

# TECHNICAL CATALOGUE UFS®

31



Il catalogo 31 vuol essere la rappresentazione, verso il mercato, di quanto è cresciuta la UFS. Moderni software, personalizzati sulle esigenze dell'azienda, ne coordinano la gestione operativa e finanziaria. La produzione viene assistita dall'ordine alla consegna ottimizzando i flussi e permettendo di creare spazi esecutivi per introdurre nuove tipologie di utensili specifici soddisfacendo, nella fascia più alta, la lavorazione di materiali impegnativi e di ultima generazione. Qualsiasi sia l'esigenza di filettatura si troverà risposta nelle tre linee di prodotto: **LINE, PLUS e TOP**.

*Our Catalogue 31 is intended to reflect the growth of UFS in the market.*

*New leading-edge software customized to the company's needs helps managing its operational and business development. Production assisted from order to delivery with production flow optimization allowing for space to deal with a range of new types of specific tools meeting the requirements from materials of the latest generation. Whatever the requirements for threading, the answer is in one of our three lines of products: **LINE, PLUS and TOP**.*

*Le catalogue 31 est une représentation des dernières évolutions des services D'UFS.*

*Des logiciels modernes, adaptés aux besoins de la société, ont été mis en place pour coordonner la gestion opérationnelle et financière. La production est assistée au départ de la commande jusqu'à la livraison en optimisant le flux tout en permettant de créer de l'espace pour introduire de nouveaux types d'outils spéciaux, haut de gamme, pour le traitement des matériaux de dernière génération. Chez UFS nous proposons trois gammes de produits afin de satisfaire toute les exigences du Taraudage: **LINE, PLUS et TOP**.*



La **UFS Technology** è dotata di apparecchiature di rilevazione sforzi, rilevazione attriti e di registrazione delle prove di filettatura consentendo il continuo monitoraggio del prodotto con una costante ricerca tesa al miglioramento. Su richiesta, è inoltre possibile lo studio ed il testing di nuovi utensili su materiali particolari eventualmente forniti dal cliente. Da qualche mese è operativo un reparto di rivestimento superficiale (TiN / TiCN / TiAlN / TXC) e un nuovo moderno reparto di tempra sottovuoto.

**UFS Technology** was set up many years ago to provide continuous product monitoring and research for quality improvement by means of special equipment for friction and stress measurement and threading test recording. Study and testing of new tools on special materials supplied by the customers can also be carried out on request. Since some months it is operating a department of superficial coating (TiN / TiCN / TiAlN / TXC) and a new modern department of vacuum tempering.

**UFS Technology** est opérationnel avec un laboratoire équipé de matériel de détection, de friction et d'enregistrement d'efforts. Des essais de filetage permettent la surveillance continue du produit avec une constante recherche précise visant à améliorer le résultat final. Sur demande, nous pouvons étudier et tester de nouveaux outils sur des matériaux spécifiques fournis par le client. Depuis fin 2013, la société UFS a investi dans de nouveaux fours qui permettent d'être autonome et plus précis en ce qui concerne la trempe et les traitements de surface sous vide (TiN / TiCN / TiAlN / TXC).

# TABELLA D'IMPIEGO

## APPLICATION TABLE

### TABLE D'OPÉRATION



Applicazione per foro cieco e passante  
blind and through hole application  
Application pour trou mort et débouchant



Applicazione per foro passante  
Through hole application  
Application pour trou débouchant



Applicazione per foro cieco  
Blind hole application  
Application pour trou mort

LINÉ

PUS

TOP



#### L1

#### Riflettore sinistra

*(left hand mirror - filtre à gauche)*

Ms58 Applicazione specifica per ottone Ms58

*Specific application for brass Ms58 - Spéciale pour laiton Ms58*

AZ Alternativa del filetto

*Brass/gold throat - Throat avec fillet alternatif*

SJ Synchro Tigid, moschettatura rigida sincronizzata

*Rigid tapping, Synchro - Synchro Rigide, tenacage rigido synchronisé*

30. Maschi con gamba lunga

*Tap with long shank - Tariquet sans tige*

BT Back Tapered, restrezzione posteriore a botte del filetto

*Back tapered thread - Détartrage arrière*

IT Inox Tapered, restrezzione posteriore orizzontale del filetto

*Horizontal back tapered for inox, application*

OX/Tapered, détartrage horizontale pour application inox

con1:16 Maschi con riflettura conica

*Tap with tapered front - Tapette à filage conique*

A Applicazione specifica per alluminio e leghe d'alluminio

*Specific application for aluminum and aluminum alloys*

Applicazione specifica pour l'aluminium et alliages d'aluminium

Cu Applicazione specifica per rame e leghe rame

*Specific application for copper and copper alloys - Application spécifique pour le cuivre et ses alliages*

Ti Applicazione specifica per titanio e leghe di titanio

*Specific application for titanium and titanium alloys - Application spécifique pour titane et alliages de titane*

N Applicazione specifica per nichel e leghe di nichel

*Specific application for nickel and nickel alloys - Application spécifique pour le nickel et ses alliages*

#### ■ Utilizzo raccomandato - velocità di taglio min/m

■ Recommandé (che - cutting speed min)

■ Utilisation Recommandée - vitesse de coupe minima

#### ○ Utilizzo accettabile - velocità di taglio m/min

○ Acceptable (che - cutting speed min)

○ Utilisation acceptable - vitesse de coupe minima

#### 1. Acciaio

1.1. Acciaio dolce magmatico

Magnetic soft steel

Acier doux magnétique

HB < 120

Inv Number = 400

Steel

1.2. Acciaio da costruzione, cementazione, autovettore

Structural, case-hardening and fire cutting steel

Acier en construction, trempé et autovecteur

> 200

< 700

Steel

1.3. Acciaio al carbonio

Plain carbon steel

Acier au carbone

< 250

< 854

Steel

1.4. Acciaio legato - Bonificato, fasi di fuso

Aloyed steel - Tempered steel, steel casting

Acier allié, trempé et levé, usinage d'acier

< 250

< 850

Steel

1.5. Acciaio legato - Bonificato

Aloyed steel - Tempered steel

Acier allié, tempé et levé

250-280

850-1200

Steel

1.6. Acciaio legato - Alta resistenza

Aloyed steel - High strength steel

Acier allié, haute résistance

35-45 HRC

1200-1400

Steel

1.7. Acciaio legato - Alta resistenza

Aloyed steel - High strength steel

Acier allié, haute résistance

45-60 HRC

1400-1600

Steel

1.8. Acciaio legato - Temprato

Hardened steel

Acier trempé

60-62 HRC

Steel

2.1. Acciaio res. autovettore

Fire resistance stainless steel

Acier inoxydable, autovecteur

= 250

< 850

Steel

2.2. Acciaio austenitico

Austenitic

Asténitique

< 250

< 850

Steel

2.3. Ferrito, Ferrite + Austenitico, Martensitico

Ferritic, ferritic + austenitic, martensitic

Ferritique, austénitique + ferritique, martensitique

< 320

< 1100

Steel

2.4. Leghe CrNi resistenti alle alte temperature

CrNi alloys, high temperature resistant

Alliage CrNi résistant à des températures élevées

330-810

1100-1400

Steel

3. Ghisa

Lamellar grey cast iron

Ferre grise lamellaire

< 100

< 600

Cast iron

3.2. Ghisa grigia lamellare

Lamellar grey cast iron

Ferre grise lamellaire

100-300

600-1000

Cast iron

3.3. Ghisa sferulitica

nodular cast iron

Ferre ductile

< 300

< 1000

Cast iron

3.4. Ghisa malleabile

Malleable cast iron

Ferre malleabile

< 210

< 700

Cast iron

3.5. Ghisa vernicolata a grafite compatta

Compacted cast iron with vermicular graphite

Ferme verniculare à graphite compacté

200-300

700-1000

Cast iron

4.1. Alluminio / Magnesio non legato

Aluminum / Magnesium unalloyed

Aluminium / Magnésium non allié

< 100

< 350

Al Mg

4.2. Leghe d'Al, Si < 0,5% - Truciolo lungo

Al alloys, Si < 0,5% - Long chipper

Alliages Al, Si < 0,5% copeaux longs

< 150

< 500

Al Mg

4.3. Leghe d'Al, Si < 10% - Truciolo medio

Al alloys, Si < 10% - Medium chipper

Alliages Al, Si < 10% copeaux moyen

< 150

< 500

Al Mg

4.4. Leghe Al, Si > 10% - Truciolo corto

Al alloys, Si > 10% - Short chipper

Alliages Al, Si > 10% copeaux courts

< 180

< 600

Al Mg

4.5. Leghe standard di magnesio

Magnesium standard alloys

Alliages de magnésium standard

100-120

240-400

Al Mg

4.6. Leghe di magnesio ad alta resistenza

High strength magnesium alloys

Alliages de magnésium de haute résistance

< 100

< 350

Al Mg

5. Rame

5.1. Rame puro, Rame eletrolitico - Truciolo lungo

Copper pure, copper electrolytic, copeaux longs

< 100

< 350

Copper

5.2. Leghe di rame, o-altezza - Truciolo lungo

Copper alloys, soft brass - Long chipper

Alliages de cuivre, cuivre doux - copeaux longs

< 200

< 700

Copper

5.3. Leghe di rame, o-altezza, bronzo - Truciolo corto

Copper alloys, hard brass, bronze - Short chipper

Alliages de cuivre, cuivre dur, bronze copeaux courts

< 200

< 700

Copper

5.4. Bronzo ad alta resistenza

High strength bronze

Bronze haute résistance

< 440

< 1500

Copper

6. Titanio

Titanium

Titanium

< 200

< 700

Titanium

6.2. Leghe di titanio

Titanium alloys

Alliages de titane

< 230

< 900

Titanium

6.3. Leghe di titanio

Titanium

Alliages de titane

< 410

< 1400

Titanium

7. Nichel

Nickel

Nickel

< 150

< 500

Nickel

7.2. Leghe di nichel

Nickel alloys

Alliages de nickel

< 270

< 900

Nickel

7.3. Leghe di nichel

Nickel alloys

Alliages de nickel

< 470

< 1400

Nickel

8. Materie plastiche

Thermoplastics

Matériaux thermoplastiques

< 80

Plastic materials

Thermosetting plastic

Thermosetting plastic

Matériaux thermosoudables

< 110

Plastic materials

Reinforced plastic materials

Matériaux renforcés

Réf. Matériaux renforcés

140-1440

600-1500

Plastic materials

9. Materiali speciali

Special materials

Matériaux spéciaux

< 51

< 1200

Special materials

Materiale speciale</



## CERTIFICATE OF REGISTRATION

This is to certify that:

### UFS - UTENSILI FILETTATORI S.R.L.

Via Giotto, 20 | 10080 SPARONE (TO) Italy

is in compliance with the standard

### UNI EN ISO 9001:2015

EA Code: 17

concerning the following kinds of products – processes – services:

Design, development, manufacturing and marketing of standard and special threading tools.

Progettazione, sviluppo, fabbricazione e commercializzazione di utensili standard e speciali per filettare.

Certificate No.: SGQ 1177/B

Issue Date: 01/06/2018

Original Certification Date: 20/06/2006

Current Certification Date: 01/06/2018

Certification Expiry Date: 18/06/2021



**ACREDIA**  
Ente Italiano di accreditamento

SGQ 8264 SGA 8140 SCA 211F

Membro degli Accordi di Mutuo

Riconoscimenti UNI, IAF e IAC

Signature of UNI, IAF and IAC Mutual

Recognition Agreement



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**SAI GLOBAL**

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Attenzione: i maschi si possono scheggiare durante il loro impiego e si raccomanda l'uso degli occhiali o dello schermo protettivo.

Warning: taps can shatter during use; protective goggles or shield should therefore be used.

Avertissement: les tampons peuvent se briser dans leur utilisation; il est recommandé l'utilisation de lunettes ou écran de protection.

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## About us



## B2B

Con il nuovo servizio ON LINE B2B, accessibile dal nostro sito [www.ufs.it](http://www.ufs.it), sarete in grado di visionare i prodotti del catalogo 31 con prezzi e disponibilità a magazzino.

Potrete ordinare direttamente ciò che Vi serve e cercare articoli alternativi. L'ordine sarà confermato e, a tal punto, diventerà effettivo.

Chiedeteci la password!

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*The order will be confirmed and, to this point, will become effective.  
Ask us for the password!*

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# Customer Service

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The screenshot shows a complex web-based application interface. At the top, there's a header with the UFS logo and a search bar. Below the header, there's a main menu with items like 'Home', 'Prodotti', 'Gestione Clienti', 'Gestione Fornitori', and 'Gestione Utenti'. The central part of the screen is filled with several data tables and charts. One prominent chart on the left is titled 'Attività Clienti' and shows data for different countries (Italy, USA, UK, France, Germany) across various categories. Another chart on the right shows 'Attività Fornitori' with similar data. There are also smaller tables for 'Gestione Utenti' and 'Gestione Ordini'. The overall layout is typical of a large-scale enterprise management system.

# METODO DI COSTRUZIONE DEL CODICE UFS

METHOD OF FAST CONSTRUCTION OF THE UFS' CODE

MÉTHODE DE CONSTRUCTION DU CODE DE L'UFS

<b>E</b>	<b>24</b>	<b>M</b>	<b>...</b>	<b>AZ</b>	<b>-</b>	<b>T</b>
Materiale del maschio Tap steel Matière du taraud	Tipo di scanalatura Flute type Type de goujure	Tipo di filettatura del maschio Threading type Type de filetage	Spazio per l'indicazione del diametro Diameter location Espace pour la désignation du diamètre	Particolari tecnici aggiuntivi del maschio Technical added information Détails techniques supplémentaires du taraud	-	Tipo di trattamento o rivestimento superficiale Tap coating or treatment surface Type de traitement ou revêtement

## FILETTATURE

THREADS  
FILETAGES

<b>M - new MJ</b>	<b>LH</b>	Filettatura sinistra Left hand thread Filetage à gauche	
<b>MF - new MJF</b>	<b>AZ</b>	Filetti alternati Interrupted threads Filets alternés	
<b>UNC</b>	<b>X</b>	Applicazione per INOX For stainless steel application Application pour acier inoxydable	
<b>UNF</b>	<b>OT</b>	Applicazione specifica per OTTONE Specific application for BRASS Application spécifique pour le laiton	
<b>UNEF</b>	<b>AL</b>	Applicazione specifica per Alluminio Specific application for Aluminium Application spécifique pour l'aluminium	
<b>UNS</b>	<b>NI</b>	Applicazione specifica per Nichel Specific application for Nickel Application spécifique pour le Nickel	
<b>8-UN</b>	<b>FOR</b>	Lubrificazione interna con uscita assiale Through coolant, axial flow Lubrification interne avec sortie axial	
<b>12-UN</b>	<b>FORY</b>	Lubrificazione interna con uscita radiale Through coolant, radial flow Lubrification interne avec sortie radiale	
<b>16-UN</b>	<b>SP</b>	Senza punta anteriore Without centre male Sans pointe avant	
<b>20-UN</b>		Maschiatura rigida sincronizzata Rigid tapping Synchro Taraudage rigide synchronisé	
<b>28-UN</b>		Maschiatura convenzionale Conventional tapping Taraudage conventionnel	
<b>32-UN</b>		Lavorazione con macchine CNC in maschiatura rigida Tapping with CNC machines Taraudage avec CNC machines	
<b>GAS</b>			
<b>Rp</b>			
<b>NPSM</b>			
<b>NPSF</b>			
<b>Rc</b>			
<b>NPT</b>			
<b>NPTF</b>			
<b>BSW</b>			
<b>PG</b>			
<b>Tr</b>			
<b>Rd</b>			
<b>EGM</b>			

# CLASSI DI MATERIALI PER MASCHI STANDARD

MATERIAL TYPE FOR STANDARD TAPS

CLASSES DE MATÉRIAUX POUR TARAUD STANDARD

	Acciai super rapidi High speed steel Acier super rapide		Acciai sinterizzati da polveri Powdered metallurgy high speed steel Acier fritté		
HSS	E  HSSE	V  HSSV3	P  HSSP 8%Co	K  PM3	XT  PM1
	R < 850 N/mm <sup>2</sup>	R < 1000 N/mm <sup>2</sup>	R < 1000 N/mm <sup>2</sup>	R < 1400 N/mm <sup>2</sup> < 45 HRC	R < 1800 N/mm <sup>2</sup> < 52 HRC
					45÷62 HRC



Gestione acciai con magazzino automatico verticale  
Automatic load system for steels'storage  
Gestion d'un entrepôt vertical automatique pour l'acier



Gestione prodotti finiti con magazzino automatico verticale  
Automatic load system for taps steels'storage  
Gestion des produits finis avec entrepôt vertical automatique

## TIPI DI SCANALATURA

FLUTE TYPE

TYPES DE GOUJURES

20	Tagli Diritti (DIN 371) Straight flutes Goujures Droites	42	Elica 10° - 15° dx per Ti e Ni (DIN 371) Spiral flutes 15° R for Ti and Ni Hélice 10° - 15° à droite pour Ti et Ni	80	Elica 40° dx, rastremazione posteriore (DIN371) Spiral flutes 40° R, back tapered tread Hélice 40° à droite, Détalonnage arrière
21	Tagli Diritti (DIN 376) Straight flutes Goujures Droites	43	Elica 10° - 15° dx per Ti e Ni (DIN 376) Spiral flutes 15° R for Ti and Ni Hélice 10° - 15° à droite pour Ti et Ni	81	Elica 40° dx, rastremazione posteriore (DIN376) Spiral flutes 40° R, back tapered tread Hélice 40° droit, Détalonnage arrière
24	Imbocco Corretto (DIN 371) Spiral pointed Entrée GUN	50	Elica 15° sinistra (DIN 371) Spiral flutes 15° LH Hélice 15° à gauche	82	Elica 45° - 48° dx (DIN 371) Spiral flutes 45° - 48° R Hélice 45° - 48° à droite
25	Imbocco Corretto (DIN 376) Spiral pointed Entrée GUN	51	Elica 15° sinistra (DIN 376) Spiral flutes 15° LH Hélice 15° à gauche	83	Elica 45° - 48° dx (DIN 376) Spiral flutes 45° - 48° R Hélice 45° - 48° à droite
26	Tagli diritti per GHISA (DIN 371) Straight flutes for cast iron Goujures Droites pour FONTE	52	Elica 10° - 15° sin. per Ti e Ni (DIN 371) Spiral flutes 15° LH for Ti and Ni Hélice 10° - 15° à gauche pour Ti et Ni	92	Elica 45° dx (DIN371) Spiral flutes 45° Hélice 45° à droite
27	Tagli diritti per GHISA (DIN 376) Straight flutes for cast iron Goujures Droites pour FONTE	53	Elica 10° - 15° sin. per Ti e Ni (DIN 376) Spiral flutes 15° LH for Ti and Ni Hélice 10° - 15° à gauche pour Ti et Ni	93	Elica 45° dx (DIN376) Spiral flutes 45° Hélice 45° à droite
28	Elica 25° dx (DIN 371) Spiral flutes 25° R Hélice 25° à droite	60	Elica 40° dx (DIN 371) Spiral flutes 40° R Hélice 40° à droite	94	Elica 45° dx (DIN371) Spiral flutes 45° Hélice 45° à droite
29	Elica 25° dx (DIN 376) Spiral flutes 25° R Hélice 25° à droite	61	Elica 40° dx (DIN 376) Spiral flutes 40° R Hélice 40° à droite	95	Elica 45° dx (DIN376) Spiral flutes 45° Hélice 45° à droite
40	Elica 15° dx (DIN 371) Spiral flutes 15° R Hélice 15° à droite	70	Elica 45° dx per Alluminio (DIN 371) Spiral flutes 45° R for Aluminium Hélice 45° à droite pour Al		
41	Elica 15° dx (DIN 376) Spiral flutes 15° R Hélice 15° à droite	71	Elica 45° dx per Alluminio (DIN 376) Spiral flutes 45° R for Aluminium Hélice 45° à droite pour Al		



# LINEE PRODOTTI

PRODUCTS LINES

GAMMES DE PRODUITS



Universal



HR



INOX

*Stainless steel  
Acier inoxydable*



Al-Cu-Fe



Ghisa  
*Cast iron  
Fonte*



Ti



Ni

**SR**

Synchro RIGID

**MDI-HR**

Metallo duro  
*Solid Carbide  
Carbure*

**X-SERIES**

Rullare  
*Roll form taps  
Tarauds à refouler*

**K-ROLL**

Rullare  
*Roll form taps  
Tarauds à refouler*



Uso generale  $R < 1000 \text{ N/mm}^2$ , acciaio HSSP 8%Co  
General purpose  $R < 1000 \text{ N/mm}^2$ , HSSP steel 8%Co  
Usage Général  $R < 1000 \text{ N/mm}^2$ , Acier HSSP 8% Co



Linea standard HSSE, HSS  
*Standard line HSSE, HSS  
Ligne standard HSSE, HSS*

# CAMPI APPLICATIVI

APPLICATION FIELD

DOMAINES D'APPLICATION

N	USO GENERALE <i>General purpose - Usage Général</i>
N	USO GENERALE R ≤ 1000N/mm <sup>2</sup> <i>General purpose R ≤ 1000N/mm<sup>2</sup> - Usage Général R ≤ 1000N/mm<sup>2</sup></i>
U	APPLICAZIONI UNIVERSALI R ≤ 1200 N/mm <sup>2</sup> <i>Universal Applications R ≤ 1200 N/mm<sup>2</sup> - Applications universelles R ≤ 1200 N/mm<sup>2</sup></i>
HR	ALTA RESISTENZA <i>High Resistance - Haute Résistance</i>

