boccassini

utensili per filettare

CATALOGO GENERALE 2015

ICIM
UNI EN ISO 9001:2008
SISTEMA DI GESTIONE CERTIFICATO

boccassini
utensili per filettare

TERMINI DI CONSEGNA

Franco Fabbrica in Milano. Le merci viaggiano sempre e comunque a rischio e pericolo del committente (a meno di specifici accordi). I termini di consegna da noi indicati a fronte di offerte o di conferme d'ordine non debbono in nessun caso intendersi perentori ed impegnativi. La mancata consegna di parte o di tutta l'ordinazione o eventuali ritardi anche nella spedizione, non darà luogo alla sospensione o annullamento dell'ordine, a richiesta di danni, penalità, interessi, né esonera il cliente dal pagamento di quanto ritirato o di altre forniture precedenti.

TERMS OF DELIVERY

Ex Works our Plant in Milan. The goods travel at customer's risk (unless special agreement). The delivery terms indicated in our offers or order confirmations must not be considered, under any circumstances, peremptory or obligating. The non-delivery of a part or the whole order, as any delay in the shipment, will not give rise to the suspension or cancellation of the order as well as requests for damages, penalties, interest, or release the Client from the payment of the amount already collected or other previous deliveries.

IMBALLO

Gratis. Particolari imballi espressamente richiesti verranno addebitati al costo.

PACKAGING

It's free (unless special requires of the customer).

TERMINI DI PAGAMENTO

I termini di pagamento sono concordati con il commerciale. Qualora i termini di pagamento non fossero rispettati Boccassini SrL potrà sospendere le forniture in corso ed addebitare gli interessi di mora al tasso commerciale corrente salvo il diritto della stessa al risarcimento del maggior danno subito.

TERMS OF PAYMENT

The payment terms are agreed with the sales department. If the payment terms are not respected, the Boccassini SrL may suspend the supplies and charge default interest at the current commercial rate or to claim additional damages.

PREZZO

In Euro. I prezzi indicati si riferiscono al listino in vigore alla data dell'ordine; per consegne differite, per qualsiasi motivo, il prezzo sarà quello del nostro listino in vigore al momento della spedizione della merce. Boccassini SrL si riserva di variare i prezzi nel tempo. Le eventuali variazioni verranno comunicate inviando i nuovi prezzi ai clienti.

PRICE

In EURO. Prices are referred to price list in force at the date of the order; for deferred deliveries the price will be that one indicated in our price list in force at the time of shipment of goods. Boccassini SrL reserves the right to change prices over time. Any changes will be communicated by sending the new prices to the customers.

IDONEITÀ

Le indicazioni contenute nella documentazione tecnica non sono vincolanti salvo indicazioni specifiche espressamente sottoscritte. Il cliente dichiara di avere accertato l'idoneità del prodotto all'uso al quale intende destinarlo, assumendo ogni rischio e responsabilità derivanti dall'uso stesso. Eventuali reclami per merce difettosa dovranno essere notificati entro otto giorni dal ricevimento; se il reclamo è tempestivo, valido e giustificato la Società fornitrice si impegna esclusivamente alla sostituzione del prodotto o all'accredito dell'importo a suo insindacabile giudizio, con esclusione di ogni altro indennizzo. Tutte le ordinazioni, anche se verbali, si intendono sempre accettate alle presenti condizioni generali. Per qualsiasi controversia è competente esclusivamente il Foro di Milano.

SUITABILITY

The indications in the technical documentation are not binding unless otherwise specified expressly subscribed. The customer declares to have verified the suitability of the product for it's purposes, assuming all risk and liability arising out of the same. Any claims for defective goods must be notified within eight days from the receipt; if the complaint is timely, valid and justified Boccassini SrL agrees to product replacement or credit the amount in its sole discretion, to the exclusion of any other compensation. All orders, even if verbal, are always accepted with these general conditions.
Exclusively the Court of Milan will deal with any dispute.

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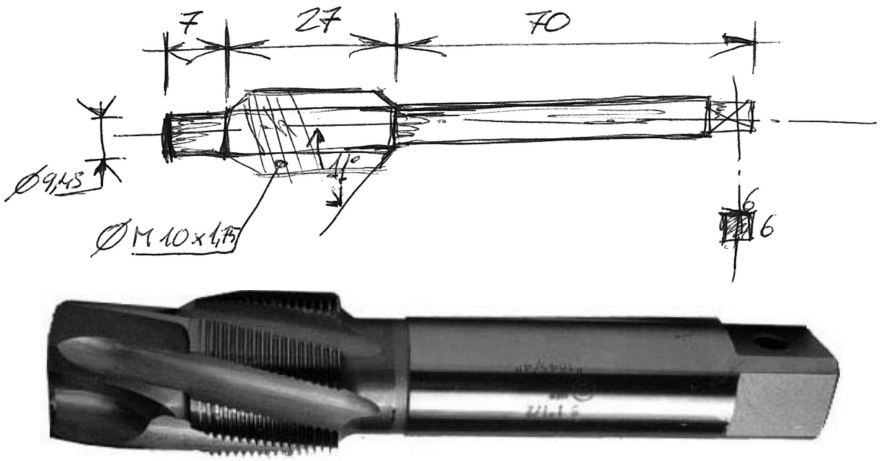
E-mail: info@boccassini.com
Ordini-offerte / *order-inquiries*: sales@boccassini.com

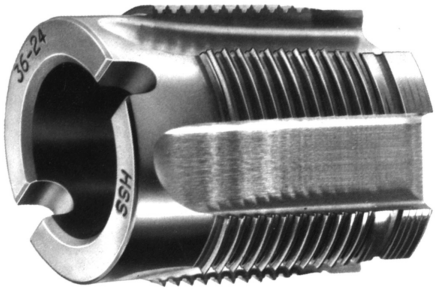
INGEGNERIZZAZIONE UTENSILI DA ESIGENZE DEL CLIENTE / *ENGINEERING OF CUTTING TOOLS ON CUSTOMER NEEDS*



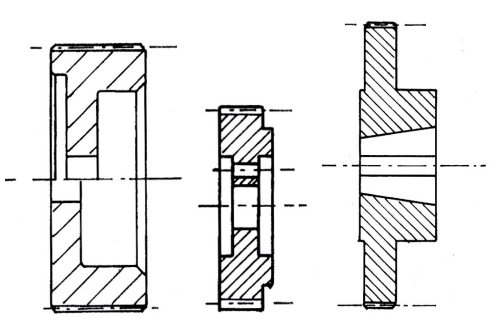
UTENSILI INGEGNERIZZATI PER SPECIFICHE ESIGENZE / *CUTTING TOOLS ENGINEERED FOR SPECIFIC FUNCTION*

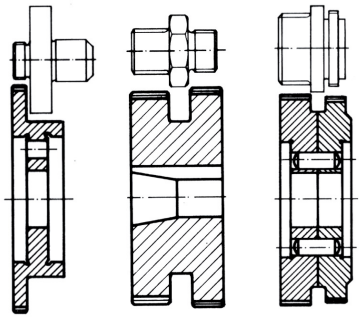
A truciolo interno / *Inner chips*

UTENSILI PER SETTORI SPECIFICI / *TOOLS FOR SPECIFIC SECTORS*

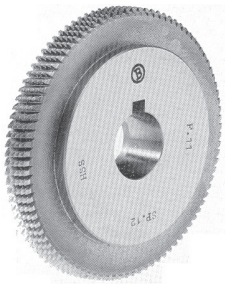


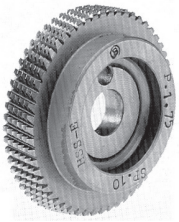
UTENSILI INGEGNERIZZATI PER MACCHINARI SPECIFICI / *CUTTING TOOLS ENGINEERED FOR SPECIFIC MACHINERY*

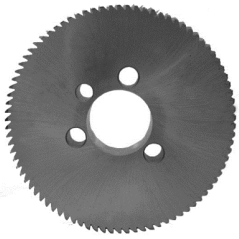




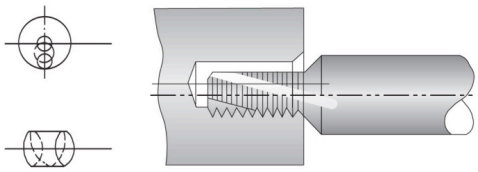
Frese a filettare
Thread milling cutters





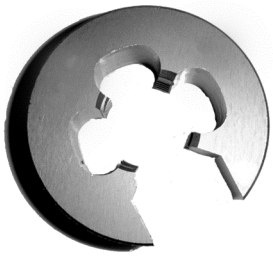


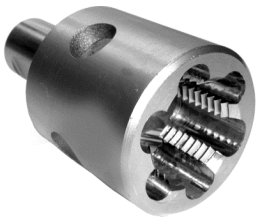
UTENSILI INGEGNERIZZATI PER UTILIZZI PARTICOLARI / *CUTTING TOOLS ENGINEERED FOR DIFFERENT APPLICATIONS*

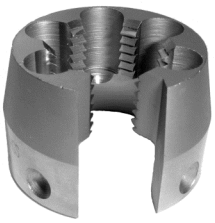


Frese a filettare
per interpolazione
Thread milling
cutters for CNC

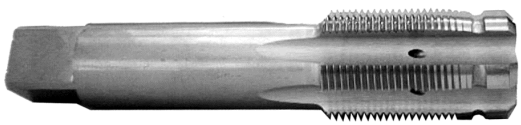
Filiere speciali / *Special dies*







Varie / *Specialties*



LE DIMENSIONI REALI DEGLI ARTICOLI NON CORRISPONDONO AGLI ESEMPI FOTOGRAFICI
THE REAL SIZE OF THE ITEMS DO NOT MATCH THE PHOTOGRAPHIC EXAMPLES

HIGH PERFORMANCE

MASCHI HP - IK - IKR

Maschi dalle elevate prestazioni, idonei per un'ampia gamma di materiali, rivestiti TiN e ZHL con foro di lubrificazione assiale e radiale

HP - IK - IKR TAPS

High Performance Taps, suitable for a wide range of materials, coated with TiN and ZHL with internal coolant, radial and axial

MASCHI TI – NI – T/N

Maschi specifici per lavorazioni di Ti, Ni e loro leghe.

TI – NI – T/N TAPS

Specific Taps for machining of Ti, Ni and their alloys.

TABELLA IMPIEGHI

Legenda / *Legend*

TD • Tagli diritti imbocco C,D / *Straight fluted*
IC • Tagli diritti imbocco corretto fori passanti / *Spiral point*
FCE • Elicoidali 15° fori ciechi / *Spiral fluted 15°*
ER • Elicoidali 35° fori ciechi / *Spiral fluted 35°*
ERE • Elicoidali 35° fori ciechi Imbocco E / *Spiral fluted 35° form "E"*
ESP • Elicoidali 10°-15° fori passanti / *Spiral Fluted 10°-15°*
Form • Maschio a rullare / *Form Taps*
LH • Filettatura sinistra / *Left thread*
AZ • Alternatura del filetto / *Interrupted thread*
OT • Per Ottone / *For Brass*
GG • Per ghisa / *For Cast Iron*
ALU • Per alluminio / *For Alluminium*
VA • Per Inox / *For Inox*
TI • Per Titanio / *For Titanium*
NI • Per Nichel e leghe / *For Nickel and Alloys*
EG • Per helicoil / *For wire thread inserts*
Punta • Maschi fora filetti / *Drill taps*
SL • Serie lunga / *Extralonge shank*

New • Maschi / *Taps* High Performance

IK • Foro assiale HSSCo-PM / *Internal coolant*
IKR • Foro radiale HSSCo-PM / *Radial coolant*
HP • High performance HSSCo-PM
TI • Leghe Ti, HP HSSCo-PM / *Ti Alloys*
Ni • Leghe Ni, HP HSSCo-PM / *Ni alloys*
T/N • Leghe Ti/Ni,HP HSSCo-PM / *Titanium/Nickel alloys*

Lubrificazione / *Lubrification*

E • Emulsione / *Emulsion*
O • Olio / *Oil*
MQL • Lubrificazione minimale / *Minimal Lubrification*
S • A secco / *Dry*

● Raccomandato / *Raccommended use*

○ Idoneo / *Suitable*

Cod.	
Rivestimenti / *Treatment*	
Materiale / *Material*	
Imbocco / *Chamfer*	
M	4H
	6H/6HX
	6G/6GX
	7G/7GX
	6H + 0.1
MF	6H/6HX
	6G/6GX
MJ	4H
UNC	2B/2BX
	3B
UNF	2B/2BX
	3B
NJC/NJF	3B
8 UN / UNEF	
G	
Rp (BSPP)	
Rc (BSPT)	
BSW	
NPSM/NPSF	
NPT/NPTF	
Tr	
EG	

	Descrizione / *Description*	N/mm2	HB	Truciolo / *Chip*	Lubrificazione / *Lubrification*
1.1	**Acciaio dolce, costruzione, cementazione, avp / *Soft constr. free-cutting steel***	< 700	< 200	Long/Medium	E, O, MQL
1.2	**Acciaio al carbonio / *Plain carbon steel***	< 700	175	Long/Medium	E, O, MQL
1.3	**Acciaio legato / *Alloyed stell***	< 800	200	Long/Medium	E, O, MQL
1.4	**Acciaio legato bonificato - alta resistenza / *Alloyed steel - tempered steel***	< 1300	> 250	Long/Medium	O, MQL
2.1	**Acciaio Inox automatico / *Free cutting inox***	< 800	< 250	Medium	O, MQL
2.2	**Acciaio Inox austenitico / *Inox austenitic***	< 900	< 250	Long	O, MQL
2.3	**Acciaio Inox ferritico + austenitico - martensitico / *Inox (ferr. martens)***	> 900	< 300	Medium/Long	O, MQL
2.4	**Leghe Ni Cr ad alta resistenza / *Ni alloys***	<1300	360	Medium/Short	O, MQL
3.1	**Ghisa grigia / *Cast Iron***	< 900	< 250	Short	O, MQL
3.2	**Ghisa malleabile e sferoidale / *Sferoidal and malleable Cast iron***	< 900	< 250	Medium/Short	E, O, MQL
4.1	**Titanio puro / *Ti Unalloyed***	< 900	< 250	Long	E, O, MQL
4.2	**Leghe di Titanio / *Ti Alloys***	> 900	> 250	Medium/Short	O, MQL
5.1	**Nichel puro / *Ni Unalloyed***	< 900	< 250	Long	E, O, MQL
5.2	**Leghe di Nichel / *Ni Alloys***	> 900	> 250	Long	O, MQL
6.1	**Rame puro, rame elettrolitico / *Cu Unalloyed***	< 400	< 120	Long	E, O, MQL
6.2	**Ottone a truciolo corto - bronzo / *Short-chipping Brass***	< 700	< 120	Short	E, O, MQL
6.3	**Ottone a truciolo lungo / *Long-chipping Brass***	< 700	< 120	Long	E, O, MQL
7.1	**Magnesio e sue leghe / *Magnesium and alloys***	< 400	< 120	Short	E, O, MQL
8.1	**Alluminio puro e leghe di Al con Si < 0,5% / *Al -Si alloys (Si < 5%) and alloys***	< 500	< 120	Long	E, O, MQL
8.2	**Leghe di Al con Si < 10% / *Al-Si alloys (Si <10%)***	< 500	< 120	Medium/Short	E, O, MQL
8.3	**Leghe di Al con Si > 10% / *Al-Si alloys (Si >10%)***	< 500	< 120	Short	E, O, MQL

								
S3P	**SH**	**S2P**	**TD**	**TDOT**	**TDGG**	**TDGG-T**	**IC**	**IC-Y**
						TiCN		TiN
HSS	HSS-E	HSS	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
C	**C**	**C**	**C**	**C**	**C**	**C**	**B**	**B**
							PAG.20	
PAG.16	PAG.17		PAG.18	PAG.19	PAG.19	PAG.19	PAG.20	PAG.20
			PAG.18				PAG.20	
							PAG.21	
			PAG.18				PAG.21	
		PAG.35	PAG.36				PAG.38	PAG.38
			PAG.36				PAG.38	
							PAG.29	
PAG.71			PAG.72				PAG.72	
		PAG.76	PAG.77				PAG.77	
			PAG.81				PAG.81	
		PAG.57	PAG.58	PAG.59	PAG.59	PAG.59	PAG.60	
			PAG.67					
			PAG.68					
PAG.54			PAG.55				PAG.55	
			PAG.70					
			PAG.69					
●	●	●	●				●	●
●	●	●	●				●	●
●	●	●	○				○	○
	●							
○	●	○	○				○	○
○	●	○						
	●							
○	●	○		○	●	●		
●	●	●	●				○	○
○	●	○	●					
	○							
○	●	○						
	○							
●	●	●	○				●	○
●	●	●		●	●			
●	●	●	○				●	●
●	●	●		●	●	●		
●	●	●	○				●	●
●	●	●	○		●	●	○	○
○	●	○				●		

TABELLA IMPIEGHI

Legenda / *Legend*

TD • Tagli diritti imbocco C,D / *Straight fluted*
IC • Tagli diritti imbocco corretto fori passanti / *Spiral point*
FCE • Elicoidali 15° fori ciechi / *Spiral fluted 15°*
ER • Elicoidali 35° fori ciechi / *Spiral fluted 35°*
ERE • Elicoidali 35° fori ciechi Imbocco E / *Spiral fluted 35° form "E"*
ESP • Elicoidali 10°-15° fori passanti / *Spiral Fluted 10°-15°*
Form • Maschio a rullare / *Form Taps*
LH • Filettatura sinistra / *Left thread*
AZ • Alternatura del filetto / *Interrupted thread*
OT • Per Ottone / *For Brass*
GG • Per ghisa / *For Cast Iron*
ALU • Per alluminio / *For Alluminium*
VA • Per Inox / *For Inox*
TI • Per Titanio / *For Titanium*
NI • Per Nichel e leghe / *For Nickel and Alloys*
EG • Per helicoil / *For wire thread inserts*
Punta • Maschi fora filetti / *Drill taps*
SL • Serie lunga / *Extralonge shank*

New • Maschi / *Taps* High Performance

IK • Foro assiale HSSCo-PM / *Internal coolant*
IKR • Foro radiale HSSCo-PM / *Radial coolant*
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TI • Leghe Ti, HP HSSCo-PM / *Ti Alloys*
Ni • Leghe Ni, HP HSSCo-PM / *Ni alloys*
T/N • Leghe Ti/Ni,HP HSSCo-PM / *Titanium/Nickel alloys*

Lubrificazione / *Lubrification*

E • Emulsione / *Emulsion*
O • Olio / *Oil*
MQL • Lubrificazione minimale / *Minimal Lubrification*
S • A secco / *Dry*

● Raccomandato / *Raccommended use*

○ Idoneo / *Suitable*

Cod.	
Rivestimenti / *Treatment*	
Materiale / *Material*	
Imbocco / *Chamfer*	
M	4H
	6H/6HX
	6G/6GX
	7G/7GX
	6H + 0.1
MF	6H/6HX
	6G/6GX
MJ	4H
UNC	2B/2BX
	3B
UNF	2B/2BX
	3B
NJC/NJF	3B
8 UN / UNEF	
G	
Rp (BSPP)	
Rc (BSPT)	
BSW	
NPSM/NPSF	
NPT/NPTF	
Tr	
EG	

	Descrizione / *Description*	N/mm2	HB	Truciolo / *Chip*	Lubrificazione / *Lubrification*
1.1	**Acciaio dolce, costruzione, cementazione, avp / *Soft constr. free-cutting steel***	< 700	< 200	Long/Medium	E, O, MQL
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1.4	**Acciaio legato bonificato - alta resistenza / *Alloyed steel - tempered steel***	< 1300	> 250	Long/Medium	O, MQL
2.1	**Acciaio Inox automatico / *Free cutting inox***	< 800	< 250	Medium	O, MQL
2.2	**Acciaio Inox austenitico / *Inox austenitic***	< 900	< 250	Long	O, MQL
2.3	**Acciaio Inox ferritico + austenitico - martensitico / *Inox (ferr. martens)***	> 900	< 300	Medium/Long	O, MQL
2.4	**Leghe Ni Cr ad alta resistenza / *Ni alloys***	<1300	360	Medium/Short	O, MQL
3.1	**Ghisa grigia / *Cast Iron***	< 900	< 250	Short	O, MQL
3.2	**Ghisa malleabile e sferoidale / *Sferoidal and malleable Cast iron***	< 900	< 250	Medium/Short	E, O, MQL
4.1	**Titanio puro / *Ti Unalloyed***	< 900	< 250	Long	E, O, MQL
4.2	**Leghe di Titanio / *Ti Alloys***	> 900	> 250	Medium/Short	O, MQL
5.1	**Nichel puro / *Ni Unalloyed***	< 900	< 250	Long	E, O, MQL
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6.3	**Ottone a truciolo lungo / *Long-chipping Brass***	< 700	< 120	Long	E, O, MQL
7.1	**Magnesio e sue leghe / *Magnesium and alloys***	< 400	< 120	Short	E, O, MQL
8.1	**Alluminio puro e leghe di Al con Si < 0,5% / *Al -Si alloys (Si < 5%) and alloys***	< 500	< 120	Long	E, O, MQL
8.2	**Leghe di Al con Si < 10% / *Al-Si alloys (Si <10%)***	< 500	< 120	Medium/Short	E, O, MQL
8.3	**Leghe di Al con Si > 10% / *Al-Si alloys (Si >10%)***	< 500	< 120	Short	E, O, MQL

APPLICATION TABLE

							NEW	NEW	NEW
									
IC-T	**IC VA**	**IC VA-Y**	**ICALU**	**ICALU T**	**ICAZ**	**ICAZ-T**	**HP IC-Y**	**HP IC-Z**	**IKR IC**
TiCN		**TiN**		**TiCN**		**TiCN**	**TiN**	**ZHL**	**TiN**
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSSCo-PM	HSSCo-PM	HSSCo-PM
B	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**
PAG.20	**PAG.21**	**PAG.21**	**PAG.22**	**PAG.22**	**PAG.22**	**PAG.22**	**PAG.23**	**PAG.23**	**PAG.23**
PAG.38	**PAG.40**	**PAG.40**					**PAG.41**	**PAG.41**	
							PAG.74	**PAG.74**	
							PAG.79	**PAG.79**	
	PAG.60	**PAG.60**					**PAG.61**	**PAG.61**	
●	●	●	○	○	●	●	○	○	○
●	●	●					●	●	●
○	●	●					●	●	●
		○					●	●	●
○	●	●			○	○			
	●	●					●	●	●
							●	●	●
							●	●	●
							○	○	○
○	○	○					●	●	●
	○								
	○						○	○	○
	●	○	○	○	●	●	○	○	○
●	●	○	●	●	●	●	○	○	○
●	●	○	●	●	●	●	●	●	●
	○	●		●		○	●	●	●

TABELLA IMPIEGHI

Legenda / *Legend*

TD • Tagli diritti imbocco C,D / *Straight fluted*
IC • Tagli diritti imbocco corretto fori passanti / *Spiral point*
FCE • Elicoidali 15° fori ciechi / *Spiral fluted 15°*
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OT • Per Ottone / *For Brass*
GG • Per ghisa / *For Cast Iron*
ALU • Per alluminio / *For Alluminium*
VA • Per Inox / *For Inox*
TI • Per Titanio / *For Titanium*
NI • Per Nichel e leghe / *For Nickel and Alloys*
EG • Per helicoil / *For wire thread inserts*
Punta • Maschi fora filetti / *Drill taps*
SL • Serie lunga / *Extralonge shank*

New • Maschi / *Taps* High Performance

IK • Foro assiale HSSCo-PM / *Internal coolant*
IKR • Foro radiale HSSCo-PM / *Radial coolant*
HP • High performance HSSCo-PM
TI • Leghe Ti, HP HSSCo-PM / *Ti Alloys*
Ni • Leghe Ni, HP HSSCo-PM / *Ni alloys*
T/N • Leghe Ti/Ni,HP HSSCo-PM / *Titanium/Nickel alloys*

Lubrificazione / *Lubrification*

E • Emulsione / *Emulsion*
O • Olio / *Oil*
MQL • Lubrificazione minimale / *Minimal Lubrification*
S • A secco / *Dry*

● Raccomandato / *Raccommended use*

○ Idoneo / *Suitable*

Cod.	
Rivestimenti / *Treatment*	
Materiale / *Material*	
Imbocco / *Chamfer*	
M	4H
	6H/6HX
	6G/6GX
	7G/7GX
	6H + 0.1
MF	6H/6HX
	6G/6GX
MJ	4H
UNC	2B/2BX
	3B
UNF	2B/2BX
	3B
NJC/NJF	3B
8 UN / UNEF	
G	
Rp (BSPP)	
Rc (BSPT)	
BSW	
NPSM/NPSF	
NPT/NPTF	
Tr	
EG	

	Descrizione / *Description*	N/mm2	HB	Truciolo / *Chip*	Lubrificazione / *Lubrification*
1.1	**Acciaio dolce, costruzione, cementazione, avp / *Soft constr. free-cutting steel***	< 700	< 200	Long/Medium	E, O, MQL
1.2	**Acciaio al carbonio / *Plain carbon steel***	< 700	175	Long/Medium	E, O, MQL
1.3	**Acciaio legato / *Alloyed stell***	< 800	200	Long/Medium	E, O, MQL
1.4	**Acciaio legato bonificato - alta resistenza / *Alloyed steel - tempered steel***	< 1300	> 250	Long/Medium	O, MQL
2.1	**Acciaio Inox automatico / *Free cutting inox***	< 800	< 250	Medium	O, MQL
2.2	**Acciaio Inox austenitico / *Inox austenitic***	< 900	< 250	Long	O, MQL
2.3	**Acciaio Inox ferritico + austenitico - martensitico / *Inox (ferr. martens)***	> 900	< 300	Medium/Long	O, MQL
2.4	**Leghe Ni Cr ad alta resistenza / *Ni alloys***	<1300	360	Medium/Short	O, MQL
3.1	**Ghisa grigia / *Cast Iron***	< 900	< 250	Short	O, MQL
3.2	**Ghisa malleabile e sferoidale / *Sferoidal and malleable Cast iron***	< 900	< 250	Medium/Short	E, O, MQL
4.1	**Titanio puro / *Ti Unalloyed***	< 900	< 250	Long	E, O, MQL
4.2	**Leghe di Titanio / *Ti Alloys***	> 900	> 250	Medium/Short	O, MQL
5.1	**Nichel puro / *Ni Unalloyed***	< 900	< 250	Long	E, O, MQL
5.2	**Leghe di Nichel / *Ni Alloys***	> 900	> 250	Long	O, MQL
6.1	**Rame puro, rame elettrolitico / *Cu Unalloyed***	< 400	< 120	Long	E, O, MQL
6.2	**Ottone a truciolo corto - bronzo / *Short-chipping Brass***	< 700	< 120	Short	E, O, MQL
6.3	**Ottone a truciolo lungo / *Long-chipping Brass***	< 700	< 120	Long	E, O, MQL
7.1	**Magnesio e sue leghe / *Magnesium and alloys***	< 400	< 120	Short	E, O, MQL
8.1	**Alluminio puro e leghe di Al con Si < 0,5% / *Al -Si alloys (Si < 5%) and alloys***	< 500	< 120	Long	E, O, MQL
8.2	**Leghe di Al con Si < 10% / *Al-Si alloys (Si <10%)***	< 500	< 120	Medium/Short	E, O, MQL
8.3	**Leghe di Al con Si > 10% / *Al-Si alloys (Si >10%)***	< 500	< 120	Short	E, O, MQL

APPLICATION TABLE

NEW	NEW									
										
IKR IC-Z	**T/NIC**	**FPL**	**ER**	**ER-Y**	**ER-T**	**ERE**	**ERVA**	**ERVA-Y**	**ERALU**	**ERALU-T**
ZHL				**TiN**	**TiCN**		**VAP**	**TiN**		**TiCN**
HSSCo-PM	HSSCo-PM	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
B	**B**	**B**	**C**	**C**	**C**	**E**	**C**	**C**	**C**	**C**
			PAG.25							
PAG.23	**PAG.23**		**PAG.24**	**PAG.24**	**PAG.24**	**PAG.24**	**PAG.25**	**PAG.25**	**PAG.26**	**PAG.26**
			PAG.24							
			PAG.25							
			PAG.25							
	PAG.41		**PAG.42**	**PAG.42**	**PAG.42**		**PAG.44**	**PAG.44**		
			PAG.42							
			PAG.29							
	PAG.74		**PAG.73**							
	PAG.79		**PAG.77**							
			PAG.81							
			PAG.63				**PAG.63**	**PAG.63**		
			PAG.56							
○		●	●	●	●	●	○	○	○	○
●		●	○	○	○	○	●	●		
●							●	●		
●	●									
		●	○	○	○	○	●	●		
●							●	●		
●	○						○	○		
●	●									
○										
●			○	○	○	○	●	●		
							○	○		
	●									
○							○	○		
	●									
○		●	●	○	●	●			●	●
○		●	●	●	●	●	●	●	●	●
●	○	●	●	●	●	●	○	○	●	●
●	○	○	○	○	○	○	●	●	○	○
	○									

TABELLA IMPIEGHI

Legenda / *Legend*

TD • Tagli diritti imbocco C,D / *Straight fluted*
IC • Tagli diritti imbocco corretto fori passanti / *Spiral point*
FCE • Elicoidali 15° fori ciechi / *Spiral fluted 15°*
ER • Elicoidali 35° fori ciechi / *Spiral fluted 35°*
ERE • Elicoidali 35° fori ciechi Imbocco E / *Spiral fluted 35° form "E"*
ESP • Elicoidali 10°-15° fori passanti / *Spiral Fluted 10°-15°*
Form • Maschio a rullare / *Form Taps*
LH • Filettatura sinistra / *Left thread*
AZ • Alternatura del filetto / *Interrupted thread*
OT • Per Ottone / *For Brass*
GG • Per ghisa / *For Cast Iron*
ALU • Per alluminio / *For Alluminium*
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TI • Per Titanio / *For Titanium*
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IK • Foro assiale HSSCo-PM / *Internal coolant*
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T/N • Leghe Ti/Ni,HP HSSCo-PM / *Titanium/Nickel alloys*

Lubrificazione / *Lubrification*

E • Emulsione / *Emulsion*
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MQL • Lubrificazione minimale / *Minimal Lubrification*
S • A secco / *Dry*

● Raccomandato / *Raccommended use*

○ Idoneo / *Suitable*

Cod.	
Rivestimenti / *Treatment*	
Materiale / *Material*	
Imbocco / *Chamfer*	
M	4H
	6H/6HX
	6G/6GX
	7G/7GX
	6H + 0.1
MF	6H/6HX
	6G/6GX
MJ	4H
UNC	2B/2BX
	3B
UNF	2B/2BX
	3B
NJC/NJF	3B
8 UN / UNEF	
G	
Rp (BSPP)	
Rc (BSPT)	
BSW	
NPSM/NPSF	
NPT/NPTF	
Tr	
EG	

	Descrizione / *Description*	N/mm2	HB	Truciolo / *Chip*	Lubrificazione / *Lubrification*
1.1	**Acciaio dolce, costruzione, cementazione, avp / *Soft constr. free-cutting steel***	< 700	< 200	Long/Medium	E, O, MQL
1.2	**Acciaio al carbonio / *Plain carbon steel***	< 700	175	Long/Medium	E, O, MQL
1.3	**Acciaio legato / *Alloyed stell***	< 800	200	Long/Medium	E, O, MQL
1.4	**Acciaio legato bonificato - alta resistenza / *Alloyed steel - tempered steel***	< 1300	> 250	Long/Medium	O, MQL
2.1	**Acciaio Inox automatico / *Free cutting inox***	< 800	< 250	Medium	O, MQL
2.2	**Acciaio Inox austenitico / *Inox austenitic***	< 900	< 250	Long	O, MQL
2.3	**Acciaio Inox ferritico + austenitico - martensitico / *Inox (ferr. martens)***	> 900	< 300	Medium/Long	O, MQL
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3.1	**Ghisa grigia / *Cast Iron***	< 900	< 250	Short	O, MQL
3.2	**Ghisa malleabile e sferoidale / *Sferoidal and malleable Cast iron***	< 900	< 250	Medium/Short	E, O, MQL
4.1	**Titanio puro / *Ti Unalloyed***	< 900	< 250	Long	E, O, MQL
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6.3	**Ottone a truciolo lungo / *Long-chipping Brass***	< 700	< 120	Long	E, O, MQL
7.1	**Magnesio e sue leghe / *Magnesium and alloys***	< 400	< 120	Short	E, O, MQL
8.1	**Alluminio puro e leghe di Al con Si < 0,5% / *Al -Si alloys (Si < 5%) and alloys***	< 500	< 120	Long	E, O, MQL
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APPLICATION TABLE

NEW	NEW	NEW	NEW	NEW	NEW					
										
HP ER-Y	IK ER-Y	IK ER-Z	HP ER-Z	NIER	TIFCE	FCE	FCE-Y	FORM	FORM-Y	FORM-T
TiN	TiN	ZHL	ZHL				TiN		TiN	TiCN
HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
C	C	C	C	C	C	C	C	C	C	C
PAG.27	PAG.27	PAG.27	PAG.27	PAG.26	PAG.27	PAG.28		PAG.33	PAG.33	PAG.33
						PAG.28				
						PAG.28				
						PAG.28				
PAG.45			PAG.45	PAG.45	PAG.48	PAG.46		PAG.49	PAG.49	PAG.49
						PAG.46				
PAG.75			PAG.75	PAG.75	PAG.75	PAG.73		PAG.73	PAG.73	
PAG.80			PAG.80	PAG.80	PAG.80	PAG.77		PAG.78	PAG.78	
						PAG.80				
PAG.64			PAG.64			PAG.62		PAG.65	PAG.65	
						PAG.56				
						PAG.87-88				
●	●	●	●			●	●		●	●
●	●	●	●			●	●		●	●
●	●	●	●			●	●			
●	●	●	●	●	●	○	●			
						○	○		●	●
●	●	●	●						○	○
●	●	●	●	○						
●	●	●	●	●	●					
●	●	●	●			●	●			
					●					
					●					
○	○	○	○	○						
				●						
○	○	○	○						●	●
						○	○			
○	○	○	○			●	●		●	●
●	●	●	●	○	○	○	○		●	●
●	●	●	●	○	○	●	●		●	●
				○	○					

TABELLA IMPIEGHI

Legenda / *Legend*

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E • Emulsione / *Emulsion*
O • Olio / *Oil*
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S • A secco / *Dry*

● Raccomandato / *Raccommended use*

○ Idoneo / *Suitable*

Cod.	
Rivestimenti / *Treatment*	
Materiale / *Material*	
Imbocco / *Chamfer*	
M	4H
	6H/6HX
	6G/6GX
	7G/7GX
	6H + 0.1
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	6G/6GX
MJ	4H
UNC	2B/2BX
	3B
UNF	2B/2BX
	3B
NJC/NJF	3B
8 UN / UNEF	
G	
Rp (BSPP)	
Rc (BSPT)	
BSW	
NPSM/NPSF	
NPT/NPTF	
Tr	
EG	

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1.4	**Acciaio legato bonificato - alta resistenza / *Alloyed steel - tempered steel***	< 1300	> 250	Long/Medium	O, MQL
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3.2	**Ghisa malleabile e sferoidale / *Sferoidal and malleable Cast iron***	< 900	< 250	Medium/Short	E, O, MQL
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APPLICATION TABLE

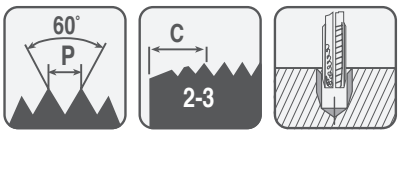
NEW	NEW	NEW							
									
HP FORM-Y	**IK FORM-Y**	**IKR FORM-Y**	**EL**	**SL TD**	**SL IC**	**SL ER**	**PUNTA**	**Tr TD**	**Tr ESP**
TiN	**TiN**	**TiN**							
HSSCo-PM	HSSCo-PM	HSSCo-PM	HSS / HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
C	**C**	**C**		**C**	**B**	**C**	**C**		
PAG.34	**PAG.34**	**PAG.34**	**PAG.30**	**PAG.32**	**PAG.32**	**PAG.32**	**PAG.31**		
PAG.50			**PAG.52**	**PAG.52**			**PAG.51**		
PAG.74									
PAG.79									
PAG.65				**PAG.66**	**PAG.66**	**PAG.66**	**PAG.66**		
								PAG.85	**PAG.85**
●	●	●	●	●	●	●	●		●
●	●	●	●	●	●	○	●		
●	●	●	○	○	○				
●	●	●							
●	●	●	○	○	○	○	○		●
●	●	●							○
								●	
			●	●	○	○	●		●
●	●	●							
○	○	○							
●	●	●	○	○	●	●			
								●	
●	●	●	○	○	●	●	●		●
●	●	●	○	○	●	●	●		●
●	●	●	○	○	○	○	○		○

FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
MASCHI A MANO SERIE 3 PZ / *HAND TAPS SET OF 3*

DIN 352

Codice Articolo

S 3P	3^ fin



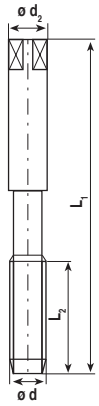
Tol	6H	6H
Mat	HSS	HSS
Imbocco	C	C

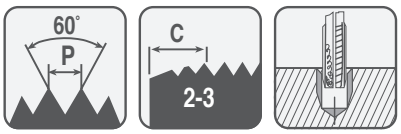
L1	L2	d2	⌀	Preforo	d x p		FINITORE BOTTOMING
32	5.5	2.5	2.1	0.75	**M 1 x 0.25**		
32	5.5	2.5	2.1	0.95	**M 1.2 x 0.25**		
32	7	2.5	2.1	1.1	**M 1.4 x 0.3**		
32	8	2.5	2.1	1.25	**M 1.6 x 0.35**		
32	8	2.5	2.1	1.3	**M 1.7 x 0.35**		
32	8	2.5	2.1	1.45	**M 1.8 x 0.35**		
36	8	2.8	2.1	1.6	**M 2 x 0.4**		
40	9	2.8	2.1	2.05	**M 2,5 x 0.45**		
40	11	3.5	2.7	2.5	**M 3 x 0.5**	25,88	8,62
45	13	4	3	2.8	**M 3.5 x 0.6**	35,88	11,96
45	13	4.5	3.4	3.3	**M 4 x 0.7**	25,88	8,62
50	16	6	4.9	3.55	**M 4.5 x 0.75**	51,34	17,11
50	16	6	4.9	4.2	**M 5 x 0.8**	28,06	9,35
50	19	6	4.9	5	**M 6 x 1**	28,06	9,35
50	19	6	4.9	6	**M 7 x 1**	37,37	12,46
56	22	6	4.9	6.75	**M 8 x 1.25**	33,35	11,11
63	22	7	5.5	7.75	**M 9 x 1.25**	46,69	15,56
70	24	7	5.5	8.5	**M 10 x 1.5**	39,79	13,27
70	24	8	6.2	9.5	**M 11 x 1.5**	70,03	23,35
75	29	9	7	10.25	**M 12 x 1.75**	52,90	17,63
80	30	11	9	12	**M 14 x 2**	67,85	22,62
80	32	12	9	14	**M 16 x 2**	80,50	26,84
95	40	14	11	15.5	**M 18 x 2.5**	115,00	38,33
95	40	16	12	17.5	**M 20 x 2.5**	126,50	42,17
100	40	18	14.5	19.5	**M 22 x 2.5**	158,70	52,90
110	50	18	14.5	21	**M 24 x 3**	167,90	55,96
110	50	20	16	24	**M 27 x 3**	225,66	75,22
125	56	22	18	26.5	**M 30 x 3.5**	295,69	98,56
125	56	25	20	29.5	**M 33 x 3.5**	381,27	127,09
150	63	28	22	32	**M 36 x 4**	459,08	153,02
150	63	32	24	35	**M 39 x 4**	606,93	202,31
150	63	32	24	37.5	**M 42 x 4.5**	676,63	225,54
160	70	36	29	40.5	**M 45 x 4.5**	742,44	247,48
180	75	36	29	43	**M 48 x 5**	915,40	305,14
180	75	40	32		**M 52 x 5**	1166,10	388,70

