aciers inoxydables, ferritiques Stainless steels, ferritic	400-640	-	600-1000 m/min	-
	2	**Aceros inoxidables, martensíticos** Aciers inoxydables, martensitiques Stainless steels, martensitic	730-1150		600-1000 m/min	
	3	**Aceros inoxidables, austeníticos** Aciers inoxydables, austénitiques Stainless steels, austentic	440-780		600-1000 m/min	
F	1	**Fundición gris** Fonte grise Grey cast iron	100-400	-	500-800 m/min	-
	2	**Fundición gris con grafito laminar** Fonte grise à graphite laminaire Grey cast iron with graphite laminate	370-800		500-800 m/min	
AL	1	**Aleaciones de Aluminio** Alliages d'Aluminium Aluminium alloys	140-360	400-1000 m/min	-	-
	2	**Aleaciones de Aluminio Si<10%** Alliages d'Aluminium Si<10% Aluminium alloys Si<10%	250-610	400-1000 m/min		
	3	**Aleaciones de Aluminio Si>10%** Alliages d'Aluminium Si>10% Aluminium alloys Si>10%	160-420	300-700 m/min		
CU	1	**Latón de viruta larga** Laiton (copeau long) Long brass shaving	300-400	-	-	400-800 m/min
	2	**Bronce** Bronze Bronze	400-500			400-800 m/min
1400 N/mm2	1	**Aleaciones refractarias, base Co,Ni** Alliages réfractaires, base Co,Ni Heat-resistant alloys, Co,Ni based	<900	-	400-800 m/min	400-800 m/min
	2	**Aceros inoxidables, refractarios** Aciers inoxydables, réfractaires Heat-resistant stainless steels	950-1050		400-800 m/min	400-800 m/min
	3	**Aleaciones refractarias, base hierro** Alliages réfractaires, base fer Heat-resistant alloys, iron based	<900		400-800 m/min	400-800 m/min

TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY





TERMINOLOGÍA
TERMINOLOGIE / TERMINOLOGY



l1	**Longitud total** / Longueur totale / Total length
l2	**Longitud de corte** / Longueur de coupe / Length of cut
d1	**Diámetro de fresa** / Diamètre de fraise / Diametre of mill
d2	**Longitud mango** / Longueur queue / Shank length
λ	**Ángulo de espiral** / Angle de spirale / Spiral angle
απ	**Ángulo de destalonado del corte principal** / Angle de détalonnage de la coupe principale / Main cutting relief angle
α0	**Ángulo de destalonado del corte secundario** / Angle de détalonnage de la coupe secondaire / Secondary cutting relief angle
βH	**Ángulo de cuña del corte principal** / Angle de coin de la coupe principale / Main cutting wedge angle
βN	**Ángulo de cuña del corte secundario** / Angle de coin de la coupe secondaire / Secondary cutting wedge angle
γp	**Ángulo de desprendimiento del corte principal** / Angle de dégagement de la coupe principale / Main cutting rake angle
γ0	**Ángulo de desprendimiento del corte secundario** / Angle de dégagement de la coupe secondaire / Secondary cutting rake angle

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3141 HM-MD



Aluminio **Aluminium**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
3,00	6	*25,97*	50	8	1
4,00	6	*25,97*	54	11	1
5,00	6	*25,97*	54	13	1

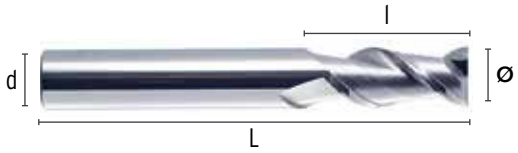
Ø mm	d mm	€	L mm	l mm	
6,00	6	*25,97*	54	13	1
8,00	8	*36,65*	58	19	1
10,00	10	*52,09*	66	22	1

3189 HM-MD



Aluminio **Aluminium**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*28,50*	57	8	2	1
3,50	6	*28,50*	57	10	2	1
4,00	6	*28,50*	57	11	2	1
4,50	6	*28,50*	57	11	2	1
5,00	6	*28,50*	57	13	2	1
6,00	6	*28,50*	57	13	2	1
7,00	8	*35,86*	63	16	2	1
8,00	8	*35,86*	63	19	2	1

Ø mm	d mm	€	L mm	l mm	Z	
9,00	10	*52,49*	72	19	2	1
10,00	10	*52,49*	72	22	2	1
12,00	12	*75,84*	83	26	2	1
14,00	14	*113,84*	83	26	2	1
16,00	16	*140,13*	92	32	2	1
18,00	18	*184,06*	92	32	2	1
20,00	20	*222,30*	104	38	2	1

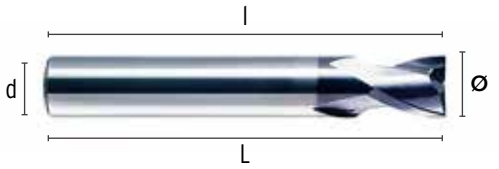
FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3167 HM-MD DIN 6527 S



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*23,34*	50	4	2	1
3,50	6	*23,34*	50	4	2	1
4,00	6	*23,86*	54	5	2	1
4,50	6	*23,86*	54	5	2	1
5,00	6	*23,86*	54	6	2	1
6,00	6	*23,86*	54	7	2	1
7,00	8	*31,54*	58	8	2	1
8,00	8	*31,54*	58	9	2	1

Ø mm	d mm	€	L mm	l mm	Z	
9,00	10	*43,34*	66	10	2	1
10,00	10	*43,34*	66	11	2	1
12,00	12	*62,34*	73	12	2	1
14,00	14	*89,20*	75	14	2	1
16,00	16	*105,00*	82	16	2	1
18,00	18	*145,20*	84	18	2	1
20,00	20	*163,66*	92	20	2	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

3168 HM-MD DIN 6527 L



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*18,83*	57	7	2	1
3,50	6	*26,66*	57	7	2	1
4,00	6	*19,77*	57	8	2	1
4,50	6	*26,66*	57	8	2	1
5,00	6	*20,73*	57	10	2	1
6,00	6	*18,47*	57	10	2	1
7,00	8	*34,54*	63	13	2	1
8,00	8	*29,10*	63	16	2	1

Ø mm	d mm	€	L mm	l mm	Z	
9,00	10	*55,20*	72	16	2	1
10,00	10	*42,07*	72	19	2	1
12,00	12	*60,03*	83	22	2	1
14,00	14	*96,40*	83	22	2	1
16,00	16	*124,90*	92	26	2	1
18,00	18	*162,13*	92	26	2	1
20,00	20	*227,17*	104	32	2	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3169 HM-MD DIN 6527 S



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*31,00*	50	4	2	1
4,00	6	*31,54*	54	5	2	1
5,00	6	*31,54*	54	6	2	1
6,00	6	*31,54*	54	7	2	1
8,00	8	*42,54*	58	9	2	1
10,00	10	*58,00*	66	11	2	1

Ø mm	d mm	€	L mm	l mm	Z	
12,00	12	*81,20*	73	12	2	1
14,00	14	*107,86*	75	14	2	1
16,00	16	*131,20*	82	16	2	1
18,00	18	*160,54*	84	18	2	1
20,00	20	*197,86*	92	20	2	1

DIN 6535 HB

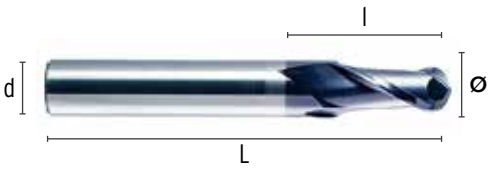
Bajo demanda / Sur commande / Upon request

3170 HM-MD DIN 6527 L



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*19,81*	57	7	2	1
4,00	6	*20,73*	57	8	2	1
5,00	6	*21,79*	57	10	2	1
6,00	6	*19,39*	57	10	2	1
8,00	8	*30,58*	63	16	2	1
10,00	10	*44,17*	72	19	2	1

Ø mm	d mm	€	L mm	l mm	Z	
12,00	12	*63,01*	83	22	2	1
14,00	14	*101,24*	83	22	2	1
16,00	16	*131,18*	92	26	2	1
18,00	18	*170,24*	92	26	2	1
20,00	20	*238,50*	104	32	2	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

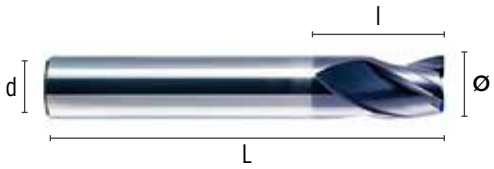
FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3171 HM-MD DIN 6527 S



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*23,34*	50	4	2	1
3,50	6	*23,34*	50	4	2	1
4,00	6	*23,86*	54	5	2	1
4,50	6	*23,86*	54	5	2	1
5,00	6	*23,86*	54	6	2	1
6,00	6	*23,86*	54	7	2	1
8,00	8	*31,54*	58	9	2	1

Ø mm	d mm	€	L mm	l mm	Z	
10,00	10	*43,34*	66	11	3	1
12,00	12	*62,34*	73	12	3	1
14,00	14	*89,20*	75	14	3	1
16,00	16	*105,00*	82	16	3	1
18,00	18	*145,20*	84	18	3	1
20,00	20	*163,66*	92	20	3	1

DIN 6535 HB

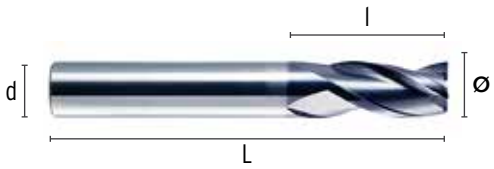
Bajo demanda / Sur commande / Upon request

3172 HM-MD DIN 6527 L



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*18,83*	57	7	3	1
3,50	6	*27,34*	57	7	3	1
4,00	6	*19,77*	57	8	3	1
4,50	6	*27,34*	57	8	3	1
5,00	6	*20,73*	57	10	3	1
6,00	6	*18,47*	57	10	3	1
8,00	8	*29,10*	63	16	3	1

Ø mm	d mm	€	L mm	l mm	Z	
10,00	10	*42,07*	72	19	3	1
12,00	12	*60,03*	83	22	3	1
14,00	14	*96,40*	83	22	3	1
16,00	16	*124,90*	92	26	3	1
18,00	18	*162,13*	92	26	3	1
20,00	20	*227,17*	104	32	3	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

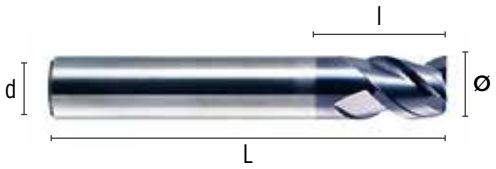
FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3173 HM-MD DIN 6527 S

45° 3z DIN 6535 HA TIALN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*23,86*	50	4	2	1
3,50	6	*23,86*	50	4	2	1
4,00	6	*24,34*	54	5	2	1
4,50	6	*24,34*	54	5	2	1
5,00	6	*24,34*	54	6	2	1
6,00	6	*24,34*	54	7	2	1
8,00	8	*31,66*	58	9	2	1

Ø mm	d mm	€	L mm	l mm	Z	
10,00	10	*43,54*	66	11	3	1
12,00	12	*62,34*	73	12	3	1
14,00	14	*89,20*	75	14	3	1
16,00	16	*105,00*	82	16	3	1
18,00	18	*145,20*	84	18	3	1
20,00	20	*163,54*	92	20	3	1

DIN 6535 HB

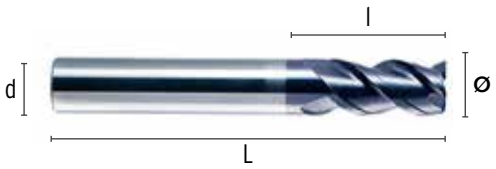
Bajo demanda / Sur commande / Upon request

3174 HM-MD DIN 6527 L

45° 3z DIN 6535 HA TIALN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*27,34*	57	7	3	1
3,50	6	*27,34*	57	7	3	1
4,00	6	*27,34*	57	8	3	1
4,50	6	*27,34*	57	8	3	1
5,00	6	*27,34*	57	10	3	1
6,00	6	*27,34*	57	10	3	1
8,00	8	*34,86*	63	16	3	1

Ø mm	d mm	€	L mm	l mm	Z	
10,00	10	*48,00*	72	19	3	1
12,00	12	*71,34*	83	22	3	1
14,00	14	*98,86*	83	22	3	1
16,00	16	*120,20*	92	26	3	1
18,00	18	*157,86*	92	26	3	1
20,00	20	*187,00*	104	32	3	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3175 HM-MD DIN 6527 S



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*23,34*	50	5	4	1
3,50	6	*23,34*	50	6	4	1
4,00	6	*23,86*	54	8	4	1
4,50	6	*23,86*	54	8	4	1
5,00	6	*23,86*	54	9	4	1
6,00	6	*23,86*	54	10	4	1
8,00	8	*31,54*	58	12	4	1

Ø mm	d mm	€	L mm	l mm	Z	
10,00	10	*43,34*	66	14	4	1
12,00	12	*62,34*	73	16	4	1
14,00	14	*89,20*	75	18	4	1
16,00	16	*105,00*	82	22	4	1
18,00	18	*145,20*	84	24	4	1
20,00	20	*163,66*	92	26	4	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

3176 HM-MD DIN 6527 L



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*18,83*	57	8	4	1
3,50	6	*29,54*	57	10	4	1
4,00	6	*19,77*	57	11	4	1
4,50	6	*29,54*	57	11	4	1
5,00	6	*20,73*	57	13	4	1
6,00	6	*18,47*	57	13	4	1
8,00	8	*29,10*	63	19	4	1

Ø mm	d mm	€	L mm	l mm	Z	
10,00	10	*42,07*	72	22	4	1
12,00	12	*60,03*	83	26	4	1
14,00	14	*96,40*	83	26	4	1
16,00	16	*124,90*	92	32	4	1
18,00	18	*162,13*	92	32	4	1
20,00	20	*227,17*	104	38	4	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3177 HM-MD DIN 6527 L



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
3,00	6	*29,86*	57	8	4	1
3,50	6	*29,86*	57	10	4	1
4,00	6	*29,86*	57	11	4	1
4,50	6	*29,86*	57	11	4	1
5,00	6	*29,86*	57	13	4	1
6,00	6	*29,86*	57	13	4	1
8,00	8	*39,86*	63	19	4	1

Ø mm	d mm	€	L mm	l mm	Z	
10,00	10	*62,34*	72	22	4	1
12,00	12	*82,34*	83	26	4	1
14,00	14	*114,00*	83	26	4	1
16,00	16	*134,86*	92	32	4	1
18,00	18	*186,66*	92	32	4	1
20,00	20	*216,86*	104	38	4	1

DIN 6535 HB

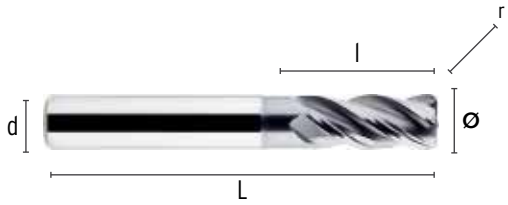
Bajo demanda / Sur commande / Upon request

3178 HM-MD DIN 6527 L



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	r	
6,00	6	*42,86*	57	13	0,5	1
6,00	6	*42,86*	57	13	1,0	1
8,00	8	*55,34*	63	19	0,5	1
8,00	8	*55,34*	63	19	1,0	1
10,00	10	*83,34*	72	22	0,5	1
10,00	10	*83,34*	72	22	1,0	1
10,00	10	*83,34*	72	22	2,0	1

Ø mm	d mm	€	L mm	l mm	r	
12,00	12	*107,66*	83	26	0,5	1
12,00	12	*107,66*	83	26	1,0	1
12,00	12	*116,66*	83	26	2,0	1
16,00	16	*171,20*	92	32	0,5	1
16,00	16	*171,20*	92	32	1,0	1
16,00	16	*175,54*	92	32	2,0	1

DIN 6535 HB

Bajo demanda / Sur commande / Upon request

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3179 HM-MD DIN 6527 L



Aceros / HRC 45-55 — **Aciers / Steel**

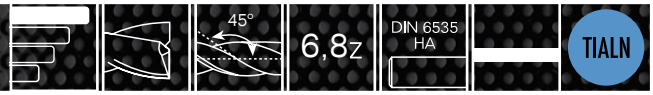
Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
6,00	6	*32,34*	57	13	6	1
8,00	8	*44,66*	63	19	6	1
10,00	10	*60,20*	72	22	6	1
12,00	12	*85,54*	83	26	6	1

Ø mm	d mm	€	L mm	l mm	Z	
14,00	14	*106,86*	83	26	6	1
16,00	16	*143,86*	92	32	6	1
18,00	18	*180,34*	92	32	6	1
20,00	20	*215,20*	104	38	8	1

3180 HM-MD DIN 6527 EL



Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
6,00	6	*35,20*	62	18	6	1
8,00	8	*48,00*	68	24	6	1
10,00	10	*67,34*	80	30	6	1
12,00	12	*96,66*	93	36	6	1

Ø mm	d mm	€	L mm	l mm	Z	
14,00	14	*133,86*	100	45	6	1
16,00	16	*180,20*	108	48	6	1
18,00	18	*242,86*	115	55	6	1
20,00	20	*310,54*	126	60	8	1

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3181 HM-MD DIN 6527 L

45° | 3,4,5,6 Z | DIN 6535 HA | TIALN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	Z	
4,00	6	*33,20*	57	11	3	1
5,00	6	*33,20*	57	13	4	1
6,00	6	*33,20*	57	13	4	1
8,00	8	*47,20*	63	19	4	1
10,00	10	*64,20*	72	22	4	1
12,00	12	*89,86*	83	26	4	1

Ø mm	d mm	€	L mm	l mm	Z	
14,00	14	*120,86*	83	26	4	1
16,00	16	*156,00*	92	32	4	1
16,00	16	*156,00*	92	32	5	1
18,00	18	*190,60*	92	32	5	1
20,00	20	*213,86*	104	38	5	1
20,00	20	*213,86*	104	38	6	1

3183 HM-MD

60° | 4z | DIN 6535 HA | TIALN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	Z	
1,20	6	*27,55*	57	4	1
1,60	8	*38,24*	63	4	1

Ø mm	d mm	€	L mm	Z	
2,00	10	*57,00*	72	4	1
2,40	12	*82,33*	83	4	1

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3184 HM-MD

90° | 4z | DIN 6535 HA | TIALN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	Z	
1,20	6	*27,55*	57	4	1
1,60	8	*38,24*	63	4	1

Ø mm	d mm	€	L mm	Z	
2,00	10	*57,00*	72	4	1
2,40	12	*82,33*	83	4	1

3185 HM-MD

r | 4z | DIN 6535 HA | TIALN

Aceros / HRC 45-55 — **Aciers / Steel**

Aplicaciones / Applications



Ø mm	r	d mm	€	L mm	Z	
5,00	0,50	6	*28,74*	57	4	1
4,00	1,00	6	*28,74*	57	4	1
5,00	1,50	8	*38,24*	63	4	1
4,00	2,00	8	*38,24*	63	4	1
5,00	2,50	10	*57,00*	72	4	1

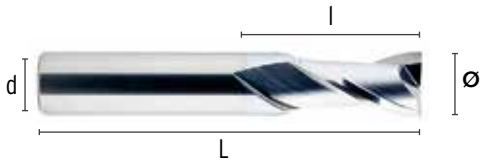
Ø mm	r	d mm	€	L mm	Z	
4,00	3,00	10	*57,00*	72	4	1
5,00	3,50	12	*82,33*	83	4	1
4,00	4,00	12	*82,33*	83	4	1
4,00	5,00	14	*110,28*	83	4	1

FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3101 HM-MD — 30° — 2z — TICN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — 800 N/mm2 — 1100 N/mm2 — F

Aplicaciones / Applications



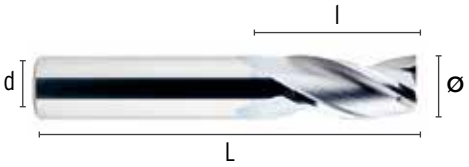
Ø mm	d mm	€	L mm	l mm	
3,00	3	*16,99*	40	12	1
4,00	4	*19,18*	40	12	1
5,00	6	*19,98*	50	14	1
6,00	6	*24,65*	50	16	1
8,00	8	*35,44*	60	20	1

Ø mm	d mm	€	L mm	l mm	
10,00	10	*48,49*	70	22	1
12,00	12	*68,18*	70	22	1
16,00	16	*115,06*	75	25	1
20,00	20	*174,64*	100	32	1

3105 HM-MD — 30° — 3z — TICN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — 800 N/mm2 — 1100 N/mm2 — F

Aplicaciones / Applications

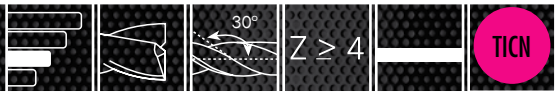


Ø mm	d mm	€	L mm	l mm	
3,00	3	*16,99*	40	12	1
4,00	4	*19,18*	40	14	1
5,00	6	*19,98*	50	16	1
6,00	6	*24,65*	50	19	1
8,00	8	*35,44*	60	20	1

Ø mm	d mm	€	L mm	l mm	
10,00	10	*48,49*	70	22	1
12,00	12	*68,18*	70	22	1
16,00	16	*115,06*	75	25	1
20,00	20	*174,64*	100	32	1

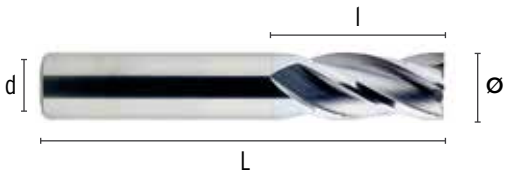
FRESAS METAL DURO
FRAISES CARBURE / HARD METAL MILLS

3107 HM-MD



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 800 N/mm2 — 1100 N/mm2 — F

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
3,00	3	*16,99*	40	12	1
4,00	4	*19,18*	40	12	1
5,00	6	*19,98*	50	14	1
6,00	6	*24,65*	50	16	1
8,00	8	*35,44*	60	20	1

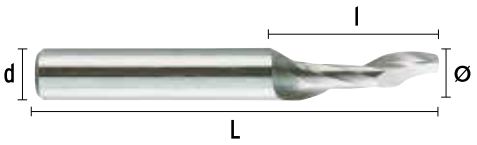
Ø mm	d mm	€	L mm	l mm	
10,00	10	*48,49*	75	22	1
12,00	12	*68,18*	70	22	1
16,00	16	*115,06*	75	25	1
20,00	20	*174,64*	100	32	1

FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3120 HSSE W 1z

Aluminio **Aluminium**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
3,00	8	*14,65*	60	12	1
4,00*	6	*14,65*	60	12	1
4,00	8	*14,65*	60	12	1
5,00*	6	*14,65*	60	12	1
5,00	8	*14,65*	60	14	1

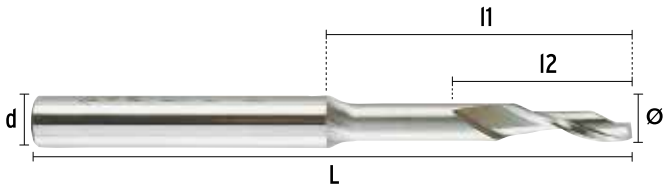
Ø mm	d mm	€	L mm	l mm	
6,00	6	*14,65*	60	14	1
6,00	8	*14,65*	60	14	1
7,00	8	*17,79*	60	14	1
8,00	8	*17,79*	80	14	1
10,00	8	*22,49*	80	14	1

***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

3121 HSSE W 1z

Aluminio **Aluminium**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l1 mm	l2 mm	
4,00	8	*20,74*	80	45	16	1
5,00*	6	*20,74*	80	45	14	1
5,00	8	*20,74*	80	45	16	1

Ø mm	d mm	€	L mm	l1 mm	l2 mm	
6,00	8	*20,74*	90	45	16	1
8,00	8	*23,00*	100	70	30	1

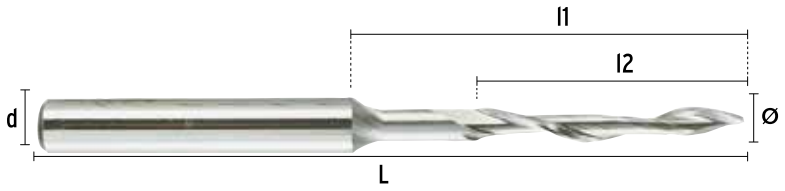
***(Hasta fin de existencias /** Jusqu'à épuisement des stocks / While supplies last)

FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3122 HSSE W — 1z

Aluminio — **Aluminium**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l1 mm	l2 mm	
5,00	8	*20,74*	100	55	35	1

3186 HSSE W — 2z



Aluminio — **Aluminium**

Aplicaciones / Applications

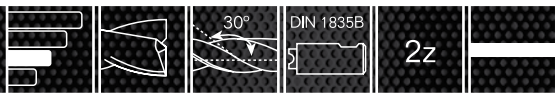


Ø mm	Z	d mm	€	L mm	l mm	
2	2	6	*14,51*	51	7	1
3	2	6	*14,51*	52	8	1
4	2	6	*14,51*	55	11	1
5	2	6	*14,51*	57	13	1
6	2	6	*14,51*	57	13	1
8	2	10	*19,76*	69	19	1

Ø mm	Z	d mm	€	L mm	l mm	
10	2	10	*20,67*	72	22	1
12	2	12	*26,82*	83	26	1
14	2	12	*29,64*	83	26	1
16	2	16	*36,15*	92	32	1
18	2	16	*44,86*	92	32	1
20	2	20	*54,59*	104	38	1

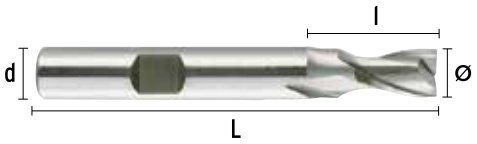
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3110 HSSE DIN 327 N



Aceros 800 - 1100 N/mm² — **Aciers / Steel** 800 N/mm2

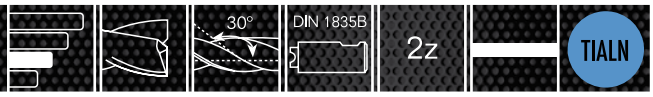
Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
2,00	6	*13,18*	48	4	1
2,50	6	*13,18*	49	5	1
3,00	6	*13,18*	49	5	1
3,50	6	*14,34*	50	6	1
4,00	6	*13,18*	51	7	1
4,50	6	*15,75*	51	7	1
5,00	6	*13,18*	52	8	1
5,50	6	*16,72*	52	8	1
6,00	6	*13,18*	52	8	1
6,50	10	*21,86*	60	10	1
7,00	10	*21,20*	60	10	1
7,50	10	*21,01*	60	10	1
8,00	10	*18,89*	61	11	1
8,50	10	*23,58*	61	11	1
9,00	10	*21,70*	61	11	1
9,50	10	*23,01*	61	11	1
10,00	10	*18,69*	63	13	1
11,00	12	*25,49*	70	13	1

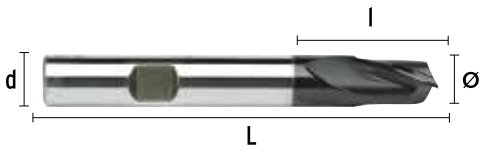
Ø mm	d mm	€	L mm	l mm	
12,00	12	*24,15*	73	16	1
13,00	12	*31,87*	73	16	1
14,00	12	*31,87*	73	16	1
15,00	12	*35,70*	73	16	1
16,00	16	*34,86*	79	19	1
17,00	16	*42,46*	79	19	1
18,00	16	*42,46*	79	19	1
19,00	16	*53,61*	79	19	1
20,00	20	*50,74*	88	22	1
22,00	20	*66,36*	88	22	1
24,00	25	*84,06*	102	26	1
25,00	25	*91,54*	102	26	1
28,00	25	*106,35*	102	26	1
30,00	25	*123,71*	102	26	1
32,00	32	*124,51*	112	32	1
36,00	32	*166,54*	112	32	1
40,00	32	*204,48*	130	38	1

3110/1 HSSE DIN 327 N



Aceros 1100 - 1400 N/mm² — **Aciers / Steel** 1100 N/mm2

Aplicaciones / Applications



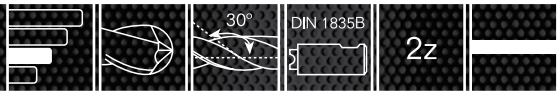
Ø mm	d mm	€	L mm	l mm	
2,00	6	*21,82*	48	4	1
2,50	6	*21,82*	49	5	1
3,00	6	*21,82*	49	5	1
3,50	6	*23,75*	50	6	1
4,00	6	*22,54*	51	7	1
4,50	6	*25,20*	51	7	1
5,00	6	*22,54*	52	8	1
5,50	6	*28,60*	52	8	1
6,00	6	*24,93*	52	8	1
6,50	10	*41,80*	60	10	1
7,00	10	*41,10*	60	10	1
7,50	10	*40,91*	60	10	1
8,00	10	*38,70*	61	11	1
8,50	10	*43,53*	61	11	1
9,00	10	*41,61*	61	11	1
9,50	10	*42,99*	61	11	1
10,00	10	*38,50*	63	13	1
11,00	12	*46,69*	70	13	1

Ø mm	d mm	€	L mm	l mm	
12,00	12	*45,32*	73	16	1
13,00	12	*53,27*	73	16	1
14,00	12	*53,27*	73	16	1
15,00	12	*57,23*	73	16	1
16,00	16	*63,33*	79	19	1
17,00	16	*84,55*	79	19	1
18,00	16	*84,55*	79	19	1
19,00	16	*96,04*	79	19	1
20,00	20	*93,09*	88	22	1
22,00	20	*119,42*	88	22	1
24,00	25	*137,64*	102	26	1
25,00	25	*145,33*	102	26	1
28,00	25	*170,47*	102	26	1
30,00	25	*188,33*	102	26	1
32,00	32	*189,15*	112	32	1
36,00	32	*264,43*	112	32	1
40,00	40	*303,46*	118	38	1

Bajo demanda / Sur commande / Upon request

FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3112 HSSE DIN 327 N



Aceros 800 - 1100 N/mm² — **Aciers / Steel** 800 N/mm2

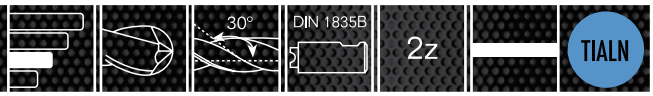
Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
3,00	6	*26,02*	49	5	1
4,00	6	*26,02*	51	7	1
5,00	6	*26,02*	52	8	1
6,00	6	*26,02*	52	8	1
7,00	10	*31,37*	60	10	1
8,00	10	*27,93*	61	11	1
9,00	10	*32,11*	61	11	1
10,00	10	*27,73*	63	13	1
12,00	12	*35,74*	73	16	1

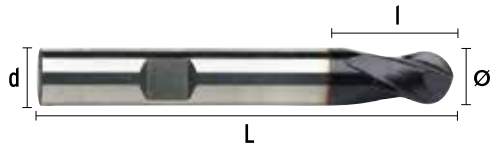
Ø mm	d mm	€	L mm	l mm	
13,00	12	*47,23*	73	16	1
14,00	12	*47,23*	73	16	1
15,00	12	*47,30*	73	16	1
16,00	16	*51,61*	79	19	1
18,00	16	*62,84*	79	19	1
20,00	20	*75,05*	88	22	1
22,00	20	*98,22*	88	22	1
24,00	25	*117,37*	102	26	1
25,00	25	*107,87*	102	26	1

3112/1 HSSE DIN 327 N



Aceros 1100 - 1400 N/mm² — **Aciers / Steel** 1100 N/mm2

Aplicaciones / Applications



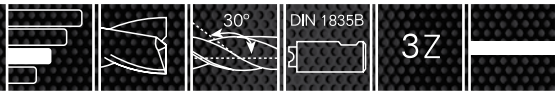
Ø mm	d mm	€	L mm	l mm	
3,00	6	*35,06*	49	5	1
4,00	6	*35,79*	51	7	1
5,00	6	*35,79*	52	8	1
6,00	6	*38,17*	52	8	1
7,00	10	*51,57*	60	10	1
8,00	10	*48,02*	61	11	1
9,00	10	*52,29*	61	11	1
10,00	10	*47,80*	63	13	1
12,00	12	*57,26*	73	16	1

Ø mm	d mm	€	L mm	l mm	
13,00	12	*69,06*	73	16	1
14,00	12	*69,06*	73	16	1
15,00	12	*69,16*	73	16	1
16,00	16	*80,57*	79	19	1
18,00	16	*105,57*	79	19	1
20,00	20	*118,11*	88	22	1
22,00	20	*152,20*	88	22	1
24,00	25	*171,93*	102	26	1
25,00	25	*162,14*	102	26	1

Bajo demanda / Sur commade / upon request

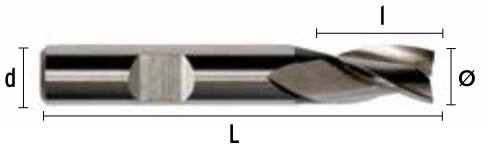
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3187 HSSE DIN 327 N



Aceros 800 - 1100 N/mm² — **Aciers / Steel** 800 N/mm2

Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
2,00	3	6	*13,23*	48	4	1
3,00	3	6	*12,02*	49	5	1
4,00	3	6	*12,02*	51	7	1
5,00	3	6	*12,02*	52	8	1
6,00	3	6	*12,02*	52	8	1
7,00	3	10	*15,04*	60	10	1
8,00	3	10	*15,04*	61	11	1
9,00	3	10	*17,62*	91	11	1
10,00	3	10	*17,61*	63	13	1
11,00	3	12	*20,50*	70	13	1
12,00	3	12	*20,49*	73	16	1

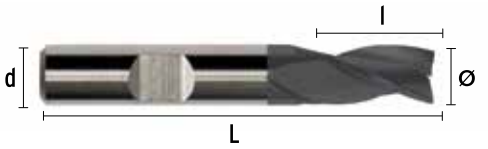
Ø mm	Z	d mm	€	L mm	l mm	
13,00	3	12	*25,41*	73	16	1
14,00	3	12	*25,41*	73	16	1
15,00	3	12	*29,47*	73	16	1
16,00	3	16	*29,47*	79	19	1
18,00	3	16	*36,25*	79	19	1
20,00	3	20	*45,34*	88	22	1
22,00	3	20	*67,53*	88	22	1
25,00	3	25	*89,27*	102	26	1
28,00	3	25	*100,33*	102	26	1
30,00	3	25	*125,35*	102	26	1
32,00	3	32	*166,09*	112	32	1

3187/1 HSSE DIN 327 N



Aceros 1100 - 1400 N/mm² — **Aciers / Steel** 1100 N/mm2

Aplicaciones / Applications

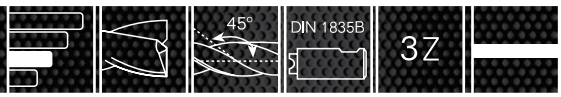


Ø mm	Z	d mm	€	L mm	l mm	
2,00	3	6	*21,87*	48	4	1
3,00	3	6	*20,66*	49	5	1
4,00	3	6	*21,39*	51	7	1
5,00	3	6	*21,39*	52	8	1
6,00	3	6	*23,77*	52	8	1
7,00	3	10	*34,93*	60	10	1
8,00	3	10	*34,85*	61	11	1
9,00	3	10	*37,52*	91	11	1
10,00	3	10	*37,42*	63	13	1
11,00	3	12	*41,70*	70	13	1
12,00	3	12	*41,65*	73	16	1

Ø mm	Z	d mm	€	L mm	l mm	
13,00	3	12	*46,81*	73	16	1
14,00	3	12	*46,81*	73	16	1
15,00	3	12	*51,00*	73	16	1
16,00	3	16	*57,94*	79	19	1
18,00	3	16	*78,34*	79	19	1
20,00	3	20	*87,70*	88	22	1
22,00	3	20	*120,58*	88	22	1
25,00	3	25	*143,06*	102	26	1
28,00	3	25	*164,43*	102	26	1
30,00	3	25	*189,97*	102	26	1
32,00	3	32	*230,73*	112	32	1

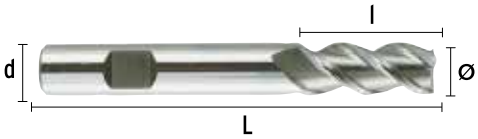
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3114 HSSE DIN 844 W



Aluminio — **Aluminium**

Aplicaciones / Applications

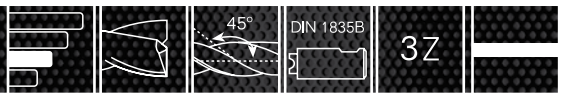


Ø mm	d mm	€	L mm	l mm	z	
2,00	6	*15,49*	51	7	3	1
3,00	6	*15,49*	52	8	3	1
4,00	6	*15,49*	55	11	3	1
5,00	6	*15,49*	57	13	3	1
6,00	6	*19,27*	57	13	3	1
7,00	10	*21,33*	69	16	3	1
8,00	10	*23,49*	69	19	3	1
9,00	10	*25,88*	69	19	3	1
10,00	10	*24,22*	72	22	3	1

Ø mm	d mm	€	L mm	l mm	z	
12,00	12	*29,41*	83	26	3	1
14,00	12	*38,64*	83	26	3	1
15,00	12	*38,36*	83	26	3	1
16,00	16	*44,06*	92	32	3	1
18,00	16	*52,22*	92	32	3	1
20,00	20	*63,22*	104	38	3	1
25,00*	25	*104,38*	121	45	4	1
30,00*	25	*149,23*	121	45	4	1