INOX	ACCIAIO INOSSIDABILE <i>Stainless steel - Acier inoxydable</i>
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GG	GHISA <i>Cast Iron - Fonte</i>
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Al-Cu-Fe	ALLUMINIO, RAME, ACCIAIO R ≤ 700 N/mm <sup>2</sup> <i>Aluminium, Cooper, Steel R ≤ 700 N/mm<sup>2</sup> - Aluminium, cuivre, acier R ≤ 700 N/mm<sup>2</sup></i>
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OT	OTTONE E BRONZO <i>Brass and Bronze - Laiton et Bronze</i>
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Ti	TITANIO <i>Titanium - Titane</i>
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Ni	NICHEL <i>Nickel - Nickel</i>
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SYNCHRO RIGID	MASCHIATURA RIGIDA SINCRONIZZATA <i>Rigid Tapping Synchro - Taraudage rigide synchronisé</i>
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MDI-HR	METALLO DURO INTEGRALE - ALTA RESISTENZA <i>Solid carbide, high resistance - Carbure, haute résistance</i>
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K-ROLL	MASCHI A RULLARE <i>Roll form taps - Tarauds à refouler</i>
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P - SERIES	MASCHI A RULLARE <i>Roll form taps - Tarauds à refouler</i>
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X - SERIES	MASCHI A RULLARE <i>Roll form taps - Tarauds à refouler</i>
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MDI -SERIES	MASCHI A RULLARE <i>Roll form taps - Tarauds à refouler</i>
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Maschi a mano, serie 3 pezzi Hand taps, 3 pieces set Tarauds à main, série 3 pièces			Maschi a mano, serie 2 pezzi Hand taps, 2 pieces set Tarauds à main, série 2 pièces			Maschi a mano sinistri LH, serie 3 pezzi Hand taps 3 pieces set - Left LH Tarauds à main à gauche, série 3 pièces			M. a mano sinistri, 2 pezzi Hand taps 2 pieces set - Left LH T. à main à gauche, s. 3 pièces		Maschi a mano per INOX Hand taps 3 pieces set – Stainless steel Tarauds à main, Inox			...
01...	02...	03...	01...	03...	01...LH	02...LH	03...LH	01...LH	03...LH	01...X-VS	02...X-VS	03...X-VS	10FC...	
LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE
00...	00...	00...	00...	00...	00...LH	00...LH	00...LH	00...LH	00...LH	00...X-VS	00...X-VS	00...X-VS	00...X-VS	
					LH	LH	LH							
2-3	2-3	2-3			4	4	4			5	5	5	6	
			82-84	82-84				85	85					
150	150	150			166	166								
			190	190										
218	218	218												
A (5-6)	D (4-5)	C (2-3)	A (5-6)	C (2-3)	A (5-6)	D (4-5)	C (2-3)	A (5-6)	C (2-3)	A (5-6)	D (4-5)	C (2-3)	C (2-3)	
HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSSE	
Br	Br	Br	Br	Br	Br	Br	Br	Br	Br	VS	VS	VS	Br	
N	N	N	N	N	N	N	N	N	N	INOX	INOX	INOX	N	
2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	1,5xD	
1.1	■		■		■	■		■		■	■	■	■ 10-15	
1.2	■		■		■	■		■		■	■	■	■ 10-15	
1.3	■		■		■	■		■		■	■	■	■ 10-12	
1.4	■		■		■	■		■		■	■	■	○ 8-10	
1.5										○				
1.6														
1.7														
1.8														
2.1	■		■		■	■		■		■	■	■	■ 10-15	
2.2	○		○		○	○		○		■	■	■	■ 10-15	
2.3	○		○		○	○		○		■	■	■	■ 10-12	
2.4														
3.1	○		○		○	○		○		■				
3.2										○				
3.3										○				
3.4	○		○		○	○		○		■				
3.5														
4.1	■		■		■	■		■		■	■	■		
4.2	■		■		■	■		■		■	■	■		
4.3	■		■		■	■		■		■	■	■		
4.4	○		○		○	○		○		■	■	■		
4.5														
4.6														
5.1	■		■		■	■		■		■	■	■		
5.2	■		■		■	■		■		■	■	■		
5.3	○		○		○	○		○		■	■	■		
5.4														
6.1														
6.2														
6.3														
7.1														
7.2														
7.3														
8.1														
8.2														
8.3														
9.1														
9.2														
9.3														
10.1														



...	Scanalature diritte per GHISA - HSSE Straight flutes for CAST IRON - HSSE Goujures Droites pour FONTE - HSSE				Scanalature diritte per GHISA - PM3 Straight flutes for CAST IRON - PM3 Goujures Droites pour FONTE - PM3				Scanalature diritte per GHISA imbocco E-PM3 Straight flutes for CAST IRON – chamfer E Goujures Droites pour FONTE - entrée E				SYNCHRO Synchro Synchro			
E20/E21...AZ-TXC	E26/E27...NQ		E26/E27...CT	E26/E27...FOR-CT	K26/K27...TX	K26/K27...FOR-TX	K26/K27...FORY-TX	K26/K27...TXS	K26/K27E...TX	K26/K27E...FOR-TX	K26/K27E...FORY-TX	S20...TXC	S20...FOR-TXC	S20...FORY-TXC		
TOP	LINE	LINE	LINE	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	
AZ														SR	SR	SR
11	12-13	12-13	12-13	14	14	14	14	15	15	15	15	16	16	16	16	
	94-95	94-95	94-95	96	96	96	96	97	97	97	97	98	98	98	98	
	152	152		152	152											
	168	168		168	168											
	192	192		192	192											
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	E (1,5-2)	E (1,5-2)	E (1,5-2)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	
HSSE	HSSE	HSSE	HSSE	PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3	
TXC	NQ	TiCN	TiCN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	
Al-Cu-Fe	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	Synchro R	Synchro R	Synchro R
1,5xD	3xD	3xD	3,5xD	3xD	3,5xD	3,5xD	3,5xD	3xD	3,5xD	3,5xD	3xD	3,5xD	3xD	3,5xD	3,5xD	
■ 20-30																
1.1																
1.2																
1.3																
1.4																
1.5												○ 10-15	○ 10-15	○ 10-15		
1.6												■ 8-10	■ 8-10	■ 8-10		
1.7																
1.8																
2.1																
2.2																
2.3																
2.4																
3.1	■ 10-15	■ 20-25	■ 20-25	■ 25-30	■ 25-30	■ 25-30	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	
3.2	■ 8-10	■ 15-20	■ 15-20	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 15-20	■ 15-20	■ 15-20	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 20-25	
3.3	○ 8-10	○ 15-20	○ 15-20	○ 20-25	○ 20-25	○ 20-25	○ 20-25	○ 15-20	○ 15-20	○ 15-20	○ 20-25	○ 20-25	○ 20-25	○ 20-25	○ 20-25	
3.4	○ 10-15	○ 20-25	○ 20-25	○ 25-30	○ 25-30	○ 25-30	○ 25-30	○ 20-25	○ 20-25	○ 20-25	○ 25-30	○ 25-30	○ 25-30	○ 25-30	○ 25-30	
3.5	○ 8-10	○ 15-20	○ 15-20	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 15-20	■ 15-20	■ 15-20	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 20-25	
4.1	○ 20-25															
4.2	■ 25-30															
4.3	○ 15-20	○ 30-40	○ 30-40									○ 30-40	○ 30-40	○ 30-40	○ 30-40	
4.4	■ 10-15	■ 25-30	■ 25-30	○ 25-30	○ 25-30	○ 25-30	○ 25-30	○ 25-30	○ 25-30	○ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	
4.5	■ 10-15	○ 20-30	■ 20-30								■ 30-40	■ 30-40	■ 30-40	■ 30-40	■ 30-40	
4.6	■ 10-15	○ 20-30	■ 20-30								■ 30-40	■ 30-40	■ 30-40	■ 30-40	■ 30-40	
5.1	○ 15-20															
5.2	■ 20-25															
5.3	■ 18-20	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 35-40	■ 35-40	■ 35-40	■ 35-40	■ 35-40	
5.4				○ 5-8	○ 5-8	○ 5-8	○ 5-8				○ 8-10	○ 8-10	○ 8-10	○ 8-10	○ 8-10	
6.1																
6.2																
6.3																
7.1																
7.2																
7.3																
8.1	○ 25-30															
8.2	■ 8-10	■ 10-15	■ 10-15								■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 20-25	
8.3											■ 10-15	■ 10-15	■ 10-15	■ 10-15	■ 10-15	
9.1																
9.2																
9.3																
10.1	○ 10-15	○ 15-20	○ 15-20	○ 15-20	○ 15-20	○ 15-20	○ 15-20	○ 15-20	○ 15-20	○ 15-20	○ 20-25	○ 20-25	○ 20-25	○ 20-25	○ 20-25	

**Scanalature diritte per alta resistenza - HR**  
**Straight flutes for high strength materials - HR**  
**Goujures Droites pour haute résistance - HR**

**Scanalature diritte in metallo duro - MD**  
**Straight flutes, hard material - HM**  
**Goujures Droites, Carbure**

**Imbocco coretto per fori passanti**  
**Spiral pointed for through holes**  
**Entrée GUN pour trous débouchants**

**Imbocco corretto sinistri LH**  
**Spiral pointed - left LH**  
**Entrée GUN - gauche LH**

K20/K21...TXC				XT20...TX	HM20/HM21...FOR	HM20/HM21...FOR	HM-XT20...CT	E24/E25...	E24/E25...V	E24/E25...T	E24/E25...TXC	E24/E25...LH	E24/E25...LH-V	E24/E25...LH-T	
TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	LINE	LINE	LINE	LINE	LINE	LINE	LINE	
<b>≤45HRC</b>			<b>≤52HRC</b>				<b>≤62HRC</b>						<b>LH</b>	<b>LH</b>	<b>LH</b>
17	17	17	18	19	19	19	20-21	20-21	20-21	20-21 (TXC)	22	22	22	22	
							23	23	23						
							23	23	23						
							24	24	24						
99	99	99		99			100-103	100-103	100-103	100-103 (TXC)	104			104	
							105								
							105								
							105								
							153	153	153	153					
							169	169	169	169					
							183	183	183						
							193	193	193	193					
							220	220	220	220					
							222 (PG)	222 (PG)	222 (PG)						
							231			231					
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	D (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	
PM3	PM3	PM3	PM1	MDI/HM	MDI/HM	MDI/HM	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE
TXC	TXC	TXC	TiAlN	Br	TiCN	Br	V	TiN	TXC/XP	Br	V	TiN			
HR	HR	HR	HR	GG	GG	HR	N	N	N	N	N	N	N	N	N
1,5xD	3,5xD	3,5xD	1,5xD	3,5xD	3,5xD	1,5xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD
1.1							○ 10-15	■ 10-15	■ 20-30	■ 20-30	○ 10-15	■ 10-15	■ 20-30	■ 20-30	
1.2							■ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 10-15	■ 10-15	■ 20-30	■ 20-30	
1.3	○ 25-30	○ 25-30					■ 10-12	■ 10-12	■ 20-25	■ 20-25	■ 10-12	■ 10-12	■ 20-25	■ 20-25	
1.4	■ 20-25	■ 20-25					○ 8-10	○ 8-10	■ 15-20	■ 15-20	○ 8-10	○ 8-10	■ 15-20	■ 15-20	
1.5	○ 5-12	■ 5-12	■ 5-12												
1.6	■ 5-8	■ 5-8	■ 5-8	○ 5-8											
1.7				■ 4-6			○ 4-6								
1.8							■ 1-4								
2.1											○ 10-15				
2.2											○ 8-10				
2.3															
2.4															
3.1	■ 25-30	■ 25-30			■ 30-40	■ 40-60									
3.2	■ 20-25	■ 20-25			■ 25-30	■ 30-40									
3.3	○ 20-25	○ 20-25			○ 25-30	○ 30-40					○ 10-15	○ 10-15			○ 10-15
3.4	○ 25-30	○ 25-30			○ 30-40	○ 40-60					■ 15-20	■ 15-20			■ 15-20
3.5	■ 20-25	■ 20-25			■ 25-30	■ 30-40									
4.1								○ 10-15	■ 10-15	○ 20-25		○ 10-15	■ 10-15	○ 20-25	
4.2								■ 15-20	■ 15-20	■ 25-30	■ 25-30	■ 15-20	■ 15-20	■ 25-30	
4.3	○ 30-40	■ 30-40	■ 30-40		○ 40-50	○ 60-70					○ 20-25	○ 20-25			○ 20-25
4.4	■ 25-30	■ 25-30	■ 25-30		■ 30-40	■ 40-60									
4.5	■ 20-30	■ 20-30	■ 20-30		■ 40-60	■ 60-80									
4.6	■ 20-30	■ 20-30	■ 20-30		■ 40-60	■ 60-80									
5.1								○ 8-12	■ 8-12	○ 15-20		○ 8-12	■ 8-12	○ 15-20	
5.2								○ 10-15	■ 10-15	■ 20-25	■ 20-25	○ 10-15	■ 10-15	■ 20-25	
5.3	■ 25-30	■ 25-30	■ 25-30		○ 40-50	○ 60-70									
5.4	○ 5-8	a 5-8	○ 5-8	■ 5-8	○ 8-10	○ 12-15	■ 5-10								
6.1								○ 5-8						○ 5-8	
6.2															
6.3															
7.1									○ 6-8					○ 6-8	
7.2															
7.3															
8.1															
8.2	■ 10-15	○ 10-15	○ 10-15		○ 20-25	○ 30-35									
8.3	■ 6-10	○ 6-10	○ 6-10		○ 10-15	○ 15-20									
9.1					○ 3-5			■ 5-10							
9.2															
9.3								■ 4-8							
10.1	○ 15-20	■ 15-20	■ 15-20		■ 20-25	■ 30-35									

**Imbocco corretto, gambo lungo**  
Spiral pointed, long shank  
Entrée GUN, tige longue

**Imbocco corretto per Al-Cu-Fe**  
Spiral pointed for Al-Cu-Fe  
Entrée GUN pour Al-Cu-Fe

**Imbocco corretto per fori passanti HSSP 8%Co**  
Spiral pointed for through holes – HSSP steel 8% Co  
Entrée GUN pour trous pour débouchants

**Imbocco corretto Universali**  
Spiral pointed Universal  
Entrée GUN, Universal

	L24/L25...	L24/L25...CT	E24/E25...AL	E24/E25...AL-VS	E24/E25...AL-TXC	E24/E25...AZ	E24/E25...AZ-TXC	E24/E25...NC	P24/P25...	P24/P25...V	P24/P25...T	P24/P25...CT	K24/K25...XP	K24/K25...FORY-XP
	LINE	LINE	LINE	LINE	TOP	LINE	TOP	LINE	PLUS	PLUS	PLUS	PLUS	TOP	TOP
	XL	XL	Al	Al	Al	AZ	AZ	Cu						
	25	25	26	26	26	27	27	27	28	28	28	28	29	29
			106	106				106	107	107	107	107	108	108
													154	154
													170	170
													194	194
	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)
	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSP	HSSP	HSSP	HSSP	HSSP	PM3	PM3
	Br	TiCN	Br	VS	TXC	Br	TXC	CrN	Br	V	TiN	TiCN	XP	XP
	N	N	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	N	N	N	N	U	U
	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3,5xD
1.1	○ 10-15	■ 20-30	○ 10-15	○ 10-15	○ 20-30	■ 10-15	■ 20-30	○ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30	■ 20-30
1.2	■ 10-15	■ 20-30						■ 20-30	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30	■ 20-30
1.3	■ 10-12	■ 20-25						■ 20-25	■ 10-12	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 20-25
1.4	○ 8-10	■ 15-20						■ 15-20	■ 8-10	■ 8-10	■ 15-20	■ 15-20	■ 15-20	■ 15-20
1.5										○ 5-12	○ 5-12	■ 5-12	■ 5-12	■ 5-12
1.6														
1.7														
1.8														
2.1		○ 10-15									○ 10-15	■ 10-15	■ 10-15	■ 10-15
2.2		○ 8-10									○ 8-10	■ 8-10	■ 8-10	■ 8-10
2.3													■ 6-8	■ 6-8
2.4														
3.1														
3.2														
3.3		○ 10-15									○ 10-15	○ 10-15	■ 10-15	■ 10-15
3.4		■ 15-20									■ 15-20	■ 15-20	■ 15-20	■ 15-20
3.5														
4.1	○ 10-15		■ 10-15	■ 10-15	○ 20-25	○ 10-15	○ 20-25		○ 10-15	■ 10-15	○ 20-25			
4.2	■ 15-20	■ 25-30	■ 15-20	■ 25-30	■ 15-20	■ 25-30	■ 15-20	■ 25-30	■ 15-20	■ 15-20	■ 25-30	■ 25-30	■ 25-30	■ 25-30
4.3	○ 20-25			■ 20-25							○ 20-25	○ 20-25	○ 20-25	○ 20-25
4.4														
4.5														
4.6														
5.1	○ 8-12		○ 8-12	■ 8-12	○ 15-20	○ 8-12	○ 15-20	■ 15-20	○ 8-12	■ 8-12	○ 15-20			
5.2	○ 10-15	■ 20-25	○ 10-15	■ 10-15	■ 20-25	■ 10-15	■ 20-25	■ 20-25	○ 10-15	■ 10-15	■ 20-25	■ 20-25	■ 20-25	■ 20-25
5.3														
5.4														
6.1			■ 5-8			○ 5-8				○ 5-8				
6.2														
6.3														
7.1			■ 6-8			○ 6-8				○ 6-8				
7.2														
7.3														
8.1			■ 20-25	■ 20-25		○ 20-25								
8.2														
8.3														
9.1														
9.2														
9.3														
10.1														

Imbocco corretto Synchro Spiral pointed Synchro Entrée GUN Synchro		Imbocco corretto HR Spiral pointed - HR Entrée GUN - HR		Imbocco corretto per INOX Spiral pointed for stainless steel Entrée GUN pour Inox				Elica 15° sinistra, fori passanti Helix 15° left, through holes Hélice 15° à gauche, trous débouchants				Elica 15° sinistra Titanio e Nickel... Helix 15° left for Ti and Ni... Hélice 15° à gauche pour Ti et Ni			
S24...TXC	S24...FORY-TXC	K24/K25...TXC	K24/K25...FORY-TXC	E24/E25...X-V	V24/N25...TXC	K24/K25...X-TXC	K24/K25...XFORY-TXC	E50/E51...	E50/E51...V	E50/E51...XP	K52/K53...V	K52/K53...CT	K52...NI		
TOP	TOP	TOP	TOP	LINE	TOP	TOP	TOP	LINE	LINE	LINE	TOP	TOP	TOP		
SR	SR							L15°	L15°	L15°	Ti	Ti	Ni		
30	30	31	31	32	32	32	32	33	33	33	34	34	35		
											34 (MJ)	34 (MJ)	35		
109	109	110	110	111	111	111	111	112	112	112	113	113	114		
											113		114		
					155						156	156			
					171						172	172			
195	195			196											
B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	D (4-5)	D (4-5)	D (4-5)	D (4-5)	D (4-5)	D (4-5)		
PM3	PM3	PM3	PM3	HSSE	HSSV3	PM3	PM3	HSSE	HSSE	HSSE	PM3	PM3	PM3		
TXC	TXC	TXC	TXC	V	TXC	TXC	TXC	Br	V	XP	V	TiCN	Br		
Synchro R	Synchro R	HR	HR	INOX	INOX	INOX	INOX	N	N	N	Ti	Ti	Ni		
3xD	3,5xD	3xD	3,5xD	3xD	3xD	3xD	3,5xD	3xD	3xD	3xD	3xD	3xD	3xD		
1.1	■ 40-45	■ 40-45						○ 10-15	■ 10-15	■ 20-30					
1.2	■ 40-45	■ 40-45						■ 10-15	■ 10-15	■ 20-30					
1.3	■ 35-40	■ 35-40				■ 20-25	■ 20-25	■ 20-25	■ 10-12	■ 10-12	■ 20-25				
1.4	■ 25-30	■ 25-30				■ 15-20	■ 15-20	■ 15-20	○ 8-10	○ 8-10	■ 15-20				
1.5	■ 10-15	■ 10-15	■ 5-12	■ 5-12		○ 5-12	■ 5-12	■ 5-12							
1.6			■ 5-8	■ 5-8			○ 5-8	○ 5-8				■ 5-8			
1.7															
1.8															
2.1	■ 20-25	■ 20-25			■ 6-8	■ 10-15	■ 10-15	■ 10-15							
2.2	■ 15-20	■ 15-20			■ 5-7	■ 8-10	■ 8-10	■ 8-10							
2.3	■ 10-15	■ 10-15			○ 3-5	■ 6-8	■ 6-8	■ 6-8							
2.4	■ 10-12	■ 10-12				○ 6-8	■ 6-8	■ 6-8				■ 6-8			
3.1															
3.2															
3.3	■ 20-25	■ 20-25	■ 15-20	■ 15-20					○ 10-15			■ 15-20			
3.4	■ 25-30	■ 25-30	■ 20-25	■ 20-25					○ 15-20			■ 20-25			
3.5															
4.1	■ 30-40	■ 30-40													
4.2	■ 45-50	■ 45-50						○ 15-20							
4.3	■ 30-40	■ 30-40							○ 20-25						
4.4		○ 25-30	○ 25-30							○ 25-30					
4.5	■ 30-40	■ 30-40													
4.6	■ 30-40	■ 30-40													
5.1	■ 20-25	■ 20-25													
5.2	■ 25-30	■ 25-30						○ 10-15	○ 20-25						
5.3	■ 35-40	■ 35-40	■ 25-30	■ 25-30							■ 25-30		○ 5-8		
5.4															
6.1	■ 20-30	■ 20-30						○ 5-8		■ 5-10					
6.2	■ 12-15	■ 12-15								■ 4-8					
6.3										■ 2-4					
7.1	■ 20-30	■ 20-30						○ 6-8							
7.2	■ 8-12	■ 8-12									■ 2-4				
7.3												■ 2-3			
8.1															
8.2															
8.3															
9.1															
9.2											■ 1-2				
9.3											■ 2-3				
10.1															

...  
...