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

Codice Articolo

DIN 352	S H	3^ fin





	H	H
Tol	6HX	6HX
Mat	HSS-E	HSS-E
Imbocco		

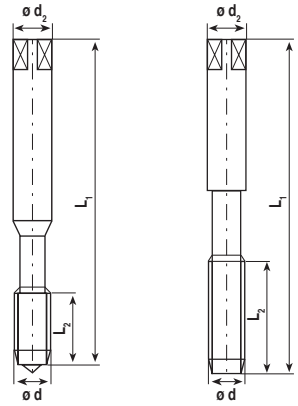
L1	L2	d2	⌀	Preforo	d x p		FINITORE BOTTOMING
45	6	2.5	2.1	0.75	**M 1 x 0.25**	70,45	
45	6	2.5	2.1	0.95	**M 1.2 x 0.25**	65,91	
45	8	2.5	2.1	1.1	**M 1.4 x 0.3**	57,95	
45	8	2.5	2.1	1.25	**M 1.6 x 0.35**	54,55	
45	8	2.5	2.1	1.3	**M 1.7 x 0.35**	54,55	
45	10	2.5	2.1	1.45	**M 1.8 x 0.35**	54,55	
45	10	2.8	2.1	1.6	**M 2 x 0.4**	64,77	
45	10	2.8	2.1	2.05	**M 2.5 x 0.45**	61,82	
40	11	3.5	2.7	2.5	**M 3 x 0.5**	45,45	15,15
45	13	4.5	3.4	3.3	**M 4 x 0.7**	45,45	15,15
50	18	6	4.9	4.2	**M 5 x 0.8**	46,59	15,53
50	18	6	4.9	5	**M 6 x 1**	46,59	15,53
56	22	6	4.9	6.75	**M 8 x 1.25**	53,41	17,8
70	25	7	5.5	8.5	**M 10 x 1.5**	61,36	20,45
75	30	9	7	10.25	**M 12 x 1.75**	86,36	
80	30	11	9	12	**M 14 x 2**	110,23	
80	32	12	9	14	**M 16 x 2**	131,36	
95	40	14	11	15.5	**M 18 x 2.5**	168,18	
95	40	16	12	17.5	**M 20 x 2.5**	193,18	

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
M1 - M 1.8 SERIE IN 2 PZ. SENZA GUIDA / *SET OF 2 WITHOUT PILOT*

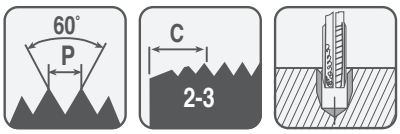
FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
TAGLIENTI DIRITTI / *STRAIGHT FLUTED*

Codice Articolo

DIN 371	DIN 376



TDGP	TD	TD	TD



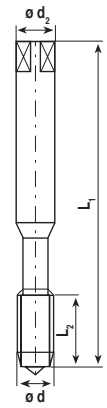
	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	6H	6H	6G	+0.10
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C

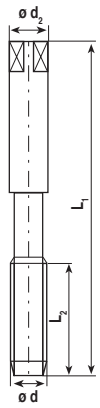
		DIN 371		DIN 376							
L1	L2	d2	⌀	d2	⌀	Preforo	d x p	DIN 376			
45	5.5	2.5	2.1			0.75	**M 1 x 0.25**		36,80		
45	5.5	2.5	2.1			0.95	**M 1.2 x 0.25**		35,19		
45	7	2.5	2.1			1.1	**M 1.4 x 0.3**		31,05		
45	8	2.5	2.1			1.25	**M 1.6 x 0.35**		28,98		
45	8	2.5	2.1			1.35	**M 1.7 x 0.35**		29,90		
45	8	2.5	2.1			1.45	**M 1.8 x 0.35**		29,21		
45	8	2.8	2.1			1.6	**M 2 x 0.4**		17,71		
45	8	2.8	2.1			1.75	**M 2.2 x 0.45**		17,25		
45	8	2.8	2.1			1.9	**M 2.3 x 0.4**				
50	9	2.8	2.1			2.05	**M 2.5 x 0.45**		17,25		
50	9	2.8	2.1			2.15	**M 2.6 x 0.45**				
56	10	3.5	2.7	2.2	1.8	2.5	**M 3 x 0.5**	19,09	12,88	14,82	23,06
56	10	4	3			2.9	**M 3.5 x 0.6**		16,10	18,52	
63	12	4.5	3.4	2.8	2.1	3.3	**M 4 x 0.7**	15,18	12,88	14,82	23,06
70	12	6	4.9			3.75	**M 4.5 x 0.75**		23,00		
70	12	6	4.9	3.5	2.7	4.2	**M 5 x 0.8**	15,18	12,88	14,82	23,06
80	14	6	4.9			4.6	**M 5.5 x 0.9**				
80	14	6	4.9	4.5	3.4	5	**M 6 x 1**	15,18	12,88	14,82	23,06
80	16	7	5.5			6	**M 7 x 1**		18,74		
90	18	8	6.2	6	4.9	6.75	**M 8 x 1.25**	17,13	14,72	16,93	25,62
100	18	9	7			7.75	**M 9 x 1.25**		24,15		
100	20	10	8	7	5.5	8.5	**M 10 x 1.5**	19,55	16,79	19,31	30,25
100	20			8	6.2	9.5	**M 11 x 1.5**		31,05		
110	22			9	7	10.25	**M 12 x 1.75**		22,19		39,72
110	25			11	9	12	**M 14 x 2**		28,75		50,37
110	25			12	9	14	**M 16 x 2**		33,35		59,00
125	32			14	11	15.5	**M 18 x 2.5**		45,77		79,18
140	32			16	12	17.5	**M 20 x 2.5**		49,45		86,37
140	32			18	14.5	19.5	**M 22 x 2.5**		57,50		
160	36			18	14.5	21	**M 24 x 3**		68,31		
160	36			20	16	24	**M 27 x 3**		89,01		
180	40			22	18	26.5	**M 30 x 3.5**		113,85		
180	40			25	20	29.5	**M 33 x 3.5**		144,90		
200	45			28	22	32	**M 36 x 4**		204,70		
200	45			32	24	35	**M 39 x 4**		255,30		
220	50			32	24	37.5	**M 42 x 4.5**		303,60		
220	50			36	29	40.5	**M 45 x 4.5**		340,40		
250	56			36	29	43	**M 48 x 5**		420,90		
250	56			40	32	47	**M 52 x 5**		515,20		
280	64			45	35	50.5	**M 56 x 5.5**		736,00		
280	64			45	35	50.5	**M 60 x 5.5**		874,00		

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK - IF AVAILABLE AT STOCK

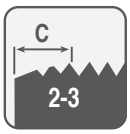
Codice Articolo

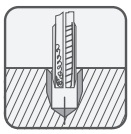
DIN 371	DIN 376





TDOT	TDGG	TDGG-T





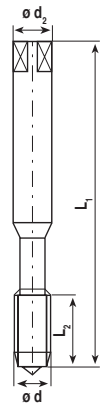
	NEUTRO	NEUTRO	TiCN
Tol	**6H**	**6HX**	**6HX**
Mat	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**C**	**C**

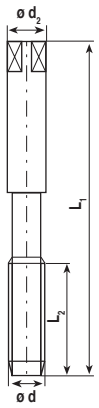
L1	L2			d2	⌀	Preforo	d x p	OTTONE / *BRASS*	GHISA / *CAST IRON*	GHISA / *CAST IRON*
45	8	DIN 371		2.8	2.1	1.6	**M 2 x 0.4**			
45	8			2.8	2.1	1.75	**M 2.2 x 0.45**			
45	8			2.8	2.1	1.9	**M 2.3 x 0.4**			
50	9			2.8	2.1	2.05	**M 2.5 x 0.45**			
50	9			2.8	2.1	2.15	**M 2.6 x 0.45**			
56	10			3.5	2.7	2.5	**M 3 x 0.5**	14,84	14,84	21,27
56	10			4	3	2.9	**M 3.5 x 0.6**			
63	12			4.5	3.4	3.3	**M 4 x 0.7**	14,84	14,84	21,27
70	12			6	4.9	3.75	**M 4.5 x 0.75**			
70	12			6	4.9	4.2	**M 5 x 0.8**	14,84	14,84	21,27
80	14			6	4.9	4.6	**M 5.5 x 0.9**			
80	14			6	4.9	5	**M 6 x 1**	14,84	14,84	21,27
80	16			7	5.5	6	**M 7 x 1**			
90	18			8	6.2	6.75	**M 8 x 1.25**	16,90	16,90	26,11
100	18			9	7	7.75	**M 9 x 1.25**			
100	20			10	8	8.5	**M 10 x 1.5**	19,43	19,43	31,17
100	20		DIN 376	8	6.2	9.5	**M 11 x 1.5**			
110	22			9	7	10.25	**M 12 x 1.75**			
110	25			11	9	12	**M 14 x 2**			
110	25			12	9	14	**M 16 x 2**			
125	32			14	11	15.5	**M 18 x 2.5**			
140	32			16	12	17.5	**M 20 x 2.5**			

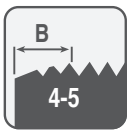
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
TAGLIENTI DIRITTI IMBOCCO CORRETTO / *SPIRAL POINT*

DIN 371	DIN 376







Codice Articolo

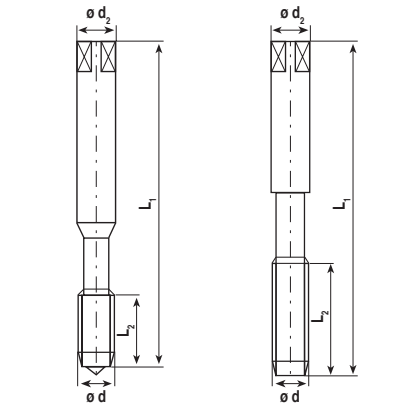
ICGP	IC	IC-Y	IC-T	IC	IC

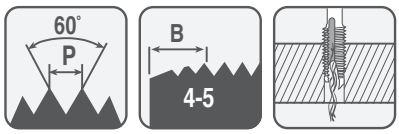
	NEUTRO	NEUTRO	TiN	TiCN	NEUTRO	NEUTRO
Tol	6H	6H	6H	6H	6G	4H
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	B	B	B	B	B	B

		DIN 371		DIN 376				DIN 376					
L1	L2	d2	⌀	d2	⌀	Preforo	d x p						
45	8	2.8	2.1			1.6	**M 2 x 0.4**		22,67				
45	8	2.8	2.1			1.75	**M 2.2 x 0.45**		21,39				
50	9	2.8	2,1			2.05	**M 2.5 x 0.45**		21,39				
56	10	3.5	2.7	2.2	1.8	2.5	**M 3 x 0.5**	19,43	15,52	20,37	21,96	17,94	17,94
56	10	4	3			2.9	**M 3.5 x 0.6**		20,70				
63	12	4.5	3.4	2.8	2.1	3.3	**M 4 x 0.7**	19,43	15,52	20,37	21,96	17,94	17,94
70	12	6	4.9	3.5	2.7	4.2	**M 5 x 0.8**	19,43	15,52	20,37	21,96	17,94	17,94
80	14	6	4.9			4.6	**M 5.5 x 0.9**						
80	14	6	4.9	4.5	3.4	5	**M 6 x 1**	19,43	15,52	20,37	21,96	17,94	17,94
80	16	7	5.5			6	**M 7 x 1**		24,15				
90	18	8	6.2	6	4.9	6.75	**M 8 x 1.25**	21,93	17,71	24,63	26,91	20,47	20,47
100	18	9	7			7.75	**M 9 x 1.25**		30,92				
100	20	10	8	7	5.5	8.5	**M 10 x 1.5**	25,03	20,24	29,05	31,97	23,23	23,23
100	20			8	6.2	9.5	**M 11 x 1.5**		39,74				
110	22			9	7	10.25	**M 12 x 1.75**		26,68	37,06	40,48		
110	25			11	9	12	**M 14 x 2**		34,27	48,10	52,67		
110	25			12	9	14	**M 16 x 2**		40,25	55,38	60,38		
125	32			14	11	15.5	**M 18 x 2.5**		55,20	71,19	76,48		
140	32			16	12	17.5	**M 20 x 2.5**		59,11	89,54	99,59		
140	32			18	14.5	19.5	**M 22 x 2.5**		69,00				
160	36			18	14.5	21	**M 24 x 3**		80,50				
160	36			20	16	24	**M 27 x 3**		106,95				
180	40			22	18	26.5	**M 30 x 3.5**		138,00				
180	40			25	20	29.5	**M 33 x 3.5**		179,40				
200	45			28	22	32	**M 36 x 4**		264,50				
200	45			32	24	35	**M 39 x 4**		328,90				
220	50			32	24	37.5	**M 42 x 4.5**		388,70				
220	50			36	29	40.5	**M 45 x 4.5**		437,00				
250	56			36	29	43	**M 48 x 5**		529,00				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / IF AVAILABLE AT STOCK

DIN 371	DIN 376





Codice Articolo

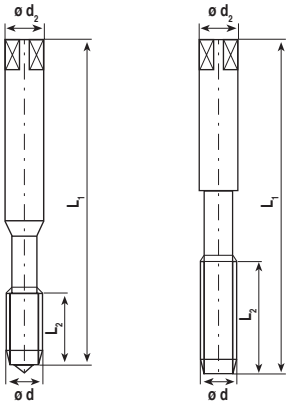
IC	IC	ICVA	ICVA-Y

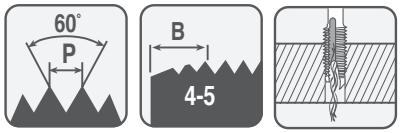
	NEUTRO	NEUTRO	VAP	TiN
Tol	**7G**	**+0.10**	**6H**	**6H**
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	**B**	**B**	**B**	**B**

L1	L2			d2	⌀	Preforo	d x p			INOX	INOX
45	8	DIN 371		2.8	2.1	1.6	**M 2 x 0.4**				
45	8			2.8	2.1	1.75	**M 2.2 x 0.45**				
45	8			2.8	2,1	1.9	**M 2.3 x 0.4**				
50	9			2.8	2,1	2.05	**M 2.5 x 0.45**				
50	9			2.8	2,1	2.15	**M 2.6 x 0.45**				
56	10			3.5	2.7	2.5	**M 3 x 0.5**	18,86	26,13	17,85	22,44
63	12			4.5	3.4	3.3	**M 4 x 0.7**	18,86	26,13	17,85	22,44
70	12			6	4.9	4.2	**M 5 x 0.8**	18,86	26,13	17,85	22,44
80	14			6	4.9	5	**M 6 x 1**	18,86	26,13	17,85	22,44
90	18			8	6.2	6.75	**M 8 x 1.25**	21,39	29,53	20,36	29,76
100	18			9	7	7.75	**M 9 x 1.25**				
100	20			10	8	8.5	**M 10 x 1.5**	25,30	35,02	23,28	35,27
110	22		DIN 376	9	7	10.25	**M 12 x 1.75**			29,35	42,82
110	25			11	9	12	**M 14 x 2**			37,70	53,16
110	25			12	9	14	**M 16 x 2**			44,28	60,80
125	32			14	11	15.5	**M 18 x 2.5**			60,72	78,18
140	32			16	12	17.5	**M 20 x 2.5**			65,02	94,32

FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
TAGLIENTI DIRITTI IMBOCCO CORRETTO / *SPIRAL POINT*

DIN 371	DIN 376





Codice Articolo

ICALU	ICALU-T	ICAZ	ICAZ-T

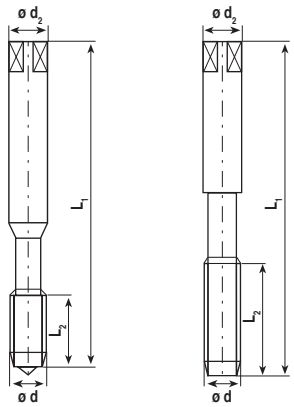
	NEUTRO	TiCN	NEUTRO	TiCN
Tol	6H	6H	6H	6H
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	B	B	B	B

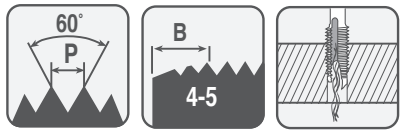
L1	L2			d2	⌀	Preforo	d x p	ALU	ALU	AZ	AZ
56	10	DIN 371		3.5	2.7	2.5	**M 3 x 0.5**	17,48	23,23	21,39	27,14
63	12			4.5	3.4	3.3	**M 4 x 0.7**	17,48	23,23	21,39	27,14
70	12			6	4.9	4.2	**M 5 x 0.8**	17,48	23,23	21,39	27,14
80	14			6	4.9	5	**M 6 x 1**	17,48	23,23	21,39	27,14
80	16			7	5.5	6	**M 7 x 1**				
90	18			8	6.2	6.75	**M 8 x 1.25**	19,21	27,40	24,38	33,58
100	20			10	8	8.5	**M 10 x 1.5**	22,77	34,50	27,83	39,56
110	22		DIN 376	9	7	10.25	**M 12 x 1.75**				
110	25			11	9	12	**M 14 x 2**				
110	25			12	9	14	**M 16 x 2**				
125	32			14	11	15.5	**M 18 x 2.5**				
140	32			16	12	17.5	**M 20 x 2.5**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

HIGH PERFORMANCE

DIN 371	DIN 376





Codice Articolo

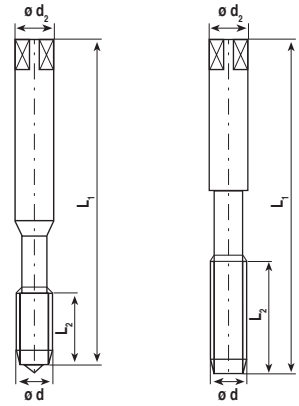
HP IC-Y	HP IC-Z	IKR IC-Y	IKR IC-Z	T/N IC

	TiN	ZHL	TiN	ZHL	NEUTRO
Tol	6HX	6HX	6HX	6HX	6HX
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM
Imbocco	B	B	B	B	B

L1	L2			d2	⌀	Preforo	d x p					TITANIO - NICHEL
56	10	DIN 371		3,5		2,7	**M 3 x 0.5**	28,98	30,32			23,69
63	10			4,5		3,4	**M 4 x 0.7**	28,98	30,32			23,69
70	12			6		4,9	**M 5 x 0.8**	28,98	30,32			26,45
80	14			6		4,9	**M 6 x 1**	28,98	30,75	67,27	69,39	26,45
90	18			8		6,2	**M 8 x 1.25**	36,11	39,00	75,45	78,77	29,90
100	22			10		5,5	**M 10 x 1.5**	44,85	45,86	82,95	84,50	34,96
100	22		DIN 376	9		7	**M 12 x 1.75**	57,50	58,91	97,73	99,82	48,53
110	25			11		9	**M 14 x 2**	75,90	80,57	118,18	123,75	59,80
110	25			12		9	**M 16 x 2**	86,25	89,66	129,32	133,75	69,00
125	32			14		11	**M 18 x 2.5**	117,30	123,52			
140	32			16		12	**M 20 x 2.5**	151,80	161,18			
160	36			18		14,5	**M 24 x 3**	209,30	213,50			
160	36			20		16	**M 27 x 3**	220,80	229,57			
180	40			22		18	**M 30 x 3.5**	248,40	257,27			
180	40			25		20	**M 33 x 3.5**	351,90	356,82			
200	45			28		22	**M 36 x 4**	414,00	426,52			

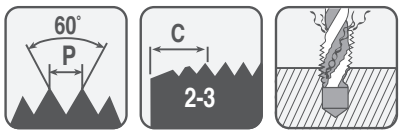
FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
ELICA 35° / *SPIRAL FLUTED 35°*

DIN 371	DIN 376



Codice Articolo

ERGP	ER	ER-Y	ER-T	ER E	ER

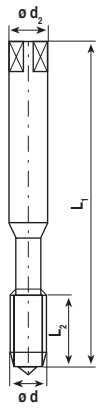


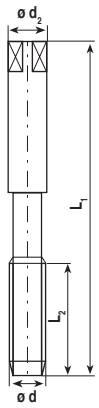
	NEUTRO	NEUTRO	TiN	TiCN	NEUTRO	NEUTRO
Tol	6H	6H	6H	6H	6H	6G
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C	E	C

		DIN 371		DIN 376				DIN 376					
L1	L2	d2	⌀	d2	⌀	Preforo	d x p						
45	8	2.8	2.1			1.6	**M 2 x 0.4**		23,02				
45	8	2.8	2.1			1.75	**M 2.2 x 0.45**						
45	4	2.8	2,1			1.9	**M 2.3 x 0.4**						
50	9	2.8	2,1			2.05	**M 2.5 x 0.45**		23,00				
50	4	2.8	2,1			2.15	**M 2.6 x 0.45**						
56	5	3.5	2.7	2.2	1.8	2.5	**M 3 x 0.5**		16,75	21,59	23,18		19,32
56	6	4	3			2.9	**M 3.5 x 0.6**		24,15				
63	7	4.5	3.4	2.8	2.1	3.3	**M 4 x 0.7**		16,75	21,59	23,18	17,37	19,32
70	8	6	4.9			3.75	**M 4.5 x 0.75**		33,35				
70	8	6	4.9	3.5	2.7	4.2	**M 5 x 0.8**		16,75	21,59	23,18	17,37	19,32
80	10	6	4.9			4.6	**M 5.5 x 0.9**						
80	10	6	4.9	4.5	3.4	5	**M 6 x 1**	20,70	16,75	21,59	23,18	17,37	19,32
80	12	7	5.5			6	**M 7 x 1**		27,60				
90	12	8	6.2	6	4.9	6.75	**M 8 x 1.25**	23,58	19,55	26,46	28,75	20,28	22,54
100	14	9	7			7.75	**M 9 x 1.25**		41,40				
100	14	10	8	7	5.5	8.5	**M 10 x 1.5**	27,37	22,54	31,36	34,27	23,39	25,99
100	20			8	6.2	9.5	**M 11 x 1.5**		44,39				
110	16			9	7	10.25	**M 12 x 1.75**		29,44	39,81	43,24	30,55	
110	25			11	9	12	**M 14 x 2**		37,37	51,21	55,77		
110	25			12	9	14	**M 16 x 2**		42,90	58,03	63,02		
110	25			14	11	15.5	**M 18 x 2.5**		59,80	75,80	81,07		
140	32			16	12	17.5	**M 20 x 2.5**		63,48	93,91	103,96		
140	32			18	14.5	19.5	**M 22 x 2.5**		74,29				
160	36			18	14.5	21	**M 24 x 3**		92,57				
160	36			20	16	24	**M 27 x 3**		113,85				
180	40			22	18	26.5	**M 30 x 3.5**		143,75				
180	40			25	20	29.5	**M 33 x 3.5**		184,00				
200	45			28	22	32	**M 36 x 4**		257,60				
200	45			32	24	35	**M 39 x 4**		319,70				
220	50			32	24	37.5	**M 42 x 4.5**		384,10				
220	50			36	29	40.5	**M 45 x 4.5**		437,00				
250	56			36	29	43	**M 48 x 5**		542,80				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 100% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

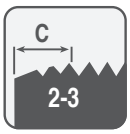
DIN 371	DIN 376





Codice Articolo

ER	ER	ER	ER VA	ERVA-Y



	NEUTRO	NEUTRO	NEUTRO	VAP	TiN
Tol	**4H**	**+ 0.10**	**7G**	**6H**	**6H**
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**C**	**C**	**C**	**C**

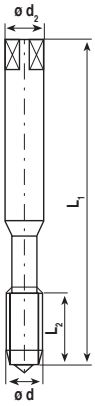
L1	L2			d2	⌀	Preforo	d x p				INOX	INOX
56	5	DIN 371		3.5	2.7	2.5	**M 3 x 0.5**	19,32	28,03	21,16	19,32	23,89
63	7			4.5	3.4	3.3	**M 4 x 0.7**	19,32	28,03	21,16	19,32	23,89
70	8			6	4.9	4.2	**M 5 x 0.8**	19,32	28,03	21,16	19,32	23,89
80	10			6	4.9	5	**M 6 x 1**	19,32	28,03	21,16	19,32	23,89
90	12			8	6.2	6.75	**M 8 x 1.25**	22,54	33,32	24,09	22,54	31,91
100	14			9	7	7.75	**M 9 x 1.25**					
100	14			10	8	8.5	**M 10 x 1.5**	25,99	38,42	28,29	25,99	37,95
100	20		DIN 376	8	6.2	9.5	**M 11 x 1.5**					
110	16			9	7	10.25	**M 12 x 1.75**		51,49	37,49	33,35	46,77
110	25			11	9	12	**M 14 x 2**		63,44		41,40	56,82
110	25			12	9	14	**M 16 x 2**		72,98		48,30	64,77
125	32			14	11	15.5	**M 18 x 2.5**				66,70	84,09
140	32			16	12	17.5	**M 20 x 2.5**				71,30	100,52

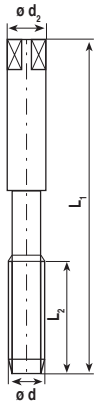
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

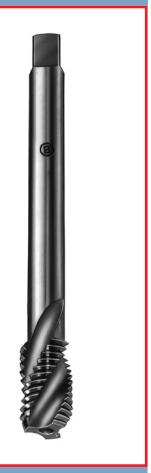
FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
ELICA 25°- 35° / *SPIRAL FLUTED 25°- 35°*

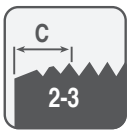
Codice Articolo

DIN 371	DIN 376	ERALU 35°	ERALU-T 35°	NI ER 25°









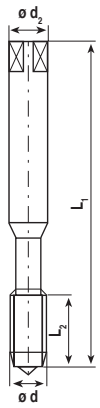
	NEUTRO	TiCN	NEUTRO
Tol	6H	6H	6HX
Mat	HSS-E	HSS-E	HSSCo-PM
Imbocco	C	C	C

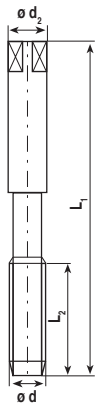
L1	L2			d2	⌀	Preforo	d x p	ALU	ALU		NICHEL
56	5	DIN 371		3.5	2.7	2.5	**M 3 x 0.5**	18,40	24,15		27,14
63	7			4.5	3.4	3.3	**M 4 x 0.7**	18,40	24,15		27,14
70	8			6	4.9	4.2	**M 5 x 0.8**	18,40	24,15		28,75
80	10			6	4.9	5	**M 6 x 1**	18,40	24,15		28,75
90	12			8	6.2	6.75	**M 8 x 1.25**	21,27	30,47		34,50
100	15			10	8	8.5	**M 10 x 1.5**	25,30	37,03		40,25
100	16		DIN 376	9	7	10.25	**M 12 x 1.75**				56,35
110	25			11	9	12	**M 14 x 2**				69,00
110	20			12	9	14	**M 16 x 2**				78,20
125	25			14	11	15.5	**M 18 x 2.5**				
140	25			16	12	17.5	**M 20 x 2.5**				
160	32			18	14.5	21	**M 24 x 3**				
160	32			20	16	24	**M 27 x 3**				
180	40			22	18	26.5	**M 30 x 3.5**				
180	40			25	20	29.5	**M 33 x 3.5**				
200	45			28	22	32	**M 36 x 4**				

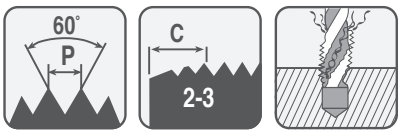
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

HIGH PERFORMANCE

DIN 371	DIN 376







Codice Articolo

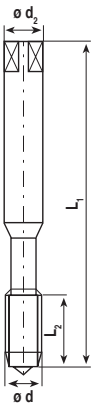
	HP ER-Y	HP ER-Z	IK ER-Y	IK ER-Z	FCE TI 15°
					
	TiN	ZHL	TiN	ZHL	NEUTRO
Tol	6HX	6HX	6HX	6HX	6HX
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM
Imbocco	C	C	C	C	C

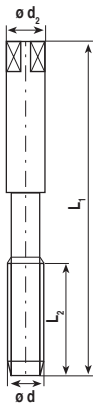
L1	L2			d2	⌀	Preforo	d x p					TITANIO
56	5	DIN 371		3.5	2.7	2.5	**M 3 x 0.5**	31,74	33,05			23,92
63	7			4.5	3.4	3.3	**M 4 x 0.7**	31,74	33,05			23,92
70	8			6	4.9	4.2	**M 5 x 0.8**	31,74	33,48			23,92
80	10			6	4.9	5	**M 6 x 1**	31,74	33,48	54,09	56,20	23,92
90	12			8	6.2	6.75	**M 8 x 1.25**	39,79	42,64	63,64	66,95	28,06
100	15			10	8	8.5	**M 10 x 1.5**	49,45	50,41	70,23	71,77	34,96
100	16		DIN 376	9	7	10.25	**M 12 x 1.75**	63,48	64,82	90,00	92,09	47,84
110	25			11	9	12	**M 14 x 2**	84,87	89,43	111,14	116,70	62,56
110	20			12	9	14	**M 16 x 2**	95,68	98,98	121,82	126,25	71,30
125	25			14	11	15.5	**M 18 x 2.5**	123,28	129,43			
140	25			16	12	17.5	**M 20 x 2.5**	157,09	166,41			121,90
160	32			18	14.5	21	**M 24 x 3**	223,10	227,14			
160	32			20	16	24	**M 27 x 3**	233,68	242,3			
180	40			22	18	26.5	**M 30 x 3.5**	240,35	249,32			
180	40			25	20	29.5	**M 33 x 3.5**	328,90	334,09			
200	45			28	22	32	**M 36 x 4**	437,00	449,25			

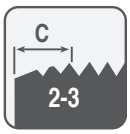
FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
ELICA 15° / *SPIRAL FLUTED 15°*

Codice Articolo

DIN 371	DIN 376	FCEGP	FCE	FCE	FCE	FCE





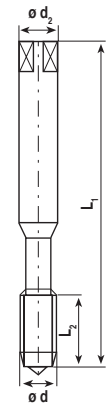


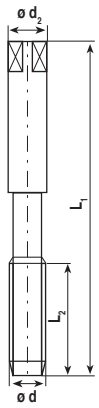
	NEUTRO	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	6H	6H	6G	7G	+ 0.10
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C	C

		DIN 371		DIN 376							
L1	L2	d2	⌀	d2	⌀	Preforo	d x p	Din 376				
45	8	2.8	2.1			1.6	**M 2 x 0.4**		20,57			
45	8	2.8	2.1			1.75	**M 2.2 x 0.45**		20,57			
45	4	2.8	2,1			1.9	**M 2.3 x 0.4**					
50	9	2.8	2,1			2.05	**M 2.5 x 0.45**		20,57			
50	4	2.8	2,1			2.15	**M 2.6 x 0.45**					
56	5	3.5	2.7	2.2	1.8	2.5	**M 3 x 0.5**		14,97	17,32	18,60	27,64
56	6	4	3			2.9	**M 3.5 x 0.6**		18,79			
63	12	4.5	3.4	2.8	2.1	3.3	**M 4 x 0.7**		14,97	17,32	18,60	27,64
70	12	6	4.9			3.75	**M 4.5 x 0.75**		27,80			
70	12	6	4.9	3.5	2.7	4.2	**M 5 x 0.8**		14,97	17,32	18,60	27,64
80	14	6	4.9	4.5	3.4	5	**M 6 x 1**		14,97	17,32	18,60	27,64
80	16	7	5.5			6	**M 7 x 1**		21,66			
90	18	8	6.2	6	4.9	6.75	**M 8 x 1.25**		17,15	19,56	21,25	32,08
100	20	10	8	7	5.5	8.5	**M 10 x 1.5**		20,04	22,94	24,88	38,03
100	20			8	6.2	9.5	**M 11 x 1.5**		38,40			
110	16			9	7	10.25	**M 12 x 1.75**		26,09			47,82
110	25			11	9	12	**M 14 x 2**		33,81			59,91
110	25			12	9	14	**M 16 x 2**		39,37			69,64
125	32			14	11	15.5	**M 18 x 2.5**		53,85			
140	32			16	12	17.5	**M 20 x 2.5**		57,96			
140	32			18	14.5	19.5	**M 22 x 2.5**		67,62			
160	36			18	14.5	21	**M 24 x 3**		79,22			
160	36			20	16	24	**M 27 x 3**		104,57			
180	40			22	18	26.5	**M 30 x 3.5**		131,61			
180	40			25	20	29.5	**M 33 x 3.5**		169,05			
200	45			28	22	32	**M 36 x 4**		239,08			
200	45			32	24	35	**M 39 x 4**		299,46			
220	50			32	24	37.5	**M 42 x 4.5**		357,42			
220	50			36	29	40.5	**M 45 x 4.5**		400,89			
250	56			36	29	43	**M 48 x 5**		492,66			
250	56			40	32	47	**M 52 x 5**		603,75			

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

DIN 371	DIN 376





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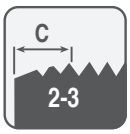
ER	IC		

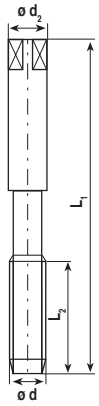


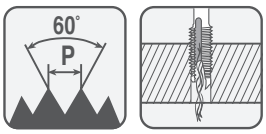
	NEUTRO	NEUTRO		
Tol	**4H**	**4H**		
Mat	HSS-E	HSS-E		
Imbocco	**C**	**B**		

L1	L2			d2	⌀	Preforo	d x p				
56	5			3.5	2.7	2.5	**MJ 3X0.5**	20,82	20,19		
63	7			4.5	3.4	3.3	**MJ 4X0.7**	20,82	20,19		
70	8			6	4.9	4.2	**MJ 5X0.8**	20,82	20,19		
80	10			6	4.9	5	**MJ 6X1**	20,82	20,19		
90	12			8	6.2	6.75	**MJ 8X1**				
90	18			6	4.9	8.3	**MJ 8X1.25**	24,04	23,02		
100	12			7	5.5	10.3	**MJ 10X1**				
100	12			7	5.5	10.3	**MJ 10X1.25**				
100	14			10	8	8.5	**MJ 10X1.5**	28,52	27,11		
100	12			9	7	12.3	**MJ 12X1.25**				
100	16			9	7	12.3	**MJ 12X1.5**				
110	16			9	7	10.25	**MJ 12X1.75**				
100	18			11	9	13	**MJ 14X1**				
100	18			11	9	12.5	**MJ 14X1.5**				

Codice Articolo

NORM Ⓑ	EL			





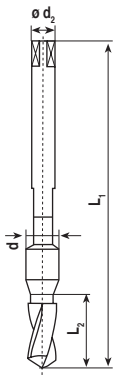
	NEUTRO			
Tol	**6H**			
Mat	HSS / HSS-E			
Imbocco				

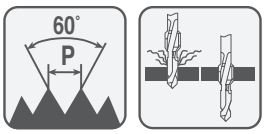
L1	L2	d2	⌀	Preforo	d x p				
100	10	1.4		1.6	**2 x 0.4**	45,54			
100	11	1.6		1.75	**2.2 x 0.45**	57,50			
110	11	1.9		2.05	**2.5 x 0.45**				
190	12	2.2		2.5	**3 x 0.5**	25,99			
190	17	3		3.3	**4 x 0.7**	25,99			
190	19	3.8		4.2	**5 x 0.8**	25,99			
190	24	4.5		5	**6 x 1**	25,99			
265	30	6		6.75	**8 x 1.25**	28,06			
265	36	8		8.5	**10 x 1.5**	32,89			
265	42	9.5	8	10.25	**12 x 1.75**	41,40			
200	48	11.2	9	12	**14 x 2**				
200	48	13.1	10	14	**16 x 2**				
220	60	14.5	11	15.5	**18 x 2.5**				
250	60	16.5	13	17.5	**20 x 2.5**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH PREZZI A RICHIESTA / *PRICE ON REQUEST*

Codice Articolo

NORM Ⓑ	PUNTA			





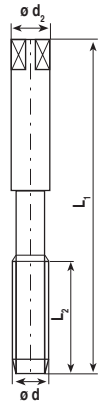
	NEUTRO			
Tol	6H			
Mat	HSS-E			
Imbocco	D			

L1	L2	d2	⧄	Preforo	d x p				
62	9	3.5	2.7	2.5	**M 3 x 0.5**	37,72			
66	10	4.5	3.4	3.3	**M 4 x 0.7**	36,80			
75	12.5	6	4.9	4.2	**M 5 x 0.8**	37,49			
81	14	6	4.9	5	**M 6 x 1**	37,95			
93	20	6	4.9	6.75	**M 8 x 1.25**	43,01			
99	22	7	5.5	8.5	**M 10 x 1.5**	54,05			
120	25	9	7	10.25	**M 12 x 1.75**	92,00			
120	28	11	9	12	**M 14 x 2**				
125	32	12	9	14	**M 16 x 2**				

FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
MASCHI SERIE LUNGA / *EXTRA LONG SHANK*

Codice Articolo

NORM ®	SL IC	SL ER	SL TD



	NEUTRO	NEUTRO	NEUTRO	
Tol	6H	6H	6H	
Mat	HSS-E	HSS-E	HSS-E	
Imbocco	B	C	C	

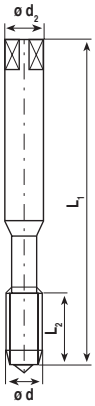
L1	L2	d2	⌀	Preforo	d x p				
100	10	3.5	2.7	2.5	**M 3 x 0.5**	49,68	49,68		
125	10	4.5	3.4	3.3	**M 4 x 0.7**	49,68	49,68		
140	12	6	4.9	4.2	**M 5 x 0.8**	53,82	53,82		
160	14	6	4.9	5	**M 6 x 1**	55,19	55,19		
180	18	6	4.9	6.75	**M 8 x 1.25**	63,48	63,48		
200	22	7	5.5	8.5	**M 10 x 1.5**	73,14	73,14		
220	22	9	7	10.25	**M 12 x 1.75**	85,55	85,55		
220	25	11	9	12	**M 14 x 2**	126,97	126,97		
220	25	12	9	14	**M 16 X 2**				
220	25	16	12	17.5	**M 20 X 2.5**				

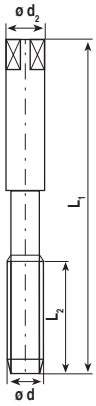
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

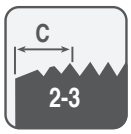
Codice Articolo

DIN 371 - DIN 2174	DIN 376 - DIN 2174

FORM	FORM-Y	FORM-T







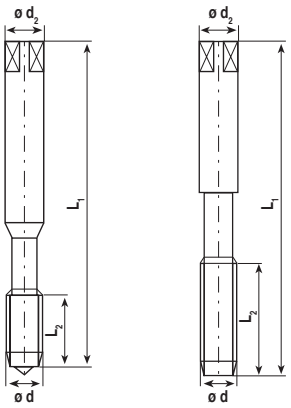
	NEUTRO	TiN	TiCN	
Tol	6HX/6GX	6HX/6GX	6HX/6GX	
Mat	HSS-E	HSS-E	HSS-E	
Imbocco	C	C	C	

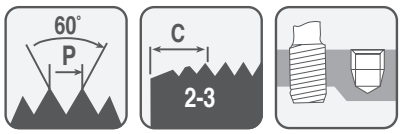
L1	L2			d2	⌀	Preforo	d x p			
45	6	DIN 371		2.8	1.6	1.8	**M 2 x 0.4**	31,98		
56	10			3.5	2.7	2.8	**M 3 x 0.5**	22,98	29,37	30,56
56	10			4	3	3.25	**M 3.5 x 06**	26,06	31,06	31,95
63	10			4.5	3.4	3.7	**M 4 x 0.7**	22,98	29,37	30,56
70	12			6	4.9	4.65	**M 5 x 0.8**	22,98	29,37	30,56
80	14			6	4.9	5.55	**M 6 x 1**	22,98	29,37	30,56
90	18			8	6.2	7.43	**M 8 x 1.25**	27,25	36,95	38,62
100	22			10	8	9.35	**M 10 x 1.5**	35,06	46,91	49,04
110	22		DIN 376	9	7	11.20	**M 12 x 1.75**	42,64	55,43	58,28
110	25			11	9	13.10	**M 14 x 2**	55,67	74,15	76,52
110	25			12	9	15.10	**M 16 x 2**	73,43	91,92	95,95
125	32			14	11	16.9	**M 18 x 2.5**			
140	32			16	12	18.9	**M 20 x 2.5**			

HIGH PERFORMANCE

Codice Articolo

DIN 371 - DIN 2174	DIN 376 - DIN 2174





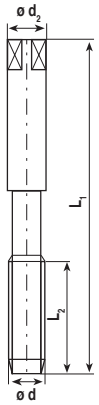
	HP FORM-Y	IK FORM-Y	IKR FORM-Y	
				
	TiN	TiN	TiN	
Tol	6HX	6HX	6HX	
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	
Imbocco	C	C	C	