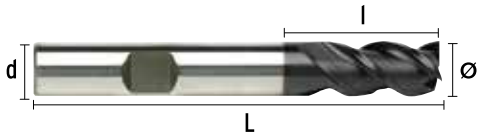
* Hasta fin de existencias / Jusqu'à epuisement des stocks / Until end of stock

3114/1 HSSE DIN 844 W



Aluminio — **Aluminium**

Aplicaciones / Applications



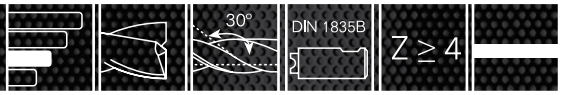
Ø mm	d mm	€	L mm	l mm	z	
6,00	6	*31,22*	57	13	3	1
7,00	10	*41,21*	66	16	3	1
8,00	10	*43,45*	69	19	3	1
9,00	10	*45,91*	69	19	3	1
10,00	10	*44,19*	72	22	3	1
12,00	12	*50,75*	83	26	3	1

Ø mm	d mm	€	L mm	l mm	z	
14,00	12	*60,25*	83	26	3	1
15,00	12	*59,93*	83	26	3	1
16,00	16	*72,79*	92	32	3	1
18,00	16	*94,59*	92	32	3	1
20,00	20	*105,92*	104	38	3	1

Bajo demanda / Sur commade / upon request

FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3115 HSSE DIN 844 N



Aceros 800 - 1100 N/mm² — **Aciers / Steel** — 800 N/mm2 — AL

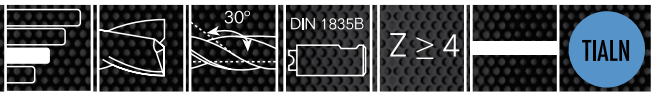
Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
2,00	3	6	*14,50*	51	7	1
2,50	3	6	*14,50*	52	8	1
3,00	4	6	*14,50*	52	8	1
4,00	4	6	*14,61*	55	11	1
5,00	4	6	*14,61*	57	13	1
6,00	4	6	*14,61*	57	13	1
7,00	4	10	*22,05*	69	16	1
8,00	4	10	*18,22*	69	19	1
9,00	4	10	*23,00*	69	19	1
10,00	4	10	*20,33*	72	22	1
11,00	4	12	*27,73*	79	22	1
12,00	4	12	*25,74*	83	26	1

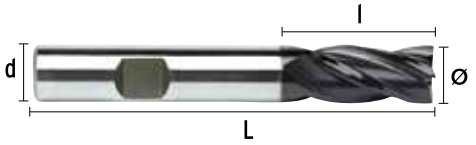
Ø mm	Z	d mm	€	L mm	l mm	
13,00	4	12	*34,67*	83	26	1
14,00	4	12	*32,71*	83	26	1
15,00	4	12	*37,34*	83	26	1
16,00	4	16	*36,44*	92	32	1
18,00	4	16	*44,91*	92	32	1
20,00	4	20	*52,56*	104	38	1
22,00	5	20	*72,99*	104	38	1
25,00	5	25	*90,70*	121	45	1
28,00	5	25	*113,40*	121	45	1
30,00	5	25	*135,14*	121	45	1
32,00	6	32	*135,14*	133	53	1

3115/1 HSSE DIN 327 N



Aceros 1100 - 1400 N/mm² — **Aciers / Steel** — 1100 N/mm2 — INOX — AL

Aplicaciones / Applications



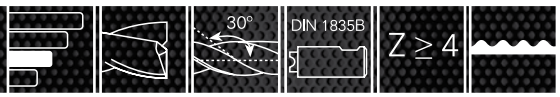
Ø mm	Z	d mm	€	L mm	l mm	
3,00	4	6	*23,19*	52	8	1
4,00	4	6	*24,02*	55	11	1
5,00	4	6	*35,44*	57	13	1
6,00	4	6	*26,40*	57	13	1
7,00	4	10	*41,98*	66	16	1
8,00	4	10	*38,02*	69	19	1
9,00	4	10	*42,96*	69	19	1
10,00	4	10	*40,20*	72	22	1
11,00	4	12	*48,99*	79	22	1
12,00	4	12	*46,96*	83	26	1
13,00	4	12	*56,15*	83	26	1

Ø mm	Z	d mm	€	L mm	l mm	
14,00	4	12	*54,14*	83	26	1
15,00	4	12	*58,89*	83	26	1
16,00	4	16	*64,96*	92	32	1
18,00	4	16	*87,07*	92	32	1
20,00	4	20	*94,97*	104	38	1
22,00	5	20	*126,24*	104	38	1
25,00	5	25	*144,47*	121	45	1
28,00	5	25	*177,72*	121	45	1
30,00	5	25	*200,08*	121	45	1
32,00	6	32	*200,08*	133	53	1

Bajo demanda / Sur commade / upon request

FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3117 HSSE DIN 844 NR



Aceros 800 - 1100 N/mm² — **Aciers / Steel** 800 N/mm2

Aplicaciones / Applications

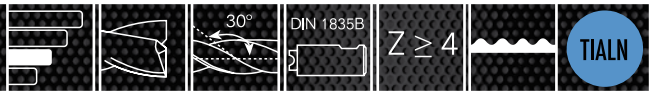


Ø mm	Z	d mm	€	L mm	l mm	
6,00	4	6	*37,35*	57	13	1
7,00	4	10	*45,01*	66	16	1
8,00	4	10	*42,03*	69	19	1
9,00	4	10	*46,69*	69	19	1
10,00	4	10	*36,86*	72	22	1
11,00	4	12	*54,99*	79	22	1
12,00	4	12	*48,48*	83	26	1
13,00	4	12	*65,77*	83	26	1
14,00	4	12	*52,56*	83	26	1
15,00	4	12	*69,13*	83	26	1
16,00	4	16	*64,39*	92	32	1
17,00	4	16	*85,19*	92	32	1

Ø mm	Z	d mm	€	L mm	l mm	
18,00	4	16	*68,03*	92	32	1
20,00	4	20	*85,25*	98	38	1
22,00	5	20	*97,95*	104	38	1
24,00	5	25	*123,32*	121	45	1
25,00	5	25	*122,43*	121	45	1
26,00	5	25	*146,22*	121	45	1
28,00	5	25	*141,50*	121	45	1
30,00	5	25	*157,15*	121	45	1
32,00	6	32	*172,33*	133	53	1
36,00*	6	32	*204,05*	133	53	1
40,00*	6	32	*229,45*	155	63	1

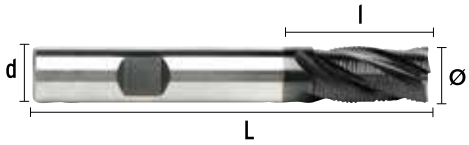
* Hasta fin de existencias / Jusqu'à epuisement des stocks / Until end of stock

3117/1 HSSE DIN 844 NR



Aceros 1100 - 1400 N/mm² — **Aciers / Steel** 1100 N/mm2

Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
6,00	4	6	*49,84*	57	13	1
7,00	4	10	*65,61*	66	16	1
8,00	4	10	*62,53*	69	19	1
9,00	4	10	*67,33*	69	19	1
10,00	4	10	*57,23*	72	22	1
11,00	4	12	*77,08*	79	22	1
12,00	4	12	*70,36*	83	26	1
13,00	4	12	*88,16*	83	26	1
14,00	4	12	*74,57*	83	26	1
15,00	4	12	*91,60*	83	26	1
16,00	4	16	*93,72*	92	32	1

Ø mm	Z	d mm	€	L mm	l mm	
17,00	4	16	*128,55*	92	32	1
18,00	4	16	*110,88*	92	32	1
20,00	4	20	*128,59*	98	38	1
22,00	5	20	*151,94*	104	38	1
24,00	5	25	*178,06*	121	45	1
25,00	5	25	*177,14*	121	45	1
26,00	5	25	*211,50*	121	45	1
28,00	5	25	*206,64*	121	45	1
30,00	5	25	*222,74*	121	45	1
32,00	6	32	*238,37*	133	53	1

Bajo demanda / Sur commade / upon request

FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3119 HSSE DIN 844 NRF

30° DIN 1835B Z ≥ 4

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2 — TI

Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
6,00	4	6	*41,60*	57	13	1
8,00	4	10	*46,80*	69	19	1
10,00	4	10	*41,07*	72	22	1
12,00	4	12	*53,99*	83	26	1
14,00	4	12	*58,53*	83	26	1

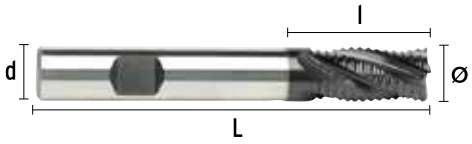
Ø mm	Z	d mm	€	L mm	l mm	
16,00	4	16	*71,64*	92	32	1
18,00	4	16	*75,68*	92	32	1
20,00	4	20	*94,87*	104	38	1
25,00	5	25	*136,22*	121	45	1
30,00	5	25	*174,84*	121	45	1

3119/1 HSSE DIN 844 NRF

30° DIN 1835B Z ≥ 4 TIALN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2 — TI

Aplicaciones / Applications



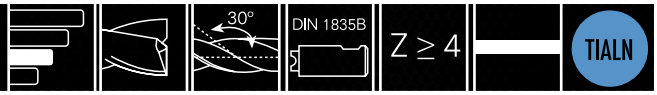
Ø mm	Z	d mm	€	L mm	l mm	
6,00	4	6	*54,17*	57	13	1
8,00	4	10	*67,45*	69	19	1
10,00	4	10	*61,55*	72	22	1
12,00	4	12	*76,02*	83	26	1
14,00	4	12	*80,71*	83	26	1

Ø mm	Z	d mm	€	L mm	l mm	
16,00	4	16	*101,21*	92	32	1
18,00	4	16	*152,84*	92	32	1
20,00	4	20	*138,51*	104	38	1
25,00	5	25	*191,33*	121	45	1
30,00	6	25	*231,07*	121	45	1

Bajo demanda / Sur commade / upon request

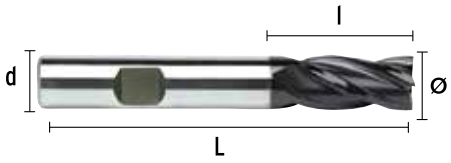
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3162 HSSE-PM DIN 844 N



Aceros 1100 - 1400 N/mm² — Aciers / Steel 1100 N/mm²

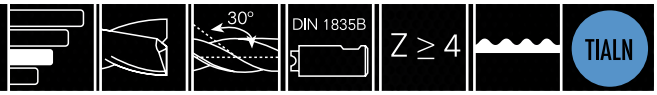
Aplicaciones / Applications



Ø mm	d mm	L mm	l mm	€	Z	
6,00	6	57	13	*28,15*	4	1
8,00	10	69	19	*35,15*	4	1
10,00	10	72	22	*41,64*	4	1
12,00	12	83	26	*49,79*	4	1

Ø mm	d mm	L mm	l mm	€	Z	
14,00	12	83	26	*58,16*	4	1
16,00	16	92	32	*68,95*	4	1
18,00	16	92	32	*84,26*	4	1
20,00	20	104	38	*103,87*	4	1

3157 HSSE-PM DIN 844 NR



Aceros 1100 - 1400 N/mm² — Aciers / Steel 1100 N/mm²

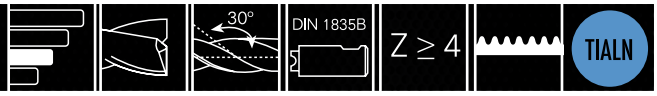
Aplicaciones / Applications



Ø mm	d mm	L mm	l mm	€	Z	
6,00	6	57	13	*48,28*	4	1
8,00	10	69	19	*53,00*	4	1
10,00	10	72	22	*51,41*	4	1
12,00	12	83	26	*65,88*	4	1
14,00	12	83	26	*78,69*	4	1
16,00	16	92	32	*96,74*	4	1
18,00	16	92	32	*105,70*	4	1

Ø mm	d mm	L mm	l mm	€	Z	
20,00	20	104	38	*131,29*	4	1
22,00	20	104	38	*162,54*	5	1
25,00	25	121	45	*192,90*	5	1
28,00	25	121	45	*247,36*	5	1
30,00	25	121	45	*258,55*	5	1
32,00	32	133	53	*280,73*	6	1

3159 HSSE-PM DIN 844 NRF



Aceros 1100 - 1400 N/mm² — Aciers / Steel 1100 N/mm²

Aplicaciones / Applications



Ø mm	d mm	L mm	l mm	€	Z	
6,00	6	57	13	*53,11*	4	1
8,00	10	69	19	*58,07*	4	1
10,00	10	72	22	*56,46*	4	1
12,00	12	83	26	*72,51*	4	1

Ø mm	d mm	L mm	l mm	€	Z	
14,00	12	83	26	*86,39*	4	1
16,00	16	92	32	*106,05*	4	1
18,00	16	92	32	*115,97*	4	1
20,00	20	104	38	*143,67*	4	1

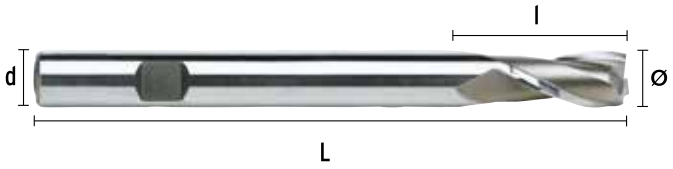
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3111 HSSE DIN 844 N

30° DIN 1835B 2z

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2 — TI

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
4,00	6	*14,10*	63	11	1
5,00	6	*14,10*	68	13	1
6,00	6	*14,10*	68	13	1
7,00	10	*23,45*	80	16	1
8,00	10	*20,50*	88	19	1
9,00	10	*27,78*	88	19	1
10,00	10	*23,45*	95	22	1

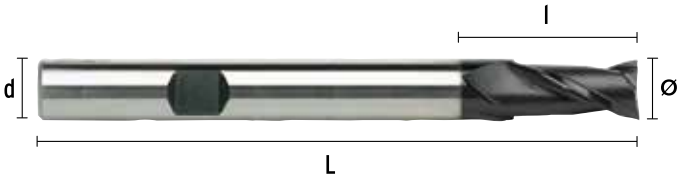
Ø mm	d mm	€	L mm	l mm	
12,00	12	*32,04*	110	26	1
14,00	12	*41,65*	110	26	1
16,00	16	*48,99*	123	32	1
18,00	16	*58,38*	123	32	1
20,00	20	*63,76*	141	38	1
22,00	20	*86,55*	141	38	1
25,00	25	*124,14*	166	45	1

3111/1 HSSE DIN 844 N

30° DIN 1835B 2z TIALN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2

Aplicaciones / Applications



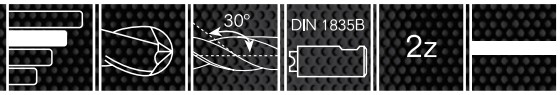
Ø mm	d mm	€	L mm	l mm	
4,00	6	*26,53*	63	11	1
5,00	6	*26,53*	68	13	1
6,00	6	*29,60*	68	13	1
7,00	10	*43,42*	80	16	1
8,00	10	*40,34*	88	19	1
9,00	10	*47,87*	88	19	1
10,00	10	*43,42*	95	22	1

Ø mm	d mm	€	L mm	l mm	
12,00	12	*63,18*	110	26	1
14,00	12	*73,07*	110	26	1
16,00	16	*87,27*	123	32	1
18,00	16	*100,97*	123	32	1
20,00	20	*125,22*	141	38	1
22,00	20	*201,73*	141	38	1
25,00	25	*240,46*	166	45	1

Bajo demanda / Sur commade / upon request

FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3113 HSSE DIN 844 N



Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	
4,00	6	*29,36*	63	11	1
5,00	6	*31,08*	68	13	1
6,00	6	*28,06*	68	13	1
8,00	10	*34,41*	88	19	1
10,00	12	*37,75*	95	22	1
12,00	12	*48,43*	110	26	1

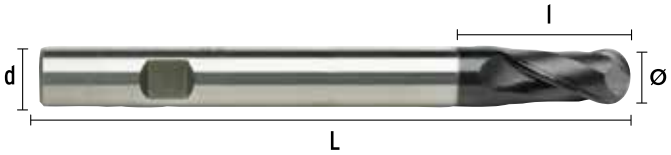
Ø mm	d mm	€	L mm	l mm	
14,00	12	*56,96*	110	26	1
16,00	16	*72,40*	123	32	1
18,00	16	*87,06*	123	32	1
20,00	20	*94,37*	141	38	1
22,00	20	*116,98*	141	38	1
25,00	25	*173,69*	166	45	1

3113/1 HSSE DIN 844 N



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2

Aplicaciones / Applications



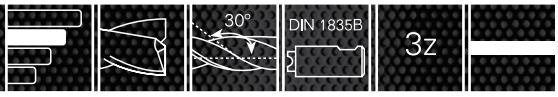
Ø mm	d mm	€	L mm	l mm	
4,00	6	*42,26*	63	11	1
5,00	6	*44,01*	68	13	1
6,00	6	*43,97*	68	13	1
8,00	10	*63,57*	88	19	1
10,00	10	*67,03*	95	22	1
12,00	12	*80,04*	110	26	1

Ø mm	d mm	€	L mm	l mm	
14,00	12	*86,58*	110	26	1
16,00	16	*111,37*	123	32	1
18,00	16	*130,47*	123	32	1
20,00	20	*156,36*	141	38	1
22,00	20	*233,06*	141	38	1
25,00	25	*285,00*	166	45	1

Bajo demanda / Sur commade / upon request

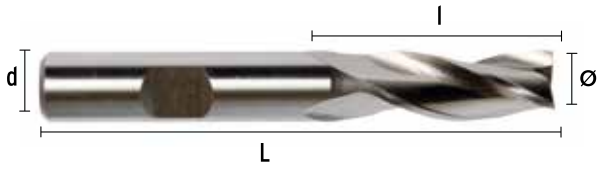
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3188 HSSE DIN 327 N



Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
3	3	6	*15,55*	52	8	1
4	3	6	*15,55*	55	11	1
5	3	6	*15,55*	57	13	1
6	3	6	*15,55*	57	13	1
7	3	10	*19,50*	66	16	1
8	3	10	*19,50*	69	19	1
9	3	10	*21,05*	69	22	1
10	3	10	*22,96*	72	22	1
11	3	12	*24,57*	79	22	1

Ø mm	Z	d mm	€	L mm	l mm	
12	3	12	*26,61*	83	26	1
13	3	12	*28,78*	83	26	1
14	3	12	*33,14*	83	26	1
15	3	12	*36,27*	83	26	1
16	3	16	*38,38*	92	32	1
18	3	16	*47,28*	92	32	1
20	3	20	*58,99*	104	38	1
22	3	20	*68,73*	104	38	1
25	3	25	*76,30*	121	45	1

3188/1 HSSE DIN 327 N

Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2

Aplicaciones / Applications

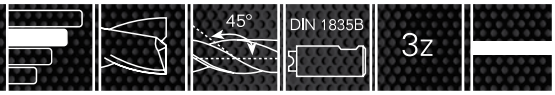


Ø mm	Z	d mm	€	L mm	l mm	
3	3	6	*27,99*	52	8	1
4	3	6	*27,99*	55	11	1
5	3	6	*27,99*	57	13	1
6	3	6	*31,06*	57	13	1
7	3	10	*39,46*	66	16	1
8	3	10	*39,34*	69	19	1
9	3	10	*41,14*	69	22	1
10	3	10	*42,93*	72	22	1
11	3	12	*44,53*	79	22	1

Ø mm	Z	d mm	€	L mm	l mm	
12	3	12	*57,74*	83	26	1
13	3	12	*31,13*	83	26	1
14	3	12	*64,55*	83	26	1
15	3	12	*67,68*	83	26	1
16	3	16	*76,65*	92	32	1
18	3	16	*89,88*	92	32	1
20	3	20	*120,46*	104	38	1
22	3	20	*183,91*	104	38	1
25	3	25	*192,62*	121	45	1

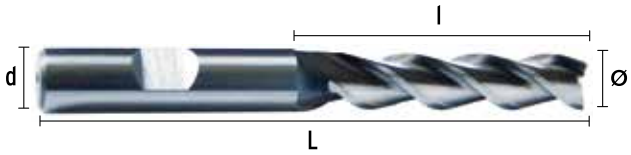
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3182 HSSE DIN 844 W



Aluminio **Aluminium**

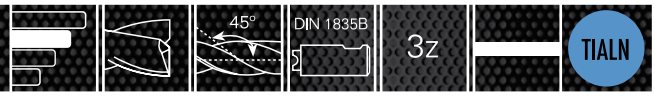
Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	z	
6,00	6	*20,69*	68	24	3	1
8,00	10	*26,37*	88	38	3	1
10,00	10	*31,00*	95	45	3	1
12,00	12	*37,19*	110	53	3	1

Ø mm	d mm	€	L mm	l mm	z	
14,00	12	*43,39*	110	53	3	1
16,00	16	*51,72*	123	63	3	1
18,00	16	*58,83*	123	63	3	1
20,00	20	*73,37*	141	75	3	1

3182/1 HSSE DIN 844 W



Aluminio **Aluminium**

Aplicaciones / Applications



Ø mm	d mm	€	L mm	l mm	z	
6,00	6	*28,50*	68	24	3	1
8,00	10	*36,78*	88	38	3	1
10,00	10	*44,03*	95	45	3	1
12,00	12	*52,83*	110	53	3	1

Ø mm	d mm	€	L mm	l mm	z	
14,00	12	*61,61*	110	53	3	1
16,00	16	*72,57*	123	63	3	1
18,00	16	*82,29*	123	63	3	1
20,00	20	*99,42*	141	75	3	1

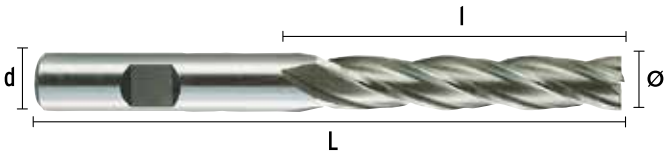
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3116 HSSE DIN 844 N

30° DIN 1835B Z ≥ 4

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2 INOX AL

Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
3,00	4	6	*17,35*	56	12	1
4,00	4	6	*17,35*	63	19	1
5,00	4	6	*17,35*	68	24	1
6,00	4	6	*17,35*	68	24	1
7,00	4	10	*26,31*	80	30	1
8,00	4	10	*24,17*	88	38	1
9,00	4	10	*27,21*	88	38	1
10,00	4	10	*23,95*	95	45	1

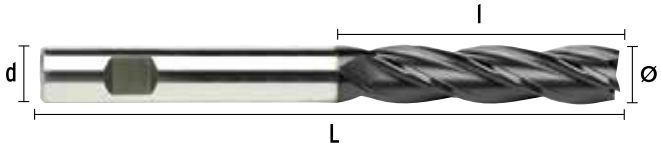
Ø mm	Z	d mm	€	L mm	l mm	
12,00	4	12	*30,36*	110	53	1
14,00	4	12	*39,71*	110	53	1
16,00	4	16	*43,44*	123	63	1
18,00	4	16	*53,05*	123	63	1
20,00	4	20	*62,12*	141	75	1
22,00	5	20	*86,15*	141	75	1
25,00	5	25	*114,28*	166	90	1

3116/1 HSSE DIN 844 N

30° DIN 1835B Z ≥ 4 TIALN

Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2 INOX AL

Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
6,00	4	6	*32,94*	68	24	1
7,00	4	10	*55,27*	80	30	1
8,00	4	10	*52,95*	88	38	1
9,00	4	10	*56,19*	88	38	1
10,00	4	10	*52,83*	95	45	1
12,00	4	12	*61,44*	110	53	1

Ø mm	Z	d mm	€	L mm	l mm	
14,00	4	12	*71,07*	110	53	1
16,00	4	16	*81,55*	123	63	1
18,00	4	16	*113,83*	123	63	1
20,00	4	20	*123,13*	141	75	1
22,00	5	20	*201,33*	141	75	1
25,00	5	25	*230,29*	166	90	1

Bajo demanda / Sur commade / upon request

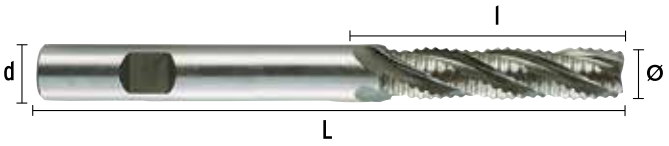
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3118 HSSE DIN 844 NR

30° DIN 1835B Z ≥ 4

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm²

Aplicaciones / Applications



Ø mm	Z	d mm	€	L mm	l mm	
6,00	4	6	*51,46*	68	24	1
8,00	4	10	*68,03*	88	38	1
10,00	4	10	*46,69*	95	45	1
12,00	4	12	*55,31*	110	53	1
14,00	4	12	*63,92*	110	53	1
16,00	4	16	*74,80*	123	63	1
18,00	4	16	*84,36*	123	63	1

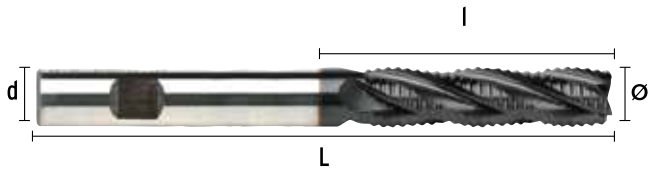
Ø mm	Z	d mm	€	L mm	l mm	
20,00	4	20	*106,09*	141	75	1
22,00	5	20	*129,26*	141	75	1
25,00	5	25	*163,23*	166	90	1
28,00	5	25	*185,02*	166	90	1
30,00	5	25	*247,89*	166	90	1
32,00	6	32	*234,93*	186	106	1

3118/1 HSSE DIN 844 NR

30° DIN 1835B Z ≥ 4 TIALN

Aceros 1100 - 1400 N/mm² Aciers / Steel 1100 N/mm²

Aplicaciones / Applications



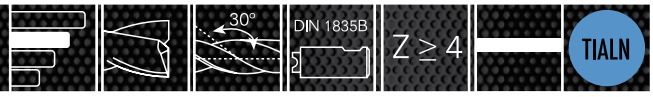
Ø mm	Z	d mm	€	L mm	l mm	
6,00	4	6	*68,08*	68	24	1
8,00	4	10	*98,18*	88	38	1
10,00	4	10	*74,06*	95	45	1
12,00	4	12	*87,13*	110	53	1
14,00	4	12	*96,00*	110	53	1
16,00	4	16	*113,84*	123	63	1
18,00	4	16	*146,02*	123	63	1

Ø mm	Z	d mm	€	L mm	l mm	
20,00	4	20	*168,44*	141	75	1
22,00	5	20	*245,68*	141	75	1
25,00	5	25	*280,69*	166	90	1
28,00	5	25	*349,86*	166	90	1
30,00	5	25	*414,57*	166	90	1
32,00	6	32	*401,23*	186	106	1

Bajo demanda / Sur commade / upon request

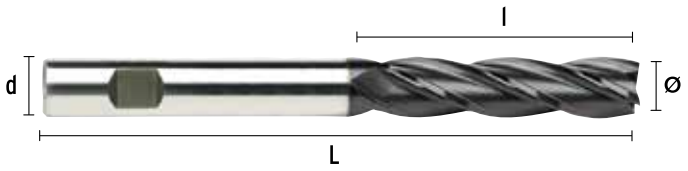
FRESAS MANGO CILÍNDRICO
FRAISES QUEUE CYLINDRIQUE / STRAIGHT SHANK MILLS

3163 HSSE-PM DIN 844 N



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm²

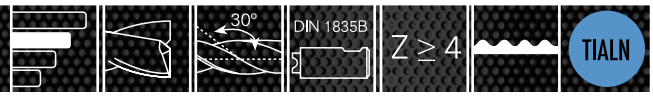
Aplicaciones / Applications



Ø mm	d mm	L mm	l mm	€	Z	
6,00	6	68	24	*33,64*	4	1
8,00	10	88	38	*42,01*	4	1
10,00	10	95	45	*49,76*	4	1
12,00	12	110	53	*59,49*	4	1

Ø mm	d mm	L mm	l mm	€	Z	
14,00	12	110	53	*69,21*	4	1
16,00	16	123	63	*82,05*	4	1
18,00	16	123	63	*99,84*	4	1
20,00	20	141	75	*123,08*	4	1

3158 HSSE-PM DIN 844 NR



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm²

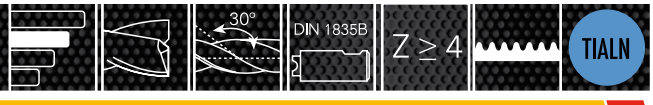
Aplicaciones / Applications



Ø mm	d mm	L mm	l mm	€	Z	
6,00	6	68	24	*73,01*	4	1
8,00	10	88	38	*76,27*	4	1
10,00	10	95	45	*69,46*	4	1
12,00	12	110	53	*87,06*	4	1
14,00	12	110	53	*99,32*	4	1

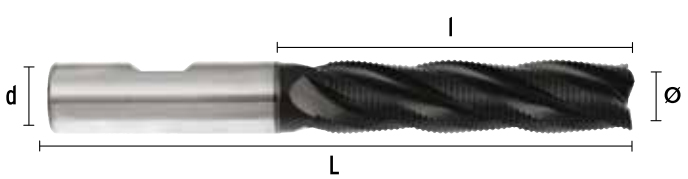
Ø mm	d mm	L mm	l mm	€	Z	
16,00	16	123	63	*122,72*	4	1
18,00	16	123	63	*138,27*	4	1
20,00	20	141	75	*176,98*	4	1
25,00	25	166	90	*271,94*	5	1
32,00	32	186	106	*386,82*	6	1

3160 HSSE-PM DIN 844 NRF



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm²

Aplicaciones / Applications

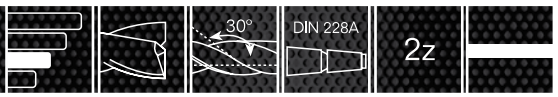


Ø mm	d mm	L mm	l mm	€	Z	
6,00	6	68	24	*80,38*	4	1
8,00	10	88	38	*83,87*	4	1
10,00	10	95	45	*76,14*	4	1
12,00	12	110	53	*95,64*	4	1

Ø mm	d mm	L mm	l mm	€	Z	
14,00	12	110	53	*109,23*	4	1
16,00	16	123	63	*134,75*	4	1
18,00	16	123	63	*151,83*	4	1
20,00	20	141	75	*194,67*	4	1

FRESAS MANGO CÓNICO
FRAISES QUEUE CONIQUE / TAPERED SHANK MILLS

3144 HSSE DIN 326 N



Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

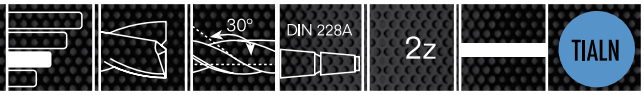
Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	2	*76,53*	85	14	1
2	14,00	2	*78,78*	100	16	1
2	16,00	2	*83,88*	105	18	1
2	18,00	2	*93,51*	110	20	1
2	20,00	2	*102,28*	115	20	1
2	22,00	2	*122,99*	120	22	1
3	24,00	2	*137,97*	140	25	1

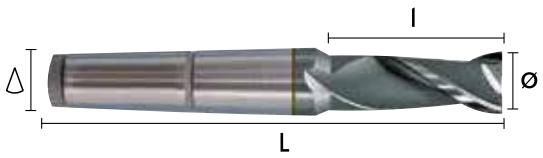
Δ	Ø mm	Z	€	L mm	l mm	
3	25,00	2	*147,37*	140	25	1
3	28,00	2	*175,15*	145	28	1
3	30,00	2	*186,76*	150	30	1
4	32,00	2	*211,40*	175	32	1
4	36,00	2	*267,21*	175	35	1
4	40,00	2	*325,03*	180	38	1

3144/1 HSSE DIN 326 N



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2

Aplicaciones / Applications



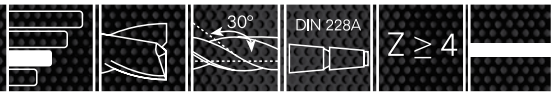
Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	2	*93,87*	85	14	1
2	14,00	2	*96,13*	100	16	1
2	16,00	2	*105,02*	105	18	1
2	18,00	2	*116,95*	110	20	1
2	20,00	2	*125,73*	115	20	1
2	22,00	2	*187,60*	120	22	1
3	24,00	2	*202,58*	140	25	1

Δ	Ø mm	Z	€	L mm	l mm	
3	25,00	2	*211,98*	140	25	1
3	28,00	2	*266,54*	145	28	1
3	30,00	2	*278,15*	150	30	1
4	32,00	2	*302,79*	175	32	1
4	36,00	2	*369,63*	175	35	1
4	40,00	2	*461,63*	180	38	1

Bajo demanda / Sur commade / upon request

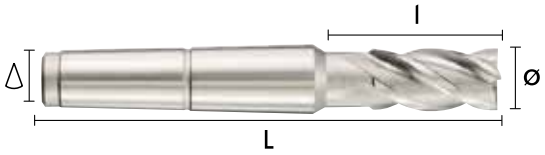
FRESAS MANGO CÓNICO
FRAISES QUEUE CONIQUE / TAPERED SHANK MILLS

3145 HSSE DIN 845 N



Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

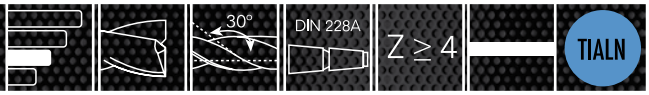
Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	4	*75,67*	96	26	1
2	14,00	4	*83,58*	111	26	1
2	16,00	4	*83,58*	117	32	1
2	18,00	4	*90,35*	117	32	1
2	20,00	4	*99,65*	123	38	1
2	22,00	4	*114,06*	123	38	1
3	24,00	5	*161,50*	147	45	1
3	25,00	5	*151,32*	147	45	1

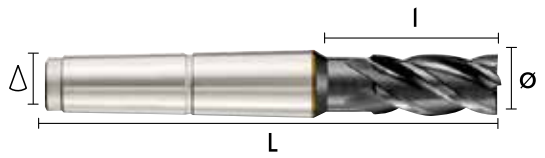
Δ	Ø mm	Z	€	L mm	l mm	
3	26,00	5	*171,35*	147	45	1
3	28,00	5	*172,47*	147	45	1
3	30,00	6	*188,30*	147	45	1
3	32,00	6	*248,14*	178	53	1
4	36,00	6	*283,98*	178	53	1
4	40,00	6	*342,42*	188	63	1
5	50,00	6	*515,71*	233	75	1

3145/1 HSSE DIN 845 N



Aceros 1100 - 1400 N/mm² — Aciers / Steel — 1100 N/mm2

Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	4	*93,01*	96	26	1
2	14,00	4	*100,92*	111	26	1
2	16,00	4	*104,71*	117	32	1
2	18,00	4	*113,81*	117	32	1
2	20,00	4	*123,09*	123	38	1
2	22,00	4	*178,67*	123	38	1
3	24,00	5	*226,11*	147	45	1
3	25,00	5	*215,92*	147	45	1

Δ	Ø mm	Z	€	L mm	l mm	
3	26,00	5	*262,75*	147	45	1
3	28,00	5	*263,88*	147	45	1
3	30,00	6	*279,69*	147	45	1
3	32,00	6	*339,54*	178	53	1
4	36,00	6	*386,40*	178	53	1
4	40,00	6	*479,00*	188	63	1
5	50,00	6	*652,30*	233	75	1

Bajo demanda / Sur commade / upon request

FRESAS MANGO CÓNICO
FRAISES QUEUE CONIQUE / TAPERED SHANK MILLS

3146 HSSE DIN 845 NR

30° DIN 228A Z ≥ 4

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2

Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	4	*98,62*	96	26	1
2	14,00	4	*99,56*	111	26	1
2	16,00	4	*107,85*	117	32	1
2	18,00	4	*113,42*	117	32	1
2	20,00	4	*125,42*	123	38	1
2	22,00	5	*159,92*	123	38	1
3	25,00	5	*186,12*	147	45	1

Δ	Ø mm	Z	€	L mm	l mm	
3	28,00	5	*209,52*	147	45	1
3	30,00	5	*227,09*	147	45	1
4	32,00	6	*253,60*	201	53	1
4	36,00	6	*285,00*	201	53	1
4	40,00	6	*326,01*	211	63	1
5	50,00	8	*466,19*	261	75	1

3146/1 HSSE DIN 845 NR

30° DIN 228A Z ≥ 4 TIALN

Aceros 1100 - 1400 N/mm² Aciers / Steel 1100 N/mm2

Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	4	*115,95*	96	26	1
2	14,00	4	*116,89*	111	26	1
2	16,00	4	*128,97*	117	32	1
2	18,00	4	*136,89*	117	32	1
2	20,00	4	*148,87*	123	38	1
2	22,00	5	*224,52*	123	38	1
3	25,00	5	*250,73*	147	45	1

Δ	Ø mm	Z	€	L mm	l mm	
3	28,00	5	*274,12*	147	45	1
3	30,00	5	*318,49*	147	45	1
4	32,00	6	*345,00*	178	53	1
4	36,00	6	*376,39*	178	53	1
4	40,00	6	*417,41*	188	63	1
4	50,00	8	*568,62*	233	75	1