**Elica 15° per fori ciechi**  
*Helix 15° for blind holes*  
*Hélice 15° pour trous borgnes*

**Elica 15° per Al-Cu-Fe**  
*Helix 15° for Al-Cu-Fe*  
*Hélice 15° pour Al-Cu-Fe*

**Elica 15°, acciaio HSSP 8% Co**  
*Helix 15°, HSSP steel 8%Co*  
*Hélice 15°, acier HSSP 8%Co*

K52...NI-CT	E40/E41...	E40/E41...V	E40/E41...T	E40/E41...XP	E40/E41...FOR	E40/E41...FOR-T	E40/E41...AZ	E40/E41...AZ-V	E40/E41...NC	P40/P41...	P40/P41...V	P40/P41...T	P40/P41...CT	TOP	LINE	LINE	LINE
Ni							AZ	AZ	Cu								
L10°	R15°	R15°	R15°	R15°	R15°	R15°	R15°	R15°	R15°	R15°	R15°	R15°	R15°				
35	36-37	36-37	36-37	36-37	38	38	41	41	41	42	42	42	42				
	39	39															
	39	39															
	40	40															
114	115-117	115-117	115-117	115-117	118	118				119	119	119	119				
	157	157	157	157													
	173	173	173	173													
	186																
	197	197	197														
D (4-5)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)				
PM3	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSP	HSSP	HSSP	HSSP				
TiCN	Br	V	TiN	XP	Br	TiN	Br	V	CrN	Br	V	TiN	TiCN				
Ni	N	N	N	N	N	N	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	N	N	N	N				
3xD	1,5xD	1,5xD	1,5xD	1,5xD	2,5xD	2,5xD	1,5xD	1,5xD	1,5xD	1,5xD	1,5xD	1,5xD	1,5xD	1,5xD			
1.1	○ 10-15	■ 10-15	■ 20-30	■ 20-30	○ 10-15	■ 20-30	■ 10-15	■ 10-15	■ 20-30	○ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30			
1.2	■ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 10-15	■ 20-30	■ 10-15	■ 20-30	■ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30			
1.3	■ 10-12	■ 10-12	■ 20-25	■ 20-25	■ 10-12	■ 20-25			■ 20-25	■ 10-12	■ 10-12	■ 20-25	■ 20-25	■ 20-25			
1.4	○ 8-10	○ 8-10	■ 15-20	■ 15-20	○ 8-10	■ 15-20			■ 15-20	■ 8-10	■ 8-10	■ 15-20	■ 15-20	■ 15-20			
1.5															○ 5-12	○ 5-12	
1.6	■ 5-8																
1.7																	
1.8																	
2.1																	
2.2																	
2.3																	
2.4																	
3.1																	
3.2																	
3.3			○ 10-15	○ 10-15			○ 10-15								○ 10-15	○ 10-15	
3.4				■ 15-20	■ 15-20			■ 15-20							■ 15-20	■ 15-20	
3.5																	
4.1	○ 10-15	■ 10-15	○ 20-25		○ 10-15	○ 20-25	○ 10-15	○ 10-15		○ 10-15	■ 10-15	○ 20-25					
4.2	■ 15-20	■ 15-20	■ 25-30	■ 25-30	■ 15-20	■ 25-30	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 25-30	■ 25-30	■ 25-30			
4.3			○ 20-25	○ 20-25			○ 20-25								○ 20-25	○ 20-25	
4.4																	
4.5																	
4.6																	
5.1	○ 8-12	■ 8-12	○ 15-20		○ 8-12	○ 15-20	○ 8-12	○ 8-12	■ 15-20	○ 8-12	■ 8-12	○ 15-20					
5.2	○ 10-15	■ 10-15	■ 20-25	■ 20-25	○ 10-15	■ 20-25	■ 10-15	■ 20-25	○ 10-15	■ 10-15	■ 20-25	○ 10-15	■ 10-15	■ 20-25	■ 20-25	■ 20-25	
5.3																	
5.4	■ 5-8																
6.1		○ 5-8						○ 5-8		○ 5-8					○ 5-8		
6.2																	
6.3																	
7.1			○ 6-8					○ 6-8		○ 6-8					○ 6-8		
7.2	■ 2-4																
7.3																	
8.1								○ 20-25	○ 20-25								
8.2																	
8.3																	
9.1	■ 3-5																
9.2																	
9.3																	
10.1																	

Elica 15° - HR Helix 15° - HR Hélice 15° - HR			Elica 15° - Titanio Helix 15° - Titanium Hélice 15° - Titane				Elica 10° - Nickel Helix 10° - Nickel Hélice 10° - Nickel				Elica 40° Helix 40° Hélice 40°				
K40/K41...TXC	K40/K41...FOR-TXC	K42/K43..V	K42/K43..CT	K28/K29...AZ-V	K42..NI	K42..NI-CT	K28/K29...V	E60/E61...	E60/E61...V	E60/E61...T	E60/E61...TXC	E60/E61...FOR	E60/E61...FOR-T		
TOP	LINE	LINE	LINE	LINE	LINE	LINE	LINE								
															
R15°	R15°	R15°	R15°	R25°	R10°	R10°	R25°	R40°	R40°	R40°	R40°	R40°	R40°	R40°	
43	43	44	44	44	45	45	45	46-47	46-47	46-47	46-47 (TXC)	48	48		
		44 (MJ)			45			50			50				
								50			50				
								51			51				
								120	120	122-126	122-126	122-126	122-126(TXC)	127	
								120	121	129				127	
										129					
										129					
										158	158	159	159	159	
										174	174	175	175	175	
												184			
												198	198	198	
												221	221	221	
C (2-3)	C (2-3)	C (2-3)	C (2-3)												
PM3	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE								
TXC	TXC	V	TiCN	V	Br	TiCN	V	Br	V	TiN	TXC/XP	Br	TiN		
HR	HR	Ti	Ti	Ti	Ni	Ni	Ni	N	N	N	N	N	N	N	
1,5xD	2,5xD	1,5xD	1,5xD	2,5xD	1,5xD	1,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	3xD	
1.1								○ 10-15	■ 10-15	■ 20-30	■ 20-30	○ 10-15	■ 20-30		
1.2								■ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 10-15	■ 20-30		
1.3								■ 10-12	■ 10-12	■ 20-25	■ 20-25	■ 10-12	■ 20-25		
1.4								○ 8-10	○ 8-10	■ 15-20	■ 15-20	○ 8-10	■ 15-20		
1.5	■ 5-12	■ 5-12													
1.6	■ 5-8	■ 5-8		■ 5-8			■ 5-8								
1.7															
1.8															
2.1												○ 10-15			
2.2												○ 8-10			
2.3															
2.4			■ 6-8												
3.1															
3.2															
3.3	■ 15-20	■ 15-20		■ 15-20								○ 10-15	○ 10-15	○ 10-15	
3.4	■ 20-25	■ 20-25		■ 20-25								■ 15-20	■ 15-20	■ 15-20	
3.5															
4.1								○ 10-15	■ 10-15	○ 20-25		○ 10-15	○ 20-25		
4.2								■ 15-20	■ 15-20	■ 25-30	■ 25-30	■ 15-20	■ 25-30		
4.3										○ 20-25	○ 20-25				
4.4	○ 25-30	○ 25-30		○ 25-30											
4.5	■ 20-30	■ 20-30													
4.6	■ 20-30	■ 20-30													
5.1								○ 8-12	■ 8-12	○ 15-20		○ 8-12	○ 15-20		
5.2								○ 10-15	■ 10-15	■ 20-25	■ 20-25	○ 10-15	■ 20-25		
5.3	■ 25-30	■ 25-30		■ 25-30											
5.4				○ 5-8			■ 5-8								
6.1			■ 5-10		■ 5-10										
6.2					■ 4-8	■ 4-8									
6.3					■ 2-4										
7.1								■ 6-8							
7.2					■ 2-4			■ 2-4	■ 2-4						
7.3							■ 2-3								
8.1															
8.2															
8.3															
9.1								■ 3-5							
9.2					■ 1-2										
9.3							■ 2-3								
10.1															

...	Elica 40° - sinistri LH Helix 40° - left LH Hélice 40° - gauche LH				Elica 40° - gambo lungo Helix 40° - long shank Hélice 40° - tige longue				Elica 40° - 45° per Al-Cu-Fe Helix 40° - 45° for Al-Cu-Fe Hélice 40° - 45° pour Al-Cu-Fe				Elica 40°, acciaio HSSP 8% Co Helix 40°, HSSP steel 8%Co Hélice 40°, acier HSSP 8%Co			
E60/E61...FOR-TXC	E60/E61...LH	E60/E61...LH-V	E60/E61...LH-XP	L60/L61...	L60/L61...CT	E70/E71...	E70/E71...VS	E70/E71...TXC	E60/E61...NC	P60/P61...	P60/P61...V	P60/P61...T	P60/P61...XP			
LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	TOP	LINE	PLUS	PLUS	PLUS	PLUS			
R40°	L35°	L35°	L35°	R40°	R40°	R45°	R45°	R45°	R40°	R40°	R40°	R40°	R40°	R40°	R40°	R40°
48	49	49	49	53	53	54	54	54	55	56	56	56	56	56	56	56
127	128	128	128			130	130		130	131	131	131	131	131	131	131
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSP	HSSP	HSSP	HSSP	HSSP	HSSP	HSSP
TXC	Br	V	XP	Br	TiCN	Br	VS	TXC	CrN	Br	V	TiN	XP			
N	N	N	N	N	N	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	N	N	N	N	N	N	N
3xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	3xD	3xD	3xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD
1.1	■ 20-30	○ 10-15	■ 10-15	■ 20-30	○ 10-15	■ 20-30	○ 10-15	○ 10-15	■ 20-30	○ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30	■ 20-30
1.2	■ 20-30	■ 10-15	■ 10-15	■ 20-30	■ 10-15	■ 20-30	■ 20-30		■ 20-30	■ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30	■ 20-30
1.3	■ 20-25	■ 10-12	■ 10-12	■ 20-25	■ 10-12	■ 20-25				■ 20-25	■ 10-12	■ 10-12	■ 20-25	■ 20-25	■ 20-25	■ 20-25
1.4	■ 15-20	○ 8-10	○ 8-10	■ 15-20	○ 8-10	■ 15-20				■ 15-20	■ 8-10	■ 8-10	■ 15-20	■ 15-20	■ 15-20	■ 15-20
1.5															○ 5-12	○ 5-12
1.6																
1.7																
1.8																
2.1	○ 10-15			○ 10-15		○ 10-15										○ 10-15
2.2	○ 8-10			○ 8-10		○ 8-10										○ 8-10
2.3																
2.4																
3.1																
3.2																
3.3	○ 10-15			○ 10-15		○ 10-15										○ 10-15
3.4	■ 15-20			■ 15-20		■ 15-20										■ 15-20
3.5																
4.1	○ 10-15	■ 10-15		○ 10-15		■ 10-15	■ 10-15	○ 20-25		○ 10-15	■ 10-15	○ 20-25				
4.2	■ 25-30	■ 15-20	■ 15-20	■ 25-30	■ 15-20	■ 25-30	■ 15-20	■ 25-30	■ 15-20	■ 15-20	■ 15-20	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 25-30
4.3	○ 20-25			a 20-25		○ 20-25			■ 20-25						○ 20-25	○ 20-25
4.4																
4.5																
4.6																
5.1	○ 8-12	■ 8-12		○ 8-12		○ 8-12	■ 8-12	○ 15-20	■ 15-20	○ 8-12	■ 8-12	○ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20
5.2	■ 20-25	○ 10-15	■ 10-15	■ 20-25	○ 10-15	■ 20-25	○ 10-15	■ 10-15	■ 20-25	■ 20-25	○ 10-15	■ 10-15	■ 20-25	■ 20-25	■ 20-25	■ 20-25
5.3																
5.4																
6.1						■ 5-8										
6.2																
6.3						■ 6-8										
7.1																
7.2																
7.3																
8.1							■ 20-25	■ 20-25								
8.2																
8.3																
9.1																
9.2																
9.3																
10.1																

Elica 40°, acciaio HSSP 8% Co, imbocco E  
*Helix 40°, HSSP steel 8%Co, chamfer E*  
*Hélice 40°, acier HSSP 8%Co, entrée E*

**Elica 40°, rastremazione posteriore**  
*Helix 40°, back tapered*  
*Hélice 40°, détalonnage arrière*

Elica 45°, HSSE  
Helix 45°, HSSE  
Hélice 45°, HSSE

**Elica 45° Universal...**  
*Helix 45° Universal...*  
*Hélice 45°. Universal...*

		Elica 40° Synchro Helix 40° Synchro Hélice 40° Synchro			Elica 25° per GHISA Helix 25° for CAST IRON Hélice 25° pour FONTE			Elica 40° HR Helix 40° - HR Hélice 40° - HR			Elica 40° - 48° per INOX Helix 40° - 48° for stainless steel Hélice 40° - 48° pour INOX			Maschi a rullare senza canalini... Roll taps without oil groove... Tarauds à refouler sans rainures	
		K82/K83...FOR-Y-XP	S80...TXC	S80...FOR-TXC	K28/K29...	K28/K29...-CT	K28/K29...-FOR-CT	K80/K81...TXC	K80/K81...-FOR-TXC	E80/E81...X-V	V82/V83...TXC	K82/K83...X-TXC	K82/K83...XFOR-TXC	P2SC...	P2SC...V
	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP	LINE	TOP	TOP	TOP	TOP	LINE
	BT	SR-BT	SR-BT	BT	BT	BT	BT	BT	BT	SR-IT	SR-IT	SR-IT	SR-IT		
R45°	R40°	R40°	R40°	R25°	R25°	R25°	R40°	R40°	R40°	R48°	R48°	R48°	R48°	P-series	P-series
60	61	61	61	62	62	62	63	63	63	64	64	65	65	68	68
														69	69
134	135	135						136	136		137	137	137	138	138
														139	139
160										161				162	
176										177				178	
199	200	200								201					
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3	HSSE	HSSV3	PM3	PM3	HSSP	HSSP	HSSP
XP	TXC	TXC	Br	TiCN	TiCN	TXC	TXC	V	TXC	TXC	TXC	TXC	Br	V	V
N	Synchro R	Synchro R	GG	GG	GG	HR	HR	INOX	INOX	INOX	INOX	INOX	INOX	N	N
3xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	3xD	3,5xD	3,5xD	3,5xD	3,5xD	3xD	3xD	3xD
1.1	■ 20-30	■ 40-45	■ 40-45											○ 15-20	■ 15-20
1.2	■ 20-30	■ 40-45	■ 40-45											○ 15-20	■ 15-20
1.3	■ 20-25	■ 35-40	■ 35-40							■ 20-25	■ 20-25	■ 20-25	■ 20-25	○ 15-18	
1.4	■ 15-20	■ 25-30	■ 25-30	○ 8-10	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20		
1.5	■ 5-12	■ 10-15	■ 10-15	○ 3-5	■ 5-12	■ 5-12	■ 5-12	■ 5-12	■ 5-12	○ 5-12	■ 5-12	■ 5-12	■ 5-12		
1.6															
1.7															
1.8															
2.1	■ 10-15	■ 20-25	■ 20-25							■ 6-8	■ 10-15	■ 10-15	■ 10-15		
2.2	■ 8-10	■ 15-20	■ 15-20							■ 5-7	■ 8-10	■ 8-10	■ 8-10		
2.3	■ 6-8	■ 10-15	■ 10-15							○ 3-5	■ 6-8	■ 6-8	■ 6-8		
2.4		■ 10-12	■ 10-12								○ 6-8	■ 6-8	■ 6-8	■ 6-8	
3.1															
3.2															
3.3	■ 10-15	■ 20-25	■ 20-25	○ 8-10	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 15-20	■ 6-8	■ 10-15	■ 10-15	■ 10-15		
3.4	■ 15-20	■ 25-30	■ 25-30	○ 10-15	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 5-7	■ 8-10	■ 8-10	■ 8-10		
3.5															
4.1														○ 20-30	■ 20-30
4.2	○ 25-30	■ 45-50	■ 45-50											○ 25-35	■ 25-35
4.3	○ 20-25	■ 30-40	■ 30-40												
4.4															
4.5															
4.6															
5.1														○ 10-15	
5.2	○ 20-25	■ 25-30	■ 25-30											○ 10-15	
5.3															
5.4															
6.1															
6.2															
6.3															
7.1															
7.2															
7.3															
8.1															
8.2															
8.3															
9.1															
9.2															
9.3															
10.1															





Maschi conici LUNGHI Taps tapered, long shank Tarauds conique longs			Maschi conici alternati AZ Taps tapered, interrupted threads AZ Tarauds conique avec filets alternés AZ			Trapezoidali Trapezoidal Trapézoïdales		Trapezoidali - sinistri LH Trapezoidal - left LH Trapézoïdales - gauches LH		Filettatura tonda Rd Round thread Rd Filetage ronde Rd		ISO529 per GHISA ISO529 for CAST IRON ISO529 pour FONTE	
E21L..	E21L..TXC	E21C..AZ	E21L..AZ	E21TPN..	E21TPN..V	E21TPN..LH	E21TPN..LH-V	E21RD...	E21RD..T	529E26..CT	529K26..TXC		
LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	TOP		
con1:16	con1:16	con1:16	con1:16			LH	LH			226	226		
210	210												
212	212	213	213										
214	214												
				223	223	223	223	224	224				
C (2-3)	C (2-3)	C (2-3)	C (2-3)	~24xP	~24xP	~24xP	~24xP	C (2-3)	C (2-3)	C (2-3)	C (2-3)		
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	PM3		
Br	TXC	Br	Br	V	V	Br	V	Br	TiN	TiCN	TXC		
N	N	N	N	N	N	N	N	N	N	GG	GG		
-	-	-	-	2xD	2xD	2xD	2xD	1xD	1xD	3xD	3xD		
1.1	○ 3-5	a 3-5	■ 3-5	■ 3-5	○ 4-6	■ 4-6	○ 4-6	■ 4-6	○ 4-6	■ 6-8			
1.2	■ 3-5	■ 3-5			■ 4-6	■ 4-6	■ 4-6	■ 4-6	■ 4-6	■ 6-8			
1.3	■ 5-7	■ 5-7			■ 6-8	■ 6-8	■ 6-8	■ 6-8	■ 6-8	■ 8-10			
1.4	○ 4-6	■ 4-6			○ 4-6	○ 4-6	○ 4-6	○ 4-6	○ 4-6	○ 4-6			
1.5											○ 5-12		
1.6											■ 5-8		
1.7													
1.8													
2.1		○ 3-5	■ 3-5	■ 3-5									
2.2		○ 2-4	■ 2-4	■ 2-4									
2.3		■ 2-3											
2.4													
3.1		○ 5-7			■ 6-8	■ 6-8	■ 6-8	■ 6-8	■ 7-9	■ 20-25	■ 25-30		
3.2		○ 3-5			○ 3-5	○ 3-5	○ 3-5	○ 3-5	○ 3-5	○ 3-5	○ 20-25		
3.3	○ 3-5	■ 3-5			○ 3-5	○ 3-5	○ 3-5	○ 3-5	○ 3-5	○ 15-20	○ 20-25		
3.4	○ 5-7	■ 5-7			■ 6-8	■ 6-8	■ 6-8	■ 6-8	■ 6-8	○ 20-25	○ 25-30		
3.5										○ 15-20	■ 20-25		
4.1		■ 6-10	■ 6-10	■ 6-10	■ 4-6		■ 4-6	○ 4-6					
4.2	○ 10-15	○ 10-15	■ 10-15	■ 10-15	■ 10-12		■ 10-12	○ 8-10	○ 12-15				
4.3	○ 10-15	■ 10-15			■ 10-12	■ 10-12	■ 10-12	■ 10-12	■ 12-15	○ 30-40			
4.4		○ 6-8			○ 6-8	○ 6-8	○ 6-8	○ 6-8	■ 8-10	■ 25-30	■ 25-30		
4.5										○ 20-30			
4.6										○ 20-30			
5.1		■ 3-5	■ 3-5	■ 3-5	■ 3-5		■ 3-5	○ 3-5					
5.2		○ 5-7	■ 5-7	■ 5-7	■ 5-7		■ 5-7	○ 5-7	■ 8-10				
5.3	○ 8-12	■ 8-12			■ 8-12	■ 8-12	■ 8-12	■ 8-12	■ 12-15	■ 25-30	■ 25-30		
5.4										○ 5-8			
6.1													
6.2													
6.3													
7.1													
7.2													
7.3													
8.1													
8.2									■ 10-15	■ 10-15			
8.3									■ 6-10				
9.1													
9.2													
9.3													
10.1									○ 15-20	○ 15-20			

**ISO529 imbocco corretto per fori passanti**  
**ISO529 spiral pointed for through holes**  
**ISO529 entrée GUN pour trous débouchants**

**ISO529 elica 40° per fori ciechi**  
**ISO529 helix 40° for blind holes**  
**ISO529 hélice 40° pour trous borgnes**

**KOMBI**  
**KOMBI**  
**KOMBI**

**KOMBI per Al**  
**KOMBI for Al**  
**KOMBI pour Al**

529E18...	529E18...T	529E24...	529E24...T	529E60...	529E60...XP	529E80...	529E80...XP	EPF...	EPF..VS	EPFALU...	EPFALU..VS		
LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	
					R40°	R40°	R40°	R40°	R30°	R30°	R30°	R30°	
227	227	227	227	228	228	228	228	234	234	234	234	234	
								234	234				
B (4-5)	B (4-5)	B (4-5)	B (4-5)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	
Br	TiN	Br	TiN	Br	XP	Br	XP	Br	VS	Br	VS	VS	
N	N	N	N	N	N	N	N	N	N	N	Al	Al	
1xD	1xD	3xD	3xD	2,5xD	2,5xD	2,5xD	2,5xD	1,5xD	1,5xD	1,5xD	1,5xD	1,5xD	
1.1	■ 10-15	■ 20-30	○ 10-15	■ 20-30	○ 10-15	■ 20-30	○ 10-15	■ 10-15	■ 10-15				
1.2	■ 10-15	■ 20-30	■ 10-15	■ 20-30	■ 10-15	■ 20-30	■ 10-15	■ 10-15	■ 10-15				
1.3	■ 10-12	■ 20-25	■ 10-12	■ 20-25	■ 10-12	■ 20-25	■ 10-12	■ 10-12	■ 10-12				
1.4			○ 8-10	■ 15-20	○ 8-10	■ 15-20	○ 8-10	■ 15-20	○ 8-10	○ 8-10			
1.5													
1.6													
1.7													
1.8													
2.1					○ 10-15		○ 10-15						
2.2					○ 8-10		○ 8-10						
2.3													
2.4													
3.1													
3.2													
3.3				○ 10-15		○ 10-15			○ 10-15				
3.4				■ 15-20		■ 15-20			○ 15-20				
3.5													
4.1	■ 10-15	■ 20-25	○ 10-15	○ 20-25	○ 10-15					■ 10-15	■ 10-15		
4.2	■ 15-20	■ 25-30	■ 15-20	■ 25-30	■ 15-20	■ 25-30			○ 15-20	■ 15-20	■ 15-20	■ 15-20	
4.3				○ 20-25		○ 20-25			○ 10-15	■ 10-15			
4.4													
4.5													
4.6													
5.1	■ 8-12	■ 15-20	○ 8-12	○ 15-20	○ 8-12		○ 8-12			■ 8-12	■ 8-12		
5.2	■ 10-15	■ 20-25	○ 10-15	■ 20-25	○ 10-15	■ 20-25	○ 10-15	■ 20-25	○ 10-15	○ 10-15	■ 10-15	■ 10-15	
5.3									○ 10-15	○ 10-15			
5.4													
6.1													
6.2													
6.3													
7.1													
7.2													
7.3													
8.1										○ 8-10	○ 8-10		
8.2													
8.3													
9.1													
9.2													
9.3													
10.1													