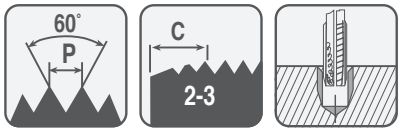
L1	L2			d2	⌀	Preforo	d x p				
56	10	DIN 371		3.5	2.7	2.8	**M 3 x 0.5**				
63	10			4.5	3.4	3.7	**M 4 x 0.7**	37,43			
70	12			6	4.9	4.65	**M 5 x 0.8**	37,43			
80	14			6	4.9	5.55	**M 6 x 1**	37,43	58,64	89,50	
90	18			8	6.2	7.45	**M 8 x 1.25**	47,15	69,55	100,89	
100	22			10	8	9.35	**M 10 x 1.5**	59,23	78,18	112,50	
110	22		DIN 376	9	7	11.20	**M 12 x 1.75**	70,36	94,77	126,52	
110	25			12	9	15.10	**M 16 x 2**	116,56	139,09	178,68	
125	32			14	11	16.9	**M 18 x 2.5**				
140	32			16	12	18.9	**M 20 x 2.5**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
CANALINI DI LUBRIFICAZIONE / *OIL FLUTES* + 10%

Codice Articolo

DIN 2181	S2P	3^



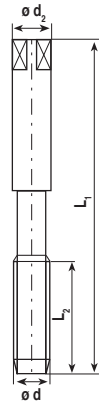


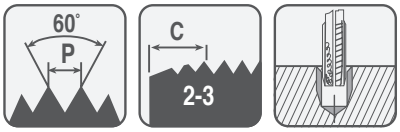
	NEUTRO	NEUTRO
Tol	**6H**	**6H**
Mat	HSS	HSS
Imbocco	**C**	**C**

L1	L2	d2	⌀	Preforo	d x p		FINITORE BOTTOMING
40	9	3,5	2,7	2.65	**M 3 x 0.35**	46,71	23,36
45	10	4,5	3,4		**M 4 x 0.5**	43,59	21,79
50	12	6	4,9		**M 5 x 0.5**	37,37	18,69
50	14	6	4,9	5.25	**M 6x 0.75**	35,01	17,51
50	19	6	4,9	7.25	**M 8 x 0.75**	42,81	21,40
56	22	6	4,9	7	**M 8 x 1**	35,65	17,82
63	20	7	5,5	9.25	**M 10 x 0.75**	56,76	28,39
63	20	7	5,5	9	**M 10 x 1**	37,95	18,98
70	24	7	5,5	8.75	**M 10 x 1.25**	38,94	19,47
70	22	9	7	11	**M 12 x 1**	43,59	21,79
70	22	9	7	10.75	**M 12 x 1.25**	46,71	23,36
70	22	9	7	10.75	**M 12 x 1.5**	43,59	21,79
70	22	11	9	13	**M 14 x 1**	60,70	30,35
70	22	11	9	12.75	**M 14 x 1.25**	63,83	31,91
70	22	11	9	12.5	**M 14 x 1.5**	54,49	27,24
70	22	12	9	15	**M 16 x 1**	69,25	34,63
70	22	12	9	14.5	**M 16 x 1.5**	61,48	30,74
80	22	14	11	17	**M 18 x 1**	85,58	42,79
80	22	14	11	16.5	**M 18 x 1.5**	76,24	38,12
80	22	16	12	19	**M 20 x 1**	94,14	47,07
80	22	16	12	18.5	**M 20 x 1.5**	85,58	42,79
80	22	16	12	18	**M 20 x 2**	112,03	56,01
80	22	18	14,5	21	**M 22 x 1**	105,85	52,93
80	22	18	14,5	20.5	**M 22 x 1.5**	107,41	53,71
90	22	18	14,5	23	**M 24 x 1**	163,39	81,70
90	22	18	14,5	22.5	**M 24 x 1.5**	124,53	62,26
90	22	18	14,5	22	**M 24 x 2**		
90	22	20	16	25.5	**M 27 x 1.5**	199,20	99,60
90	22	20	16	25	**M 27 x 2**	207,00	103,50
90	22	20	16	16.5	**M 28 x 1.5**	225,66	112,83
90	22	22	18	28.5	**M 30 x 1.5**	253,00	126,50
90	22	22	18	28	**M 30 x 2**	253,00	126,50
90	22	22	18	31.5	**M 33 x 1.5**	287,91	143,96
100	25	25	20	31	**M 33 x 2**	305,90	152,95

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 374





Codice Articolo

	TD	TD	TD	TD
				
	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	**6H**	**6G**	**+0.05**	**+0.10**
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**C**	**C**	**C**

L1	L2	d2	⍁	Preforo	d x p				
45	8	1.4	-	1.75	**M 2 x 0.25**	54,49			
45	8	1.6	-	1.95	**M 2.2 x 0.25**	54,49			
45	9	1.8	-	2.15	**M 2.5 x 0.35**	49,77			
56	10	2.2	-	2.65	**M 3 x 0.35**	21,85			
56	10	2.5	2.1	3.15	**M 3.5 x 0.35**	23,00			
63	10	2.8	2.1	3.5	**M 4 x 0.5**				
70	10	3.5	2.7	4.5	**M 5 x 0.5**	20,01			
80	10	4.5	3.4	5.5	**M 6 x 0.5**	28,03			
80	10	4.5	3.4	5.25	**M 6 x 0.75**	20,70			
80	10	5.5	4.3	6.25	**M 7 x 0.75**	25,30			
90	12	6	4.9	7.25	**M 8 x 0.75**	23,33			
90	18	6	4.9	7	**M 8 x 1**	19,09			
100	18	7	5.5	8	**M 9 x 1**	29,21			
100	12	7	5.5	9.25	**M 10 x 0.75**	31,10			
100	16	7	5.5	9	**M 10 x 1**	19,55			
100	16	7	5.5	8.75	**M 10 x 1.25**	19,55			
100	12	8	6.2	10.25	**M 11 x 0.75**				
100	20	8	6.2	10	**M 11 x 1**	34,27			
100	20	8	6.2	9.75	**M 11 x 1.25**	42,78			
100	12	9	7	11.25	**M 12 x 0.75**	35,65			
100	16	9	7	11	**M 12 x 1**	24,38			
100	16	9	7	10.75	**M 12 x 1.25**	24,38			
100	16	9	7	10.5	**M 12 x 1.5**	23,46			
100	12	11	9	12.5	**M 13 x 0.5**				
100	12	11	9	12.25	**M 13 x 0.75**				
100	18	11	9	12	**M 13 x 1**	41,17			
100	12	11	9	13.5	**M 14 x 0.5**				
100	12	11	9	13.25	**M 14 x 0.75**				
100	18	11	9	13	**M 14 x 1**	32,89			
100	18	11	9	12.75	**M 14 x 1.25**	32,89			
110	25	11	9	12.5	**M 14 x 1.5**	31,97			
100	18	12	9	14	**M 15 x 1**	48,30			
100	18	12	9	13.5	**M 15 x 1.5**	48,30			
100	18	12	9	15	**M 16 x 1**	41,40			
100	18	12	9	14.75	**M 16 x 1.25**	49,45			
100	18	12	9	14.5	**M 16 x 1.5**	33,35			
100	18	12	9	16	**M 17 x 1**	57,50			
110	22	12	9	15.5	**M 17 x 1.5**	56,35			
110	18	14	11	17	**M 18 x 1**	49,68			
110	25	14	11	16.5	**M 18 x 1.5**	46,00			
125	25	14	11	16	**M 18 x 2**	67,85			

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

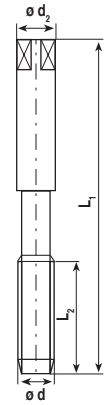
Codice Articolo	TD	TD	TD	TD
	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	6H	6G	+0.05	+0.10
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C

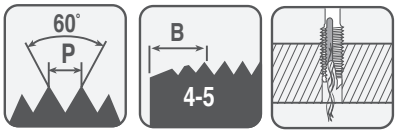
L1	L2	d2	⌀	Preforo	d x p				
125	18	16	12	19	**M 20 x 1**	58,65			
125	25	16	12	18.5	**M 20 x 1.5**	50,60			
125	25	16	12	18	**M 20 x 2**	74,75			
125	18	18	14.5	21	**M 22 x 1**	65,55			
125	25	18	14.5	20.5	**M 22 x 1.5**	57,50			
125	25	18	14.5	20	**M 22 x 2**	85,10			
140	18	18	14.5	23	**M 24 x 1**	75,90			
140	25	18	14.5	22.5	**M 24 x 1.5**	66,24			
140	25	18	14.5	22	**M 24 x 2**	86,25			
140	18	18	14.5	24	**M 25 x 1**	105,80			
140	25	18	14.5	23.5	**M 25 x 1.5**	97,75			
140	25	18	14.5	23	**M 25 x 2**	110,40			
140	18	20	16	25	**M 26 x 1**	112,70			
140	25	20	16	24.5	**M 26 x 1.5**	101,20			
140	25	20	16	24	**M 26 x 2**	110,40			
140	25	20	16	26	**M 27 x 1**	138,00			
140	25	20	16	25.5	**M 27 x 1.5**	100,05			
140	25	20	16	25	**M 27 x 2**	112,70			
150	18	20	16	27	**M 28 x 1**	148,35			
150	25	20	16	26.5	**M 28 x 1.5**	117,30			
150	25	20	16	26	**M 28 x 2**	124,20			
150	18	22	18	29	**M 30 x 1**	124,43			
150	25	22	18	28.5	**M 30 x 1.5**	115,00			
150	25	22	18	28	**M 30 x 2**	121,90			
150	18	22	18	31	**M 32 x 1**	187,45			
150	18	22	18	30.5	**M 32 x 1.5**	142,60			
150	28	22	18	30	**M 32 x 2**	154,10			
160	22	25	20	31.5	**M 33 x 1.5**	157,55			
160	32	25	20	31	**M 33 x 2**	158,70			
160	25	28	22	32.5	**M 34 x 1.5**	241,50			
160	25	28	22	33.5	**M 35 x 1.5**	190,90			
180	22	28	22	34.5	**M 36 x 1.5**	173,65			
180	32	28	22	34	**M 36 x 2**	183,31			
180	32	28	22	33	**M 36 x 3**	193,20			
180	28	32	24	36.5	**M 38 x 1.5**	276,00			
180	28	32	24	37	**M 39 x 2**	285,20			
190	36	32	24	36	**M 39 x 3**	248,97			
180	28	32	24	38.5	**M 40 x 1.5**	218,50			
180	28	32	24	38	**M 40 x 2**	236,90			
180	28	32	24	37	**M 40 x 3**	276,00			
180	32	32	24	40.5	**M 42 x 1.5**	253,00			
180	32	32	24	40	**M 42 x 2**	285,20			
200	36	32	24	39	**M 42 x 3**	282,90			
190	28	36	29	43.5	**M 45 x 1.5**	292,10			
190	36	36	29	43	**M 45 x 2**	308,20			
190	36	36	29	42	**M 45 x 3**	326,60			
190	28	36	29	46.5	**M 48 x 1.5**	354,20			
190	28	36	29	46	**M 48 x 2**	368,00			
200	36	36	29	45	**M 48 x 3**	374,90			
200	32	36	29	48.5	**M 50 x 1.5**	402,50			
200	32	36	29	48	**M 50 x 2**	425,50			
200	32	36	29	47	**M 50 x 3**	425,50			
200	36	40	32	50.5	**M 52 x 1.5**	432,40			
200	36	40	32	50	**M 52 x 2**	460,00			
200	36	40	32	49	**M 52 x 3**	483,00			

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

FILETTATURA METRICA ISO A PASSO FINE
ISO METRIC FINE THREAD
IMBOCCO CORRETTO / *SPIRAL POINT*

DIN 374





Codice Articolo

	IC	IC-Y	IC-T	IC	IC
					
	NEUTRO	TiN	TiCN	NEUTRO	NEUTRO
Tol	6H	6H	6H	6G	+0.10
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	B	B	B	B	B

L1	L2	d2	⌀	Preforo	d x p					
45	8	2.8	2.1	1.75	**M 2 x 0.25**	54,49				
45	8	2.8	2.1	1.95	**M 2.2 x 0.25**	54,49				
45	9	2.8	2.1	2.15	**M 2.5 x 0.35**	49,77				
56	10	2.2	2.1	2.65	**M 3 x 0.35**	21,85				
56	10	2.5	2.1	3.15	**M 3.5 x 0.35**	23,00				
63	10	2.8	2.1	3.5	**M 4 x 0.5**	24,84				
70	10	3.5	2.7	4.5	**M 5 x 0.5**	24,84				
80	10	4.5	3.4	5.5	**M 6 x 0.5**					
80	10	4.5	3.4	5.25	**M 6 x 0.75**	25,53	30,38	31,97	28,98	
80	10	5.5	4.3	6.25	**M 7 x 0.75**	31,05				
90	12	6	4.9	7.25	**M 8 x 0.75**	29,44				
90	18	6	4.9	7	**M 8 x 1**	23,69	30,61	32,89	27,09	33,10
100	18	7	5.5	8	**M 9 x 1**	35,65				
100	12	7	5.5	9.25	**M 10 x 0.75**	37,95				
100	16	7	5.5	9	**M 10 x 1**	24,61	33,42	36,34	28,29	34,39
100	16	7	5.5	8.75	**M 10 x 1.25**	24,61	33,42	36,34	28,29	34,39
100	12	8	6.2	10.25	**M 11 x 0.75**					
100	20	8	6.2	10	**M 11 x 1**	42,55				
100	20	8	6.2	9.75	**M 11 x 1.25**					
100	12	9	7	11.25	**M 12 x 0.75**	46,00				
100	16	9	7	11	**M 12 x 1**	30,59	40,97	44,39		
100	16	9	7	10.75	**M 12 x 1.25**	28,98	39,36	42,78		43,25
100	16	9	7	10.75	**M 12 x 1.5**	29,44	39,81	43,24	33,74	41,13
100	12	11	9	12.5	**M 13 x 0.5**					
100	12	11	9	12.25	**M 13 x 0.75**					
100	18	11	9	12	**M 13 x 1**	50,60				
100	12	11	9	13.5	**M 14 x 0.5**					
100	12	11	9	13.25	**M 14 x 0.75**					
100	18	11	9	13	**M 14 x 1**	40,94				
100	18	11	9	12.75	**M 14 x 1.25**	40,94				
110	25	11	9	12.5	**M 14 x 1.5**	39,10	52,95	57,50	42,47	54,63
100	18	12	9	14	**M 15 x 1**	59,80				
100	18	12	9	13.5	**M 15 x 1.5**	59,80				
100	18	12	9	15	**M 16 x 1**	49,68				
100	18	12	9	14.75	**M 16 x 1.25**	60,95				
100	18	12	9	14.5	**M 16 x 1.5**	41,86	57,00	61,98	54,51	58,49
100	18	12	9	16	**M 17 x 1**					
110	22	12	9	15.5	**M 17 x 1.5**					
110	18	14	11	17	**M 18 x 1**	62,10				
110	25	14	11	16.5	**M 18 x 1.5**	56,35	72,34	77,62		
125	25	14	11	16	**M 18 x 2**	87,40				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

Codice Articolo

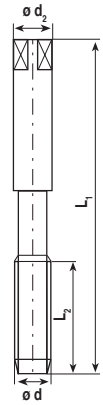
	IC	IC-Y	IC-T	IC	IC
	NEUTRO	TiN	TiCN	NEUTRO	NEUTRO
Tol	6H	6H	6H	6G	+0.10
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	B	B	B	B	B

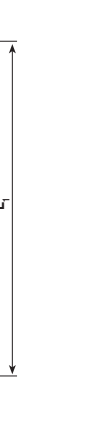
L1	L2	d2	⌀	Preforo	d x p					
125	18	16	12	19	**M 20 x 1**	71,30				
125	25	16	12	18.5	**M 20 x 1.5**	63,25	93,68	103,73		
125	25	16	12	18	**M 20 x 2**					
125	18	18	14.5	21	**M 22 x 1**	80,50				
125	25	18	14.5	20.5	**M 22 x 1.5**	73,60				
125	25	18	14.5	20	**M 22 x 2**					
140	18	18	14.5	23	**M 24 x 1**	94,30				
140	25	18	14.5	22.5	**M 24 x 1.5**	82,80				
140	25	18	14.5	22	**M 24 x 2**	103,50				
140	18	18	14.5	24	**M 25 x 1**					
140	25	18	14.5	23.5	**M 25 x 1.5**	118,45				
140	25	18	14.5	23	**M 25 x 2**	138,00				
140	18	20	16	25	**M 26 x 1**					
140	25	20	16	24.5	**M 26 x 1.5**	126,50				
140	25	20	16	24	**M 26 x 2**	138,00				
140	25	20	16	26	**M 27 x 1**					
140	25	20	16	25.5	**M 27 x 1.5**	121,90				
140	25	20	16	25	**M 27 x 2**	133,40				
150	18	20	16	27	**M 28 x 1**	188,60				
150	25	20	16	26.5	**M 28 x 1.5**	142,60				
150	25	20	16	26	**M 28 x 2**					
150	18	22	18	29	**M 30 x 1**	161,00				
150	25	22	18	28.5	**M 30 x 1.5**	140,30				
150	25	22	18	28	**M 30 x 2**	147,20				
150	18	22	18	31	**M 32 x 1**	239,20				
150	18	22	18	30.5	**M 32 x 1.5**	172,50				
150	28	22	18	30	**M 32 x 2**	186,30				
160	22	25	20	31.5	**M 33 x 1.5**	195,50				
160	32	25	20	31	**M 33 x 2**	198,95				
160	25	28	22	32.5	**M 34 x 1.5**					
160	25	28	22	33.5	**M 35 x 1.5**					
180	22	28	22	34.5	**M 36 x 1.5**	225,40				
180	32	28	22	34	**M 36 x 2**	228,85				
180	32	28	22	33	**M 36 x 3**	241,50				
180	28	32	24	36.5	**M 38 x 1.5**	345,00				
180	28	32	24	37	**M 39 x 2**	349,60				
190	36	32	24	36	**M 39 x 3**	312,80				
180	28	32	24	38.5	**M 40 x 1.5**	276,00				
180	28	32	24	38	**M 40 x 2**	299,00				
180	28	32	24	37	**M 40 x 3**					
180	32	32	24	40.5	**M 42 x 1.5**	305,90				
180	32	32	24	40	**M 42 x 2**	354,20				
200	36	32	24	39	**M 42 x 3**	354,20				
190	28	36	29	43.5	**M 45 x 1.5**	356,50				
190	36	36	29	43	**M 45 x 2**	391,00				
190	36	36	29	42	**M 45 x 3**					
190	28	36	29	46.5	**M 48 x 1.5**	448,50				
190	28	36	29	46	**M 48 x 2**	460,00				
200	36	36	29	45	**M 48 x 3**					
200	32	36	29	48.5	**M 50 x 1.5**					
200	32	36	29	48	**M 50 x 2**					
200	32	36	29	47	**M 50 x 3**					
200	36	40	32	50.5	**M 52 x 1.5**					
200	36	40	32	50	**M 52 x 2**					
200	36	40	32	49	**M 52 x 3**					

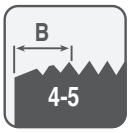
FILETTATURA METRICA ISO A PASSO FINE
ISO METRIC FINE THREAD
IMBOCCO CORRETTO / *SPIRAL POINT*

Codice Articolo

DIN 374	ICVA	ICVA-Y







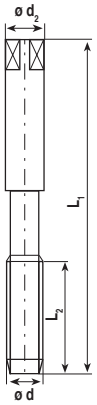
	VAP	TiN
Tol	6H	6H
Mat	HSS-E	HSS-E
Imbocco	B	B

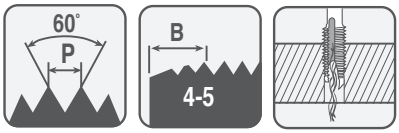
L1	L2	d2	⌀	Preforo	d x p	INOX	INOX
80	10	4.5	3.4	5.25	**M 6 x 0.75**	28,59	33,05
90	18	6	4.9	7	**M 8 x 1**	26,53	35,85
100	16	7	5.5	9	**M 10 x 1**	27,57	39,51
100	16	7	5.5	8.75	**M 10 x 1.25**	27,57	39,51
100	12	9	7	11.25	**M 12 x 0.75**		
100	16	9	7	11	**M 12 x 1**	34,26	47,67
100	16	9	7	10.75	**M 12 x 1.25**	32,45	45,89
100	16	9	7	10.5	**M 12 x 1.5**	32,97	46,40
100	18	11	9	13	**M 14 x 1**	45,85	61,22
100	11	11	9	12.75	**M 14 x 1.25**	45,85	61,22
110	25	11	9	12.5	**M 14 x 1.5**	43,79	59,18
100	18	12	9	14.5	**M 16 x 1.5**	46,89	63,37
110	25	14	11	16.5	**M 18 x 1.5**	63,11	80,55
125	25	16	12	18.5	**M 20 x 1.5**	70,84	100,07

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

HIGH PERFORMANCE

DIN 374





Codice Articolo

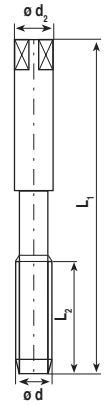
	HP IC-Y	HP IC-Z	T/N IC	
				
	TiN	ZHL	NEUTRO	
Tol	6HX	6HX	6HX	
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	
Imbocco	B	B	B	

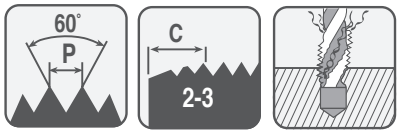
L1	L2	d2	⌀	Preforo	d x p			TITANIO - NICHEL	
90	18	6	4.9	7	**M 8 x 1**	42,90	45,70	33,35	
100	16	7	5.5	9	**M 10 x 1**	49,45	50,41	37,95	
100	16	7	5.5	8.75	**M 10 x 1.25**	48,53	49,50	37,95	
100	16	9	7	11	**M 12 x 1**	64,17	65,50	48,30	
100	16	9	7	10.75	**M 12 x 1.25**	59,11	60,50	48,30	
100	16	9	7	10.5	**M 12 x 1.5**	59,11	60,50	48,30	
110	25	11	9	12.5	**M 14 x 1.5**	79,81	84,43	64,40	
100	18	12	9	14.5	**M 16 x 1.5**	88,09	91,48	73,60	
110	25	14	11	16.5	**M 18 x 1.5**	119,60	125,80	102,27	
125	25	16	12	18.5	**M 20 x 1.5**	157,55	166,86	127,27	

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

FILETTATURA METRICA ISO A PASSO FINE
ISO METRIC FINE THREAD
ELICA 35° / *SPIRAL FLUTED 35°*

DIN 374





Codice Articolo

	ER	ER-Y	ER-T	ER	ER
					
	NEUTRO	TiN	TiCN	NEUTRO	NEUTRO
Tol	6H	6H	6H	6G	+10
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C	C

L1	L2	d2	⍁	Preforo	d x p					
45	8	1.4	-	1.75	**M 2 x 0.25**					
45	8	1.6	-	1.95	**M 2.2 x 0.25**					
45	9	1.8	-	2.15	**M 2.5 x 0.35**					
56	5	2.2	-	2.65	**M 3 x 0.35**	31,05				
56	6	2.5	2.1	3.15	**M 3.5 x 0.35**					
63	7	2.8	2.1	3.5	**M 4 x 0.5**	28,75				
70	8	3.5	2.7	4.5	**M 5 x 0.5**	29,21				
80	10	4.5	3.4	5.5	**M 6 x 0.5**	37,37				
80	10	4.5	3.4	5.25	**M 6 x 0.75**	27,60	32,45	34,04	32,20	
80	10	5.5	4.3	6.25	**M 7 x 0.75**	34,50				
90	12	6	4.9	7.25	**M 8 x 0.75**	31,88				
90	12	6	4.9	7	**M 8 x 1**	26,45	33,38	35,65	31,05	46,19
100	18	7	5.5	8	**M 9 x 1**	40,25				
100	12	7	5.5	9.25	**M 10 x 0.75**	43,70				
100	12	7	5.5	9	**M 10 x 1**	27,83	36,63	39,56	32,20	50,11
100	12	7	5.5	8.75	**M 10 x 1.25**	28,41	37,21	40,14	32,66	50,27
100	12	8	6.2	10.25	**M 11 x 0.75**					
100	12	8	6.2	10	**M 11 x 1**	46,00				
100	12	8	6.2	9.75	**M 11 x 1.25**	54,28				
100	12	9	7	11.25	**M 12 x 0.75**	51,75				
100	12	9	7	11	**M 12 x 1**	36,80	47,17	50,60		61,98
100	12	9	7	10.75	**M 12 x 1.25**	34,50	44,87	48,30	40,25	61,98
100	16	9	7	10.5	**M 12 x 1.5**	34,50	44,87	48,30		
100	12	11	9	12.5	**M 13 x 0.5**					
100	12	11	9	12.25	**M 13 x 0.75**					
100	18	11	9	12	**M 13 x 1**	54,74				
100	12	11	9	13.5	**M 14 x 0.5**					
100	12	11	9	13.25	**M 14 x 0.75**					
100	12	11	9	13	**M 14 x 1**	48,30				
100	12	11	9	12.75	**M 14 x 1.25**	48,30				
110	18	11	9	12.5	**M 14 x 1.5**	43,47	57,32	61,87	50,60	84,93
100	18	12	9	14	**M 15 x 1**	67,85				
100	18	12	9	13.5	**M 15 x 1.5**	67,85				
100	12	12	9	15	**M 16 x 1**	56,58				
100	12	12	9	14.75	**M 16 x 1.25**	69,00				
100	18	12	9	14.5	**M 16 x 1.5**	48,76	63,90	68,89	58,65	96,41
100	18	12	9	16	**M 17 x 1**	81,65				
100	18	12	9	15.5	**M 17 x 1.5**					
110	18	14	11	17	**M 18 x 1**	67,85				
110	25	14	11	16.5	**M 18 x 1.5**	64,40	80,38	85,68		
110	18	14	11	16	**M 18 x 2**	97,75				

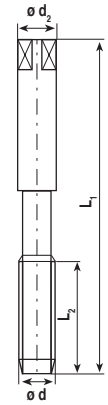
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 100% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

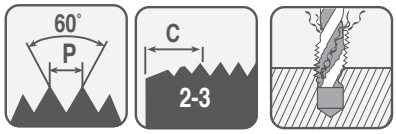
Codice Articolo	ER	ER-Y	ER-T	ER	ER
	NEUTRO	TiN	TiCN	NEUTRO	NEUTRO
Tol	6H	6H	6H	6G	+10
Mat	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C	C

L1	L2	d2	⌀	Preforo	d x p					
125	18	16	12	19	**M 20 x 1**	79,35				
125	18	16	12	18.5	**M 20 x 1.5**	72,59	101,73	111,78		
125	18	16	12	18	**M 20 x 2**	103,50				
125	18	18	14.5	21	**M 22 x 1**	94,30				
125	18	18	14.5	20.5	**M 22 x 1.5**	80,50				
125	18	18	14.5	20	**M 22 x 2**	116,15				
140	18	18	14.5	23	**M 24 x 1**	108,10				
140	18	18	14.5	22.5	**M 24 x 1.5**	92,00				
140	18	18	14.5	22	**M 24 x 2**	115,00				
140	18	18	14.5	24	**M 25 x 1**					
140	18	18	14.5	23.5	**M 25 x 1.5**	137,08				
140	18	18	14.5	23	**M 25 x 2**					
140	18	20	16	25	**M 26 x 1**	158,70				
140	18	20	16	24.5	**M 26 x 1.5**	142,60				
140	18	20	16	24	**M 26 x 2**					
140	25	20	16	26	**M 27 x 1**					
140	25	20	16	25.5	**M 27 x 1.5**	144,90				
140	25	20	16	25	**M 27 x 2**	151,80				
150	18	20	16	27	**M 28 x 1**					
150	18	20	16	26.5	**M 28 x 1.5**	165,60				
150	18	20	16	26	**M 28 x 2**					
150	18	22	18	29	**M 30 x 1**					
150	18	22	18	28.5	**M 30 x 1.5**	170,20				
150	25	22	18	28	**M 30 x 2**	170,20				
150	18	22	18	31	**M 32 x 1**					
150	18	22	18	30.5	**M 32 x 1.5**	195,50				
150	18	22	18	30	**M 32 x 2**					
160	22	25	20	31.5	**M 33 x 1.5**	223,10				
160	22	25	20	31	**M 33 x 2**	213,90				
160	25	28	22	32.5	**M 34 x 1.5**					
180	22	28	22	34.5	**M 36 x 1.5**	246,10				
180	32	28	22	34	**M 36 x 2**	243,80				
180	32	28	22	33	**M 36 x 3**	250,70				
180	28	32	24	36.5	**M 38 x 1.5**	381,80				
180	28	32	24	37	**M 39 x 2**					
190	36	32	24	36	**M 39 x 3**	356,50				
180	28	32	24	38.5	**M 40 x 1.5**	315,10				
180	28	32	24	38	**M 40 x 2**	361,10				
180	28	32	24	37	**M 40 x 3**					
180	32	32	24	40.5	**M 42 x 1.5**	363,40				
180	32	32	24	40	**M 42 x 2**	388,70				
200	36	32	24	39	**M 42 x 3**	363,40				
190	28	36	29	43.5	**M 45 x 1.5**	395,60				
190	36	36	29	43	**M 45 x 2**	437,00				
190	36	36	29	42	**M 45 x 3**	425,50				
190	28	36	29	46.5	**M 48 x 1.5**	460,00				
190	28	36	29	46	**M 48 x 2**	517,50				
200	36	36	29	45	**M 48 x 3**	487,60				
200	32	36	29	48.5	**M 50 x 1.5**	542,80				
200	32	36	29	48	**M 50 x 2**	542,80				
200	32	36	29	47	**M 50 x 3**	542,80				
200	36	40	32	50.5	**M 52 x 1.5**					
200	36	40	32	50	**M 52 x 2**					
200	36	40	32	49	**M 52 x 3**					

FILETTATURA METRICA ISO A PASSO FINE
ISO METRIC FINE THREAD
ELICA 35° / *SPIRAL FLUTED 35°*

DIN 374





Codice Articolo

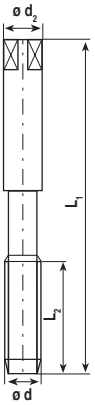
	ERVA 35°	ERVA-Y 35°		
				
	VAP	TiN		
Tol	6H	6H		
Mat	HSS-E	HSS-E		
Imbocco	C	C		

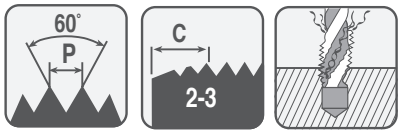
L1	L2	d2	⌀	Preforo	d x p	INOX	INOX		
80	10	4.5	3.4	5.25	**M 6 x 0.75**	31,74	36,16		
90	12	6	4.9	7	**M 8 x 1**	30,42	39,69		
100	12	7	5.5	9	**M 10 x 1**	32,00	43,90		
100	12	7	5.5	8.75	**M 10 x 1.25**	32,67	44,55		
100	12	9	7	11.25	**M 12 x 0.75**				
100	12	9	7	11	**M 12 x 1**	42,32	55,64		
100	12	9	7	10.75	**M 12 x 1.25**	39,67	53,02		
100	16	9	7	10.75	**M 12 x 1.5**	39,67	53,02		
100	12	11	9	13	**M 14 x 1**	55,55	70,80		
100	12	11	9	12.75	**M 14 x 1.25**	55,55	70,80		
110	18	11	9	12.5	**M 14 x 1.5**	49,99	65,31		
100	18	12	9	14.5	**M 16 x 1.5**	56,07	72,45		
110	25	14	11	16.5	**M 18 x 1.5**	74,06	91,36		
125	18	16	12	18.5	**M 20 x 1.5**	81,99	111,09		

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

HIGH PERFORMANCE

DIN 374





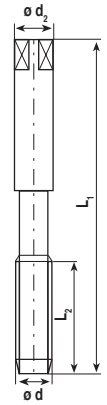
Codice Articolo

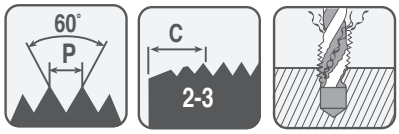
	HP ER-Y 45°	HP ER-Z 45°	NI ER 25°	
				
	TiN	ZHL	NEUTRO	
Tol	**6HX**	**6HX**	**6HX**	
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	
Imbocco	**C**	**C**	**C**	

L1	L2	d2	⌀	Preforo	d x p			NICHEL	
90	12	6	4.9	7	**M 8 x 1**	49,45	52,18	36,80	
100	12	7	5.5	9	**M 10 x 1**	57,04	57,91	40,25	
100	12	7	5.5	8.75	**M 10 x 1.25**	55,66	56,55	40,25	
100	13	9	7	11	**M 12 x 1**	73,14	74,36		
100	13	9	7	10.75	**M 12 x 1.25**	67,85	69,14	52,90	
100	16	9	7	10.75	**M 12 x 1.5**	67,85	69,14	52,90	
110	16	11	9	12.5	**M 14 x 1.5**	91,31	95,80	69,00	
100	18	12	9	14.5	**M 16 x 1.5**	100,74	103,98	80,50	
110	15	14	11	16.5	**M 18 x 1.5**	128,80	134,89		
125	18	16	12	18.5	**M 20 x 1.5**	170,66	179,82		

FILETTATURA METRICA ISO A PASSO FINE
ISO METRIC FINE THREAD
ELICA 15° / *SPIRAL FLUTED 15°*

DIN 374





Codice Articolo

	FCE	FCE	FCE	FCE
				
Tol	NEUTRO 6H	NEUTRO 6G	NEUTRO +0.05	NEUTRO +0.10
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C

L1	L2	d2	⌀	Preforo	d x p				
45	8	1.4	-	1.75	**M 2 x 0.25**				
45	8	1.6	-	1.95	**M 2.2 x 0.25**				
45	9	1.8	-	2.15	**M 2.5 x 0.35**				
56	10	2.2	-	2.65	**M 3 x 0.35**	24,15			
56	10	2.5	2.1	3.15	**M 3.5 x 0.35**				
63	10	2.8	2.1	3.5	**M 4 x 0.5**	22,94			
70	10	3.5	2.7	4.5	**M 5 x 0.5**	23,43			
80	10	4.5	3.4	5.5	**M 6 x 0.5**	36,22			
80	10	4.5	3.4	5.25	**M 6 x 0.75**	24,15			
80	10	5.5	4.3	6.5	**M 7 x 0.5**				
80	10	5.5	4.3	6.25	**M 7 x 0.75**	31,16			
90	12	6	4.9	7.25	**M 8 x 0.75**	27,04			
90	18	6	4.9	7	**M 8 x 1**	22,22			
100	12	7	5.5	8.5	**M 9 x 0.5**				
100	18	7	5.5	8	**M 9 x 1**	34,53			
100	12	7	5.5	9.25	**M 10 x 0.75**	36,22			
100	16	7	5.5	9	**M 10 x 1**	22,94			
100	16	7	5.5	8.75	**M 10 x 1.25**	22,94			
100	12	8	6.2	10.25	**M 11 x 0.75**				
100	20	8	6.2	10	**M 11 x 1**	40,70			
100	20	8	6.2	9.75	**M 11 x 1.25**	50,72			
100	12	9	7	11.25	**M 12 x 0.75**	43,47			
100	16	9	7	11	**M 12 x 1**	28,98			
100	16	9	7	10.75	**M 12 x 1.25**	28,98			
100	16	9	7	10.5	**M 12 x 1.5**	27,78			
100	12	11	9	12.5	**M 13 x 0.5**				
100	12	11	9	12.25	**M 13 x 0.75**				
100	18	11	9	12	**M 13 x 1**	50,72			
100	12	11	9	13.5	**M 14 x 0.5**				
100	12	11	9	13.25	**M 14 x 0.75**				
100	18	11	9	13	**M 14 x 1**	38,64			
100	18	11	9	12.75	**M 14 x 1.25**	38,64			
110	25	11	9	12.5	**M 14 x 1.5**	36,22			
100	18	12	9	14	**M 15 x 1**	56,75			
100	18	12	9	13.5	**M 15 x 1.5**	56,75			
100	18	12	9	15	**M 16 x 1**	47,34			
100	18	12	9	16	**M 17 x 1**	69,02			
110	22	12	9	15.5	**M 17 x 1.5**	67,62			
110	18	14	11	17	**M 18 x 1**	59,17			
110	25	14	11	16.5	**M 18 x 1.5**	53,13			
125	25	14	11	16	**M 18 x 2**	84,53			

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

Codice Articolo	FCE	FCE	FCE	FCE
	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	6H	6G	+0.05	+0.10
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C

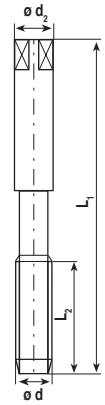
L1	L2	d2	⌀	Preforo	d x p				
125	18	16	12	19	**M 20 x 1**	68,82			
125	25	16	12	18.5	**M 20 x 1.5**	61,17			
125	25	16	12	18	**M 20 x 2**	91,77			
125	18	18	14.5	21	**M 22 x 1**	78,48			
125	25	18	14.5	20.5	**M 22 x 1.5**	67,62			
125	25	18	14.5	20	**M 22 x 2**	101,43			
140	18	18	14.5	23	**M 24 x 1**	90,57			
140	25	18	14.5	22.5	**M 24 x 1.5**	79,70			
140	25	18	14.5	22	**M 24 x 2**	100,22			
140	18	18	14.5	24	**M 25 x 1**	127,99			
140	25	18	14.5	23.5	**M 25 x 1.5**	115,92			
140	25	18	14.5	23	**M 25 x 2**	129,20			
140	18	20	16	25	**M 26 x 1**	132,82			
140	25	20	16	24.5	**M 26 x 1.5**	123,17			
140	25	20	16	24	**M 26 x 2**	135,24			
140	25	20	16	26	**M 27 x 1**	164,22			
140	25	20	16	25.5	**M 27 x 1.5**	118,33			
140	25	20	16	25	**M 27 x 2**	131,61			
150	18	20	16	27	**M 28 x 1**	176,30			
150	25	20	16	26.5	**M 28 x 1.5**	137,66			
150	25	20	16	26	**M 28 x 2**	144,90			
150	18	22	18	29	**M 30 x 1**	144,90			
150	25	22	18	28.5	**M 30 x 1.5**	134,04			
150	25	22	18	28	**M 30 x 2**	142,48			
150	18	22	18	31	**M 32 x 1**	229,43			
150	18	22	18	30.5	**M 32 x 1.5**	166,64			
150	28	22	18	30	**M 32 x 2**	181,12			
160	22	25	20	31.5	**M 33 x 1.5**	190,79			
160	32	25	20	31	**M 33 x 2**	195,61			
160	25	28	22	32.5	**M 34 x 1.5**				
160	25	28	22	33.5	**M 35 x 1.5**				
180	22	28	22	34.5	**M 36 x 1.5**	205,27			
180	32	28	22	34	**M 36 x 2**	217,35			
180	32	28	22	33	**M 36 x 3**	234,25			
180	28	32	24	36.5	**M 38 x 1.5**	338,10			
180	28	32	24	37	**M 39 x 2**	338,10			
190	36	32	24	36	**M 39 x 3**	313,95			
180	28	32	24	38.5	**M 40 x 1.5**	253,58			
180	28	32	24	38	**M 40 x 2**	280,14			
180	28	32	24	37	**M 40 x 3**	321,19			
180	32	32	24	40.5	**M 42 x 1.5**	289,80			
180	32	32	24	40	**M 42 x 2**	333,27			
200	36	32	24	39	**M 42 x 3**	333,27			
190	28	36	29	43.5	**M 45 x 1.5**	340,51			
190	36	36	29	43	**M 45 x 2**	355,00			
190	36	36	29	42	**M 45 x 3**	381,57			
190	28	36	29	46.5	**M 48 x 1.5**	408,13			
190	28	36	29	46	**M 48 x 2**	422,63			
200	36	36	29	45	**M 48 x 3**	434,70			
200	32	36	29	48.5	**M 50 x 1.5**	475,76			
200	32	36	29	48	**M 50 x 2**	507,15			
200	32	36	29	47	**M 50 x 3**				
200	36	40	32	50.5	**M 52 x 1.5**				
200	36	40	32	50	**M 52 x 2**				
200	36	40	32	49	**M 52 x 3**				