Bajo demanda / Sur commade / upon request

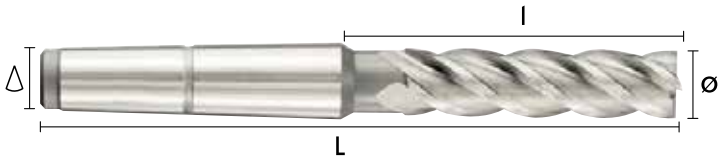
FRESAS MANGO CÓNICO
FRAISES QUEUE CONIQUE / TAPERED SHANK MILLS

3147 HSSE DIN 845 N

30° DIN 228A Z ≥ 4

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm²

Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	4	*86,94*	138	53	1
2	14,00	4	*91,49*	138	53	1
2	16,00	4	*99,65*	148	63	1
2	18,00	4	*112,90*	148	63	1
2	20,00	4	*161,50*	160	75	1
3	22,00	5	*172,47*	160	75	1
3	25,00	5	*189,70*	192	90	1

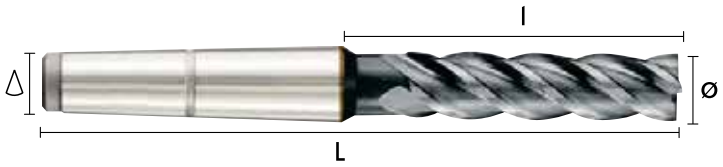
Δ	Ø mm	Z	€	L mm	l mm	
3	28,00	5	*210,87*	192	90	1
3	30,00	6	*270,14*	192	90	1
4	32,00	6	*289,34*	210	106	1
4	36,00	6	*347,49*	231	106	1
4	40,00	6	*398,00*	250	125	1
4	50,00	6	*612,83*	308	150	1

3147/1 HSSE DIN 845 N

30° DIN 228A Z ≥ 4 TIALN

Aceros 1100 - 1400 N/mm² Aciers / Steel 1100 N/mm²

Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
1	12,00	4	*112,95*	123	53	1
2	14,00	4	*117,48*	138	53	1
2	16,00	4	*134,90*	148	63	1
2	18,00	4	*163,84*	148	63	1
2	20,00	4	*212,44*	160	75	1
3	22,00	5	*269,40*	160	75	1
3	25,00	5	*286,63*	192	90	1

Δ	Ø mm	Z	€	L mm	l mm	
3	28,00	5	*347,97*	192	90	1
3	30,00	5	*407,24*	192	90	1
4	32,00	6	*426,44*	231	106	1
4	36,00	6	*501,12*	231	106	1
4	40,00	6	*602,90*	250	125	1
4	50,00	6	*817,74*	308	150	1

Bajo demanda / Sur commade / upon request

FRESAS MANGO CÓNICO
FRAISES QUEUE CONIQUE / TAPERED SHANK MILLS

3148 HSSE DIN 845 NR

30° DIN 228A Z ≥ 4

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2

Aplicaciones / Applications



Δ	Ø mm	Z	€	L mm	l mm	
2	16,00*	4	*144,51*	148	63	1
2	18,00*	4	*153,78*	148	63	1
2	20,00	4	*160,86*	160	75	1
2	22,00	5	*218,46*	160	75	1
3	25,00	5	*252,97*	192	90	1
3	28,00	5	*283,47*	192	90	1

Δ	Ø mm	Z	€	L mm	l mm	
3	30,00	5	*319,84*	192	90	1
4	32,00	6	*346,00*	254	106	1
4	36,00	6	*379,30*	254	106	1
4	40,00	6	*484,65*	273	125	1
5	50,00	8	*731,75*	336	150	1

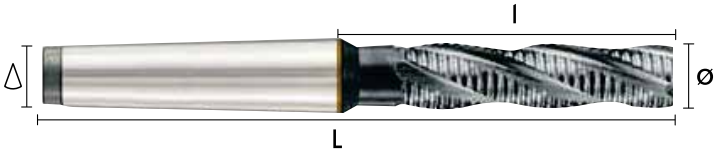
* Hasta fin de existencias / Jusqu'à epuisement des stocks / Until end of stock

3148/1 HSSE DIN 845 NR

30° DIN 228A Z ≥ 4 TIALN

Aceros 1100 - 1400 N/mm² Aciers / Steel 1100 N/mm2

Aplicaciones / Applications



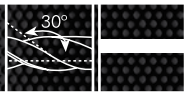
Δ	Ø mm	Z	€	L mm	l mm	
2	20,00	4	*211,81*	160	75	1
2	22,00	5	*315,37*	160	75	1
3	25,00	5	*349,88*	192	90	1
3	28,00	5	*420,55*	192	90	1
3	30,00	5	*456,93*	192	90	1

Δ	Ø mm	Z	€	L mm	l mm	
4	32,00	6	*483,09*	254	106	1
4	36,00	6	*532,95*	254	106	1
4	40,00	6	*689,54*	273	125	1
5	50,00	8	*936,64*	336	150	1

Bajo demanda / Sur commade / upon request

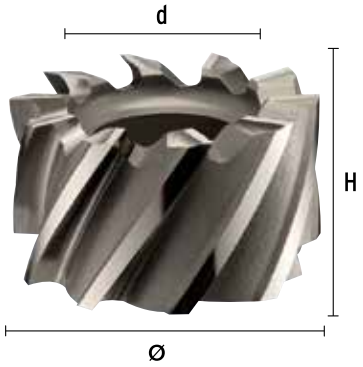
FRESAS CON AGUJERO
FRAISES À TROU / MILLS WITH HOLES

3149 HSSE DIN 1880 N



Aceros 800 - 1100 N/mm² — Aciers / Steel

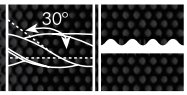
Aplicaciones / Applications



Ø mm	Z	d mm	€	H mm	
40,00	6	16	*130,14*	32	1
50,00	8	22	*165,59*	36	1

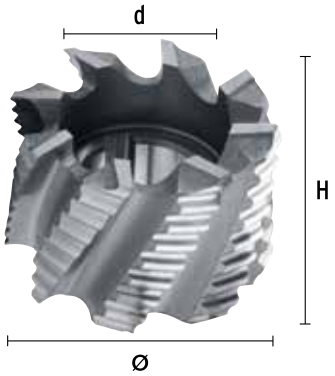
Ø mm	Z	d mm	€	H mm	
63,00	8	27	*225,03*	40	1
80,00	10	27	*330,18*	45	1

3150 HSSE DIN 1880 NR



Aceros 800 - 1100 N/mm² — Aciers / Steel

Aplicaciones / Applications

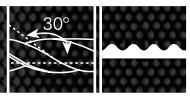


Ø mm	Z	d mm	€	H mm	
40,00	6	16	*195,90*	32	1
50,00	6	22	*243,46*	36	1

Ø mm	Z	d mm	€	H mm	
63,00	8	27	*308,87*	40	1
80,00	8	27	*429,48*	45	1

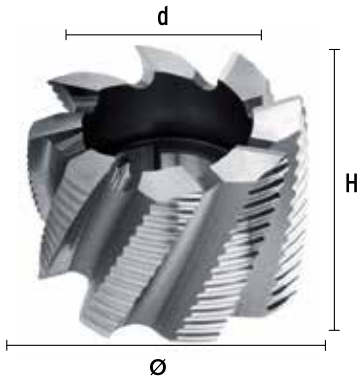
FRESAS CON AGUJERO
FRAISES À TROU / MILLS WITH HOLES

3165 HSSE DIN 1880 NRF



Aceros 800 - 1100 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø mm	Z	d mm	€	H mm	
40,00	8	16	*238,48*	32	1
50,00	8	22	*296,35*	36	1

Ø mm	Z	d mm	€	H mm	
63,00	10	27	*383,27*	40	1
80,00	10	27	*575,81*	45	1

3151 HSSE DIN 885 B

Aceros 800 - 1100 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø mm	Z	d mm	€	e mm	
63,00	18	22	*147,17*	4	1
63,00	18	22	*138,95*	5	1
63,00	18	22	*131,80*	6	1
63,00	18	22	*140,58*	8	1
63,00	18	22	*148,26*	10	1
80,00	20	27	*131,19*	4	1
80,00	20	27	*165,83*	5	1
80,00	20	27	*169,19*	6	1
80,00	20	27	*173,53*	8	1
80,00	20	27	*190,02*	10	1
80,00	20	27	*208,68*	12	1

Ø mm	Z	d mm	€	e mm	
100,00	24	32	*202,09*	6	1
100,00	24	32	*221,85*	8	1
100,00	24	32	*244,92*	10	1
100,00	24	32	*271,29*	12	1
100,00	24	32	*314,12*	14	1
125,00	24	32	*316,31*	6	1
125,00	24	32	*326,19*	8	1
125,00	24	32	*342,67*	10	1
125,00	24	32	*398,67*	12	1
125,00	24	32	*422,85*	14	1
125,00	24	32	*369,26*	16	1

FRESAS CON AGUJERO
FRAISES À TROU / MILLS WITH HOLES

3161 HSSE DIN 885 A

Aceros 800 - 1100 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø mm	Z	d mm	€	e mm	
63,00	18	22	*112,59*	4	1
63,00	18	22	*116,03*	5	1
63,00	18	22	*120,93*	6	1
63,00	18	22	*130,16*	8	1
63,00	18	22	*145,31*	10	1
80,00	20	27	*140,00*	4	1
80,00	20	27	*145,93*	5	1
80,00	20	27	*154,02*	6	1
80,00	20	27	*163,47*	8	1
80,00	18	27	*167,59*	10	1
80,00	18	27	*188,75*	12	1

Ø mm	Z	d mm	€	e mm	
100,00	20	32	*182,77*	6	1
100,00	20	32	*203,01*	8	1
100,00	20	32	*235,35*	10	1
100,00	20	32	*253,77*	12	1
100,00	20	32	*283,11*	14	1
125,00	24	32	*215,85*	6	1
125,00	24	32	*257,01*	8	1
125,00	24	32	*281,69*	10	1
125,00	24	32	*335,97*	12	1
125,00	24	32	*378,58*	14	1
125,00	24	32	*392,47*	16	1

3166 HSSE DIN 1834 A

Aceros 800 - 1100 N/mm² — Aciers / Steel

Aplicaciones / Applications



Ø mm	Z	d mm	€	e mm	
50,00	24	16	*136,29*	1,6	1
50,00	24	16	*132,52*	2	1
50,00	24	16	*134,78*	2,5	1
50,00	24	16	*137,05*	3	1
63,00	28	22	*144,41*	4	1
63,00	28	22	*152,20*	5	1
63,00	28	22	*167,08*	6	1
80,00	32	27	*152,39*	1,6	1
80,00	32	27	*148,03*	2	1
80,00	32	27	*150,50*	2,5	1
80,00	32	27	*154,65*	3	1
80,00	32	27	*165,72*	4	1
80,00	32	27	*185,67*	5	1
80,00	32	27	*196,98*	6	1
100,00	36	32	*182,30*	1,6	1
100,00	36	32	*181,30*	2	1

Ø mm	Z	d mm	€	e mm	
100,00	36	32	*181,16*	2,5	1
100,00	36	32	*184,41*	3	1
100,00	36	32	*198,83*	4	1
100,00	36	32	*210,76*	5	1
100,00	36	32	*236,80*	6	1
100,00	28	32	*261,74*	8	1
125,00	40	32	*230,56*	1,6	1
125,00	40	32	*221,75*	2	1
125,00	40	32	*227,78*	2,5	1
125,00	40	32	*232,79*	3	1
125,00	40	32	*249,40*	4	1
125,00	40	32	*266,96*	5	1
125,00	40	32	*286,84*	6	1
125,00	40	32	*335,33*	8	1
125,00	40	32	*371,67*	10	1

3152 HSS DIN 850 D

DIN 1835B

Tol
D (h11)
d (h8)
l (e8)

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

Aplicaciones / Applications



Ø mm	d mm	L mm	l mm	€	Z	
4,50	6	50	1,00	*52,77*	6	1
7,50	6	50	1,50	*54,93*	6	1
7,50	6	50	2,00	*54,93*	6	1
10,50	6	50	2,00	*59,12*	6	1
10,50	6	50	2,50	*59,12*	6	1
10,50	6	50	3,00	*59,12*	6	1
13,50	10	56	3,00	*60,06*	6	1
13,50	10	56	4,00	*60,06*	6	1
16,50	10	56	3,00	*60,61*	6	1
16,50	10	56	4,00	*60,61*	6	1
16,50	10	56	5,00	*60,61*	6	1
19,50	10	63	4,00	*69,00*	8	1
19,50	10	63	5,00	*69,00*	8	1

Ø mm	d mm	L mm	l mm	€	Z	
19,50	10	63	6,00	*69,00*	8	1
22,50	10	63	5,00	*75,85*	8	1
22,50	10	63	6,00	*75,85*	8	1
22,50	10	63	8,00	*75,85*	8	1
25,50	10	63	6,00	*88,48*	10	1
28,50	10	63	6,00	*90,04*	10	1
28,50	10	63	8,00	*90,04*	10	1
28,50	12	71	10,00	*90,04*	10	1
32,50	12	71	7,00	*111,55*	10	1
32,50	12	71	8,00	*111,55*	10	1
32,50	12	71	10,00	*111,55*	10	1
45,50	12	71	10,00	*176,61*	12	1

3153 HSS DIN 851 N

DIN 1835B — **ISO 3337**

Tol
D (d11)
d (h8)
l (d11)

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

Aplicaciones / Applications



Ø mm	d mm	L mm	l mm	€	Z	
11,00	10	53,50	4	*96,99*	6	1
12,50	10	57	6	*100,83*	6	1
16,00	10	62	8	*110,89*	6	1
18,00	12	70	8	*116,76*	8	1

Ø mm	d mm	L mm	l mm	€	Z	
21,00	12	74	9	*128,65*	6	1
25,00	16	82	11	*145,17*	8	1
32,00	16	90	14	*182,62*	8	1
40,00	25	108	18	*253,45*	10	1

3154 HSS DIN 851 N

DIN 228A | ISO 1641 | Tol D (d11) l (d11)

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm²

Aplicaciones / Applications



Δ	Ø mm	L mm	l mm	€	Z	
1	18,00	82	8	*129,65*	8	1
2	21,00	102	9	*142,93*	8	1
2	25,00	104	11	*148,16*	8	1
2	32,00	111	14	*220,07*	8	1

Δ	Ø mm	L mm	l mm	€	Z	
3	40,00	138	18	*290,02*	8	1
4	50,00	173	22	*352,19*	8	1
4	60,00	188	28	*508,85*	10	1
5	72,00	229	35	*662,83*	10	1

3155 HSS DIN 1833 A

DIN 1835B | ISO 3859 | Tol D (js16) d (h8)

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm²

Aplicaciones / Applications



Ø mm	d mm	Ang º	L mm	l mm	€	Z	
16,00	12	45	60	4,00	*98,44*	8	1
20,00	12	45	63	5,00	*104,73*	8	1
25,00	12	45	67	6,30	*127,69*	10	1
32,00	16	45	71	8,00	*142,47*	12	1

Ø mm	d mm	Ang º	L mm	l mm	€	Z	
16,00	12	60	60	6,30	*98,44*	8	1
20,00	12	60	63	8,00	*104,73*	8	1
25,00	12	60	67	10,00	*127,69*	10	1
32,00	16	60	71	12,50	*142,47*	12	1

3156 HSS DIN 1833 B

DIN 1835B | ISO 3859 | Tol D (js16) d (h8)

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

Aplicaciones / Applications



Ø mm	d mm	Ang º	L mm	l mm	€	Z	
16,00	12	45	60	4,00	*79,25*	10	1
20,00	12	45	63	5,00	*89,15*	10	1
25,00	12	45	67	6,30	*100,24*	10	1
32,00	16	45	71	8,00	*113,98*	12	1

Ø mm	d mm	Ang º	L mm	l mm	€	Z	
16,00	12	60	60	6,30	*79,25*	10	1
20,00	12	60	63	8,00	*89,15*	10	1
25,00	12	60	67	10,00	*100,24*	10	1
32,00	16	60	71	12,50	*113,98*	12	1

3164 HSSE DIN 6518 N

DIN 1835B | Tol R (H11) d2 (h6)

Aceros 800 - 1100 N/mm² — Aciers / Steel — 800 N/mm2

Aplicaciones / Applications



Ø mm	Radio mm	d mm	L mm	€	Z	
8,00	1,00	10	60	*66,83*	4	1
9,20	1,60	10	60	*72,96*	4	1
10,00	2,00	10	60	*72,96*	4	1
11,00	2,50	10	60	*72,96*	4	1
12,00	3,00	12	60	*75,86*	4	1
14,00	4,00	12	60	*82,09*	4	1
16,00	5,00	12	60	*88,00*	4	1
20,00	6,00	16	67	*92,76*	4	1
22,00	7,00	16	71	*113,91*	4	1
24,00	8,00	16	71	*113,91*	4	1

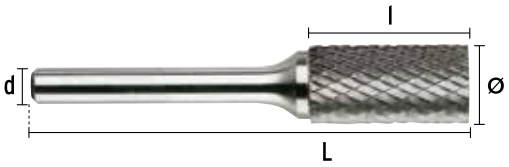
Ø mm	Radio mm	d mm	L mm	€	Z	
26,00	9,00	25	85	*137,13*	4	1
28,00	10,00	25	85	*137,13*	4	1
32,00	11,00	25	90	*151,43*	4	1
34,00	12,00	25	90	*151,43*	4	1
42,00	13,00	25	100	*212,04*	6	1
44,00	14,00	25	100	*212,04*	6	1
46,00	15,00	25	100	*242,49*	6	1
48,00	16,00	25	100	*242,49*	6	1
52,00	18,00	32	112	*273,57*	6	1
56,00	20,00	32	112	*303,86*	6	1

FRESAS ROTATIVAS METAL DURO
FRAISES ROTATIVES CARBURE / HARD METAL ROTARY MILLS

3201 Cilíndrica / Cylindrique / Straight

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F AL

Aplicaciones / Applications



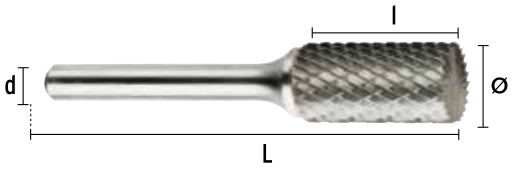
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*11,77*	*12,95*		38	13	1
4,00	4	*19,62*	*21,58*		50	13	1
6,00	6	*23,03*	*25,33*		50	19	1
8,00	6	*28,92*	*31,81*		65	19	1

Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*32,33*	*35,56*	*35,74*	65	19	1
12,00	6	*46,31*	*50,94*	*50,32*	70	25	1
16,00	6	*58,27*	*64,10*	*72,93*	70	25	1

3202 Cilíndrica con corte / Cylindrique taillée / Straight with cut

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F AL

Aplicaciones / Applications



Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*12,79*	*14,07*		38	13	1
4,00	4	*23,47*	*25,81*		50	13	1
6,00	6	*25,51*	*28,06*		50	19	1
8,00	6	*32,33*	*35,56*		65	19	1

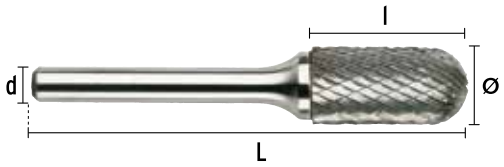
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*35,57*	*39,12*	*42,56*	65	19	1
12,00	6	*51,09*	*56,20*	*63,03*	70	25	1
16,00	6	*68,15*	*74,97*	*83,16*	70	25	1

FRESAS ROTATIVAS METAL DURO
FRAISES ROTATIVES CARBURE / HARD METAL ROTARY MILLS

3203 Cilíndrica radio / Cylindrique à rayon / Straight radius

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F AL

Aplicaciones / Applications



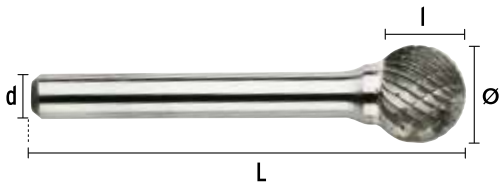
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*13,14*	*14,45*		38	13	1
6,00	3	*21,33*	*23,46*		50	13	1
6,00	6	*26,01*	*28,61*		50	19	1
8,00	6	*30,71*	*33,78*		65	19	1

Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*34,11*	*37,53*	*41,29*	65	19	1
12,00	6	*52,02*	*57,22*	*64,87*	70	25	1
16,00	6	*64,74*	*71,22*	*87,84*	70	25	1

3204 Esférica / Sphérique / Spherical

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F AL

Aplicaciones / Applications



Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*13,40*	*14,74*		38	2,50	1
6,00	3	*20,18*	*22,20*		44	5,00	1
6,00	6	*23,81*	*26,19*		50	5,00	1
8,00	6	*26,44*	*29,08*		51	6,40	1

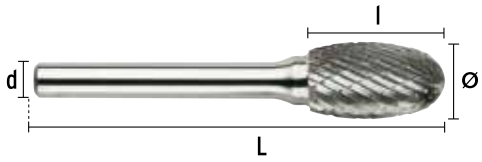
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*27,10*	*29,81*	*37,11*	53	8,00	1
12,00	6	*36,54*	*40,19*	*47,69*	56	11,00	1
16,00	6	*49,40*	*54,34*	*59,63*	59	14,00	1
19,00	6	*65,67*	*72,24*		61	16,00	1

FRESAS ROTATIVAS METAL DURO
FRAISES ROTATIVES CARBURE / HARD METAL ROTARY MILLS

3205 Oval / Ovale

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 AL

Aplicaciones / Applications



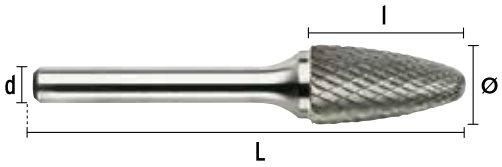
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*17,80*	*17,80*		38	6	1
6,00	3	*23,46*	*23,46*		47	10	1
8,00	6	*41,70*	*41,70*		58	13	1

Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*32,96*	*55,34*		60	16	1
12,00	6	*44,27*	*72,53*		67	22	1
16,00	6	*66,44*	*160,80*		70	25	1

3206 Árbol con radio / Arbre à rayon / Arc with radius

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F AL

Aplicaciones / Applications



Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*16,18*	*17,80*		38	13	1
6,00	3	*21,33*	*23,46*		50	13	1
10,00	6	*37,91*	*41,70*	*42,56*	65	19	1

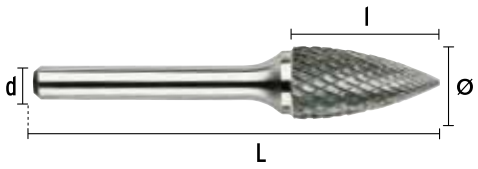
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
12,00	6	*50,31*	*55,34*	*61,16*	70	25	1
16,00	6	*65,94*	*72,53*	*85,22*	70	25	1

FRESAS ROTATIVAS METAL DURO
FRAISES ROTATIVES CARBURE / HARD METAL ROTARY MILLS

3207 Árbol / Arbre / Arc

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F

Aplicaciones / Applications



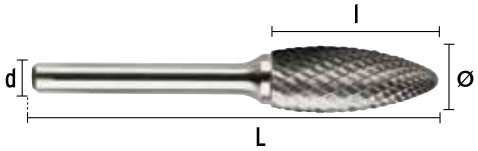
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*15,28*	*16,80*		38	13	1
6,00	3	*22,11*	*24,32*		50	13	1
6,00	6	*27,21*	*29,93*		50	16	1

Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*36,66*	*40,33*		65	19	1
12,00	6	*46,91*	*51,60*		70	25	1
16,00	6	*65,20*	*71,72*		70	25	1

3208 Llama / Flamme / Flame

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F

Aplicaciones / Applications



Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*16,56*	*18,21*		38	6	1
6,00	6	*28,15*	*30,96*		50	13	1

Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
8,00	6	*32,29*	*35,52*		65	19	1
12,00	6	*65,42*	*71,96*		77	32	1

FRESAS ROTATIVAS METAL DURO
FRAISES ROTATIVES CARBURE / HARD METAL ROTARY MILLS

3209 Cónica / Conique / Tapered

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F

Aplicaciones / Applications



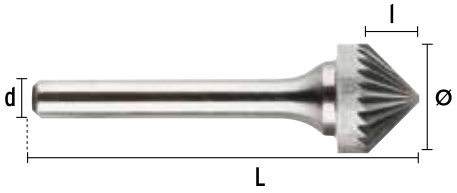
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*14,83*	*16,31*		38	11	1
6,00	6	*24,02*	*26,42*		50	19	1

Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*32,29*	*35,52*		61	16	1
12,00	6	*45,53*	*50,09*		67	25	1

3210 Cónica 90º / Conique 90º / Tapered 90º

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F

Aplicaciones / Applications



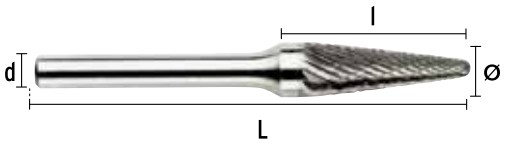
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*28,61*	*31,48*		50	5	1
16,00	6	*46,29*	*50,92*		53	8	1

FRESAS ROTATIVAS METAL DURO
FRAISES ROTATIVES CARBURE / HARD METAL ROTARY MILLS

3211 Cónica radio / Conique à rayon / Tapered radius

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F AL

Aplicaciones / Applications



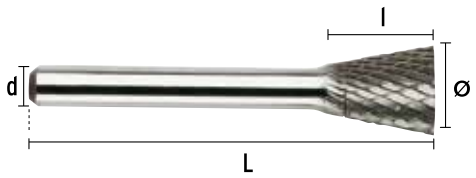
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*16,24*	*17,86*		38	10	1
6,00	6	*27,82*	*30,60*		50	16	1
10,00	6	*41,33*	*45,46*	*50,11*	72	27	1

Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
12,00	6	*48,93*	*53,82*	*59,21*	73	28	1
16,00	6	*77,76*	*85,53*	*119,01*	78	33	1

3212 Cono invertido / Cône inversé / Inverted taper

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F

Aplicaciones / Applications

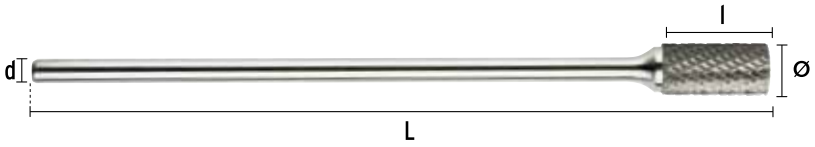


Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
3,00	3	*17,38*	*19,11*		38	4	1
6,00	6	*25,17*	*27,68*		50	8	1

3214 Cilíndrica L / Cylindrique L / Straight L

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F

Aplicaciones / Applications

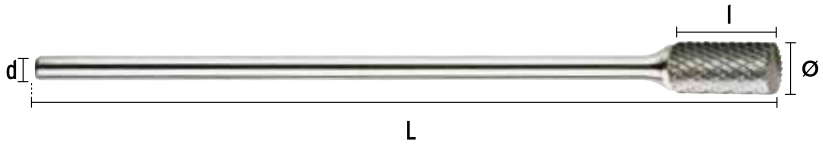


Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*41,33*	*45,46*		169	19	1

3215 Cilíndrica con corte L / Cylindrique taillée L / Straight with L cut

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm2 1400 N/mm2 F

Aplicaciones / Applications



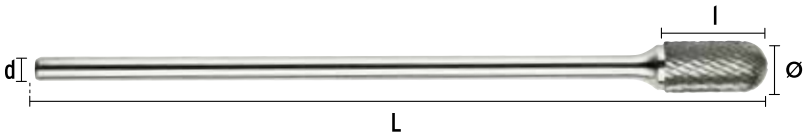
Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
6,00	6	*35,62*	*39,18*		162	16	1

FRESAS ROTATIVAS METAL DURO
FRAISES ROTATIVES CARBURE / HARD METAL ROTARY MILLS

3216 Cilíndrica radio L / Cylindrique à rayon L / Straight L radius

Aceros 800 - 1100 N/mm² Aciers / Steel 1400 N/mm² F

Aplicaciones / Applications

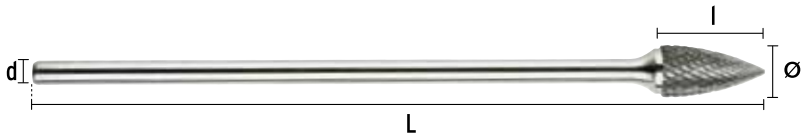


Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
10,00	6	*48,86*	*53,74*		169	19	1
12,00	6	*64,90*	*71,39*		175	25	1

3217 Árbol L / Arbre L / L Arc

Aceros 800 - 1100 N/mm² Aciers / Steel 800 N/mm² 1400 N/mm² F

Aplicaciones / Applications

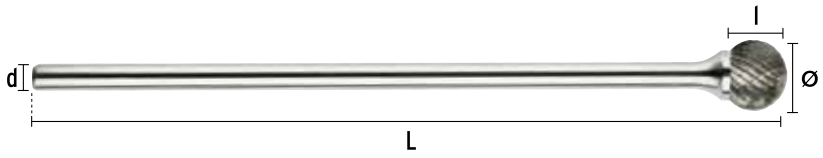


Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
12,00	6	*64,51*	*70,96*		175	25	1

3218 Esférica L / Sphérique L / L Spherical

Aceros 800 - 1100 N/mm² Aciers / Steel — 800 N/mm2 — 1400 N/mm2 — F

Aplicaciones / Applications

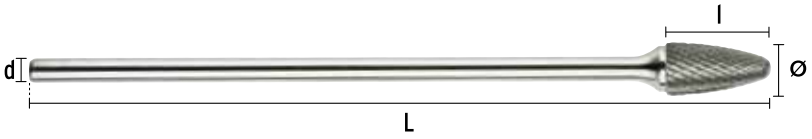


Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
12,00	6	*50,93*	*56,02*		161	11	1

3219 Árbol radio L / Arbre à rayon L / L Radius arc

Aceros 800 - 1100 N/mm² Aciers / Steel — 800 N/mm2 — 1400 N/mm2 — F

Aplicaciones / Applications



Ø mm	d mm	CRUZ €	DIAM €	ALU €	L mm	l mm	
12,00	6	*70,94*	*70,60*		175	25	1

FRESAS HUECAS MÁQUINAS ELECTROMAGNÉTICAS
FRAISES A TROU ELECTROMAGNETIQUES / ELECTROMAGNETICS HOLE SAWS

7172 HSS | L=30 | WELDON 19 | QUICK CHANGE

Aceros 400 - 800 N/mm² — Aciers / Steel F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
12,00	19	30	*31,50*	1
13,00	19	30	*31,50*	1
14,00	19	30	*32,31*	1
15,00	19	30	*33,63*	1
16,00	19	30	*34,81*	1
17,00	19	30	*36,13*	1
18,00	19	30	*40,63*	1
19,00	19	30	*41,44*	1
20,00	19	30	*43,13*	1
21,00	19	30	*46,19*	1
22,00	19	30	*48,19*	1
23,00	19	30	*49,88*	1
24,00	19	30	*51,75*	1
25,00	19	30	*53,50*	1
26,00	19	30	*55,00*	1
27,00	19	30	*59,31*	1
28,00	19	30	*59,38*	1
29,00	19	30	*61,56*	1
30,00	19	30	*63,13*	1
31,00	19	30	*68,88*	1
32,00	19	30	*77,50*	1
33,00	19	30	*78,56*	1
34,00	19	30	*91,56*	1
35,00	19	30	*100,94*	1
36,00	19	30	*103,44*	1

Ø mm	d mm	L mm	€	
37,00	19	30	*109,38*	1
38,00	19	30	*110,94*	1
39,00	19	30	*115,13*	1
40,00	19	30	*117,94*	1
41,00	19	30	*122,75*	1
42,00	19	30	*129,38*	1
43,00	19	30	*132,19*	1
44,00	19	30	*141,56*	1
45,00	19	30	*146,19*	1
46,00	19	30	*149,19*	1
47,00	19	30	*154,19*	1
48,00	19	30	*161,50*	1
49,00	19	30	*163,94*	1
50,00	19	30	*168,00*	1
51,00	19	30	*169,00*	1
52,00	19	30	*170,13*	1
53,00	19	30	*171,25*	1
54,00	19	30	*174,19*	1
55,00	19	30	*177,75*	1
56,00	19	30	*181,63*	1
57,00	19	30	*185,38*	1
58,00	19	30	*189,38*	1
59,00	19	30	*193,44*	1
60,00	19	30	*197,00*	1

FRESAS HUECAS MÁQUINAS ELECTROMAGNÉTICAS
FRAISES A TROU ELECTROMAGNETIQUES / ELECTROMAGNETICS HOLE SAWS

7172 HSS | L=50 | WELDON 19 | QUICK CHANGE

Aceros 400 - 800 N/mm² — **Aciers / Steel** F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
12,00	19	50	*48,81*	1
13,00	19	50	*49,81*	1
14,00	19	50	*52,06*	1
15,00	19	50	*52,38*	1
16,00	19	50	*52,56*	1
17,00	19	50	*54,06*	1
18,00	19	50	*59,94*	1
19,00	19	50	*61,81*	1
20,00	19	50	*64,75*	1
21,00	19	50	*69,38*	1
22,00	19	50	*71,69*	1
23,00	19	50	*76,44*	1
24,00	19	50	*78,88*	1
25,00	19	50	*79,13*	1
26,00	19	50	*81,19*	1
27,00	19	50	*84,94*	1
28,00	19	50	*88,63*	1
29,00	19	50	*92,31*	1
30,00	19	50	*96,38*	1
31,00	19	50	*101,06*	1
32,00	19	50	*105,69*	1
33,00	19	50	*110,94*	1
34,00	19	50	*115,13*	1
35,00	19	50	*119,88*	1
36,00	19	50	*125,38*	1

Ø mm	d mm	L mm	€	
37,00	19	50	*127,38*	1
38,00	19	50	*132,19*	1
39,00	19	50	*141,56*	1
40,00	19	50	*151,94*	1
41,00	19	50	*153,56*	1
42,00	19	50	*162,00*	1
43,00	19	50	*166,94*	1
44,00	19	50	*171,50*	1
45,00	19	50	*197,88*	1
46,00	19	50	*212,38*	1
47,00	19	50	*226,63*	1
48,00	19	50	*233,94*	1
49,00	19	50	*236,25*	1
50,00	19	50	*237,44*	1
51,00	19	50	*237,94*	1
52,00	19	50	*239,13*	1
53,00	19	50	*240,50*	1
54,00	19	50	*245,00*	1
55,00	19	50	*248,38*	1
56,00	19	50	*249,88*	1
57,00	19	50	*255,75*	1
58,00	19	50	*257,06*	1
59,00	19	50	*261,38*	1
60,00	19	50	*263,88*	1

FRESAS HUECAS MÁQUINAS ELECTROMAGNÉTICAS
FRAISES A TROU ELECTROMAGNETIQUES / ELECTROMAGNETICS HOLE SAWS

7137 HSSE | L=30 | WELDON 19 | QUICK CHANGE

Aceros 800 - 1100 N/mm² — Aciers / Steel F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
12,00	19	30	*43,29*	1
13,00	19	30	*43,29*	1
14,00	19	30	*43,29*	1
15,00	19	30	*49,93*	1
16,00	19	30	*53,12*	1
17,00	19	30	*54,60*	1
18,00	19	30	*57,68*	1
19,00	19	30	*60,99*	1
20,00	19	30	*64,07*	1
21,00	19	30	*67,41*	1
22,00	19	30	*70,49*	1
23,00	19	30	*72,71*	1
24,00	19	30	*75,80*	1
25,00	19	30	*79,11*	1
26,00	19	30	*80,86*	1
27,00	19	30	*82,29*	1
28,00	19	30	*85,21*	1
29,00	19	30	*88,39*	1
30,00	19	30	*91,31*	1
31,00	19	30	*103,05*	1
32,00	19	30	*106,24*	1
33,00	19	30	*120,67*	1
34,00	19	30	*124,17*	1
35,00	19	30	*127,96*	1
36,00	19	30	*131,47*	1

Ø mm	d mm	L mm	€	
37,00	19	30	*135,28*	1
38,00	19	30	*138,78*	1
39,00	19	30	*142,58*	1
40,00	19	30	*146,09*	1
41,00	19	30	*149,89*	1
42,00	19	30	*153,39*	1
43,00	19	30	*157,19*	1
44,00	19	30	*160,69*	1
45,00	19	30	*164,49*	1
46,00	19	30	*168,00*	1
47,00	19	30	*171,79*	1
48,00	19	30	*175,30*	1
49,00	19	30	*179,10*	1
50,00	19	30	*182,61*	1
55,00	19	30	*201,01*	1
60,00	19	30	*219,12*	1

FRESAS HUECAS MÁQUINAS ELECTROMAGNÉTICAS
FRAISES A TROU ELECTROMAGNETIQUES / ELECTROMAGNETICS HOLE SAWS

7137 **HSSE** L=50 WELDON 19 QUICK CHANGE

Aceros 800 - 1100 N/mm² Aciers / Steel F

Aplicaciones / Applications



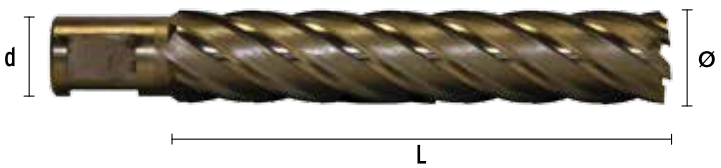
Ø mm	d mm	L mm	€	
12,00	19	50	*52,59*	1
13,00	19	50	*56,97*	1
14,00	19	50	*61,35*	1
15,00	19	50	*65,74*	1
16,00	19	50	*70,12*	1
17,00	19	50	*74,51*	1
18,00	19	50	*78,89*	1
19,00	19	50	*83,28*	1
20,00	19	50	*87,65*	1
21,00	19	50	*92,03*	1
22,00	19	50	*96,41*	1
23,00	19	50	*100,80*	1
24,00	19	50	*105,18*	1
25,00	19	50	*109,57*	1
26,00	19	50	*113,95*	1
27,00	19	50	*118,34*	1
28,00	19	50	*122,71*	1
29,00	19	50	*127,09*	1
30,00	19	50	*131,47*	1
31,00	19	50	*135,86*	1
32,00	19	50	*140,24*	1
33,00	19	50	*144,63*	1
34,00	19	50	*149,01*	1
35,00	19	50	*153,39*	1
36,00	19	50	*157,77*	1