# INDICE PRODOTTI

PRODUCTS INDEX

INDEX DES PRODUITS

Filettatura-Thread-Filetage		M		Filettatura-Thread-Filetage		M		Filettatura-Thread-Filetage		M	
CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.
00M	1	002-003	Line	E24M...TZ	15	026	Line	E41M...AZ	23	041	Line
00M...LH	2	004	Line	E24M...V	11	020	Line	E41M...AZ-V	23	041	Line
00M...X-VS	3	005	Line	E25M...X-V	18	032	Line	E41M...FOR	21	038	Line
01M	1	002-003	Line	E25M...	11	021	Line	E41M...FOR-T	21	038	Line
01M...LH	2	004	Line	E25M...+0,1	14	024	Line	E41M...NC	24	041	Line
01M...X-VS	3	005	Line	E25M...4H	12	023	Line	E41M...T	21	037	Line
02M	1	002-003	Line	E25M...-6G	13	023	Line	E41M...T+0,1	23	040	Line
02M...LH	2	004	Line	E25M...-7G	13	024	Line	E41M...T-4H	22	039	Line
02M...X-VS	3	005	Line	E25M...AL-TXC	15	026	Top	E41M...T-6G	22	039	Line
03M	2	002-003	Line	E25M...AL-VS	14	026	Line	E41M...T-7G	23	040	Line
03M...LH	2	004	Line	E25M...AZ	15	027	Line	E41M...TZ	23	041	Line
03M...X-VS	3	005	Line	E25M...AZ-TXC	15	027	Top	E41M...V	21	037	Line
10FCM...	3	006	Line	E25M...AZ-TZ	15	027	Line	E41M...XP	21	037	Line
10FPM...	3	006	Line	E25M...LH	12	022	Line	E50M...	18	033	Line
12FPM...	3	006	Line	E25M...LH-T	12	022	Line	E50M...V	19	033	Line
E20M...	4	008	Line	E25M...LH-V	12	022	Line	E50M...XP	19	033	Line
E20M...AZ	6	011	Line	E25M...NC	15	027	Line	E51M...	19	033	Line
E20M...AZ-TXC	6	011	Top	E25M...T	11	021	Line	E51M...V	19	033	Line
E20M...AZ-V	6	011	Line	E25M...T+0,1	14	024	Line	E51M...XP	19	033	Line
E20M...LH	5	010	Line	E25M...T-4H	13	023	Line	E60M...CP-T	27	046	Line
E20M...LH-T	6	010	Line	E25M...T-6G	13	023	Line	E60M...CP-TXC	27	046	Line
E20M...LH-V	6	010	Line	E25M...T-7G	13	024	Line	E60M...CP-V	27	046	Line
E20M...-OT	4	007	Line	E25M...TXC	12	021	Line	E60M...	26	046	Line
E20M...-OT-CT	4	007	Line	E25M...TZ	15	026	Line	E60M...+0,1	30	051	Line
E20M...SP	4	008	Line	E25M...V	11	021	Line	E60M...-4H	29	050	Line
E20M...SP-T	5	008	Line	E26M...FOR-CT	7	012	Line	E60M...6G	29	050	Line
E20M...SP-V	4	008	Line	E26M...NQ	7	012	Line	E60M...-7G	30	051	Line
E20M...T	5	008	Line	E26M...SP-NQ	7	012	Line	E60M...CP	26	046	Line
E20M...V	4	008	Line	E27M...FOR-CT	7	013	Line	E60M...FOR	28	048	Line
E21M	5	009	Line	E27M...NQ	7	013	Line	E60M...FOR-T	28	048	Line
E21M...AZ	6	011	Line	E27M...SP-NQ	7	013	Line	E60M...FOR-TXC	28	048	Line
E21M...AZ-TXC	6	011	Top	E26M...CT	7	012	Line	E60M...LH	28	049	Line
E21M...AZ-V	6	011	Line	E26M...SP-CT	7	012	Line	E60M...LH-V	29	049	Line
E21M...LH	5	010	Line	E27M...CT	7	013	Line	E60M...LH-XP	29	049	Line
E21M...LH-T	6	010	Line	E27M...SP-CT	7	013	Line	E60M...NC	32	055	Line
E21M...LH-V	6	010	Line	E40M...	20	036	Line	E60M...T	27	046	Line
E21M...T	5	009	Line	E40M...+0,1	23	040	Line	E60M...TXC	27	046	Line
E21M...V	5	009	Line	E40M...-4H	22	039	Line	E60M...V	27	046	Line
E24M...X-V	18	032	Line	E40M...-6G	22	039	Line	E60M...XP+0,1	30	051	Line
E24M...	10	020	Line	E40M...-7G	22	040	Line	E60M...XP-4H	29	050	Line
E24M...+0,1	14	024	Line	E40M...AZ	23	041	Line	E60M...XP-6G	30	050	Line
E24M...4H	12	023	Line	E40M...AZ-V	23	041	Line	E60M...XP-7G	30	051	Line
E24M...-6G	13	023	Line	E40M...FOR	21	038	Line	E61M...+0,1	30	051	Line
E24M...-7G	13	024	Line	E40M...FOR-T	21	038	Line	E61M...-4H	29	050	Line
E24M...AL	14	026	Line	E40M...NC	24	041	Line	E61M...6G	29	050	Line
E24M...AL-TXC	15	026	Top	E40M...T	20	036	Line	E61M...FOR	28	048	Line
E24M...AL-VS	14	026	Line	E40M...T+0,1	23	040	Line	E61M...FOR-T	28	048	Line
E24M...AZ	15	027	Line	E40M...T-4H	22	039	Line	E61M...FOR-TXC	28	048	Line
E24M...AZ-TXC	15	027	Top	E40M...T-6G	22	039	Line	E61M...LH	28	049	Line
E24M...AZ-TZ	15	027	Line	E40M...T-7G	23	040	Line	E61M...LH-V	29	049	Line
E24M...LH	12	022	Line	E40M...TZ	23	041	Line	E61M...LH-XP	29	049	Line
E24M...LH-T	12	022	Line	E40M...V	20	036	Line	E61M...XP+0,1	30	051	Line
E24M...LH-V	12	022	Line	E40M...XP	20	036	Line	E61M...XP-4H	29	050	Line
E24M...NC	15	027	Line	E41M...	21	037	Line	E61M...XP-6G	30	050	Line
E24M...T	11	020	Line	E41M...+0,1	23	040	Line	E61M...	27	047	Line
E24M...T+0,1	14	024	Line	E41M...-4H	22	039	Line	E61M...-7G	30	051	Line
E24M...T-4H	13	023	Line	E41M...-6G	22	039	Line	E61M...NC	32	055	Line
E24M...T-6G	13	023	Line	E41M...-7G	22	040	Line	E61M...T	28	047	Line
E24M...T-7G	13	024	Line					E61M...TXC	28	047	Line
E24M...TXC	11	020	Line					E61M...V	27	047	Line

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Filettatura-Thread-Filetage		M		Filettatura-Thread-Filetage		M		Filettatura-Thread-Filetage		M	
CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.
E61M...XP-7G	30	051	Line	K26M...FORY-TX	8	014	Top	K83M...X-TXC	37	065	Top
E70M...	31	054	Line	K26M...SP-TX	8	014	Top	L24M...	14	025	Line
E70M...TXC	31	054	Top	K26M...TX	8	014	Top	L24M...CT	14	025	Line
E70M...TZ	31	054	Line	K26M...TXS	8	014	Top	L25M...	14	025	Line
E70M...VS	31	054	Line	K27EM...FOR-TX	8	015	Top	E25M...AL	14	026	Line
E71M...	31	054	Line	K27EM...FORY-TX	9	015	Top	L25M...CT	14	025	Line
E71M...TXC	31	054	Top	K27EM...TX	8	015	Top	L60...CT	31	053	Line
E71M...TZ	31	054	Line	K27M...FOR-TX	8	014	Top	L60M...	31	053	Line
E71M...VS	31	054	Line	K27M...FORY-TX	8	014	Top	L61...CT	31	053	Line
E80M...X-V	37	064	Line	K27M...TXS	8	014	Top	L61M...	31	053	Line
E80M...	33	058	Line	K27M...TX	8	014	Top	LANCIAM...	4	007	Line
E80M...T	34	058	Line	K28M...	36	062	Top	LANCIAM...NC	4	007	Line
E80M...V	33	058	Line	K28M...AZ-V	26	044	Top	P24M...	16	028	Plus
E80M...XP	34	058	Line	K28M...CT	36	062	Top	P24M...CT	16	028	Plus
E81M...X-V	37	064	Line	K28M...FOR-CT	36	062	Top	P24M...T	16	028	Plus
E81M...	33	058	Line	K28M...V	26	045	Top	P24M...V	16	028	Plus
E81M...T	34	058	Line	K29M...	36	062	Top	P25M...	16	028	Plus
E81M...V	33	058	Line	K29M...AZ-V	26	044	Top	P25M...CT	16	028	Plus
E81M...XP	34	058	Line	K29M...CT	36	062	Top	P25M...T	16	028	Plus
E82M...	34	059	Line	K29M...FOR-CT	36	062	Top	P25M...V	16	028	Plus
E82M...T	34	059	Line	K29M...V	26	045	Top	P2CCM...	38	070	Line
E82M...V	34	059	Line	K40M...FOR-TXC	25	043	Top	P2CCM...FP	40	072	Line
E82M...XP	34	059	Line	K40M...TXC	25	043	Top	P2CCM...FP-T	40	072	Line
E83M...	34	059	Line	K41M...FOR-TXC	25	043	Top	P2CCM...LH	40	073	Line
E83M...T	34	059	Line	K41M...TXC	25	043	Top	P2CCM...LH-T	40	073	Line
E83M...V	34	059	Line	K42M...CT	25	044	Top	P2CCM...SP	38	070	Line
E83M...XP	34	059	Line	K42M...NI	26	045	Top	P2CCM...SP-T	39	070	Line
HM20M...FOR	10	019	Top	K42M...NI-4HX	26	045	Top	P2CCM...SP-V	39	070	Line
HM20M...FOR-CT	10	019	Top	K42M...NI-CT	26	045	Top	P2CCM...T	39	070	Line
HM21M...FOR	10	019	Top	K42M...V	25	044	Top	P2CCM...V	39	070	Line
HM21M...FOR-CT	10	019	Top	K42MJ...V	25	044	Top	P2SCM...	37	068	Line
HM2CCM...FORY-CT	42	078	Top	K43M...CT	25	044	Top	P2SCM...FP	39	072	Line
HM2SCM...FOR-T	42	078	Top	K43M...V	25	044	Top	P2SCM...FP-T	40	072	Line
HM-XT20M...CT	10	019	Top	K43MJ...V	25	044	Top	P2SCM...LH	40	073	Line
K20M...TXC	9	017	Top	K52M...CT	19	034	Top	P2SCM...LH-T	40	073	Line
K21M...TXC	9	017	Top	K52M...NI	20	035	Top	P2SCM...SP	37	068	Line
K22M...FOR-TXC	9	017	Top	K52M...NI-4HX	20	035	Top	P2SCM...SP-T	38	068	Line
K22M...FORY-TXC	9	017	Top	K52M...NI-CT	20	035	Top	P2SCM...SP-V	38	068	Line
K23M...FOR-TXC	9	017	Top	K52M...V	19	034	Top	P2SCM...T	38	068	Line
K23M...FORY-TXC	9	017	Top	K52MJ...V	19	034	Top	P2SCM...V	38	068	Line
K24M...FORY-TXC	18	031	Top	K52MJ...CT	19	034	Top	P3CCM...	39	071	Line
K24M...XFORY-TXC	18	032	Top	K53M...CT	19	034	Top	P3CCM...SP	39	071	Line
K24M...X-TXC	18	032	Top	K53M...V	19	034	Top	P3CCM...SP-T	39	071	Line
K24M...FORY-XP	17	029	Top	K53MJ...V	19	034	Top	P3CCM...SP-V	39	071	Line
K24M...TXC	17	031	Top	K53MJ...CT	19	034	Top	P3CCM...T	39	071	Line
K24M...XP	17	029	Top	K80M...FOR-TXC	36	063	Top	P3CCM...V	39	071	Line
K25M...FORY-TXC	18	031	Top	K80M...TXC	36	063	Top	P3SCM...	38	069	Line
K25M...XFORY-TXC	18	032	Top	K81M...FOR-TXC	36	063	Top	P3SCM...SP	38	069	Line
K25M...X-TXC	18	032	Top	K81M...TXC	36	063	Top	P3SCM...SP-T	38	069	Line
K25M...FORY-XP	17	029	Top	K82M...FOR-XP	35	060	Top	P3SCM...SP-V	38	069	Line
K25M...TXC	17	031	Top	K82M...FORY-XP	35	060	Top	P3SCM...T	38	069	Line
K25M...XP	17	029	Top	K82M...XFOR-TXC	37	065	Top	P3SCM...V	38	069	Line
K26EM...FOR-TX	8	015	Top	K82M...XP	35	060	Top	P40M...	24	042	Plus
K26EM...FORY-TX	9	015	Top	K82M...X-TXC	37	065	Top	P40M...CT	24	042	Plus
K26EM...TX	8	015	Top	K83M...FOR-XP	35	060	Top	P40M...T	24	042	Plus
K26M...FOR-TX	8	014	Top	K83M...FORY-XP	35	060	Top	P40M...V	24	042	Plus
				K83M...XFOR-TXC	37	065	Top	P41M...	24	042	Plus
				K83M...XP	35	060	Top	P41M...CT	24	042	Plus
								P41M...T	24	042	Plus
								P41M...V	24	042	Plus

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CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.
P60EM...	33	057	Plus	00MF...	43-44	082-084	Line	E60MF...V	59	122	Line
P60EM...FOR	33	057	Plus	00MF...LH	44	085	Line	E61MF...	60-61	123-126	Line
P60EM...FOR-XP	33	057	Plus	01MF...	43-44	082-084	Line	E61MF...+0,1	63	129	Line
P60EM...XP	33	057	Plus	01MF...LH	44	085	Line	E61MF...-4H	63	129	Line
P60M...	32	056	Plus	03MF...	43-44	082-084	Line	E61MF...-6G	63	129	Line
P60M...T	32	056	Plus	03MF...LH	44	085	Line	E61MF...-7G	63	129	Line
P60M...V	32	056	Plus	E20MF...	45	086	Line	E61MF...FOR	62	127	Line
P60M...XP	32	056	Plus	E20MF...T	45	086	Line	E61MF...FOR-T	62	127	Line
P61EM...	33	057	Plus	E21MF...	45-46	087-092	Line	E61MF...FOR-TXC	62	127	Line
P61EM...FOR	33	057	Plus	E21MF...LH	46	093	Line	E61MF...LH	63	128	Line
P61EM...FOR-XP	33	057	Plus	E21MF...LH-T	46	093	Line	E61MF...LH-V	63	128	Line
P61EM...XP	33	057	Plus	E21MF...T	46	087-088	Line	E61MF...LH-XP	63	128	Line
P61M...	32	056	Plus	E24MF...	49	100	Line	E61MF...NC	64	130	Line
P61M...T	32	056	Plus	E24MF...T	49	100	Line	E61MF...T	60-61	123-126	Line
P61M...V	32	056	Plus	E24MF...TXC	49	100	Line	E61MF...TXC	62	123-126	Line
P61M...XP	32	056	Plus	E24MF...V	49	100	Line	E61MF...V	60-61	123-126	Line
S20M...FOR-TXC	9	016	Top	E24MF...LH	52	104	Line	E71MF...	63	130	Line
S20M...FORY-TXC	9	016	Top	E24MF...LH-T	52	104	Line	E71MF...VS	63	130	Line
S20M...TXC	9	016	Top	E25MF...AL	52	106	Line	E81MF...	64	132	Line
S24M...FORY-TXC	17	030	Top	E25MF...AL-VS	52	106	Line	E81MF...T	64	132	Line
S24M...TXC	17	030	Top	E25MF...	50	101-103	Line	E81MF...V	64	132	Line
S80M...FOR-TXC	35	061	Top	E25MF...+0,1	52	105	Line	E81MF...XP	64	132	Line
S80M...TXC	35	061	Top	E25MF...-4H	52	105	Line	E83MF...	65	133	Line
V24M...TXC	18	032	Top	E25MF...-6G	52	105	Line	E83MF...T	65	133	Line
V25M...TXC	18	032	Top	E25MF...-7G	52	105	Line	E83MF...V	65	133	Line
V82M...TXC	37	064	Top	E25MF...LH	52	104	Line	E83MF...XP	65	133	Line
V83M...TXC	37	064	Top	E25MF...LH-T	52	104	Line	HM20MF...FOR	49	099	Top
X2CCM...FOR-TG	42	077	Top	E25MF...NC	52	106	Plus	HM21MF...FOR	49	099	Top
X2CCM...TG	42	077	Top	E25MF...T	51	101-103	Line	K21MF...TXC	48	099	Top
X2CCM...CT	41	075	Top	E25MF...V	50	101-103	Line	K23MF...FOR-TXC	49	099	Top
X2CCM...FOR-TG	42	076	Top	E25MF...TXC	51	101-103	Line	K23MF...FORY-TXC	49	099	Top
X2CCM...FORY-TG	42	076	Top	E25MF...X-V	54	111	Top	K25MF...FORY-TXC	54	110	Top
X2CCM...NC	41	075	Top	E26MF...FOR-CT	46	094	Line	K25MF...FORY-XP	54	108	Top
X2CCM...SP-CT	41	075	Top	E26MF...NQ	46	094	Line	K25MF...TXC	54	110	Top
X2CCM...SP-NC	41	075	Top	E26MF...SP-NQ	46	094	Line	K25MF...XFORY-TXC	55	111	Top
X2CCM...SP-TG	41	075	Top	E27MF...FOR-CT	47	095	Line	K25MF...XP	53	108	Top
X2CCM...TG	41	075	Top	E27MF...NQ	47	095	Line	K25MF...X-TXC	55	111	Top
X2CCM...TXC	42	076	Top	E26MF...CT	46	094	Line	K27MF...TX	48	097	Top
X2SCM...TG	42	077	Top	E26MF...SP-CT	46	094	Line	K27MF...FOR-TX	48	097	Top
X2SCM...CT	41	074	Top	E27MF...CT	46	095	Line	K27MF...FORY-TX	48	097	Top
X2SCM...NC	40	074	Top	E27MF...SP-CT	46	095	Line	K27MF...TX	47	096	Top
X2SCM...SP-CT	41	074	Top	E40MF...	56	115	Line	K27MF...TXS	47	096	Top
X2SCM...SP-NC	40	074	Top	E40MF...FOR	58	118	Line	K27MF...FOR-TX	48	096	Top
X2SCM...SP-TG	40	074	Top	E40MF...FOR-T	58	118	Line	K27MF...FORY-TX	48	096	Top
X2SCM...TG	40	074	Top	E40MF...T	56	115	Line	K42MF...CT	59	120	Top
X3CCM...SP-TG	41	075	Top	E40MF...V	56	115	Line	K42MF...NI	59	121	Top
X3CCM...TG	41	075	Top	E40MF...XP	56	115	Line	K42MF...NI-4HX	59	121	Top
X3SCM...SP-TG	41	074	Top	E41MF...	57	116-117	Line	K42MF...NI-CT	59	121	Top
X3SCM...TG	41	074	Top	E41MF...FOR	58	118	Line	K42MF...V	59	120	Top
XT20M...	10	018	Top	E41MF...FOR-T	58	118	Line	K42MJF...V	59	120	Top
XT20M...TX	10	018	Top	E41MF...T	57	116-117	Line	K43MF...CT	59	120	Top
XT21M...	10	018	Top	E41MF...V	57	116-117	Line	K43MF...V	59	120	Top
				E41MF...XP	58	116-117	Line	K43MJF...V	59	120	Top
				E51MF...	55	112	Line	K52MF...CT	56	113	Top
				E51MF...V	55	112	Line	K52MF...NI	56	114	Top
				E51MF...XP	55	112	Line	K52MF...NI-4HX	56	114	Top
				E60MF...	59	122	Line	K52MF...NI-CT	56	114	Top
				E60MF...FOR	62	127	Line	K52MF...V	55	113	Top
				E60MF...FOR-T	62	127	Line	K52MJF...V	56	113	Top
				E60MF...FOR-TXC	62	127	Line				
				E60MF...T	59	122	Line				
				E60MF...TXC	60	122	Line				

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CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.
K53MF...CT	56	113	Top	S24MF...TXC	54	109	Top	K24UNC...XP	75	154	Top
K53MF...V	55	113	Top	S80MF...TXC	65	135	Top	K25UNC...FORY-XP	75	154	Top
K53MF...V	56	113	Top	S80MF...FOR-TXC	66	135	Top	K25UNC...XP	75	154	Top
K81MF...FOR-TXC	66	136	Top	V25MF...TXC	54	111	Top	K26UNC...FOR-TX	73	152	Top
K81MF...TXC	66	136	Top	V83MF...TXC	66	137	Top	K26UNC...TX	73	152	Top
K83MF...FOR-XP	65	134	Top	X2CCEMF...FOR-TG	71	146	Top	K27UNC...FOR-TX	73	152	Top
K83MF...FORY-XP	65	134	Top	X2CCEMF...TG	71	146	Top	K27UNC...TX	73	152	Top
K83MF...X-FOR-TXC	66	137	Top	X2CCMF...FOR-TG	70	145	Top	K42UNC...CT	77	158	Top
K83MF...XP	65	134	Top	X2CCMF...FORY-TG	70	145	Top	K42UNC...V	77	158	Top
K83MF...X-TXC	66	137	Top	X2CCMF...TG	70	144	Top	K42UNC...V-3BX	77	158	Top
P25MF....	53	107	Plus	X2CCMF...TXC	70	145	Top	K43UNC...CT	77	158	Top
P25MF...CT	53	107	Plus	X2SCEMF...TG	71	146	Top	K43UNC...V	77	158	Top
P25MF...T	53	107	Plus	X2SCMF...TG	70	144	Top	K43UNC...V-3BX	77	158	Top
P25MF...V	53	107	Plus	X3CCMF...TG	70	144	Top	K52UNC...CT	75	156	Top
P2CCMF...	68	140	Line	X3SCMF...TG	70	144	Top	K52UNC...V	75	156	Top
P2CCMF...FP	69	142	Line					K52UNC...V-3BX	76	156	Top
P2CCMF...FP-T	69	142	Line					K53UNC...CT	75	156	Top
P2CCMF...LH	69	143	Line					K53UNC...V	75	156	Top
P2CCMF...LH-T	69	143	Line					K53UNC...V-3BX	76	156	Top
P2CCMF...SP	68	140	Line					K82UNC...FOR-XP	79	160	Top
P2CCMF...SP-T	68	140	Line					K82UNC...FORY-XP	79	160	Top
P2CCMF...SP-V	68	140	Line					K82UNC...XP	79	160	Top
P2CCMF...T	68	140	Line					K83UNC...FOR-XP	79	160	Top
P2CCMF...V	68	140	Line					K83UNC...FORY-XP	79	160	Top
P2SCMF...	66	138	Line					K83UNC...XP	79	160	Top
P2SCMF...FP	69	142	Line					P2CCUNC...	80	162	Line
P2SCMF...FP-T	69	142	Line					P2CCUNC...T	80	162	Line
P2SCMF...LH	69	143	Line					P2SCUNC...	79	162	Top
P2SCMF...LH-T	69	143	Line					P2SCUNC...T	79	162	Top
P2SCMF...SP	66	138	Line					V24UNC...TXC	75	155	Top
P2SCMF...SP-T	67	138	Line					V25UNC...TXC	75	155	Top
P2SCMF...SP-V	67	138	Line					V82UNC...TXC	79	161	Top
P2SCMF...T	67	138	Line					V83UNC...TXC	79	161	Top
P2SCMF...V	67	138	Line								
P3CCMF...	68	141	Line								
P3CCMF...SP	68	141	Line								
P3CCMF...SP-T	68	141	Line								
P3CCMF...SP-V	68	141	Line								
P3CCMF...T	68	141	Line								
P3CCMF...V	68	141	Line								
P3SCMF...	67	139	Line								
P3SCMF...SP	67	139	Line								
P3SCMF...SP-T	67	139	Line								
P3SCMF...SP-V	67	139	Line								
P3SCMF...T	67	139	Line								
P3SCMF...V	67	139	Line								
P41MF....	58	119	Plus								
P41MF...CT	58	119	Plus								
P41MF...T	58	119	Plus								
P41MF...V	58	119	Plus								
P61MF...	64	131	Plus								
P61MF...T	64	131	Plus								
P61MF...V	64	131	Plus								
P61MF...XP	64	131	Plus								
S20MF...FOR-TXC	48	098	Top								
S20MF...FORY-TXC	48	098	Top								
S20MF...TXC	48	098	Top								
S24MF...FORY-TXC	54	109	Top								
Filettatura-Thread-Filetage		MF		Filettatura-Thread-Filetage		MF		Filettatura-Thread-Filetage		UNC	
CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.
01UNC...	72	150	Line	02UNC...	72	150	Line	03UNC...	72	150	Line
00UNC...	72	150	Line	E20UNC...	72	151	Line	E20UNC...T	73	151	Line
E20UNC...	72	151	Line	E21UNC...	72	151	Line	E21UNC...T	73	151	Line
E24UNC...	74	153	Line	E24UNC...T	74	153	Line	E24UNC...V	74	153	Line
E24UNC...V	74	153	Line	E24UNC...XP	74	153	Line	E25UNC...	74	153	Line
E24UNC...XP	74	153	Line	E25UNC...T	74	153	Line	E25UNC...V	74	153	Line
E25UNC...V	74	153	Line	E25UNC...XP	74	153	Line	E26UNC...NQ	73	152	Line
E25UNC...XP	74	153	Line	E26UNC...SP-NQ	73	152	Line	E27UNC...NQ	73	152	Line
E26UNC...SP-NQ	73	152	Line	E27UNC...CT	73	152	Line	E26UNC...CT	73	152	Line
E27UNC...CT	73	152	Line	E26UNC...CT-SP	73	152	Line	E26UNC...CT-SP	73	152	Line
E26UNC...CT-SP	73	152	Line	E27UNC...CT	73	152	Line	E27UNC...CT	73	152	Line
E27UNC...CT	73	152	Line	E40UNC...	76	157	Line	E40UNC...	76	157	Line
E40UNC...	76	157	Line	E40UNC...T	76	157	Line	E40UNC...V	76	157	Line
E40UNC...T	76	157	Line	E40UNC...V	76	157	Line	E40UNC...XP	77	157	Line
E40UNC...V	76	157	Line	E40UNC...XP	77	157	Line	E41UNC...	76	157	Line
E40UNC...XP	77	157	Line	E41UNC...	76	157	Line	E41UNC...T	76	157	Line
E41UNC...	76	157	Line	E41UNC...T	76	157	Line	E41UNC...V	76	157	Line
E41UNC...T	76	157	Line	E41UNC...V	76	157	Line	E41UNC...XP	78	159	Line
E41UNC...V	76	157	Line	E41UNC...XP	78	159	Line	E41UNC...XP	78	159	Line
E41UNC...XP	78	159	Line	E41UNC...XP	78	159	Line	E60UNC...	77	159	Line
E60UNC...	77	159	Line	E60UNC...T	78	159	Line	E60UNC...T	78	159	Line
E60UNC...T	78	159	Line	E60UNC...V	78	159	Line	E60UNC...V	78	159	Line
E60UNC...V	78	159	Line	E60UNC...XP	78	159	Line	E60UNC...XP	78	159	Line
E60UNC...XP	78	159	Line	E61UNC...	77	159	Line	E61UNC...	77	159	Line
E61UNC...	77	159	Line	E61UNC...T	78	159	Line	E61UNC...T	78	159	Line
E61UNC...T	78	159	Line	E61UNC...V	78	159	Line	E61UNC...V	78	159	Line
E61UNC...V	78	159	Line	E61UNC...XP	78	159	Line	E61UNC...XP	78	159	Line
E61UNC...XP	78	159	Line	K24UNC...FORY-XP	75	154	Top	K24UNC...FORY-XP	75	154	Top