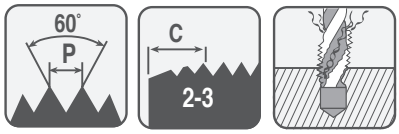
HIGH PERFORMANCE

DIN 374

Codice Articolo

TI FCE



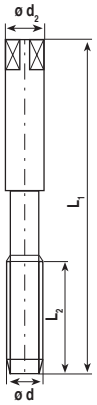


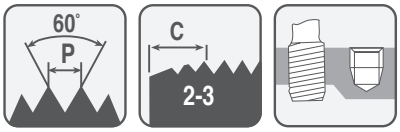
	NEUTRO	
Tol	6HX	
Mat	HSSCo-PM	
Imbocco	C	

L1	L2	d2	⌀	Preforo	d x p	TITANIO
90	12	8	6.2	7	**M 8 x 1**	32,43
100	12	10	8	9	**M 10 x 1**	40,02
100	12	10	8	8.75	**M 10 x 1.25**	39,10
100	12	9	7	11	**M 12 x 1**	
100	12	9	7	10.75	**M 12 x 1.25**	54,74
100	16	9	7	10.75	**M 12 x 1.5**	54,74
100	15	11	9	12.5	**M 14 x 1.5**	70,84
100	18	12	9	14.5	**M 16 x 1.5**	80,96

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 374





Codice Articolo

FORM	FORM-Y	FORM-T
		

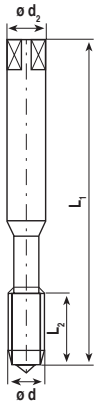
	NEUTRO	TiN	TiCN	
Tol	6HX/6GX	6HX/6GX	6HX/6GX	
Mat	HSS-E	HSS-E	HSS-E	
Imbocco	C	C	C	

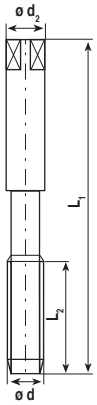
L1	L2	d2	⍁	Preforo	d x p				
63	7	2.8	2.1	3.8	**M 4 x 0.5**	35,53	41,93	43,11	
70	8	3.5	2.7	4.8	**M 5 x 0.5**	35,53	41,93	43,11	
80	10	4.5	3.4	5.8	**M 6 x 05**	53,87	60,27	61,45	
80	10	4.5	3.4	5.65	**M 6 x 0.75**	35,06	41,45	42,64	
90	12	6	4.9	7.65	**M 8 x 0.75**	49,96	59,68	61,33	
90	18	6	4.9	7.55	**M 8 x 1**	39,09	48,80	50,46	
100	16	8	5.5	9.55	**M 10x 1**	42,64	54,48	56,62	
100	16	7	5.5		**M 10 x 1.25**	42,64	54,48	56,62	
100	16	9	7	11.55	**M 12 x 1**	59,23	72,02	74,86	
100	16	9	7		**M 12 x 1.25**	53,31	66,10	68,94	
110	22	9	7	11.35	**M 12 x 1.5**	53,31	66,10	68,94	
100	18	11	9		**M 14 x 1**	73,67	92,16	94,52	
110	25	11	9	13.35	**M 14 x 1.5**	68,70	87,18	89,55	
100	18	12	9	15.55	**M 16 x 1**	102,58	121,06	125,08	
100	18	12	9	15.35	**M 16 x 1.5**	87,65	106,13	110,16	
110	25	14	11	17.35	**M 18 x 1.5**	115,82	134,78	138,32	
125	18	16	12	19.55	**M 20 x 1**	140,62	171,97	182,32	
125	25	16	12	19.35	**M 20 x 1.5**	140,62	171,97	182,32	

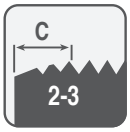
HIGH PERFORMANCE

Codice Articolo

DIN 371	DIN 374	HP FORM-Y	







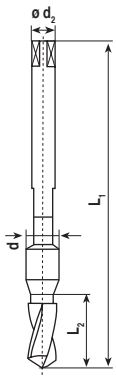
	TiN	
Tol	6HX	
Mat	HSSCo-PM	
Imbocco	C	

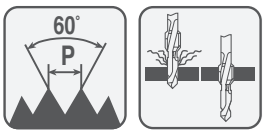
L1	L2	d2	⌀	Preforo	d x p		
90	18	8	6.2	7.55	**M 8 x 1**	56,38	
100	22	10	8	9.55	**M 10x 1**	65,15	
100	22	10	8		**M 10 x 1.25**	60,88	
110	22	9	7	11.55	**M 12 x 1**	83,63	
110	22	9	7		**M 12 x 1.25**	77,71	
110	22	9	7	11.35	**M 12 x 1.5**	77,71	
110	25	11	9	13.35	**M 14 x 1.5**	101,87	
100	18	12	9	15.35	**M 16 x 1.5**	124,37	

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
CANALINI DI LUBRIFICAZIONE / *OIL FLUTES* + 10%

Codice Articolo

NORM Ⓑ	PUNTA	



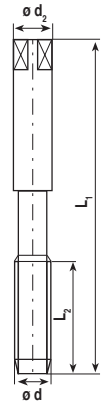


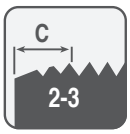
	NEUTRO	
Tol	**6H**	
Mat	HSS-E	
Imbocco	**D**	

L1	L2	d2	⌀	Preforo	d x p		
93	20	6	4.9	7.05	**M 8 x 1**	80,04	
99	22	7	5.5	9.05	**M 10 x 1**	80,04	

Codice Articolo

NORM ®	SL TD	EL





	NEUTRO	NEUTRO
Tol	6H	6H
Mat	HSS-E	HSS-E
Imbocco	C	

L1	L2	d2	⌀	Preforo	d x p		
180	12	6	4.9	7	**M 8 x 1**		
200	16	7	5.5	9	**M 10 x 1**		
220	25	11	9	12.5	**M 14 x 1.5**		
200	18	12	9	14.5	**M 16 x 1.5**		
220	25	14	11	16.5	**M 18 x 1.5**		
220	32	16	12	18.5	**M 20 x 1.5**		
250	32	18	14	20.5	**M 22 x 1.5**		
250	36	18	14	22	**M 24 x 2**		
250	32	20	16	25	**M 27 x 2**		

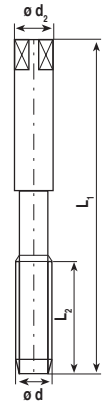
MASCHI PER DADI / *NUT TAPS*

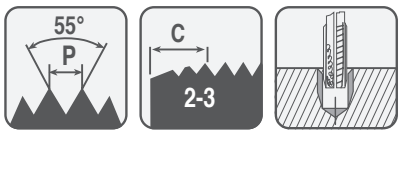
L1	L2	d2	⌀	Preforo	d x p		
190	12	3.8	-	4.5	**M 5 x 0.5**		
190	18	4.5	-	5.25	**M 6 x 0.75**		
265	24	6	-	7	**M 8 x 1**		
265	18	8	-	9.25	**M 10 x 0.75**		
265	24	8	-	9	**M 10 x 1**		
265	30	8		8.75	**M 10 x 1.25**		
265	24	9.5		11	**M 12 x 1**		
265	36	9		10.5	**M 12 x 1.5**		

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

	0.25	0.35	0.45	0.5	0.6	0.75	0.9	1	1.25	1.5	1.75	2	2.5	3	4	6
3					■											
3.5	■															
4		■				■										
4.5				■												
5		■				■	■	■								
5.5				■		■										
6	■	■														
6.5				■		■										
7				■					■	■						
8				■						■						
8.5				■		■										
9				■		■				■						
9.5						■										
10				■												
10.5						■										
11				■		■										
1.5				■												
12				■												
13				■		■			■	■						
13.5						■										
14				■		■					■					
15				■		■			■							
16				■		■					■					
17						■			■		■					
18				■		■			■							
19						■		■	■	■						
20				■		■			■							
21				■		■		■	■	■	■					
22				■		■			■							
23								■	■	■						
24						■			■							
25						■			■					■		
26						■			■		■					
27				■		■			■							
28									■							
29								■	■	■		■				
30						■			■					■		
31								■		■						
32									■					■		
33								■	■					■		
34								■	■			■				
35								■				■		■		
36								■	■							
37								■		■						
38								■				■		■		
39								■	■	■						
40								■					■		■	
41								■								
42								■			■					
43										■		■				
44								■		■		■				
45								■	■							
46								■		■						
47								■		■						
48								■	■							
49										■				■		
50								■	■						■	
52								■								
54												■				
55								■				■		■	■	
56												■		■	■	
58												■		■		
60												■		■	■	
62												■				
63															■	
64												■		■	■	■
65												■		■		
66												■				
68														■	■	■

DIN 2184-2





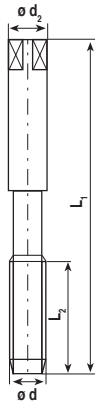
Codice Articolo

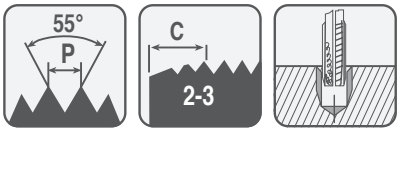
	S3P	3^
		
Tol	NEUTRO **medium**	NEUTRO **medium**
Mat	HSS	HSS
Imbocco	**C**	**C**

L1	L2	d2	⌀	Preforo	mm	d x p		FINITORE BOTTOMING
36	10	2.5	2.1	1.15	1.59	**W 1/16 - 60**		
36	10	2.8	2.1	1.8	2.38	**W 3/32 - 48**		
40	12	3.5	2.7	2.5	3.17	**W 1/8 - 40**	46,19	
45	14	4.5	3.4	3.1	3.97	**W 5/32-32**	46,19	
50	18	6	4.9	3.6	4.76	**W 3/16 - 24**	43,45	
50	18	6	4.9	4.4	5.56	**W 7/32 - 24**		
50	19	6	4.9	5	6.35	**W 1/4 - 20**	43,45	
56	22	6	4.9	6.5	7.94	**W 5/16 - 18**	52,28	
70	24	70	5.5	7.9	9.53	**W 3/8 - 16**	57,43	
70	24	8	6.2	9.2	11.11	**W 7/16 - 14**	68,15	
75	29	9	7	10.4	12.70	**W 1/2 - 12**	76,10	
80	30	11	9	12	14.29	**W 9/16 - 12**	102,70	
80	32	12	9	13.4	15.88	**W 5/8 - 11**	106,42	
95	40	14	11	16.25	19.05	**W 3/4 - 10**	143,80	
100	40	18	14.5	19.25	22.23	**W 7/8 - 9**	183,66	
110	50	18	14.5	22	25.4	**W 1' - 8**	233,43	
132	56	22	18	24.5	28.58	**W 1' 1/8 - 7**	322,14	
132	56	22	18	27.75	31.75	**W 1' 1/4 - 7**	373,50	
150	63	28	22	30.25	34.93	**W 1' 3/8 - 6**		
150	63	32	24	33.5	38.10	**W 1' 1/2 - 6**	583,60	

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 2184-1





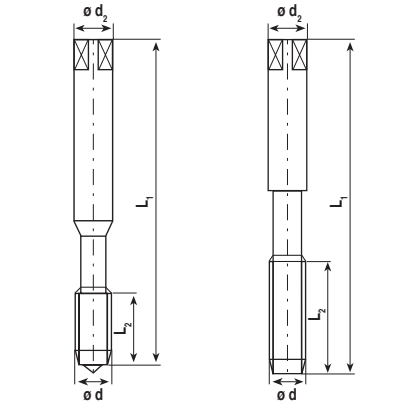
Codice Articolo

	TD	IC
	TAGLIENTI DRITTI / *STRAIGHT FLUTED*	IMBOCCO CORRETTO / *SPIRAL POINT*
		
	NEUTRO	NEUTRO
Tol	medium	medium
Mat	HSS-E	HSS-E
Imbocco	C	B

L1	L2	d2	⌀	Preforo	mm	d x p		
45	8	2.5	2.1	1.15	1.59	**W 1/16 - 60**		
50	9	2.8	2.1	1.8	2.38	**W 3/32 - 48**		
56	10	3.5	2.7	2.5	3.17	**W 1/8 - 40**	24,15	28,75
63	10	4.5	3.4	3.1	3.97	**W 5/32 - 32**		
70	12	6	4.9	3.6	4.76	**W 3/16 - 24**	24,15	29,21
80	12	6	4.9	4.4	5.56	**W 7/32 - 24**		
80	16	7	5.5	5	6.35	**W 1/4 - 20**	24,15	28,98
90	18	8	6.2	6.5	7.94	**W 5/16 - 18**	29,44	35,33
100	22	10	7	7.9	9.53	**W 3/8 - 16**	29,67	35,65
100	20	8	6.2	9.2	11.11	**W 7/16 - 14**	39,10	47,61
110	25	9	7	10.4	12.70	**W 1/2 - 12**	39,79	47,84
110	25	11	9	12	14.29	**W 9/16 - 12**		62,10
110	25	12	9	13.4	15.88	**W 5/8 - 11**	56,35	67,85
125	32	14	11	16.25	19.05	**W 3/4 - 10**	69,00	83,95
140	32	18	14.5	19.25	22.23	**W 7/8 - 9**	87,40	105,80
160	36	20	16	22	25.4	**W 1' - 8**	124,20	149,50
180	40	22	18	24.5	28.58	**W 1' 1/8 - 7**		
180	40	25	20	27.75	31.75	**W 1' 1/4 - 7**		
200	45	28	22	30.25	34.93	**W 1' 3/8 - 6**		
200	45	32	24	33.5	38.10	**W 1' 1/2 - 6**		

Codice Articolo

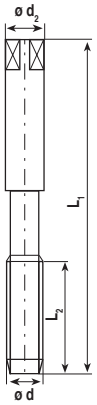
DIN 2184-1	FCE 15°	ER 35°
		
Tol	**medium**	**medium**
Mat	HSS-E	HSS-E
Imbocco	**C**	**C**

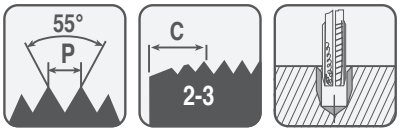


L1	L2	d2	⌀	Preforo	mm	d x p		
45	8	2.5	2.1	1.15	1.59	**W 1/16 - 60**		
50	9	2.8	2.1	1.8	2.38	**W 3/32 - 48**		
56	10	3.5	2.7	2.5	3.17	**W 1/8 - 40**	28,01	31,05
63	10	4.5	3.4	3.1	3.97	**W 5/32-32**		
70	12	6	4.9	3.6	4.76	**W 3/16 - 24**	28,01	30,59
80	12	6	4.9	4.4	5.56	**W 7/32 - 24**		
80	16	7	5.5	5	6.35	**W 1/4 - 20**	28,01	29,90
90	18	8	6.2	6.5	7.94	**W 5/16 - 18**	34,78	36,80
100	22	10	7	7.9	9.53	**W 3/8 - 16**	34,78	37,26
100	20	8	6.2	9.2	11.11	**W 7/16 - 14**	46,13	49,45
110	25	9	7	10.4	12.70	**W 1/2 - 12**	46,85	49,68
110	25	11	9	12	14.29	**W 9/16 - 12**		77,74
110	25	12	9	13.4	15.88	**W 5/8 - 11**	65,69	69,00
125	32	14	11	16.25	19.05	**W 3/4 - 10**	81,87	86,25
140	32	18	14.5	19.25	22.23	**W 7/8 - 9**	102,88	109,25
160	36	20	16	22	25.4	**W 1' - 8**	146,11	154,10
180	40	22	18	24.5	28.58	**W 1' 1/8 - 7**		
180	40	25	20	27.75	31.75	**W 1' 1/4 - 7**		
200	45	28	22	30.25	34.93	**W 1' 3/8 - 6**		
200	45	32	24	33.5	38.10	**W 1' 1/2 - 6**		

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 100% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

DIN 5157





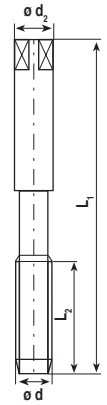
Codice Articolo

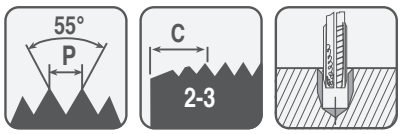
	S2P	3^
		
	NEUTRO	NEUTRO
Tol	ISO228	ISO228
Mat	HSS	HSS
Imbocco	C	C

L1	L2	d2	⌀	Preforo	mm	d x p		FINITORE BOTTOMING
63	20	7	5.5	8.7	9.73	**G 1/8 - 28**	35,01	17,51
70	22	11	9	11.16	13.16	**G 1/4 - 19**	43,59	21,79
70	22	12	9	15	16.66	**G 3/8 - 19**	54,49	27,24
80	22	16	12	19	20.95	**G 1/2 - 14**	81,74	40,87
80	22	18	14.5	20.75	22.91	**G 5/8 - 14**	99,57	49,78
90	22	20	16	24.5	26.44	**G 3/4 - 14**	119,83	59,91
90	22	22	18	28	30.20	**G 7/8 - 14**	163,39	81,70
100	25	25	20	30.5	33.25	**G 1' - 11**	200,77	100,38
125	40	28	22	35	37.90	**G 1' 1/8 - 11**		
125	40	32	24	39.5	41.91	**G 1' 1/4 - 11**	328,34	164,18
140	40	36	29	41.5	44.32	**G 1' 3/8 - 11**		
140	40	36	29	45	47.80	**G 1' 1/2 - 11**	410,80	205,41
140	40	40	32	51	53.75	**G 1' 3/4 - 11**	621,00	310,50
160	40	45	35	57	59.61	**G 2' - 11**	690,00	345,00
160	40	50	39	63.3	65.71	**G 2' 1/4 - 11**		
160	40	50	39	72.8	75.18	**G 2' 1/2 - 11**	1403,00	701,50
180	45	56	44	85.5	87.88	**G 3' - 11**	1794,00	897,00

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 5156





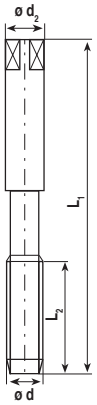
Codice Articolo

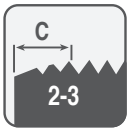
TD	TD	TD	TD
			
NEUTRO	**NEUTRO**	**NEUTRO**	**NEUTRO**
Tol	**ISO 228**	**+ 0.05**	**+ 0.10**	**+ 0.20**
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**C**	**C**	**C**

l.tot	l.fil	gambo	⍁	Preforo	mm	d x p				
90	18	6	4.9	6.56	7.72	**G 1/16 - 28**	59,80			
100	16	7	5.5	8.75	9.73	**G 1/8 - 28**	21,85	32,66	32,66	35,65
100	18	11	9	11.75	13.16	**G 1/4 - 19**	30,36	44,85	45,48	47,15
110	22	12	9	15.25	16.66	**G 3/8 - 19**	37,49	55,20	56,05	60,95
125	25	16	12	19	20.95	**G 1/2 - 14**	51,98	74,55	74,55	81,88
125	25	18	14.5	20.75	22.91	**G 5/8 - 14**	65,34			
140	25	20	16	24.5	26.44	**G 3/4 - 14**	85,10	119,60	115,18	128,80
150	25	22	18	28	30.2	**G 7/8 - 14**	112,70			
160	32	25	20	30.5	33.25	**G 1' - 11**	138,00		178,95	
180	28	32	24	35	37.9	**G 1' 1/8 - 11**	193,20			
180	32	32	24	39.5	41.91	**G 1' 1/4 - 11**	227,70			
190	36	36	29	41.5	44.32	**G 1' 3/8 - 11**				
200	36	36	29	45	47.8	**G 1' 1/2 - 11**	315,10			
200	36	40	29	51	53.75	**G 1' 3/4 - 11**				
220	36	45	35	57	59.61	**G 2' - 11**	579,60			
250	50	45	35	63.3	65.71	**G 2' 1/4 - 11**				
270	55	56	44	72.8	75.18	**G 2' 1/2 - 11**	943,00			
270	55	56	44	85.5	87.88	**G 3' - 11**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

DIN 5156





Codice Articolo

TDOT	TDGG	TDGG-T

	NEUTRO	NIT	TiCN
Tol	**ISO 228**	**ISO 228**	**ISO 228**
Mat	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**C**	**C**

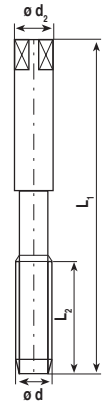
l.tot	l.fil	gambo	⌀	Preforo	mm	d x p	OTTONE / BRASS	GHISA / CAST IRON	GHISA / CAST IRON
90	18	6	4.9	6.56	7.72	**G 1/16 - 28**			
100	16	7	5.5	8.75	9.73	**G 1/8 - 28**	24,15	24,15	35,88
100	18	11	9	11.75	13.16	**G 1/4 - 19**	33,35	33,35	49,74
110	22	12	9	15.25	16.66	**G 3/8 - 19**	41,17	41,17	60,97
125	25	16	12	19	20.95	**G 1/2 - 14**	56,12	56,12	87,79
125	25	18	14.5	20.75	22.91	**G 5/8 - 14**			
140	25	20	16	24.5	26.44	**G 3/4 - 14**	92,00	94,30	
150	25	22	18	28	30.2	**G 7/8 - 14**			
160	32	25	20	30.5	33.25	**G 1' - 11**	147,20	151,80	

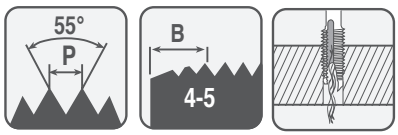
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

EN ISO 228

FILETTATURA GAS CILINDRICA G
WHITWORTH PIPE THREAD G
IMBOCCO CORRETTO / *SPIRAL POINT*

DIN 5156





Codice Articolo

	IC	ICVA	ICVA-Y
			
	NEUTRO	VAP	TiN
Tol	ISO 228	ISO 228	ISO 228
Mat	HSS-E	HSS-E	HSS-E
Imbocco	B	B	B

L1	L2	d2	⍁	Preforo	mm	d x p		INOX	INOX
100	16	7	5.5	8.75	9.73	**G 1/8 - 28**	28,06	29,90	38,25
100	18	11	9	11.75	13.16	**G 1/4 - 19**	36,80	40,25	55,68
110	22	12	9	15.25	16.66	**G 3/8 - 19**	47,61	51,75	69,32
125	25	16	12	19	20.95	**G 1/2 - 14**	65,09	71,30	107,20
125	25	18	14.5	20.75	22.91	**G 5/8 - 14**			
140	25	20	16	24.5	26.44	**G 3/4 - 14**	105,80	116,15	176,11
150	25	22	18	28	30.20	**G 7/8 - 14**			
160	32	25	20	30.5	33.25	**G 1' - 11**	170,20	184,00	255,30
180	28	32	24	35	37.90	**G 1' 1/8 - 11**			
180	32	32	24	39.5	41.91	**G 1' 1/4 - 11**			
190	36	36	29	41.5	44.32	**G 1' 3/8 - 11**			
200	36	36	29	45	47.80	**G 1' 1/2 - 11**			
225	36	40	32	51	53.75	**G 1' 3/4 - 11**			
220	36	45	35	57	59.61	**G 2' - 11**			
230	45	45	35	72.8	75.18	**G 2' 1/2 - 11**			
270	55	56	44	85.5	87.88	**G 3' - 11**			

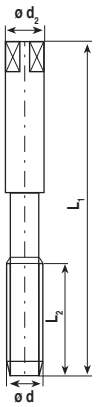
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

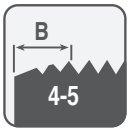
HIGH PERFORMANCE

DIN 5156

Codice Articolo

HP IC-Y	HP IC-Z		

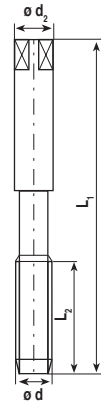


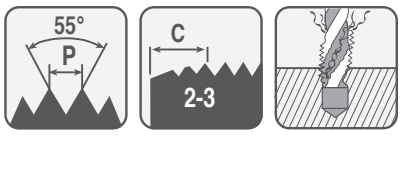


	TiN	ZHL		
Tol	**ISO228**	**ISO228**		
Mat	HSSCo-PM	HSSCo-PM		
Imbocco	**B**	**B**		

L1	L2	d2	⌀	Preforo	mm	d x p				
100	16	7	5.5	8.75	9.73	**G 1/8 - 28**	52,21	53,14		
100	18	11	9	11.75	13.16	**G 1/4 - 19**	74,75	79,43		
110	22	12	9	15.25	16.66	**G 3/8 - 19**	92,00	98,52		
125	25	16	12	19	20.95	**G 1/2 - 14**	150,65	154,16		
140	25	20	16	24.5	26.44	**G 3/4 - 14**	264,50	272,75		
160	32	25	20	30.5	33.25	**G 1' - 11**	384,10	388,64		

DIN 5156





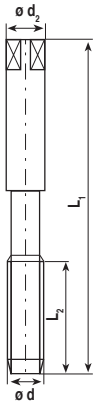
Codice Articolo

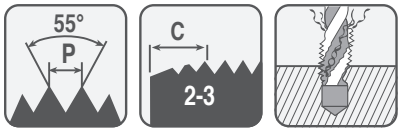
	FCE	FCE	FCE	FCE
				
	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	**ISO 228**	**+ 0.05**	**+ 0.10**	**+ 0.20**
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**C**	**C**	**C**

L1	L2	d2	⍁	Preforo	mm	d x p				
90	18	6	4.9	6.8	7.72	**G 1/16 - 28**				
100	16	7	5.5	8.75	9.73	**G 1/8 - 28**	25,24	37,72	39,66	
100	18	11	9	11.75	13.16	**G 1/4 - 19**	35,01	51,73	54,88	
110	22	12	9	15.25	16.66	**G 3/8 - 19**	43,3	63,76	67,22	
125	25	16	12	19	20.95	**G 1/2 - 14**	59,51	85,34	87,8	
125	25	18	14.5	20.75	22.91	**G 5/8 - 14**	75,47			
140	25	20	16	24.5	26.44	**G 3/4 - 14**	96,43	135,52	142,03	
150	25	22	18	28	30.20	**G 7/8 - 14**	128,04			
160	32	25	20	30.5	33.25	**G 1' - 11**	156,98	213,57	221,07	
180	28	32	24	35	37.90	**G 1' 1/8 - 11**	219,77			
180	32	32	24	39.5	41.91	**G 1' 1/4 - 11**	265,65			
190	36	36	29	41.5	44.32	**G 1' 3/8 - 11**	350,18			
200	36	36	29	45	47.80	**G 1' 1/2 - 11**	367,08			
200	36	40	32	51	53.75	**G 1' 3/4 - 11**	586,84			
220	36	45	35	57	59.61	**G 2' - 11**	661,71			
250	50	45	35	63.3	65.71	**G 2' 1/4 - 11**				
270	55	56	44	72.8	75.18	**G 2' 1/2 - 11**				
270	55	56	44	85.5	87.88	**G 3' - 11**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

DIN 5156





Codice Articolo

ER	ERVA	ERVA-Y

	NEUTRO	VAP	TiN	
Tol	ISO 228	ISO 228	ISO 228	
Mat	HSS-E	HSS-E	HSS-E	
Imbocco	C	C	C	

L1	L2	d2	⌀	Preforo	mm	d x p		INOX	INOX
90	12	6	4.9	6.8	7.72	**G 1/16 - 28**			Y
100	12	7	5.5	8.7	9.73	**G 1/8 - 28**	28,06	30,82	42,73
100	18	11	9	11.16	13.16	**G 1/4 - 19**	37,95	41,63	57,05
100	18	12	9	15	16.66	**G 3/8 - 19**	48,30	53,02	70,57
125	25	16	12	19	20.95	**G 1/2 - 14**	66,24	72,22	108,11
125	25	18	14.5	20.75	22.91	**G 5/8 - 14**	84,87		
140	25	20	16	24.5	26.44	**G 3/4 - 14**	108,10	116,15	176,11
150	25	22	18	28	30.20	**G 7/8 - 14**	144,21		
160	32	22	20	30.5	33.25	**G 1' - 11**	173,42	186,30	257,57
180	28	32	24	35	37.90	**G 1' 1/8 - 11**	243,80		
180	32	32	24	39.5	41.91	**G 1' 1/4 - 11**	289,80		
190	36	36	29	41.5	44.32	**G 1' 3/8 - 11**	388,70		
225	36	36	29	45	47.80	**G 1' 1/2 - 11**	400,20		
200	36	40	32	51	53.75	**G 1' 3/4 - 11**			
220	36	45	35	57	59.61	**G 2' - 11**			
250	50	45	35	63.3	65.71	**G 2' 1/4 - 11**			
270	55	56	44	72.8	75.18	**G 2' 1/2 - 11**			
270	55	56	44	85.5	87.88	**G 3' - 11**			

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

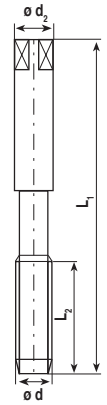
NEW

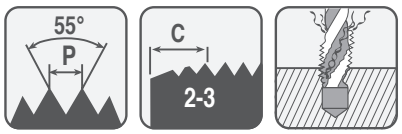
EN ISO 228

FILETTATURA GAS CILINDRICA G
WHITWORTH PIPE THREAD G
ELICOIDALI - ELICA 45° / *SPIRAL FLUTED 45°*

HIGH PERFORMANCE

DIN 5156





Codice Articolo

	HP ER-Y	HP ER-Z		
				
	TiN	ZHL		
Tol	ISO 228X	ISO 228X		
Mat	HSSCo-PM	HSSCo-PM		
Imbocco	C	C		

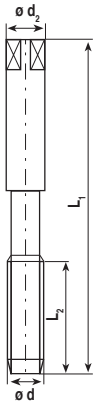
L1	L2	d2	⍁	Preforo	mm	d x p				
100	12	7	5.5	8.7	9.73	**G 1/8 - 28**	51,75	52,68		
100	16	11	9	11.16	13.16	**G 1/4 - 19**	74,75	77,27		
110	13	12	9	15	16.66	**G 3/8 - 19**	92,00	96,59		
125	18	16	12	19	20.95	**G 1/2 - 14**	150,65	153,36		
140	18	20	16	24.5	26.44	**G 3/4 - 14**	264,50	272,75		
160	23	25	20	30.5	33.25	**G 1' - 11**	384,10	388,64		

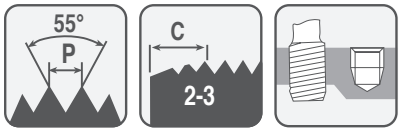
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

EN ISO 228

NEW

DIN 2189





Codice Articolo

	FORM	FORM-Y	HP FORM-Y
			
	NEUTRO	TiN	TiN
Tol	ISO 228X	ISO 228X	ISO 228X
Mat	HSS-E	HSS-E	HSSCo-PM
Imbocco	C	C	C

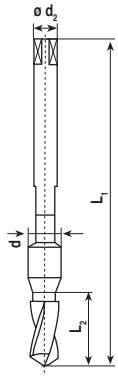
HIGH PERFORMANCE

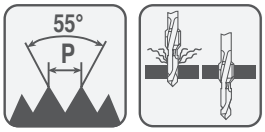
L1	L2	d2	⌀	Preforo	mm	d x p				
100	16	7	5.5	8.7	9.73	**G 1/8 - 28**	45,01	54,74		67,51
100	18	11	9	11.16	13.16	**G 1/4 - 19**	49,75	64,01		80,54
110	22	12	9	15	16.66	**G 3/8 - 19**	65,15	81,62		103,05
125	25	16	12	19	20.95	**G 1/2 - 14**	73,43	106,39		139,77
140	25	20	16	24.5	26.44	**G 3/4 - 14**	129,11	184,33		265,33
160	32	25	20	32	33.25	**G 1' - 11**	244,01	308,78		

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
CANALINI DI LUBRIFICAZIONE / *OIL FLUTES* + 10%

Codice Articolo

NORM Ⓑ	PUNTA			
	NEUTRO			
Tol	B			
Mat	HSS-E			
Imbocco	D			

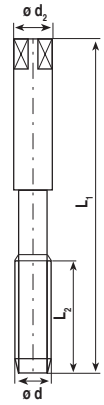


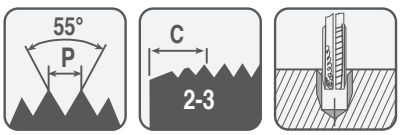


L1	L2	d2	⍁	Preforo	mm	Ø
93	20	7	5.5	8.75	9.73	1/8 - 28
106	25	11	9	11.75	13.16	1/4 - 14
123	32	12	9	15.25	16.66	3/8 - 14
132	36	16	12	19	20.95	1/2 - 14
155	45	20	16	24.5	26.44	3/4 - 14
180	50	25	20	30.5	33.25	1 - 11

Codice Articolo

NORM Ⓑ	SL IC	SL ER	SL TD	
	NEUTRO	NEUTRO	NEUTRO	
Tol	ISO 228	ISO 228	ISO 228	
Mat	HSS-E	HSS-E	HSS-E	
Imbocco	B	C	C	





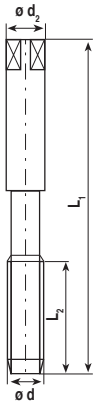
L1	L2	d2	⍁	Preforo	mm	Ø
200	16	7	5.5	8.75	9.73	1/8 - 28
200	18	11	9	11.16	13.16	1/4 - 14
180	22	12	9	15	16.66	3/8 - 14
250	32	16	12	19	20.95	1/2 - 14
250	32	20	16	24.5	26.44	3/4 - 14
250	22	25	20	30.5	33.25	1 - 11

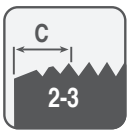
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

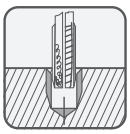
DIN 374

Codice Articolo

TD			







	NEUTRO			
Tol				
Mat	HSS-E			
Imbocco	**C**			

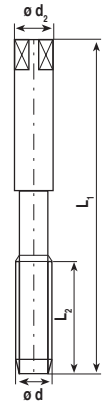
L1	L2	d2	⌀	Preforo	mm	d x p				
100	16	7	5.5	8.6	9.73	**Rp 1/8 - 28**	32,20			
100	18	11	9	11.5	13.16	**Rp 1/4 - 19**	44,16			
110	22	12	9	15	16.66	**Rp 3/8 - 19**	55,43			
125	25	16	12	18.6	20.95	**Rp 1/2 - 14**	75,90			
140	25	20	16	24	26.44	**Rp 3/4 - 14**	110,40			
160	32	25	20	30.25	33.25	**Rp 1' - 11**	156,40			
180	32	32	24	39	41.91	**Rp 1' 1/4 - 11**	259,90			
200	36	36	29	44.9	47.80	**Rp 1' 1/2 - 11**	356,50			
220	36	45	35	56.6	59.61	**Rp 2' - 11**	621,00			

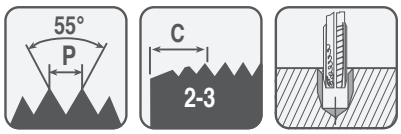
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

NORM ®

Codice Articolo

S 3^	





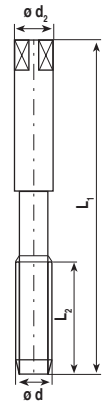
	NEUTRO	
Tol		
Mat	HSS	
Imbocco	C	

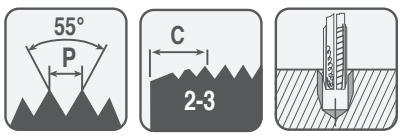
						Preforo				
L1	L2	d2	⌀	L.MIS.	Preforo	min	max	mm	d x p	
119	36	31.5	25	28.3	38.52	37.5	38.95	41.91	**Rc 1' ¼ - 11**	193,18
125	37	35.5	28	28.3	44.5	43.5	44.85	47.8	**Rc 1' ½ - 11**	250,00
160	41	45	31.5	32.7	56.5	55	56.66	59.61	**Rc 2' - 11**	400,00
						62.75	63.4	65.71	**Rc 2' ¼ - 11**	
						72.22	72.86	75.18	**Rc 2' ½ - 11**	700,00
164	48	50	39	40.2	84.15	84.92	85.56	87.88	**Rc 3' - 11**	1000,00
180	60	70	55		29.75	110	110.7	113.03	**Rc 4' - 11**	

DIN 374

Codice Articolo

TD	





	NEUTRO	
Tol		
Mat	HSS-E	
Imbocco	C	

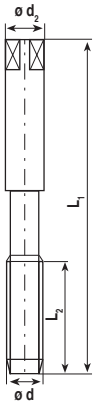
						Preforo				
L1	L2	d2	⌀	L.MIS.	Preforo	min	max	mm	d x p	
90	18	6	4.9	10.1	6.3	6.1	6.56	7.72	**Rc 1/16 - 28**	82,80
100	20	8	6.2	10.1	8.3	8.1	8.57	9.73	**Rc 1/8 - 28**	47,15
110	25	11	9	15	11.5	10.75	11.45	13.16	**Rc 1/4 - 19**	59,80
110	25	14	11	15.4	14.75	14.25	14.95	16.66	**Rc 3/8 - 19**	71,99
140	32	18	14.5	20.5	18.25	17.75	18.63	20.95	**Rc 1/2 - 14**	92,46
160	36	20	16	21.8	23.5	23	24.12	26.44	**Rc 3/4 - 14**	131,10
180	36	28	22	26	29.75	29	30.29	33.25	**Rc 1' - 11 ½**	181,70

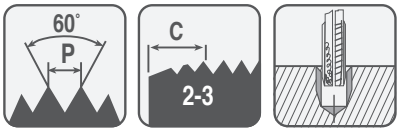
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

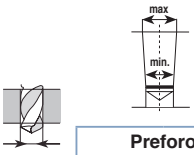
NORM Ⓑ

Codice Articolo

S 3^	







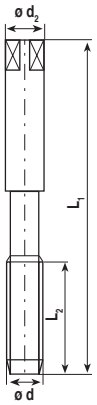
	NEUTRO	
Tol		
Mat	HSS	
Imbocco	C	

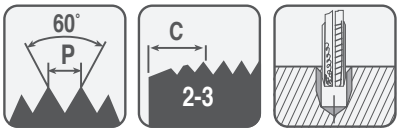
						Preforo					
L1	L2	d2	⌀	L.MIS.	Preforo	min	max	mm	d x p		
125	34	32	24	27	38	38.48	38.56	42.16	**NPT 1' ¼ - 11 ½**	193,18	
140	34	36	29	27	44	44.55	44.63	48.26	**NPT 1' ½ - 11 ½**	250,00	
160	36	36	29	28	56	56.59	56.67	60.32	**NPT 2' - 11 ½**	400,00	
160	55	45	35.5	41	67			73.02	**NPT 2' ½ - 8**	700,00	
160	58	50	39	43	83			88.9	**NPT 3' - 8**	1000,00	
180	60	70	55	46				114.3	**NPT 4' - 8**		

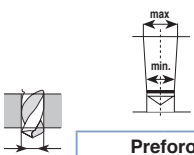
DIN 374

Codice Articolo

TD NPT	TD AZ NPT	TD NPTF







	NEUTRO	NEUTRO	NEUTRO
Tol			
Mat	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C

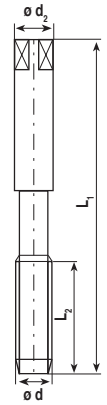
						Preforo						
L1	L2	d2	⌀	L.MIS.	Preforo	min	max	mm	d x p			
90	18	6	4.9	11	6.3	6.41	6.5	7.93	**NPT 1/16 - 27**	54,49	75,90	59,94
100	20	8	6.2	11	8.5	8.76	8.85	10.28	**NPT 1/8 - 27**	47,15	66,70	51,86
110	25	11	9	17	11.2	11.39	11.48	13.71	**NPT 1/4 - 18**	59,80	75,90	65,78
110	25	14	11	17	14.5	14.83	14.92	17.14	**NPT 3/8 - 18**	71,99	87,40	79,19
140	32	18	14.5	21	18	18.33	18.41	21.33	**NPT 1/2 - 14**	92,46	115,00	101,71
160	36	20	16	22	23	23.67	23.76	26.67	**NPT 3/4 - 14**	131,10	172,50	144,21
180	36	28	22	26	29	29.72	29.81	33.4	**NPT 1' - 11 ½**	181,70	239,20	189,75

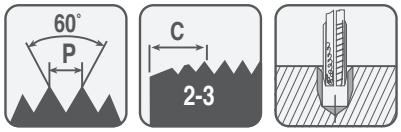
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 374