Ø mm	d mm	L mm	€	
37,00	19	50	*162,15*	1
38,00	19	50	*166,53*	1
39,00	19	50	*170,92*	1
40,00	19	50	*175,30*	1
41,00	19	50	*179,69*	1
42,00	19	50	*184,07*	1
43,00	19	50	*188,45*	1
44,00	19	50	*192,83*	1
45,00	19	50	*197,21*	1
46,00	19	50	*201,59*	1
47,00	19	50	*205,98*	1
48,00	19	50	*210,36*	1
49,00	19	50	*214,75*	1
50,00	19	50	*219,12*	1
51,00	19	50	*223,51*	1
52,00	19	50	*227,89*	1
53,00	19	50	*232,27*	1
54,00	19	50	*236,65*	1
55,00	19	50	*241,04*	1
56,00	19	50	*245,42*	1
57,00	19	50	*249,81*	1
58,00	19	50	*254,18*	1
59,00	19	50	*258,57*	1
60,00	19	50	*262,95*	1

7137 **HSSE** L=110 WELDON 19 QUICK CHANGE

Aceros 800 - 1100 N/mm² Aciers / Steel F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
20,00	19	110	*139,13*	1
22,00	19	110	*145,09*	1
24,00	19	110	*153,18*	1
25,00	19	110	*158,99*	1
26,00	19	110	*173,10*	1
28,00	19	110	*186,98*	1

Ø mm	d mm	L mm	€	
30,00	19	110	*198,72*	1
32,00	19	110	*214,16*	1
35,00	19	110	*227,65*	1
40,00	19	110	*306,77*	1
45,00	19	110	*385,89*	1
50,00	19	110	*451,48*	1

FRESAS HUECAS MÁQUINAS ELECTROMAGNÉTICAS
FRAISES A TROU ELECTROMAGNETIQUES / ELECTROMAGNETICS HOLE SAWS

7138 HSSE | L=30 | WELDON 19 | QUICK CHANGE | TIALN

Aceros 1100 - 1400 N/mm² — Aciers / Steel | INOX | F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
12,00	19	30	*79,42*	1
13,00	19	30	*79,42*	1
14,00	19	30	*79,42*	1
15,00	19	30	*82,73*	1
16,00	19	30	*82,73*	1
17,00	19	30	*89,15*	1
18,00	19	30	*92,46*	1
19,00	19	30	*94,32*	1
20,00	19	30	*98,05*	1
21,00	19	30	*105,07*	1
22,00	19	30	*109,62*	1
23,00	19	30	*113,56*	1
24,00	19	30	*117,69*	1
25,00	19	30	*122,24*	1
26,00	19	30	*126,80*	1
27,00	19	30	*131,15*	1
28,00	19	30	*135,28*	1
29,00	19	30	*139,62*	1
30,00	19	30	*143,56*	1
31,00	19	30	*156,79*	1

Ø mm	d mm	L mm	€	
32,00	19	30	*167,97*	1
33,00	19	30	*178,72*	1
34,00	19	30	*189,67*	1
35,00	19	30	*196,09*	1
36,00	19	30	*206,43*	1
37,00	19	30	*223,39*	1
38,00	19	30	*233,73*	1
39,00	19	30	*244,07*	1
40,00	19	30	*252,35*	1

FRESAS HUECAS MÁQUINAS ELECTROMAGNÉTICAS
FRAISES A TROU ELECTROMAGNETIQUES / ELECTROMAGNETICS HOLE SAWS

7138 HSSE | L=50 | WELDON 19 | QUICK CHANGE | TIALN

Aceros 1100 - 1400 N/mm² — Aciers / Steel | INOX | F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
12,00	19	50	*106,10*	1
13,00	19	50	*106,10*	1
14,00	19	50	*106,10*	1
15,00	19	50	*115,22*	1
16,00	19	50	*123,28*	1
17,00	19	50	*127,84*	1
18,00	19	50	*137,34*	1
19,00	19	50	*140,86*	1
20,00	19	50	*148,10*	1
21,00	19	50	*159,06*	1
22,00	19	50	*164,23*	1
23,00	19	50	*169,82*	1
24,00	19	50	*175,20*	1
25,00	19	50	*180,79*	1
26,00	19	50	*185,94*	1
27,00	19	50	*194,43*	1
28,00	19	50	*202,90*	1
29,00	19	50	*213,05*	1
30,00	19	50	*221,32*	1
31,00	19	50	*231,66*	1

Ø mm	d mm	L mm	€	
32,00	19	50	*235,80*	1
33,00	19	50	*246,14*	1
34,00	19	50	*254,43*	1
35,00	19	50	*264,77*	1
36,00	19	50	*273,03*	1
37,00	19	50	*285,45*	1
38,00	19	50	*293,72*	1
39,00	19	50	*302,00*	1
40,00	19	50	*318,54*	1
45,00	19	50	*378,54*	1
50,00	19	50	*479,87*	1

FRESAS HUECAS MÁQUINAS ELECTROMAGNÉTICAS
FRAISES A TROU ELECTROMAGNETIQUES / ELECTROMAGNETICS HOLE SAWS

7139 TCT — L=35 — WELDON 19 — QUICK CHANGE

Aceros 1100 - 1400 N/mm² — Aciers / Steel — INOX — F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
18,00	19	35	*160,27*	1
19,00	19	35	*160,27*	1
20,00	19	35	*160,27*	1
21,00	19	35	*160,27*	1
22,00	19	35	*163,12*	1
23,00	19	35	*163,12*	1
24,00	19	35	*164,52*	1
25,00	19	35	*164,52*	1
26,00	19	35	*166,24*	1

Ø mm	d mm	L mm	€	
27,00	19	35	*166,24*	1
28,00	19	35	*166,24*	1
29,00	19	35	*166,24*	1
30,00	19	35	*170,49*	1
31,00	19	35	*170,49*	1
32,00	19	35	*170,49*	1
33,00	19	35	*170,49*	1
34,00	19	35	*170,49*	1
35,00	19	35	*183,82*	1

7139 TCT — L=50 — WELDON 19 — QUICK CHANGE

Aceros 1100 - 1400 N/mm² — Aciers / Steel — INOX — F

Aplicaciones / Applications



Ø mm	d mm	L mm	€	
18,00	19	50	*171,91*	1
19,00	19	50	*171,91*	1
20,00	19	50	*171,91*	1
21,00	19	50	*171,91*	1
22,00	19	50	*175,02*	1
23,00	19	50	*175,02*	1
24,00	19	50	*176,44*	1
25,00	19	50	*176,44*	1
26,00	19	50	*177,87*	1
27,00	19	50	*177,87*	1
28,00	19	50	*177,87*	1
29,00	19	50	*177,87*	1
30,00	19	50	*182,40*	1
31,00	19	50	*182,40*	1
32,00	19	50	*182,40*	1
33,00	19	50	*182,40*	1
34,00	19	50	*182,40*	1

Ø mm	d mm	L mm	€	
35,00	19	50	*195,45*	1
36,00	19	50	*195,45*	1
37,00	19	50	*195,45*	1
38,00	19	50	*195,45*	1
39,00	19	50	*195,45*	1
40,00	19	50	*220,70*	1
41,00	19	50	*220,70*	1
42,00	19	50	*220,70*	1
43,00	19	50	*220,70*	1
44,00	19	50	*220,70*	1
45,00	19	50	*220,70*	1
46,00	19	50	*292,18*	1
47,00	19	50	*292,18*	1
48,00	19	50	*292,18*	1
49,00	19	50	*292,18*	1
50,00	19	50	*292,18*	1

Accesorios / Accessoires / Accessories

7140 **Cono Morse** / Cône Morse / Morse taper



△	€	L mm
Nº 2	*305,61*	180
Nº 3	*305,61*	185

7141 **Punzón** / Poinçon / Puncher



Ref.	€	Ø mm	L mm	L Fresa L Fraise Cutting L
7137-7138-7172	*18,28*	6,35	77	25
	18,28	6,35	87	35
	18,28	6,35	102	50
	23,07	8,00	160	110
7139	*18,28*	8,00	87	35
	18,28	8,00	102	50

7158 **Adaptador para Taladros Fein** / Adaptateur pour perceuses Fein / Adaptor for Fein drills



€	*100,88*

ESTUCHES FRESAS
COFFRETS DE FRAISES / MILLS CASES

3138 Ø 4 a 12 mm — Ø mm 4-5-6 8-10-12 — 2z



REF	€
HSS E	*122,42*
HSS E TIALN	*213,73*

3139 Ø 4 a 12 mm — Ø mm 6-8 10-12 — 3z



REF	€
HSS E	*148,60*
HSS E TIALN	*240,65*

3140 Ø 4 a 12 mm — Ø mm 4-5-6 8-10-12 — 4z



REF	€
HSS E	*129,29*
HSS E TIALN	*220,79*

ESTUCHES FRESAS ROTATIVAS
COFFRETS DE FRAISES ROTATIVES / ROTARY MILLS CASES

3220 10 PCS

10 | CRUZ



Ref.	Ø mm	d mm	L mm	l mm
3201	10,00	6	65	19
3201	12,00	6	70	25
3203	10,00	6	65	19
3203	12,00	6	70	25
3204	10,00	6	53	9
3205	10,00	6	60	16
3206	12,00	6	70	25
3207	10,00	6	65	19
3207	12,00	6	70	25
3211	12,00	6	75	30

€ 409,12

3221 5 PCS

5 | CRUZ



Ref.	Ø mm	d mm	L mm	l mm
3201	12,00	6	70	25
3203	12,00	6	70	25
3207	12,00	6	70	25
3211	12,00	6	75	30
3206	12,00	6	75	30

€ 245,96

ESTUCHES FRESAS HUECAS
COFFRETS DE FRAISES A TROU / ELECTROMAGNETICS MILLS CASES

7168 7 PCS L = 25 7

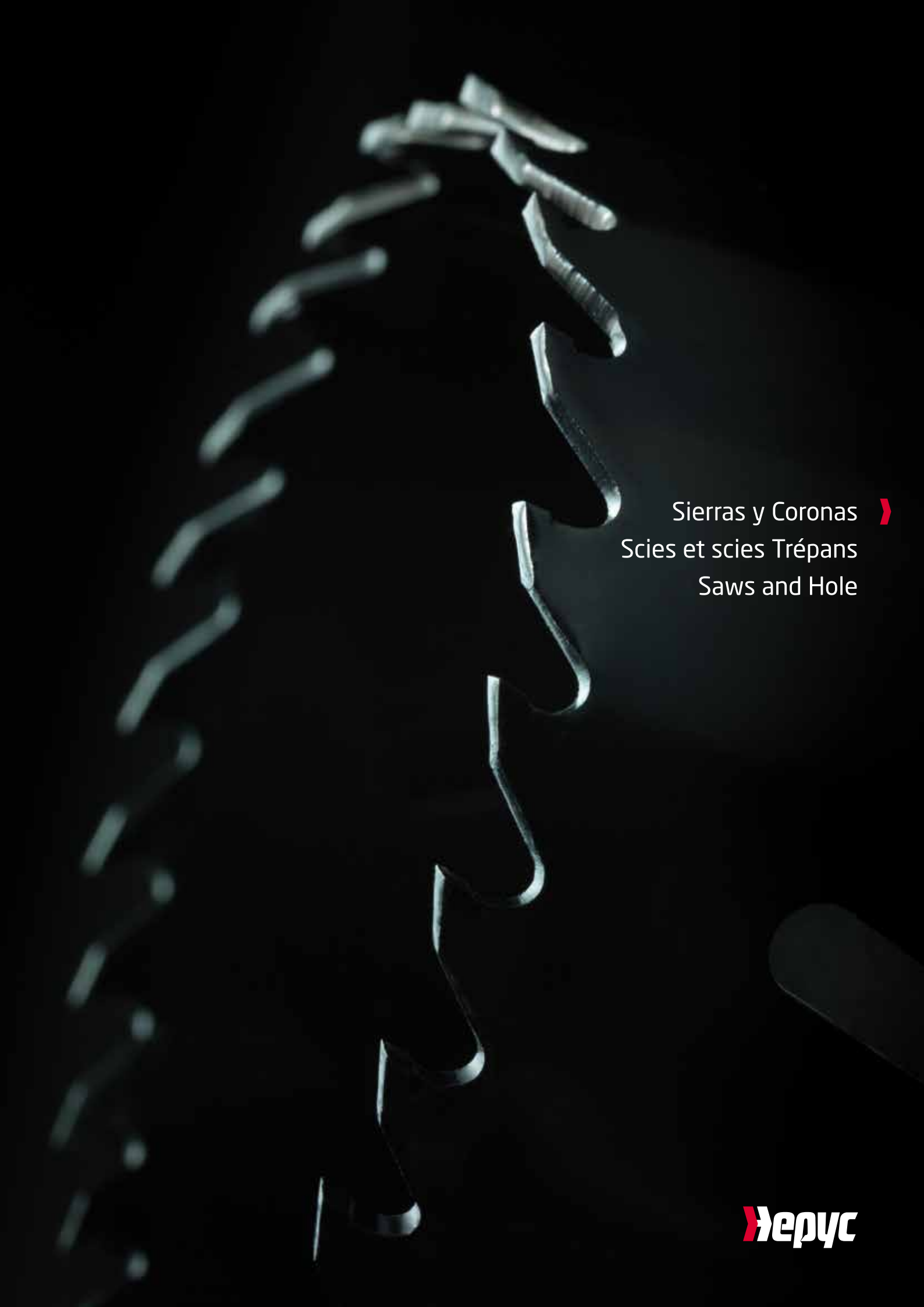


Ref.	Ø mm	d mm	L mm	Pcs.
7137	12	19	25	1
7137	14	19	25	1
7137	16	19	25	1
7137	18	19	25	1
7137	20	19	25	1
7137	22	19	25	1
7141	6,35		77	1
			€	*396,15*

7169 7 PCS L = 50 7



Ref.	Ø mm	d mm	L mm	Pcs.
7137	12	19	50	1
7137	14	19	50	1
7137	16	19	50	1
7137	18	19	50	1
7137	20	19	50	1
7137	22	19	50	1
7141	6,35		102	1
			€	*511,23*



Sierras y Coronas
Scies et scies Trépans
Saws and Hole

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Hojas sierra cinta / Lames de scie à ruban / Band saw blades

7202-7213	M42- CONSTANTE		68-69 HRC · M42 (8% CO) · CR · CP	1100 N/mm2	368
7301-7314	M42- VARIABLE		68-69 HRC · M42 (8% CO) · VR · VP	1100 N/mm2	369
7321-7324	M51- VARIABLE		68-69 HRC · M51 (10% CO) · VP · 10°	1400 N/mm2	370

Sierras Circulares / Scies Circulaires / Circular Saw

7801	HSS DIN1837 N		ISO 2296 · Form. A · Tol. Ø (j15) d (H7) · Tol. l (j11) D1 (j18)	800 N/mm2	371
7802	HSS DIN1838 N		ISO 2296 · Form. B · Tol. Ø (j15) d (H7) · Tol. l (j11) D1 (j18)	800 N/mm2	372

Hojas sierra de máquina / Lames de scie pour machine / Machine saw blades

7401	HSS DC		M2 · DC · 0°	1100 N/mm2	373

Hojas sierra de mano / Lames de scie à main / Hand hacksaw blades

7501	BIMETAL		DC	800 N/mm2	374
7504	CV		DC · FLEX	800 N/mm2	374
7505	CV		DC · 2C	800 N/mm2	375

Coronas metal / Scies-trépan métaux / Metal hole saws

7111	BIMETAL M42		DV 4/6 Tpi · 0° · M42 (8% CO) · 20mm	800 N/mm2	376
7110	BIMETAL DENTADO FINO M42		10 Tpi · 0° · M42 (8% CO) · 20mm	800 N/mm2	377
7142	BIMETAL DE CAMBIO RÁPIDO M42		DV 4/6 Tpi · 0° · M42 (8% CO) · 20mm	800 N/mm2	378
7157	BIMETAL TCT		20mm	INOX	379
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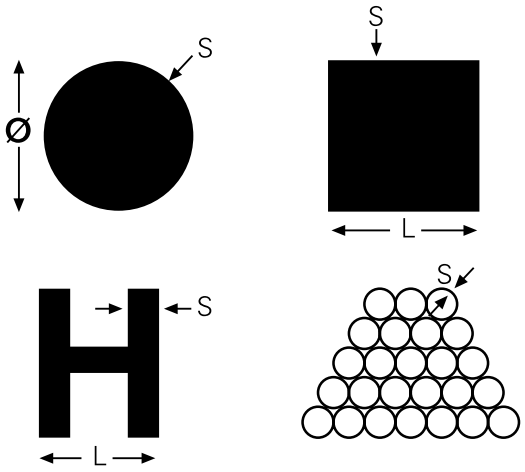
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GUIA DE SELECCIÓN SIERRAS DE CINTA

GUIDE SÉLECTION LAMES DE SCIE À RUBAN / BAND SAW BLADES SELECTION GUIDE

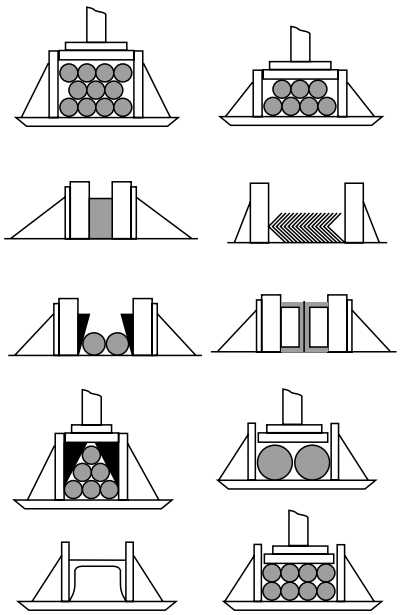
Dentado y amarre del material / Denture et fixation du matériel / Toothing and securing of material

> Selección del correcto dentado para el corte de tubos y perfiles.
Choix de la denture appropriée pour la coupe de tubes et de profilés.
Select correct toothing to cut tubes and beams.

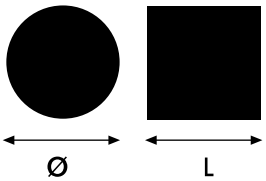


S mm	ØL mm										
	20	40	60	80	100	120	150	200	300	400	500
2	14	14	14	14	10/14	10/14	10/14	10/14	10/14	8/12	8/12
3				10/14					6/10		
4			10/14				6/10	6/10		6/10	6/10
5		10/14			6/10	6/10			4/6	4/6	4/6
6	10/14		8/12	6/10			5/8	4/6			
7		8/12				5/8					3/4
8			6/10		5/8		4/6		3/4	3/4	
10		6/10		5/8	4/6	4/6		3/4			2/3
12			5/8	4/6	3/4	3/4	3/4				
15							2/3	2/3	2/3	2/3	
20											
30											
50											

> Selección correcta de amarre de material.
Choix du type de fixation du matériel approprié.
Correct selection to secure material.



> Para el corte de secciones macizas.
Pour la coupe de sections massives.
For cutting solid sections.



Ø L (mm)	tpi
< 20	10/14 ó 8/12
20 - 40	6/10 ó 6
40 - 70	6 ó 4/6
70 - 140	4 ó 3/4
140 - 200	3/4 ó 3
200 - 400	3 ó 2/3
> 400	1/2 ó 1,25

GUIA DE SELECCIÓN SIERRAS DE CINTA

GUIDE SÉLECTION LAMES DE SCIE À RUBAN / BAND SAW BLADES SELECTION GUIDE

Tabla de velocidades según el material empleado

Speed sheet according to used material / Table de vitesses selon materiel employe

SELECCIÓN DE DENTADO			10/14		8/12-6/10		5/8-4/6		4/6-3/4		3/4-2/3		REFRIGERACIÓN		
	DIMENSIONES A CORTAR		0-13 mm		13-25 mm		25-75 mm		75-150 mm		150-Superior*			Aceite de corte	
TIPO DE MATERIAL	Refer. I.H.A.	Equival. SAE-AISI	Veloc. Aprox. Cinta m/min	Avance de corte cm^2/min	Veloc. Aprox. Cinta m/min	Avance de corte cm^2/min	Veloc. Aprox. Cinta m/min	Avance de corte cm^2/min	Veloc. Aprox. Cinta m/min	Avance de corte cm^2/min	Veloc. Aprox. Cinta m/min	Avance de corte cm^2/min	Emuls.	SI	NO
Aceros al Carbono	F-151 F-111 F-112 F-113 F-114 F-115 F-512 F-516	1010 1015-1025 1035 1045-1055 W-1 W-2	105 110 83 71 78	45-58 50-65 26-32 19-30 19-25	100 105 79 73 72	51-77 60-70 32-38 24-36 20-28	90 100 73 70 66	64-90 70-90 38-45 36-43 25-33	85 95 64 60 60	77-100 90-100 51-64 40-52 25-33	80 85 61 49 54	64-90 60-90 45-58 37-50 19-28	5%		X X X X X
Aceros Fácil Manipulación	F-211 F-212	1117-1118 1137-1151	102 100	51-64 32-38	102 93	58-70 38-45	102 84	70-90 45-58	99 81	90-105 64-77	84 72	77-90 51-70	5%		X X X
Aceros Cromo Molibdeno	F-125 F-155	4135-4142 4145-4161	94 75	25-32 12-25	86 70	32-38 19-32	77 67	38-51 32-54	75 63	58-70 38-58	64 55	51-64 32-45	5%		X X
Aceros Niquel	F-152	2317	90	19-25	85	25-32	82	32-43	77	38-49	70	32-45	8%	X	
Aceros Cromo Niquel	F-518 F-153 F-154	3115-3130 3310-3315 3320-3340	90 67 55	24-30 10-18 5-11	84 61 50	30-36 17-23 10-17	78 55 43	36-48 23-30 17-27	75 54 44	43-62 30-42 22-35	72 45 40	36-48 23-45 17-30	8%	X X X	
Aceros Cromo Niquel Molibdeno	F-127 F-128 F-156	4337-4340 8630-8645 3320-3341	83 83 73	17-23 17-23 6-12	75 78 68	23-30 23-30 10-17	68 72 55	23-36 30-36 17-23	66 65 52	30-43 36-43 17-23	54 54 45	23-36 23-36 10-16	6%	X X X	
Aceros Cromo	F-121 F-122 F-131	5120-5135 5140-5160 50100-52100	90 81 63	18-30 17-23 12-18	87 77 58	23-36 23-30 17-23	78 74 52	36-43 23-35 23-30	75 70 48	43-55 30-42 30-35	60 58 35	30-49 23-35 23-30	6%		X X X
Aceros/Cromo Vanadio	F-143	6145-6152	76	10-17	69	17-22	63	22-42	60	30-48	47	22-42	6%		X
Aceros/Silicio Manganeso	F-144	9255-9260	69	12-17	63	19-24	60	25-30	57	25-43	48	19-30	5%		
Aceros trabajados en Frio	F-522 F520H F-523 F-520P F-536 F-521	01-02 L-3 06-07 A2-A3-A6 D2-D3-D6	74 63 70 72 44	12-23 12-18 17-30 5-18 3-6	67 58 65 68 39	19-30 17-23 23-35 11-24 6-13	65 52 62 65 35	25-43 23-30 30-49 18-31 12-20	60 48 57 60 33	30-49 30-35 35-53 18-37 12-20	50 35 45 50 24	23-42 23-30 30-48 11-24 10-15	6% Seco		X
Aceros trabajados en Caliente	F-526 F-536 F-528 F-532	H12-H13-H21 L2-L6-L7 F-1	70 65 62	12-25 12-24 12-22	68 61 60	14-26 12-25 17-30	62 58 56	23-30 19-30 23-35	60 55 50	23-32 25-41 23-38	48 46 38	18-25 19-30 17-35	5%	X	X
Trabajos de Choque	F-524 F-520E	S-1 S-2 S-5	70 55	12-30 6-19	63 50	19-30 12-22	60 48	25-35 19-30	58 40	25-35 19-33	48 35	19-30 12-20	5%	X X	
Aceros Rápidos	F-522 F-553 F-554 F-550A	T-1 T-2 T-4 T-5 M-2 M-3	46 39 39	6-19 3-12 6-17	43 36 36	12-25 6-17 12-28	39 33 33	12-25 6-17 12-28	36 30 30	12-25 12-22 17-35	28 24 24	12-23 6-17 10-22	3%	X X X	
Aceros Inoxidables	F-314 F-310C F-331 F-310A F-332 F-331 F-312 F-313 F-330B	201-202-304 303-303F 308-309-310 314-316-317 321-347 410-420 431 446	42 50 31 31 44 53 39 30	6-19 6-32 3-6 3-6 6-17 6-19 6-19 6-13	39 45 30 30 38 50 33 26	19-25 19-38 6-12 6-12 12-23 12-25 12-25 6-19	35 42 27 27 35 45 30 23	12-32 19-38 6-12 6-12 12-28 12-32 19-25 13-19	34 38 24 24 35 42 28 20	19-38 25-38 6-19 6-19 17-33 19-38 19-36 13-26	28 30 19 18 30 33 24 17	12-25 19-30 6-12 6-12 12-23 12-25 12-25 13-19		Especial para Inox.	

* Reducir de 10 a 20% con dimensiones superiores a 200 mm.
* M51 aumentar condiciones 20%
* INOX PLUS aumentar condiciones 30%

Cálculo del precio de un corte soldado:
Comment calculer le prix d´un ruban soudé:
Calculation of the price of a welded cut:

Longitud/Longueur/Length = 2,660 m
Anchura/Largeur/Width x = 10 x 0,90
Espesor/Épaisseur/Thickness
Dentado/Denture/Toothing = CP; 6

Precio / Prix / Price = (Longitud / Longueur / Length x Precio Prix/Price / Metro Mètre/Metre) + Precio Prix/Price / Soldadura Soudure/Weld

HOJAS DE SIERRA DE CINTA

LAMES DE SCIE À RUBAN / BAND SAW BLADES

7202-7213 **M42 Dentado constante**

M42 Denture constant / M42 Constant tooth

68-69 HRC | M42 (8% CO) | CR 0° | CP 10°

Aceros 800 - 1100 N/mm² — Aciers / Steel — AL INOX F

Aplicaciones / Applications



Ref.	A mm	e mm	t.p.i. 1,25	2	3	4	6	8	10	14	18	€ m	€ soldadura soudure welding
*7202	6,00	0,90				CP	CP		CR	CR		*16,84*	*9,57*
*7204	10,00	0,90				CP	CP		CR	CR		*16,84*	*9,57*
7205	13,00	0,65					CP		CR	CR	CR	*15,47*	*9,57*
7206	13,00	0,90			CP	CP	CP		CR	CR		*15,47*	*9,57*
7207	20,00	0,90			CP	CP	CR	CR	CR	CR		*17,69*	*9,57*
7208	27,00	0,90		CP	CP	CP-CR	CR	CR	CR	CR		*18,20*	*9,57*
7209	34,00	1,10	CP	CP	CP	CR						*25,29*	*12,59*
7210	41,00	1,30	CP	CP	CP	CR						*31,63*	*15,90*
7212	54,00	1,60	CP									*46,33*	*26,78*
7213	67,00	1,60	CP									*78,92*	*49,39*

*** Se vende sólo en rollos de 30 m.**
Vendu uniquement en rouleaux de 30 m.
Only sold in 30 m rolls.

Axe mm	L	€		Axe mm	L	€		Axe mm	L	€	
13x0,65	1.138	*27,17*	3		2.550	*54,68*	1		4.870	*98,18*	1
	1.140	*27,20*	3	27x0,90	2.000	*45,96*	1		5.000	*100,55*	1
	1.300	*29,67*	3		2.060	*47,05*	1	34x1,10	3.180	*93,03*	1
	1.325	*30,06*	3		2.070	*47,23*	1		3.420	*99,10*	1
	1.330	*30,14*	3		2.080	*47,41*	1		3.505	*101,25*	1
	1.440	*31,84*	3		2.150	*48,69*	1		3.660	*105,17*	1
	1.470	*32,30*	3		2.352	*52,36*	1		3.720	*106,69*	1
	1.638	*34,90*	3		2.360	*52,51*	1		3.800	*108,71*	1
	1.640	*34,93*	3		2.370	*52,69*	1		4.100	*116,30*	1
	1.735	*36,40*	3		2.420	*53,60*	1		4.115	*116,68*	1
	1.750	*36,63*	3		2.450	*54,15*	1		4.520	*126,92*	1
	2.000	*40,50*	3		2.460	*54,33*	1		4.570	*128,19*	1
13x0,90	1.140	*27,20*	3		2.480	*54,69*	1		4.640	*129,96*	1
	1.325	*30,06*	3		2.500	*55,06*	1		4.800	*134,00*	1
	1.330	*30,14*	3		2.550	*55,97*	1		4.860	*135,52*	1
	1.638	*34,90*	3		2.600	*56,88*	1		4.990	*138,81*	1
	1.640	*34,93*	3		2.650	*57,79*	1		5.270	*145,89*	1
	1.735	*36,40*	3		2.700	*58,70*	1		5.300	*146,65*	1
	1.750	*36,63*	3		2.750	*59,61*	1		5.550	*152,97*	1
	2.000	*40,50*	3		2.755	*59,70*	1		5.620	*154,74*	1
20x0,90	2.000	*44,95*	1		2.765	*59,88*	1		5.800	*159,30*	1
	2.060	*46,01*	1		2.825	*60,97*	1		6.000	*164,36*	1
	2.070	*46,19*	1		2.835	*61,15*	1	41x1,30	4.100	*145,56*	1
	2.080	*46,37*	1		2.845	*61,33*	1		4.520	*158,85*	1
	2.090	*46,54*	1		2.850	*61,43*	1		4.570	*160,43*	1
	2.100	*46,72*	1		2.895	*62,24*	1		5.300	*183,51*	1
	2.110	*46,90*	1		2.945	*63,15*	1		5.500	*189,84*	1
	2.115	*46,99*	1		2.950	*63,25*	1		5.550	*191,42*	1
	2.120	*47,07*	1		2.960	*63,43*	1		5.800	*199,33*	1
	2.140	*47,43*	1		3.010	*64,34*	1		6.000	*205,65*	1
	2.265	*49,64*	1		3.100	*65,97*	1		6.200	*211,98*	1
	2.360	*51,32*	1		3.180	*67,43*	1		6.300	*215,14*	1
	2.362	*51,36*	1		3.420	*71,80*	1		6.600	*224,63*	1
	2.370	*51,50*	1		3.505	*73,34*	1		6.700	*227,79*	1
	2.375	*51,59*	1		3.660	*76,16*	1		6.900	*234,12*	1
	2.400	*52,03*	1		3.800	*78,71*	1		7.000	*237,28*	1
	2.465	*53,18*	1		4.100	*84,17*	1	6x0,90	30 M	*505,26*	1
	2.520	*54,15*	1		4.250	*86,90*	1	10x0,90	30 M	*505,26*	1
	2.530	*54,33*	1		4.570	*92,72*	1				

HOJAS DE SIERRA DE CINTA

LAMES DE SCIE À RUBAN / BAND SAW BLADES

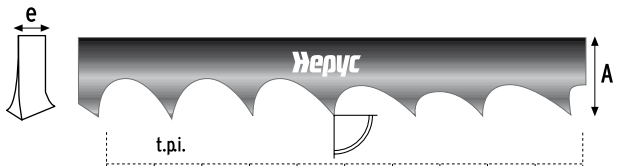
7301-7314 **M42 Dentado variable**

M42 Denture variable / M42 Variable tooth

68-69 HRC | M42 (8% CO) | VR 0° | VP 10°

Aceros 800 - 1100 N/mm² Aciers / Steel — AL INOX F

Aplicaciones / Applications



Ref.	A mm	e mm	0,75/1,25	1,10/1,40	1,40/2	2/3	3/4	4/6	5/8	6/10	8/12	10/14	€ m	€ soldadura soudure welding
7302*	6,00	0,90										VR	*16,84*	*9,57*
7304*	10,00	0,90										VR	*16,84*	*9,57*
7305	13,00	0,65								VR	VR	VR	*15,47*	*9,57*
7306	13,00	0,90								VR	VR	VR	*15,47*	*9,57*
7307	20,00	0,90						VP-VR	VR	VR	VR	VR	*17,69*	*9,57*
7308	27,00	0,90				VP	VP-VR	VP-VR	VP-VR	VR	VR	VR	*18,20*	*9,57*
7309	34,00	1,10				VP	VP-VR	VP-VR	VP-VR	VR	VR		*25,31*	*12,59*
7310	41,00	1,30			VP	VP	VP-VR	VP-VR	VP-VR				*31,63*	*15,90*
7311	54,00	1,30			VP	VP	VP-VR	VP-VR					*46,33*	*26,78*
7312	54,00	1,60	VP	VP	VP	VP	VP						*46,33*	*26,78*
7313	67,00	1,60	VP	VP	VP	VP							*78,92*	*49,39*
7314	80,00	1,60	VP										*92,38*	*82,34*

* **Se vende sólo en rollos de 30 m.**
Vendu uniquement en rouleaux de 30 m.
Only sold in 30 m rolls.