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CODICE - code	pg. list.	pg. cat.	Typ.
E40UNF...	85	173	Line
E40UNF...T	85	173	Line
E40UNF...V	85	173	Line
E40UNF...XP	85	173	Line
E41UNF...	85	173	Line
E41UNF...T	85	173	Line
E41UNF...V	85	173	Line
E41UNF...XP	85	173	Line
E60UNF...	86	175	Line
E60UNF...T	86	175	Line
E60UNF...V	86	175	Line
E60UNF...XP	87	175	Line
E61UNF...	86	175	Line
E61UNF...T	86	175	Line
E61UNF...V	86	175	Line
E61UNF...XP	87	175	Line
K24UNF...FORY-XP	84	170	Top
K24UNF...XP	84	170	Top
K25UNF...FORY-XP	84	170	Top
K25UNF...XP	84	170	Top
K27UNF...FOR-TX	83	168	Top
K27UNF...TX	82	168	Top
K42UNF...CT	86	174	Top
K42UNF...V	86	174	Top
K42UNF...V-3BX	86	174	Top
K43UNF...CT	86	174	Top
K43UNF...V	86	174	Top
K43UNF...V-3BX	86	174	Top
K52UNF...CT	84	172	Top
K52UNF...V	84	172	Top
K52UNF...V-3BX	85	172	Top
K53UNF...CT	84	172	Top
K53UNF...V	84	172	Top
K53UNF...V-3BX	85	172	Top
K82UNF...FOR-XP	87	176	Top
K82UNF...FORY-XP	87	176	Top
K82UNF...XP	87	176	Top
K83UNF...FOR-XP	87	176	Top
K83UNF...FORY-XP	87	176	Top
K83UNF...XP	87	176	Top
P2CCUNF...	88	178	Line
P2CCUNF...T	88	178	Line
P2SCUNF...	88	178	Line
P2SCUNF...T	88	178	Line
V24UNF...TXC	84	171	Top
V25UNF...TXC	84	171	Top
V82UNF...TXC	88	177	Top
V83UNF...TXC	88	177	Top

Segue - Follow - Suite	UNEFT			GAS																																																																																																																																																																																																																																																																							
CODICE - code	pg. list.	pg. cat.	Typ.	CODICE - code	pg. list.	pg. cat.	Typ.																																																																																																																																																																																																																																																																				
E21UNEF...	89	182	Line	K27G...TX	93	192	Top																																																																																																																																																																																																																																																																				
E21UNEF...T	89	182	Line	K83G...FOR-XP	96	199	Top																																																																																																																																																																																																																																																																				
E25UNEF...	89	183	Line	K83G...FORY-XP	96	199	Top																																																																																																																																																																																																																																																																				
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E20...UNS...	90	185	Line	S24G...FORY-TXC	94	195	Top																																																																																																																																																																																																																																																																				
E20...UNS...T	90	185	Line	S24G...TXC	94	195	Top																																																																																																																																																																																																																																																																				
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E21...UNS...T	90	185	Line	S80G...TXC	96	200	Top																																																																																																																																																																																																																																																																				
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E25EGM...	106	231	Top
E25EGM...XP	106	231	Line
E60EGM...	106	232	Line
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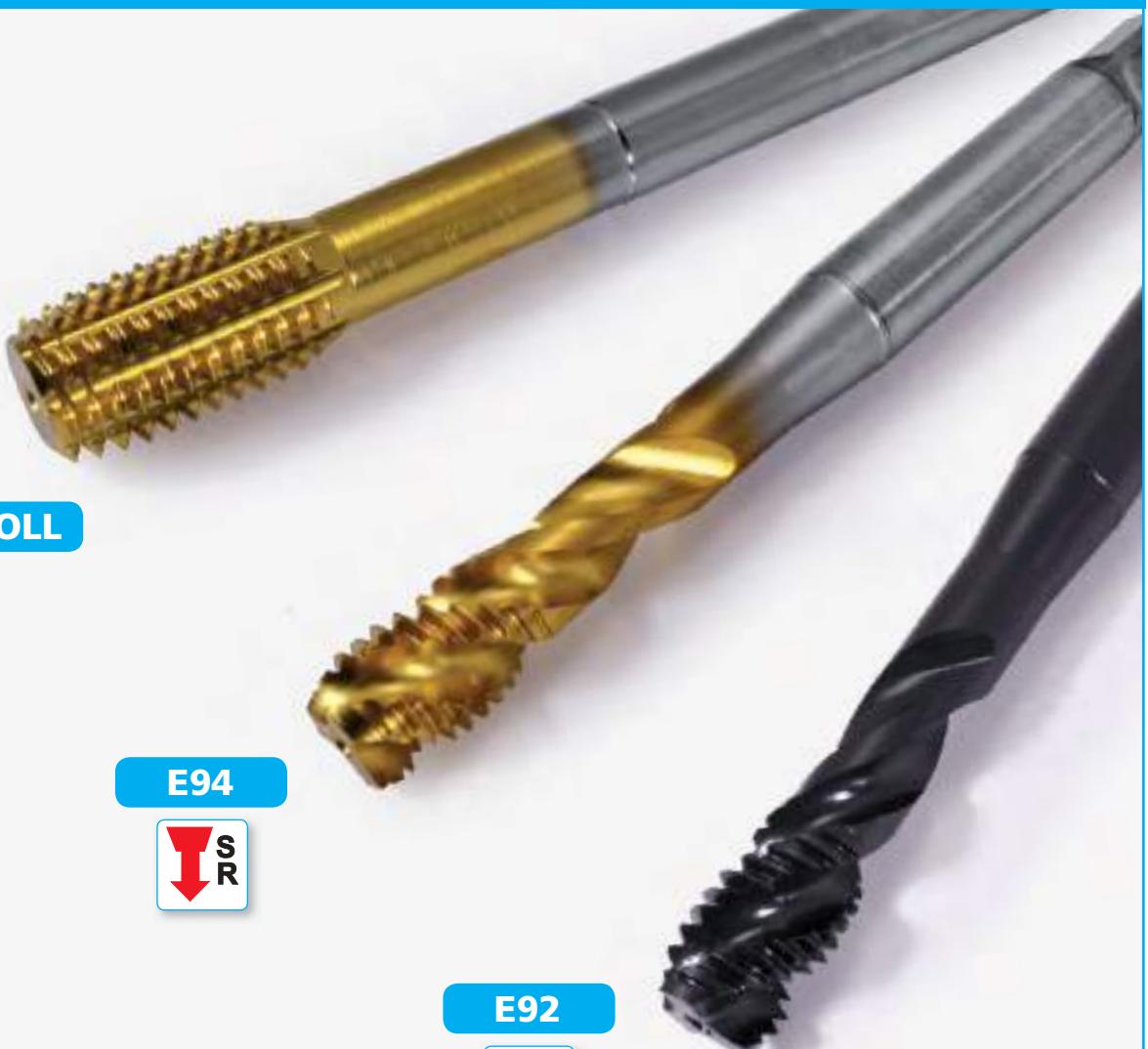
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P-NPM...	108	79	Line
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E21TPN...LH	103	223	Line
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# NEWS



E92



E94



K-ROLL

**Nuova geometria di taglio**

- New cutting edge geometry
- Nouvelle géométrie de coupe

**Rastremazione posteriore**

- Back tapered
- Conicité conique arrière

**Vaporizzazione**

- Steam tempering
- Vaporisée

**Nuovi maschi a macchina in HSSE, per filettatura cieca, profonda fino a 3xD**

New machine taps HSSE steel, for deep threading until 3xD

Tarauds nouveaux en HSSE pour filetage dans les trous borgnes jusqu'à 3xD

**Caratteristiche**

Features - Caractéristiques

**Acciai 1.1 - 1.2 - 1.3 - 1.4 - 2.1 - 2.2**

Steels - Aciers

**Nuova geometria di elica**

New helix geometry - Nouvelle géométrie hélice

**Cura del cutting edge che stabilizza il prodotto**

New cutting edge for better performance

Nouveau tranchant pour de meilleures performances

**Rastremazione posteriore**

Back tapered - Conicité arrière

**Utilizzo sia in maschiatura rigida che compensata**

Standard and rigid tapping - Taraudage normal et rigide

**Grandi vantaggi**

Big Advantages - Gros avantages

**Favorita la fuoriuscita del truciolo, senza matassa**

Excellent chip removal without sticking

Enlèvement de copeaux excessif, sans écheveau

**Riduzione fermi macchina**

Downtime reduction - Réduction des temps d'arrêt

**Incremento durata dell'utensile**

Increased tool's life

Augmentation de la durée de vie de l'outil

**Miglior qualità di filetto ottenuto**

Better thread surface quality

Meilleure qualité de filet obtenu



# Filettatura metrica ISO passo grosso DIN 13

ISO Metric coarse thread DIN 13

Metricches ISO-Regelgewinde DIN13 – Maschinengewindebohrer  
Filetage métrique ISO DIN 13 – Tarauds machine  
Rosca ISO métrica regular DIN13 – Machos de roscar a máquina



N

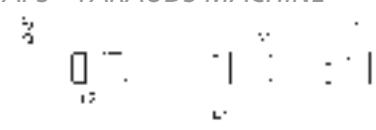
## USO GENERALE

General purpose - Usage Général

### MASCHI A MACCHINA

MACHINE TAPS - TARAUDES MACHINE

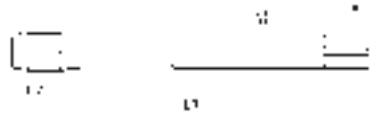
DIN  
371



DIN  
371



DIN  
376



LINE



BT

R45°

LINE



BT

R45°

LINE



BT

R45°

Profond. di filettatura - Thread depth - Profond. de filetage

3xD

Materiale - Material - Matériau

HSSE

Tolleranza - Tolerance - Tolérance

6HX

Trattamento superficiale - Surface treatment - Revêtement

BR

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

V

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Diagram
▲ 3	0,5	56	5	3,5	2,7	3	2,5	
▲ 4	0,7	63	7	4,5	3,4	3	3,3	
▲ 5	0,8	70	8	6	4,9	3	4,2	
▲ 6	1	80	10	6	4,9	3	5	
8	1,25	90	13	8	6,2	3	6,8	
10	1,5	100	15	10	8	3	8,5	

CODICE - CODE		
E92M...	E92M...V	E92M...T
E92M3	E92M3V	E92M3T
E92M4	E92M4V	E92M4T
E92M5	E92M5V	E92M5T
E92M6	E92M6V	E92M6T
E92M8	E92M8V	E92M8T
E92M10	E92M10V	E92M10T

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Diagram
12	1,75	110	18	9	7	3	10,3	
14	2	110	20	11	9	3	12	
16	2	110	20	12	9	4	14	
18	2,5	125	25	14	11	4	15,5	
20	2,5	140	25	16	12	4	17,5	
22	2,5	140	25	18	14,5	4	19,5	
24	3	160	30	18	14,5	4	21	

CODICE - CODE		
E93M...	E93M...V	E93M...T
E93M12	E93M12V	E93M12T
E93M14	E93M14V	E93M14T
E93M16	E93M16V	E93M16T
E93M18	E93M18V	E93M18T
E93M20	E93M20V	E93M20T
E93M22	E93M22V	E93M22T
E93M24	E93M24V	E93M24T

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs



# Filettatura metrica ISO passo grosso DIN 13

*ISO Metric coarse thread DIN 13*

*Metricches ISO-Regelgewinde DIN13 – Maschinengewindebohrer*

*Filetage métrique ISO DIN 13 – Tarauds machine*

*Rosca ISO métrica regular DIN13 – Machos de roscar a máquina*



N

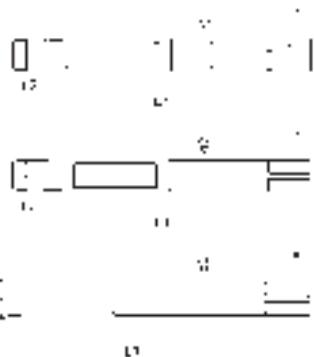
USO GENERALE

General purpose - Usage Général

## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN  
371



Profond. di filettatura - Thread depth - Profond. de filetage

Materiale - Material - Matériau

Tolleranza - Tolerance - Tolérance

Trattamento superficiale - Surface treatment - Revêtement

LINE

LINE

LINE



3xD

3xD

3xD

HSSE

HSSE

HSSE

6HX

6HX

6HX

TiN

TXC

TiN

1.1 1.2 1.3 1.4	1.5	1.1 1.2 1.3 1.4	1.5	1.1 1.2 1.3 1.4	1.5
-----------------	-----	-----------------	-----	-----------------	-----

4.3	2.1 2.2 2.3	4.3
-----	-------------	-----

5.2		5.2
-----	--	-----

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	3	0,5	56	5	3,5	2,7	3	
	4	0,7	63	7	4,5	3,4	3	3,3
	5	0,8	70	8	6	4,9	3	4,2
	6	1	80	10	6	4,9	3	5
	8	1,25	90	13	8	6,2	3	6,8
	10	1,5	100	15	10	8	3	8,5

E94M...T	E94M...TXC	CODICE - CODE E94M...FOR-T
E94M3T	E94M3TXC	-
E94M4T	E94M4TXC	-
E94M5T	E94M5TXC	-
E94M6T	E94M6TXC	E94M6FOR-T
E94M8T	E94M8TXC	E94M8FOR-T
E94M10T	E94M10TXC	E94M10FOR-T

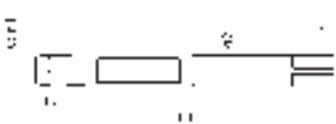
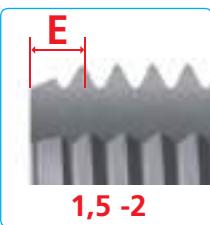
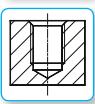
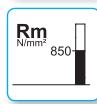
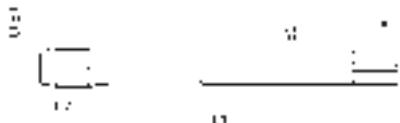
DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	12	1,75	110	18	9	7	3	
	14	2	110	20	11	9	3	12
	16	2	110	20	12	9	4	14
	18	2,5	125	25	14	11	4	15,5
	20	2,5	140	25	16	12	4	17,5
	22	2,5	140	25	18	14,5	4	19,5
	24	3	160	30	18	14,5	4	21

E95M...T	E95M...TXC	CODICE - CODE E95M...FOR-T
E95M12T	E95M12TXC	E95M12FOR-T
E95M14T	E95M14TXC	E95M14FOR-T
E95M16T	E95M16TXC	E95M16FOR-T
E95M18T	E95M18TXC	E95M18FOR-T
E95M20T	E95M20TXC	E95M20FOR-T
E95M22T	E95M22TXC	E95M22FOR-T
E95M24T	E95M24TXC	E95M24FOR-T

Per filettatura rigida  
Syncro rigid threading  
Pour le taraudage rigide



Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

**N**
**USO GENERALE**
*General purpose - Usage Général*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*
**DIN  
371**

**LINE**
**DIN  
376**

*Profond. di filettatura - Thread depth - Profond. de filetage*
*Materiale - Material - Matériaux*
*Tolleranza - Tolerance - Tolérance*
*Trattamento superficiale - Surface treatment - Revêtement*
**3xD**
**HSSE**
**6HX**
**TXC**
**1.1 1.2 1.3 1.4 1.5**
**2.1 2.2 2.3**
**1,5 - 2**

**Numero gruppi materiali**  
*Material's groups number*  
*Nombre de groupes du matériau*

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>3</b>	<b>0,5</b>	56	5	3,5	2,7	3	2,5
	<b>4</b>	<b>0,7</b>	63	7	4,5	3,4	3	3,3
	<b>5</b>	<b>0,8</b>	70	8	6	4,9	3	4,2
	<b>6</b>	<b>1</b>	80	10	6	4,9	3	5
	<b>8</b>	<b>1,25</b>	90	13	8	6,2	3	6,8
	<b>10</b>	<b>1,5</b>	100	15	10	8	3	8,5

**CODICE - CODE**
**E94EM...TXC**

E94EM3TXC

E94EM4TXC

E94EM5TXC

E94EM6TXC

E94EM8TXC

E94EM10TXC

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>12</b>	<b>1,75</b>	110	18	9	7	3	10,3
	<b>14</b>	<b>2</b>	110	20	11	9	3	12
	<b>16</b>	<b>2</b>	110	20	12	9	4	14

**CODICE - CODE**
**E95EM...TXC**

E95EM12TXC

E95EM14TXC

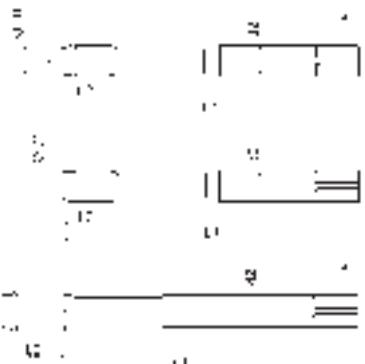
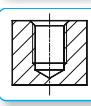
E95EM16TXC

Per filettatura rigida  
*Syncro rigid threading*  
*Pour le taraudage rigide*





**K-ROLL**
**MASCHI A RULLARE**
*Roll form taps - Tarauds à refouler*
**Filettatura metrica ISO passo grosso DIN 13**
*ISO Metric coarse thread DIN 13*
*Metrishes ISO-Regelgewinde DIN13 – Maschinengewindebohrer*
*Filetage métrique ISO DIN 13 – Tarauds machine*
*Rosca ISO métrica regular DIN13 – Machos de roscar a máquina*

**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDES MACHINE*
**DIN  
371**

**TOP**
**TOP**
**6HX**
**6GX**

**3xD**
**3xD**
**PM8**
**PM8**
**6HX**
**6GX**
**TiN-G**
**TiN-G**

1.3	1.4	1.5	1.3	1.4	1.5
2.2	2.3	2.4	2.2	2.3	2.4



# Filettatura metrica ISO passo grosso DIN 13

ISO Metric coarse thread DIN 13

Metricches ISO-Regelgewinde DIN13 – Maschinengewindebohrer

Filetage métrique ISO DIN 13 – Tarauds machine

Rosca ISO métrica regular DIN13 – Machos de roscar a máquina



## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

K-ROLL

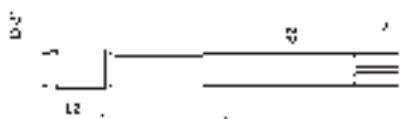
MASCHI A RULLARE

Roll form taps - Tarauds à rouler

DIN  
371



DIN  
376



CNC



Profond. di filettatura - Thread depth - Profond. de filetage

TOP

TOP

Materiale - Material - Matériau

3xD

3xD

Tolleranza - Tolerance - Tolérance

PM8

PM8

Trattamento superficiale - Surface treatment - Revêtement

6HX

6HX

TiN-G

TiN-G

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.3 1.4

1.3 1.4

2.2 2.3 2.4

2.2 2.3 2.4

DIN 371 Ød1 P L<sub>1</sub> L<sub>2</sub> d<sub>2</sub> a Z

CODICE - CODE

K2CCM...FOR-TG

K2CCM...FORY-TG

M

6

8

10

1

1,25

1,5

80

90

100

10

13

15

6

8

10

4,9

6,2

8

5

5

8

5,55

7,40

9,30

DIN 376 Ød1 P L<sub>1</sub> L<sub>2</sub> d<sub>2</sub> a Z

CODICE - CODE

K2CCM...FOR-TG

K2CCM...FORY-TG

M

1,25

2

2

110

110

110

18

20

20

9

11

12

7

9

9

8

8

8

11,20

13,10

15,10

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs



## MASCHI A MACCHINA

## MACHINE TAPS - TARAUDS MACHINE

K-ROLL

## MASCHI A RULLARE

## ***Roll form taps - Tarauds à refouler***



**Profond. di filettatura** - *Thread depth* - Profond. de filetage

3xD

3xD

## Materiale - Material - Matériau

PM8

## Tolleranza - Tolerance - Tolérance

**6HX**

## Trattamento superficiale - Surface treatment - Revêtement

**TiN-G**

TiN-G

## **Numero gruppi materiali**

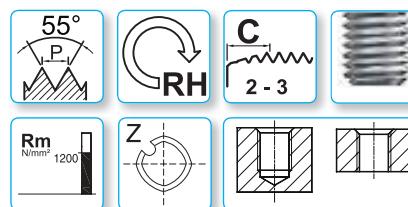
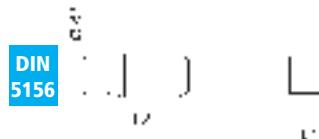
*Material's groups number*

*Nombre de groupes du matériel*

**Confezione / Box / Colis:**  
M3 – M10: 10 pezzi / pcs





**K-ROLL**
**MASCHI A RULLARE**
*Roll form taps - Tarauds à rouler*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*

*Profond. di filettatura - Thread depth - Profond. de filetage*
**3xD**
**3xD**
*Materiale - Material - Matériau*
**PM8**
**PM8**
*Tolleranza - Tolerance - Tolérance*
**ISO 228X**
**ISO 228X**
*Trattamento superficiale - Surface treatment - Revêtement*
**TiN-G**
**TiN-G**

1.3	1.4	1.5
2.2	2.3	2.4

1.3	1.4	1.5
2.2	2.3	2.4

**Numero gruppi materiali**  
*Material's groups number*  
*Nombre de groupes du matériau*

DIN 5156	Ød1 GAS	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>1/8</b>	<b>28</b>	9,73	90	10	7	5,5	8	9,25
	<b>1/4</b>	<b>19</b>	13,16	100	13	11	9	8	12,5
	<b>3/8</b>	<b>19</b>	16,66	100	13	12	9	8	16
	<b>1/2</b>	<b>14</b>	20,96	125	18	16	12	8	20
new	<b>5/8</b>	<b>14</b>	22,91	125	18	18	14,5	8	22
	<b>3/4</b>	<b>14</b>	26,44	140	18	20	16	8	25,5
new	<b>7/8</b>	<b>14</b>	30,20	150	18	22	18	8	29,25
new	<b>1</b>	<b>11</b>	33,25	160	23	25	20	8	32