Codice Articolo

TD





	NEUTRO
Tol	
Mat	HSS-E
Imbocco	C

NPSM

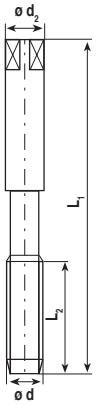
L1	L2	d2	⌀	Preforo	mm	d x p	
90	18	6	4.9	6.9	7.753	**NPSM 1/16 - 27**	59,80
100	16	7	5.5	9.1	10.10	**NPSM 1/8 - 27**	42,55
100	18	11	9	12	13.40	**NPSM 1/4 - 18**	55,20
110	22	12	9	15.5	16.84	**NPSM 3/8 - 18**	62,10
125	25	16	12	19	20.95	**NPSM 1/2 - 14**	77,05
140	25	20	16	24.5	26.29	**NPSM 3/4 - 14**	116,15
160	32	25	20	30.5	32.89	**NPSM 1' - 11½**	159,85
180	32	32	24	38	41.65	**NPSM 1' 1/4 - 11½**	
190	28	36	29	44	47.72	**NPSM 1' 1/2 - 11½**	
220	36	45	35	56	59.76	**NPSM 2' - 11½**	

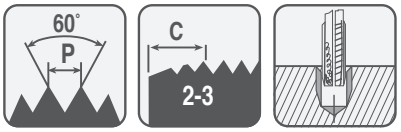
NPSF

L1	L2	d2	⌀	Preforo	mm	d x p	
90	18	6	4.9	6.9	7.64	**NPSF 1/16 - 27**	68,82
100	16	7	5.5	8.75	9.98	**NPSF 1/8 - 27**	55,06
100	18	11	9	11.2	13.23	**NPSF 1/4 - 18**	74,38
110	22	12	9	14.5	16.67	**NPSF 3/8 - 18**	83,32
125	25	16	12	18	20.73	**NPSF 1/2 - 14**	104,81
140	25	20	16	23.5	26.08	**NPSF 3/4 - 14**	137,66
160	32	25	20	29.5	32.63	**NPSF 1' - 11½**	

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 2184-2





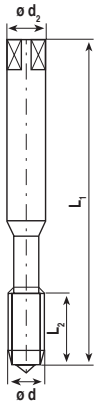
Codice Articolo

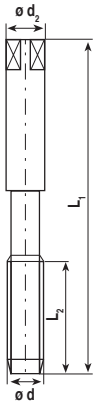
	S3P	3^
		
Tol	NEUTRO	NEUTRO
Mat	HSS	HSS
Imbocco	C	C

L1	L2	d2	⌀	Preforo	mm	d x p		FINITORE BOTTOMING
40	12	3.5	2.7	2.6	3.175	**Nr 5 - 40**	48,30	16,10
45	14	4	3	2.7	3.505	**Nr 6 - 32**	48,30	16,10
45	14	4.5	3.4	3.4	4.166	**Nr 8 - 32**	50,60	16,87
50	16	6	4.9	3.8	4.826	**Nr 10 - 24**	50,60	16,87
50	18	6	4.9	4.5	5.486	**Nr 12 - 24**	48,21	16,07
50	19	6	4.9	5.1	6.35	**NC 1/4 - 20**	43,59	14,53
56	22	6	4.9	6.5	7.94	**NC 5/16 - 18**	48,21	16,07
70	24	7	5.5	7.9	9.53	**NC 3/8 - 16**	54,49	18,17
70	24	8	6.2	9.3	11.11	**NC 7/16 - 14**	66,90	22,30
75	29	9	7	10.7	12.70	**NC 1/2 - 13**	76,24	25,41
80	30	11	9	12.3	14.29	**NC 9/16 - 12**	101,13	33,71
80	32	12	9	13.5	15.88	**NC 5/8 - 11**	105,85	35,28
95	40	14	11	16.5	19.05	**NC 3/4 - 10**	141,63	47,21
100	40	18	14.5	19.3	22.23	**NC 7/8 - 9**	178,94	59,65
110	50	18	14.5	22.25	25.40	**NC 1' - 8**	225,66	75,22
132	56	22	18	25	28.58	**NC 1' 1/8 - 7**	311,24	103,75
132	56	22	18	28.25	31.75	**NC 1' 1/4 - 7**	381,27	127,09
150	63	28	22	30.75	34.93	**NC 1' 3/8 - 6**	591,39	197,13
150	63	32	24	34	38.10	**NC 1' 1/2 - 6**	645,81	215,27
160	70	36	29	39.5	44.45	**NC 1' 3/4 - 5**	995,98	332,00
190	80	40	32	45.25	50.80	**NC 2' - 4½**	1276,05	425,35

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 371	DIN 376





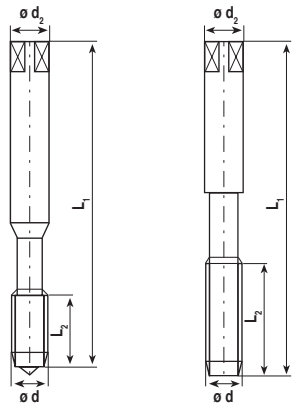
Codice Articolo

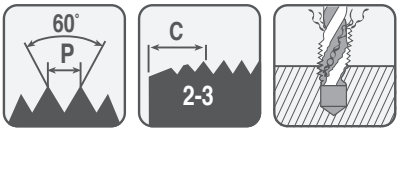
	TD	IC
	TAGLIENTI DRITTI / *STRAIGHT FLUTED*	IMBOCCO CORRETTO / *SPIRAL POINT*
		
	NEUTRO	NEUTRO
Tol	2B	2B
Mat	HSS-E	HSS-E
Imbocco	C	B

L1	L2	d2	⍁	Preforo	mm	d x p		
45	8	2.8	2.1	1.8	2.184	**Nr 2 - 56**	22,54	
50	9	2.8	2.1	2	2.515	**Nr 3 - 48**	22,54	
56	10	3.5	2.7	2.3	2.845	**Nr 4 - 40**	19,90	25,30
56	10	3.5	2.7	2.6	3.175	**Nr 5 - 40**	19,43	24,84
56	10	4	3.4	2.7	3.505	**Nr 6 - 32**	18,67	23,46
63	10	4.5	3.4	3.4	4.166	**Nr 8 - 32**	18,67	23,46
70	12	6	4.9	3.8	4.826	**Nr 10 - 24**	19,90	25,30
80	12	6	4.9	4.5	5.486	**Nr 12 - 24**	22,19	
80	16	7	5.5	5.1	6.35	**NC 1/4 - 20**	21,85	26,91
90	18	8	6.2	6.5	7.94	**NC 5/16 - 18**	22,43	28,06
100	20	10	8	7.9	9.53	**NC 3/8 - 16**	22,88	28,75
100	20	8	6.2	9.3	11.11	**NC 7/16 - 14**	28,75	37,49
110	25	9	7	10.7	12.70	**NC 1/2 - 13**	29,90	38,64
110	25	11	9	12.3	14.29	**NC 9/16 - 12**	44,85	58,19
110	25	12	9	13.5	15.88	**NC 5/8 - 11**	43,24	56,35
125	32	14	11	16.5	19.05	**NC 3/4 - 10**	55,20	71,30
140	32	18	14.5	19.3	22.23	**NC 7/8 - 9**	71,30	92,00
160	36	20	16	22.25	25.40	**NC 1' - 8**	101,20	131,10
180	40	22	18	25	28.58	**NC 1' 1/8 - 7**	133,40	
180	40	25	20	28.25	31.75	**NC 1' 1/4 - 7**	156,40	
200	45	28	22	30.75	34.93	**NC 1' 3/8 - 6**	220,80	
200	45	32	24	34	38.10	**NC 1' 1/2 - 6**	248,40	
220	50	36	29	39.5	44.45	**NC 1' 3/4 - 5**	529,00	
250	56	40	32	45.25	50.80	**NC 2' - 4½**	609,50	

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 100% SE DISPONIBILI A STOCK / *IF AVAILABLE AT STOCK*

DIN 371	DIN 376





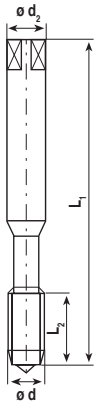
Codice Articolo

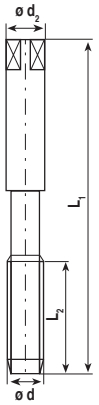
	FCE 15°	ER 35°	FORM	FORM-Y
	ELICOIDALI / SPIRAL FLUTED		*A RULLARE / FLUTELESS TAPS*	
				
	NEUTRO	NEUTRO	NEUTRO	TiN
Tol	**2B**	**2B**	**2BX**	**2BX**
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**C**	**C**	**C**

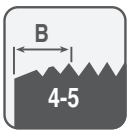
L1	L2	d2	⌀	Preforo	mm	d x p				
45	8	2.8	2.1	1.8	2.184	**Nr 2 - 56**	25,60	30,13		
50	9	2.8	2.1	2	2.515	**Nr 3 - 48**	25,12	28,29		
56	10	3.5	2.7	2.3	2.845	**Nr 4 - 40**	22,46	25,88		
56	10	3.5	2.7	2.6	3.175	**Nr 5 - 40**	22,46	25,88		
56	10	4	3.4	2.7	3.505	**Nr 6 - 32**	21,57	24,38	40,91	47,05
63	10	4.5	3.4	3.4	4.166	**Nr 8 - 32**	21,57	24,38		
70	12	6	4.9	3.8	4.826	**Nr 10 - 24**	22,94	26,45	48,86	55,00
80	12	6	4.9	4.5	5.486	**Nr 12 - 24**				
80	16	7	5.5	5.1	6.35	**NC 1/4 - 20**	24,63	27,60	47,50	56,82
90	18	8	6.2	6.5	7.94	**NC 5/16 - 18**	25,35	29,21	51,59	60,91
100	22	10	8	7.9	9.53	**NC 3/8 - 16**	25,84	29,90	60,00	71,36
100	20	8	6.2	9.3	11.11	**NC 7/16 - 14**	32,60	37,72		
110	25	9	7	10.7	12.70	**NC 1/2 - 13**	34,29	39,10		
110	25	11	9	12.3	14.29	**NC 9/16 - 12**	51,80	58,30		
110	25	12	9	13.5	15.88	**NC 5/8 - 11**	49,05	55,66		
125	32	14	11	16.5	19.05	**NC 3/4 - 10**	64,00	71,30		
140	32	18	14.5	19.3	22.23	**NC 7/8 - 9**	81,70	92,00		
160	36	20	16	22.25	25.40	**NC 1' - 8**	115,20	131,10		
180	40	22	18	25	28.58	**NC 1' 1/8 - 7**	155,77	172,50		
180	40	25	20	28.25	31.75	**NC 1' 1/4 - 7**	181,12	200,10		
200	45	28	22	30.75	34.93	**NC 1' 3/8 - 6**	258,40			
200	45	32	24	34	38.10	**NC 1' 1/2 - 6**	287,38			
220	50	36	29	39.5	44.45	**NC 1' 3/4 - 5**				
250	56	40	32	45.25	50.80	**NC 2' - 4½**				

HIGH PERFORMANCE

DIN 371	DIN 376







Codice Articolo

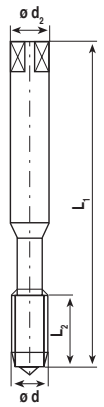
	HP IC-Y	HP IC-Z	T/N IC	HP FORM-Y
	IMBOCCO CORRETTO / SPIRAL POINT			A RULLARE / FLUTELESS TAPS
				
	TiN	ZHL	NEUTRO	TiN
Tol	2BX	2BX	2BX	2BX
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM
Imbocco	B	B	B	C

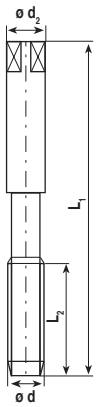
L1	L2	d2	⊠	Preforo	mm	d x p			TITANIO - NICHEL	
80	16	7	5.5	5.1	6.35	**NC 1/4 - 20**	34,50	37,50	29,90	41,59
90	18	8	6.2	6.5	7.94	**NC 5/16 - 18**	40,25	43,09	33,35	50,00
100	22	10	7	7.9	9.53	**NC 3/8 - 16**	49,45	50,41	39,30	62,50
110	25	9	7	10.7	12.70	**NC 1/2 - 13**				
110	20	11	9	12.3	14.29	**NC 9/16 - 12**				
110	25	12	9	13.5	15.88	**NC 5/8 - 11**				

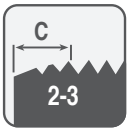
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
FORM: CANALINI DI LUBRIFICAZIONE / *OIL FLUTES* + 10%

HIGH PERFORMANCE

DIN 371	DIN 376







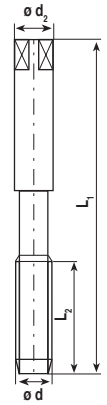
Codice Articolo

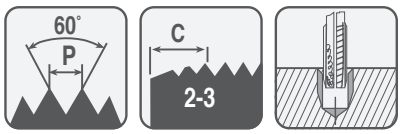
HP ER-Y 45°	HP ER-Z 45°	TI FCE 15°	NI ER 25°

	TiN	ZHL	NEUTRO	NEUTRO
Tol	**2BX**	**2BX**	**2BX**	**2BX**
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM
Imbocco	**C**	**C**	**C**	**C**

L1	L2	d2	⌀	Preforo	mm	d x p			TITANIO	NICHEL
80	11	7	5.5	5.1	6.35	**NC 1/4 - 20**	36,80	39,77	28,29	32,20
90	12	8	6.2	6.5	7.94	**NC 5/16 - 18**	43,70	46,5	31,05	37,95
100	15	10	7	7.9	9.53	**NC 3/8 - 16**	54,05	54,95	39,10	44,85
110	18	9	7	10.7	12.70	**NC 1/2 - 13**				
110	25	12	9	13.5	15.88	**NC 5/8 - 11**				

DIN 2184-2





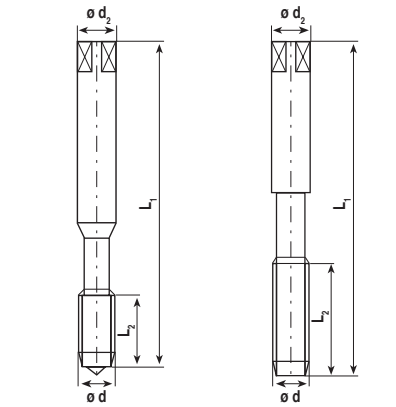
Codice Articolo

	S2P	3^
		
Tol	2B	2B
Mat	HSS	HSS
Imbocco	C	C

L1	L2	d2	⍁	Preforo	mm	d x p		FINITORE BOTTOMING
32	10	2.8	2.1	1.8	2.184	**Nr 2 - 64**		
32	10	2.8	2.1	2.1	2.515	**Nr 3 - 56**		
36	11	3.5	2.7	2.4	2.845	**Nr 4 - 48**		
36	11	3.5	2.7	2.6	3.175	**Nr 5 - 44**	34,50	17,25
40	12	4.5	3.4	2.9	3.505	**Nr 6 - 40**	34,04	17,02
40	12	4.5	3.4	3.5	4.166	**Nr 8 - 36**	34,04	17,02
45	14	8	4.9	4	4.826	**Nr 10 - 32**	34,50	17,25
50	14	6	4.9	4.6	5.486	**Nr 12 - 28**	37,37	18,69
50	18	6	4.9	5.4	6.35	**UNF 1/4-28**	31,88	15,94
56	22	6	4.9	6.9	7.94	**UNF 5/16-24**	36,13	18,06
63	22	7	5.5	8.4	9.53	**UNF 3/8-24**	39,54	19,76
63	22	8	6.2	9.9	11.11	**UNF 7/16-20**		
75	24	9	7	11.5	12.70	**UNF 1/2-20**		
80	28	11	9	13	14.29	**UNF 9/16-18**	74,69	37,34
80	28	12	9	14.5	15.88	**UNF 5/8-18**	77,49	38,74
95	32	14	11	17.4	19.05	**UNF 3/4-16**	102,70	51,35
100	36	18	14.5	20.4	22.23	**UNF 7/8-14**	130,73	65,37
110	40	18	14.5	23.25	25.40	**UNF 1' - 12**	168,08	84,05
110	50	22	18	26.5	28.58	**UNF 1' 1/8 - 12**	239,64	119,82
132	56	22	18	29.5	31.75	**UNF 1' 1/4 - 12**	280,14	140,07
132	56	28	22	32.7	34.93	**UNF 1' 3/8 - 12**		
150	63	32	24	36	38.10	**UNF 1' 1/2 - 12**	459,08	229,54

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 371	DIN 376



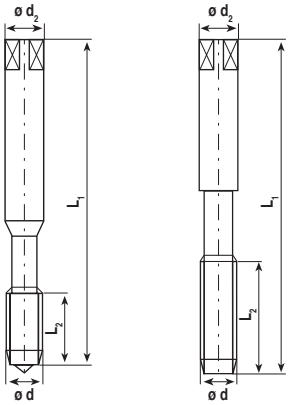
Codice Articolo

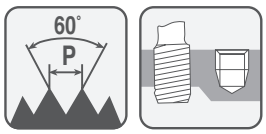
TD	IC	FCE	ER
TAGLIO DIRITTO / *STRIGHT FLUTED*	IMBOCCO CORRETTO / *SPIRAL POINT*	ELICOIDALI / *SPIRAL FLUTED*	

	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	**2B**	**2B**	**2B**	**2B**
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	**C**	**B**	**C**	**C**

L1	L2	d2	⌀	Preforo	mm	d x p				
45	8	2.8	2.1	1.8	2.184	**Nr 2 - 64**	23,69			
50	9	2.8	2.1	2.1	2.515	**Nr 3 - 56**	23,00			
56	10	3.5	2.7	2.4	2.845	**Nr 4 - 48**	20,70	27,05	23,91	26,91
56	10	3.5	2.7	2.6	3.175	**Nr 5 - 44**	20,24	26,45	23,43	26,45
56	10	4	3	2.9	3.505	**Nr 6 - 40**	19,21	25,07	22,22	25,07
63	10	4.5	3.4	3.5	4.166	**Nr 8 - 36**	19,55	25,30	22,70	25,53
70	12	6	4.9	4	4.826	**Nr 10 - 32**	20,47	26,45	23,66	27,14
80	14	6	4.9	4.6	5.486	**Nr 12 - 28**	23,00		26,56	30,59
80	16	7	5.5	5.4	6.35	**NF 1/4 - 28**	22,54	28,29	26,32	29,90
90	18	8	6.2	6.9	7.94	**NF 5/16 - 24**	23,69	30,82	27,53	31,05
100	16	7	5.5	8.4	9.53	**NF 3/8 - 24**	24,15	31,05	28,50	31,74
100	20	8	6.2	9.9	11.11	**NF 7/16 - 20**	32,20	40,25	37,07	41,86
100	18	9	7	11.5	12.70	**NF 1/2 - 20**	33,35	41,40	38,64	43,24
100	18	11	9	13	14.29	**NF 9/16 - 18**	49,45	60,95	57,00	64,17
100	18	12	9	14.5	15.88	**NF 5/8 - 18**	48,30	60,95	55,54	62,79
125	25	14	11	17.4	19.05	**NF 3/4 - 16**	62,10	77,74	71,73	80,73
125	25	18	14.5	20.4	22.23	**NF 7/8 - 14**	75,90	94,30	89,84	103,50
140	25	20	16	23.25	25.40	**NF 1' - 12**	107,64	133,40	127,76	138,00
150	32	22	18	26.52	28.58	**NF 1' 1/8 - 12**	135,70		158,67	172,50
150	28	22	18	29.5	31.75	**NF 1' 1/4 - 12**	161,00		190,79	207,00
160	25	28	22	32.7	34.93	**NF 1' 3/8 - 12**	216,20		255,99	
180	28	32	24	36	38.10	**NF 1' 1/2 - 12**	253,00		301,87	322,00

DIN 371	DIN 376





Codice Articolo

FORM	FORM-Y

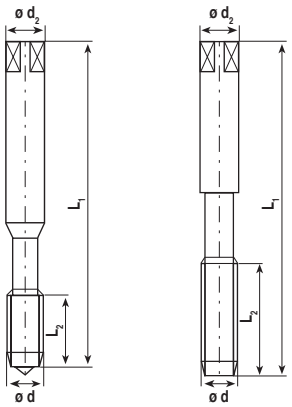
	NEUTRO	TiN
Tol	**2BX**	**2BX**
Mat	HSS-E	HSS-E
Imbocco	**C**	**C**

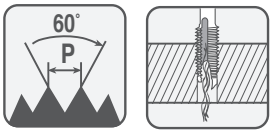
L1	L2	d2	⌀	Preforo	mm	d x p		
70	12	6	4.9	4.5	4.82	**Nr 10 - 32**	39,77	45,91
80	16	7	5.5	6	6.35	**Nr 1/4 - 28**	45,45	54,77
90	18	8	6.2	7.5	7.94	**Nr 5/16 - 24**	52,27	61,59
100	16	7	5.5	9.1	9.53	**Nr 3/8 - 24**	59,09	70,45

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 100% SE DISPONIBILI A STOCK - *IF AVAILABLE AT STOCK*
CANALINI DI LUBRIFICAZIONE / *OIL FLUTES* + 10%

HIGH PERFORMANCE

DIN 371	DIN 376





Codice Articolo

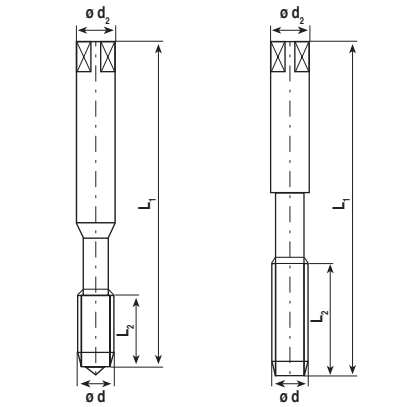
	HP IC-Y	HP IC-Z	T/N IC	HP FORM-Y
	IMBOCCO CORRETTO / SPIRAL POINT			A RULLARE / FLUTELESS TAPS
				
	TiN	ZHL	NEUTRO	TiN
Tol	2BX	2BX	2BX	2BX
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM
Imbocco	B	B	C	C

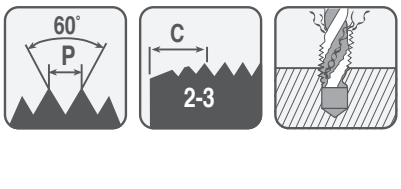
L1	L2	d2	⌀	Preforo	mm	d x p			TITANIO - NICHEL	
80	16	7	5.5	5.4	6.35	**NF 1/4 - 28**	36,36	39,68	31,82	45,00
90	18	6	6.2	6.9	7.94	**NF 5/16 - 24**	42,50	45,82	35,68	54,55
100	22	7	5.5	8.4	9.53	**NF 3/8 - 24**	52,27	53,82	42,05	68,18
100	20	8	6.2	9.9	11.11	**NF 7/16 - 20**				
100	18	9	7	11.5	12.70	**NF 1/2 - 20**				
100	18	11	9	13	14.29	**NF 9/16 - 18**				
100	18	12	9	14.5	15.88	**NF 5/8 - 18**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
FORM: CANALINI DI LUBRIFICAZIONE / *OIL FLUTES* + 10%

HIGH PERFORMANCE

DIN 371	DIN 376





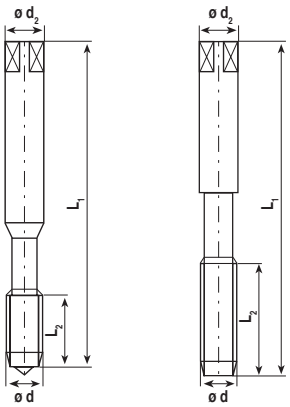
Codice Articolo

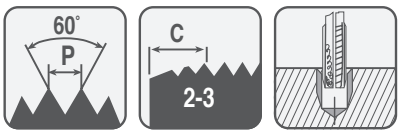
HP ER-Y 45°	HP ER-Z° 45°	TI FCE 15°	NI ER 25°

	TiN	ZHL	NEUTRO	NEUTRO
Tol	**2BX**	**2BX**	**2BX**	**2BX**
Mat	HSSCo-PM	HSSCo-PM	HSSCo-PM	HSSCo-PM
Imbocco	**C**	**C**	**C**	**C**

L1	L2	d2	⌀	Preforo	mm	d x p			TITANIO	NICHEL
80	11	7	5.5	5.4	6.35	**NF 1/4 - 28**	39,77	45,02	30,68	35,68
90	12	8	6.2	6.9	7.94	**NF 5/16 - 24**	46,59	49,91	34,09	42,05
100	12	10	7	8.4	9.53	**NF 3/8 - 24**	57,95	59,50	42,05	48,86
100	13	8	6.2	9.9	11.11	**NF 7/16 - 20**				
100	15	9	7	11.5	12.70	**NF 1/2 - 20**				
100	15	11	9	13	14.29	**NF 9/16 - 18**				
100	18	12	9	14.5	15.88	**NF 5/8 - 18**				

DIN 371	DIN 376





Codice Articolo

TD	IC	FCE 15°	ER 35°
TAGLIO DIRITTO / STRIGHT FLUTED	IMBOCCO CORRETTO / SPIRAL POINT	ELICOIDALI / SPIRAL FLUTED	

	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	2B	2B	2B	2B
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	B	C	C

UNEF

L1	L2	d2	⌀	Preforo	mm	d x p				
80	12	6	4.9	4.7	5.486	**Nr 12 - 32**	85,73			
80	16	4.5	3.4	5.6	6.35	**NEF 1/4 - 32**	38,64			
90	12	6	4.9	7.2	7.94	**NEF 5/16 - 32**	48,30			
100	12	7	5.5	8.8	9.53	**NEF 3/8 - 32**	57,96			
100	20	8	6.2	10.2	11.11	**NEF 7/16 - 28**	62,79			
100	18	9	7	11.8	12.70	**NEF 1/2 - 28**	72,45			
100	18	11	9	13.2	14.29	**NEF 9/16 - 24**	82,11			
100	18	12	9	14.75	15.88	**NEF 5/8 - 24**	91,77			
125	25	14	11	17.75	19.05	**NEF 3/4 - 20**	115,92			
125	25	18	14.5	21	22.23	**NEF 7/8 - 20**	142,48			
140	25	20	16	24.25	25.40	**NEF 1' - 20**	202,86			

	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	2B	2B	2B	2B
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	B	C	C

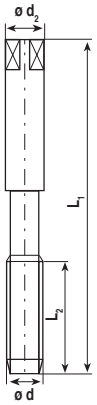
8 UN

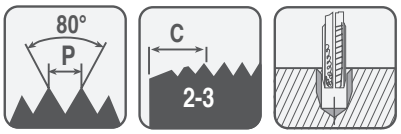
L1	L2	d2	⌀	Preforo	mm	d x p				
150	32	22	18	25.40	28.57	**UN 1' 1/8 - 8**	174,80	213,90	200,45	218,50
180	40	25	20	28.60	31.75	**UN 1' 1/4 - 8**	202,40	243,80	234,25	253,00
180	36	28	22	31.80	34.92	**UN 1' 3/8 - 8**	246,10	296,70	284,97	305,90
180	36	32	24	34.95	38.10	**UN 1' 1/2 - 8**	278,30	340,40	323,61	349,60
180	36	32	24	38.10	41.27	**UN 1' 5/8 - 8**	335,80	407,10	388,82	414,00
200	36	36	29	41.30	44.45	**UN 1' 3/4 - 8**	368,00	441,60	420,21	460,00
200	36	36	29	44.50	47.62	**UN 1' 7/8 - 8**	434,70		502,32	542,80
210	36	40	32	47.37	50.80	**UN 2' - 8**	471,50		540,96	591,10
240	50	40	32	53.90	57.15	**UN 2' 1/4 - 8**				
250	50	45	35	60.50	63.50	**UN 2' 1/2 - 8**				
270	50	50	39	66.50	69.85	**UN 2' 3/4 - 8**				
270	55	56	44	73	76.20	**UN 3' - 8**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

	8	12	14	16	18	20	24	27	28	32	36	40	48	56	60	64
6																
9/64																
8																
11/64																
10												UNS	UNS	UNS		
12										UNEF	UNS					
15/64																
1/4						UNS				UNEF	UNS	UNS		UNS		
9/32																
5/16										UNEF		UNS				
3/8					UNS	UN20		UNS	UN28	UNEF		UNS				
7/16							UNS	UNS	UNEF	UN32						
1/2							UNS	UNS	UNEF	UN32						
9/16							UNEF									
5/8				UN16		UN20	UNEF	UNS	UN28							
11/16				UN16	UNS		UNEF									
3/4					UNS	UNEF		UNS	UN28							
13/16				UN16		UNEF										
7/8		UN12		UN16	UNS	UNEF	UNS									
15/16				UN16	UNS											
1'			UNS	UN16	UNS	UNEF	UNS			UN32						
1'1/16		UN12		UN16	UNEF	UN20										
1'1/8	UN8			UN16	UNEF	UN20										
1'3/16	UN8	UN12		UN16	UNEF											
1'1/4	UN8		UNS	UN16	UNEF	UN20										
1'5/16		UN12	UNS	UN16												
1'3/8	UN8				UNEF	UN20										
1'7/16		UN12			UNEF											
1'1/2	UN8			UN16	UNEF											
1'9/16																
1'5/8	UN8	UN12														
1'11/16																
1'3/4	UN8	UN12														
1'13/16																
1'7/8	UN8	UN12				UN20										
1'15/16																
2'	UN8	UN12		UN16												
2'1/8																
2'1/4	UN8															
2'3/8																
2'1/2	UN8	UN12														
2'3/4																
2'7/8	UN8															
3'	UN8															
	8	12	14	16	18	20	24	27	28	32	36	40	48	56	60	64

DIN 374



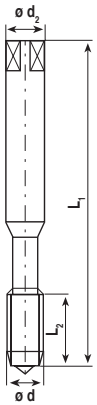


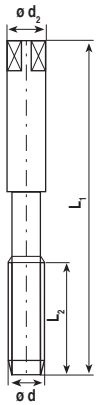
Codice Articolo

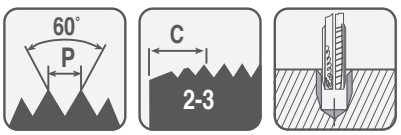
	TD	
PG		
Tol	PG NEUTRO 2B	
Mat	HSS-E	
Imbocco	C	

L1	L2	d2	⌀	Preforo	mm	p	d	
100	18	9	7	11.4	12.50	**20**	**PG 7**	51,98
100	18	12	9	14	15.20	**18**	**PG 9**	67,16
125	25	14	11	17.35	18.60	**18**	**PG 11**	87,40
125	25	16	12	19	20.40	**18**	**PG 13.5**	93,15
125	25	18	14.5	21.25	22.50	**18**	**PG 16**	113,85
150	25	20	16	26.75	28.30	**16**	**PG 21**	157,13
180	28	32	24	35.5	37	**16**	**PG 29**	243,80
190	28	36	29	45.5	47	**16**	**PG 36**	365,70
200	36	40	32	52.5	54	**16**	**PG 42**	441,60
220	36	45	35	57.8	59.30	**16**	**PG 48**	731,40

DIN 371 | DIN 376







Codice Articolo

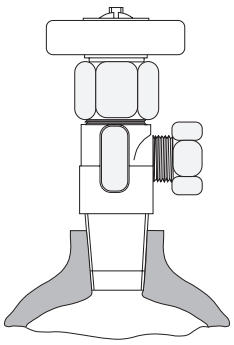
	TD	TD	TD
	ETRTO	DIN 7756	ISO 4570
			
Tol	NEUTRO	NEUTRO	NEUTRO
Mat	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C

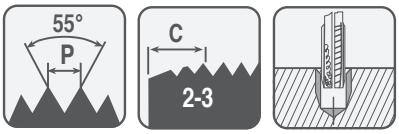
L1	L2	d2	⌀	Preforo	mm	d x p		d x p		d x p	
80	14	6	4.9			**5V1-2**	59,09	**VG5**	59,09	**5V1**	59,09
90	18	6	4.9			**8V1-2**	63,64	**VG8**	63,64	**8V1**	63,64
100	16	7	5.5			**10V1**	91,82	**VG9.6**		**10V2**	

NORM ®

Codice Articolo

TD			





	NEUTRO			
Tol				
Mat	HSS-E			
Imbocco	**C**			

FILETTATURA CONICA (CON.3:25) / *TAPERED THREAD (TAPER CON. 3:25)*

L1	L2	d2	⌀	Preforo	d x p				
100	30	18	14.5		**W 19.8 - 14**	174,80			
110	40	22	18		**W 28.8 - 14**	228,85			

STANDARD FRANCESE CON/TAP/KEG 1:10 (60°)

L1	L2	d2	⌀	Preforo	d x p				
160	36	18	14.5		**M 24.2 x 2**	226,14			

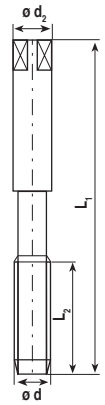
STANDARD ITALIANO CON/TAP/KEG 1:10 (60°)

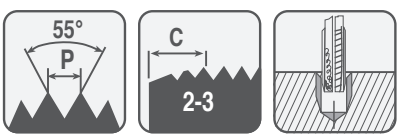
L1	L2	d2	⌀	Preforo	d x p				
160	36	20	16		**M 26 x 2**	226,14			

DIN 374

Codice Articolo

TD	TD		





	NEUTRO	NEUTRO		
Tol				
Mat	HSS-E	HSS-E		
Imbocco	**C**	**C**		

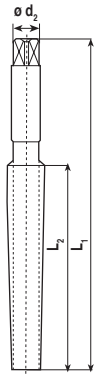
L1	L2	d2	⌀	Preforo	d x p		LH		
125	25	18	14.5	19.7	**W 21.7- 14**	172,50	189,75		
125	25	18	14.5	19.8	**W 21.8 - 14**	158,70	174,57		
140	25	18	14.5	22.3	**W 24.32 - 14**				

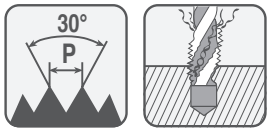
STANDARD ITALIANO

125	25	16	12		**W 20 - 14**				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

NORM Ⓑ





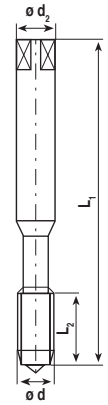
Codice Articolo

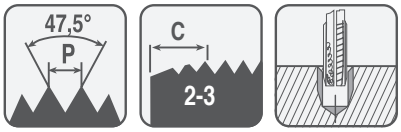
	TD	TD	ESP	ESP
	TAGLIENTI DIRITTI / *STRAIGHT FLUTED*		ELICOIDALI ELICA 10° / *SPIRAL FLUTED 10°*	
				
	NEUTRO	NEUTRO	NEUTRO	NEUTRO
Tol	7H	7H	7H	7H
Mat	HSS-E	HSS-E	HSS-E	HSS-E
Imbocco	C	C	C	C

				Preforo						
L1	L2	d2	⍁	min	max	d x p		LH		LH
130	60	6	4.9	6	6.23	**Tr 8 x 2**				
140	60	7	5.5	8	8.23	**Tr 10 x 2**	173,65	173,65	202,40	232,76
176	90	8	6.2	9	9.31	**Tr 12 x 3**	236,90	236,90	273,70	314,75
210	120	9	7	10	10.37	**Tr 14 x 4**	340,40	340,40	395,60	454,94
220	120	11	9	12	12.37	**Tr 16 x 4**	340,40	340,40	395,60	454,94
250	150	13	10	14	14.37	**Tr 18 x 4**	368,00	368,00	432,40	497,26
260	150	14	11	16	16.37	**Tr 20 x 4**	368,00	368,00	432,40	497,26
260	150	14	11	15	15.45	**Tr 20 x 5**				
300	180	16	12	17	17.45	**Tr 22 x 5**	506,00	506,00	593,40	682,41
260	150	18	14.5	19	19.45	**Tr 24 x 5**	529,00	529,00	632,50	727,38
310	180	20	16	20	20.45	**Tr 25 x 5**	547,40	547,40	655,50	753,83
310	180	20	16	21	21.44	**Tr 26 x 5**	547,40	547,40	655,50	753,83
310	180	22	18	23	23.45	**Tr 28 x 5**	611,80	611,80	717,60	825,24
320	180	22	18	24	24.50	**Tr 30 x 6**	724,50	724,50	846,40	973,36
360	200	28	22	30	30.50	**Tr 36 x 6**	966,00	966,00	1127,00	1161,50

Codice Articolo

TD





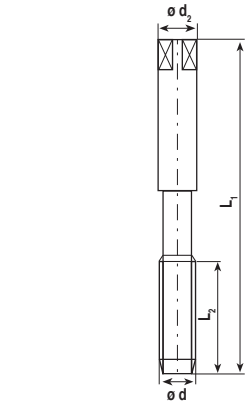
	NEUTRO
Tol	
Mat	HSS-E
Imbocco	C

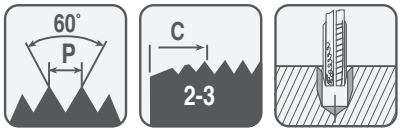
L1	L2	d2	⌀	Preforo	P	d
66	19	6.3	5	5	1	**0 BA**
62	17	5.6	5	4.4	0.9	**1 BA**
58	16	5	4	4.7	0.81	**2 BA**
53	13	4.5	3.55	4.1	0.73	**3 BA**
50	13	3.55	2.8	3.6	0.66	**4 BA**
48	11	2.5	2.5	3.2	0.59	**5 BA**
44.5	15.5	2.24	2.24	2.8	0.53	**6 BA**

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

Codice Articolo

FCE





	NEUTRO
Tol	
Mat	HSS-E
Imbocco	**C**

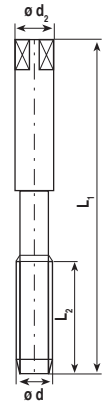
EG M

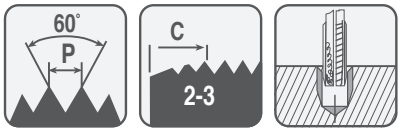
L1	L2	d2	⍁	Preforo	Ø	d x p	
63	10	4.5	3.4	3.15	3.65	**M 3 X 0.5**	26,14
70	12	6	4.9	4.20	4.91	**M 4 X 0.7**	26,14
80	14	6	4.9	5.25	6.04	**M 5 X 0.8**	27,27
90	18	8	6.2	6.30	7.30	**M 6 X 1**	28,41
100	22	10	8	8.40	9.62	**M 8 X 1.25**	32,95
110	22	9	7	10.4	11.95	**M 10 X 1.5**	39,77
110	25	11	9	12.5	14.27	**M 12 X 1.75**	51,14
110	22	12	9	14.5	16.58	**M 14 X 2**	65,91

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

NASM 33537

FILETTATURA AMERICANA EG-UNF / EG-UNC PER INSERTI FILETTATI
EG-UNF / EG-UNC UNIFIED NATIONAL THREAD FOR WIRE THREAD INSERTS
ELICOIDALI 15° / *SPIRAL FLUTED 15°*





Codice Articolo

	FCE
Tol	
Mat	HSS-E
Imbocco	C

EG-UNF

L1	L2	d2	⌀	Preforo	Ø	d x p	
70	12	6	4.9	3.7	4.33	**Nr 6 x 40**	34,53
80	12	6	4.9	4.4	5.08	**Nr 8 x 36**	34,53
80	12	6	4.9	5.1	5.8	**Nr 10 x 32**	35,26
90	18	8	6.2	6.6	7.5	**NF 1/4 x 28**	38,16
100	20	8	6.2	9.8	10.89	**NF 3/8 x 24**	45,16
100	18	12	9	13.1	14.35	**NF 1/2 x 20**	56,51

Codice Articolo

	FCE
Tol	
Mat	HSS-E
Imbocco	C

EG-UNC

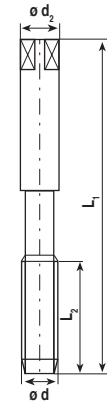
L1	L2	d2	⌀	Preforo	Ø	d x p	
63	10	4.5	3.4	3.1	3.67	**Nr 4 - 40**	32,84
70	12	6	4.9	3.8	4.53	**Nr 6 - 32**	31,63
80	12	6	4.9	4.5	5.19	**Nr 8 - 32**	31,63
80	16	7	5.5	5.3	6.20	**Nr 10 - 24**	34,06
90	18	8	6.2	6.8	8	**NC 1/4 - 20**	34,78
100	22	10	8	8.4	9.77	**NC 5/16 - 18**	37,19
110	22	9	7	10	11.58	**NC 3/8 - 16**	38,64
110	25	12	9	13.3	15.23	**NC 1/2 - 13**	50,47

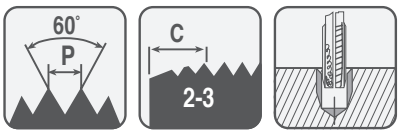
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