Axe mm	L	€		Axe mm	L	€		Axe mm	L	€	
13x0,65	1.138	*27,17*	3		2.550	*54,68*	1		4.870	*98,18*	1
	1.140	*27,20*	3	27x0,90	2.000	*45,96*	1		5.000	*100,55*	1
	1.300	*29,67*	3		2.060	*47,05*	1	34x1,10	3.180	*93,06*	1
	1.325	*30,06*	3		2.070	*47,23*	1		3.420	*99,13*	1
	1.330	*30,14*	3		2.080	*47,41*	1		3.505	*101,28*	1
	1.440	*31,84*	3		2.150	*48,69*	1		3.660	*105,21*	1
	1.470	*32,30*	3		2.352	*52,36*	1		3.720	*106,72*	1
	1.638	*34,90*	3		2.360	*52,51*	1		3.800	*108,75*	1
	1.640	*34,93*	3		2.370	*52,69*	1		4.100	*116,34*	1
	1.735	*36,40*	3		2.420	*53,60*	1		4.115	*116,72*	1
	1.750	*36,63*	3		2.450	*54,15*	1		4.520	*126,97*	1
	2.000	*40,50*	3		2.460	*54,33*	1		4.570	*128,23*	1
13x0,90	1.140	*27,20*	3		2.480	*54,69*	1		4.640	*130,00*	1
	1.325	*30,06*	3		2.500	*55,06*	1		4.800	*134,05*	1
	1.330	*30,14*	3		2.550	*55,97*	1		4.860	*135,57*	1
	1.638	*34,90*	3		2.600	*56,88*	1		4.990	*138,86*	1
	1.640	*34,93*	3		2.650	*57,79*	1		5.270	*145,95*	1
	1.735	*36,40*	3		2.700	*58,70*	1		5.300	*146,71*	1
	1.750	*36,63*	3		2.750	*59,61*	1		5.550	*153,03*	1
	2.000	*40,50*	3		2.755	*59,70*	1		5.620	*154,80*	1
20x0,90	2.000	*44,95*	1		2.765	*59,88*	1		5.800	*159,36*	1
	2.060	*46,01*	1		2.825	*60,97*	1		6.000	*164,42*	1
	2.070	*46,19*	1		2.835	*61,15*	1	41x1,30	4.100	*145,56*	1
	2.080	*46,37*	1		2.845	*61,33*	1		4.520	*158,85*	1
	2.090	*46,54*	1		2.850	*61,43*	1		4.570	*160,43*	1
	2.100	*46,72*	1		2.895	*62,24*	1		5.300	*183,51*	1
	2.110	*46,90*	1		2.945	*63,15*	1		5.500	*189,84*	1
	2.115	*46,99*	1		2.950	*63,25*	1		5.550	*191,42*	1
	2.120	*47,07*	1		2.960	*63,43*	1		5.800	*199,33*	1
	2.140	*47,43*	1		3.010	*64,34*	1		6.000	*205,65*	1
	2.265	*49,64*	1		3.100	*65,97*	1		6.200	*211,98*	1
	2.360	*51,32*	1		3.180	*67,43*	1		6.300	*215,14*	1
	2.362	*51,36*	1		3.420	*71,80*	1		6.600	*224,63*	1
	2.370	*51,50*	1		3.505	*73,34*	1		6.700	*227,79*	1
	2.375	*51,59*	1		3.660	*76,16*	1		6.900	*234,12*	1
	2.400	*52,03*	1		3.800	*78,71*	1		7.000	*237,28*	1
	2.465	*53,18*	1		4.100	*84,17*	1	6x0,90	30 M	*505,26*	1
	2.520	*54,15*	1		4.250	*86,90*	1	10x0,90	30 M	*505,26*	1
	2.530	*54,33*	1		4.570	*92,72*	1				

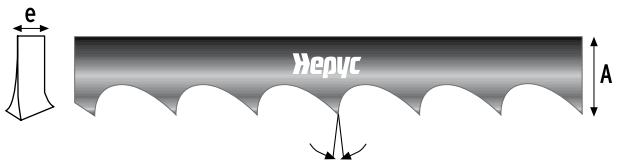
HOJAS DE SIERRA DE CINTA

LAMES DE SCIE À RUBAN / BAND SAW BLADES

7321-7324 M51 Dentado variable

M42 Denture variable / M42 Variable tooth

VP 10° | 68-69 HRC | M51 (10% CO)



Ref.	A mm	e mm	t.p.i. 0,75/1,25	1,5/2	2/3	3/4	4/6	€ m	€ soldadura soudure welding
7321	27,00	0,90			VP	VP	VP	*34,45*	*11,11*
7322	34,00	1,10			VP	VP	VP	*35,27*	*14,60*
7323	41,00	1,30		VP	VP	VP	VP	*43,09*	*18,47*
7324	54,00	1,60	VP	VP	VP	VP		*76,46*	*31,07*

Axe mm	L	€	
27x0,90	2.000	*80,01*	1
	2.060	*82,08*	1
	2.070	*82,42*	1
	2.080	*82,77*	1
	2.150	*85,18*	1
	2.352	*92,14*	1
	2.370	*92,76*	1
	2.360	*92,41*	1
	2.420	*94,48*	1
	2.450	*95,51*	1
	2.460	*95,86*	1
	2.480	*96,55*	1
	2.500	*97,24*	1
	2.550	*98,96*	1
	2.600	*100,68*	1
	2.650	*102,40*	1
	2.700	*104,13*	1
	2.750	*105,85*	1
	2.755	*106,02*	1
	2.765	*106,36*	1
	2.825	*108,43*	1
	2.835	*108,78*	1
	2.845	*109,12*	1
	2.850	*109,29*	1
	2.895	*110,84*	1
	2.945	*112,57*	1
	2.950	*112,74*	1
	2.960	*113,08*	1
	3.010	*114,81*	1
	3.100	*117,91*	1
	3.180	*120,66*	1
	3.420	*128,93*	1
	3.505	*131,86*	1
	3.660	*137,20*	1
	3.800	*142,02*	1
	4.100	*152,36*	1
	4.250	*157,52*	1

Axe mm	L	€	
	4.570	*168,55*	1
	4.870	*178,88*	1
	5.000	*183,36*	1
34x1,10	3.180	*126,75*	1
	3.420	*135,22*	1
	3.505	*138,21*	1
	3.660	*143,68*	1
	3.720	*145,80*	1
	3.800	*148,62*	1
	4.100	*159,20*	1
	4.115	*159,73*	1
	4.520	*174,01*	1
	4.570	*175,78*	1
	4.640	*178,25*	1
	4.800	*183,89*	1
	4.860	*186,00*	1
	4.990	*190,59*	1
	5.270	*200,47*	1
	5.300	*201,52*	1
	5.550	*210,34*	1
	5.620	*212,81*	1
	5.800	*219,16*	1
	6.000	*226,21*	1
41x1,30	4.100	*195,15*	1
	4.520	*213,25*	1
	4.570	*215,40*	1
	5.300	*246,86*	1
	5.500	*255,48*	1
	5.550	*257,63*	1
	5.800	*268,40*	1
	6.000	*277,02*	1
	6.200	*285,64*	1
	6.300	*289,95*	1
	6.600	*302,88*	1
	6.700	*307,19*	1
	6.900	*315,80*	1
	7.000	*320,11*	1

7801 HSS DIN 1837 N

ISO 2296 | Form. A | Tol. Ø (j15) d (H7) | Tol. I (j11) D1 (j18)

Aceros 400-800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



D mm	e mm	d mm	z	€
20	0,20	5	80	15,96
	0,25		64	16,06
	0,30		64	15,11
	0,40		64	14,80
	0,50		48	14,80
	0,60		48	13,95
	0,80		48	14,37
	1,00		40	15,22
	1,20		40	15,64
	1,60		40	16,22
	2,00		32	17,33
25	0,20	8	80	16,49
	0,25		80	16,49
	0,30		80	15,64
	0,40		64	14,53
	0,50		64	14,80
	0,60		64	14,96
	0,80		48	14,96
	1,00		48	15,11
	1,20		48	15,64
	1,60		40	16,06
	2,00		40	16,49
	2,50		40	18,34
32	0,20	8	100	15,64
	0,25		100	14,11
	0,30		80	13,00
	0,40		80	12,58
	0,50		80	12,68
	0,60		64	12,84
	0,80		64	13,11
	1,00		64	14,11
	1,20		48	14,11
	1,60		48	15,11
	2,00		48	16,80
	2,50		40	19,34
	3,00		40	21,03
40	0,20	10	128	16,22
	0,25		100	15,38
	0,30		100	13,69
	0,40		100	13,26
	0,50		80	13,26
	0,60		80	13,42
	0,80		80	14,37
	1,00		64	15,64
	1,20		64	15,64
	1,60		64	17,33
	2,00		48	18,65
	2,50		48	21,61
	3,00		48	23,83
50	0,25	13	128	18,65
	0,30		128	15,22
	0,40		100	14,53
	0,50		100	15,11
	0,60		100	15,11
	0,80		80	20,93
	1,00		80	20,93
	1,20		80	20,93
	1,60		64	20,93
	2,00		64	20,93
	2,50		64	23,30
	3,00		48	25,84
	4,00		48	30,91
	5,00		48	35,14
63	0,30	16	128	20,45
	0,40		128	18,50
	0,50		128	18,65
	0,60		100	18,65
	0,80		100	20,98
	1,00		100	22,72
	1,20		80	22,88
	1,60		80	23,99
	2,00		80	25,52
	2,50		64	29,80
	3,00		64	32,87
	4,00		64	39,63
	5,00		48	47,72
	6,00		48	53,21
80	0,50	22	128	23,57
	0,60		128	24,26
	0,80		128	26,79
	1,00		100	26,37
	1,20		100	27,53
	1,60		100	30,07
	2,00		80	31,44
	2,50		80	36,83
	3,00		80	41,91
	4,00		64	51,21
	5,00		64	61,93
	6,00		64	70,97
100	0,60	22	160	30,91
	0,80		128	34,30
	1,00		128	33,19
	1,20		128	33,19
	1,60		100	38,52
	2,00		100	41,06
	2,50		100	49,52
	3,00		80	55,75
	4,00		80	66,74
	5,00		80	81,70
	6,00		64	93,85
125	0,80	22	160	50,36
	1,00		160	53,37
	1,20		128	53,37
	1,60		128	54,32
	2,00		128	57,44
	2,50		100	67,32
	3,00		100	76,63
	4,00		100	93,27
	5,00		80	111,93
	6,00		80	126,30
160	1,20	32	200	68,75
	1,60		160	78,63
	2,00		128	83,12
	2,50		128	98,34
	3,00		128	122,34
	4,00		100	157,90
	5,00		100	196,85
	6,00		100	229,61
200	1,60	32	160	117,58
	2,00		160	126,56
	2,50		160	148,34
	3,00		128	183,05
	4,00		128	246,52
	5,00		128	305,55
	6,00		100	354,38
250	2,00	32	200	164,66
	2,50		160	195,16
	3,00		160	242,03
	4,00		160	303,86
	5,00		128	380,91
	6,00		128	426,62
315	2,50	40	200	309,62
	3,00		200	360,30
	4,00		160	452,30
	5,00		160	560,84
	6,00		160	648,72

7802 HSS DIN 1838 N

ISO 2296 | Form. B | Tol. Ø (j15) d (H7) | Tol. l (j11) D1 (j18)

Aceros 400-800 N/mm² — **Aciers / Steel**

Aplicaciones / Applications



D mm	e mm	d mm	z	€
50	0,50	13	48	*15,11*
	0,60		48	*15,11*
	0,80		40	*20,93*
	1,00		40	*20,93*
	1,20		40	*20,93*
	1,60		32	*20,93*
	2,00		32	*20,93*
	2,50		32	*23,30*
	3,00		24	*25,84*
	4,00		24	*30,91*
	5,00		24	*35,14*
63	0,50	16	64	*18,65*
	0,60		48	*18,65*
	0,80		48	*20,98*
	1,00		48	*22,72*
	1,20		40	*22,88*
	1,60		40	*23,99*
	2,00		40	*25,52*
	2,50		32	*29,80*
	3,00		32	*32,87*
	4,00		32	*39,63*
	5,00		24	*47,72*
	6,00		24	*53,21*
80	0,60	22	64	*24,26*
	0,80		64	*26,79*
	1,00		48	*26,37*
	1,20		48	*27,53*
	1,60		48	*30,07*
	2,00		40	*31,44*
	2,50		40	*36,83*
	3,00		40	*41,91*
	4,00		32	*51,21*
	5,00		32	*61,93*
	6,00		32	*70,97*
100	0,80	22	64	*34,30*
	1,00		64	*33,19*
	1,20		64	*33,19*
	1,60		48	*38,52*
	2,00		48	*41,06*
	2,50		48	*49,52*
	3,00		40	*55,75*
	4,00		40	*66,74*
	5,00		40	*81,70*
	6,00		32	*93,85*
125	0,80	22	80	*50,36*
	1,00		80	*53,37*
	1,20		64	*53,37*
	1,60		64	*54,32*
	2,00		64	*57,44*
	2,50		64	*67,32*
	3,00		48	*76,63*
	4,00		48	*93,27*
	5,00		40	*111,93*
	6,00		40	*126,30*
160	1,20	32	80	*68,75*
	1,60		80	*78,63*
	2,00		64	*83,12*
	2,50		64	*98,34*
	3,00		64	*122,34*
	4,00		48	*157,90*
	5,00		48	*196,85*
	6,00		48	*229,61*
200	1,60	32	80	*117,58*
	2,00		80	*126,56*
	2,50		80	*148,34*
	3,00		64	*183,05*
	4,00		64	*246,52*
	5,00		64	*305,55*
	6,00		48	*354,38*
250	2,00	32	100	*164,66*
	2,50		80	*195,16*
	3,00		80	*242,03*
	4,00		80	*303,86*
	5,00		80	*380,91*
	6,00		64	*426,62*
315	2,50	40	100	*309,62*
	3,00		100	*360,30*
	4,00		80	*452,30*
	5,00		80	*560,84*
	6,00		80	*648,72*

7401 HSS DC — M2 — 0° — DC

Aceros 1.100 N/mm² — Aciers / Steel — INOX — F

Aplicaciones / Applications



L mm	A mm	e mm	Pulgadas Pouces Inches	Ø Taladro Perceuse Drill	tpi 4	6	8	10	14	€
300	25	1,50	12	8,5				■	■	*17,13*
350	25	1,25	14	8,5				■		*15,68*
350	25	1,50	14	8,5					■	*19,24*
350	30	1,50	14	8,5				■	■	*21,76*
350	30	2,00	14	8,5		■		■		*28,93*
400	25	1,50	16	8,5				■	■	*22,32*
400	30	1,50	16	8,5		■	■	■	■	*26,90*
400	30	2,00	16	8,5		■	■	■	■	*31,21*
450	30	2,00	18	8,5	■	■	■	■		*31,21*
450	35	2,00	18	8,5		■	■	■		*35,94*
450	40	2,00	18	10,5	■	■		■		*40,72*
500	40	2,00	20	10,5	■	■	■	■		*52,68*
600	50	2,50	24	13		■				*79,87*

HOJAS DE SIERRA DE MANO
LAME DE SCIE À MAIN / HAND HACKSAW BLADE

7501 BIMETAL

DC

Aceros 800 N/mm² — Aciers / Steel — INOX F

Aplicaciones / Applications



L mm	A mm	e mm	z	€	
300	13	0,65	18	*2,39*	100
300	13	0,65	24	*2,39*	100
300	13	0,65	32	*2,39*	100

7504 CV

DC FLEX

Aceros 1.100 N/mm² — Aciers / Steel — F

Aplicaciones / Applications



L mm	A mm	e mm	z	€	
300	13	0,65	24	*0,60*	100

7505 CV — DC — 2C

Aceros 1.100 N/mm² — Aciers / Steel

Aplicaciones / Applications



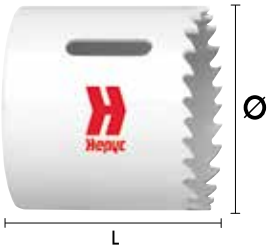
L mm	A mm	e mm	z	€	
300	25	0,65	24	*0,71*	50

CORONAS METAL
SCIES-TRÉPAN METAUX / METAL HOLE SAWS

7111 **Bimetal M42** DV 4/6 Tpi · 10° · 20mm · M42 (8% CO)

Aceros 800 N/mm² — Aciers / Steel — AL INOX

Aplicaciones / Applications



Ø mm	P.G.	L mm	Ref. 7111 €	Ref. 8157 blister €	
14,00	-	40	12,96	13,44	1
16,00	9	40	12,96	13,44	1
17,00	-	40	12,96	13,44	1
19,00	11	40	12,96	13,44	1
20,00	-	40	12,96	13,44	1
21,00	11	40	12,96	13,44	1
22,00	16	40	12,96	13,44	1
24,00	-	40	12,96	13,44	1
25,00	-	40	13,76	14,26	1
27,00	-	40	14,58	15,07	1
29,00	21	40	14,58	15,07	1
30,00	-	40	14,58	15,07	1
32,00	-	40	14,58	15,07	1
33,00	-	40	14,58	15,07	1
35,00	-	40	15,50	15,99	1
37,00	29	40	15,50	15,99	1
38,00	-	40	15,50	15,99	1
40,00	-	40	15,50	15,99	1
41,00	-	40	15,50	15,99	1
43,00	-	40	15,50	15,99	1
44,00	-	40	18,96	19,45	1
46,00	-	40	18,96	19,45	1
48,00	36	40	18,96	19,45	1
50,00	-	40	18,96	19,45	1
51,00	-	40	18,96	19,45	1
52,00	-	40	22,44	22,92	1
54,00	42	40	22,44	22,92	1
56,00	-	40	22,44	22,92	1
57,00	-	40	22,44	22,92	1
59,00	-	40	22,44	22,92	1

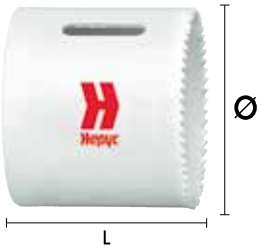
Ø mm	P.G.	L mm	Ref. 7111 €	Ref. 8157 blister €	
60,00	-	40	22,44	22,92	1
64,00	-	40	24,85	25,34	1
65,00	-	40	24,85	25,34	1
67,00	-	40	24,85	25,34	1
68,00	-	40	24,85	25,34	1
70,00	-	40	24,85	25,34	1
73,00	-	40	24,85		1
76,00	-	40	25,39		1
79,00	-	40	25,39		1
83,00	-	40	25,39		1
86,00	-	40	25,39		1
89,00	-	40	25,39		1
92,00	-	40	29,42		1
95,00	-	40	34,18		1
98,00	-	40	36,18		1
102,00	-	40	38,02		1
105,00	-	40	40,99		1
108,00	-	40	53,84		1
111,00	-	40	63,63		1
114,00	-	40	74,25		1
121,00	-	40	82,49		1
127,00	-	40	91,47		1
133,00	-	40	100,54		1
140,00	-	40	109,61		1
152,00	-	40	127,97		1
160,00	-	40	197,78		1
168,00	-	40	217,36		1
177,00	-	40	221,38		1
210,00	-	40	233,98		1
250,00	-	40	247,30		1

7110 Bimetal Dentado Fino M42
Denture Fine / Fine Tooth Pitch

8/12Tpi | 0° | 20mm | M42 (8% CO)

Aceros 800 N/mm² — Aciers / Steel — AL INOX

Aplicaciones / Applications



Ø mm	P.G.	L mm	€	
16,00	9	40	*12,96*	1
19,00	11	40	*12,96*	1
20,00	-	40	*12,96*	1
22,00	16	40	*12,96*	1
25,00	-	40	*13,76*	1
27,00	-	40	*14,58*	1
29,00	21	40	*14,58*	1
30,00	-	40	*14,58*	1
32,00	-	40	*14,58*	1
35,00	-	40	*15,50*	1
38,00	-	40	*15,50*	1
40,00	-	40	*15,50*	1
43,00	-	40	*15,50*	1

Ø mm	P.G.	L mm	€	
46,00	-	40	*18,96*	1
48,00	36	40	*18,96*	1
51,00	-	40	*18,96*	1
54,00	42	40	*22,44*	1
57,00	-	40	*22,44*	1
60,00	-	40	*22,44*	1
68,00	-	40	*24,85*	1
70,00	-	40	*24,85*	1
76,00	-	40	*25,39*	1
83,00	-	40	*25,39*	1
98,00	-	40	*36,18*	1
102,00	-	40	*38,02*	1

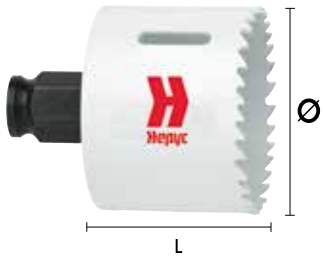


7142 **Bimetal Cambio Rápido M42**
Changement Rapide / Quick Change

DV 4/6 Tpi | 0° | 20mm | M42 (8% CO)

Aceros 800 N/mm² — **Aciers / Steel** AL INOX

Aplicaciones / Applications



Ø mm	L mm	€	
19,00	40	*15,94*	1
20,00	40	*15,94*	1
22,00	40	*15,94*	1
25,00	40	*16,75*	1
29,00	40	*17,58*	1
32,00	40	*17,58*	1
35,00	40	*18,49*	1
38,00	40	*18,49*	1
41,00	40	*18,49*	1
44,00	40	*18,49*	1
48,00	40	*21,96*	1
51,00	40	*21,96*	1
54,00	40	*25,42*	1
57,00	40	*25,42*	1
60,00	40	*25,42*	1
64,00	40	*27,84*	1
68,00	40	*27,84*	1
70,00	40	*27,84*	1
76,00	40	*28,38*	1

7157 **Bimetal TCT**
Métal Dur / Hard Metal

20mm

Aceros inox — **Aciers inox / Stainless steel** — 800 N/mm2 — TI

Aplicaciones / Applications



Ø mm	L mm	€	
19,00	40	*47,61*	1
22,00	40	*47,61*	1
25,00	40	*50,59*	1
29,00	40	*55,39*	1
32,00	40	*55,39*	1
35,00	40	*55,39*	1
38,00	40	*55,39*	1
44,00	40	*71,47*	1
48,00	40	*71,47*	1
51,00	40	*71,47*	1
54,00	40	*84,24*	1
57,00	40	*84,24*	1
60,00	40	*84,24*	1
64,00	40	*91,34*	1
70,00	40	*91,34*	1
76,00	40	*93,30*	1
83,00	40	*93,30*	1
86,00	40	*93,30*	1
89,00	40	*93,30*	1
95,00	40	*125,59*	1
102,00	40	*139,76*	1



Accesorios
Accessoires / Accessories

› Ref. 7112 Husillo eje hexagonal / Arbre axe hexagonal / Hexagonal axis spindle



Rosca Filetage Thread	Ø mm	Hex.	€	
1/2 UNF	14,00 - 30,00	8,5	*14,28*	1
1/2 UNF	14,00 - 30,00	11	*14,28*	1
5/8 UNF	32,00 - 250,00	8,5	*28,44*	1
5/8 UNF	32,00 - 250,00	11	*28,44*	1

› Ref. 7112 Husillo eje SDS+ / Arbre axe SDS+ / SDS+ axis spindle



Rosca Filetage Thread	Ø mm	Hex.	€	
1/2 UNF	14,00 - 30,00	SDS+	*14,28*	1
5/8 UNF	32,00 - 250,00	SDS+	*28,44*	1

› Ref. 7113 Broca de Centrar eje L=85 / Foret de centrage axe L=85 / L=85 axis centre drill-bit



Ø mm	Hex.	€	
14,00 - 250,00	Ø 6,35	*4,49*	1

› Ref. 7114 Extensión eje L=330 / Extension axe L=330 / L=330 axis extension



Ø mm	Hex.	€	
14,00 - 250,00	11	*23,39*	1

› Ref. 7143 Husillo cambio rápido eje hexagonal / Arbre changement rapide axe hexagonal / Hexagonal axis quick-change spindle



Ø mm	Hex.	€	
14,00 - 210,00	9,52	*43,75*	1

› Ref. 7144 Adaptador / Adaptateur / Adaptor



Ø mm	Hex.	€	
14,00 - 30,00	-	*3,72*	1
32,00 - 210,00	-	*4,16*	1

› Ref. 7145 Broca de Centrar eje L= 100 / Foret de centrage axe L=100 / L=100 axis centre drill-bit



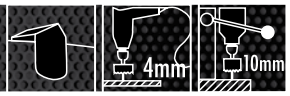
Ø mm	Hex.	€	
14,00 - 210,00	6,25	*4,38*	1

› Ref. 7146 Kit cambio rápido husillo+adaptador / Kit changement rapide arbre+adaptateur / Spindle+adaptor quick-change kit



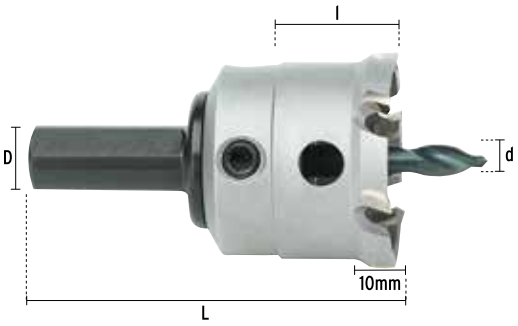
Ø mm	Hex.	€	
-	-	*51,63*	1

7101 **TCT Metal Duro**
Métal Dur / Hard Metal



Aceros inox — **Aciers inox / Stainless steel** — 1200 N/mm2 — AL

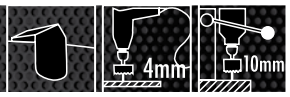
Aplicaciones / Applications



Ø mm	L mm	l mm	Z	d mm	D mm	€	
18,00	67,50	22	4	6	10	*81,52*	1
19,00	67,50	22	4	6	10	*79,61*	1
20,00	67,50	22	4	6	10	*79,61*	1
21,00	67,50	22	4	6	10	*82,06*	1
22,00	67,50	22	4	6	10	*82,06*	1
23,00	67,50	22	4	6	10	*83,31*	1
24,00	67,50	22	4	6	10	*83,31*	1
25,00	67,50	22	4	6	10	*83,31*	1
26,00	67,50	22	6	6	10	*88,20*	1
27,00	67,50	22	6	6	10	*89,40*	1
28,00	67,50	22	6	6	10	*89,40*	1
29,00	67,50	22	6	6	10	*89,40*	1
30,00	67,50	22	6	6	10	*89,40*	1
31,00	67,50	22	6	6	10	*105,36*	1
32,00	67,50	22	6	6	10	*105,36*	1
33,00	67,50	22	6	6	10	*109,02*	1
34,00	67,50	22	6	6	10	*110,23*	1
35,00	67,50	22	6	6	10	*110,23*	1
36,00	67,50	22	6	6	10	*111,45*	1
38,00	67,50	22	6	6	13	*111,45*	1
39,00	67,50	22	6	6	13	*112,69*	1
40,00	67,50	22	6	6	13	*112,69*	1
41,00	67,50	22	6	6	13	*133,50*	1
42,00	67,50	22	6	6	13	*133,50*	1
43,00	67,50	22	6	6	13	*137,20*	1
44,00	67,50	22	6	6	13	*137,20*	1
45,00	67,50	22	6	6	13	*137,20*	1
46,00	67,50	22	6	6	13	*142,09*	1
48,00	67,50	22	6	6	13	*142,09*	1
49,00	67,50	22	6	6	13	*143,29*	1
50,00	67,50	22	6	6	13	*143,29*	1
51,00	67,50	22	6	6	13	*165,34*	1
52,00	67,50	22	6	6	13	*165,34*	1
53,00	67,50	22	6	6	13	*166,59*	1
55,00	67,50	22	6	6	13	*166,59*	1
56,00	67,50	22	6	6	13	*182,50*	1
57,00	67,50	22	6	6	13	*182,50*	1
58,00	67,50	22	6	6	13	*182,50*	1
59,00	67,50	22	6	6	13	*184,97*	1
60,00	67,50	22	6	6	13	*184,97*	1
61,00	67,50	22	8	8	13	*208,22*	1
62,00	67,50	22	8	8	13	*208,22*	1
63,00	67,50	22	8	8	13	*208,22*	1

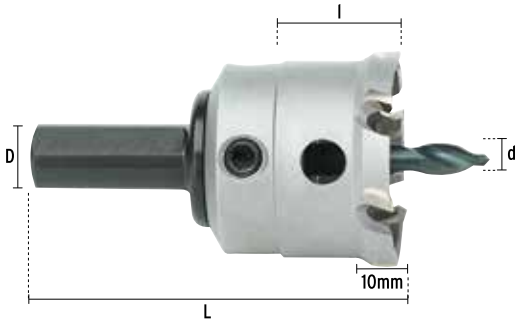
CORONAS METAL
SCIES-TRÉPAN METAUX / METAL HOLE SAWS

7101 **TCT Metal Duro**
Métal Dur / Hard Metal



Aceros inox — **Aciers inox / Stainless steel** — 1200 N/mm2 — AL

Aplicaciones / Applications



Ø mm	L mm	l mm	Z	d mm	D mm	€	
64,00	67,50	22	8	8	13	*208,22*	1
65,00	67,50	22	8	8	13	*208,22*	1
66,00	67,50	22	8	8	13	*226,60*	1
67,00	67,50	22	8	8	13	*226,60*	1
68,00	67,50	22	8	8	13	*229,06*	1
69,00	67,50	22	8	8	13	*229,06*	1
70,00	67,50	22	8	8	13	*229,06*	1
75,00	67,50	22	10	8	13	*238,85*	1
80,00	67,50	22	10	8	13	*248,65*	1
85,00	67,50	22	10	8	13	*251,12*	1
90,00	67,50	22	12	8	13	*264,57*	1
95,00	67,50	22	12	8	13	*268,24*	1
100,00	67,50	22	12	8	13	*275,59*	1

Accesorios / Accessoires / Accessories

› **Ref. 7102 Broca de Centrar** / Centre drill-bit / Foret de centrage



Ø mm	Hex.	L mm	€	
18,00 - 60,00	6	50	*3,69*	1
61,00 - 100,00	8	50	*5,41*	1

› **Ref. 7103 Cono morse** / Cône morse / Morse taper



Ø mm	Hex.	L mm	€	
61,00 - 100,00	-	-	*126,05*	1

7104 HSS Reafilable
HSS Réaffûtable / Resharpenable HSS

M2 | 5mm | 8mm

Aceros 800 N/mm² | Aciers / Steel | INOX | AL

Aplicaciones / Applications



Ø mm	L mm	Z	d mm	D mm	€	
10,00	25	6	5	8	*16,83*	1
11,00	25	6	5	8	*17,71*	1
12,00	25	6	5	8	*18,69*	1
13,00	25	6	5	8	*19,62*	1
14,00	25	6	6	8	*20,18*	1
15,00	25	6	6	8	*20,81*	1
16,00	25	6	6	8	*21,32*	1
17,00	25	6	6	8	*21,66*	1
18,00	25	8	6	10	*21,95*	1
19,00	25	8	6	10	*22,12*	1
20,00	25	8	6	10	*22,40*	1
21,00	25	8	6	10	*23,52*	1
22,00	25	8	6	10	*24,64*	1
23,00	25	8	6	10	*25,76*	1
24,00	25	8	6	10	*26,88*	1
25,00	25	10	6	10	*28,00*	1
26,00	25	10	6	10	*29,13*	1
27,00	25	10	6	10	*30,26*	1
28,00	25	10	6	10	*31,37*	1
29,00	25	10	6	10	*32,48*	1
30,00	25	10	6	10	*33,59*	1
31,00	25	10	6	12	*34,71*	1
32,00	25	12	6	12	*35,85*	1
33,00	25	12	6	12	*36,98*	1
34,00	25	12	6	12	*38,10*	1
35,00	25	12	6	12	*39,21*	1
36,00	25	12	6	12	*40,33*	1
37,00	25	12	6	12	*41,44*	1
38,00	25	12	6	12	*42,59*	1
39,00	25	14	6	12	*43,71*	1
40,00	25	14	6	12	*44,82*	1
41,00	25	14	6	12	*45,93*	1
42,00	25	14	6	12	*47,05*	1
43,00	25	14	6	12	*48,21*	1
44,00	25	14	6	12	*49,31*	1
45,00	25	14	6	12	*50,43*	1
46,00	25	16	6	12	*51,56*	1
47,00	25	16	6	12	*52,68*	1
48,00	25	16	6	12	*53,78*	1
49,00	25	16	6	12	*54,92*	1
50,00	25	16	6	12	*56,04*	1
51,00	25	18	8	12	*71,43*	1
52,00	25	18	8	12	*72,82*	1
53,00	25	18	8	12	*74,25*	1
54,00	25	18	8	12	*75,62*	1
55,00	25	18	8	12	*77,04*	1

(continúa Ref.7104 / suite Réf.7104 / Ref.7104 cont'd)

CORONAS METAL
SCIES-TRÉPAN METAUX / METAL HOLE SAWS

7104 **HSS Reafilable**
HSS Réaffûtable / Resharpenable HSS

M2 | 5mm | 8mm

Aceros 800 N/mm² | Aciers / Steel | INOX | AL

Aplicaciones / Applications



Ø mm	L mm	Z	d mm	D mm	€	
56,00	25	18	8	12	*78,44*	1
57,00	25	18	8	12	*79,83*	1
58,00	25	22	8	12	*81,23*	1
59,00	25	22	8	12	*82,66*	1
60,00	25	22	8	12	*84,03*	1
61,00	25	22	8	12	*96,83*	1
62,00	25	22	8	12	*98,42*	1
63,00	25	22	8	12	*100,02*	1
64,00	25	22	8	12	*101,58*	1
65,00	25	22	8	12	*103,17*	1
66,00	25	22	8	12	*104,77*	1
67,00	25	22	8	12	*106,33*	1
68,00	25	24	8	12	*107,92*	1
69,00	25	24	8	12	*109,54*	1
70,00	25	24	8	12	*111,14*	1
75,00	25	24	8	12	*119,04*	1
80,00	25	24	8	12	*127,00*	1
85,00	25	26	8	12	*146,57*	1
90,00	25	26	8	12	*154,07*	1
95,00	25	28	8	12	*163,40*	1
100,00	25	28	8	12	*172,74*	1

Accesorios / Accessoires / Accessories

› **Ref. 7105 Husillo** / Arbre / Spindle



Ø mm	D mm	Hex.	€	
14,00 - 17,00	8	-	*8,60*	1
18,00 - 30,00	10	-	*8,60*	1
31,00 - 50,00	12	-	*9,17*	1
51,00 - 100,00	12	-	*11,11*	1

› **Ref. 7106 Cono Morse** / Cône morse / Morse taper



Ø mm	D mm	Hex.	€	
18,00 - 30,00	CM2	-	*29,90*	1
31,00 - 100,00	CM2	-	*29,90*	1

› **Ref. 7107 Broca de Centrar** / Foret de centrage / Centre drill-bit



Ø mm	D mm	Hex.	€	
10,00 - 13,00	-	6	*2,61*	1
14,00 - 50,00	-	6	*2,80*	1
51,00 - 100,00	-	8	*2,99*	1

ESTUCHES CORONAS
COFFRETS / CASES

Bimetal M42



Ref.	Ø mm	Husillos Arbres Spindles	L mm	€	
7163	22,00-25,00-29,00-32,00-38,00	14-30/32-250	-	*165,05*	1
7164	22,00-29,00-35,00-44,00-51,00-64,00	14-30/32-250	-	*199,48*	1
7165	19,00-22,00-29,00-38,00-44,00-57,00	14-30/32-250	-	*191,04*	1
7166	19,00-22,00-25,00-29,00-35,00 38,00-44,00-51,00-57,00	14-30/32-250	-	*244,02*	1
7115/1	25,00-35,00-43,00-51,00-64,00	14-30/32-210	-	*181,70*	1
7116/1	19,00-22,00-25,00-29,00-38,00-48,00	14-30/32-210	-	*181,55*	1
7117	19,00-22,00-25,00-32,00-35,00-38,00 43,00-51,00-57,00-60,00-64,00-76,00	14-30/32-210	330	*357,22*	1
7148	22,00-25,00-33,00-35,00-41,00-51,00	14-30/32-210	-	*210,26*	1

ESTUCHES CORONAS
COFFRETS / CASES

Bimetal Dentado Fino M42
Denture Fine / Fine Tooth Pitch

Estuches / Coffrets / Cases



Ref.	Ø mm	Husillos Arbres Spindles	L mm	€	
7115/2	25,00-35,00-43,00-51,00-60,00	14-30/32-210	-	*181,70*	1
7116/2	19,00-22,00-25,00-29,00-38,00-48,00	14-30/32-210	-	*181,77*	1

Bimetal Cambio Rápido M42
Changement Rapide / Quick Change

Estuches / Coffrets / Cases



Ref.	Ø mm	Husillo cambio rápido Arbre changement rapide Quick-change spindle	€	
7147	19,00-22,00-25,00-32,00-35,00-38,00 43,00-51,00-57,00-60,00-64,00-76,00	14-210	*354,77*	1

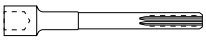
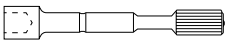
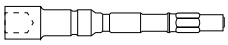
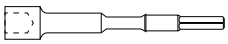


Brocas para Construcción
Forets pour Construction
Drill-bit for Construction

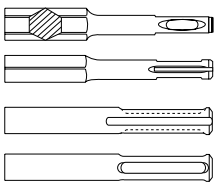
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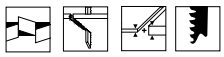
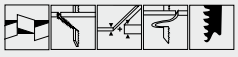
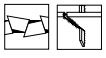
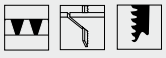
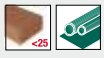
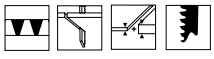
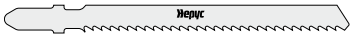
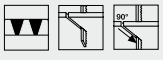
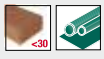
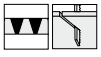
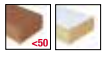
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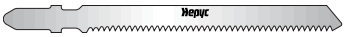
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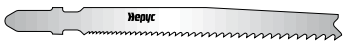
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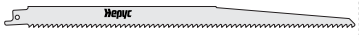
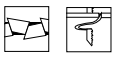
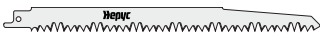
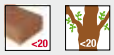
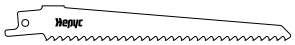
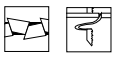
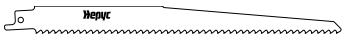
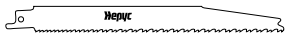
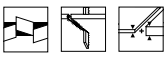
Sierras de calar para metal / Scies sauteuses pour métal / Jig saws for metal

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7609	HSS		440
7611	HSS		440
7647	HSS		440
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7629	BIMETAL		440
7649	BIMETAL		440
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7651	HM		440

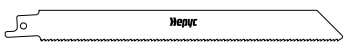
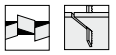
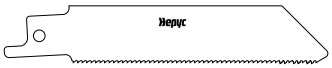
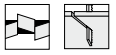
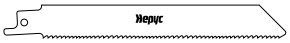
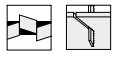
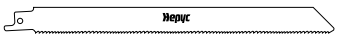
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BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1201 Fasterplus (SDS+)

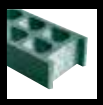
APLICACIONES
APPLICATIONS



Hormigón / Béton / Concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS+
Queue SDS+
SDS+ shank



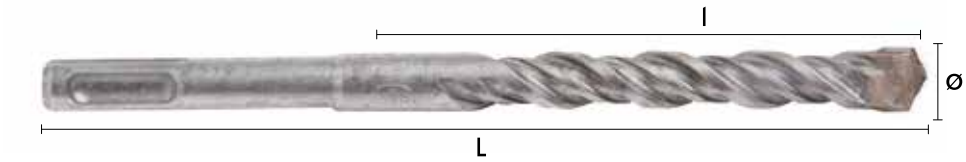
Punta 2 cortes
Pointe 2 dents
2-cut tip



Percusión y rotación
Percussion et rotation
Percussion and rotation



PGM





Ø mm	L mm	l mm	Ref. 1201 € (clip)	Ref. 1201 clip	Ref. 1201/1 € (pack)	Ref. 1201/1 pack
4,00	110	50	*5,23*	1		-
5,00	110	50	*4,57*	1	4,00	20
5,50	110	50	*5,04*	1		-
6,00	110	50	*4,68*	1	4,14	20
7,00	110	50	*4,99*	1		-
8,00	110	50	*4,92*	1	4,34	20
10,00	110	50	*5,26*	1		-
5,00	160	100	*5,50*	1	4,83	20
5,50	160	100	*4,71*	1		-
6,00	160	100	*4,80*	1	4,21	20
6,50	160	100	*5,36*	1		-
7,00	160	100	*5,50*	1		-
8,00	160	100	*5,06*	1	4,45	20
9,00	160	100	*6,37*	1		-
10,00	160	100	*6,30*	1	5,53	20
11,00	160	100	*7,58*	1		-
12,00	160	100	*7,31*	1	6,43	20
13,00	160	100	*11,83*	1		-
14,00	160	100	*11,83*	1		-
15,00	160	100	*15,08*	1		-
5,00	210	150	*8,60*	1		-
6,00	210	150	*7,34*	1		-
6,50	210	150	*9,28*	1		-
8,00	210	150	*6,24*	1		-
9,00	210	150	*8,23*	1		-
10,00	210	150	*8,23*	1	7,25	20
12,00	210	150	*10,02*	1	8,82	20
13,00	210	150	*13,22*	1		-
14,00	210	150	*13,08*	1		-
16,00	210	150	*15,46*	1		-
17,00	210	150	*21,96*	1		-
18,00	210	150	*21,96*	1		-
20,00	210	150	*29,53*	1		-
24,00*	210	150	*48,20*	1		-
6,00	260	200	*11,29*	1		-
6,50	260	200	*13,15*	1		-
8,00	260	200	*8,52*	1		-
10,00	260	200	*9,23*	1		-
11,00	260	200	*11,42*	1		-
12,00	260	200	*11,40*	1		-
14,00	260	200	*13,65*	1		-
15,00	260	200	*16,99*	1		-
16,00	260	200	*16,99*	1		-