M



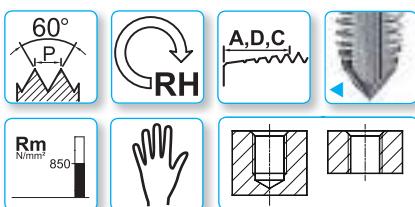
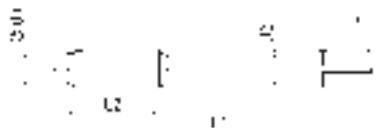
## MASCHI A MANO

HAND TAPS - TARAUDS MAIN

N

USO GENERALE  
*General purpose - Usage Général*

DIN  
352



LINE

LINE

LINE

LINE



Profond. di filettatura - Thread depth - Profond. de filetage

2xD

2xD

2xD

2xD

Materiale - Material - Matériau

HSS

HSS

HSS

HSS

Tolleranza - Tolerance - Tolérance

-

-

ISO2/6H

ISO2/6H

Trattamento superficiale - Surface treatment - Revêtement

BR

BR

BR

BR

Numero gruppi materiali  
*Material's groups number*  
*Nombre de groupes du matériau*

1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
2.1 2.2 2.3 3.1 3.4	2.1 2.2 2.3 3.1 3.4	2.1 2.2 2.3 3.1 3.4	2.1 2.2 2.3 3.1 3.4
4.1 4.2 4.3 4.4	4.1 4.2 4.3 4.4	4.1 4.2 4.3 4.4	4.1 4.2 4.3 4.4
5.1 5.2 5.3	5.1 5.2 5.3	5.1 5.2 5.3	5.1 5.2 5.3

DIN 352	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 2	<b>0,4</b>	36	8	2,8	2,1	3	1,6	
◀ 2,5	<b>0,45</b>	40	9	2,8	2,1	3	2,05	
◀ 2,6	<b>0,45</b>	40	9	2,8	2,1	3	2,1	
◀ 3	<b>0,5</b>	40	9	3,5	2,7	3	2,5	
◀ 3,5	<b>0,6</b>	45	10	4	3	3	2,9	
◀ 4	<b>0,7</b>	45	11	4,5	3,4	3	3,3	
◀ 4,5	<b>0,75</b>	50	13	6	4,9	3	3,7	
◀ 5	<b>0,8</b>	50	13	6	4,9	3	4,2	
◀ 6	<b>1</b>	56	15	6	4,9	3	5	

		CODICE - CODE		
01M...	02M...	03M...	00M...	
○	○	●	●	
○	○	●	●	
○	○	○	○	
○	○	●	●	
○	○	○	○	
○	○	●	●	
○	○	●	●	

Segue diametri  
*Diameters, to be continued*  
*Diamètres à suivre*

Pag. 3



Ad esaurimento scorte  
*Stock clearance - Stock épuisé*

Confezione: Singola  
*Box: Single*  
*Colis: Unique*

€ Pag. listino - Price list - Liste des prix

● Standard

1

1

2

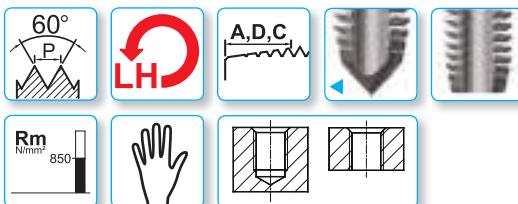
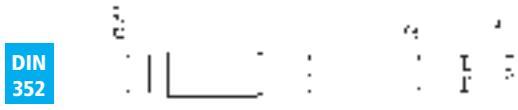
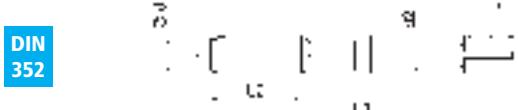
1

○ Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

★ Solo a richiesta  
*Only on request / Sur demande*



**MASCHI A MANO, FILETTATURA SINISTRA**  
 LEFT HAND TAPS - TARAUDS MAIN GAUCHE



LINE

LINE

LINE

LINE



Profond. di filettatura - Thread depth - Profond. de filetage

2xD

2xD

2xD

2xD

Materiale - Material - Matériau

HSS

HSS

HSS

HSS

Tolleranza - Tolerance - Tolérance

-

-

ISO2/6H

ISO2/6H

Trattamento superficiale - Surface treatment - Revêtement

BR

BR

BR

BR

**Numero gruppi materiali**  
 Material's groups number  
 Nombre de groupes du matériau

1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
2.1 2.2 2.3 3.1 3.4	2.1 2.2 2.3 3.1 3.4	2.1 2.2 2.3 3.1 3.4	2.1 2.2 2.3 3.1 3.4
4.1 4.2 4.3 4.4	4.1 4.2 4.3 4.4	4.1 4.2 4.3 4.4	4.1 4.2 4.3 4.4
5.1 5.2 5.3	5.1 5.2 5.3	5.1 5.2 5.3	5.1 5.2 5.3

DIN 352	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
3	0,5	40	9	3,5	2,7	3	2,5	
4	0,7	45	11	4,5	3,4	3	3,3	
5	0,8	50	13	6	4,9	3	4,2	
6	1	56	15	6	4,9	3	5	
8	1,25	63	19	6	4,9	3	6,8	
10	1,5	70	22	7	5,5	3	8,5	
12	1,75	75	28	9	7	4	10,30	
14	2	80	30	11	9	4	12	
16	2	80	30	12	9	4	14	
18	2,5	95	34	14	11	4	15,5	
20	2,5	95	34	16	12	4	17,5	
22	2,5	100	34	18	14,5	4	19,5	
24	3	110	38	18	14,5	4	21	
27	3	110	38	20	16	4	24	
30	3,5	125	45	22	18	4	26,5	

CODICE - CODE			
01M...LH	02M...LH	03M...LH	00M...LH
○	○	○	○
○	○	○	●
○	○	○	●
○	○	○	●
○	○	○	●
○	○	○	●
○	○	○	○
○	○	○	○
★	★	★	★
★	★	★	★
★	★	★	★
★	★	★	★
★	★	★	★
★	★	★	★
★	★	★	★



Ad esaurimento scorte  
 Stock clearance - Stock épuisé

Confezione: Singola  
 Box: Single  
 Colis: Unique

€ Pag. listino - Price list - Liste des prix

• Standard

2

2

2

2

○ Disponibilità da richiedere, prezzo a listino  
 On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta  
 Only on request / Sur demande



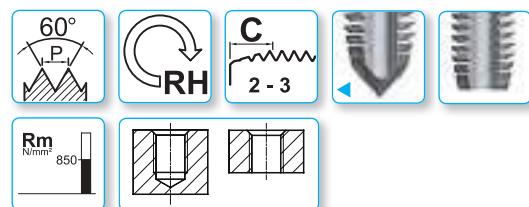
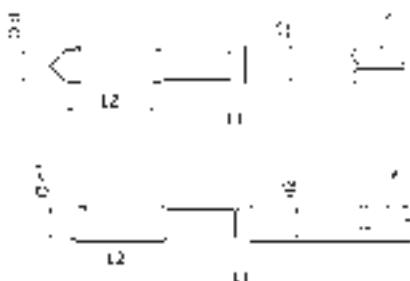


**OT**
**OTTONE**

Brass - Laiton

**MASCHI A MACCHINA**

MACHINE TAPS - TARAUDS MACHINE

**DIN  
371**


LINE

LINE

LINE

LINE

**Ms58****Ms58****3xD****3xD****3xD****3xD****HSSE****HSSE****HSSE****HSSE****ISO2/6H****ISO2/6H****ISO2/6H****ISO2/6H****BR****CrN****BR****TiCN**

Numero gruppi materiali

Material's groups number

Nombre de groupes du matériau

<b>DIN 371</b>	<b>Ød1 M</b>	<b>P mm</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>d<sub>2</sub> h9</b>	<b>a h12</b>	<b>Z</b>	
◀ 3	0,5	56	10	3,5	2,7	2	2,5	
◀ 4	0,7	63	13	4,5	3,4	2	3,3	
◀ 5	0,8	70	13	6	4,9	2	4,2	
◀ 6	1	80	16	6	4,9	2	5	
8	1,25	90	18	8	6,2	2	6,8	
10	1,5	100	20	10	8	2	8,5	

LANCIAM...	CODICE - CODE			
	LANCIAM...NC	E20M...-OT	E20M...-OT-CT	
●	○	-	-	-
●	○	-	-	-
●	○	-	-	-
●	○	-	-	-
●	○	-	-	-
●	○	-	-	-

<b>DIN 371</b>	<b>Ød1 M</b>	<b>P mm</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>d<sub>2</sub> h9</b>	<b>a h12</b>	<b>Z</b>	
◀ 3	0,5	56	10	3,5	2,7	3	2,5	
◀ 4	0,7	63	13	4,5	3,4	3	3,3	
◀ 5	0,8	70	13	6	4,9	3	4,2	
◀ 6	1	80	16	6	4,9	3	5	
8	1,25	90	18	8	6,2	3	6,8	
10	1,5	100	20	10	8	3	8,5	

LANCIAM...	CODICE - CODE			
	LANCIAM...NC	E20M...-OT	E20M...-OT-CT	
-	-	○	○	
-	-	○	○	
-	-	○	○	
-	-	○	○	
-	-	○	○	
-	-	○	○	

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs

**€ Pag. listino - Price list - Liste des prix**

● Standard

**4****4****4****4****4**
 Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

 Solo a richiesta  
Only on request / Sur demande













# M Filettatura metrica ISO passo grosso DIN 13

ISO Metric coarse thread DIN 13

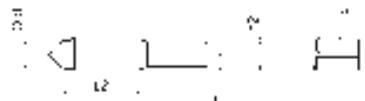
Metrishes ISO-Regelgewinde DIN13 – Maschinengewindebohrer  
Filetage métrique ISO DIN 13 – Tarauds machine  
Rosca ISO métrica regular DIN13 – Machos de roscar a máquina



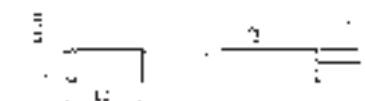
## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

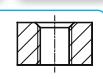
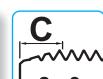
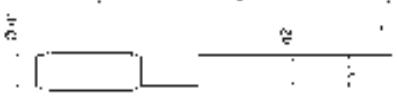
DIN  
371



DIN  
371



DIN  
376



**TOP**

**TOP**

**TOP**

**TOP**

**ADITAPS**

Profond. di filettatura - Thread depth - Profond. de filetage

3xD

3,5xD

3,5xD

3xD

Materiale - Material - Matériau

PM3

PM3

PM3

PM3

Tolleranza - Tolerance - Tolérance

6HX

6HX

6HX

6HX

Al Si>10%,  
Ottone / Brass / Laiton  
Bronzo / Bronze / Bronze  
truciolo corto / short chip /  
coupeaux courts

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

TiAIN

TiAIN

TiAIN

TXS

3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5
4.4 5.3 5.4	4.4 5.3 5.4	4.4 5.3 5.4	4.4 5.3 5.4
10.1	10.1	10.1	10.1

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub> 10xP	d <sub>2</sub> h9	a h12	Z	
4	<b>0,7</b>	63	13	4,5	3,4	3	3,3	
5	<b>0,8</b>	70	13	6	4,9	3	4,2	
6	<b>1</b>	80	16	6	4,9	4	5	
8	<b>1,25</b>	90	18	8	6,2	4	6,8	
10	<b>1,5</b>	100	20	10	8	4	8,5	
6	<b>1</b>	80	16	6	4,9	4	5	
8	<b>1,25</b>	90	18	8	6,2	4	6,8	
10	<b>1,5</b>	100	20	10	8	4	8,5	

CODICE - CODE								
K26M...TX				K26M...TXS				
●				○				●
●				○				●
●				○				●
●				○				●
●				○				●
K26M...SP-TX				K26M...FOR-TX				K26M...FORY-TX
○				○				
○				○				
○				○				

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub> 10xP	d <sub>2</sub> h9	a h12	Z	
12	<b>1,75</b>	110	25	9	7	4	10,3	
14	<b>2</b>	110	28	11	9	4	12	
16	<b>2</b>	110	28	12	9	4	14	
18	<b>2,5</b>	125	33	14	11	5	15,5	
20	<b>2,5</b>	140	33	16	12	5	17,5	
22	<b>2,5</b>	140	33	18	14,5	5	19,5	
24	<b>3</b>	160	39	18	14,5	5	21	

CODICE - CODE								
K27M...TX				K27M... FOR-TX				K27M...FORY-TX
●				○				●
●				○				●
●				○				●
○				○				○
○				○				○
○				○				○
○				○				○

Esecuzione in metallo duro integrale:  
Solid carbide edition at page:  
En Carbure:

Pag. 19

Confezione / Box / Colis:  
M3 – M12: 5 pezzi /pcs / pièces  
>M12: singoli/single pcs

€ Pag. listino - Price list - Liste des prix

● Standard

8

8

8

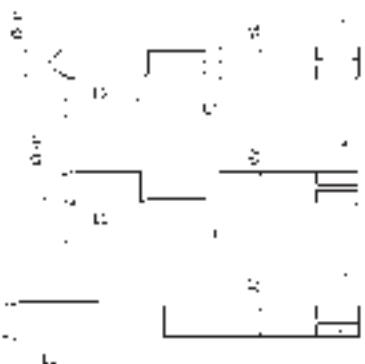
8

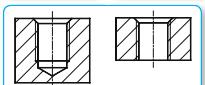
○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

\* Solo a richiesta  
Only on request / Sur demande





**HR**
**ALTA RESISTENZA**
*High Resistance - Haute Résistance*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*
**DIN  
371**

**TOP**
**DIN  
371**

**DIN  
376**

 $\leq 45HRC$ 
*Profond. di filettatura - Thread depth - Profond. de filetage*
**1,5xD**
*Materiale - Material - Matériau*
**PM3**
*Tolleranza - Tolerance - Tolérance*
**6HX**

Al Si>10%,  
Ottone / Brass / Laiton  
Bronzo / Bronze / Bronze  
truciolo corto / short chip /  
coupeaux courts

**Numero gruppi materiali**  
Material's groups number  
Nombre de groupes du matériau

**TXC**
**1.5 1.6**
**4.3 4.4 4.5 4.6 5.3 5.4**
**8.2 8.3 10.1**
**3,5xD**
**3,5xD**
**PM3**
**PM3**
**ISO2/6H**
**ISO2/6H**
**TXC**
**TXC**
**1.3 1.4**
**3.1 3.2**
**4.3 4.4**
**1.5 1.6**
**3.3 3.4**
**5.3 5.4**
**1.3 1.4**
**3.1 3.2**
**4.3 4.4**
**3.4 3.5**
**5.3 5.4**
**8.2 8.3 10.1**
**8.2 8.3 10.1**

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>3</b>	<b>0,5</b>	56	10	3,5	2,7	3	2,5
	<b>4</b>	<b>0,7</b>	63	13	4,5	3,4	3	3,3
	<b>5</b>	<b>0,8</b>	70	13	6	4,9	3	4,2
	<b>6</b>	<b>1</b>	80	16	6	4,9	4	5
	<b>8</b>	<b>1,25</b>	90	18	8	6,2	4	6,8
	<b>10</b>	<b>1,5</b>	100	20	10	8	4	8,5
	<b>6</b>	<b>1</b>	80	16	6	4,9	3	5
	<b>8</b>	<b>1,25</b>	90	18	8	6,2	3	6,8
	<b>10</b>	<b>1,5</b>	100	20	10	8	3	8,5

CODICE - CODE								
K20M...TXC								
○								
●								
●								
●								
●								
●								

**K22M...FOR-TXC      K22M...FORY-TXC**

○

○

○

○

○

○

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>12</b>	<b>1,75</b>	110	25	9	7	3	10,3
	<b>14</b>	<b>2</b>	110	28	11	9	3	12
	<b>16</b>	<b>2</b>	110	28	12	9	3	14
	<b>18</b>	<b>2,5</b>	125	33	14	11	3	15,5
	<b>20</b>	<b>2,5</b>	140	33	16	12	3	17,5
	<b>22</b>	<b>2,5</b>	140	33	18	14,5	3	19,5
	<b>24</b>	<b>3</b>	160	39	18	14,5	4	21

CODICE - CODE								
K21M...TXC								
●								
○								
○								

**K23M...FOR-TXC      K23M...FORY-TXC**

○

○

○

○

★

★

★

★

★

★

★

★

Confezione / Box / Colis:  
M3 – M12: 5 pezzi / pcs  
>M12: singoli / single pcs

**€ Pag. listino - Price list - Liste des prix**

• Standard

**9**

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

**9**

★ Solo a richiesta  
Only on request / Sur demande

**9**



# Filettatura metrica ISO passo grosso DIN 13

*ISO Metric coarse thread DIN 13*

Metricches ISO-Regelgewinde DIN13 – Maschinengewindebohrer  
Filetage métrique ISO DIN 13 – Tarauds machine  
Rosca ISO métrica regular DIN13 – Machos de roscar a máquina



## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

HR

ALTA RESISTENZA

High Resistance - Haute Résistance

~DIN  
371



TOP



~DIN  
371



UFS  
norm



TOP

≤ 52HRC

≤ 52HRC



Profond. di filettatura - Thread depth - Profond. de filetage

2xD

1,5xD

Materiale - Material - Matériau

PM1

PM1

Tolleranza - Tolerance - Tolérance

6HX

6HX

Trattamento superficiale - Surface treatment - Revêtement

TiAlN

TiAlN

Numero gruppi materiali

Material's groups number

Nombre de groupes du matériau

1.6 1.7

1.6 1.7

5.4

5.4

9.1 9.3

9.1 9.3

~DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
4	<b>0,7</b>	63	13	4,5	3,4	4	3,3	
5	<b>0,8</b>	70	13	6	4,9	4	4,2	
6	<b>1</b>	80	16	6	4,9	4	5	
8	<b>1,25</b>	90	18	8	6,2	5	6,8	
10	<b>1,5</b>	100	20	10	8	5	8,5	
6	<b>1</b>	80	18	6	4,9	4	5	
8	<b>1,25</b>	90	25	8	6,2	5	6,8	
10	<b>1,5</b>	100	30	10	8	5	8,5	

CODICE - CODE								
XT20M...								
	○							
	○							
	○							
	○							
XT20M...TX								
	-	●						
	-	●						
	-	●						

UFS norm	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
12	<b>1,75</b>	110	25	9	7	5	10,3	
12	<b>1,75</b>	110	30	<b>12</b>	9	5	10,3	

CODICE - CODE								
XT21M...								
	○							
XT20M...TX								
	-	●						



Ad esaurimento scorte  
Stock clearance - Stock épuisé

Confezione / Box / Colis:  
M3 – M12: 5 pezzi / pcs  
>M12: singoli / single pcs

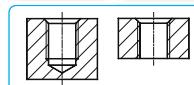
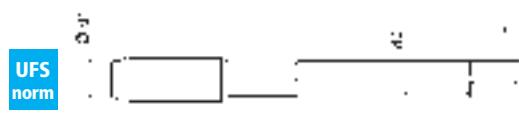
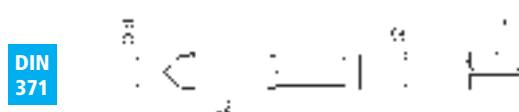
€ Pag. listino - Price list - Liste des prix  
● Standard

10

10

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta  
Only on request / Sur demande


**Profond. di filettatura - Thread depth - Profond. de filetage**
**3,5xD**
**3,5xD**
**1,5xD**
**Materiale - Material - Matériau**
**MDI-HM**
**MDI-HM**
**MDI-HM**
**Tolleranza - Tolerance - Tolérance**
**6HX**
**6HX**
**6HX**
**Trattamento superficiale - Surface treatment - Revêtement**
**BR**
**TiCN**
**TiCN**
**Ghisa / Cast Iron / Fonte  
Al Si>10%,  
Ottone / Brass / Laiton  
Bronzo /Bronze / Bronze  
truciolo corto / short chip /  
coupeaux courts**
**Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau**

3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5	1.7 1.8
4.3 4.4 4.5 4.6	4.3 4.4 4.5 4.6	5.4
5.3 5.4 8.2 8.3	5.3 5.4 8.2 8.3	9.1 9.3
10.1	10.1	

<b>DIN 371</b>	<b>Ød1 M</b>	<b>P mm</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>d<sub>2</sub> h6</b>	<b>a h12</b>	<b>Z</b>	
	<b>6</b>	<b>1</b>	80	16	6	4,9	-	5
	<b>8</b>	<b>1,25</b>	90	18	8	6,2	-	6,8
	<b>10</b>	<b>1,5</b>	100	20	10	8	-	8,5
	<b>6</b>	<b>1</b>	80	18	6	4,9	-	5
	<b>8</b>	<b>1,25</b>	90	25	8	6,2	-	6,8
	<b>10</b>	<b>1,5</b>	100	30	10	8	-	8,5









## MASCHI A MACCHINA

## MACHINE TAPS - TARAUDS MACHINE

USO GENERALE

## **General purpose - Usage Général**

**Confezione / Box / Colis:**  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

### • Standard

13

○ Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

★ Solo a richiesta  
*Only on request / Sur demande*

























# Filettatura metrica ISO passo grosso DIN 13

ISO Metric coarse thread DIN 13

Metricches ISO-Regelgewinde DIN13 – Maschinengewindebohrer  
Filetage métrique ISO DIN 13 – Tarauds machine  
Rosca ISO métrica regular DIN13 – Machos de roscar a máquina



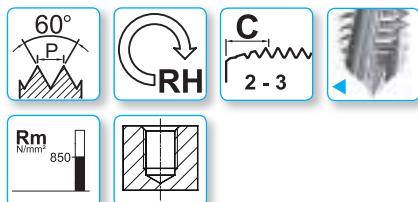
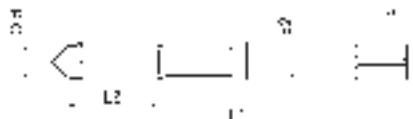
N

USO GENERALE

General purpose - Usage Général

## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN  
371

LINE



LINE



LINE



LINE



Profond. di filettatura - Thread depth - Profond. de filetage

1,5xD

1,5xD

1,5xD

1,5xD

Materiale - Material - Matériau

HSSE

HSSE

HSSE

HSSE

Tolleranza - Tolerance - Tolérance

ISO2/6H

ISO2/6H

ISO2/6H

ISO2/6H

Trattamento superficiale - Surface treatment - Revêtement

BR

V

TiN

XP

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4

4.1 4.2

4.1 4.2

3.3 3.4

3.3 3.4

5.1 5.2

5.1 5.2

4.1 4.2 4.3

4.2 4.3

6.1 7.1

5.1 5.2

5.2

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 2	<b>0,4</b>	45	10	2,8	2,1	3	1,6	
◀ 2,2	<b>0,45</b>	45	10	2,8	2,1	3	1,75	
◀ 2,3	<b>0,4</b>	45	10	2,8	2,1	3	1,9	
◀ 2,5	<b>0,45</b>	50	13	2,8	2,1	3	2,05	
◀ 2,6	<b>0,45</b>	50	13	2,8	2,1	3	2,10	
◀ 3	<b>0,5</b>	56	10	3,5	2,7	3	2,5	
◀ 3,5	<b>0,6</b>	56	11	4	3	3	2,9	
◀ 4	<b>0,7</b>	63	13	4,5	3,4	3	3,3	
◀ 5	<b>0,8</b>	70	13	6	4,9	3	4,2	
◀ 6	<b>1</b>	80	16	6	4,9	3	5	
◀ 7	<b>1</b>	80	16	7	5,5	3	6	
◀ 8	<b>1,25</b>	90	18	8	6,2	3	6,8	
◀ 10	<b>1,5</b>	100	20	10	8	3	8,5	