GAMMA DI MASCHI ECONOMICI
SET OF LOW COST TAPS

Codice Articolo

DIN 352	BE 3P	BE 3^



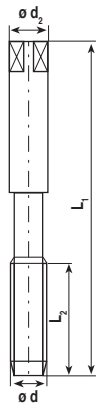


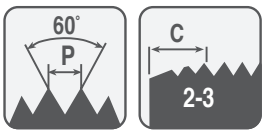
	NEUTRO	NEUTRO
Tol	**medium**	**medium**
Mat	HSS	HSS
Imbocco	**C**	**C**

d x p		FINITORE BOTTOMING
M 3 x 0.5	16,32	5,44
M 3.5 x 0.6	22,31	7,44
M 4 x 0.7	16,32	5,44
M 5 x 0.8	17,63	5,88
M 6 x 1	18,45	6,15
M 7 x 1	27,14	9,05
M 8 x 1.25	22,79	7,60
M 9 x 1.25	34,50	11,50
M 10 x 1.5	26,96	8,99
M 12 x 1.75	34,30	11,44

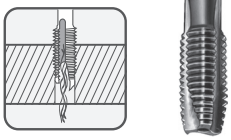
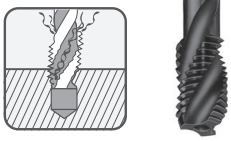
PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

DIN 371





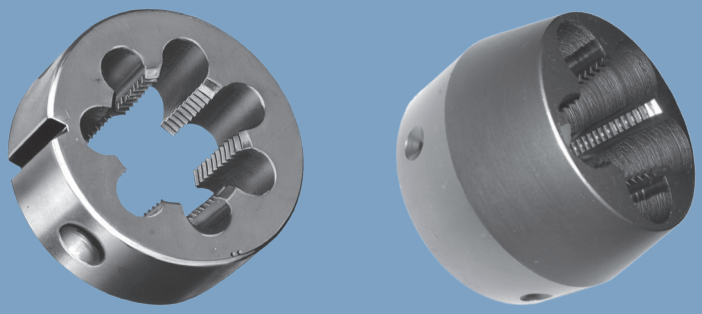
Codice Articolo

	IC	ER
		
		
Tol		
Mat	HSS-E	HSS-E
Imbocco	**C**	**C**

d x p		
M 3 x 0.5	11,38	12,99
M 3.5 x 0.6		
M 4 x 0.7	11,38	13,57
M 5 x 0.8	11,96	14,26
M 6 x 1	11,96	14,26
M 7 x 1		
M 8 x 1.25	14,26	16,44
M 9 x 1.25		
M 10 x 1.5	16,79	19,55
M 12 x 1.75	21,39	24,84

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

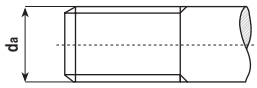
NOTE
NOTES

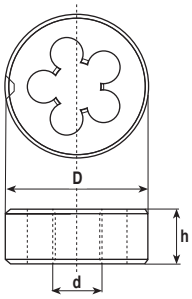


FILIERE NORMALI
NORMAL ROUND DIES

FILIERE CAMPANA
BELL FORM

FILETTATURA METRICA ISO A PASSO GROSSO
ISO METRIC COARSE THREAD
FILIERE NORMALI / *NORMAL ROUND DIES* - FILIERE CAMPANA / *BELL FORM*





Codice Articolo

FN	FK

	NEUTRO	NEUTRO
Tol	6G	6G
Mat	HSS	HSSCo-PM

Codice Articolo

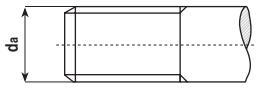
FCAM	FKCAM

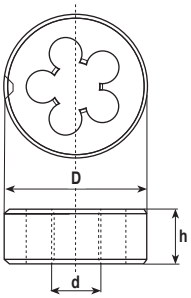
	NEUTRO	NEUTRO
Tol	6G	6G
Mat	HSS	HSSCo-PM

da	d x p	D	h N	h CAM		
0.97	**M 1 x 0.25**	16	5		55,62	
1.17	**M 1.2 x 0.25**	16	5		52,40	
1.36	**M 1.4 x 0.3**	16	5		44,49	
1.54	**M 1.6 x 0.35**	16	5		42,89	
	M 1.7 x 0.35	16	5		42,89	
1.74	**M 1.8 x 0.35**	16	5		42,89	
1.94	**M 2 x 0.4**	16	5		39,75	
		20	5		33,33	
2.13	**M 2.2 x 0.45**	16	5		39,75	
		20	5		33,33	
2.24	**M 2.3 x 0.4**	16	5		39,75	
		20	5		32,07	
2.43	**M 2.5 x 0.45**	16	5		39,75	
2.53	**M 2.6 x 0.45**	16	5		39,75	
		20	5		30,94	
2.92	**M 3 x 0.5**	16	5	9	35,21	
		20	5	11	27,47	
		25	5		35,21	
3.41	**M 3.5 x 0.6**	20	5		29,81	
3.90	**M 4 x 0.7**	16	5	9	35,21	
		20	5	11	26,74	
		25	7		35,21	
4.40	**M 4.5 x 0.75**	20	7		33,62	
4.90	**M 5 x 0.8**	16		9		
		20	7	11	25,22	
		25	7		33,62	
5.40	**M 5.5 x 0.9**	20	7		42,89	
5.88	**M 6 x 1**	20	7	11	25,40	
		25	9		33,62	
6.88	**M 7 x 1**	20	7		35,88	
		25	9		31,74	
7.97	**M 8 x 1.25**	25	9	14.5	28,29	
		30	11		42,07	
		38	10		46,08	

da	d x p	D	h N	h CAM		
0.97	**M 1 x 0.25**	16				
1.17	**M 1.2 x 0.25**	16				
1.36	**M 1.4 x 0.3**	16				
1.54	**M 1.6 x 0.35**	16				
	M 1.7 x 0.35	16				
1.74	**M 1.8 x 0.35**	16				
1.94	**M 2 x 0.4**	16				
		20				
2.13	**M 2.2 x 0.45**	16				
		20				
2.24	**M 2.3 x 0.4**	16				
		20				
2.43	**M 2.5 x 0.45**	16				
2.53	**M 2.6 x 0.45**	16				
		20				
2.92	**M 3 x 0.5**	16		9	43,70	
		20		11	44,60	
		25				
3.41	**M 3.5 x 0.6**	20				
3.90	**M 4 x 0.7**	16		9	43,70	
		20		11	43,70	
		25				
4.40	**M 4.5 x 0.75**	20				
4.90	**M 5 x 0.8**	16		9	43,70	
		20		11	43,70	
		25				
5.40	**M 5.5 x 0.9**	20				
5.88	**M 6 x 1**	20		11	43,70	
		25				
6.88	**M 7 x 1**	20				
		25				
7.97	**M 8 x 1.25**	25		14.5	51,65	
		30				
		38				

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK - *IF AVAILABLE AT STOCK*





Codice Articolo

FN	FK

	NEUTRO	NEUTRO
Tol	6G	6G
Mat	HSS	HSSCo-PM

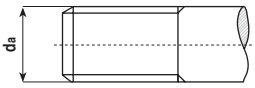
da	d x p	D	h N	h CAM		
8.86	**M 9 x 1.25**	25	9		37,39	
9.85	**M 10 x 1.5**	25	9	14.5	45,78	
		30	11		34,88	
		38	10		44,60	
10.85	**M 11 x 1.5**	30	11		47,68	
		38	10		61,98	
11.83	**M 12 x 1.75**	38	14		44,27	
13.82	**M 14 x 2**	38	14		45,80	
15.82	**M 16 x 2**	38	14		72,77	
		45	18		60,36	
17.79	**M 18 x 2.5**	38	14			
		45	18		62,22	
19.79	**M 20 x 2.5**	38	14			
		45	18		62,22	
		50	18			
21.79	**M 22 x 2.5**	55	22		90,39	
23.76	**M 24 x 3**	55	22		88,63	
26.76	**M 27 x 3**	65	25		129,83	
29.73	**M 30 x 3.5**	65	25		129,83	
32.73	**M 33 x 3.5**	65	25		137,44	
35.70	**M 36 x 4**	65	25		137,44	
38.70	**M 39 x 4**	75	30		218,33	
41.68	**M 42 x 4.5**	75	30		225,38	
44.93	**M 45 x 4.5**	90	36		333,38	
47.92	**M 48 x 5**	90	36		333,38	
51.29	**M 52 x 5**	90	36		352,16	

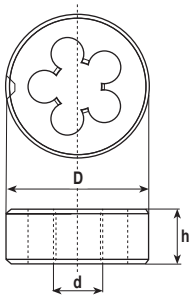
Codice Articolo

FCAM	FKCAM

	NEUTRO	NEUTRO
Tol	6G	6G
Mat	HSS	HSSCo-PM

da	d x p	D	h N	h CAM		
8.86	**M 9 x 1.25**	25				
9.85	**M 10 x 1.5**	25		14.5	68,09	
		30				
		38				
10.85	**M 11 x 1.5**	30				
		38				
11.83	**M 12 x 1.75**	38			84,52	
13.82	**M 14 x 2**	38				
15.82	**M 16 x 2**	38				
		45				
17.79	**M 18 x 2.5**	38				
		45				
19.79	**M 20 x 2.5**	38				
		45				
		50				
21.79	**M 22 x 2.5**	55				
23.76	**M 24 x 3**	55				
26.76	**M 27 x 3**	65				
29.73	**M 30 x 3.5**	65				
32.73	**M 33 x 3.5**	65				
35.70	**M 36 x 4**	65				
38.70	**M 39 x 4**	75				
41.68	**M 42 x 4.5**	75				
44.93	**M 45 x 4.5**	90				
47.92	**M 48 x 5**	90				
51.29	**M 52 x 5**	60				





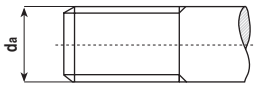
Codice Articolo

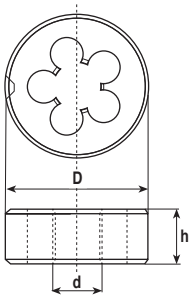
	FN	FCAM		FN	FCAM

	NEUTRO	NEUTRO		NEUTRO	NEUTRO
Tol	6G	6G		6G	6G
Mat	HSS	HSS		HSS	HSS

da	d x p	D	h N	h CAM		da	d x p	D	h N	h CAM	
1.98	**M 2 x 0.25**	16	5		49,31	12.88	**M 13 x 1**	38	10		64,36
2.15	**M 2.2 x 0.25**	16	5		46,95	12.90	**M 13 x 1.25**	38	10		84,52
2.44	**M 2.5 x 0.35**	16	5		46,95	12.85	**M 13 x 1.5**	38	10		84,52
2.54	**M 2.6x 0.35**	16	5			12.93	**M 14 x 0.5**	38	10		95,29
2.94	**M 3 x 0.35**	20	5		36,56	13.90	**M 14 x 0.75**	38	10		65,15
3.44	**M 3.5 x 0.35**	20	5		39,92	13.88	**M 14 x 1**	38	10		53,22
3.93	**M 4 x 0.5**	20	5		32,07	13.86	**M 14 x 1.25**	38	14		56,35
4.43	**M 4.5 x 0.5**	20	7		42,76	13.85	**M 14 x 1.5**	38	14		50,80
4.90	**M 5 x 0.5**	20	7		32,07	14.95	**M 15 x 0.5**	38	10		
5.43	**M 5.5 x 0.5**	20	7		62,64	14.97	**M 15 x 0.75**	38	10		88,04
5.92	**M 6 x 0.5**	20	7		36,62	14.88	**M 15 x 1**	38	10		58,77
5.90	**M 6 x 0.75**	20	7		31,27	14.86	**M 15 x 1.25**	38	14		83,34
		25	9			14.85	**M 15 x 1.5**	38	14		62,75
6.93	**M 7 x 0.5**	25	9		52,40	15.95	**M 16 x 0.5**	38	10		139,18
6.90	**M 7 x 0.75**	25	9		36,21	15.97	**M 16 x 0.75**	38	10		96,90
7.93	**M 8 x 0.5**	25	9		49,31	15.88	**M 16 x 1**	38	10		76,07
7.90	**M 8 x 0.75**	25	9		34,94			45	14		76,07
7.88	**M 8 x 1**	25	9		34,94	15.86	**M 16 x 1.25**	38	14		84,52
8.93	**M 9 x 0.5**	25	9		61,96	15.85	**M 16 x 1.5**	38	14		68,79
8.90	**M 9 x 0.75**	25	9		44,49			45	14		68,79
8.88	**M 9 x 1**	25	9		38,50	16.97	**M 17 x 0.75**	38	10		
9.93	**M 10 x 0.5**	30	11		62,64	16.88	**M 17 x 1**	38	10		79,82
9.90	**M 10 x 0.75**	30	11		46,95	16.86	**M 17 x 1.25**	38	14		
		38	10			16.85	**M 17 x 1.5**	38	14		89,21
9.88	**M 10 x 1**	25	9		49,31	17.97	**M 18 x 0.75**	38	10		103,23
		30	11		42,89	17.88	**M 18 x 1**	38	10		73,95
		38	10		49,31			45	14		
9.86	**M 10 x 1.25**	25	9		51,65	17.80	**M 18 x 1.25**	38	14		97,43
		30	11		46,48	17.85	**M 18 x 1.5**	38	14		67,14
		38	10					45	14		67,14
10.93	**M 11 x 0.5**	30	11		82,18	17.80	**M 18 x 2**	38	14		79,10
10.90	**M 11 x 0.75**	30	11		53,99	18.88	**M 19x 1**	38	14		97,43
10.88	**M 11 x 1**	30	11		46,02	18.85	**M 19 x 1.5**	38	14		147,90
		38	10		54,82	19.97	**M 20 x 0.75**	45	10		167,86
11.86	**M 11 x 1.25**	30	11		60,10	19.88	**M 20 x 1**	38	10		82,50
		38	10					45	10		73,88
11.93	**M 12 x 0.5**	38	10		83,44	19.86	**M 20 x 1.25**	38	14		
11.90	**M 12 x 0.75**	38	10		57,94	19.85	**M 20 x 1.5**	38	14		78,18
11.88	**M 12 x 1**	38	10		53,29			45	14		67,50
11.86	**M 12 x 1.25**	38	10		55,17			50	14		
11.85	**M 12 x 1.5**	38	10		50,80	19.80	**M 20 x 2**	45	18		78,62
12.90	**M 13 x 0.5**	38	10					50	18		
12.95	**M 13 x 0.75**	38	10		81,00						

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK - *IF AVAILABLE AT STOCK*





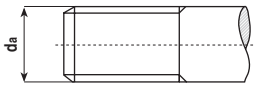
Codice Articolo

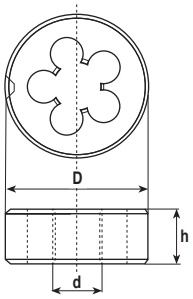
	FN	FCAM		FN	FCAM
	NEUTRO	NEUTRO		NEUTRO	NEUTRO
Tol	6G	6G		6G	6G
Mat	HSS	HSS		HSS	HSS

da	d x p	D	h N		
20.88	**M 21 x 1**	50	14	100,96	
21.97	**M 22 x 0.75**	50	14		
21.88	**M 22 x 1**	45	14		
		50	14	96,25	
		55	16	100,90	
21.86	**M 22 x 1.25**	50	14		
21.85	**M 22 x 1.5**	45	14	98,60	
		50	14	87,36	
		55	16	89,21	
21.80	**M 22 x 2**	45	18	111,51	
		50	18		
22.85	**M 23 x 1.5**	50	14		
23.88	**M 24 x 1**	50	14	102,12	
23.86	**M 24 x 1.25**	50	14		
23.85	**M 24 x 1.5**	50	14	97,43	
		55	18	93,69	
23.80	**M 24 x 2**	50	18	99,31	
		55	16	99,31	
24.88	**M 25 x 1**	50	14	125,51	
24.86	**M 25 x 1.25**	50	14		
24.85	**M 25 x 1.5**	50	14		
		55	14	108,00	
24.80	**M 25 x 2**	55	18	119,74	
25.88	**M 26 x 1**	55	14	128,63	
25.86	**M 26 x 1.25**	55	14		
25.85	**M 26 x 1.5**	50	14		
		55	14	105,25	
25.80	**M 26 x 2**	55	18	140,28	
26.88	**M 27 x 1**	65	16	149,08	
26.85	**M 27 x 1.5**	50	14		
		65	18	131,47	
26.80	**M 27 x 2**	50	18	157,29	
		65	18	145,56	
27.88	**M 28 x 1**	65	14	150,25	
27.85	**M 28 x 1.5**	50	14		
		65	18	133,44	
27.80	**M 28 x 2**	50	18		
		65	18	166,78	
28.85	**M 29 x 1.5**	65	18		
29.85	**M 30 x 1**	65	16	150,91	
29.85	**M 30 x 1.5**	65	18	135,04	
29.80	**M 30 x 2**	65	18	139,92	
29.80	**M 30 x 3**	65	18	220,69	

da	d x p	D	h N		
31.88	**M 32 x 1**	65	16	159,65	
31.65	**M 32 x 1.5**	65	18	135,04	
31.82	**M 32 x 2**	65	18	157,25	
32.88	**M 33 x 1**	65	16		
32.85	**M 33 x 1.5**	65	18	142,98	
32.82	**M 33 x 2**	65	18	150,91	
34.88	**M 35 x 1**	65	16		
34.85	**M 35 x 1.5**	65	18	142,98	
34.82	**M 35 x 2**	65	18	174,72	
35.88	**M 36 x 1**	65	16	178,43	
35.85	**M 36 x 1.5**	65	18	142,98	
35.82	**M 36 x 2**	65	18	150,91	
35.90	**M 36 x 3**	65	25	164,34	
37.88	**M 38 x 1**	75	20	363,89	
37.85	**M 38 x 1.5**	75	20	219,20	
37.82	**M 38 x 2**	75	20	246,52	
38.82	**M 39 x 2**	75	20	246,52	
38.76	**M 39x 3**	75	30	258,25	
39.88	**M 40 x 1**	75	20		
39.85	**M 40 x 1.5**	75	20	219,20	
41.85	**M 42 x 1.5**	75	20	219,20	
41.82	**M 42 x 2**	75	20	254,14	
41.76	**M 42 x 3**	75	30	266,89	
44.88	**M 45 x 1**	75	20		
44.85	**M 45 x 1.5**	75	20	295,49	
44.82	**M 45 x 2**	90	22	333,57	
44.76	**M 45 x 3**	90	36	357,44	
47.88	**M 48 x 1**	90	22		
47.85	**M 48 x 1.5**	90	22	309,76	
47.82	**M 48 x 2**	90	22	333,57	
47.76	**M 48 x 3**	90	36	365,37	
49.88	**M 50 x 1**	90	22		
49.85	**M 50 x 1.5**	90	22	309,76	
49.82	**M 50 x 2**	90	22	346,31	
51.85	**M 52 x 1.5**	90	22	309,76	
51.82	**M 52 x 2**	90	22	346,31	
51.76	**M 52 x 3**	90	36	389,72	
55.60	**M 56 x 4**	90	36		

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 50% SE DISPONIBILI A STOCK - *IF AVAILABLE AT STOCK*





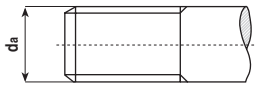
Codice Articolo

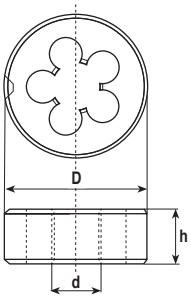
FN

	NEUTRO
Tol	medium
Mat	HSS

da	mm	d x p	D	h N	
1.54	1.59	**W 1/16 - 60**	16	5	65,74
2.33	2.38	**W 3/32 - 48**	20	5	49,31
3.12	3.17	**W 1/8 - 40**	16	5	34,75
			20	5	32,87
3.82	3.97	**W 5/32 - 32**	20	5	34,04
			25	7	
4.61	4.76	**W 3/16 - 24**	20	5	34,04
			25	7	
5.41	5.56	**W 7/32 - 24**	20	7	37,10
6.20	6.35	**W 1/4 - 20**	20	7	32,39
			25	9	37,10
6.99	7.14	**W 9/32 - 20**	25	9	58,70
7.79	7.94	**W 5/16 - 18**	25	9	36,62
9.38	9.53	**W 3/8 - 16**	30	11	41,56
			38	10	
10.89	11.11	**W 7/16 - 14**	30	11	44,60
			38	14	
12.52	12.70	**W 1/2 - 12**	38	14	54,47
14.11	14.29	**W 9/16 - 12**	38	14	58,70
15.7	15.88	**W 5/8 - 11**	38	14	74,65
			45	18	72,77
16.98	17.46	**W 11/16 - 11**	45	18	
18.87	19.05	**W 3/4 - 10**	45	18	77,47
20.18	20.36	**W 13/16 - 10**	45	18	
22	22.23	**W 7/8 - 9**	50	18	
		W 15/16 - 9	50	18	
25.2	25.4	**W 1' - 8**	55	18	103,30
28.38	28.58	**W 1' 1/8 - 7**	65	25	187,82
31.15	31.75	**W 1' 1/4 - 7**	65	25	183,12
34.28	34.93	**W 1' 3/8 - 6**	65	25	178,43
37.47	38.10	**W 1' 1/2 - 6**	75	30	269,98
44.11	44.45	**W 1' 3/4 - 5**	90	36	422,59
50.43	50.80	**W 2' - 4.5**	90	36	434,32

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 100% SE DISPONIBILI A STOCK - *IF AVAILABLE AT STOCK*





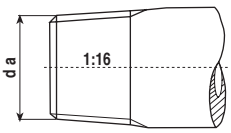
Codice Articolo

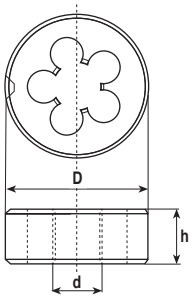
	FN	FN	FNOT	FCAM	FCOT
					
Tol	NEUTRO A	NEUTRO -0.1 / -0.2	NEUTRO A	NEUTRO A	NEUTRO A
Mat	HSS	HSS	HSS	HSS	HSS

da	mm	d x p	D	N	Cam			OTTONE		OTTONE
9.58	9.73	**G 1/8 - 28**	25	9		54,70				
			30	11		45,08			68,09	
			38	10	24	45,08	67,61			83,34
13.01	13.16	**G 1/4 - 19**	25	9		59,86				
			30	11	18	54,93				105,64
			38	10	24	45,08	67,61		72,77	84,52
16.51	16.66	**G 3/8 - 19**	30	11	18	70,43			115,03	
			38	14	24	53,99	79,82		83,34	95,86
			45	14		61,15				
20.8	20.95	**G 1/2 - 14**	38	14	24	55,17	81,00		86,86	99,89
			45	14	28.5	61,15			98,60	113,39
			50	14	32	75,13				
22.77	22.91	**G 5/8 - 14**	50	14		91,57				
			55	16		91,57				
26.26	26.44	**G 3/4 - 14**	45	14		110,35			190,16	218,69
			50	14	32	86,86	129,12		147,90	170,09
			55	16		101,64				
30.02	30.20	**G 7/8 - 14**	65	18		133,83				
33.07	33.25	**G 1' - 11**	50	18	32				167,86	203,08
			65	18		127,95				
37.72	37.90	**G 1' 1/8 - 11**	65	18		199,55				
			75	20		199,55				
41.73	41.91	**G 1' 1/4 - 11**	65	18		197,21				
			75	20		189,06				
44.14	44.32	**G 1' 3/8 - 11**	90	22		305,20				
47.62	47.80	**G 1' 1/2 - 11**	75	20		291,12				
			90	22		274,69				
53.57	53.75	**G 1' 3/4 - 11**	90	22		289,76				
59.43	59.61	**G 2' - 11**	90	22		363,89				
			105	22		346,31				
65.53	65.71	**G 2' 1/4 - 11**	105	22		434,32				
75	75.18	**G 2' 1/2 - 11**	105	22		446,07				
87.7	87.88	**G 3' - 11**	140	25		635,39				

BS 21
EN 10226-2

FILETTATURA GAS CONICA RC (BSPT) CON.1:16
TAPERED PIPE THREAD RC (BSPT) TAPER 1:16
FILIERE NORMALI / *NORMAL ROUND DIES*





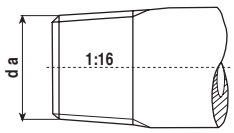
Codice Articolo

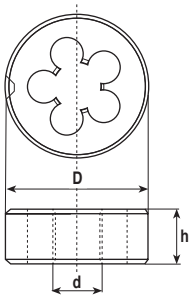
FN

	NEUTRO
Tol	
Mat	HSS

da	mm	d x p	D	h N	
9.48	9.73	**R 1/8 - 28**	25	10	77,66
			30	10	65,42
			38	10	66,57
12.78	13.16	**R 1/4 - 19**	38	14	66,57
16.26	16.66	**R 3/8 - 19**	38	15	74,53
			45	15	
20.44	20.95	**R 1/2 - 14**	38	20	
			45	20	88,54
25.85	26.44	**R 3/4 - 14**	65	20	149,20
32.60	33.25	**R 1' - 11**	65	25	186,35
	41.91	**R 1' 1/4 - 11**	75	27	239,16
	47.80	**R 1' 1/2 - 11**	90	27	344,80
	59.61	**R 2' - 11**	105	31	459,09
	75.18	**R 2' 1/2 - 11**	105		

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
6125 PREZZO A RICHIESTA - *PRICE ON REQUEST*



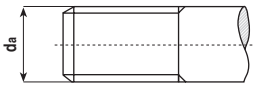


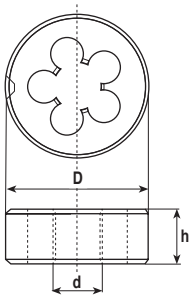
Codice Articolo

	FN
Tol	
Mat	HSS

					h	
	da	mm	d x p	D	N	
NPT	7.58	7.93	**NPT 1/16 - 27**	25	10	73,18
				30	10	
				38	10	
	9.93	10.28	**NPT 1/8 - 27**	30	10	68,09
				38	10	
	13.18	13.71	**NPT 1/4 - 18**	38	15	69,26
	16.59	17.14	**NPT 3/8 - 18**	38	15.3	
				45	15.3	85,92
	20.63	21.33	**NPT 1/2 - 14**	45	20	90,55
				50	20	
	25.95	26.67	**NPT 3/4 - 14**	65	20.2	154,03
	32.50	33.40	**NPT 1' - 11½**	65	25	190,59
	41.23	42.16	**NPT 1' 1/4 - 11½**	75	25.6	251,20
	47.30	48.26	**NPT 1' 1/2 - 11½**	90	26	354,50
	59.33	60.32	**NPT 2' - 11½**	105	26.9	464,85

					h	
	da	mm	d x p	D	N	
NPTF	7.57	7.93	**NPTF 1/16 - 27**	25	10	87,08
				30	10	
				38	10	
	9.91	10.28	**NPTF 1/8 - 27**	30	10	81,02
				38	10	
	13.17	13.71	**NPTF 1/4 - 18**	38	15	82,43
	16.59	17.14	**NPTF 3/8 - 18**	38	15.3	
				45	15.3	108,00
	20.66	21.33	**NPTF 1/2 - 14**	45	20	107,76
				50	20	
	25.97	26.67	**NPTF 3/4 - 14**	65	20.2	180,77
	32.52	33.40	**NPTF 1' - 11½**	65	25	237,13
	41.25	42.16	**NPTF 1' 1/4 - 11½**	75	25.6	
	47.32	48.26	**NPTF 1' 1/2 - 11½**	90	26	
	59.33	60.32	**NPTF 2' - 11½**	105	26.9	





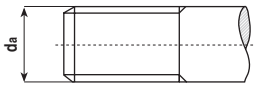
Codice Articolo

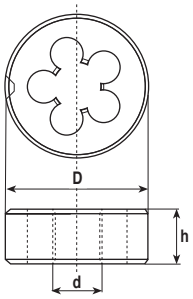
FN

	NEUTRO
Tol	2A
Mat	HSS

da	mm	d x p	D	h N
9.95	10.10	**1/8 - 27**	38	10
13.2	13.40	**1/4 - 18**	38	14
16.6	16.84	**3/8 - 18**	38	14
20.75	20.95	**1/2 - 14**	45	14
26.10	24.5	**3/4 - 14**	55	16
32.65	32.89	**1' - 11.5**	65	18

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*



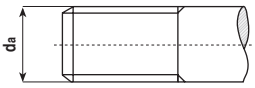


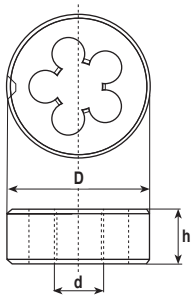
Codice Articolo

FN

	NEUTRO
Tol	2A
Mat	HSS

da	mm	d x p	D	h N	
1.79	1.854	**Nr 1 - 64**	16	5	46,95
2.12	2.184	**Nr 2 - 56**	16	5	44,14
2.44	2.515	**Nr 3 - 48**	16	5	42,72
2.76	2.845	**Nr 4 - 40**	16	5	35,21
			20	5	35,21
3.09	3.175	**Nr 5 - 40**	20	5	35,21
3.41	3.505	**Nr 6 - 32**	20	5	35,21
4.07	4.166	**Nr 8 - 32**	20	5	35,21
4.71	4.826	**Nr 10 - 24**	20	7	35,21
5.37	5.486	**Nr 12 - 24**	20	7	35,21
6.22	6.35	**NC 1/4 - 20**	20	7	32,54
			25	9	
7.80	7.94	**NC 5/16 - 18**	25	9	34,94
9.37	9.53	**NC 3/8 - 16**	30	11	42,89
10.95	11.11	**NC 7/16 - 14**	30	11	42,89
12.52	12.70	**NC 1/2 - 13**	38	14	51,65
14.10	14.29	**NC 9/16 - 12**	38	14	55,17
15.68	15.88	**NC 5/8 - 11**	45	18	68,09
18.84	19.05	**NC 3/4 - 10**	45	18	70,43
22	22.23	**NC 7/8 - 9**	50	18	
			55	22	96,25
25.16	25.40	**NC 1' - 8**	55	22	99,78
28.31	28.58	**NC 1' 1/8 - 7**	65	25	147,90
31.49	31.75	**NC 1' 1/4 - 7**	65	25	147,90
34.63	34.93	**NC 1' 3/8 - 6**	65	25	164,34
37.80	38.10	**NC 1' 1/2 - 6**	75	30	234,77
44.12	44.45	**NC 1' 3/4 - 5**	90	36	
50.45	50.80	**NC 2' - 4 1/2**	90	36	





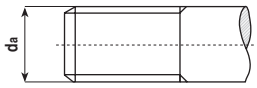
Codice Articolo

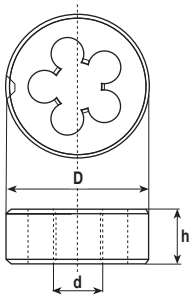
FN

	NEUTRO
Tol	2A
Mat	HSS

da	mm	d x p	D	h N	
2.12	2.184	**Nr 2 - 64**	16	5	44,14
2.44	2.515	**Nr 3 - 56**	16	5	42,96
2.77	2.845	**Nr 4 - 48**	16	5	36,39
3.10	3.175	**Nr 5 - 44**	20	5	36,39
3.42	3.505	**Nr 6 - 40**	20	5	36,39
4.08	4.166	**Nr 8 - 36**	20	5	36,39
4.73	4.826	**Nr 10 - 32**	20	7	33,33
5.38	5.486	**Nr 12 - 28**	20	7	34,94
6.25	6.35	**NF 1/4 - 28**	20	7	33,33
			25	9	35,73
7.82	7.94	**NF 5/16 - 24**	25	9	34,94
9.41	9.53	**NF 3/8 - 24**	30	11	42,26
			38	10	
10.98	11.11	**NF 7/16 - 20**	30	11	42,96
			38	10	
12.56	12.70	**NF 1/2 - 20**	38	10	50,47
14.14	14.29	**NF 9/16 - 18**	38	14	52,59
15.73	15.88	**NF 5/8 - 18**	38	14	71,48
			45	14	68,09
18.89	19.05	**NF 3/4 - 16**	45	14	69,89
22.05	22.23	**NF 7/8 - 14**	50	14	93,69
			55	16	93,69
25.21	25.40	**NF 1' - 12**	55	16	97,69
28.38	28.58	**NF 1' 1/8 - 12**	65	18	145,56
31.55	31.75	**NF 1' 1/4 - 12**	65	18	145,56
34.73	34.93	**NF 1' 3/8 - 12**	65	18	157,29
37.90	38.10	**NF 1' 1/2 - 12**	75	20	222,40

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*
LH + 100% SE DISPONIBILI A STOCK - *IF AVAILABLE AT STOCK*



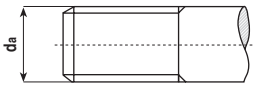


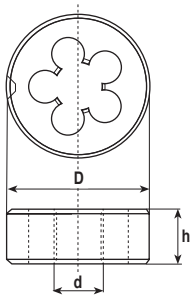
Codice Articolo

FN

	NEUTRO
Tol	2A
Mat	HSS

da	mm	d x p	D	h N	
6.30	6.35	**NEF 1/4 - 32**	25	9	51,77
7.83	7.94	**NEF 5/16 - 32**	25	9	51,27
9.42	9.53	**NEF 3/8 - 32**	30	11	59,66
11	11.11	**NEF 7/16 - 28**	30	11	66,98
12.59	12.70	**NEF 1/2 - 28**	38	10	72,73
14.16	14.29	**NEF 9/16 - 24**	38	10	73,21
15.75	15.88	**NEF 5/8 - 24**	38	10	
18.91	19.05	**NEF 3/4 - 20**	45	14	93,67
22.09	22.23	**NEF 7/8 - 20**	50	14	
25.26	25.40	**NEF 1' - 20**	55	14	162,70





Codice Articolo

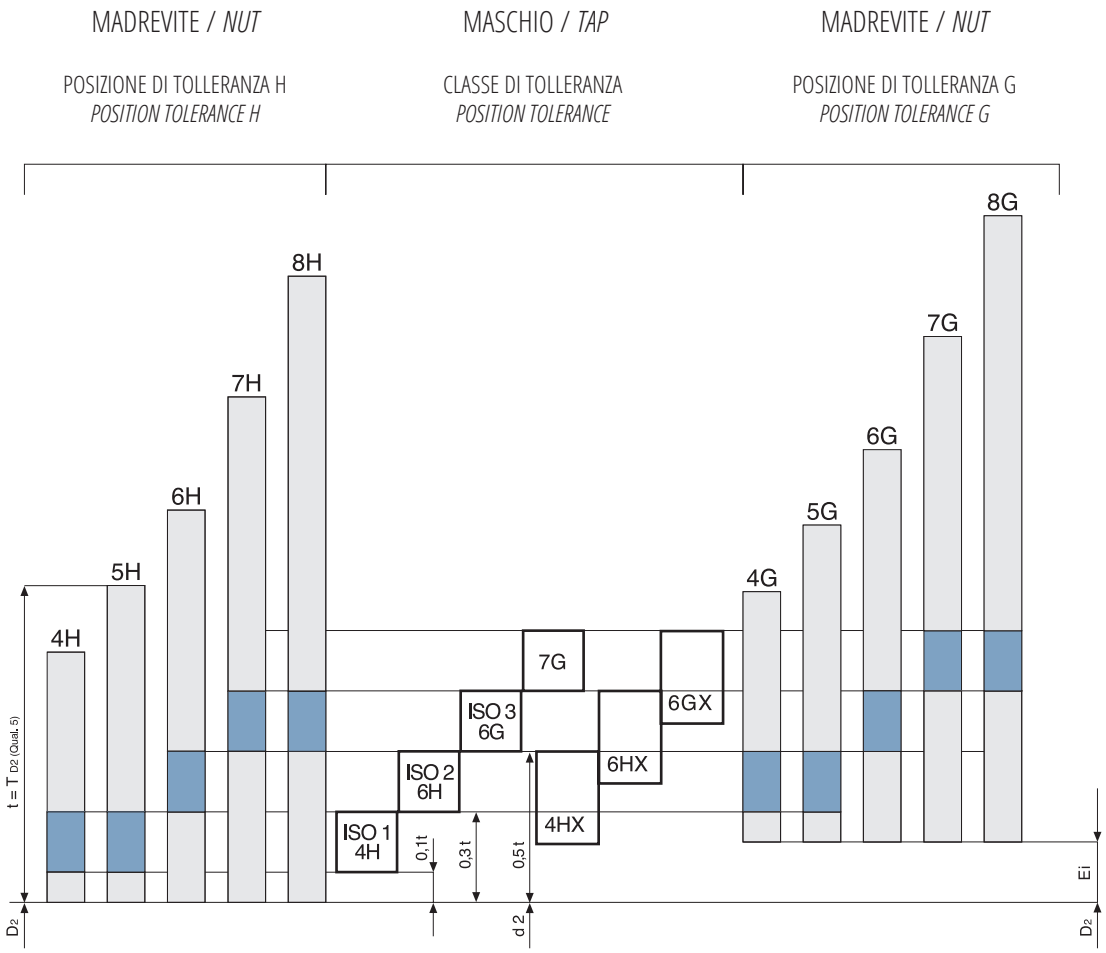
FN

	NEUTRO
Tol	
Mat	HSS

da	mm	P	d x p	D	h N	
12.4	12.50	**20**	**PG 7**	38	10	66,91
15.1	15.20	**18**	**PG 9**	38	10	66,91
18.1	18.60	**18**	**PG 11**	45	14	83,34
20.3	20.40	**18**	**PG 13.5**	45	14	83,34
22.4	22.50	**18**	**PG 16**	55	16	112,23
28.2	28.30	**16**	**PG 21**	65	18	160,45
36.9	37	**16**	**PG 29**	75	18	
46.9	47	**16**	**PG 36**	90	22	340,43
53.9	54	**16**	**PG 42**	90	22	387,37
59.20	59.30	**16**	**PG 48**	105	22	446,07

PREZZI IN EURO, DOVE NON INDICATI PREZZI A RICHIESTA / *PRICES IN EURO, IF BLANK PRICE ON REQUEST*

INFORMAZIONI TECNICHE
TECHNICAL INFORMATIONS



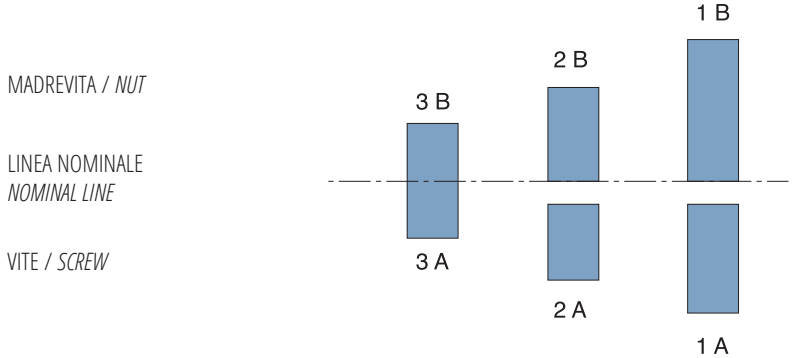
Uso generale dei maschi classe 1 a 3 / *General use of taps class 1 to 3:*

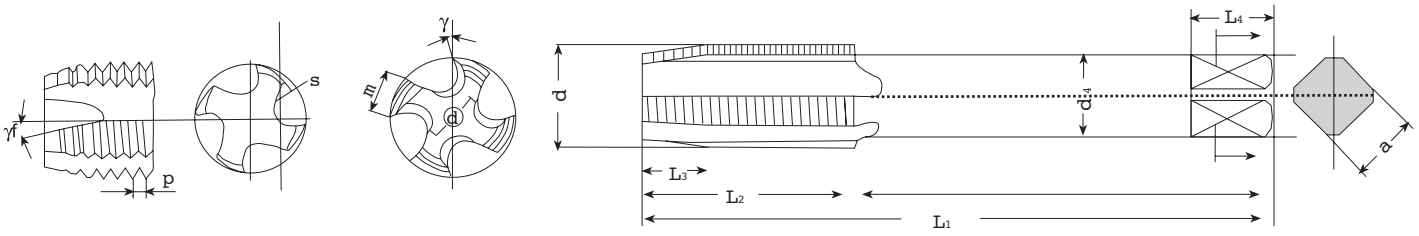
- **ISO - classe/class 1:** madreviti 4H e 5H / *nuts 4H and 5H*
- **ISO - classe/class 2:** madreviti 6H, 4G and 5G / *nuts 6H, 4G and 5G*
- **ISO - classe/class 3:** madreviti 7H, 8H e 6G / *nuts 7H, 8H and 6G*

Questa corrispondenza ha solo valore indicativo, poiché la precisione della maschiatura dipende da diversi altri fattori. È pertanto raccomandata la scelta conforme all'esecuzione della madrevite desiderata.