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last) **(continúa Ref.1201** / suite Réf.1201 / Ref.1201 cont'd)

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1201 Fasterplus (SDS+)





Ø mm	L mm	l mm	clip Ref. 1201 €	clip Ref. 1201 pack	pack Ref. 1201/1 €	pack Ref. 1201/1 pack
22,00	260	200	*43,74*	1		-
24,00	260	200	*49,22*	1		-
25,00	260	200	*51,31*	1		-
6,00	310	250	*14,58*	1		-
8,00	310	250	*14,54*	1		-
10,00	310	250	*12,56*	1		-
12,00	310	250	*17,35*	1		-
14,00	310	250	*19,67*	1		-
16,00	310	250	*20,74*	1		-
18,00	310	250	*30,48*	1		-
20,00	310	250	*40,59*	1		-
22,00	310	250	*45,73*	1		-
24,00	310	250	*66,65*	1		-
8,00	450	400	*21,43*	1		-
10,00	450	400	*21,54*	1		-
12,00	450	400	*28,26*	1		-
14,00	450	400	*26,06*	1		-
15,00	450	400	*27,81*	1		-
16,00	450	400	*30,54*	1		-
18,00	450	400	*41,75*	1		-
20,00	450	400	*45,54*	1		-
22,00	450	400	*46,28*	1		-
24,00	450	400	*54,99*	1		-
25,00	450	400	*53,01*	1		-
26,00	450	400	*55,02*	1		-
8,00	610	600	*38,09*	1		-
10,00	610	600	*32,78*	1		-
12,00	610	600	*38,97*	1		-
14,00	610	600	*38,43*	1		-
16,00	610	600	*40,50*	1		-
18,00	610	600	*48,20*	1		-

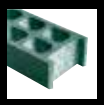
APLICACIONES
APPLICATIONS



Hormigón / Béton / Concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS+
Queue SDS+
SDS+ shank



Punta 2 cortes
Pointe 2 dents
2-cut tip



Percusión y rotación
Percussion et rotation
Percussion and rotation

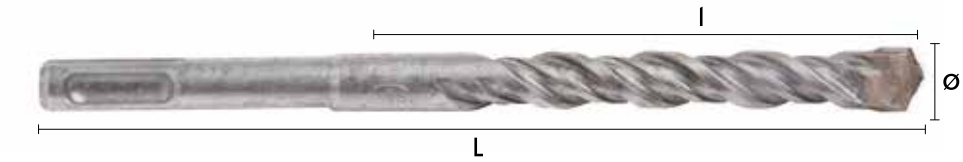


PGM



BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1201 Fasterplus (SDS+)





clip | pack

Ø mm	L mm	l mm	€		€		Ref. 1201	Ref. 1201/1
20,00	610	600	*59,17*	1		-		
22,00	610	600	*57,81*	1		-		
25,00	610	600	*106,71*	1		-		
10,00	1000	940	*107,17*	1		-		
12,00	1000	940	*112,13*	1		-		
14,00	1000	940	*112,14*	1		-		
16,00	1000	940	*138,55*	1		-		
18,00	1000	940	*148,43*	1		-		
20,00	1000	940	*132,74*	1		-		
22,00	1000	940	*174,83*	1		-		
25,00	1000	940	*205,33*	1		-		

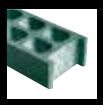
APLICACIONES
APPLICATIONS



Hormigón / Béton / Concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS+
Queue SDS+
SDS+ shank



Punta 2 cortes
Pointe 2 dents
2-cut tip



Percusión y rotación
Percussion et rotation
Percussion and rotation



PGM

› **Ref. 1217**



Ø mm	L mm	
5,00	110	1
6,00	110	1
8,00	110	1
6,00	160	1
8,00	160	1
10,00	160	1
12,00	160	1
TOTAL		7
€	*53,29*	

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1226 Compaqplus (SDS+)





Ø mm	L mm	l mm	Ref. 1226 clip €		Ref. 1226/1 pack €	
5,00	115	50	*14,04*	1	*11,73*	5
6,00	115	50	*13,00*	1	*11,18*	5
6,50	115	50	*13,29*	1		-
7,00	115	50	*13,37*	1		-
8,00	115	50	*13,29*	1	*11,43*	5
10,00	115	50	*15,17*	1	*13,04*	5
5,00	165	100	*14,35*	1	*11,98*	5
6,00	165	100	*13,29*	1	*11,43*	5
6,50	165	100	*13,37*	1		-
7,00	165	100	*13,60*	1		-
8,00	165	100	*13,89*	1	*11,95*	5
10,00	165	100	*14,86*	1	*12,78*	5
12,00	165	100	*16,62*	1	*14,30*	5
14,00	165	100	*21,44*	1	*18,45*	5
6,00	215	150	*14,26*	1	*12,26*	5
7,00	215	150	*14,57*	1		-
8,00	215	150	*14,57*	1	*12,53*	5
10,00	215	150	*16,10*	1	*13,84*	5
12,00	215	150	*18,21*	1	*15,66*	5
14,00	215	150	*23,79*	1	*20,45*	5
16,00	215	150	*28,12*	1		-
6,00	315	250	*15,97*	1		-
8,00	315	250	*18,53*	1		-
10,00	315	250	*21,62*	1		-
12,00	315	250	*24,38*	1		-
14,00	315	250	*28,70*	1		-
16,00	315	250	*29,23*	1		-
8,00	465	400	*49,83*	1		-
10,00	465	400	*50,83*	1		-
12,00	465	400	*56,13*	1		-
14,00	465	400	*61,91*	1		-
16,00	465	400	*63,46*	1		-

› Ref. 1217/2



Ø mm	L mm	
6,00	110	1
8,00	110	1
6,00	160	1
8,00	160	1
10,00	160	1
12,00	160	1
TOTAL		6
€	*100,63*	

APLICACIONES
APPLICATIONS



Hormigón armado
Béton armé
Reinforced concrete



Granito
Granit
Granite



Hormigón
Béton
Concrete



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS+
Queue SDS+
SDS+ shank



Punta 6 cortes
Pointe 6 dents
6-cut tip



Percusión y rotación
Percussion et rotation
Percussion and rotation



PGM



BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1223 Quatroplus (SDS+)





APLICACIONES
APPLICATIONS



Hormigón armado
Béton armé
Reinforced concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS+
Queue SDS+
SDS+ shank



Ø >12 mm



Percusión y rotación
Percussion et rotation
Percussion and rotation



Punta 4 cortes
Pointe 4 dents
4-cut tip

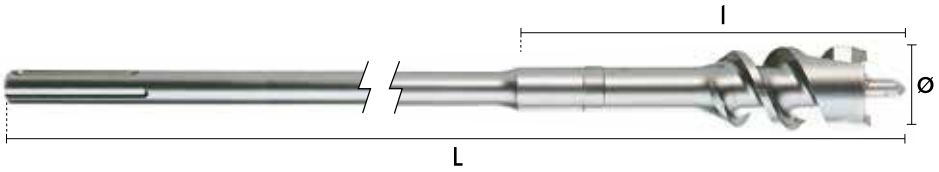


PGM

Ø mm	L mm	l mm	€	clip	€	pack
			Ref. 1223		Ref. 1223/1	
5,00	115	50	5,55	1	5,00	5
6,00	115	50	5,91	1	5,32	5
8,00	115	50	7,76	1	6,98	5
10,00	115	50	8,81	1	7,93	5
5,00	165	100	6,74	1	6,07	5
6,00	165	100	6,48	1	5,83	5
8,00	165	100	7,76	1	6,98	5
10,00	165	100	9,42	1	8,48	5
12,00	165	100	11,69	1	10,52	5
6,00	215	150	8,72	1	7,85	5
8,00	215	150	9,73	1	8,75	5
10,00	215	150	11,25	1	10,12	5
12,00	215	150	13,95	1	12,56	5
14,00	215	150	18,15	1		
16,00	215	150	29,09	1		
6,00	265	200	10,46	1		
8,00	265	200	10,67	1		
10,00	265	200	14,48	1		
12,00	265	200	16,91	1		
14,00	265	200	20,29	1		
16,00	265	200	33,63	1		
18,00	265	200	45,05	1		
20,00	265	200	50,87	1		
22,00	265	200	61,37	1		
8,00	315	250	13,62	1		
10,00	315	250	18,40	1		
12,00	315	250	21,98	1		
14,00	315	250	26,01	1		
16,00	315	250	35,14	1		
8,00	465	400	22,54	1		
10,00	465	400	25,25	1		
12,00	465	400	27,47	1		
14,00	465	400	32,58	1		
16,00	465	400	44,03	1		
18,00	450	400	52,93	1		
20,00	450	400	60,67	1		
22,00	450	400	73,05	1		
24,00	450	400	77,34	1		
25,00	450	400	70,77	1		
28,00	450	400	90,14	1		
30,00	450	400	114,14	1		

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1222 Performax (SDS MAX)



clip

Ø mm	L mm	l mm	Ref. 1222 €	
45,00	590	450	*376,76*	1
55,00	590	450	*441,39*	1
65,00	590	450	*502,22*	1
80,00	590	450	*623,39*	1
45,00	990	850	*413,03*	1
55,00	990	850	*444,81*	1
65,00	990	850	*548,63*	1
80,00	990	850	*667,66*	1

APLICACIONES
APPLICATIONS



Hormigón armado
Béton armé
Reinforced concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS MAX
Queue SDS MAX
SDS Max shank



Punta perforadora
Pointe perforatrice
Drilling tip



Percusión y rotación
Percussion et rotation
Percussion and rotation



BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1203 Fastermax (SDS MAX)





clip

APLICACIONES
APPLICATIONS



Hormigón armado
Béton armé
Reinforced concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS MAX
Queue SDS MAX
SDS Max shank



Punta 4 cortes
Pointe 4 dents
4-cut tip



Percusión y rotación
Percussion et rotation
Percussion and rotation



2 cortes
2 pointe
2 cut tip

Ø mm	L mm	l mm	Ref. 1203 €	Ref. 1203
12,00	340	200	62,83	1
14,00	340	200	75,35	1
15,00	340	200	84,17	1
16,00	340	200	84,17	1
18,00	340	200	86,57	1
20,00	340	200	86,57	1
22,00	340	200	88,98	1
24,00	340	200	90,94	1
25,00	340	200	94,03	1
26,00	340	200	100,18	1
28,00	340	200	108,43	1
30,00	340	200	119,26	1
32,00	340	200	119,27	1
12,00	540	360	72,95	1
14,00	540	360	86,35	1
15,00	540	360	87,45	1
16,00	540	360	92,06	1
18,00	540	360	94,46	1
20,00	540	360	99,54	1
22,00	540	360	103,92	1
24,00	540	360	121,73	1
25,00	540	360	116,00	1
26,00	540	360	123,92	1
28,00	540	360	123,92	1
30,00	540	360	137,97	1
32,00	540	360	148,54	1
35,00	540	360	167,85	1
38,00	540	360	222,34	1
40,00	540	360	282,98	1
45,00	540	360	368,71	1
16,00	690	550	118,64	1
18,00	690	550	118,64	1
20,00	690	550	136,66	1
22,00	690	550	136,66	1
25,00	690	550	151,68	1
28,00	690	550	161,49	1
32,00	690	550	182,49	1
35,00	690	550	182,39	1
38,00	690	550	281,89	1

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1203 Fastermax (SDS MAX)





clip

Ø mm	L mm	l mm	Ref. 1203 €	
40,00	690	550	*317,12*	1
16,00	920	780	*133,67*	1
18,00	920	780	*135,14*	1
19,00*	920	780	*135,20*	1
20,00	920	780	*147,93*	1
22,00	920	780	*147,93*	1
24,00*	920	780	*168,95*	1
25,00	920	780	*168,95*	1
26,00*	920	780	*225,11*	1
28,00	920	780	*225,29*	1
29,00*	920	780	*225,29*	1
30,00*	920	780	*225,29*	1
32,00	920	780	*225,29*	1
35,00	920	780	*289,14*	1
36,00*	920	780	*294,41*	1
40,00	920	780	*341,55*	1
42,00*	920	780	*352,29*	1
45,00*	920	780	*385,22*	1
20,00	1500	1360	*239,62*	1
25,00	1500	1360	*323,89*	1
28,00	1500	1360	*382,42*	1
32,00	1500	1360	*439,75*	1
36,00*	1500	1360	*576,70*	1
40,00	1500	1360	*845,65*	1
42,00*	1500	1360	*845,65*	1
45,00*	1500	1360	*892,65*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

APLICACIONES
APPLICATIONS



Hormigón armado
Béton armé
Reinforced concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS MAX
Queue SDS MAX
SDS Max shank



Punta 4 cortes
Pointe 4 dents
4-cut tip

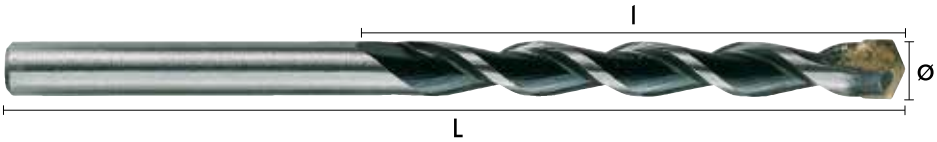


Percusión y rotación
Percussion et rotation
Percussion and rotation



BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1207 Óptima



APLICACIONES
APPLICATIONS



Gres / Grès / Stoneware



Hormigón
Béton
Concrete



Ladrillo
Brique
Brick



Acero <80Kg
Acier <80Kg
Steel <80Kg



Maderas blandas
Bois tendre
Softwoods



Plástico
Plastique
Plastic

Características
Caractéristiques
Features



Punta 2 cortes
Pointe 2 dents
2-cut tip



Fresado tipo S
Fraisage type S
S-type milling



Percusión y rotación
Percussion et rotation
Percussion and rotation

	Ø mm	L mm	l mm	tubo Ref. 1207 €		pack Ref. 1207/1 €	
	3,00	70	40	*4,57*	1	*4,12*	10
	4,00	75	40	*4,41*	1	*3,97*	10
	5,00	85	50	*4,94*	1	*4,45*	10
	6,00	100	60	*5,01*	1	*4,49*	10
	7,00	100	60	*5,30*	1		-
	8,00	120	80	*5,72*	1	*5,13*	10
	9,00	120	80	*6,60*	1		-
	10,00	120	80	*7,62*	1	*6,86*	5
	11,00	150	90	*9,49*	1		-
	12,00	150	90	*10,79*	1	*9,71*	5
	14,00	150	90	*14,40*	1		-
	5,00	150	90	*8,85*	1		-
	6,00	150	90	*9,33*	1		-
	8,00	200	150	*9,90*	1		-
	10,00	200	150	*11,68*	1		-
	12,00	200	150	*12,20*	1		-

Estuches / Coffrets / Cases

› Ref. 8128/4



Ø mm	€	
3,00 - 4,00 - 5,00 - 6,00 - 7,00 - 8,00 - 9,00 - 10,00	*48,33*	8

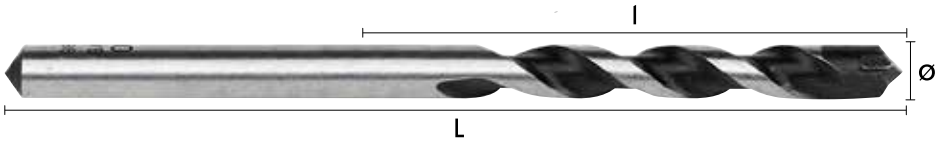
› Ref. 8130/4



Ø mm	€	
4,00 - 5,00 - 6,00 - 8,00 - 10,00	*31,02*	5

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1225 Perfecta



Ø mm	L mm	l mm	tubo Ref. 1225 €	tubo Ref. 1225	pack Ref. 1225/1 €	pack Ref. 1225/1
3,00	70	35	*2,74*	1	*2,48*	10
3,50	70	35	*2,81*	1		-
4,00	75	40	*2,74*	1	*2,48*	10
5,00	85	50	*2,81*	1	*2,54*	10
6,00	100	60	*3,24*	1	*2,92*	10
7,00	100	60	*3,68*	1		-
8,00	120	70	*4,02*	1	*3,64*	10
9,00	120	70	*4,62*	1		-
10,00	120	80	*5,41*	1	*4,86*	5
11,00 *	150	80	*7,26*	1		-
12,00	150	80	*7,48*	1	*6,73*	5
13,00 *	150	80	*9,51*	1		-
14,00	150	80	*11,71*	1		-
15,00 *	160 *	80	*13,59*	1		-
16,00	160	80	*15,12*	1		-
18,00	160	80	*20,06*	1		-
20,00	160	80	*23,97*	1		-
6,00	150	80	*4,26*	1		-
8,00 *	150	80	*4,80*	1		-
8,00	250	170	*6,77*	1		-
10,00	250	170	*8,54*	1		-
12,00	250	170	*11,53*	1		-
14,00	250	170	*20,99*	1		-

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

Estuches / Coffrets / Cases

› Ref. 8130/5

Ø mm	€	
4,00 - 5,00 - 6,00 - 8,00 - 10,00	*21,86*	5



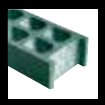
APLICACIONES
APPLICATIONS



Granito / Granit / Granite



Hormigón
Béton
Concrete



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick



Cerámica
Céramique
Ceramic



Gres
Grès
Stoneware



Mármol
Marbre
Marble

Características
Caractéristiques
Features



Punta 2 cortes
Pointe 2 dents
2-cut tip



Fresado tipo U
Fraisage type U
U-type milling



Percusión y rotación
Percussion et rotation
Percussion and rotation



Punta soldada a 1100º
Pointe soudée à 1100º
Tip soldered at 1100º

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

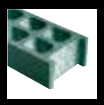
1208 Diamond



APLICACIONES
APPLICATIONS



Hormigón
Béton
Concrete



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick



Gres
Grès
Stoneware



Cerámica
Céramique
Ceramic



Mármol
Marbre
Marble

Características
Caractéristiques
Features



Punta 2 cortes
Pointe 2 dents
2-cut tip



Fresado tipo U
Fraisage type U
U-type milling



Percusión y rotación
Percussion et rotation
Percussion and rotation



Punta soldada a 1100º
Pointe soudée à 1100º
Tip soldered at 1100º

Ø mm	L mm	l mm	tubo Ref. 1208 €	tubo Ref. 1208	pack Ref. 1208/1 €	pack Ref. 1208/1
3,00	70	40	2,17	1	1,95	10
3,50	70	40	2,06	1		-
4,00	75	40	2,13	1	1,92	10
4,50	80	50	2,06	1		-
5,00	85	50	2,13	1	1,92	10
5,50	85	50	2,17	1		-
6,00	100	60	2,38	1	2,14	10
6,50	100	60	2,73	1		-
7,00	100	60	2,65	1		-
8,00	120	80	2,86	1	2,57	10
9,00	120	80	3,27	1		-
10,00	120	80	4,11	1	3,70	5
11,00	150	90	5,34	1		-
12,00	150	90	5,97	1	5,38	5
13,00	150	90	7,33	1		-
14,00	150	90	9,04	1		-
15,00	160	100	10,44	1		-
16,00	160	100	11,63	1		-
18,00	160	100	15,44	1		-
20,00	160	100	18,45	1		-
22,00	160	100	21,19	1		-
25,00	160	100	24,35	1		-
5,00	150	90	2,95	1		-
5,50	150	90	3,30	1		-
6,00	150	90	3,27	1		-
6,50	150	90	4,76	1		-
7,00	150	90	3,78	1		-
8,00	150	90	4,47	1		-
10,00	150	90	5,80	1		-
8,00	200	150	5,31	1		-
10,00	200	150	6,70	1		-
12,00	200	150	6,76	1		-
10,00	300	250	6,62	1		-
12,00	300	250	8,87	1		-
14,00	300	250	16,15	1		-
8,00	400	350	11,48	1		-
10,00	400	350	12,00	1		-
12,00	400	350	14,23	1		-
14,00	400	350	18,24	1		-
16,00	400	350	21,45	1		-
18,00	400	350	23,57	1		-
20,00	400	350	27,88	1		-
22,00	400	350	32,98	1		-
24,00	400	350	38,90	1		-
10,00	600	550	16,57	1		-
12,00	600	550	16,83	1		-
14,00	600	550	20,08	1		-
16,00	600	550	24,08	1		-
18,00	600	550	28,25	1		-
20,00	600	550	35,94	1		-

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1208 Diamond

Estuches / Coffrets / Cases

› Ref. 8128/3



Ø mm	€	
3,00 - 4,00 - 5,00 - 6,00 - 7,00 - 8,00 - 9,00 - 10,00	*25,86*	8

› Ref. 8130/3

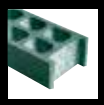


Ø mm	€	
4,00 - 5,00 - 6,00 - 8,00 - 10,00	*16,83*	5

APLICACIONES
APPLICATIONS



Hormigón
Béton
Concrete



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick



Gres
Grès
Stoneware

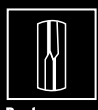


Cerámica
Céramique
Ceramic



Mármol
Marbre
Marble

Características
Caractéristiques
Features



Punta 2 cortes
Pointe 2 dents
2-cut tip



Fresado tipo U
Fraisage type U
U-type milling



Percusión y rotación
Percussion et rotation
Percussion and rotation



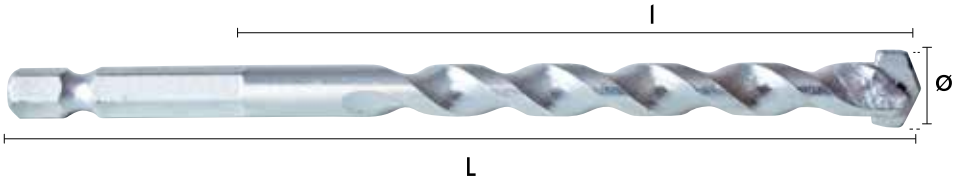
Punta soldada a 1100º
Pointe soudée à 1100º
Tip soldered at 1100º



BROCAS ENGANCHE HEXAGONAL 1/4"

FORETS EMMANCHEMENT HEXAGONAL 1/4" / DRILL-BITS WITH HEXAGON SHANK 1/4"

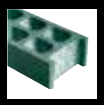
1502 DIAMOND Hex.



APLICACIONES
APPLICATIONS



Hormigón
Béton
Concrete



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick



Gres
Grès
Stoneware

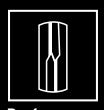


Cerámica
Céramique
Ceramic



Mármol
Marbre
Marble

Características
Caractéristiques
Features



Punta 2 cortes
Pointe 2 dents
2-cut tip



Fresado tipo U
Fraisage type U
U-type milling



Percusión y rotación
Percussion et rotation
Percussion and rotation



Punta soldada a 1100º
Pointe soudée à 1100º
Tip soldered at 1100º



Mango hexagonal 1/4"
Queue hexagonale 1/4"
Hexagonal shank 1/4"



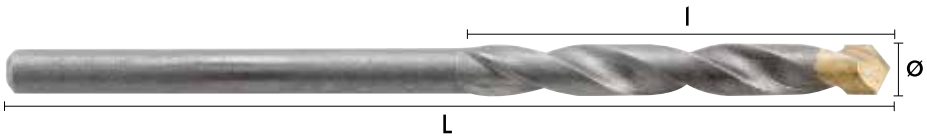
Cambio rápido
Change rapide
Quick change

tubo

Ø mm	L mm	l mm	Ref. 1502 €	Ref. 1502
3,00	60	35	*2,28*	1
4,00	75	35	*2,44*	1
5,00	85	35	*3,05*	1
6,00	100	50	*3,34*	1
7,00	100	50	*3,65*	1
8,00	120	70	*3,95*	1
9,00	120	70	*4,57*	1
10,00	120	70	*5,03*	1
12,00	150	80	*6,08*	1

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

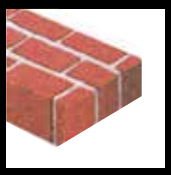
1209 Marmolit



Ø mm	L mm	l mm	€	funda
			Ref. 1209	
3,00	60	40	0,95	1
3,50	60	40	1,06	1
4,00	75	40	0,83	1
4,50	85	50	1,06	1
5,00	85	50	0,87	1
5,50	85	50	1,06	1
6,00	100	60	0,95	1
7,00	100	60	1,14	1
8,00	120	80	1,33	1
9,00	120	80	1,61	1
10,00	120	80	1,98	1
11,00	150	90	2,37	1
12,00	150	90	2,58	1
13,00	150	90	3,82	1
14,00	150	90	4,24	1
15,00	150	100	5,11	1
16,00	150	100	5,59	1
18,00	160	100	6,99	1
20,00	160	100	9,56	1
24,00*	160	100	15,70	1
25,00*	160	100	16,45	1
5,00	150	90	2,24	1
6,00	150	90	2,40	1
7,00*	150	90	2,55	1
6,00	200	150	3,36	1
7,00*	200	150	3,57	1
8,00	200	150	3,97	1
9,00*	200	150	4,25	1
10,00	200	150	4,41	1
11,00*	200	150	4,46	1
12,00	200	150	4,55	1
6,00	300	250	4,47	1
7,00*	300	250	4,86	1
8,00	300	250	4,91	1
9,00*	300	250	4,99	1
10,00	300	250	4,68	1
12,00	300	250	5,81	1
13,00*	300	250	7,05	1
14,00	300	250	7,15	1
16,00	300	250	10,11	1
18,00	300	250	11,67	1
20,00	300	250	15,73	1
6,00	400	350	5,19	1
7,00*	400	350	5,51	1
8,00	400	350	5,59	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

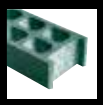
APLICACIONES
APPLICATIONS



Ladrillo / Brique / Brick



Cerámica
Céramique
Ceramic



Ladrillo hormigón
Brique béton
Concrete brick



Hormigón
Béton
Concrete

Características
Caractéristiques
Features



Punta 2 cortes
Pointe 2 dents
2-cut tip



Percusión y rotación
Percussion et rotation
Percussion and rotation



BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1209 Marmolit



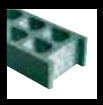
APLICACIONES
APPLICATIONS



Ladrillo / Brique / Brick



Cerámica
Céramique
Ceramic



Ladrillo hormigón
Brique béton
Concrete brick



Hormigón
Béton
Concrete

Características
Caractéristiques
Features



Punta 2 cortes
Pointe 2 dents
2-cut tip



Percusión y rotación
Percussion et rotation
Percussion and rotation

funda

Ø mm	L mm	l mm	€	Ref. 1209
10,00	400	350	*6,14*	1
12,00	400	350	*7,05*	1
14,00	400	350	*7,72*	1
15,00	400	350	*8,83*	1
16,00	400	350	*10,85*	1
18,00	400	350	*12,86*	1
20,00	400	350	*17,72*	1
22,00 *	400	350	*32,07*	1
8,00	600	550	*7,63*	1
10,00	600	550	*8,31*	1
12,00	600	550	*8,97*	1
14,00	600	550	*10,31*	1
16,00	600	550	*14,08*	1
18,00	600	550	*15,57*	1
20,00	600	550	*22,75*	1
22,00 *	600	550	*34,49*	1
28,00 *	600	550	*85,72*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

Estuches / Coffrets / Cases

› Ref. 8128/2



Ø mm	€	
3,00 - 4,00 - 5,00 - 6,00 - 7,00 - 8,00 - 9,00 - 10,00	*13,85*	8

› Ref. 8130/2



Ø mm	€	
4,00 - 5,00 - 6,00 - 8,00 - 10,00	*9,27*	5

BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1227 Porceline



Ø mm	L mm	tubo Ref. 1227 €	
5,00	55	*20,88*	1
6,00	55	*27,57*	1
7,00	55	*29,15*	1
8,00	55	*30,32*	1
10,00	55	*32,83*	1
12,00	55	*35,01*	1
15,00	55	*37,92*	1
20,00	55	*43,89*	1
25,00	55	*53,11*	1
35,00	55	*55,35*	1

› **Ref. 1227/1 Dispensador de agua** / Réservoir d'eau / Water dispenser



Ø mm	€	
5,00 - 10,00	*3,20*	1
12,00 - 25,00	*3,20*	1

› **Ref. 8138**



Ref.	Ø mm	€	
8138	5,00 - 6,00 - 7,00 - 8,00 -10,00 + dispensador	*146,23*	1

APLICACIONES APPLICATIONS



Porcelanato
Céramique dur / Hard tile



Gres
Grès
Stoneware



Cerámica
Céramique
Ceramic



Granito
Granit
Granite



Vidrio
Verre
Glass

Características Caractéristiques Features



Diamante
Diamant
Diamond



Rotación
Rotation
Rotation



1
Refrigerar de manera abundante la zona a perforar.
Refroidir abondamment la zone à perforer.
Cool the area to be drilled.



2
Comenzar a perforar en un ángulo de 45º hasta realizar una pequeña muesca.
Commencer à perforer à un angle de 45º jusqu'à obtenir une petite encoche.
Start to drill at a 45º angle until you make a small notch.



3
Perforar de forma perpendicular hasta realizar el orificio.
Perforer perpendiculairement jusqu'à réalisation de l'orifice.
Drill at a right angle until you make a hole.



BROCAS PARA PARED
FORETS BÉTON / MASONRY DRILL-BITS

1228 Porceline Widia

APLICACIONES
APPLICATIONS



Porcelanato
Céramique dur / Hard tile



Gres
Grès
Stoneware



Cerámica
Céramique
Ceramic

Características
Caractéristiques
Features



Rotación
Rotation
Rotation



tubo

Ø mm	L mm	l mm	Ref. 1228 €	Ref. 1228
3,00 *	85	40	*19,13*	1
4,00	85	50	*19,13*	1
5,00	85	50	*20,24*	1
6,00	100	65	*21,16*	1
7,00 *	125	75	*24,22*	1
8,00	126	75	*26,25*	1
9,00 *	150	90	*31,82*	1
10,00	150	90	*31,82*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

1212 Vidrio

APLICACIONES
APPLICATIONS



Vidrio / Verre / Glass



Cerámica
Céramique
Ceramic



Gres
Grès
Stoneware

Características
Caractéristiques
Features



Punta Ojiva
Pointe Ogive
Pointed tip



Rotación
Rotation
Rotation



tubo

Ø mm	L mm	Ref. 1212 €	Ref. 1212
3,00	65	*4,87*	1
4,00	65	*5,01*	1
5,00	65	*5,51*	1
6,00	65	*5,96*	1
7,00	70	*7,09*	1
8,00	70	*7,47*	1
9,00	70	*10,09*	1
10,00	80	*10,09*	1
12,00	80	*15,23*	1

CORONAS PARED
SCIES-TRÉPAN BÉTON / CORE BITS

7121 SDS+

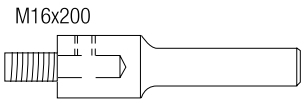


clip

Ø mm	Z	Ref. 7121 €	
25,00	4	*59,18*	1
30,00	6	*63,45*	1
35,00	6	*68,07*	1
40,00	6	*74,17*	1
50,00	6	*85,06*	1
65,00	6	*85,84*	1
68,00	6	*96,47*	1
82,00	6	*123,23*	1
90,00	6	*145,08*	1
100,00	6	*164,46*	1
112,00	6	*198,31*	1

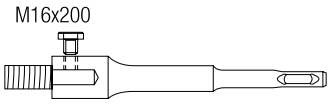
Accesorios / Accessoires / Accessories

› **Ref. 7122 Mango hexagonal** / Queue hexagonale / Hexagonal shank



L mm	€	
78	*32,79*	1
220	*46,01*	1
370	*55,94*	1

› **Ref. 7123 Mango SDS+** / Queue SDS+ / SDS+ Shank



L mm	€	
105	*38,54*	1
220	*51,61*	1
370	*61,34*	1

› **Ref. 7124 Broca de centrar Ø 8** / Foret de centrage Ø 8 / Centre drill-bit Ø 8



L mm	€	
120	*8,31*	1

› **Ref. 7153 Mango broca** / Queue foret / Drill-bit shank



L mm	€	
175	*71,81*	1
340	*93,92*	1
440	*109,56*	1

APLICACIONES APPLICATIONS



Hormigón / Béton / Concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características Caractéristiques Features



Mango SDS+
Queue SDS+
SDS+ shank



Punta Dientes MD
Pointe Dents de MD
MD tooth tip

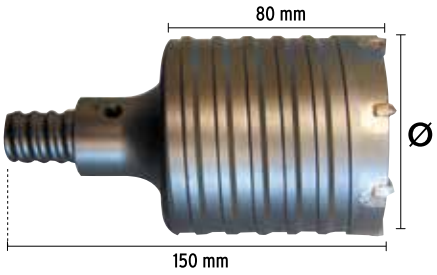


Percusión y rotación
Percussion et rotation
Percussion and rotation



CORONAS PARED
SCIES-TRÉPAN BÉTON / CORE BITS

7125 SDS MAX



APLICACIONES
APPLICATIONS



Hormigón / Béton / Concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS MAX
Queue SDS MAX
SDS Max shank



Mango estriado
Queue cannelée
Ribbed shank



Mango SW 19
Queue SW 19
SW 19 shank



Mango SW 13
Queue SW 13
SW 13 shank



Punta Dientes MD
Pointe Dents de MD
MD tooth tip



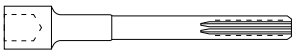
Percusión y rotación
Percussion et rotation
Percussion and rotation

tubo

Ø mm	z	€	Ref. 7125
45,00	4	*139,48*	1
50,00	6	*166,76*	1
55,00	6	*181,92*	1
68,00	6	*194,04*	1
82,00	6	*275,91*	1
90,00	6	*321,39*	1
100,00	6	*348,67*	1
125,00	6	*394,16*	1
150,00	6	*515,45*	1

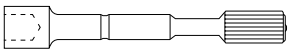
Accesorios / Accessoires / Accessories

› Ref. 7126 Mango SDS MAX / Queue SDS MAX / SDS MAX Shank



L mm	€	
200	*85,06*	1
460	*100,26*	1

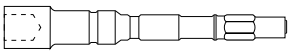
› Ref. 7127 Mango estriado / Queue canelée / Ribbed shank



L mm	€	
200 *	*85,06*	1
460 *	*100,26*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

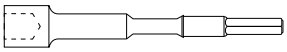
› Ref. 7128 SW 19



L mm	€	
200 *	*85,06*	1
460 *	*100,26*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

› Ref. 7129 SW 13



L mm	€	
200 *	*85,06*	1
460 *	*100,26*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

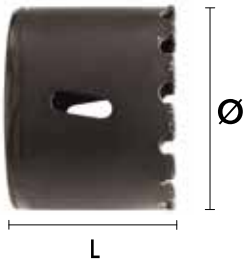
› Ref. 7130 Broca de centrar Ø 11 / Foret de centrage Ø 11 / Centre drill-bit Ø 11



L mm	€	
135	*17,79*	1

CORONAS PARED
SCIES-TRÉPAN BÉTON / CORE BITS

7154 Tungsteno



clip

Ø mm	L mm	Ref. 7154 €	
16,00	40	*12,08*	1
19,00	40	*12,65*	1
20,00	40	*13,24*	1
22,00	40	*14,41*	1
25,00	40	*15,84*	1
29,00	40	*17,13*	1
30,00	40	*17,07*	1
32,00	40	*17,82*	1
35,00	40	*17,91*	1
38,00	40	*19,19*	1
44,00	40	*19,41*	1
48,00	40	*19,89*	1
51,00	40	*20,15*	1
54,00	40	*21,69*	1
57,00	40	*22,40*	1
60,00	40	*22,66*	1
64,00	40	*22,92*	1
70,00	40	*24,52*	1
76,00	40	*26,00*	1
83,00	40	*26,39*	1
86,00	40	*28,02*	1
95,00	40	*35,68*	1
102,00	40	*31,79*	1

Accesorios / Accessoires / Accessories

› **Ref. 7160 Broca de Centrar** / Foret de centrage / Centre drill-bit



Ø mm	€	
8,00	*7,50*	1

› **Ref. 7161 Husillo hexagonal** / Arbre hexagonal / Hexagonal spindle



Rosca Filetage Thread	Ø mm	€	
1/2 UNF	16,00-30,00	*18,28*	1
5/8 UNF	31,00-114,00	*33,89*	1

APLICACIONES
APPLICATIONS



Gres / Grès / Stoneware



Porcelanato
Céramique dur
Hard tile



Fibra de vidrio
Fibre de verre
Fibreglass



Ladrillo
Brique
Brick

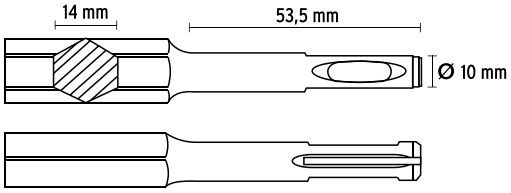
Características
Caractéristiques
Features



Taladro manual 20 mm
Perçage manuel 20 mm
Manual drill 20 mm

PUNTEROS Y CINCELES
POINTEROLLES ET BURINS / POINTERS AND CHISELS

1401 SDS+



		L mm	P gr	TG mm	clip Ref. 1401 €	clip Ref. 1401	pack Ref. 1401/1 €	pack Ref. 1401/1
001		250	270	20	*10,95*	1	*10,44*	5
002		250	260	-	*10,95*	1	*10,44*	5
005		250	350	22	*21,44*	1		-
003		250	330	40	*18,76*	1		-
006		250	520	22	*71,84*	1		-
011		260	260	40	*23,56*	1		-
007		250	270	20	*12,58*	1		-
008		250	270	-	*12,58*	1		-
009		250 250		40 60	*22,06* *24,47*	1 1		- -

Elu, Felisati, Hilti, Kress, Makita, Aeg, Atlas Copco, Black & Decker, Bosch, Dewalt, Metabo.