E40M...	E40M...V	CODICE - CODE	E40M...T	E40M...XP
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
●	●	●	●	●
○	○	○	○	○
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
○	○	○	○	○
●	●	●	●	●
●	●	●	●	●
○	○	○	○	○
●	●	●	●	●
●	●	●	●	●

Segue diametri  
Diameters, to be continued  
Diamètres à suivre

Pag. 37

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

20

● Standard

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

20

★ Solo a richiesta  
Only on request / Sur demande

20





# Filettatura metrica ISO passo grosso DIN 13

*ISO Metric coarse thread DIN 13*

Metricches ISO-Regelgewinde DIN13 – Maschinengewindebohrer  
Filetage métrique ISO DIN 13 – Tarauds machine  
Rosca ISO métrica regular DIN13 – Machos de roscar a máquina



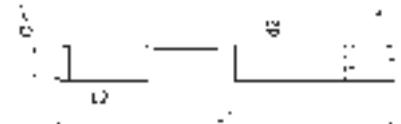
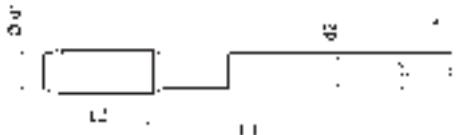
N

USO GENERALE

General purpose - Usage Général

## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN  
371DIN  
376

LINE

LINE



2,5xD

2,5xD

HSSE

HSSE

ISO2/6H

ISO2/6H

BR

TiN

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4

4.1 4.2

3.3 3.4

5.1 5.2

4.1 4.2 4.3

5.1 5.2

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	6	1	80	16	6	4,9	3	
	8	1,25	90	18	8	6,2	3	6,8
	10	1,5	100	20	10	8	3	8,5





















# Filettatura metrica ISO passo grosso DIN 13

*ISO Metric coarse thread DIN 13*

Metrishes ISO-Regelgewinde DIN13 – Maschinengewindebohrer  
Filetage métrique ISO DIN 13 – Tarauds machine  
Rosca ISO métrica regular DIN13 – Machos de roscar a máquina



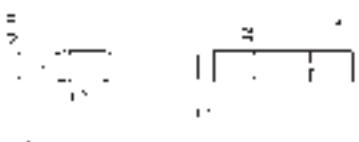
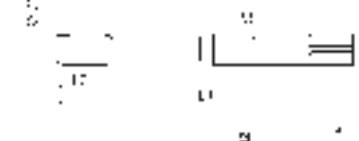
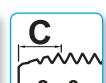
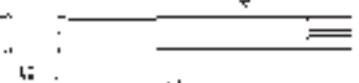
N

USO GENERALE

General purpose - Usage Général

## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN  
371DIN  
371DIN  
376

LINE

R40°

LINE

R40°

LINE

R40°

Profond. di filettatura - Thread depth - Profond. de filetage

3xD

3xD

3xD

Materiale - Material - Matériau

HSSE

HSSE

HSSE

Tolleranza - Tolerance - Tolérance

ISO2/6H

ISO2/6H

ISO2/6H

Trattamento superficiale - Surface treatment - Revêtement

BR

TiN

TXC

Numero gruppi materiali Material's groups number Nombre de groupes du matériau							
1.1 1.2 1.3 1.4		1.1 1.2 1.3 1.4		1.1 1.2 1.3 1.4		1.1 1.2 1.3 1.4	
4.1 4.2		3.3 3.4		2.1 2.2 3.3 3.4		4.2 4.3	
5.1 5.2		4.1 4.2 4.3		5.1 5.2		5.2	

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Image
◀	6	1	80	10	6	4,9	3	5
	8	1,25	90	13	8	6,2	3	6,8
	10	1,5	100	15	10	8	3	8,5

CODICE - CODE								
E60M...FOR	E60M...FOR-T	E60M...FOR-TXC						
○	○	○						
○	○	○						
○	○	○						

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Image
	12	1,75	110	18	9	7	3	10,3
	14	2	110	20	11	9	3	12
	16	2	110	20	12	9	4	14
	18	2,5	125	25	14	11	4	15,5
	20	2,5	140	25	16	12	4	17,5
	22	2,5	140	25	18	14,5	4	19,5
	24	3	160	30	18	14,5	4	21

CODICE - CODE								
E61M...FOR	E61M...FOR-T	E61M...FOR-TXC						
○	○	○						
○	○	○						
○	○	○						
○	○	○						
○	○	○						
○	○	○						
○	○	○						

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

● Standard

28

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

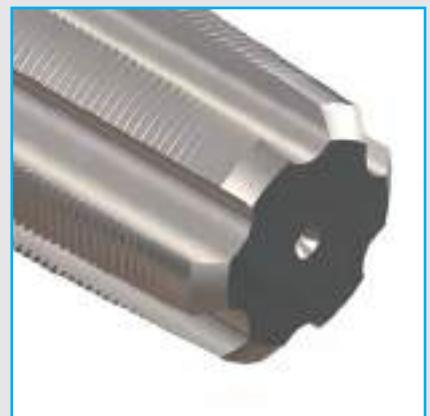
28

★ Solo a richiesta  
Only on request / Sur demande









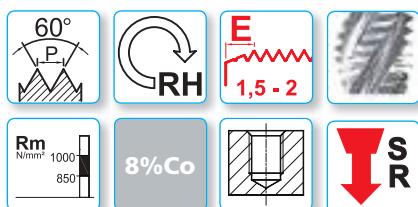
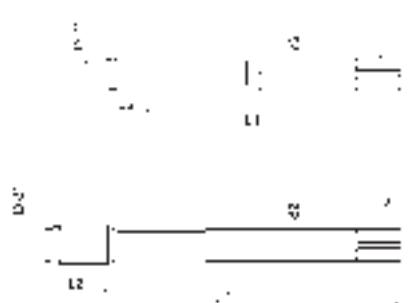








**N**
**USO GENERALE R ≤ 1000N/mm<sup>2</sup>**

 General purpose R ≤ 1000N/mm<sup>2</sup> - Usage Général R ≤ 1000N/mm<sup>2</sup>
**DIN  
371**

**plus**


R40°

**plus**

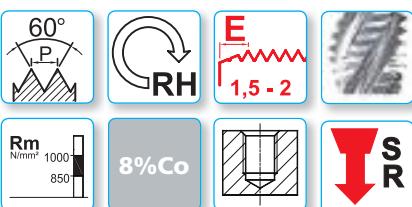

R40°

**plus**


R40°

**plus**


R40°

**DIN  
376**


Profond. di filettatura - Thread depth - Profond. de filetage

**2,5xD**
**2,5xD**
**3xD**
**3xD**

Materiale - Material - Matériau

**HSSP**
**HSSP**
**HSSP**
**HSSP**

Tolleranza - Tolerance - Tolérance

**ISO2/6H**
**ISO2/6H**
**ISO2/6H**
**ISO2/6H**

Trattamento superficiale - Surface treatment - Revêtement

**BR**
**XP**
**BR**
**XP**
**Numero gruppi materiali**

Material's groups number

Nombre de groupes du matériau

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4 1.5

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4 1.5

4.1 4.2

2.1 2.2

4.1 4.2

2.1 2.2

5.1 5.2

3.3 3.4 4.2 4.3

5.1 5.2

3.3 3.4 4.2 4.3

5.2

5.2

5.2

5.2

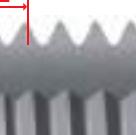
DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>4</b>	<b>0,7</b>	63	7	4,5	3,4	3	3,3
	<b>5</b>	<b>0,8</b>	70	8	6	4,9	3	4,2
	<b>6</b>	<b>1</b>	80	10	6	4,9	3	5
	<b>8</b>	<b>1,25</b>	90	13	8	6,2	3	6,8
	<b>10</b>	<b>1,5</b>	100	15	10	8	3	8,5

P60EM...	CODICE - CODE		
	P60EM...XP	P60EM...FOR	P60EM...FOR-XP
★	★	-	-
○	○	-	-
○	○	○	○
○	○	○	○
○	○	○	○

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>12</b>	<b>1,75</b>	110	18	9	7	4	10,3
	<b>14</b>	<b>2</b>	110	20	11	9	4	12
	<b>16</b>	<b>2</b>	110	20	12	9	4	14

P61EM...	CODICE - CODE		
	P61EM...XP	P61EM...FOR	P61EM...FOR-XP
○	○	○	○
○	○	○	○
○	○	○	○

 RACCOMANDATO per filettatura rigida  
 We recommend Syncro rigid threading:  
 Recommandé pour le taraudage rigide

**E**


1,5 - 2


**Ad esaurimento scorte**  
 Stock clearance - Stock épousé

**Vedi nuova serie - See new series - Voir nouvelle série**  
 E94-E95 pag. XXXIII

 Confezione / Box / Colis:  
 M3 – M10: 10 pezzi / pcs  
 M12 – M16: 5 pezzi / pcs

**€ Pag. listino - Price list - Liste des prix**

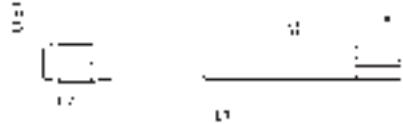
• Standard

**33**
**33**
**33**
**33**

 ○ Disponibilità da richiedere, prezzo a listino  
 On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta

Only on request / Sur demande


**Filettatura metrica ISO passo grosso DIN 13**
*ISO Metric coarse thread DIN 13*
*Metrishes ISO-Regelgewinde DIN13 – Maschinengewindebohrer*
*Filetage métrique ISO DIN 13 – Tarauds machine*
*Rosca ISO métrica regular DIN13 – Machos de roscar a máquina*
**N****USO GENERALE***General purpose - Usage Général*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*
**DIN  
371****DIN  
371****DIN  
376**
*Profond. di filettatura - Thread depth - Profond. de filetage*
*2,5÷3xD*
*2,5÷3xD*
*2,5÷3xD*
*2,5÷3xD*
*Materiale - Material - Matériau*
*HSSE*
*HSSE*
*HSSE*
*HSSE*
*Tolleranza - Tolerance - Tolérance*
*ISO2/6H*
*ISO2/6H*
*ISO2/6H*
*ISO2/6H*
*Trattamento superficiale - Surface treatment - Revêtement*
*BR*
*V*
*TiN*
*XP*
*Numero gruppi materiali*
*Material's groups number*
*Nombre de groupes du matériau*

<b>BR</b>	<b>V</b>	<b>TiN</b>	<b>XP</b>
1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
5.1 5.2	2.1 2.2	5.1 5.2	2.1 2.2
	5.1 5.2		5.2

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Image
3	<b>0,5</b>	56	5	3,5	2,7	3	2,5	
4	<b>0,7</b>	63	7	4,5	3,4	3	3,3	
5	<b>0,8</b>	70	8	6	4,9	3	4,2	
6	<b>1</b>	80	10	6	4,9	3	5	
8	<b>1,25</b>	90	13	8	6,2	3	6,8	
10	<b>1,5</b>	100	15	10	8	3	8,5	

E80M...	CODICE - CODE	E80M...V	E80M...T	E80M...XP
●	○	○	○	○
●	○	○	○	○
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Image
8	<b>1,25</b>	90	13	6	4,9	3	6,8	
10	<b>1,5</b>	100	15	7	5,5	3	8,5	
12	<b>1,75</b>	110	18	9	7	3	10,3	
14	<b>2</b>	110	20	11	9	3	12	
16	<b>2</b>	110	20	12	9	4	14	
18	<b>2,5</b>	125	25	14	11	4	15,5	
20	<b>2,5</b>	140	25	16	12	4	17,5	
22	<b>2,5</b>	140	25	18	14,5	4	19,5	
24	<b>3</b>	160	30	18	14,5	4	21	
27	<b>3</b>	160	30	20	16	4	24	
30	<b>3,5</b>	180	35	22	18	4	26,5	

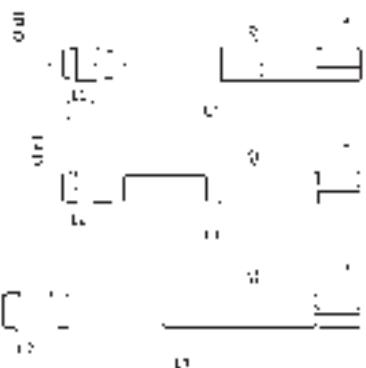
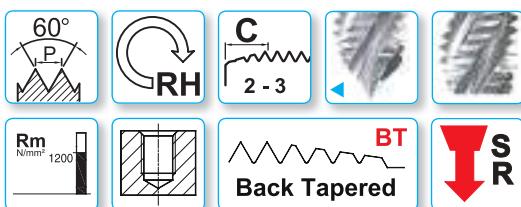
E81M...	CODICE - CODE	E81M...V	E81M...T	E81M...XP
○	○	○	○	○
○	○	○	○	○
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
○	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○

*Per filettatura rigida  
Syncro rigid threading  
Pour le taraudage rigide*

*Ad esaurimento scorte  
Stock clearance - Stock épuisé*
*Vedi nuova serie - See new series - Voir nouvelle série: E92-E93 pag. XXXI*
*Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs*
*€ Pag. listino - Price list - Liste des prix*
*33*
*33*
*34*
*34*
*● Standard*
*○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier*
*★ Solo a richiesta  
Only on request / Sur demande*




**Filettatura metrica ISO passo grosso DIN 13**
*ISO Metric coarse thread DIN 13*
*Metricches ISO-Regelgewinde DIN13 – Maschinengewindebohrer*
*Filetage métrique ISO DIN 13 – Tarauds machine*
*Rosca ISO métrica regular DIN13 – Machos de roscar a máquina*

**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*
**DIN  
371**

**DIN  
371**
**TOP**
**DIN  
376**
**TOP**
**TOP**

*Profond. di filettatura - Thread depth - Profond. de filetage*
**3xD**
**3,5xD**
**3,5xD**
*Materiale - Material - Matériau*
**PM3**
**PM3**
**PM3**
*Tolleranza - Tolerance - Tolérance*
**6HX**
**6HX**
**6HX**
*Trattamento superficiale - Surface treatment - Revêtement*
**XP**
**XP**
**XP**

**Numero gruppi materiali**  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3 1.4 1.5	1.1 1.2 1.3 1.4 1.5	1.1 1.2 1.3 1.4 1.5
2.1 2.2 2.3	2.1 2.2 2.3	2.1 2.2 2.3
3.3 3.4 4.2 4.3	3.3 3.4 4.2 4.3	3.3 3.4 4.2 4.3
5.2	5.2	5.2

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
3	<b>0,5</b>	56	5	3,5	2,7	3	2,5	
4	<b>0,7</b>	63	7	4,5	3,4	3	3,3	
5	<b>0,8</b>	70	8	6	4,9	3	4,2	
6	<b>1</b>	80	10	6	4,9	3	5	
8	<b>1,25</b>	90	13	8	6,2	3	6,8	
10	<b>1,5</b>	100	15	10	8	3	8,5	













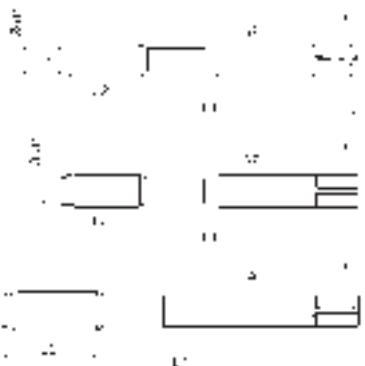
## ROLL FORM TAPS

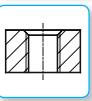
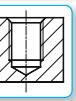
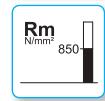
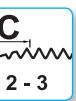
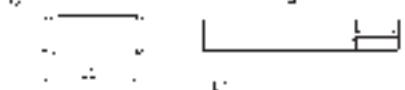








**P - SERIES**
**MASCHI A RULLARE**
*Roll form taps - Tarauds à refouler*
**DIN  
371**

**DIN  
371**

**DIN  
376**

**LINE**

**LINE**

**LINE**

**Profond. di filettatura - Thread depth - Profond. de filetage**
**3xD**
**3xD**
**3xD**
**Materiale - Material - Matériau**
**HSSP**
**HSSP**
**HSSP**
**Tolleranza - Tolerance - Tolérance**
**6GX**
**6GX**
**6GX**
**Trattamento superficiale - Surface treatment - Revêtement**
**BR**
**V**
**TiN**
**Numero gruppi materiali**
*Material's groups number*
*Nombre de groupes du matériau*
**1.1 1.2 1.3**
**1.1 1.2**
**1.1 1.2 1.3 1.4**
**4.1 4.2**
**4.1 4.2**
**2.1 2.2 2.3**

**5.1 5.2**
**4.1 4.2 4.3**


**5.1 5.2**

DIN 371	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
▲ 3	0,5	56	10	3,5	2,7	2	2,80	
▲ 3,5	0,6	56	11	4	3	2	3,25	
▲ 4	0,7	63	13	4,5	3,4	4	3,70	
▲ 5	0,8	70	13	6	4,9	5	4,65	
▲ 6	1	80	16	6	4,9	5	5,55	
▲ 8	1,25	90	18	8	6,2	5	7,40	
▲ 10	1,5	100	20	10	8	5	9,30	
8	1,25	90	18	8	6,2	5	7,40	
10	1,5	100	20	10	8	5	9,30	

CODICE - CODE		
P3CCM...	P3CCM...V	P3CCM...T
○	○	○
○	○	○
○	○	○
○	○	○
○	○	○
○	○	○
○	○	○
P3CCM...SP	P3CCM...SP-V	P3CCM...SP-T
○	○	○
○	○	○

DIN 376	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
12	1,75	110	25	9	7	5	11,20	
14	2	110	28	11	9	6	13,10	
16	2	110	28	12	9	6	15,10	

CODICE - CODE		
P3CCM...	P3CCM...V	P3CCM...T
○	○	○
○	○	○
○	○	○


**Ad esaurimento scorte**  
*Stock clearance - Stock épuisé*

 Confezione / Box / Colis:  
 M3 – M10: 10 pezzi / pcs  
 M12 – M16: 5 pezzi / pcs

**€ Pag. listino - Price list - Liste des prix**

• Standard

**39**
**39**
**39**

 ○ Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

 ★ Solo a richiesta  
*Only on request / Sur demande*















UNI 5870 - ISO 1502

Calibri a tampone filettati passa / non passa

## *Thread plug gauges go/no-go*

## *Calibres de filetage entre/n'entre pas*



### **Tolleranza - Tolerance - Tolérance**

6H

## Trattamento superficiale - Surface treatment - Revêtement

BR

<b>Ød1 M</b>	<b>P mm</b>	<b>CODICE - CODE P-NPM...</b>
<b>2</b>	0,4	○
<b>2,2</b>	0,45	○
<b>2,5</b>	0,45	○
<b>3</b>	0,5	○
<b>3,5</b>	0,6	○
4	0,7	○
<b>4,5</b>	0,75	○
<b>5</b>	0,8	○
<b>6</b>	1	○
<b>7</b>	1	○
<b>8</b>	1,25	○
<b>9</b>	1,25	○
<b>10</b>	1,5	○
<b>11</b>	1,5	○
<b>12</b>	1,75	○
<b>14</b>	2	○
<b>16</b>	2	○
<b>18</b>	2,5	○
<b>20</b>	2,5	○
<b>22</b>	2,5	○
<b>24</b>	3	○
<b>27</b>	3	○
<b>30</b>	3,5	○
<b>33</b>	3,5	○
<b>36</b>	4	○
<b>39</b>	4	○
<b>42</b>	4,5	○
<b>45</b>	4,5	○
<b>48</b>	5	○

Confezione: Singola  
Box: Single  
Collezione Unica

€ Pag. listino - Price list - Liste des prix

- Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

108

★ Solo a richiesta  
*Only on request / Sur demande*



MF

MF



































**MASCHI A MACCHINA**

MACHINE TAPS - TARAUDS MACHINE

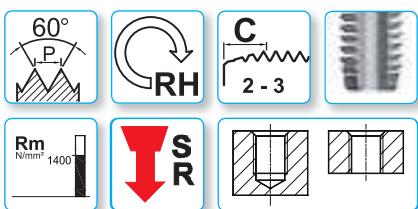
**SYNCHRO RIGID**

**MASCHIATURA RIGIDA SINCRONIZZATA**

Rigid Tapping Synchro - Taraudage rigide synchronisé

**MF**

**UFS norm**



Profond. di filettatura - Thread depth - Profond. de filetage

**TOP**

**TOP**

**TOP**

Materiale - Material - Matériau

**3xD**

**3,5xD**

**3,5xD**

Tolleranza - Tolerance - Tolérance

**PM3**

**PM3**

**PM3**

Trattamento superficiale - Surface treatment - Revêtement

**6HX**

**6HX**

**6HX**

Ghisa / Cast iron / Fonte

Numero gruppi materiali

Acciaio alta resistenza

Material's groups number

Hight resistance Steel

Nombre de groupes du matériau

Acier haute résistance

Al Si>10%

**TXC**

**TXC**

**TXC**

**1.5 1.6**

**1.5 1.6**

**1.5 1.6**

3.1 3.2 3.3 3.4 3.5

3.1 3.2 3.3 3.4 3.5

3.1 3.2 3.3 3.4 3.5

4.3 4.4 4.5 4.6 5.3 5.4

4.3 4.4 4.5 4.6 5.3 5.4

4.3 4.4 4.5 4.6 5.3 5.4

8.2 8.3 10.1

8.2 8.3 10.1

8.2 8.3 10.1

UFS norm	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h6	a h12	Z	
	<b>8</b>	<b>1</b>	90	13	8	6,2	4	7
	<b>10</b>	<b>1</b>	100	15	10	8	4	9
	<b>10</b>	<b>1,25</b>	100	15	10	8	4	8,75
	<b>12</b>	<b>1,25</b>	110	18	<b>12</b>	9	4	10,75
	<b>12</b>	<b>1,5</b>	110	18	<b>12</b>	9	4	10,5
	<b>14</b>	<b>1,5</b>	110	20	<b>12</b>	9	4	12,5
	<b>16</b>	<b>1,5</b>	110	20	<b>16</b>	12	4	14,5







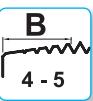




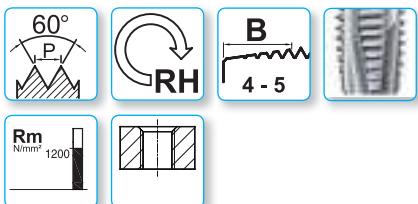
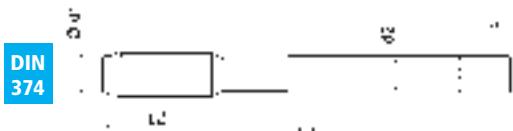






**N**
**USO GENERALE R ≤ 1000N/mm<sup>2</sup>**
*General purpose R ≤ 1000N/mm<sup>2</sup> - Usage Général R ≤ 1000N/mm<sup>2</sup>*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*
**DIN  
374**
**plus**
**plus**
**plus**
**plus**

**Profond. di filettatura - Thread depth - Profond. de filetage**
**3xD**
**3xD**
**3xD**
**3xD**
**Materiale - Material - Matériau**
**HSSP**
**HSSP**
**HSSP**
**HSSP**
**Tolleranza - Tolerance - Tolérance**
**6H**
**6H**
**6H**
**6H**
**Trattamento superficiale - Surface treatment - Revêtement**
**BR**
**V**
**TiN**
**TiCN**
**Numero gruppi materiali**
*Material's groups number*
*Nombre de groupes du matériau*
**1.1 1.2 1.3 1.4**
**1.1 1.2 1.3 1.4**
**1.1 1.2 1.3 1.4 1.5**
**1.1 1.2 1.3 1.4 1.5**
**4.1 4.2**
**4.1 4.2**
**3.3 3.4 4.1 4.2 4.3**
**2.1 2.2**
**5.1 5.2**
**5.1 5.2**
**5.1 5.2**
**3.3 3.4 4.2 4.3**
**6.1 7.1**
**5.2**