This correspondence is an approximation since the accuracy of tapping depends on several other factors. Therefore it is recommended a choice conforms to the execution of the nut desired.

SCHEMA QUALITATIVO DI AMPIEZZA E POSIZIONE RELATIVO ALLE FILETTATURE AMERICANE
QUALITATIVE DIAGRAM OF SIZE AND POSITION ABOUT THE AMERICAN STANDARD





L1) Lunghezza totale
Overail lenght

L2) Lunghezza filetto
Thread length

L3) Lunghezza imbocco
Chamfer length

L4) Lunghezza quadro
Lenght of square

d) Diametro nominale
Thread diameter

d4) Diametro del gambo
Shank diameter

d6) Diametro del nocciolo
Core diameter

a) Quadro
Square

yf) Angolo dell'imbocco corretto
Spiral point angle

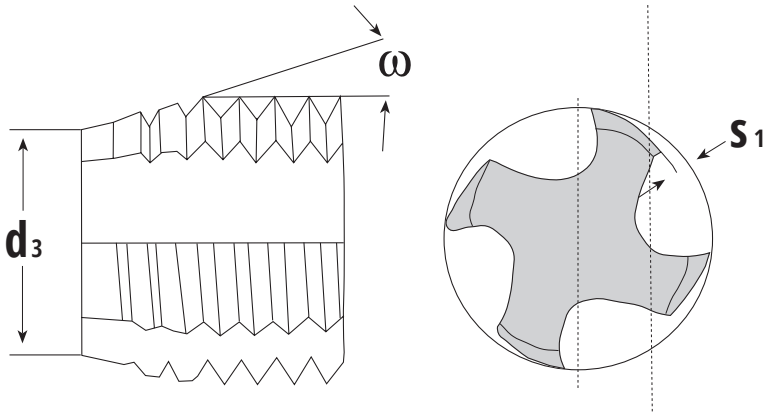
S) Spoglia radiale sul filetto
Thread radial relief

m) Larghezza del tagliente
Width of land

y) Angolo di taglio
Rake angle

p) Passo
Pitch

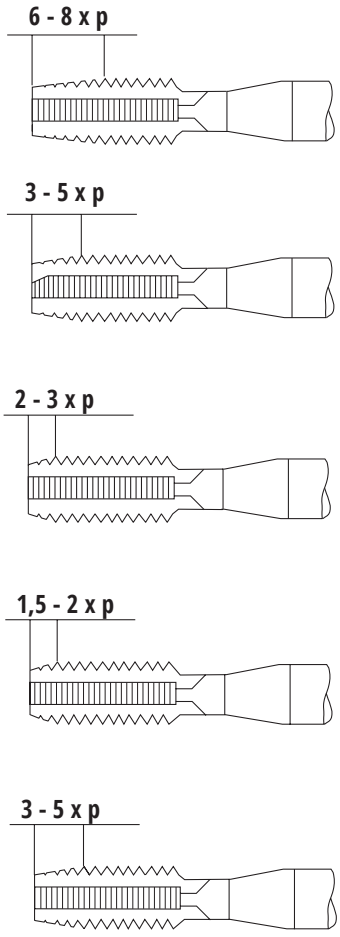
IMBOCCO / *CHAMFER*



d3) Diametro imbocco
Chamfer diameter

ω) Angolo d'imbocco
Chamfer angle

S1) Spoglia radiale sull'imbocco
Chamfer radial relief



COPPIA E POTENZA ASSORBITA
TORQUE AND ABSORBED POWER

Formula per calcolo della potenza di macchina necessaria *Formula for calculating the working power required*	*esempio* *M22, passo 2.5, materiale GG-22, V=15 m/min, rendimento macchina = 0.6, N=220 giri/min^{-1}*
$P_i = \frac{P_e}{\eta} = \frac{1}{9550} \cdot \frac{a \cdot K_s \cdot r \cdot \eta}{1000 \cdot \eta}$ [KW]	$P_i \approx \frac{1{,}5625 \cdot 1600 \cdot 11 \cdot 220}{9\,550\,000 \cdot 0{,}6} \approx 1{,}05$ KW

Terminologia / *Terminology*	
P_i	Potenza assorbita / *Absorbed Power*
P_e	Potenza effettiva / *Effective power*
F_u	$a \cdot K_s$ sforzo di taglio in N
r	$\frac{\text{Ø esterno / } external}{2}$ [mm]
n	giri/min^{-1} / *revolutions/min^{-1}*
η	Rendimento della macchina / *Machine efficiency*
K_s	Sforzo specifico di taglio / *Specific Shearing Stress* (N/mm^2)
a	Sezione del trucciolo / *Section of chip* (mm^2)
	Per filettature cilindriche con angolo sui fianchi di 55° e 60° con portanza del 75 %: **a≈0.25 P² (P = passo)** *For cylindrical thread with 55° and 60° angle and 75% lift:* **a≈0.25 P2 (P = pitch)**
	Per filettature trapezie ACME, tonde piatte ecc, la sezione "a" deve venire calcolata di volta in volta considerando solo la superficie tagliata contemporaneamente. Per filettature a più principi la sezione determinata va moltiplicata per il numero dei principi. **Con la perdita dell'affilatura** dell'utensile lo sforzo di taglio può giungere a raddoppiare. È pertanto consigliabile moltiplicare per 2 i valori calcolati. *For trapezoidal thread ACME, round, flat, etc., "a" section must be calculated each time considering only the cut surface simultaneously. For multi-start screw thread the determined section must be multiplied by the number of the starts. With loss of sharpening of the tool, the Shearing*

Per i maschi in serie P_i deve venire moltiplicato per uno dei seguenti fattori
For Taps Set Pi it must be multiplied by one of these coefficients

serie di 2 pezzi / *2 pz set*	fattore 0.7
serie di 3 pezzi / *3 pz set*	fattore 0.5
serie di 4 pezzi / *4 pz set*	fattore 0.4

Consiglio: per filettature con passo superiore a 4 mm consigliabile usare maschi in serie.
Advice: for threads with pitch higher than 4 mm it is recommended to use Taps Set

Sforzo specifico di taglio / *Specific Shearing Stress*

	K_s
Acciaio / *Steel* 1000...1300 N/mm²	3600 N/mm²
Acciaio / *Steel* 850... 1000 N/mm²	2600 N/mm²
Acciaio / *Steel* 700 N/mm²	2500 N/mm²
Acciaio / *Steel* 600 N/mm²	2400 N/mm²
Bronzo fuso / *Cast bronze*	1900 N/mm²
GG-22 (HB 170)	1600 N/mm²

	K_s
Ghisa dura / *Hard cast iron*	1250 N/mm²
Rame / *Copper*	1100 N/mm²
Ghisa bianca / *White cast iron*	900 N/mm²
Ottone / *Brass*	720 N/mm²
Leghe Al-Si / *Alloys Al-Si*	680 N/mm²
Leghe di Zinco / *Zinc Alloys*	440 N/mm²

FILETTATURA ESTERNA SCOSTAMENTO A_0 / *EXTERNAL THREAD DEVIATION* A_0

PASSO / *PITCH* mm	SCOSTAMENTO A_0 DELLA POSIZIONE DELLA TOLLERANZA / *DEVIATION* A_0 *OF POSITION TOLERANCE*					
	c	d	e	f	g	h
0.2			-45	-32	-17	0
0.25			-45	-33	-18	0
0.3			-46	-33	-18	0
0.35			-46	-34	-19	0
0.4	(-120)	(-72)	-48	-34	-19	0
0.45	(-120)	(-73)	-48	-35	-20	0
0.5	(-122)	(-74)	-50	-36	-20	0
0.6	(-124)	(-76)	-53	-36	-21	0
0.7	(-125)	(-78)	-56	-38	-22	0
0.75	(-126)	(-79)	-56	-38	-22	0
0.81	(-127)	(-80)	-60	-38	-24	0
1	-130	-85	-60	-40	-26	0
1.25	-135	-90	-63	-42	-28	0
1.5	-140	-95	-67	-45	-32	0
1.75	-145	-100	-71	-48	-34	0
2	-150	-105	-71	-52	-38	0
2.5	-160	-110	-80	-58	-42	0
3	-170	-115	-85	-63	-48	0
3.5	-180	-125	-90	-70	-53	0
4	-190	-130	-95	-75	-60	0
4.5	-200	-135	-100	-80	-63	0
5	-212	-140	-106	-85	-71	0
5.5	-224	-150	-112	-90	-75	0
6	-235	-155	-118	-95	-80	0
8	-265	-180	-140	-118	-100	0

PREFORO DI MASCHIATURA
PILOT-HOLE FOR TAPPING

UNC

d	p	
1	64	1,5
2	56	1,8
3	48	2
4	40	2,3
5	40	2,6
6	32	2,7
8	32	3,4
10	24	3,8
12	24	4,5
1/4	20	5,1
5/16	18	6,5
3/8	16	7,9
7/16	14	9,3
1/2	13	10,7
9/16	12	12,3
5/8	11	13,5
3/4	10	16,5
7/8	9	19,3
1’	8	22,25
1’1/8	7	25
1’1/4	7	28
1’3/8	6	30,75
1’1/2	6	33,5
1’3/4	5	39
2’	4 1/2	45

UNF

d	p	
0	80	1,2
1	72	1,5
2	64	1,8
3	56	2,1
4	48	2,4
5	44	2,6
6	40	2,9
8	36	3,5
10	32	4
12	28	4,6
1/4	28	5,4
5/16	24	6,9
3/8	24	8,4
7/16	20	9,9
1/2	20	11,5
9/16	18	13
5/8	18	14,5
3/4	16	17,4
7/8	14	20,4
1’	12	23,25
1’1/8	12	26,5
1’1/4	12	29,75
1’3/8	12	33
1’1/2	12	36

UNEF

d	p	
12	32	4,7
1/4	32	5,6
5/16	32	7,2
3/8	32	8,8
7/16	28	10,2
1/2	28	11,8
9/16	24	13,2
5/8	24	14,75
3/4	20	17,75
7/8	20	21
1’	20	24,25
1’1/8	18	27,25
1’1/4	18	30,5
1’3/8	18	33,5

BSW

d	p	
3/32	48	1,8
1/8	40	2,5
5/32	32	3,10
3/16	24	3,6
7/32	24	4,40
1/4	20	5,10
5/16	18	6,50
3/8	16	7,9
7/16	14	9,30
1/2	12	10,5
9/16	12	12
5/8	11	13,5
3/4	10	16,5
7/8	9	19,25
1’	8	22
1’1/8	7	24,75
1’1/4	7	27,75
1’3/8	6	30,50
1’1/2	6	33,5
1’5/8	5	35,5
1’3/4	5	39
1’7/8	4 1/2	41,5
2	4 1/2	44,5

BSW

d	p	
1/8	28	8,7
1/4	19	11,6
3/8	19	15
1/2	14	19
5/8	14	20,75
3/4	14	24,5
7/8	14	28
1’	11	30,5
1’1/8	11	35
1’1/4	11	39,5
1’3/8	11	41,5
1’1/2	11	45
1’3/4	11	51
2’	11	57
2’1/4	11	63
2’1/2	11	72,5
2’3/4	11	79
3’	11	85,5

Tr

d	p	max	min
10	2	8,2	8
10	3	7,3	7
12	2	10,2	10
12	3	9,3	9
14	2	12,2	12
14	3	11,3	11
14	4	10,35	10
16	2	14,2	14
16	4	12,35	12
18	2	16,20	16
18	4	14,35	14
20	2	18,2	18
20	4	16,35	16
22	5	17,45	17
24	3	21,3	21
24	5	19,45	19
26	3	23,3	23
26	5	21,45	21
28	5	23,45	23
30	6	24,5	24
32	6	26,5	26
34	6	28,5	28
36	6	30,5	30
40	7	33,5	33
42	7	35,5	35
44	7	37,5	37
46	8	38,6	38
48	8	40,6	40
50	8	42,6	42
52	8	44,6	44

UN

d	p	
1’1/16	12	24,75
1’1/8	8	25,25
1’3/16	12	28
1’1/4	8	28,5
1’5/16	12	31,25
1’3/8	8	31,75
1’1/2	8	35
1’5/8	8	38
1’5/8	12	39
1’3/4	8	41,25
1’3/4	12	42,25
1’7/8	8	44,5
1’7/8	12	45,5
2’	8	47,5
2’	12	48,5
2’1/8	12	51,8
2’1/4	8	53,9
2’3/8	12	58,2
2’1/2	8	60,3
2’1/2	12	61,3
2’3/4	8	66,6
3’	8	73
3’	12	74

BA

d	p	
14	0,23	0,75
13	0,25	0,95
12	0,28	1
11	0,31	1,2
10	0,35	1,35
9	0,39	1,5
8	0,43	1,8
7	0,48	2
6	0,53	2,3
5	0,59	2,6
4	0,66	2,95
3	0,73	3,4
2	0,81	3,9
1	0,90	4,4
0	1	5

BSF

d	p	
3/16	32	3,9
7/32	28	4,5
1/4	26	5,25
9/32	26	6
5/16	22	6,7
3/8	20	8,2
7/16	18	9,6
1/2	16	11
9/16	16	12,5
5/8	14	13,9
11/16	14	15,5
3/4	12	16,75
7/8	11	19,75
1’	10	22,6
1’1/8	9	25,5
1’1/4	9	28,75

RP

d	p	
1/8	28	8,6
1/4	19	11,5
3/8	19	15
1/2	14	18,6
3/4	14	24
1’	11	30,25
1’1/4	11	39
1’3/8	11	41,5
1’1/2	11	44,9
2’	11	56,6

PG

d	p	
7	20	11,4
9	18	14
11	18	17,25
13,5	18	19
16	18	21,25
21	16	26,75
29	16	35,5
36	16	45,5
42	16	52,5
48	16	57,8

NPSM

d	p	
1/8	27	9,10
1/4	18	12
3/8	18	15,5
1/2	14	19
3/4	14	24,5
1’	11 1/2	30,5

NPSC

d	p	
1/8	27	8,9
1/4	18	11,50
3/8	18	15,00
1/2	14	18,50
3/4	14	23,80
1’	11 1/2	29,90

NPSF

d	p	
1/8	27	8,7
1/4	18	11,30
3/8	18	14,75
1/2	14	18,25
3/4	14	23,50
1’	11 1/2	29,50

EG-M		
d	p	
M 2	0,4	2,1
M 2,5	0,45	2,6
M 3	0,5	3,2
M 3,5	0,6	3,7
M 4	0,7	4,2
M 5	0,8	5,2
M 6	1	6,3
M 8	1,25	8,4
M 10	1,5	10,4
M 12	1,75	12,5
M 14	2	14,5
M 16	2	16,5
M 18	2,5	18,75
M 20	2,5	20,75
M 22	2,5	22,75
M 24	3	24,75
M 30	3,5	31

EG-MF		
d	p	
M 8	1	8,3
M 10	1	10,3
M 10	1,25	10,3
M 12	1,25	12,3
M 12	1,5	12,5
M 14	1,25	14,3
M 14	1,5	14,5
M 16	1,5	16,5
M 18	1,5	18,5
M 20	1,5	20,5
M 22	1,5	22,5
M 24	1,5	24,5

EG-UNC		
d	p	
1	64	2,0
2	56	2,4
3	48	2,8
4	40	3,1
5	40	3,4
6	32	3,8
8	32	4,5
10	24	5,3
12	24	5,9
1/4	20	6,8
5/16	18	8,4
3/8	16	10,0
7/16	14	11,7
1/2	13	13,3
9/16	12	15,0
5/8	11	16,5
3/4	10	19,7
7/8	9	23,0
1’	8	26,5

EG-UNF		
d	p	
1	72	2,0
2	64	2,3
3	56	2,7
4	48	3,1
5	44	3,4
6	40	3,8
7	4	0,0
8	32	4,4
10	32	5,1
12	28	0,0
1/4	28	6,6
5/16	24	8,2
3/8	20	9,8
7/16	20	11,4
1/2	18	13,0
9/16	18	14,7
5/8	16	16,3
3/4	16	19,5
7/8	14	22,7
1’	12	26,0

BSW		
d	p	
1/8	28	8,7
1/4	19	11,6
3/8	19	15
1/2	14	19
5/8	14	20,75
3/4	14	24,5
7/8	14	28
1’	11	30,5
1’ 1/8	11	35
1’ 1/4	11	39,5
1’ 3/8	11	41,5
1’ 1/2	11	45
1’ 3/4	11	51
2’	11	57
2’ 1/4	11	63
2’ 1/2	11	72,5
2’ 3/4	11	79
3’	11	85,5

NPT				
d	p		min	max
1/16	27	6,3	6,41	6,50
1/8	27	8,5	8,76	8,85
1/4	18	11,20	11,39	11,48
3/8	18	14,5	14,83	14,92
1/2	14	18	18,33	18,41
3/4	14	23	23,67	23,76
1’	11 1/2	29	29,72	29,81
1’1/4	11 1/2	38	38,48	38,56
1’1/2	11 1/2	44	44,55	44,63
2’	11 1/2	56	56,59	56,67

NPTF				
d	p		min	max
1/16	27	6,3	6	6,41
1/8	27	8,6	8,25	8,76
1/4	18	11,20	10,7	11,40
3/8	18	14,75	14,1	14,84
1/2	14	18	17,4	18,33
3/4	14	23,5	22,6	23,68
1’	11 1/2	29,5	28,5	29,72
1’1/4	11 1/2	38,5	37	38,48
1’1/2	11 1/2	44	43,5	44,56
2’	11 1/2	56,5	55	56,59

RC				
d	p		min	max
1/16	28	6,3	6,10	6,56
1/8	28	8,3	8,10	8,57
1/4	19	11,5	10,75	11,45
3/8	19	14,75	14,25	14,95
1/2	14	18,25	17,75	18,63
3/4	14	23,5	23	24,12
1’	11	29,75	29	30,29
1’1/4	11	38,5	37,5	38,95
1’1/2	11	44,5	43,5	44,85
2’	11	56,5	55	56,66

DIAMETRI DI PREFORATURA PER MASCHI A RULLARE
DIAMETERS OF PREDRILLING FOR FORMING TAPS

M		
d	p	
2	0,4	1,8
2,2	0,45	2
2,3	0,4	2,1
2,5	0,45	2,3
2,6	0,45	2,4
3	0,5	2,8
3,5	0,6	3,25
4	0,7	3,7
5	0,8	4,65
6	1	5,55
8	1,25	7,45
10	1,5	9,35
12	1,75	11,2
14	2	13,1
16	2	15,1
18	2,5	16,9
20	2,5	18,9

MF		
d	p	
4	0,5	3,8
5	0,5	4,8
6	0,5	5,8
6	0,75	5,65
8	0,75	7,65
8	1	7,55
10	1	9,55
12	1	11,55
12	1,5	11,35
14	1,5	13,35
16	1	15,55
16	1,5	15,35
18	1	17,55
18	1,5	17,35
20	1	19,55
20	1,5	19,35
22	1,5	21,35
24	1,5	23,35
26	1,5	25,35
28	1,5	27,35
30	1,5	29,35

UNC		
d	p	
1	64	1,7
2	56	2,0
3	48	2,3
4	40	2,6
5	40	2,9
6	32	3,2
8	32	3,8
10	24	4,4
12	24	5
1/4	20	5,8
5/16	18	7,3
3/8	16	8,8
7/16	14	10,3
1/2	13	11,9

UNF		
d	p	
1	72	1,7
2	64	2
3	56	2,3
4	48	2,6
5	44	2,9
6	40	3,2
8	36	3,9
10	32	4,5
12	28	5,1
1/4	28	6
5/16	24	7,5
3/8	24	9,1
7/16	20	10,6
1/2	20	12,1
5/8	18	15,25
3/4	16	18,35
7/8	14	21,40
1’	12	24,45

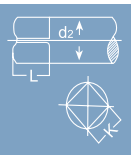
G		
d	p	
1/8	28	9,35
1/4	19	12,55
3/8	19	16,05
1/2	14	20,15
3/4	14	25,65
1’	11	32,25

TABELLA DI CONVERSIONE POLLICI/MILLIMETRI
CONVERSION TABLE INS/MM

ø pollici / *ins*	Decimali ins *Decimal ins*	Equivalente in mm *Conversion table ins/mm*
1/64	015625	0.3968
1/32	03125	0.7937
3/64	046875	1.1906
1/16	0625	1.5874
5/64	078125	1.9843
3/32	09375	2.3812
7/64	109375	2.7780
1/8	125	3.1749
9/64	140625	3.5718
5/32	15625	3.9686
11/64	171875	4.3655
3/16	1875	4.7624
13/64	203125	5.1592
7/32	21875	5.5561
15/64	234375	5.9530
1/4	25	6.3498
17/64	265625	6.7467
9/32	28125	7.1436
19/64	296875	7.5404
5/16	3125	7.9373
21/64	328125	8.3342
11/32	34375	8.7310
23/64	359375	9.1279
3/8	375	9.5248
25/64	390625	9.9216
13/32	40625	10.3185
27/64	421875	10.7154
7/16	4375	11.1122
29/64	453125	11.5091
15/32	46875	11.9060
31/64	484375	12.3029
1/2	5	12.6997

ø pollici / *ins*	Decimali ins *Decimal ins*	Equivalente in mm *Conversion table ins/mm*
33/64	515625	13.0966
17/32	53125	13.4934
35/64	546875	13.8903
9/16	5625	14.2872
37/64	578125	14.6841
19/32	59375	15.0809
39/64	609375	15.4778
5/8	625	15.8747
41/64	640625	16.2715
21/32	65625	16.6684
43/64	671875	17.0653
11/16	6875	17.4621
45/64	703125	17.8590
23/32	71875	18.2559
47/64	734375	18.6527
3/4	75	19.0496
49/64	765625	19.4465
25/32	78125	19.8433
51/64	796875	20.2402
13/16	8125	20.6371
53/64	828125	21.0339
27/32	84375	21.4308
55/64	859375	21.8277
7/8	875	22.2245
57/64	890625	22.6214
29/32	90625	23.0183
59/64	921875	23.4151
15/16	9375	23.8120
61/64	953125	24.2089
31/64	96875	24.6057
63/64	984375	25.0026
1	1	25.3995

QUADRI PER UTENSILI SEC. DIN 10
BOARDS FOR TOOLS IN DIN 10
DIMENSIONI - TOLLERANZE - QUOTE IN MM
DIMENSIONS - ALLOWANCES



ø gambo d2 / *ø shank d2*		Quadro k *Board*	Quadro esterno K h12 *External board*		L
da / *from*	a / *to*	valore *measure*	max	min	
2,47	2,83	2,1	2,100	2,010	5
2,83	3,20	2,4	2,400	2,310	5
3,20	3,60	2,7	2,700	2,910	6
3,60	4,01	3,0	3,000	3,280	6
4,01	4,53	3,4	3,400	4,180	6
4,53	5,08	3,8	3,800	4,780	7
5,08	5,79	4,3	4,300	5,380	7
5,79	6,53	4,9	4,900	6,050	8
6,53	7,33	5,5	5,500	6,850	8
7,33	8,27	6,2	6,200	7,850	9
8,27	9,46	7	7,000	8,850	10
9,46	10,67	8	8,00	9,850	11
10,67	12,00	9	9,000	10,820	12
12,00	13,33	10	10,000	11,820	13
13,33	14,67	11	11,000	12,820	14
14,67	16,00	12	12,000	14,320	15
16,00	17,33	13	13,000	15,820	16
17,33	19,33	14,5	14,500	17,820	17
19,33	21,33	16	16,000	19,790	19
21,33	24,00	18	18,000	21,790	21
24,00	26,67	20	20,000	23,790	23
26,67	29,33	22	22,000	25,790	25
29,33	32,00	24	24,000	28,790	27
32,00	34,67	26	26,000	31,750	29
34,67	38,67	29	29,000	34,750	32
38,67	42,67	32	32,000	38,750	35
42,67	46,67	35	35,000	43,750	38
46,67	52,06	39	39,000	48,750	42
52,06	58,67	44	44,000	54,700	47
58,67	65,33	49	49,000	60,700	52
65,33	73,33	55	55,000	67,700	58
73,33	81,33	61	61,000	75,500	64
81,33	90,66	68	68,000	68,000	71
90,66	101,33	76	76,000	76,000	79

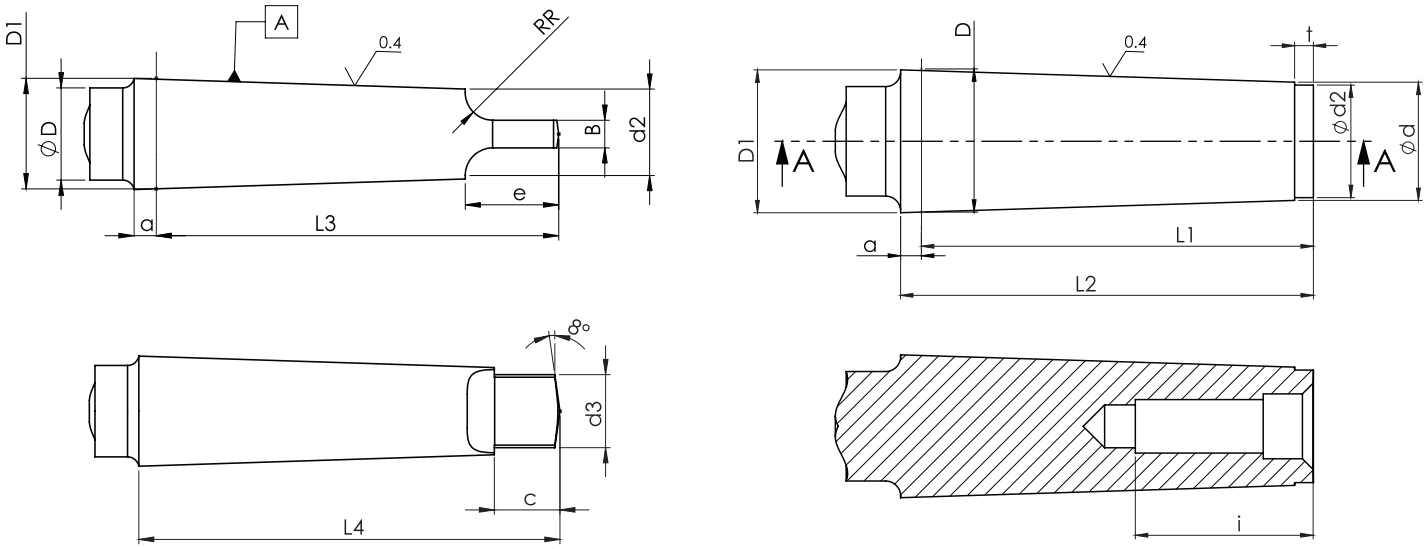
ALCUNE ALTRE FILETTATURE UNIFICATE
OTHER THREADS' STANDARDS

NGO	Filettatura americana cilindrica per rubinetti bombole gas / *American National gas outlet thread*
NPSC	Filettatura americana cilindrica per l'accoppiamento di tubi con l'aggiunta di impermeabilizzanti / *American Standard straight pipe thread in couplings*
NPSH	Filettatura americana cilindrica per tubi, giunti e nippli / *American Standard straight pipe thread for hose couplings and nipples*
NPSI	Filettatura americana interna cilindrica, per tenuta stagna senza sigillanti / *American Standard intermediate internal straight pipe thread, dryseal*
NPSL	Filettatura americana cilindrica per controdadi e tubi per controdadi / *American Standard straight pipe thread for locknuts and locknut-pipe thread*
NGT	Filettatura americana conica per tubi / *National Gas taper threads*
NPTR	Filettatura americana conica per tubi per equipaggiamenti ferroviari / *American Standard taper pipe thread for railing fittings*
PTF-SAE Short	Filettatura americana conica per tubi per tenuta stagna senza sigillanti / *Dryseal SAE Short taper pipe thread*
API-LP	Filettatura americana conica per tubi, settore petrolifero / *American Petroleum Institute Line Pipe*

ACME-G	Filettatura trapezoidale americana per usi generici / *ACME thread for general purposes*
ACME-C	Filettatura trapezoidale americana autocentrante / *Centralizing ACME thread*
STUB-ACME	Filettatura trapezoidale americana, profilo ribassato / *STUB-ACME threads, short*
N BUTT	Filettatura americana a dente di sega / National Buttress screw thread

Rd	Filettatura a profilo tondo / *Rundgewinde*
E	Filettatura Edison, settore elettrico / *Electrical thread*
S	Filettatura a dente di sega
FG	Filettatura tedesca per cicli / *Gewinde für Fahrräder und Mopeds*
BSC	Filettatura inglese per cicli / *British Standard Cycle thread*

CODOLO / *TANG*				conicità C	P%	a	D1**	d**	d1	d2**	d3 max	l1 max	l2 max	l3 max	l4 max	b h13	C	e max	l max	R max	t max
Tipo	Cono	n°	D																		
- B	metrico	4	4	1:20	5	2 +0.5/0	4,1	2,9	-	-	-	23	25	-	-	-	-	-	-	-	2
- B	metrico	6	6			3 +0.5/0	6,2	4,4	-	-	-	32	35	-	-	-	-	-	-	-	3
A B	Morse	0	9,045	1:19,212	5,205	3 +1/0	9,2	6,4	-	6,1	6	50	53	56,5	59,5	3,9	6.5	10,5	-	4	4
A B	Morse	1	12,065	1:20,047	4,988	3.5 +1/0	12,2	9,4	M 6	9	8,7	53,5	57	62	65,5	5,2	8,5	13,5	16	5	5
A B	Morse	2	17,780	1:20,020	4,995	5 +1/0	18	14,6	M 10	14	13,5	64	69	75	80	6,3	10	16	24	6	5
A B	Morse	3	23,825	1:19,922	5,020	5 +1/0	24,1	19,8	M 12	19,1	18,5	81	86	94	99	7,9	13	20	28	7	7
A B	Morse	4	31,267	1:19,254	5,194	6.5 +1.5/0	31,6	25,9	M 16	25,2	24,5	102,5	109	117,5	124	11,9	16	24	32	8	9
A B	Morse	5	44,399	1:19,002	5,263	6.5 +1.5/0	44,7	37,6	M 20	36,5	35,7	129,5	136	149,5	156	15,9	19	29	40	10	10
A B	Morse	6	63,348	1:19,180	5,214	8 +2/0	63,8	53,9	M 24	52,4	51	182	190	210	218	19	27	40	50	13	16
A B	metrico	80	80	120	5	8 +2/0	80,4	70,2	M 30	69	67	196	204	220	228	26	24	48	65	24	24
A B	metrico	100	100			10 +2/0	100,5	88,4	M 36	87	85	232	242	260	270	32	28	58	80	30	30
A B	metrico	120	120			12 +2/0	120,6	106,6	M 36	105	102	268	280	300	312	38	32	68	80	36	36
A B	metrico	160	160			16 +3/0	160,8	143	M 48	141	138	340	356	380	396	50	40	88	100	48	48
A B	metrico	200	200			20 +3/0	201	179,4	M 48	177	174	412	432	460	480	62	48	108	100	60	60



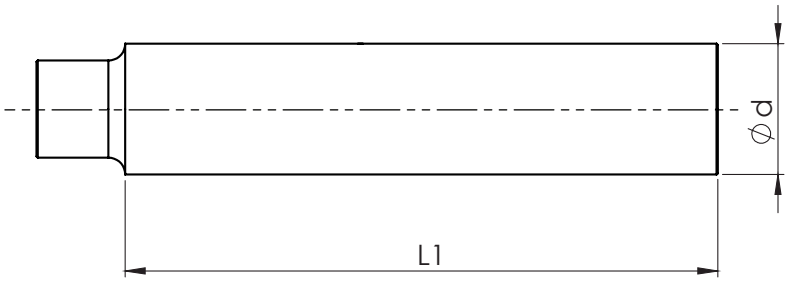
* La differenza dei valori limite di a dei codoli, relativa alla zona nella quale deve essere compreso il piano di misura del diametro D, rappresenta in spostamento assiale la tolleranza della parte conica.
The difference of the limit values of "a" of the tangs on the area in which it must be understood the plane of measurement of the diameter D, is in axial tolerance of the conical part.

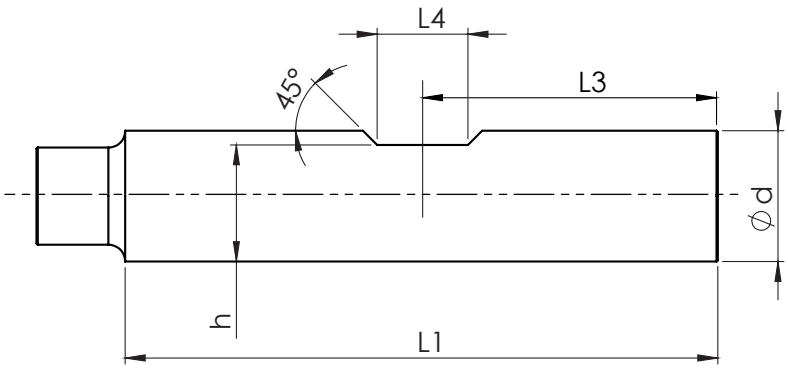
** I valori dimensioni D1,d e d2 sono approssimativi e dati a titolo indicativo (valori esatti si possono calcolare in base alla dimensione D ed alla conicità, tenendo presenti i valori effettivi delle dimensioni a, l1 e l3 rispettivamente).
The difference of the limit values of "a" of the tangs on the area in which it must be understood the plane of measurement of the diameter D, is in axial tolerance of the conical part.

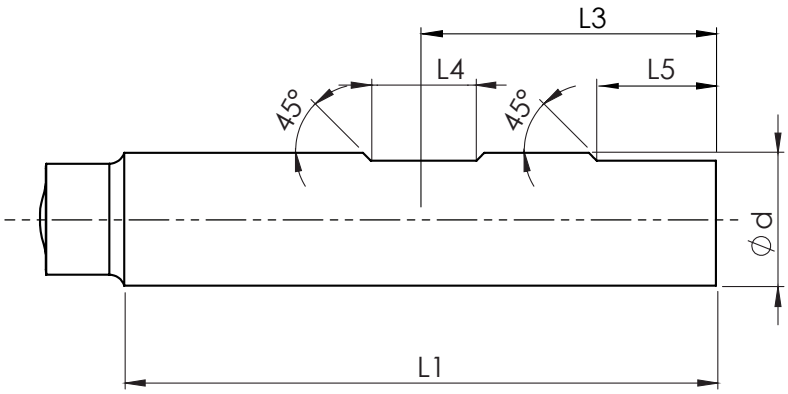
CODOLO CILINDRICO CON PIANO DI FISSAGGIO / *CYLINDRIC TANG WITH FIXING FACE*

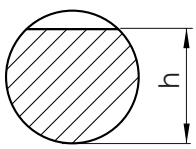
d	L1 ±1	L3 +0 -1	L4 +0.05 -0	h
6	36	18	4.2	4.8
10	40	20	7	8.4
12	45	22.5	8	10.4
16	48	24	10	14.2
20	50	25	11	18.2

d	L1 ±1	L3 +0 -1	L4 +0.05 -0	L4 +0.05 -0	h
25	56	32	12	17	23
32	60	36	14	19	30
40	70	40	14	19	38
50	80	45	18	23	47,8









VAP	Trattamento di vaporizzazione - Riduce l'attrito tra l'utensile e il pezzo in lavorazione, migliora lo scorrimento del maschio ed evita le incollature dei trucioli. *Vaporization treatment - It reduces the friction between the tool and the workpiece, improves the sliding of the tap and avoids the gluing of chips.*	**NERO** ***BLACK***
NIT	Nitrurazione - I maschi nitrurati hanno una maggiore durezza superficiale e sono consigliati per materiali abrasivi come la ghisa grigia, leghe d'alluminio con percentuale di Si medio alta. *Nitriding - The nitrided taps have a higher surface hardness and are recommended for abrasive materials such as cast iron, aluminum alloys with high average percentage of Si.*	**NERO** ***BLACK***
TiN	Rivestimento con nitruri di titanio - Questo trattamento è consigliato per la lavorazione di materiale abrasivo, di materiali che creano saldature fredde. Permette di aumentare la velocità di filettatura e la durata del maschio. *Surface with titanium nitrides - This treatment is recommended for the processing of abrasive material, of materials that create cold welding. It allows to increase the speed of threading and durability of the tap.*	**GIALLO** ***YELLOW***
TiCN	Rivestimento con carbonitruri di titanio. Questo trattamento ha una durezza superiore al TIN, consente velocità di filettatura superiori. *Surface with titanium carbonitrides. This treatment has a hardness higher than the TIN and allows higher speed of threading.*	**VIOLA - GRIGIO** ***VIOLET - GRAY***
TiAlN	Rivestimento con nitruri di titanio e alluminio - Utilizzato per le lavorazioni di materiali abrasivi, come Ghisa grigia, leghe d'allumino con Silicio, materie plastiche a fibre rinforzate o lavorazioni ad alte temperature con raffreddamento insufficiente. *Surface with nitrides of titanium and aluminum - It is used for machining of abrasive materials such as cast iron, aluminum alloys with silicon, plastics with reinforced fibers or for workings at high temperatures with insufficient cooling.*	**VIOLA - NERO** ***VIOLET - BLACK***
CrN	Rivestimenti con nitruri di cromo - Utilizzato in sostituzione della cromatura, da applicarsi nelle lavorazioni del rame e le sue leghe, titanio, leghe d'alluminio senza Silicio a truciolo lungo. *Surface with chromium nitride - It is used to replace the chromium plating, to be applied in the processing of copper and its alloys, titanium, aluminum alloys without silicon long chips.*	**GRIGIO METALLICO** ***METALLIC***
ZHL	Elevata durezza e resistenza a temperatura - Combinata con ottime proprietà di scorrimento. *High hardness and temperature resistance - Combined with excellent sliding properties.*	**GRIGIO SCURO** ***DARK GRAY***

	Y - TiN	**T - TiCN**	**CrN**	**TiAlN**	**Z -ZHL**
	Monostrato *Monolayer*	**Monostrato** *Monolayer*	**Monostrato** *Monolayer*	**Nano struttura** *Nano structure*	**Pluristrato** *Plurilayer*
Durezza / *Hardness* H V (0.05)	2300	3000	1750	3300	300
Coefficiente di attrito su acciaio a secco *Coefficient of friction on dry steel*	0.4	0.4	0.5	0.4	0.2
Spessore / *Thickness* (um)	1+5	1+5	1+4/10	1+4	2+6
Temperatura massima di esercizio (°C) 600°C *Maximum operating temperature (° C) 600° C*	600°C= 1100°F	400°C= 750°F	700°C= 300°F	900°C= 1470°F	800°C=
Colore / *Color*	Giallo - Oro *Golden Yellow*	Grigio - Blu *Gray - Blue*	Grigio - Argento *Gray - Silver*	Nero - Viola *Black - Violet*	Grigio - Nero *Gray - Black*