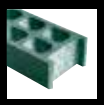
APLICACIONES APPLICATIONS



Hormigón / Béton / Concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características Caractéristiques Features



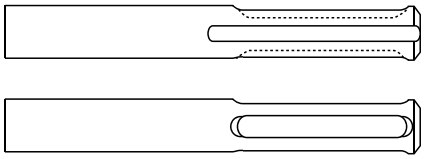
Mango SDS+
Queue SDS+
SDS+ shank



Percusión
Percussion
Percussion

PUNTEROS Y CINCELES
POINTEROLLES ET BURINS / POINTERS AND CHISELS

1405 SDS MAX



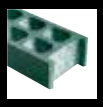
APLICACIONES
APPLICATIONS



Hormigón / Béton / Concrete



Granito
Granit
Granite



Ladrillo hormigón
Brique béton
Concrete brick



Ladrillo
Brique
Brick

Características
Caractéristiques
Features



Mango SDS MAX
Queue SDS MAX
SDS Max shank



Percusión
Percussion
Percussion

		L mm	P gr	TG mm	clip Ref. 1405 €	clip Ref. 1405	pack Ref. 1405/1 €	pack Ref. 1405/1
001		280 400 600	500 730 1130	25 25 25	*15,52* *15,48* *20,66*	1 1 1	*14,74*	5
002		280 400 600	480 710 1110	- - -	*15,52* *15,48* *20,66*	1 1 1	*14,74*	5
003		400	790	50	*31,38*	1		-
004		300	780	80	*34,85*	1		-
005		300	570	26	*32,16*	1		-
006		380	940	35	*118,18*	1		-
007		400	730	25	*17,80*	1		-
008		400	710	-	*17,80*	1		-
009		350	790	50	*36,70*	1		-
010		400	790	-	*20,75*	1		-
011		300	710	50	*32,97*	1		-

Elu, Hilti, Hitachi, Kango, Makita, Aeg, Atlas Copco, Bosch, Dewalt, Metabo, Milwaukee, Spit.

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1301 3P ST



Ø mm	L mm	l mm	Ref. 1301 €	funda
3,00	60	30	*0,59*	1
4,00	70	40	*0,65*	1
5,00	85	45	*0,70*	1
6,00	90	50	*0,97*	1
7,00	105	60	*1,10*	1
8,00	110	65	*1,32*	1
9,00	115	70	*1,54*	1
10,00	120	70	*1,68*	1
11,00	130	75	*2,00*	1
12,00	140	85	*2,18*	1
13,00	150	95	*2,21*	1
14,00	150	95	*2,36*	1
15,00	160	100	*2,59*	1
16,00	160	105	*3,11*	1
18,00	180	125	*4,10*	1
20,00	200	130	*5,06*	1
6,00	300	180	*2,51*	1
8,00	300	180	*3,14*	1
10,00	300	180	*3,66*	1
12,00	300	180	*4,53*	1
14,00	300	180	*5,65*	1
16,00	300	180	*7,59*	1
18,00	300	180	*9,96*	1
20,00	300	180	*11,58*	1

APLICACIONES
APPLICATIONS



Maderas blandas
Bois tendre / Softwoods



Aglomerado
Stratifié
Plywood

Características
Caractéristiques
Features



3 puntas madera
3 dents bois
3-tip wood

CV

Cromo vanadio
Chrome vanadium
Chromium Vanadium

Estuches / Coffrets / Cases

› Ref. 8131/2



Ø mm	€	
3,00 - 4,00 - 5,00 - 6,00 - 7,00 - 8,00 - 9,00 - 10,00	*11,93*	8

› Ref. 8132/2



Ø mm	€	
4,00 - 5,00 - 6,00 - 8,00 - 10,00	*8,06*	5



BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

Estuches / Coffrets / Cases

› Ref. 8133 Estuche Brocas Combinadas (HSS,MARMOLIT,3P)



Ø mm **HSS**	Ø mm **Muros** / Murs / Walls **Marmolit**	Ø mm **Madera** / Bois / Wood **3 P**	€	
4 - 5 - 6 - 8	4 - 5 - 6 - 8	-	*12,83*	8

› Ref. 8134 Estuche Brocas Combinadas (HSS,MARMOLIT,3P)



Ø mm **HSS**	Ø mm **Muros** / Murs / Walls **Marmolit**	Ø mm **Madera** / Bois / Wood **3 P**	€	
4 - 6 - 8	4 - 6 - 8	4 - 6 - 8	*15,38*	9

› Ref. 8136 Estuche Brocas Combinadas (HSS, MARMOLIT,3P)



Ø mm **HSS**	Ø mm **Muros** / Murs / Walls **Marmolit**	Ø mm **Madera** / Bois / Wood **3 P**	€	
5 - 6 - 8	5 - 6 - 8	5 - 6 - 8	*15,73*	9

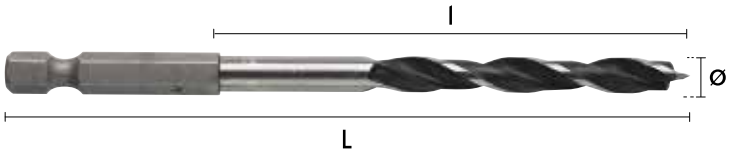
› Ref. 8137 Estuche Brocas Combinadas (HSS, MARMOLIT,3P)



Ø mm **HSS**	Ø mm **Muros** / Murs / Walls **Marmolit**	Ø mm **Madera** / Bois / Wood **3 P**	€	
3 - 4 - 5 - 6 - 8 - 10	3 - 4 - 5 - 6 - 8 - 10	3 - 4 - 5 - 6 - 8 - 10	*30,03*	18

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1503 ST Hex.



Ø mm	L mm	l mm	€	tubo Ref. 1503
2,00	70	24	*0,91*	1
3,00	82	33	*0,76*	1
4,00	96	43	*0,84*	1
5,00	106	52	*1,07*	1
6,00	113	57	*1,14*	1
7,00	129	69	*1,29*	1
8,00	117	75	*1,52*	1
9,00	125	81	*1,60*	1
10,00	133	87	*1,83*	1
11,00	142	94	*1,98*	1
12,00	151	101	*2,21*	1

APLICACIONES
APPLICATIONS





Aglomerado
Stratifié
Plywood

Maderas blandas
Bois tendre / Softwoods

Características
Caractéristiques
Features



3 puntas madera
3 dents bois
3-tip wood



Cromo vanadio
Chrome vanadium
Chromium Vanadium



Mango hexagonal 1/4"
Queue hexagonale 1/4"
Hexagonal shank 1/4"



Cambio rápido
Change rapide
Quick change



BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



Aglomerado
Stratifié
Plywood



Maderas blandas
Bois tendre
Softwoods

Características
Caractéristiques
Features



3 puntas madera
3 dents bois
3-tip wood

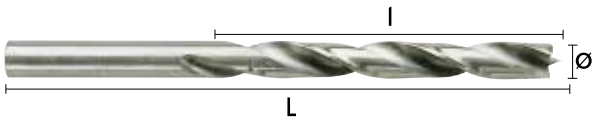


Rotación
Rotation
Rotation

HSS

Acero rápido
Acier rapide
High speed steel

1302 3P Pro



funda

Ref. 1302

Ø mm	L mm	l mm	€	
3,00	60	30	*1,12*	1
4,00	75	43	*1,19*	1
5,00	85	52	*1,44*	1
6,00	100	63	*1,83*	1
7,00	100	60	*2,07*	1
8,00	120	75	*2,36*	1
9,00	120	81	*3,11*	1
10,00	120	70	*3,57*	1
11,00	150	75	*4,12*	1
12,00	150	85	*4,80*	1
13,00	150	95	*5,05*	1
14,00	150	95	*7,64*	1
15,00	160	100	*11,39*	1
16,00	160	105	*10,79*	1
18,00	160	125	*19,04*	1
20,00	160	130	*23,34*	1
6,00	300	160	*6,52*	1
8,00	300	160	*8,97*	1
10,00	300	160	*11,32*	1
12,00	300	160	*14,51*	1
14,00	300	160	*18,66*	1
16,00	300	160	*24,00*	1
18,00 *	300	160	*30,08*	1
20,00 *	300	160	*37,63*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

Estuches / Coffrets / Cases

› Ref. 8131/1



Ø mm	€	
3,00 - 4,00 - 5,00 - 6,00 - 7,00 - 8,00 - 9,00 - 10,00	*20,10*	8

› Ref. 8132/1



Ø mm	€	
4,00 - 5,00 - 6,00 - 8,00 - 10,00	*13,14*	5

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1303 Pala Standard
Plat Standard / Standard Spade



Ø mm	L mm	Ref. 1303 €	funda
6,00	152	1,32	1
8,00	152	1,53	1
10,00	152	1,63	1
12,00	152	1,69	1
14,00	152	1,83	1
15,00	152	2,11	1
16,00	152	2,11	1
18,00	152	2,26	1
19,00	152	2,40	1
20,00	152	2,40	1
22,00	152	2,96	1
24,00	152	3,24	1
25,00	152	3,38	1
26,00	152	3,66	1
28,00	152	3,93	1
30,00	152	4,21	1
32,00	152	4,43	1
33,00	152	4,63	1
34,00	152	5,12	1
35,00	152	5,34	1
36,00	152	5,57	1
38,00	152	5,78	1
40,00	152	6,05	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

APLICACIONES
APPLICATIONS



Maderas blandas
Bois tendre / Softwoods



Aglomerado
Stratifié
Plywood

Características
Caractéristiques
Features



Punta pala PRO
Pointe plate PRO
PRO spade tip



Rotación
Rotation
Rotation



Mango hexagonal 1/4"
Queue hexagonale 1/4"
Hexagonal shank 1/4"



Cambio rápido
Change rapide
Quick change



BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1304 Pala Pro
Plat Pro / Pro Spade

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



Aglomerado
Stratifié
Plywood



Maderas blandas
Bois tendre
Softwoods

Características
Caractéristiques
Features



Punta pala ST
Pointe plate ST
ST spade tip



Rotación
Rotation
Rotation



Mango hexagonal 1/4"
Queue hexagonale 1/4"
Hexagonal shank 1/4"



Cambio rápido
Change rapide
Quick change

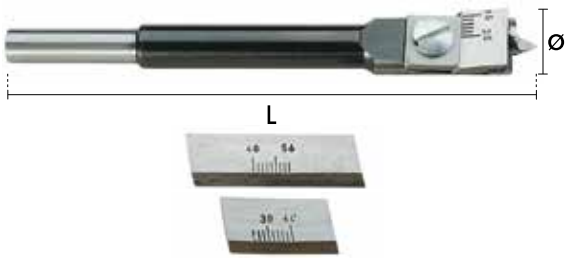


Ø mm	L mm	€	funda Ref. 1304
6,00	152	2,03	1
8,00	152	2,15	1
10,00	152	2,38	1
12,00	152	2,52	1
14,00	152	2,61	1
16,00	152	3,00	1
18,00	152	3,14	1
19,00 *	152	3,22	1
20,00	152	3,33	1
22,00	152	3,96	1
24,00	152	4,10	1
25,00	152	4,42	1
26,00	152	4,61	1
28,00	152	4,84	1
30,00	152	5,26	1
32,00	152	5,53	1
33,00 *	152	6,18	1
34,00	152	6,18	1
35,00	152	6,52	1
36,00	152	6,78	1
38,00	152	7,08	1
40,00	152	7,54	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1305 Pala Extensible
Plat Extensible / Expansion Spade



tubo

Ø mm	L mm	Ref. 1305 €	
15,00 - 45,00	120	*28,98*	1
22,00 - 76,00	155	*36,21*	1

1320 Alargador
Adaptateur / Extension Piece



tubo

Ø mm	L mm	Ref. 1320 €	
12,00	300	*12,56*	1

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



Maderas blandas
Bois tendre
Softwoods

Características
Caractéristiques
Features



Rotación
Rotation
Rotation

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1306 Lewis

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



Maderas blandas
Bois tendre
Softwoods

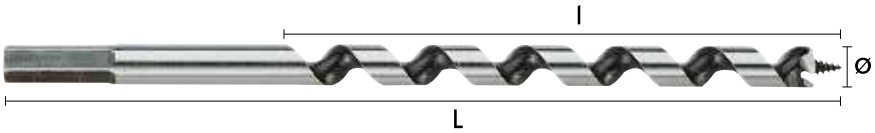
Características
Caractéristiques
Features



Punta tipo Lewis
Pointe type Lewis
Lewis-type tip



Rotación
Rotation
Rotation

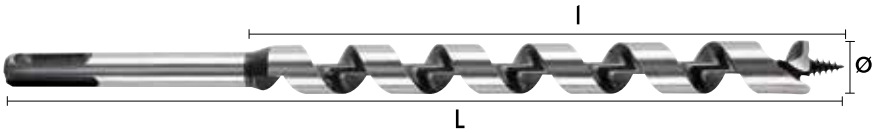


funda

Ø mm	L mm	l mm	Ref. 1306 €	Ref. 1306
6,00	235	160	8,88	1
8,00	235	160	8,88	1
10,00	235	160	9,21	1
12,00	235	160	10,48	1
14,00	235	160	11,07	1
16,00	235	160	12,39	1
18,00	235	160	14,19	1
20,00	235	160	15,31	1
22,00	235	160	16,71	1
24,00	235	160	18,98	1
26,00	235	160	21,43	1
28,00	235	160	24,69	1
30,00	235	160	28,40	1
32,00	235	160	32,11	1
8,00	450	350	19,99	1
10,00	450	350	19,99	1
12,00	450	350	21,22	1
14,00	450	350	23,35	1
16,00	450	350	26,75	1
18,00	450	350	28,83	1
20,00	450	350	31,16	1
22,00	450	350	33,87	1
24,00	450	350	37,05	1
26,00	450	350	44,08	1
28,00	450	350	50,57	1
30,00	450	350	60,42	1
32,00	450	350	74,13	1

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1321 Lewis (SDS+)



Ø mm	L mm	l mm	€	funda
			Ref. 1321	
6,00	200	100	17,34	1
8,00	200	100	17,34	1
10,00	235	160	17,56	1
12,00	235	160	19,19	1
14,00	235	160	21,65	1
16,00	235	160	24,40	1
18,00	235	160	27,33	1
20,00	235	160	28,83	1
22,00	235	160	32,81	1
24,00	235	160	34,93	1
10,00	400	320	23,59	1
12,00	400	320	24,83	1
14,00	400	320	27,33	1
16,00	400	320	30,32	1
18,00	400	320	33,08	1
20,00	400	320	35,57	1
22,00	400	320	38,93	1
24,00	400	320	42,16	1

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood

Características
Caractéristiques
Features



Punta tipo Lewis
Pointe type Lewis
Lewis-type tip



Mango SDS+
Queue SDS+
SDS+ shank



Rotación
Rotation
Rotation



BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

APLICACIONES
APPLICATIONS



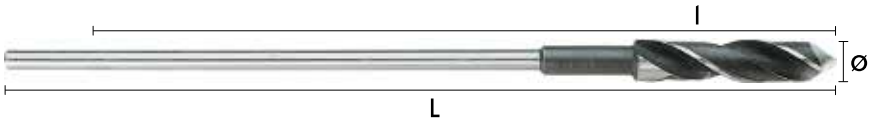
Encofrados
Coffrages / Shuttering

Características
Caractéristiques
Features



Rotación
Rotation
Rotation

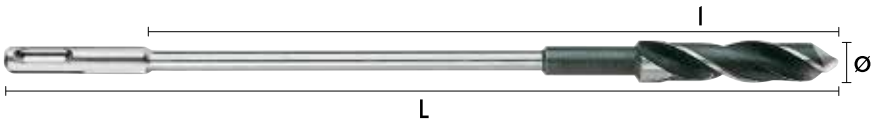
1307 Encofrar
Coffrage / Shuttering



Ø mm	L mm	l mm	€	funda Ref. 1307
6,00	400	370	9,54	1
8,00	400	370	9,67	1
10,00	400	370	11,51	1
12,00	400	370	14,91	1
14,00	400	370	16,52	1
16,00	400	370	19,22	1
18,00	400	370	23,49	1
20,00	400	370	31,70	1
22,00	400	370	42,34	1
24,00	400	370	49,56	1
26,00	400	370	54,56	1
28,00	400	370	59,47	1
30,00	400	370	62,75	1
8,00	600	570	10,28	1
10,00	600	570	11,98	1
12,00	600	570	15,66	1
14,00	600	570	17,12	1
16,00	600	570	19,82	1
18,00	600	570	24,09	1
20,00	600	570	32,18	1
22,00	600	570	42,96	1
24,00	600	570	50,26	1
26,00	600	570	55,29	1
28,00	600	570	60,21	1
30,00	600	570	63,48	1
8,00	800	770	13,93	1
10,00	800	770	15,51	1
12,00	800	770	18,93	1
14,00	800	770	21,69	1
16,00	800	770	25,34	1
18,00	800	770	30,18	1
20,00	800	770	38,20	1
22,00	800	770	49,82	1
24,00	800	770	57,10	1
26,00	800	770	62,06	1
28,00	800	770	66,91	1
30,00	800	770	70,19	1
8,00	1000	970	14,54	1
10,00	1000	970	16,37	1
12,00	1000	970	19,76	1
14,00	1000	970	22,54	1
16,00	1000	970	32,12	1
18,00	1000	970	32,12	1
20,00	1000	970	40,11	1
22,00	1000	970	51,87	1
24,00	1000	970	59,28	1
26,00	1000	970	63,99	1
28,00	1000	970	66,99	1
30,00	1000	970	72,26	1

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1318 Encofrar (SDS+)
Coffrage / Shuttering



Ø mm	L mm	l mm	Ref. 1318 €	funda
10,00	400	370	25,13	1
12,00	400	370	28,29	1
14,00	400	370	35,06	1
16,00	400	370	43,94	1
18,00	400	370	58,35	1
20,00	400	370	65,49	1
22,00	400	370	77,51	1
24,00	400	370	82,51	1
26,00	400	370	92,85	1
28,00	400	370	100,62	1
30,00	400	370	113,78	1
32,00	400	370	118,82	1
35,00	400	370	129,21	1
10,00	600	570	26,29	1
12,00	600	570	27,07	1
14,00	600	570	37,68	1
16,00	600	570	46,52	1
18,00	600	570	60,92	1
20,00	600	570	68,07	1
22,00	600	570	74,71	1
24,00	600	570	87,66	1
26,00	600	570	98,06	1
28,00	600	570	105,81	1
30,00	600	570	118,82	1
32,00	600	570	124,02	1
35,00	600	570	134,41	1

APLICACIONES
APPLICATIONS



Encofrados
Coffrages / Shuttering

Características
Caractéristiques
Features



Mango SDS+
Queue SDS+
SDS+ shank



Rotación
Rotation
Rotation



BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



Maderas blandas
Bois tendre
Softwoods

Características
Caractéristiques
Features



Ángulo 90º
Angle 90º
Angle 90º



Rotación
Rotation
Rotation

1308 Avellanador
Fraise à trou et àchanfreiner / Countersink bit



tubo

ø mm	d mm	L mm	€	Ref. 1308
12,00	3	20	*6,47*	1
12,00	4	20	*6,47*	1
12,00	5	20	*6,47*	1
12,00	6	20	*6,47*	1
16,00	3	21	*8,69*	1
16,00	4	21	*8,69*	1
16,00	5	21	*8,69*	1
16,00	6	25	*8,69*	1
16,00	8	25	*8,69*	1

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



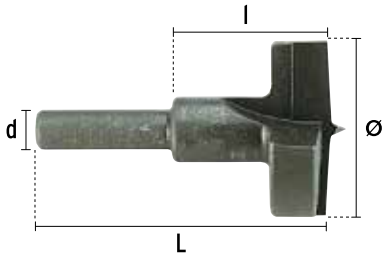
Maderas blandas
Bois tendre
Softwoods

Características
Caractéristiques
Features



Rotación
Rotation
Rotation

1309 Cazoleta T1
Mèche type Forstner T1 / Cup drill-bit T1



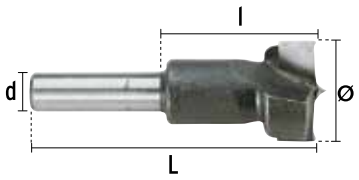
tubo

ø mm	d mm	L mm	l mm	€	Ref. 1309
26,00	8	57	25	*21,89*	1
30,00*	8	57	25	*21,89*	1
35,00	8	57	25	*21,89*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

1310 Cazoleta T2
Mèche type Forstner T2 / Cup drill-bit T2



tubo

Ø mm	d mm	L mm	l mm	Ref. 1310 €	
20,00	8	57	25	*35,24*	1
26,00	8	57	25	*35,24*	1
30,00	8	57	25	*35,24*	1
35,00	8	57	25	*35,24*	1
40,00*	8	57	25	*44,51*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



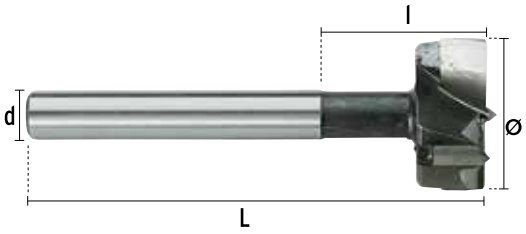
Maderas blandas
Bois tendre
Softwoods

Características
Caractéristiques
Features



Rotación
Rotation
Rotation

1311 Cazoleta T3
Mèche type Forstner T3 / Cup drill-bit T3



tubo

Ø mm	d mm	L mm	l mm	Ref. 1311 €	
20,00	10	90	30	*64,26*	1
26,00	10	90	30	*80,14*	1
30,00	10	90	30	*74,92*	1
35,00	10	90	30	*82,68*	1
40,00	10	90	30	*98,69*	1

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



Contrachapado
Contreplaqués
Plywood



Maderas blandas
Bois tendre
Softwoods

Características
Caractéristiques
Features





BROCAS PARA MADERA
FORETS À BOIS / WOOD DRILL-BITS

7149 Multi

APLICACIONES
APPLICATIONS



Maderas duras
Bois dur / Hardwoods



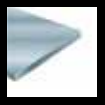
Contrachapado
Contreplaqués
Plywood



Acero <80Kg
Acier <80Kg
Steel <80Kg



Aluminio
Aluminium



Acero Inox
Acier inox
Stainless steel



Maderas blandas
Bois tendre
Softwoods



Estratificado
Stratifié
Plywood



PVC

Características
Caractéristiques
Features



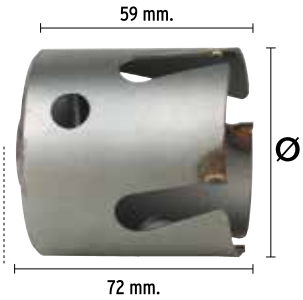
Mango SDS+
Queue SDS+
SDS+ shank



Punta Dientes MD
Pointe
Dents de MD
MD tooth tip



Rotación
Rotation
Rotation



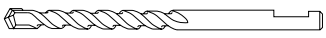
clip

Ref. 7149

Ø mm	Z	€	
25,00	3	*56,23*	1
30,00	3	*57,46*	1
35,00	3	*59,25*	1
40,00	3	*61,81*	1
45,00	3	*71,75*	1
50,00	3	*77,33*	1
55,00	3	*77,33*	1
58,00	5	*80,35*	1
60,00	5	*80,35*	1
63,00	5	*80,35*	1
65,00	5	*80,75*	1
68,00	5	*80,75*	1
70,00	5	*110,18*	1
74,00	5	*111,12*	1
80,00	5	*116,82*	1
85,00	5	*131,10*	1
105,00	6	*153,32*	1

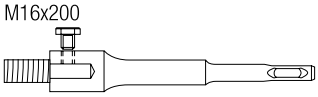
Accesorios / Accessoires / Accessories

› **Ref. 7152 Broca de centrar Ø 7,2 - 8** / Foret de centrage Ø 7,2 - 8 / Centre drill-bit Ø 7,2 - 8



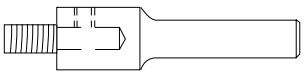
L mm	€	
109	*4,97*	1
120	*6,58*	1

› **Ref. 7151 MANGO SDS+** / Queue SDS+ / SDS+ Shank



L mm	€	
105	*38,54*	1
220	*51,61*	1
370	*61,34*	1

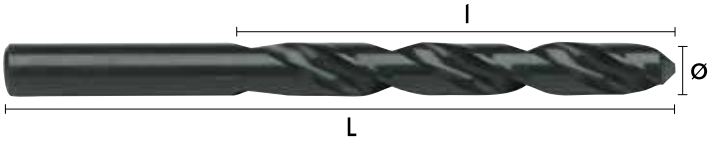
› **Ref. 7150 Mango Hexagonal** / Queue hexagonale / Hexagonal shank



L mm	€	
78	*32,79*	1
220	*46,01*	1
370	*55,94*	1

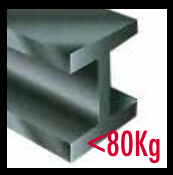
BROCAS PARA METAL
FORETS À MÉTAUX / METAL DRILL-BITS

8163 Rectificada (HSS DIN 338N)



Ø mm	L mm	l mm	tubo Ref. 8163 €	tubo Ref. 8163	pack Ref. 1101 €	pack Ref. 1101
1,00	34	12	*3,68*	3	*1,03*	10
1,50	40	18	*3,24*	3	*0,87*	10
2,00	49	24	*3,14*	3	*0,85*	10
2,50	57	30	*3,14*	3	*0,85*	10
3,00	61	33	*2,12*	2	*0,74*	10
3,25	65	36	*2,47*	2	*0,93*	10
3,50	70	39	*2,47*	2	*0,93*	10
4,00	75	43	*1,56*	1	*0,96*	10
4,25	75	43	*1,85*	1	*1,24*	10
4,50	80	47	*1,85*	1	*1,24*	10
5,00	86	52	*1,83*	1	*1,22*	10
5,25	86	52	*2,18*	1	*1,55*	10
5,50	93	57	*2,18*	1	*1,55*	10
6,00	93	57	*2,25*	1	*1,64*	10
6,50	101	63	*2,71*	1	*2,10*	10
7,00	109	69	*3,03*	1	*2,42*	10
7,50	109	69	*3,35*	1	*2,72*	10
8,00	117	75	*3,47*	1	*2,85*	10
8,50	117	75	*4,20*	1	*3,57*	10
9,00	125	81	*4,50*	1	*3,91*	10
10,00	133	87	*5,09*	1	*4,47*	5
11,00	142	94	*6,74*	1	*6,12*	5
12,00	151	101	*7,80*	1	*7,20*	5
13,00	151	101	*9,47*	1	*8,86*	5

APLICACIONES
APPLICATIONS



Acero <80Kg
Acier <80Kg / Steel <80Kg



Fundición
Fonte
Cast Iron

Características
Caractéristiques
Features



Serie corta
Série courte
Short series



Punta a 118º
Pointe à 118º
118º Tip



Convencional
Normal
Conventional



Convencional
Normal
Conventional



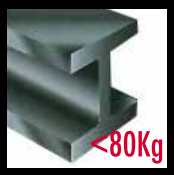
Espiral a 30º
Spiral à 30º
30º Spiral



BROCAS PARA METAL
FORETS À MÉTAUX / METAL DRILL-BITS

Rectificada (HSS DIN 338N)

APLICACIONES
APPLICATIONS



Acero <80Kg
Acier <80Kg / Steel <80Kg



Fundición
Fonte
Cast Iron

Características
Caractéristiques
Features



Serie corta
Série courte
Short series



Punta a 118º
Pointe à 118º
118º Tip



Convencional
Normal
Conventional



Convencional
Normal
Conventional



Espiral a 30º
Spiral à 30º
30º Spiral

Estuches / Coffrets / Cases

› Ref. 8123/2*



Ø mm	€	
1,00-1,50-2,00-2,50-3,00-3,50-4,00-4,50-5,00-5,50 6,00-6,50-7,00-7,50-8,00-8,50-9,00-9,50-10,00	*41,25*	19

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

› Ref. 8124/2



Ø mm	€	
1,00-2,00-3,00-4,00-5,00-6,00-7,00-8,00-9,00-10,00	*22,92*	10

› Ref. 8125/2



Ø mm	€	
2,00 - 2,50 - 3,00 - 3,50 - 4,00 - 4,50 - 5,00 5,50 - 6,00 - 6,50 - 7,00 - 7,50 - 8,00	*22,18*	13

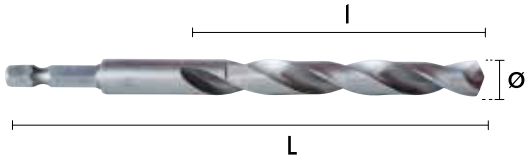
› Ref. 8126/2



Ø mm	€	
2,00 - 3,00 - 4,00 - 5,00 - 6,00 - 8,00	*11,21*	6

BROCAS PARA METAL
FORETS À MÉTAUX / METAL DRILL-BITS

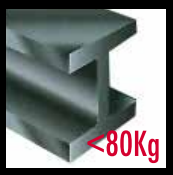
1501 HSS Hex.



tubo

Ø mm	L mm	l mm	Ref. 1501 €	
3,00	61	33	*6,69*	1
4,00	75	43	*7,36*	1
5,00	86	52	*7,68*	1
6,00	93	57	*8,28*	1
7,00	109	69	*8,52*	1
8,00	117	75	*8,81*	1
9,00	125	81	*9,11*	1
10,00	133	87	*11,48*	1

APLICACIONES
APPLICATIONS



Acero <80Kg
Acier <80Kg / Steel <80Kg



Fundición
Fonte
Cast Iron

Características
Caractéristiques
Features



Serie corta
Série courte
Short series



Punta a 118º
Pointe à 118º
118º Tip



Convencional
Normal
Conventional



Convencional
Normal
Conventional



Espiral a 30º
Spiral à 30º
30º Spiral



Cambio rápido
Change rapide
Quick change

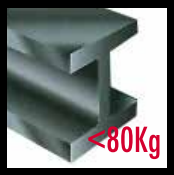


Mango hexagonal 1/4"
Queue hexagonale 1/4"
Hexagonal shank 1/4"

BROCAS PARA METAL
FORETS À MÉTAUX / METAL DRILL-BITS

1154 Speedplus (HSS DIN 338NSP)

APLICACIONES
APPLICATIONS



Acero <80Kg
Acier <80Kg / Steel <80Kg



Fundición
Fonte
Cast Iron

Características
Caractéristiques
Features



Serie corta
Série courte
Short series



Punta a 118º
Pointe à 118º
118º Tip



Split Point



Espiral a 30º
Spiral à 30º
30º Spiral



Corrección de labios
Correction de lèvres
Lip correction



Ø mm	L mm	l mm	tubo Ref. 1154 €	tubo Ref. 1154	pack Ref. 1158 €	pack Ref. 1158
1,00	34	12	3,93	3	1,12	10
1,50	40	18	3,48	3	0,97	10
2,00	49	24	3,36	3	0,92	10
2,50	57	30	3,36	3	0,92	10
3,00	61	33	2,24	2	0,84	10
3,25	65	36	2,64	2	1,03	10
3,50	70	39	2,64	2	1,03	10
4,00	75	43	1,62	1	1,06	10
4,25	75	43	1,92	1	1,34	10
4,50	80	47	1,92	1	1,34	10
5,00	86	52	1,92	1	1,34	10
5,25	86	52	2,28	1	1,70	10
5,50	93	57	2,28	1	1,70	10
6,00	93	57	2,38	1	1,82	10
6,50	101	63	2,86	1	2,30	10
7,00	109	69	3,23	1	2,67	10
7,50	109	69	3,60	1	3,03	10
8,00	117	75	3,70	1	3,13	10
8,50	117	75	4,54	1	3,96	10
9,00	125	81	4,87	1	4,32	10
10,00	133	87	5,50	1	4,92	5
11,00	142	94	7,34	1	6,77	5
12,00	151	101	8,53	1	7,95	5
13,00	151	101	10,34	1	9,75	5

Estuches / Coffrets / Cases

› Ref. 8124/5



Ø mm	€	
1,00-2,00-3,00-4,00-5,00-6,00-7,00-8,00-9,00-10,00	25,92	10

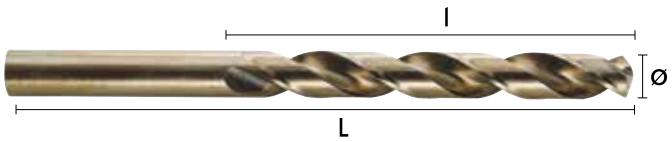
› Ref. 8126/5



Ø mm	€	
2,00 - 3,00 - 4,00 - 5,00 - 6,00 - 8,00	12,93	6

BROCAS PARA METAL
FORETS À MÉTAUX / METAL DRILL-BITS

8164 Cobalt (HSSCO DIN 338N)



Ø mm	L mm	l mm	tubo Ref. 8164 €	tubo Ref. 8164	pack Ref. 1105 €	pack Ref. 1105
1,00	34	12	5,55	3	1,67	10
1,50	40	18	5,11	3	1,52	10
2,00	49	24	5,25	3	1,56	10
2,50	57	30	5,55	3	1,67	10
3,00	61	33	3,31	2	1,39	10
3,25	65	36	4,28	2	1,86	10
3,50	70	39	4,22	2	1,84	10
4,00	75	43	2,38	1	1,81	10
4,25	75	43	2,69	1	2,11	10
4,50	80	47	2,78	1	2,21	10
5,00	86	52	2,69	1	2,11	10
5,25	86	52	3,22	1	2,65	10
5,50	93	57	3,92	1	3,34	10
6,00	93	57	3,43	1	2,86	10
6,50	101	63	4,26	1	3,71	10
7,00	109	69	4,46	1	3,91	10
7,50	109	69	4,73	1	4,16	10
8,00	117	75	5,73	1	5,20	10
8,50	117	75	5,69	1	5,10	10
9,00	125	81	7,04	1	6,46	10
10,00	133	87	8,69	1	8,15	5
11,00	142	94	12,53	1	11,96	5
12,00	151	101	15,59	1	15,02	5
13,00	151	101	21,46	1	20,88	5

Estuches / Coffrets / Cases

› **Ref. 8124/3**

Ø mm	€	
1,00-2,00-3,00-4,00-5,00-6,00-7,00-8,00-9,00-10,00	40,61	10

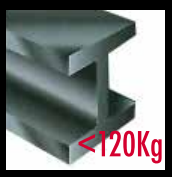


› **Ref. 8126/3**

Ø mm	€	
2,00 - 3,00 - 4,00 - 5,00 - 6,00 - 8,00	18,92	6



APLICACIONES
APPLICATIONS



Acero <120Kg
Acier <120Kg / Steel <120Kg



Acero inox
Acier inox
Stainless steel

Características
Caractéristiques
Features



Serie corta
Série courte
Short series



Punta a 135º
Pointe à 135º
135º Tip



Split Point



Espiral a 30º
Spiral à 30º
30º Spiral

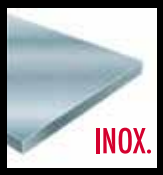


Corrección de labios
Correction de lèvres
Lip correction

BROCAS PARA METAL
FORETS À MÉTAUX / METAL DRILL-BITS

8166 Cobalt IX (HSS DIN 338IX)

APLICACIONES
APPLICATIONS



Acero inox
Acier inox / Stainless steel



Aluminio
Aluminium
Aluminium

Características
Caractéristiques
Features



Serie corta
Série courte
Short series



Punta a 135º
Pointe à 135º
135º Tip



Split Point



Corrección de labios
Correction de lèvres
Lip correction



Espiral a 30º
Spiral à 30º
30º Spiral



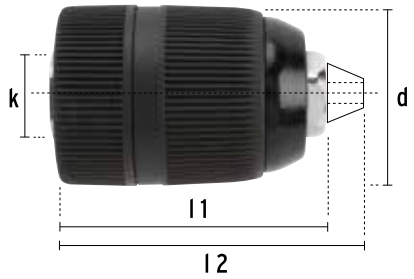
Ø mm	L mm	l mm	tubo Ref. 8166 €	tubo Ref. 8166	pack Ref. 1106 €	pack Ref. 1106
3,00	61	33	*6,44*	2	*2,96*	10
3,25	65	36	*7,05*	2	*3,28*	10
3,50	70	39	*6,93*	2	*3,22*	10
4,00	75	43	*4,16*	1	*3,65*	10
4,25	75	43	*4,77*	1	*4,23*	10
4,50	80	47	*4,77*	1	*4,23*	10
5,00	86	52	*4,99*	1	*4,44*	10
5,25	86	52	*6,05*	1	*5,53*	10
5,50	93	57	*5,93*	1	*5,42*	10
6,00	93	57	*6,53*	1	*6,01*	10
6,50	101	63	*7,68*	1	*7,15*	10
7,00	109	69	*8,82*	1	*8,32*	10
7,50	109	69	*9,98*	1	*9,47*	10
8,00	117	75	*10,79*	1	*10,28*	10
8,50	117	75	*12,90*	1	*12,37*	10
9,00	125	81	*13,93*	1	*13,42*	10
10,00	133	87	*17,21*	1	*16,70*	5
11,00	142	94	*21,60*	1	*21,09*	5
12,00	151	101	*25,25*	1	*24,73*	5
13,00	151	101	*31,52*	1	*31,02*	5

PORTABROCAS Y ACCESORIOS
MANDRINS ET ACCESSOIRES / DRILL CHUCKS AND ACCESSORIES

6118 Automático
Automatique / Automatic

> **De uso en taladros portátiles percutores.**
Perceuses portables à percussion.
For use with portable percussive drills.