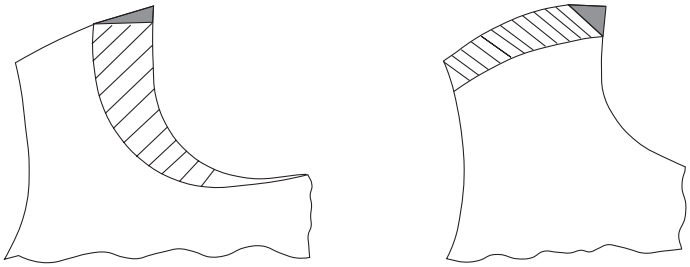
DIFETTO / *LACK*	CAUSE PRINCIPALI / *MAIN CAUSES*	RIMEDIO / *ACTION*
ROTTURA DEL MASCHIO DURANTE LA CORSA DI MASCHIATURA *BREAKING OF THE TAP DURING THE TAPPING*	1. preforo troppo piccolo / *pilot hole too small* 2. maschio usurato / *tap worn out* 3. affilatura male eseguita / *sharpening badly executed* 4. disassamento o disallineamento tra il maschio e il foro da maschiare / *misalignment or mismatch between the tap and the hole to be tapped* 5. maschio urta sul fondo del foro / *tap hits the bottom of the hole* 6. intasamento dei canali di scarico / *obstruction of the outlet channels* 7. non corretto fissaggiodel pezzo da maschiare / *Incorrect fastening of the piece to be tapped*	1. verificare il diametro di foratura */ check the diameter of the pilot hole* 2. prowedere alla sostituzione o alla corretta riaffilatura delll'utensile / *replace the tap* 3. riaffilare correttamente il maschio / *properly sharpen the tap* 4. allineare e centrare correttamente / *align and properly center* 5. regolare correttamente la corsa / *roperly adjust the stroke* 6. sostituire il maschio con uno di tipo più idoneo / *replace tap with one more suitable* 7. prowedere ad un fissaggio corretto / *provide for a correct fixing*
ROTTURA DEL MASCHIO DURANTE LA CORSA DI RITORNO *BREAKING OF THE TAP DURING THE STROKE RETURN*	1. non corretta rettifica dell'imbocco / *Incorrect grinding of the entrance* 2. sagoma dei canali di scarico non idonea / *shape of the outlet channels unsuitable* 3. non corretto fissaggio del pezzo da maschiare / *Incorrect fastening of the piece to be tapped* 4. inversione o velocità di ritorno non adeguate / *reverse or return speed not right*	1. rettificare correttamente l'imbocco / *grinding properly the chamfer* 2. rettificare correttamente le scanalature in modo da evitare l'interferenza dei trucioli / *grinding properly the grooves so as to avoid the interference of the chips* 3. fissare correttamente il pezzo in modo da evitare gli effetti negativi dell'inversione di coppia al momento del ritorno / *properly fix the piece in order to avoid the negative effects of the reversal of torque at the time of return* 4. impostarecorrettamente la macchina ed usare portamaschi idonei / *set the machine properly and use tap holders appropriate*
USURA ECCESSIVA DEL MASCHIO *EXCESSIVE WEAR OF THE TAP*	1. angolo di taglio non adatto al materiale da lavorare / *cutting angle not suitable for the material to be machined* 2. lubrorefrigerazione non adatta / *coolant not suitable* 3. mancanza di trattamento superficiale adatto / *lack of suitable surface treatment* 4. velocità di maschiatura errata / *tapping speed wrong*	1. riaffilare correttamente il maschio / *resharpen correctly the tap* 2. usare tipo e quantità di lubrorefrigerante appropriato / *use the appropriate type and amount of coolant* 3. usare un maschio con trattamento superficiale / *Use a tap with a surface treatment* 4. impostare la velocità di taglio adatta al materiale da lavorare / *set the cutting speed suitable for the material to be machined*
ROTTURA DEI FILETTI D'IMBOCCO DEL MASCHIO *BREAKING OF CHAMFER'S THREADS OF THE TAP*	1. angolo di taglio non adatto / *cutting angle not suitable* 2. non corretta rettifica dell'imbocco / *Incorrect grinding of the chamfer* 3. diametro del preforo / *diameter of the drive hole* 4. centraggi e allineamenti scorretti / *centering and alignment incorrect*	1. riaffilare correttamente il maschio / *resharpen correctly the tap* 2. rettificare correttamente l'imbocco / *adjust properly the chamfer* 3. correggere il diametro di foratura / *correct the drilling diameter* 4. procedere ad un impostazione corretta di tutti i parametri di lavorazione / *proceed with a correct setting of all the working parameters*
ROTTURA DEI FILETTI DEL MASCHIO DOPO L'IMBOCCO *BREAKING OF THREADS AFTER THE CHAMFER OF THE TAP*	1. sagoma dei canali di scarico non idonea / *hape of the outlet channels unsuitable* 2. intasamento dei canali di scarico / *obstruction of the outlet channels* 3. velocità di taglio non adatta / *cutting speed is not suitable*	1. riaffilare correttamente le scanalature in modo da evitare l'interferenza dei trucioli / *resharpen correctly the grooves in order to avoid the interference of the chips* 2. sostituire il maschio con uno di tipo più idoneo / *replace the tap with one more suitable* 3. impostare una velocità di taglio corretta / *set a correct cutting speed*
IL MASCHIO PRODUCE UNA FILETTATURA MAGGIORATA *TAP PRODUCES AN INCREASED THREAD*	1. angolo di taglio e/o spoglia dell'imbocco non idonei / *cutting angle and/or rake of chamfer unsuitable* 2. eccessiva o scarsa spinta assiale del maschio / *excessive or bad axial thrust of the male* 3. lubrificazione non idonea / *lubrication unsuitable* 4. dissassamento maschio / foro da filettare / *male/ tapping hole off-axis*	1. riaffilare correttamente il maschio / *resharpen correctly the tap* 2. correggere la spinta o se possibile, usare sistemi d'avanzamento con patrona o con dispositivi di compensazione / *fix the push or use systems of advancement with compensation devices* 3. prowedere alla lubrificazione adatta / *provide lubrication suitable* 4. allineare e centrare correttamente / *align and properly center*
IL MASCHIO PRODUCE UNA FILETTATURA MINORATA *TAP PRODUCES AN UNDERSIZED THREAD*	1. angolo di taglio non adatto / *cutting angle not suitable* 2. maschio usurato / *tap worn out*	1. riaffilare correttamente il maschio / *resharpen correctly the tap* 2. sostituire o riaffilare il maschio / *use a new tap*
IL MASCHIO PRODUCE FILETTI STRAPPATI E SI VERIFICA UN FENOMENO DI GRIPPAGGIO *TAP PRODUCES RIPPED THREADS AND HAPPENS AN EVENT OF SEIZURE*	1. angolo di taglio non idoneo / *cutting angle unsuitable* 2. maschio usurato / *tap worn out* 3. lubrificazione non adatta / *lubrication not suitable* 4. preforo troppo piccolo / *pilot hole too small*	1. riaffilare correttamente il maschio / *resharpen correctly the tap* 2. sostituire o riaffilare il maschio / *use a new tap* 3. usare tipo e quantità di lubrificante appropriati / *use the appropriate type and amount of lubricant* 4. correggere il diametro di foratura / *correct the drilling diameter*

AFFILATURA / *SHARPENING*

AFFILATURA / *SHARPENING*

È importante affilare in tempo il maschio quando presenta sintomi di usura. Ciò si riconosce da una **cattiva qualità** della filettatura. Non intervenendo preventivamente si ottiene un aumento del consumo del tagliente del maschio. L'affilatura del maschio serve a rigenerare gli spigoli consumati dall' usura, ciò è molto importante per la durata del maschio e per la qualità delle superfici filettate. L'utensile non affilato aumenta il momento torcente dell'utensile, e può portare alla rottura del maschio.

It is important to sharpen on time the tap when it has symptoms of wear. This is visible by a poor quality of the thread. Not acting in advance you get an increase in the consumption of the sharp of the tap. The sharpening of the tap serves to regenerate the edges consumed by wear, this is very important for the life of the tap and for the quality of the threaded surfaces. The unsharpened tool increases the torque of the tool, and can lead to the breakdown of the tap.



SI DEVE PROCEDERE COME SEGUE / *PROCEED AS FOLLOW*

1) affilatura imbocco: la produzione di trucioli è più alta all'imbocco, e per tale ragione che l'usura dell'imbocco è più intensa, l'imbocco deve essere perfettamente centrato onde evitare gli effetti visibili. Pericolo: rottura del maschio durante la corsa di ritorno.

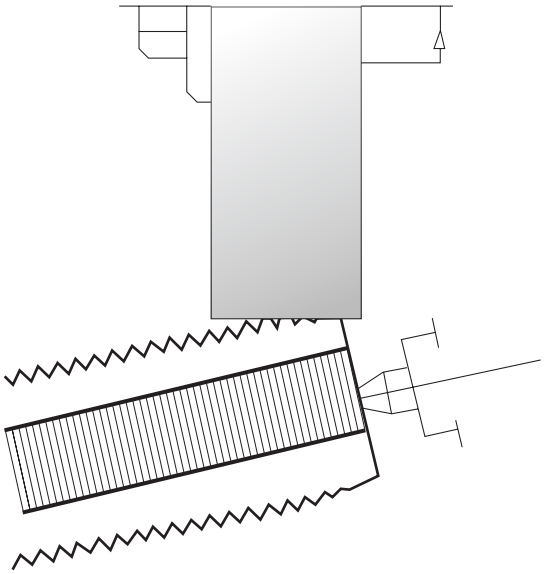
Sharpening chamfer: chips production is higher at the entrance, it is for this reason that the wear of the chamfer is more intense, the chamfer must be perfectly centered to prevent the visible effects. Danger: tap breakage during the return stroke

2) affilatura scanalature, si deve fare su un'affilatrice per maschi dotata di divisore o di una patrona.

* Scanalature diritte si ripassa la superficie di spoglia superiore.
* Scanalature diritte imbocco corretto si riaffila solo la scanalatura tagliente.
* Scanalature elicoidali si affilano seguendo il passo elica.

Sharpening flutes, you should do on a sharpener for taps with a divider.

** Straight flutes goes over the upper rake surface.*
** Straight flutes spiral point is regrinds only the flute's edge.*
** Helical flutes are sharpened following the step helix.*



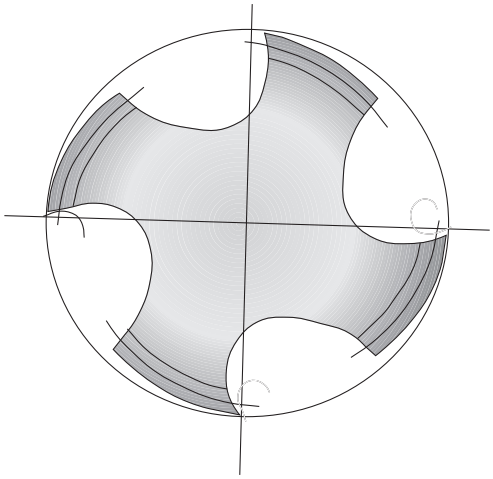
CONTROLLI / *CHECKS*

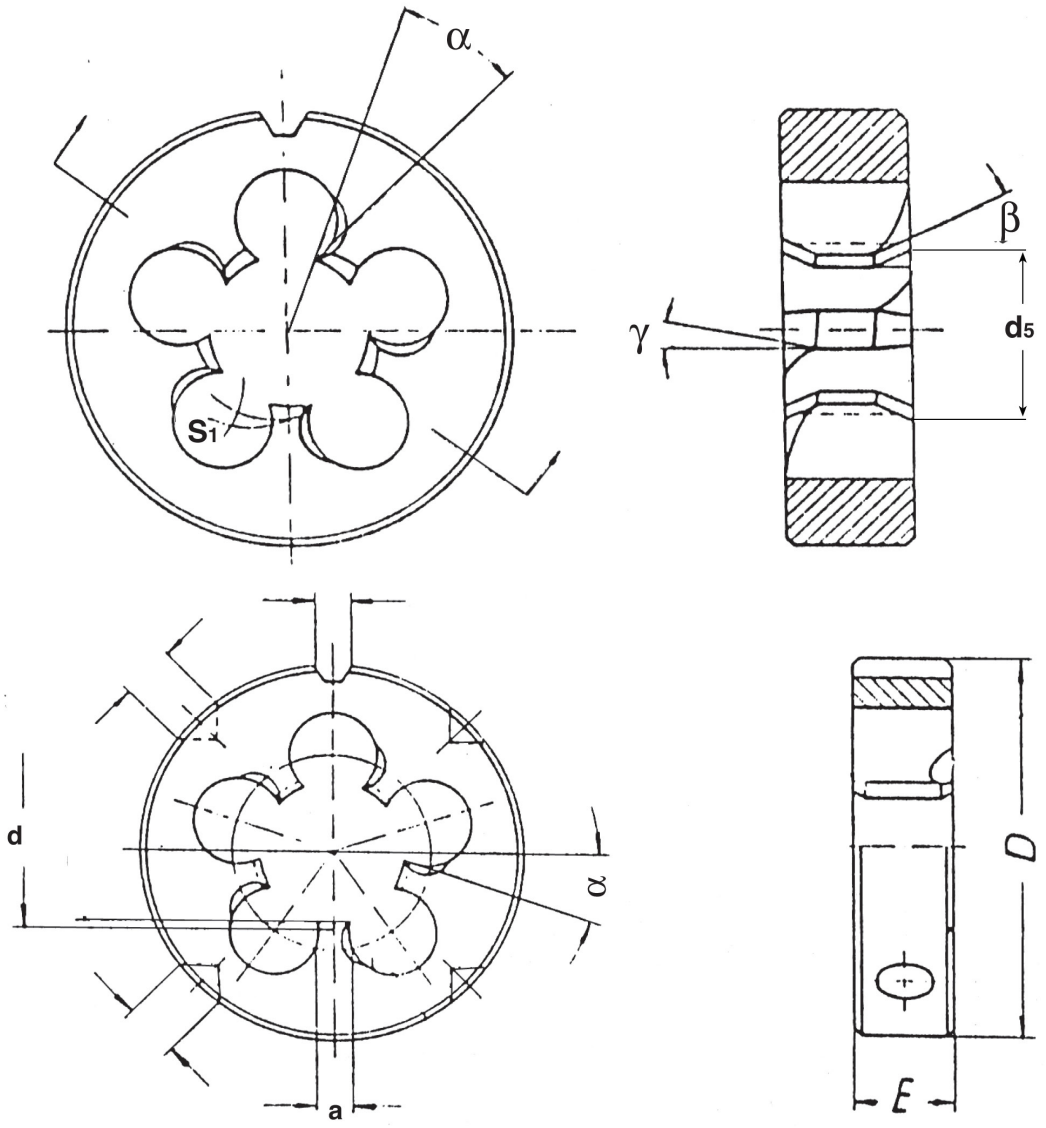
Dopo l'affilatura del maschio si deve controllare:
Imbocco: vedere se centrato
il numero di spire e l' angolo devono essere uguali
i taglienti devono essere concentrici.

Dato che la zona dell'imbocco è soggetta ad usura, è necessario ripristinarla correttamente. Se l'usura si presenta anche sui fianchi del filetto, si consiglia di accorciare il maschio prima di procedere alla riaffilatura. Dopo l' affilatura è bene eseguire una pulizia delle bave createsi, che si possono togliere con una spazzola metallica. Pericolo: alesature, filettature lasche.

After the sharpening of the tap, it must be checked:
Chamfer: check if it is centered
the number of turns and the angle must be the same
the cutting edges should be concentric.

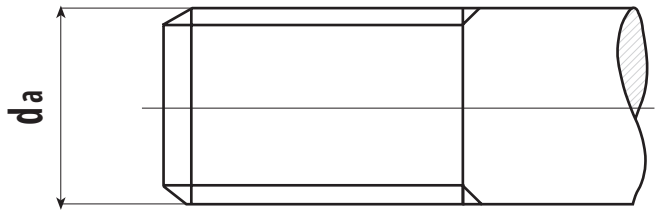
Since that the chamfer area is subject to wear, it is necessary to restore it properly. If the wear is also present on the flanks of the thread, it is recommended to shorten the tap prior to regrinding. After the sharpness it is good to clean the burr, which can be removed with a wire brush.
Danger: boring, loose threads.





α	Semiangolo di imbocco / *Chamfer angle*
β	Angolo di imbocco corretto / *Spiral point angle*
γ	Spoglia radiale sull'imbocco / *Chamfer radial relief*
S_1	Angolo di taglio / *Rake angle*
E	Spessore della filiera / *Die thickness*
D	Diametro della filiera / *Die O.D.*
d	Diametro nominale della filettatura / *Thread diamete*
d_5	Diametro in punta sull'imbocco / *Chamfer diameter*
a	Larghezza del tagliente / *Width of land*

DIAMETRI DI TORNITURA PER VITI
DIAMETERS TURNING FOR SCREWS



M	
d x p	min-max
M 1 x 0.25	0.91 - 0.98
M 1.2 x 0.25	1.11 - 1.18
M 1.4 x 3	1.30 - 1.38
M 1.6 x 0.35	1.49 - 1.58
M 1.7 x 0.35	1.59 - 1.68
M 1.8 x 0.35	1.69 - 1.78
M 2 x 0.4	1.88 - 1.98
M 2.2 x 0.45	2.08 - 2.18
M 2.3 x 0.4	2.18 - 2.28
M 2.5 x 0.45	2.38 - 2.48
M 2.6 x 0.45	2.48 - 2.58
M 3 x 0.5	2.87 - 2.98
M 3.5 x 0.6	3.35 - 3.47
M 4 x 0.7	3.83 - 3.97
M 4.5 x 0.75	4.33 - 4.47
M 5 x 0.8	4.82 - 4.97
M 5.5 x 0.9	5.31 - 5.47
M 6 x 1	5.79 - 5.97
M 7 x 1	6.79 - 6.97
M 8 x 1.25	7.76 - 7.97
M 9 x 1.25	8.76 - 8.97
M 10 x 1.5	9.73 - 9.96
M 11 x 1.5	10.73 - 10.96
M 12 x 1.75	11.70 - 11.96
M 14 x 2	13.68 - 13.96
M 16 x 2	15.68 - 15.96
M 18 x 2.5	17.62 - 17.95
M 20 x 2.5	19.62 - 19.95
M 22 x 2.5	21.62 - 21.95
M 24 x 3	23.57 - 23.95
M 27 x 3	26.57 - 26.95
M 30 x 3.5	29.52 - 29.94
M 33 x 3.5	32.52 - 32.94
M 36 x 4	35.49 - 35.94
M 39 x 4	38.49 - 38.94
M 42 x 4.5	41.43 - 41.93
M 45 x 4.5	44.43 - 44.93
M 48 x 5	47.39 - 47.92
M 52 x 5	51.39 - 51.92
M 56 x 5.5	55.36 - 55.92
M 60 x 5.5	59.36 - 59.92

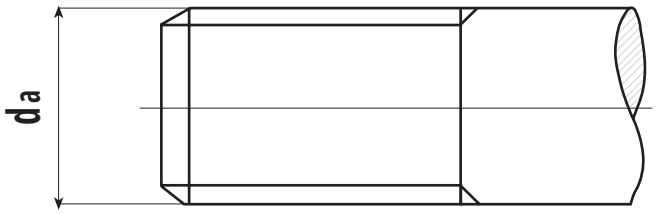
MF	
d x p	min-max
M 2 x 0.25	1.91 - 1.98
M 2.2 x 0.25	2.11 - 2.18
M 2.5 x 0.35	2.39 - 2.48
M 3 x 0.35	2.89 - 2.98
M 3.5 x 0.35	3.39 - 3.48
M 4 x 0.5	3.87 - 3.98
M 5 x 0.5	4.87 - 4.98
M 6 x 0.5	5.87 - 5.98
M 6 x 0.75	5.83 - 5.97
M 7 x 0.5	6.87 - 6.98
M 7 x 0.75	6.83 - 6.97
M 8 x 0.75	7.83 - 7.97
M 8 x 1	7.79 - 7.97
M 9 x 0.5	8.87 - 8.98
M 9 x 1	8.79 - 8.97
M 10 x 0.75	9.83 - 9.97
M 10 x 1	9.79 - 9.97
M 10 x 1.25	9.76 - 9.97
M 11 x 0.5	10.87 - 10.98
M 11 x 0.75	10.83 - 10.97
M 11 x 1	10.79 - 10.97
M 11 x 1.25	10.76 - 10.97
M 12 x 0.75	11.83 - 11.97
M 12 x 1	11.79 - 11.97
M 12 x 1.25	11.76 - 11.97
M 12 x 1.5	11.73 - 11.96
M 13 x 0.5	12.87 - 12.98
M 13 x 0.75	12.83 - 12.97
M 13 x 1	12.79 - 12.97
M 14 x 0.5	13.87 - 13.98
M 14 x 0.75	13.83 - 13.97
M 14 x 1	13.79 - 13.97
M 14 x 1.25	13.76 - 13.97
M 14 x 1.5	13.73 - 13.96
M 15 x 1	14.79 - 14.97
M 15 x 1.5	14.73 - 14.96
M 16 x 1	15.79 - 15.97
M 16 x 1.25	15.76 - 15.97
M 16 x 1.5	15.73 - 15.96
M 17 x 1	16.79 - 16.97
M 17 x 1.5	16.73 - 16.96
M 18 x 1	17.79 - 17.93
M 18 x 1.5	17.73 - 17.96
M 18 x 2	17.68 - 17.96
M 20 x 1	19.79 - 19.97
M 20 x 1.5	19.73 - 19.96
M 20 x 2	19.68 - 19.96
M 22 x 1	21.79 - 21.97
M 22 x 1.5	21.73 - 21.96
M 22 x 2	21.68 -21.96
M 24 x 1	23.79 - 23.97
M 24 x 1.5	23.73 - 23.96
M 24 x 2	23.68 - 23.96

MF	
d x p	min-max
M 25 x 1	24.79 - 24.97
M 25 x 1.5	24.73 - 24.96
M 25 x 2	24.68 - 24.96
M 26 x 1	25.79 - 25.97
M 26 x 1.5	25.73 - 25.96
M 26 x 2	25.68 - 25.96
M 27 x 1	26.79 - 26.97
M 27 x 1.5	26.73 - 26.96
M 27 x 2	26.68 - 26.96
M 28 x 1	27.79 - 27.93
M 28 x 1.5	27.73 - 27.96
M 28 x 2	27.68 - 27.96
M 30 x 1	29.79 - 29.97
M 30 x 1.5	29.73 - 29.96
M 30 x 2	29.68 - 29.96
M 32 x 1	31.79 - 31.97
M 32 x 1.5	31.73 - 31.96
M 32 x 2	31.68 - 31.96
M 33 x 1.5	32.73 - 32.96
M 33 x 2	32.68 - 32.96
M 34 x 1.5	33.73 - 33.96
M 35 x 1.5	34.73 - 34.96
M 36 x 1.5	35.73 - 35.96
M 36 x 2	35.68 - 35.96
M 36 x 3	35.57 - 35.95
M 38 x 1.5	37.73 - 37.96
M 39 x 2	38.68 - 38.96
M 39 x 3	38.57 - 38.95
M 40 x 1.5	39.73 - 39.96
M 40 x 2	39.68 - 39.96
M 42 x 1.5	41.73 - 41.96
M 42 x 2	41.68 - 41.96
M 42 x 3	41.57 - 41.95
M 45 x 1.5	44.73 - 44.96
M 45 x 2	44.68 - 44.96
M 45 x 3	44.57 - 44.95
M 48 x 1.5	47.73 - 47.96
M 48 x 2	47.68 - 47.96
M 48 x 3	47.57 - 47.95
M 50 x 1.5	49.73 - 49.96
M 50 x 2	49.68 - 49.96
M 50 x 3	49.57 - 49.95
M 52 x 1.5	51.73 - 51.96
M 52 x 2	51.68 - 51.96
M 52 x 3	51.57 - 51.95
M 56 x 1.5	55.73 - 55.96
M 56 x 2	55.68 - 55.96
M 56 x 3	55.57 - 55.95
M 56 x 4	55.49 - 55.94
M 60 x 1.5	59.73 -59.96
M 60 x 2	59.68 - 59.96
M 60 x 3	59.57 - 59.95
M 60 x 4	59.49 - 59.94

MF		
d	p	min-max
1'1/16	- 12	26.65 - 26.94
1'1/8	- 8	28.14 - 28.52
1'3/16	- 12	29.82 - 30.11
1'1/4	- 8	31.31 - 31.69
1'5/16	- 12	33.00 - 33.28
1'3/8	- 8	34.48 - 34.86
1'1/2	- 8	37.66 - 38.04
1'5/8	- 8	40.83 - 41.21
1'5/8	- 12	40.93 - 41.22
1'3/4	- 8	44.01 - 44.39
1'3/4	- 12	44.11 - 44.39
1'7/8	- 8	47.18 - 47.56
1'7/8	- 12	47.28 - 47.57
2'	- 8	50.36 - 50.74
2'	- 12	50.45 -50.74
2'1/8	- 12	53.63 - 53.92
2'1/4	- 8	56.80 - 57.09
2'3/8	- 12	59.98 - 60.26
2'1/2	- 8	63.05 - 63.43
2'1/2	- 12	63.15 - 63.44
2'3/4	- 8	69.40 - 69.78
3'	- 8	75.75 - 76.13
3'	- 12	75.85 - 76.14

MF		
d	p	min-max
3/16	- 32	4.63 - 4.76
1/4	- 26	6.20 - 6.35
5/16	- 22	7.78 - 7.93
3/8	- 20	9.35 - 9.52
7/16	- 18	10.93 - 11.13
1/2	- 16	12.51 - 12.7
5/8	- 14	15.66 - 15.87
3/4	- 12	18.86 - 19.05
7/8	- 11	21.99 - 22.22

DIAMETRI DI TORNITURA PER VITI
DIAMETERS TURNING FOR SCREWS



UNC	
d p	min-max
1 -64	1.74 - 1.83
2 -56	2.06 - 2.16
3 -48	2.33 - 2.49
4 - 40	2.69 - 2.82
5 -40	3.02 - 3.15
6 -32	3.33 - 3.48
8 -32	3.9 - 4.14
10 -24	4.61 - 4.80
12 -24	5.27 - 5.46
1/4 -20	6.11 - 6.32
5/16 -18	7.68 - 7.90
3/8 -16	9.25 - 9.49
7/16 -14	10.81 - 11.07
1/2 -13	12.38 - 12.66
9/16 -12	13.95 - 14.24
5/8 -11	15.52 - 15.83
3/4 -10	18.67 - 19.0
7/8 - 9	21.82 - 22.17
1' - 8	24.96 - 25.34
1'1/8 - 7	28.10 - 28.51
1'1/4 - 7	31.27 - 31.69
1'3/8 - 6	34.40 - 34.86
1'1/2 - 6	37.57 - 38.03
1'3/4 - 5	43.86 - 44.38
2'- 4 1/2	50.11 - 50.72

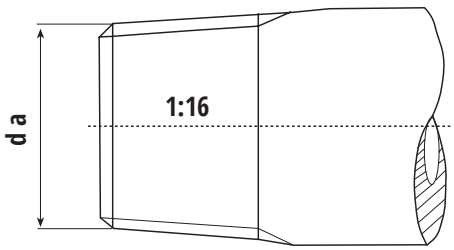
UNF	
d p	min-max
0 - 80	1.37 - 1.50
1 - 72	1.75 - 1.83
2 - 64	2.07 - 2.16
3 - 56	2.39 - 2.49
4 - 48	2.71 - 2.82
5 - 44	3.03 - 3.15
6 - 40	3.35 - 3.48
8 - 36	4.00 - 4.14
10 - 32	4.65 - 4.80
12 - 28	5.29 - 5.46
1/4 - 28	6.16 - 6.32
5/16 - 24	7.72 - 7.91
3/8 - 24	9.31 - 9.49
7/16 - 20	10.87 -11.07
1/2 - 20	12.46 -12.66
9/16 - 18	14.03 -14.25
5/8 - 18	15.61-15.83
3/4 - 16	18.77-19.01
7/8 - 14	21.92-22.18
1' - 12	25.06-25.35
1'1/8 -12	28.24-28.52
1'1/4 -12	31.41-31.70
1'3 /8-12	34.58-34.87
1'1/2-12	37.76-38.05

UNEF	
d p	min-max
12 - 32	5.30 - 5.46
1/4 - 32	6.17 - 6.32
5/16 - 32	7.76 - 7.91
3/8 - 32	9.34 - 9.5
7/16 - 28	10.91-11.08
1/2 - 28	12.50-12.67
9/16 - 24	14.07-14.25
5/8 - 24	15.66-15.84
3/4 - 20	18.81-19.01
7/8 - 20	21.91-22.18
1' - 20	25.15-25.36
1'1/8 - 18	28.31-28.53
1'1/4 - 18	31.48-31.70
1'3/8 - 1	34.61-34.88

UNEF	
d p	min-max
7 - 20	12.3 - 12.5
9 - 18	15 - 15.2
11 - 18	18.4 - 18.6
13.5 -18	20.2 - 20.4
16 - 18	22.3 - 22.5
21 - 16	28. - 28.3
29 - 16	36.7 - 37
36 - 16	46.7 - 47
42 - 16	53.7 - 54
48 - 16	59
	59.3

BSW	
d p	min-max
3/32 - 48	2.28 - 2.38
1/8 - 40	3.06 - 3.17
5/32 - 32	3.84 - 3.96
3/16 - 24	4.62 - 4.76
7/32 - 24	5.41 - 5.55
1/4 - 20	6.19 - 6.35
5/16 - 18	7.77 - 7.93
3/8 - 16	9.34 - 9.52
7/16 - 14	10.92 -11.13
1/2 - 12	12.49 -12.7
9/16 - 12	14.07 -14.28
5/8 - 11	15.65 -15.87
3/4 - 10	18.81 -19.05
7/8 - 9	21.97 -22.22
1' - 8	25.13 -25.4
1'1/8 - 7	28.29 -28.57
1'1/4 - 7	31.46 -31.75
1'3/8 - 6	34.62 -34.92
1'1/2 - 6	37.79 -38.1
1'5/8 - 5	40.94 -4127
1'3/4 - 5	44.11 -44.45
1'7/8 -41/2	47.26 -47.62
2' - 41/2	50.43 -50.8

G	
d p	min-max
1/8 - 28	9.51 - 9.72
1/4 - 19	12.90 - 13.15
3/8 - 19	16.41 - 16.66
1/2 - 14	20.67 - 20.95
5/8 - 14	22.62 - 22.91
3/4 - 14	26.15 - 26.44
7/8 - 14	29.91 - 30.20
1' - 11	32.88 - 33.24
1'1/8 -11	37.53 - 37.89
1'1/4 -11	41.55 - 41.91
1'1/2 -11	47.44 - 47.80
1'3/4 -11	53.38 - 53.74
2' - 11	59.25 - 59.61
2'1/4 -11	65.27 - 65.71
2'1/2 -11	74.75 - 75.18
2'3/4 -11	81.1 - 81.53
3' -11	87.45 - 87.88



UNC		
d p	min	max
1/16 - 27	7 . 5 2	7 . 6 4
1/8 - 27	9 . 8 7	9 . 9 9
1/4 - 18	13.10	13.26
3/8 - 18	16.52	16.66
1/2 - 14	20.55	20.71
3/4 - 14	25.87	26.03
1' -11 1/2	32.42	32.59
1'1/4 -11 1/2	41.14	41.32
1'1/2 - 11 1/2	47.21	47.39
2' - 8	59.25	59.4

NPTF		
d p	min	max
1/16 - 27	7 . 5 2	7 . 6 2
1/8 - 27	9 . 8 7	9 . 9 6
1/4 - 18	13.13	13.21
3/8 - 18	16.55	16.63
1/2 - 14	20.62	20.70
3/4 - 14	25.93	26.02
1' -11 1/2	32.47	32.56
1'1/4 -11 1/2	41.20	41.29
1'1/2 - 11 1/2	47.27	47.36
2' - 8	59.28	59.37

NPTF		
d p	mis.	toll.
1/16 - 28	7.47	± 0.05
1/8 - 28	9.48	± 0.05
1/4 - 19	12.78	± 0.08
3/8 - 19	16.26	± 0.08
1/2 - 14	20.44	± 0.11
3/4 - 14	25.85	± 0.11
1' - 11	32.60	± 0.14

ALCUNI ESEMPI DI MATERIALI
EXAMPLES OF MATERIALS

		# Werkstoff	DIN	UNI	AISI/SAE ASTM
1.1	**Acciaio dolce, da costruzione, da cementazione, alta velocità** ***Soft Steel, Structural Steel, Casehardening Steel, Super Cutting Steel***	1,1141	CK15	-	1018
		1,7131	16MnCr5	16MnCr5	-
		1,0570	St52-3N	Fe510FN	1024
		1,0401	C15	C15	M1015
		1,0116	Fe36DOD1	Fe360CFN	A284GrD
		1,1121	CK10	2C10	-
		1,0715	9SMn28	CF9Mn28	1213
		1,0718	9SMnPb28	CF9SMnPb28	12L13
		1,0726	35S20	-	1140
1.2	**Acciaio al carbonio** ***Carbon Steel***	1,1191	C45E	C46	-
		1,1203	C55E	-	-
		1,1231	C67E	C70	-
		1,1248	C75E	C75	1078
		1,1274	C101E	C100	-
1.3	**Acciaio legato** ***Alloyed Steel***	1,0503	C45	C45	1045
		1,0535	C55	C55	1055
		1,1525	C80W1	C80KU	W108
		1,2067	102Cr6	-	L1
		1,2330	35CrMo4	35CrMo4	4135
1.4	**Acciaio legato bonificato / alta resistenza** ***High Tensile Steel***	1,7220	36CrMo4	36CrMo4KB	4137
		1,7228	50CrMo4	-	4150
		1,7361	32CrMo12	32CrMo12	-
		1,6511	36CrNiMo4	36NiCrMo7KB	4340
		1,6580	30CrNiMo8	30NiCrMo8	-
		1,6582	36CrNiMo6	35NiCrMo6KB	4337
		1,7223	41CrMo4	41CrMo4	4140
2.1	**Acciaio Inox automatico** ***Free-cutting Inox Steel***	1,4305	X8CrNiS18-19	X10CrNiS1809	303
		1,4104	X14CrMoS17	X10CrS17	A430F
2.2	**Acciaio Inox austenitico** ***Austenitic Inox Steel***	1,4311	X2CrNiN18-10	X2CrNiN1810	304LN
		1,4404	X2CrNiMo17-12-2	X2CrNiMo1712	316L
		1,4435	X2CrNiMo18-14-3	X2CrNiMo1713	-
		1,4841	X15CrNiSi25-20	X16CrNiSi2520	314
		1,4305	X8CrNiS18-9	X10CrNiS1809	303
		1,4301	X5CrNi1810	X5CrNi1810	304
		1,4401	X5CrNiMo17-12-2	X5CrNiMo1712	316
		-	duplex	duplex	A182
2.3	**Acciaio inox ferritico-ferritico+austenitico-martensitico** ***Inox Steel Austenitic - Austenitic+Ferritic - Martensitic***	1,4110	X55CrMo14	-	-
		1,4521	X2CrMoTi18-2	-	443
		1,4510	X3CrTi17	X6CrTi17	430Ti
		1,4462	X2CrNiMoN22-5-3	-	S31803
2.4	**Leghe Ni Cr ad alta resistenza** ***Ni Cr Alloys high strength***	1,4542	X7CrNiAl17-4	-	630
		1,4545	X4CrNiCu16-6	-	-
		1,4547	X2CrNiMo20-18-6	-	254SMO
		1,4876	X10NiCrAlTi32-20	-	B163
		1,4958	X7CrNiAlTi21-31	-	N08811
3.1	**Ghisa grigia** ***Cast Iron***	0,6015	GG15	G15	A48-25B
		0,6025	GG25	G25	A48-40B
		0,6030	GG30	G30	A48-45B
		0,6035	GG35	G35	A48-50B
		0,6040	GG40	-	A48-60B
3.2	**Ghisa malleabile e sferoidale** ***Malleable and Spheroidal Cast Iron***	0,7040	GGG40	GS400-12	60-40-18
		0,7060	GGG60	GS600-3	80-55-06
		0,7070	GGG70	GS700-2	100-70-03
		0,7080	GGG80	GS800-2	120-90-02

		# Werkstoff	DIN	UNI	AISI/SAE ASTM
4.1	**Titanio puro** ***Titanium***	3,7024	Ti99,8	-	-
		3,7034	Ti99,7	-	4902
		3,7055	-	-	R50550
		3,7064	Ti99,5	-	4901
4.2	**Leghe di Titanio** ***Titanium Alloys***	3,7124	TiCu2	-	-
		3,7184	TiAl4Mo4Sn2Si05	-	-
		3,7174	TiAl6VSn2	-	-
5.1	**Nichel puro** ***Nickel***	1,3911	RNi24	-	-
		1,3926	RNi12	-	-
		1,3927	RNi8	-	-
5.2	**Leghe di Nichel** ***Nickel Alloys***	2,4668	NiCr19Fe19NbMo	-	-
		2,4360	NiCu30Fe	-	4544
		2,4816	NiCr15Fe	-	5540
		2,4631	NiCr20TiAl	-	-
		2,4665	NiCr22Fe18Mo	-	5536E
6.1	**Rame puro, rame elettrolitico** ***Copper and Electrolytic Copper***	2,0060	ECu57	-	C11000
		2,0065	ECu58	-	
		2,0070	SeCu	-	C10300
6.2	**Ottone a truciolo corto - bronzo** ***Brass with short chip - Bronze***	2,0401	CuZn39Pb3	-	C38500
		2,0402	CuZn40Pb2	-	C3800
		2,0580	CuZn40Mn1Pb	-	-
		2,0410	CuZn44Pb2	-	-
		2,1086	G-CuSn10	-	C90250
		2,0882	CuNi30Mn1Fe	-	C71500
6.3	**Ottone a truciolo lungo** ***Brass with long chip***	2,0240	CuZn15	-	C23000
		2,0265	CuZn30	-	C26000
		2,0335	CuZn36	-	C27000
		2,0360	CuZn40	-	C28000
7.1	**Magnesio e sue leghe** ***Magnesium and its Alloys***	3,5612	MgAl6Zn1	-	SAE530
		3,5632	MgAl6Zn3	-	SAE50
		3,5912	MgAL9Zn1	AZ91hp	SAE501
		3,5812	MgAl8Zn1	AZ81hp	AZ81
		3,5161	MgZn6Zr	-	-
8.1	**Alluminio puro e leghe di Al con Si < 0,5%** ***Aluminum and Al with Si < 0,5% Alloys***	3,0205	Al99	3567	1200
		3,0305	Al99,9	-	1090
		3,0505	AlMn0	-	3105
		3,0525	AlMn1Mg0,5	-	3005
		3,3315	AlMg1	5764	5005A
		3,3525	AlMg2Mn03	P-AlMg2Mn	5251
		3,3542	G-AlMg3Cu	-	-
		3,3555	AlMg5	3576	5056A
		3,0615	AlMgSiPb	-	6012
		3,1325	AlCuMg1	3579	2017A
		3,4365	AlZnMgCu1,5	3735	7075
8.2	**Leghe di Al con Si < 10%** ***Al with Si < 10% Alloys***	3,2315	AlMgSi1	3571	6082
		3,3210	AlMgSi07	-	6005A
		3,2134	GAlSi5Cu1Mg	3600	355,1
		3,2151	GAlSi6Cu4	3052	319
		3,2341	GAlSi5Mg	3054	-
		3,2381	GAlSi10Mg	-	A360
		3,2581	GAlSi12	4514	A413
		3,2585	S-AlSi12	-	4047
8.3	**Leghe di Al con Si > 10%** ***Al with Si > 10% Alloys***		AlSi17Cu4	-	390
			AlSi18	-	-
			AlSi21CuNiMg	-	393

COMPARAZIONE DUREZZE
HARDNESS COMPARISON TABLE

HV Vickers	HC Rockwell	HB Brinell	Resistenza *Strength*	Tensile
Durezza *Hardness*	Durezza *Hardness*	Durezza *Hardness*	N/mm²	Ton/sq
940	68			
900	67			
864	66			
829	65			
800	64			
773	63			
745	62			
720	61			
698	60			
675	59			
655	58		2200	142
650		618	2180	141
640		608	2145	139
639	57	607	2140	138
630		599	2105	136
620		589	2070	134
615	56	584	2050	133
610		580	2030	131
600		570	1995	129
596	55	567	1980	128
590		561	1955	126
580		551	1920	124
578	54	549	1910	1 24
570		542	1880	122
560	53	532	1845	119
550		523	1810	117
544	52	517	1790	116
540		513	1775	115
530		504	1740	113
527	51	501	1730	112
520		494	1700	110
514	50	488	1680	109
510		485	1665	108
500		475	1630	105
497	49	472	1620	105
490		466	1595	103
484	48	460	1570	102
480		456	1555	101
473	47	449	1530	99
470		447	1520	98
460		437	1485	96
458	46	435	1480	96
450		428	1455	94
446	45	424	1440	93
440		418	1420	92

HV Vickers	HC Rockwell	HB Brinell	Resistenza *Strength*	Tensile
Durezza *Hardness*	Durezza *Hardness*	Durezza *Hardness*	N/mm²	Ton/sq
434	44	416	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
390	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	3637	1140	74
350		333	1125	73
345	35	328	1110	72
340		323	1095	71
336	34	319	1080	70
330		314	1060	69
327	33	311	1050	68
320		304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300		285	965	62
295		280	950	61
293	29	278	940	61
290		276	930	60
287	28	273	920	60
285		271	915	59
280	27	266	900	58
275		261	880	57
272	26	258	870	56
270		257	865	56
268	25	255	860	56
265		252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245		233	785	51
243	21	231	780	50
240		228	770	50
235		223	755	49
230		219	740	48
225		214	720	47
220		209	705	46
215		204	690	45
210		199	675	44
205		195	660	43
200		190	640	41

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