> **Dispositivo de cierre de seguridad.**
Dispositif de fermeture de sécurité.
Safety lock.



Ø mm	d mm	k	l1 mm	l2 mm	pack €	pack	blister €	blister
					Ref. 6118		Ref. 8156	
1,00-10,00	42	3/8"x 24H UNF	65	78	*60,20*	1	*60,72*	1
2,00-13,00	42	1/2"x 20H UNF	65	78	*69,88*	1	*70,40*	1

6105 Llave Pro
Clé Pro / Pro Key

> **Cierre manual con llave.**
Serrage manuel avec clé.
Manual lock with key

> **De uso en taladros portátiles.**
Sur perceuses portables.
For use with portable drills.

> **Componentes templados y rectificados.**
Avec des composants trempés et rectifiés.
Tempered and rectified components.



Ø mm	d mm	k	l1 mm	l2 mm	gr.		pack €	pack	blister €	blister
							Ref. 6105		Ref. 8119/1	
1,00-10,00	36,5	1/2" x 20 H	50	60	220	Ref. 6109	*37,76*	1	*38,29*	1
1,50-13,00	42,7	1/2" x 20 H	59	74	370	Ref. 6109	*48,46*	1	*49,00*	1

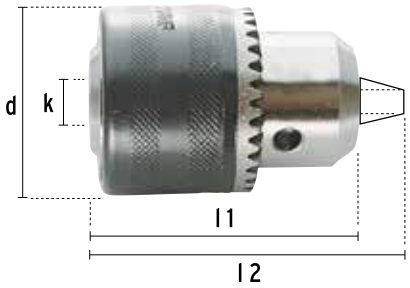


PORTABROCAS Y ACCESORIOS
MANDRINS ET ACCESSOIRES / DRILL CHUCKS AND ACCESSORIES

6106 Llave
Clé / Key

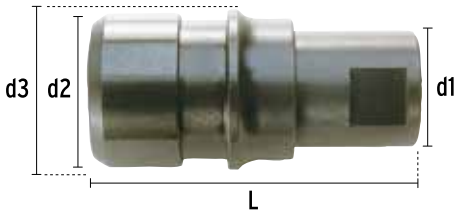
> Cierre manual con llave
Serrage manuel avec clé.
Key manual lock.

> De uso en taladros portátiles
Sur perceuses portables.
For use with portable drills.



Ø mm	d mm	k	l1 mm	l2 mm	gr.		pack € Ref. 6106	pack	blister € Ref. 8119	blister
1,00-10,00	33	1/2" x 20 H	49	59	160	Ref. 6109	*20,69*	1	*21,22*	1
1,50-13,00	42,7	1/2" x 20 H	59	74	355	Ref. 6109	*23,12*	1	*23,65*	1

6117 SDS+



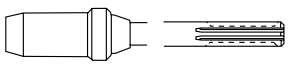
d1 mm	d2 mm	d3 mm	k	L mm	caja € Ref. 6117	caja	blister € Ref. 8175	blister
21,5	28	29,5	1/2" x UNF	59	*79,68*	1	*80,24*	1

(Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)

1224 Adaptador SDS+
Adaptateur SDS+ / SDS MAX adaptor



> SDS MAX



L mm	tubo € Ref. 1224	tubo
220	*103,76*	1

6107 Adaptador Black & Decker
Adaptateur Black & Decker / Black & Decker adaptor



Rosca Filetage Thread	L mm	gr	caja Ref. 6107 €	caja Ref. 6107 📦	blister Ref. 8120 €	blister Ref. 8120 📦
3/8 - 1/2	-	30	*4,60*	1	*5,12*	1

6108 Adaptador SDS+
Adaptateur SDS+ / SDS+ adaptor



Rosca Filetage Thread	L mm	gr	caja Ref. 6108 €	caja Ref. 6108 📦	blister Ref. 8121 €	blister Ref. 8121 📦
1/2 - 20	63	55	*28,35*	1	*28,89*	1

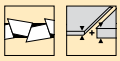
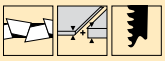
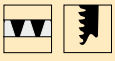
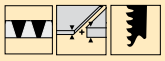
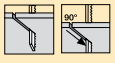
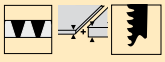
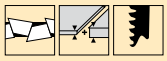
6109 Llave de recambio
Clé de Rechange / Spare key



	caja Ref. 6109 €	caja Ref. 6109 📦	blister Ref. 8122 €	blister Ref. 8122 📦
6109	*4,36*	1	*4,88*	1

GUÍA DE SELECCIÓN DE SIERRAS DE CALAR

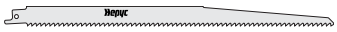
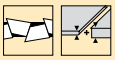
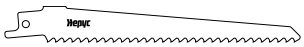
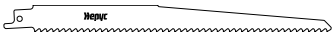
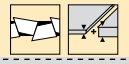
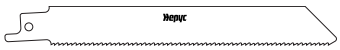
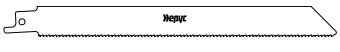
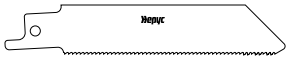
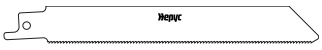
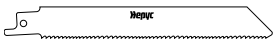
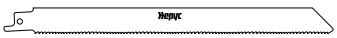
GUIDE SÉLECTION DE SCIES SAUTEUSES / SELECTION GUIDE FOR JIG SAWS

	Ref.	FOTO	Ref. Bosch	€	uds. envasado	Calidad sierra	Longitud x paso	Tipo dentado	Tipo corte
MADERA BOIS WOOD	7604		T111C	6,85	5	HCS	75 x 3		
	7603		T144D	7,34	5	HCS	75 x 4-5,2		
	7624		T244D	8,36	5	HCS	75 x 4-5,2		
	7614		T344D	10,38	5	HCS	125 x 4		
	7601		T101B	9,64	5	HCS	75 x 2,7		
	7602		T101D	9,64	5	HCS	75 x 4-5,2		
	7621		T101BR	10,13	5	HCS	75 x 2,5		
	7622		T301CD	12,16	5	HCS	90 x 3		
	7642		T101DP	10,38	5	HCS	75 x 4		
	7643		T234X	15,71	5	HCS	93 x 2-3		
	7644		T308B	16,21	5	HCS	93 x 2,2		
	7623		T101AIF	17,99	5	BIMETAL	75 x 1,6		
	7645		T141HM	19,24	1	HM	75 x 4,3		
	7646		T345XF	23,31	5	BIMETAL	105 x 2,4- 5		
METAL MÉTAUX METAL	7626		T318A	13,17	5	HSS	105 x 1,2		
	7607		T118A	9,64	5	HSS	67 x 1,1-1,5		
	7609		T118B	9,64	5	HSS	67 x 1,9-2,3		
	7611		T127D	10,13	5	HSS	75 x 3		
	7647		T123X	13,17	5	HSS	75 x 1,2- 2,6		
	7648		T321AF	18,24	5	BIMETAL	105 x 1,2		
	7629		T118AF	12,66	5	BIMETAL	67 x 1,1-1,5		
	7649		T118BF	12,66	5	BIMETAL	67 x 1,9- 2,3		
	7650		T118AHM	14,94	1	HM	60 x 1,1		
GRES GRÈS	7651			7,09	1	HM	75 x 1/2		

Rendimiento del corte: ● - Óptimo ● - Superior
Rendement de la coupe: - Optimum - Supérieur
Cutting perfomance: - Optimum - Higher

	Madera	Madera tornillos	Aglomerados	Madera verde	Metal	Aluminio	Inox	CU, NI, Ns, Zn	Gres/Cerámica	Ladrillo/Hormigón	Sandwich	Fibro cemento	CFK	Plástico
														
	< 40													
	< 50													
	< 50													
	< 90													
	< 25													●
	< 40		●											
	< 30													●
	< 50		●											
	< 50		●											
	< 60		●											●
	< 50													●
	< 20													●
	●		●									●	●	
		●				●		●						
					●	●								
					●									
					●									
								●						●
					●	●								
					●						●			
					●									
					●									
					●		●							
									●				●	

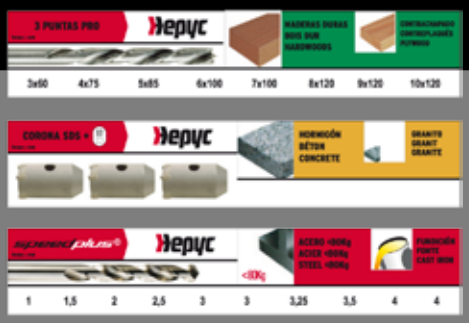
GUÍA DE SELECCIÓN DE HOJAS DE SABLE
GUIDE SÉLECTION SCIES SABRE / SELECTION GUIDE FOR SABRE

	Ref.	FOTO	Ref. Bosch	€	uds. envasado	Calidad sierra	Longitud x paso	Tipo dentado	Tipo corte
MADERA BOIS WOOD	7701		S1344D	*26,84*	5	HCS	280 x 6		
	7702		S644D	*16,21*	5	HCS	130 x 6		
	7703		S1531L	*28,88*	5	HCS	220 x 4-5		
	7704		S611DF	*22,79*	5	BIMETAL	130 x 6		
	7705		S1111DF	*51,66*	5	BIMETAL	210 x 6		
	7706		S3456XF	*41,53*	5	BIMETAL	180 x 11-5		
METAL MÉTAUX METAL	7707		S922BF	*19,75*	5	BIMETAL	130 x 14		
	7708		S1122BF	*24,82*	5	BIMETAL	180 x 12,7		
	7709		S522EF	*15,71*	5	BIMETAL	80 x 18		
	7710		S922EF	*19,75*	5	BIMETAL	130 x 18		
	7711			*24,82*	5	BIMETAL	180 x 18		
	7712		S922VF	*19,75*	5	BIMETAL	130 x 10-14		
	7713		S1122VP	*24,82*	5	BIMETAL	230 x 10-14		
ESPECIAL DEMOLICIÓN DEMOLITION	7714		S926CHF	*37,98*	5	BIMETAL	130 x 8-10		
	7715		S1126CHF	*45,59*	5	BIMETAL	210 x 8-10		
	7717		S922EHM	*27,35*	1	HM	130 x 18		
	7718		S1243HM	*73,44*	1	HM	280 x 2		
	7719		S1226CHF	*55,71*	1	HM	280 x 8-10		

Rendimiento del corte: ● - Óptimo ● - Superior
Rendement de la coupe: - Optimum - Supérieur
Cutting perfomance: - Optimum - Higher

Madera	Madera tornillos	Aglomerados	Madera verde	Metal	Aluminio	Inox	CU, NI, Ns, Zn	Gres/Cerámica	Ladrillo/Hormigón	Sandwich	Fibro cemento	CFK	Plástico
													
●		●											●
●		●											●
●			●										
	●												●
	●												●
	●						●						●
				●	●		●						
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	●			●									

EXPOSITORES



Claridad expositiva en el punto de venta para que la elección del producto sea más fácil y cómoda.

PRÉSENTOIRS: Clarté de l'exposition sur le point de vente pour plus de facilité et de commodité dans le choix du produit.

DISPLAY STANDS: Clarity of display at the point of sale so that the selection of the product may be easier and more comfortable.

PACKAGING



Nuestra amplia gama de alternativas en la presentación del producto le ayudará a la hora de segmentar a su público, además de especializar la venta a profesionales.

Notre large gamme d'alternatives pour la présentation du produit vous aidera à segmenter votre public ainsi qu'à spécialiser la vente aux professionnels.

Our wide range of alternatives for presenting the product will help when segmenting your clients, in addition to specializing sales to professionals.



TUBO / TUBE



PACK



CLIP



CAJA / BOÎTE / BOX

Hepyc CENTER



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8207/1 Rectificada (HSS DIN 338 N)

Ø mm		Ø mm		Ø mm	
1,00	40	4,50	40	10,00	20
1,50	20	5,00	60	11,00	10
2,00	40	5,50	40	12,00	10
2,25	40	6,00	60	13,00MR	5
2,50	40	6,50	20	14,00MR	5
3,00	60	7,00	20	15,00MR	5
3,25	40	7,50	20	16,00MR	5
3,50	40	8,00	30	TOTAL	810
4,00	60	8,50	20	€	*1.624,75*
4,25	40	9,00	20		



8207/2 Speedplus (HSS DIN 338 NSP)

Ø mm		Ø mm		Ø mm	
1,00	40	4,25	40	8,50	20
1,50	20	4,50	40	9,00	20
2,00	40	5,00	60	10,00	20
2,25	40	5,50	40	11,00	10
2,50	40	6,00	60	12,00	10
3,00	60	6,50	20	13,00	5
3,25	40	7,00	20	TOTAL	795
3,50	40	7,50	20	€	*1.454,05*
4,00	60	8,00	30		



8207/3 Cobalt (HSSCO DIN 338 N)

Ø mm		Ø mm		Ø mm	
1,00	40	4,50	40	10,00	20
1,50	20	5,00	60	11,00	10
2,00	40	5,50	40	12,00	10
2,25	40	6,00	60	13,00MR	5
2,50	40	6,50	20	14,00MR	5
3,00	60	7,00	20	15,00MR	5
3,25	40	7,50	20	16,00MR	5
3,50	40	8,00	30	TOTAL	810
4,00	60	8,50	20	€	*2.923,55*
4,25	40	9,00	20		



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8207/4 Cobalt IX (HSSCO DIN 338 IX)

Ø mm	
1,00	-
1,50	-
2,00	-
2,25	-
2,50	-
3,00	60
3,25	40
3,50	40
4,00	60

Ø mm	
4,25	40
4,50	40
5,00	60
5,50	40
6,00	60
6,50	20
7,00	20
7,50	20
8,00	30

Ø mm	
8,50	20
9,00	20
10,00	20
11,00	10
11,00	10
12,00	10
13,00	5
TOTAL	615
€	*4.108,80*



8207/5 Titanium (HSSTIN DIN 338 N)

Ø mm	
1,00	40
1,50	20
2,00	40
2,25	40
2,50	40
3,00	60
3,25	40
3,50	40
4,00	60

Ø mm	
4,25	40
4,50	40
5,00	60
5,50	40
6,00	60
6,50	20
7,00	20
7,50	20
8,00	30

Ø mm	
8,50	20
9,00	20
10,00	20
11,00	10
12,00	10
13,00	5
TOTAL	795
€	*2.995,50*



8209/3 Insertos roscados
Filetsrapportés / Wire theard insert

Medidas	
M4X 0,70	6
M5X0,80	6
M6X1,00	6
M8X1,25	5
M10X1,50	5
M12X1,75	3
€	*1.708,96*



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8208/2 Machos y cojinetes
Tarauds et filères / Taps and dies

Machos M Tarauds M H Taps	
M3,00	5
M4,00	5
M5,00	5
M6,00	5
M8,00	5
M10,00	5
M12,00	5

Cojinetes M Filières M H Dies	
M3,00	5
M4,00	5
M5,00	5
M6,00	5
M8,00	5
M10,00	5
M12,00	5

Accesorios Accessoires Accessories	
Gir.T M3-10	5
Gir.T M5-12	5
Vol. 20	2
Vol. 38	2
TOTAL	84
€	*2.008,28*



8208/3 Rectificada (HSS DIN 338N)

Ø mm	
1,00	8
1,50	8
2,00	8
2,50	8
3,00	16
3,25	8
3,50	8
4,00	16
4,25	8

Ø mm	
4,50	8
5,00	16
5,25	8
5,50	8
6,00	16
6,50	8
7,00	8
7,50	8
8,00	16

Ø mm	
8,50	8
9,00	8
10,00	16
11,00	5
12,00	5
13,00	5
TOTAL	231
€	*733,10*



8208/4 Speedplus (HSS DIN 338 NSP)

Ø mm	
1,00	8
1,50	8
2,00	8
2,50	8
3,00	16
3,25	8
3,50	8
4,00	16
4,25	8

Ø mm	
4,50	8
5,00	16
5,25	8
5,50	8
6,00	16
6,50	8
7,00	8
7,50	8
8,00	16

Ø mm	
8,50	8
9,00	8
10,00	16
11,00	5
12,00	5
13,00	5
TOTAL	231
€	*1.396,50*



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8208/5 Cobalt (HSSCO DIN 338 N)

Ø mm	
1,00	8
1,50	8
2,00	8
2,50	8
3,00	16
3,25	8
3,50	8
4,00	16
4,25	8

Ø mm	
4,50	8
5,00	16
5,25	8
5,50	8
6,00	16
6,50	8
7,00	8
7,50	8
8,00	16

Ø mm	
8,50	8
9,00	8
10,00	16
11,00	5
12,00	5
13,00	5
TOTAL	231
€	*1.217,85*



8208/6 Cobalt IX (HSSCO DIN 338 IX)

Ø mm	
1,00	-
1,50	-
2,00	-
2,50	-
3,00	16
3,25	8
3,50	16
4,00	24
4,25	8

Ø mm	
4,50	16
5,00	16
5,25	8
5,50	8
6,00	16
6,50	8
7,00	8
7,50	8
8,00	16

Ø mm	
8,50	8
9,00	8
10,00	16
11,00	5
12,00	5
13,00	5
TOTAL	223
€	*1.438,50*



8208/9 Diamond

Ø mm	
3,00x70	8
4,00x75	8
5,00x85	8
6,00x100	8
7,00x100	8
8,00x120	8
9,00x120	8
10,00x120	8

Ø mm	
11,00x150	5
12,00x150	5
13,00x150	5
14,00x150	5
16,00x160	5
18,00x160	4
20,00x160	4
5,00x150	8

Ø mm	
6,00x150	8
8,00x200	8
10,00x200	8
12,00x200	5
10,00x300	5
12,00x300	5
TOTAL	144
€	*762,80*



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8208/10 Perfecta

Ø mm	
3,00x70	8
4,00x75	8
5,00x85	8
6,00x100	8
7,00x100	8
8,00x120	8
9,00x120	8

Ø mm	
10,00x120	8
12,00x150	5
13,00x150	5
14,00x150	5
16,00x160	4
18,00x160	4
20,00x160	4

Ø mm	
6,00x150	8
8,00x250	8
10,00x250	5
12,00x250	5
14,00x250	5
TOTAL	122
€	*922,84*



8208/11 Fasterplus

Ø mm	
5,00x110	8
5,00x160	8
6,00x110	8
6,00x160	8
6,00x210	8
8,00x110	8
8,00x160	8
8,00x210	8

Ø mm	
8,00x260	8
10,00x160	8
10,00x210	8
10,00x260	8
12,00x160	8
12,00x210	8
12,00x260	8
14,00x160	8

Ø mm	
14,00x210	8
14,00x260	8
16,00x210	5
18,00x210	5
20,00x210	5
TOTAL	159
€	*1.561,14*



8208/20 Compaqplus

Ø mm	
6,00x115	8
6,00x165	8
6,00x215	8
6,00x265	8
8,00x115	8
8,00x215	8
8,00x315	8

Ø mm	
10,00x115	8
10,00x165	8
10,00x215	8
10,00x315	8
12,00x165	8
12,00x215	8
12,00x365	8

Ø mm	
14,00x165	8
14,00x215	8
14,00x365	8
TOTAL	136
€	*2.430,40*



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8208/21 Quatroplus

Ø mm	
6,00x115	8
6,00x165	8
6,00x215	8
8,00x115	8
8,00x165	8
8,00x215	8

Ø mm	
10,00x115	8
10,00x165	8
10,00x215	8
12,00x165	8
12,00x215	8
14,00x215	8

Ø mm	
14,00x265	2
14,00x315	2
16,00x215	2
16,00x265	2
TOTAL	104
€	*1.175,08*



8208/13 Punteros y Brocas SDS MAX

Ref.	Mod.	
1401	001	5
1401	002	5
1401	003	2
1401	005	2
1405	001	5
1405	002	5
1405	003	2
1405	004	2

Ref.	Ø mm	
1203	12x340	1
1203	14x340	1
1203	16x340	1
1203	18x340	1
1203	20x340	1
1203	22x340	1
1203	25x340	1
1203	16x540	1

Ref.	Ø mm	
1203	18x540	1
1203	20x540	1
1203	22x540	1
1203	25x540	1
1203	30x540	1
1203	32x540	1
	TOTAL	42
€	*1.842,77*	



8209/1 Coronas SDS+
Scies trépan / Core bits

Ø mm	
25,00	3
30,00	3
35,00	3
40,00	3
50,00	6
65,00	3
68,00	6
SDS+220	5
SDS+370	5
TOTAL	37
€	*2.706,08*



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8208/15 3P Pro

Ø mm	
3,00x60	8
4,00x75	8
5,00x85	8
6,00x100	8
7,00x100	8
8,00x120	8
9,00x120	8
10,00x120	8
11,00x150	5
12,00x150	5
13,00x150	5
14,00x150	5

Ø mm	
16,00x150	5
18,00x160	4
20,00x160	4
6,00x300	4
8,00x300	4
10,00x300	4
12,00x300	4
14,00x300	4
16,00x300	4
18,00x300	4
TOTAL	128
€	*1.415,67*



8208/17 Tipo B Pro
Type B Pro / Pro B type

Ø mm	
8,00	10
10,00	10
12,00	10
14,00	20
16,00	10
18,00	20
20,00	20
22,00	10
24,00	10
25,00	8

Ø mm	
26,00	8
28,00	4
30,00	4
32,00	4
33,00	4
34,00	4
35,00	4
36,00	4
38,00	4
TOTAL	168
€	*628,55*



8208/18 Estuches
Coffrets / Cases

Ref.	Composición Composition / Composition	
8126	HSS (2,3,4,5,6,8)	5
8124	HSS (1-10)	5
8126	HSS CO (2,3,4,5,6,8)	5
8124	HSS CO (1-10)	5
8130	Perfecta (4,5,6,8,10)	5
8128	Perfecta (3,4,5,6,7,8,9,10)	5
8130	Diamond (4,5,6,8,10)	5
8128	Diamond (3,4,5,6,7,8,9,10)	5
8131	3 P St (4,5,6,8,10)	5
8132	3 P St (3,4,5,6,7,8,9,10)	5
8131	3 P Pro (4,5,6,8,10)	5
8132	3 P Pro (3,4,5,6,7,8,9,10)	5
	TOTAL	60
	€	*1.111,40*



EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

8209/2 Bimetal

Ø mm	
16,00	5
19,00	5
20,00	5
22,00	5
25,00	5
27,00	5
30,00	5
32,00	5

Ø mm	
35,00	5
40,00	4
43,00	4
48,00	4
51,00	4
54,00	4
60,00	4
64,00	4

Ø mm	
70,00	4
76,00	4
83,00	3
92,00	3
14,00-30,00	5
32,00-152,00	4
TOTAL	96
€	*1.575,18*



8208/19 Sierras de calar
Scies sauteuses / Jig saws

Ref.	
7604	5
7603	5
7624	5
7614	5
7601	5
7602	5
7621	5
7622	5
7642	5
7643	5
7644	5
7623	5
7645	5

Ref.	
7646	5
7626	5
7607	5
7609	5
7611	5
7647	5
7648	5
7629	5
7649	5
7650	5
7651	5
TOTAL	120
€	*1.493,36*



8211/14 SDS MAX

Ref.	Ø mm	
1203	16,00x340	3
1203	18,00x340	3
1203	20,00x340	3
1203	22,00x340	3
1203	24,00x340	2
1203	26,00x340	2
1203	28,00x340	2
1203	30,00x340	1
1203	32,00x340	1
1203	35,00x340	1

Ref.	Ø mm	
1203	22,00x540	3
1203	24,00x540	3
1203	26,00x540	2
1203	28,00x540	2
1203	32,00x540	1
1203	35,00x540	1
1203	36,00x540	1
1203	38,00x540	1
1203	40,00x540	1
1203	42,00x540	1

Ref.	Ø mm	
1405/1	400,00	5
1405/2	400,00	5
7125	45,00	1
7125	50,00	1
7125	55,00	1
7125	68,00	1
7125	82,00	1
7125	90,00	1
7125	100,00	1
7126	200,00	7
TOTAL		61
€		*6.322,62*



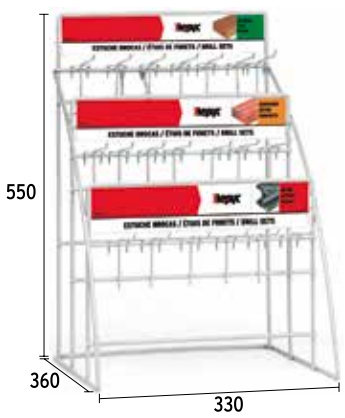
EXPOSITORES
PRÉSENTOIRS / DISPLAY STANDS

› Ref. 8207



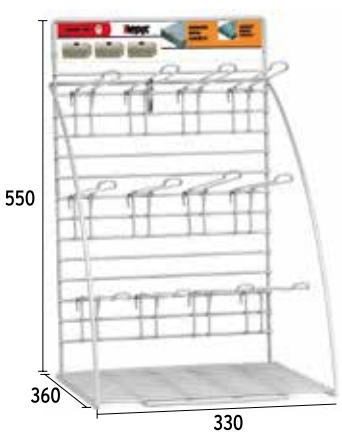
€	231,60

› Ref. 8208



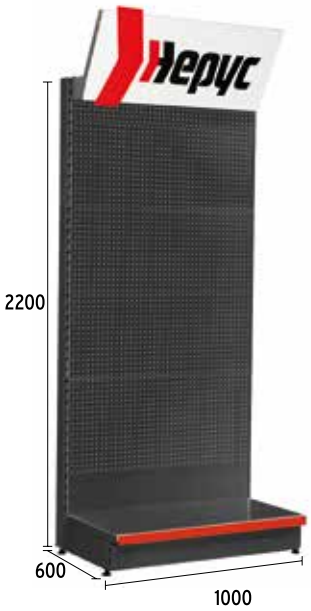
€	179,43

› Ref. 8209



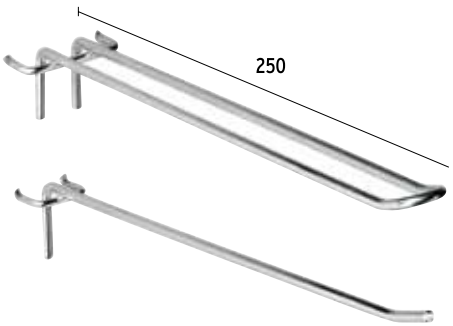
€	195,34

› Ref. 8211



€	848,99

› Ref. 8212



Ref.	€
8212/1	8,14
8212/2	6,08

Hepyc Display



Nuevo Display Modular
con placas intercambiables

Nouveau Présentoir Modulaire
avec étages réaménageables

New Modular Display
with exchangeable plates

EXPOSITOR TOTEM
PRÉSENTOIRS / DISPLAY STANDS





DISPLAY MODULAR
- Diseño atractivo
- Claridad expositiva
- Ahorro de espacio
- Expositor polivalente: para brocas, machos, fresas, etc
- Portafolletos

PRESENTOIR MODULAIRE
- Design attirant
- Mise en valeur des produits
- Encombrement réduit
- Présentoir polyvalent: pour forets, tarauds, fraises, etc...
- Porte-documents

MODULAR DISPLAY
- Attractive design
- Clear exposition
- Saving space
- Available for drill-bits, taps, end mills, etc.
- Brochure holders













Base + 2 pisos fijos
Posibilidad de añadir un 3º y un 4º módulo.

Base + 2 étages fixes
Possibilité d´ajouter un 3ème et 4ème module.

Base + 2 fixed floors
Possibility of adding a 3th and 4th floor.

A elegir entre diferentes composiciones.

A choisir entre différentes compositions.
To chose among different compositions.

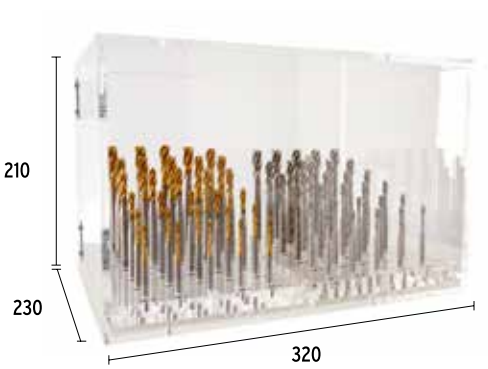
EXPOSITOR TOTEM
PRÉSENTOIRS / DISPLAY STANDS

› Ref. 8214



€ Vacío | 961,46

› Ref. 8214/1



€ Urna vacía | 100,89



€ Vacío | 860,58



€ Vacío | 759,69

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

BROCAS CILÍNDRICAS / FORETS CYLINDRIQUES / STRAIGHT DRILL-BITS

8214/2 HSS DIN 338 NSP



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 137,85

8214/3 HSS TIN DIN 338 NSP



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 297,15

8214/4 HSSCO DIN 338 N



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 235,65

8214/5 HSSCO TIALN DIN 338 N



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 484,30

8214/6 HSSCO DIN 338 IX



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 460,95

8214/7 HSSCO TIALN DIN 338 IX



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 881,80

8214/8 HSSCO DIN 338S



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 701,40

8214/9 HSSCO TIALN DIN 338S



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs. 50
€ 981,75

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

8214/12 HSSCO DIN 1897 S



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs.	50
€	*510,90*

8214/13 HSSCO TIALN DIN 1897



Ø mm	
4	10
5	10
6	10
8	10
10	5
12	5

TOTAL pcs.	50
€	*715,50*

8214/16 HSS DIN 8376



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5

TOTAL pcs.	25
€	*2.648,76*

8214/17 HSS DIN 8374



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5

TOTAL pcs.	25
€	*3.021,19*

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

ESCARIADORES / ALESOIRS / REAMERS

8214/18 HSSCO DIN 212 B



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs. 30
€ 759,45

8214/19 HSSCO DIN 212 E



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs. 30
€ 934,82

BROCAS ESCALONADAS Y AVELLANADORAS
FRAISES ETAGEES ET CONIQUES / STEP AND COUNTERBORE DRILL-BITS

8214/20 HSS



Ø mm	
4-12*2	6
4-20	6
6-30	5
20-30	4

TOTAL pcs. 21
€ 1.362,17

8214/21 HSS TIALN



Ø mm	
4-12*2	6
4-20	6
6-30	5
20-30	4

TOTAL pcs. 21
€ 2.816,09

8214/22 HSS 35º



Ø mm	
4-12*2	12
4-20	6
6-30	10

TOTAL pcs. 28
€ 2.349,60

8214/23 HSS 35º TIALN



Ø mm	
4-12*2	12
4-20	6
6-30	10

TOTAL pcs. 28
€ 3.524,38

8214/24 HSS



Ø mm	
3-14	6
6-20	6
16-30	5
26-40	4

TOTAL pcs. 21
€ 1.004,44

8214/25 HSS TIALN



Ø mm	
3-14	6
6-20	6
16-30	5
26-40	4

TOTAL pcs. 21
€ 1.894,90

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

AVELLANADORES 90º / FRAISES A CHANFREINER 90º / COUNTERSINK CUTTERS 90º

8214/26 HSS DIN 335C



Ø mm	
8,30	6
10,40	6
12,40	6
16,50	6
20,50	5
25,00	5
30,00	4

TOTAL pcs.	38
€	*826,02*

8214/27 HSS TIALN DIN 335C



Ø mm	
8,30	6
10,40	6
12,40	6
16,50	6
20,50	5
25,00	5
30,00	4

TOTAL pcs.	38
€	*2.404,47*

8214/28 HSSCO DIN 335C



Ø mm	
8,30	6
10,40	6
12,40	6
16,50	6
20,50	5
25,00	5
30,00	4

TOTAL pcs.	38
€	*1.662,01*

8214/29 HSSCO TIALN DIN 335C



Ø mm	
8,30	6
10,40	6
12,40	6
16,50	6
20,50	5
25,00	5
30,00	4

TOTAL pcs.	38
€	*2.874,82*

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

MACHOS MÁQUINA / TARAUDS MACHINE / MACHINE TAPS

8214/30 HSSE DIN 371/376B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 455,75

8214/31 HSSE DIN 371/376 R35º



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 551,25

8214/32 HSSE TIN DIN 371/376B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 683,00

8214/33 HSSE TIN DIN 371/376 R35º



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 789,50

8214/34 HSSEX TICN DIN 371/376B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.079,20

8214/35 HSSEX TICN DIN 371/376 R35º



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.213,10

8214/36 HSSEX TICN DIN 371/376 B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.288,55

8214/37 HSSEX TICN DIN 371/376 R15º LH



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.269,55

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

8214/38 HSSE VAP DIN 371/376B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 663,55

8214/39 HSSE VAP DIN 371/376 R35º



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 747,00

8214/40 HSSE TIN DIN 371/376B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 848,00

8214/41 HSSE TIN DIN 371/376 R35º



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 931,45

8214/42 HSSE DIN 371/376B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 716,30

8214/43 HSSE DIN 371/376 R45º



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 664,90

8214/44 HSSE CRN DIN 371/376B



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.019,80

8214/45 HSSE CRN DIN 371/376 R45º



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 968,50

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

8214/47 HSSE TIN DIN 371/376 6HX



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.306,20

8214/51 HSSE TIN DIN 371/376 6GX



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.369,45

8214/49 HSSE TIN DIN 371/376 6HX R



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.306,20

8214/53 HSSE TIN DIN 371/376 6GX R



Ø mm	
M4	5
M5	5
M6	5
M8	5
M10	5
M12	5

TOTAL pcs. 30
€ 1.369,45

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

FRESAS FRONTALES / FRAISES FRONTALES / END MILLS

8214/54 HSSE DIN 327 N 2Z



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs.	30
€	*506,35*

8214/55 HSSE TIALN DIN 327 N 2Z



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs.	30
€	*962,65*

8214/56 HSSE DIN 327 N 2Z



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs.	30
€	*847,30*

8214/57 HSSE TIALN DIN 327 N 2Z



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs.	30
€	*1.314,15*

8214/58 HSSE DIN 844 W 3Z



Ø mm	
6	5
8	5
10	5
12	5

TOTAL pcs.	20
€	*636,85*

8214/59 HSSE TIALN DIN 844 W 3Z



Ø mm	
6	5
8	5
10	5
12	5

TOTAL pcs.	20
€	*848,05*

8214/60 HSSE DIN 844 N 4Z



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs.	30
€	*540,60*

8214/61 HSSE TIALN DIN 844 N 4Z



Ø mm	
4	5
5	5
6	5
8	5
10	5
12	5

TOTAL pcs.	30
€	*1.055,20*

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

8214/62 HSSEX TIALN DIN 844 NR



Ø mm	
6	5
8	5
10	5
12	5

TOTAL pcs. 20
€ 1.092,85

8214/63 HSSEX TIALN DIN 844 NRF



Ø mm	
6	5
8	5
10	5
12	5

TOTAL pcs. 20
€ 1.200,75

FRESAS ROTATIVAS / FRAISES ROTATIVES / ROTARY MILLS

8214/69 FRESAS ROTATIVAS



Ø mm	
12x6 (3201)	2
10x6 (3201)	2
8x6 (3201)	1
12x6 (3202)	2
10x6 (3202)	2
8x6 (3202)	1
12x6 (3203)	2
10x6 (3203)	2



Ø mm	
8x6 (3203)	1
12x6 (3204)	2
10x6 (3204)	2
8x6 (3204)	1
12x6 (3207)	3
10x6 (3207)	2
12x6 (3206)	5



TOTAL pcs. 30
€ 1.342,00

CORONAS METAL / SCIES TREPAN METAUX / METAL HOLE SAWS

8214/64 HSSE

460,95

Ø mm	
14x25	1
16x25	1
18x25	1
20x25	1
22x25	1
24x25	1
14x50	1
16x50	1
18x50	1
20x50	1
22x50	1
24x50	1



TOTAL pcs. 12
€ 864,05

8214/65 HSSE TIALN

681,15

Ø mm	
14x25	1
16x25	1
18x25	1
20x25	1
22x25	1
24x25	1
14x50	1
16x50	1
18x50	1
20x50	1
22x50	1
24x50	1



TOTAL pcs. 12
€ 1.434,22

PLACAS DISPONIBLES
MODULES DISPONIBLES / AVAILABLE PLATES

8214/66 TCT

Ø mm	
18x35	1
20x35	1
22x35	1
24x25	1
26x35	1
28x35	1
18x50	1
20x50	1
22x50	1
24x50	1
26x50	1
28x50	1



TOTAL pcs.	12
€	*2.031,68*

8214/67 HSS REAFILABLES REAFFUTABLES / RESHARPENABLE HSS

Ø mm	
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
32	1
33	1
35	1
40	1
44	1
50	1



TOTAL pcs.	21
€	*657,29*

8214/68 TCT METAL DURO CARBURE / HARD METAL

Ø mm	
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1
35	1
40	1
42	1
50	1



TOTAL pcs.	21
€	*2.030,27*

8214/70 BIMETAL

Ø mm	
16	1
19	1
20	1
22	1
25	1
27	1
30	1
32	1
35	1
40	1
43	1
48	1
51	1
54	1
60	1
14-30	7
32-200	8



TOTAL pcs.	30
€	*566,12*