<b>DIN 374</b>	<b>Ød1 MF</b>	<b>P mm</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>d<sub>2</sub> h9</b>	<b>a h12</b>	<b>Z</b>	
	<b>8</b>	<b>1</b>	90	18	6	4,9	3	7
	<b>10</b>	<b>1</b>	90	15	7	5,5	3	9
	<b>10</b>	<b>1,25</b>	100	20	7	5,5	3	8,75
	<b>12</b>	<b>1,25</b>	100	22	9	7	4	10,75
	<b>12</b>	<b>1,5</b>	100	22	9	7	4	10,5
	<b>14</b>	<b>1,5</b>	100	22	11	9	4	12,5
	<b>16</b>	<b>1,5</b>	100	22	12	9	4	14,5
	<b>18</b>	<b>1,5</b>	110	25	14	11	4	16,5
	<b>20</b>	<b>1,5</b>	125	25	16	12	4	18,5



**Profond. di filettatura** - Thread depth - Profond. de filetage

3xD

3,5xD

Materiale - Material - Matériau

**PM3**

PM3

## **Tolleranza - Tolerance - Tolérance**

**6HX**

6HX

Trattamento superficiale - Surface treatment - Revêtement

XP

XP

## **Numero gruppi materiali**

*Material's groups number*

*NOMBRE DE GROUPES DU MATERIAU*

1.1	1.2	1.3	1.4	1.5
2.1	2.2	2.3		2.1
3.3	3.4	4.2	4.3	3.3
5.2				5.2

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

53

54

- Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

**★ Solo a richiesta**  
*Only on request / Sur demande*









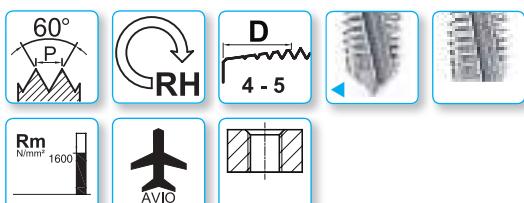
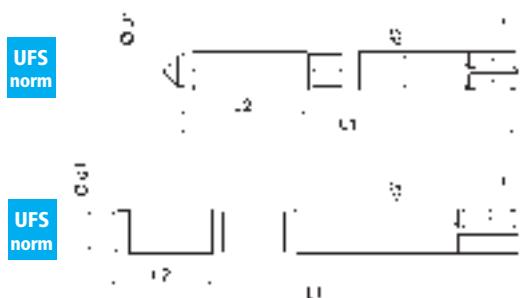


**MASCHI A MACCHINA**

MACHINE TAPS - TARAUDS MACHINE

**Ni**

**NICHEL**  
 Nickel - Nickel



Profond. di filettatura - Thread depth - Profond. de filetage

3xD

3xD

3xD

Materiale - Material - Matériau

PM3

PM3

PM3

Tolleranza - Tolerance - Tolérance

6HX

6HX

4HX

Trattamento superficiale - Surface treatment - Revêtement

BR

TiCN

BR

Numero gruppi materiali  
 Material's groups number  
 Nombre de groupes du matériau

7.3 9.3

1.6 5.4

7.3 9.3

7.2 9.1

UFS norm	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀	<b>8</b>	<b>1</b>	90	25	8	6,2	3	*7
◀	<b>10</b>	<b>1</b>	100	30	10	8	3	*9
◀	<b>10</b>	<b>1,25</b>	100	30	10	8	3	*8,75
	<b>12</b>	<b>1,25</b>	110	30	<b>12</b>	9	3	*10,75
	<b>12</b>	<b>1,5</b>	110	30	<b>12</b>	9	3	*10,5
	<b>14</b>	<b>1,5</b>	110	30	<b>12</b>	9	3	*12,5
	<b>16</b>	<b>1,5</b>	110	30	<b>16</b>	12	3	*12,5

CODICE - CODE		
K52MF...NI	K52MF...NI-CT	K52MF...NI-4HX
○	○	*
○	○	*
○	○	*
○	○	*
○	○	*
○	○	*

\* Per MJ vedi tabella di foratura pag. 252

\* Drills' diameters for MJ: table page 252

\* Pour MJ voir le tableau de perçage page 252

Confezione / Box / Colis:  
 M3 – M10: 10 pezzi / pcs  
 M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

56

● Standard

56

○ Disponibilità da richiedere, prezzo a listino  
 On enquiry, standard price-list / Stock à vérifier

56

\* Solo a richiesta  
 Only on request / Sur demande

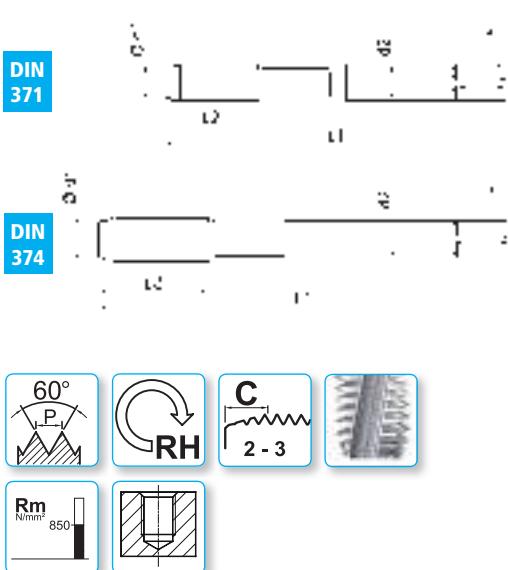






## MASCHI A MACCHINA

#### **MACHINE TAPS - TARAUDS MACHINE**



**Profond. di filettatura** - Thread depth - Profond. de filetage

2,5xD

2,5xD

## Materiale - Material - Matériau

HSSE

## Tolleranza - Tolerance - Tolérance

ISO2/6H

ISO2/6H

Trattamento superficiale - Surface treatment - Revêtement

---

BR

TiN

## **Numero gruppi materiali**

*Material's groups number*

*Nombre de groupes du matériau*

DIN 371	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>8</b>	<b>1</b>	90	18	8	6,2	3	7
	<b>10</b>	<b>1</b>	90	15	10	8	3	9
	<b>10</b>	<b>1,25</b>	100	20	10	8	3	8,75

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Paq. listino - Price list - Liste des prix

58

58

- Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

★ Solo a richiesta  
*Only on request / Sur demande*











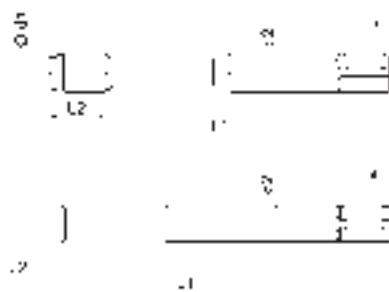
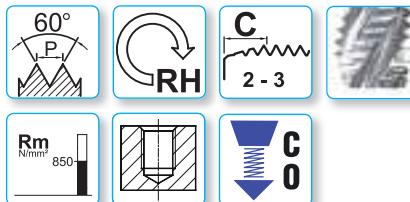










**N**
**USO GENERALE**
*General purpose - Usage Général*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*
**DIN  
371**

**DIN  
374**

**LINE**

**LINE**

**LINE**

**LINE**

**2,5xD**
**HSSE**
**ISO1/4H**
**BR**
**2,5xD**
**HSSE**
**ISO3/6G**
**BR**
**2,5xD**
**HSSE**
**7G(6H+0,05)**
**BR**
**2,5xD**
**HSSE**
**6H+0,1**
**BR**
*Profond. di filettatura - Thread depth - Profond. de filetage*
**2,5xD**
**2,5xD**
**2,5xD**
**2,5xD**
*Materiale - Material - Matériau*
**HSSE**
**HSSE**
**HSSE**
**HSSE**
*Tolleranza - Tolerance - Tolérance*
**ISO1/4H**
**ISO3/6G**
**7G(6H+0,05)**
**6H+0,1**
*Trattamento superficiale - Surface treatment - Revêtement*
**BR**
**BR**
**BR**
**BR**
**Numero gruppi materiali**
*Material's groups number*
*Nombre de groupes du matériau*

1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
4.1 4.2	4.1 4.2	4.1 4.2	4.1 4.2
5.1 5.2	5.1 5.2	5.1 5.2	5.1 5.2

DIN 371	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>8</b>	<b>1</b>	90	13	8	6,2	3	7
	<b>10</b>	<b>1</b>	90	15	10	8	3	9
	<b>10</b>	<b>1,25</b>	100	15	10	8	3	8,75

E60MF...-4H	E60MF...-6G	E60MF...-7G	E60MF...+0,1
*	*	*	*
*	*	*	*
*	*	*	*

DIN 374	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>8</b>	<b>1</b>	90	13	6	4,9	3	7
	<b>10</b>	<b>1</b>	90	15	7	5,5	3	9
	<b>10</b>	<b>1,25</b>	100	15	7	5,5	3	8,75
	<b>12</b>	<b>1,25</b>	100	13	9	7	3	10,75
	<b>12</b>	<b>1,5</b>	100	13	9	7	3	10,5
	<b>14</b>	<b>1,5</b>	100	15	11	9	4	12,5
	<b>16</b>	<b>1,5</b>	100	15	12	9	4	14,5

E61MF...-4H	E61MF...-6G	E61MF...-7G	E61MF...+0,1
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

 Confezione / Box / Colis:  
 M3 – M10: 10 pezzi / pcs  
 M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

• Standard

**63**
**63**
**63**
**63**

 ○ Disponibilità da richiedere, prezzo a listino  
 On enquiry, standard price-list / Stock à vérifier

 ★ Solo a richiesta  
 Only on request / Sur demande







# Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13

Metric ISO-Feingewinde DIN 13 – Maschinengewindebohrer

Filetage métrique ISO à pas fin DIN 13 – Tarauds machine

Rosca ISO métrica fina DIN 13 – Machos de roscar a máquina



N

USO GENERALE

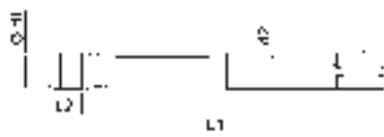
General purpose - Usage Général

## MASCHI A MACCHINA

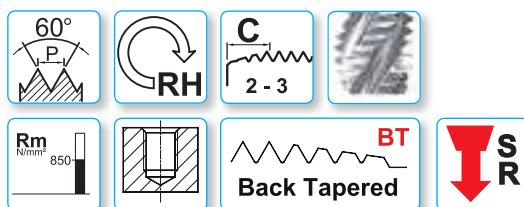
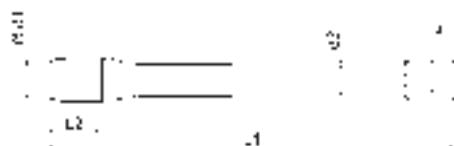
MACHINE TAPS - TARAUDS MACHINE

MF

DIN  
371



DIN  
374



LINE



LINE



LINE



LINE



Profond. di filettatura - Thread depth - Profond. de filetage

2,5÷3xD

Materiale - Material - Matériau

HSSE

Tolleranza - Tolerance - Tolérance

ISO2/6H

Trattamento superficiale - Surface treatment - Revêtement

BR

2,5÷3xD

HSSE

ISO2/6H

2,5÷3xD

HSSE

ISO2/6H

2,5÷3xD

HSSE

V

1.1 1.2 1.3 1.4

5.1 5.2

1.1 1.2 1.3 1.4

2.1 2.2

1.1 1.2 1.3 1.4

5.1 5.2

1.1 1.2 1.3 1.4

2.1 2.2

5.1 5.2

5.2

DIN 371	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	8	1	90	13	8	6,2	3	
10	1	90	15	10	8	3	9	
10	1,25	100	15	10	8	3	8,75	







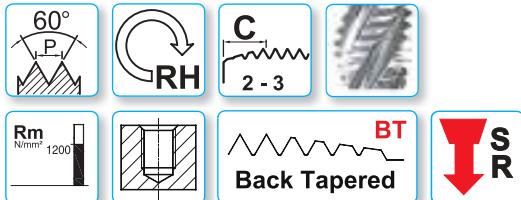
**MASCHI A MACCHINA**  
 MACHINE TAPS - TARAUDS MACHINE

**HR**

**ALTA RESISTENZA**  
 High Resistance - Haute Résistance

**MF**

**DIN  
374**



Profond. di filettatura - Thread depth - Profond. de filetage



2,5xD

3xD

PM3

PM3

6HX

6HX

**TXC**

**TXC**

1.4 1.5

1.4 1.5

3.3 3.4

3.3 3.4

Numero gruppi materiali  
 Material's groups number  
 Nombre de groupes du matériau

DIN 374	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>8</b>	<b>1</b>	90	13	6	4,9	3	7
	<b>10</b>	<b>1</b>	90	15	7	5,5	3	9
	<b>10</b>	<b>1,25</b>	100	15	7	5,5	3	8,75
	<b>12</b>	<b>1</b>	100	13	9	7	4	11
	<b>12</b>	<b>1,25</b>	100	13	9	7	4	10,75
	<b>12</b>	<b>1,5</b>	100	13	9	7	4	10,5
	<b>14</b>	<b>1,5</b>	100	15	11	9	4	12,5
	<b>16</b>	<b>1,5</b>	100	15	12	9	4	14,5





# Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13

Metric ISO-Feingewinde DIN 13 – Maschinengewindebohrer

Filetage métrique ISO à pas fin DIN 13 – Tarauds machine

Rosca ISO métrica fina DIN 13 – Machos de roscar a máquina



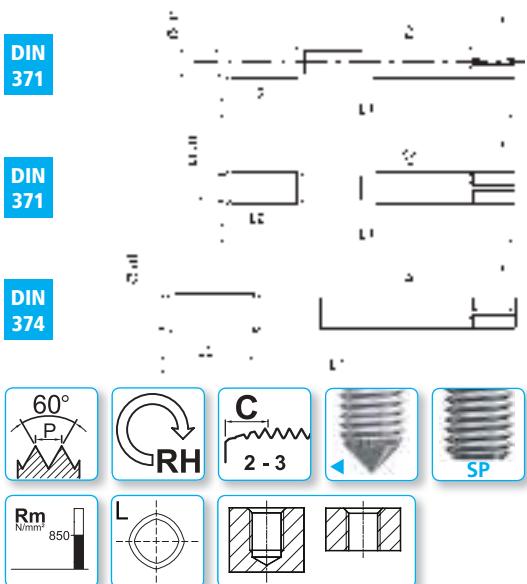
## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

## P - SERIES

### MASCHI A RULLARE

Roll form taps - Tarauds à refouler



Profond. di filettatura - Thread depth - Profond. de filetage

3xD

3xD

3xD

Materiale - Material - Matériau

HSSP

HSSP

HSSP

Tolleranza - Tolerance - Tolérance

6HX

6HX

6HX

Trattamento superficiale - Surface treatment - Revêtement

BR

V

TiN

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3	1.1 1.2	1.1 1.2 1.3 1.4
4.1 4.2	4.1 4.2	2.1 2.2 2.3
	5.1 5.2	4.1 4.2 4.3
		5.1 5.2

DIN 371	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 4	0,5	63	13	4,5	3,4	-	3,80	
◀ 5	0,5	70	13	6	4,9	-	4,80	
◀ 6	0,75	80	16	6	4,9	-	5,65	
◀ 8	0,75	90	18	8	6,2	-	7,65	
◀ 8	1	90	18	8	6,2	-	7,55	
◀ 10	1	90	15	10	8	-	9,55	
◀ 10	1,25	100	20	10	8	-	9,40	
8	1	90	18	8	6,2	-	7,55	
10	1	90	15	10	8	-	9,55	
10	1,25	100	20	10	8	-	9,40	

CODICE - CODE		
P2SCMF...	P2SCMF...V	P2SCMF...T
○	○	○
○	○	○
○	○	○
○	○	○
●	○	○
●	○	○
●	○	○
P2SCMF...SP	P2SCMF...SP-V	P2SCMF...SP-T
○	○	○
○	○	○
○	○	○

DIN 374	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
12	1	100	22	9	7	-	11,55	
12	1,25	100	22	9	7	-	11,40	
12	1,5	100	22	9	7	-	11,30	
14	1,25	100	22	11	9	-	13,45	
14	1,5	100	22	11	9	-	13,30	
16	1,5	100	22	12	9	-	15,30	

CODICE - CODE		
P2SCMF...	P2SCMF...V	P2SCMF...T
○	○	○
●	○	○
●	○	○
○	○	○
●	○	○
●	○	○



Ad esaurimento scorte  
Stock clearance - Stock épousé

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

• Standard

66

67

67

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

\* Solo a richiesta  
Only on request / Sur demande





# Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13

Metrishes ISO-Feingewinde DIN 13 – Maschinengewindebohrer

Filetage métrique ISO à pas fin DIN 13 – Tarauds machine

Rosca ISO métrica fina DIN 13 – Machos de roscar a máquina



## MASCHI A MACCHINA

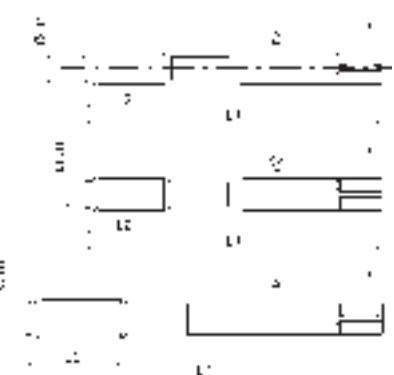
MACHINE TAPS - TARAUDS MACHINE

## P - SERIES

### MASCHI A RULLARE

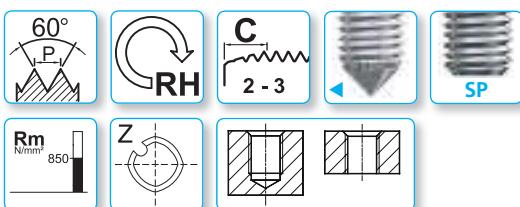
Roll form taps - Tarauds à refouler

DIN  
371



DIN  
371

DIN  
374



Profond. di filettatura - Thread depth - Profond. de filetage

LINE

LINE

LINE

Materiale - Material - Matériau

3xD

3xD

3xD

Tolleranza - Tolerance - Tolérance

HSSP

HSSP

HSSP

Trattamento superficiale - Surface treatment - Revêtement

6HX

6HX

6HX

BR

V

TiN

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3

1.1 1.2

1.1 1.2 1.3 1.4

4.1 4.2

4.1 4.2

2.1 2.2 2.3

5.1 5.2

4.1 4.2 4.3

5.1 5.2

DIN 371	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 4	0,5	63	13	4,5	3,4	4	3,80	
◀ 5	0,5	70	13	6	4,9	5	4,80	
◀ 6	0,75	80	16	6	4,9	5	5,65	
◀ 8	0,75	90	18	8	6,2	5	7,65	
◀ 8	1	90	18	8	6,2	5	7,55	
◀ 10	1	90	15	10	8	5	9,55	
◀ 10	1,25	100	20	10	8	5	9,40	
8	1	90	18	8	6,2	5	7,55	
10	1	90	15	10	8	5	9,55	
10	1,25	100	20	10	8	5	9,40	

CODICE - CODE		
P2CCMF...	P2CCMF...V	P2CCMF...T
○	○	○
○	○	○
○	○	○
○	○	○
●	○	○
●	○	○
●	○	○
P2CCMF...SP	P2CCMF...SP-V	P2CCMF...SP-T
○	○	○
○	○	○
○	○	○

DIN 374	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
12	1	100	22	9	7	6	11,55	
12	1,25	100	22	9	7	6	11,40	
12	1,5	100	22	9	7	6	11,30	
14	1,25	100	22	11	9	6	13,45	
14	1,5	100	22	11	9	6	13,30	
16	1,5	100	22	12	9	6	15,30	
18	1,5	110	25	14	11	6	17,30	
20	1,5	125	25	16	12	8	19,30	

CODICE - CODE		
P2CCMF...	P2CCMF...V	P2CCMF...T
○	○	○
●	○	○
●	○	○
○	○	○
●	○	○
●	○	○
○	○	○
○	○	○



Ad esaurimento scorte  
Stock clearance - Stock éproulé

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

● Standard

68

68

68

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

\* Solo a richiesta

Only on request / Sur demande





# Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13

Metric ISO-Feingewinde DIN 13 – Maschinengewindebohrer

Filetage métrique ISO à pas fin DIN 13 – Tarauds machine

Rosca ISO métrica fina DIN 13 – Machos de roscar a máquina



## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

## P - SERIES

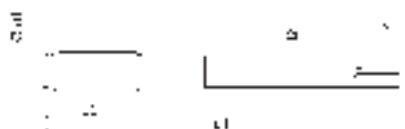
### MASCHI A RULLARE

Roll form taps - Tarauds à refouler

DIN  
371



DIN  
374



Profond. di filettatura - Thread depth - Profond. de filetage

LINE



LINE



LINE



LINE



Materiale - Material - Matériau

3xD

HSSP

6HX

BR

3xD

HSSP

6HX

BR

Tolleranza - Tolerance - Tolérance

3xD

HSSP

6HX

BR

Trattamento superficiale - Surface treatment - Revêtement

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

3xD

TiN

BR

DIN  
371

Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 8	1	90	18	8	6,2	5	7,55
◀ 10	1	90	15	10	8	5	9,55
◀ 10	1,25	100	20	10	8	5	9,40

CODICE - CODE

P2SCMF...FP P2SCMF...FP-T P2CCMF...FP P2CCMF...FP-T

★ ★ ★ ★

★ ★ ★ ★

★ ★ ★ ★

DIN  
374

Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
12	1	100	22	9	7	6	11,55
12	1,5	100	22	9	7	6	11,30
14	1,5	100	22	11	9	6	13,30
16	1,5	100	22	12	9	6	15,30
18	1,5	110	25	14	11	6	17,30
20	1,5	125	25	16	12	8	19,30

CODICE - CODE

P2SCMF...FP P2SCMF...FP-T P2CCMF...FP P2CCMF...FP-T

★ ★ ★ ★

★ ★ ★ ★

★ ★ ★ ★

★ ★ ★ ★

★ ★ ★ ★

★ ★ ★ ★



Ad esaurimento scorte  
Stock clearance - Stock épousé

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

69

● Standard

69

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

69

★ Solo a richiesta  
Only on request / Sur demande

69





**X - SERIES**
**MASCHI A RULLARE**

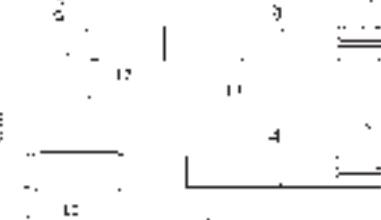
Roll form taps - Tarauds à refouler

**MASCHI A MACCHINA**

MACHINE TAPS - TARAUDS MACHINE

 DIN  
371

**TOP**

 DIN  
371

 DIN  
374


Profond. di filettatura - Thread depth - Profond. de filetage

**3xD**
**3xD**
**3xD**

Materiale - Material - Matériaux

**PM3**
**PM3**
**PM3**

Tolleranza - Tolerance - Tolérance

**6HX**
**6HX**
**6HX**

Trattamento superficiale - Surface treatment - Revêtement

**TXC**
**TiN-G**
**TiN-G**

Numero gruppi materiali

Material's groups number

Nombre de groupes du matériau

**TXC**
**1.1 1.2**
**1.1 1.2 1.3 1.4 1.5**
**1.1 1.2 1.3 1.4 1.5**
**4.1 4.2 4.3**
**2.1 2.2 2.3 2.4**
**2.1 2.2 2.3 2.4**
**5.1 5.2**
**4.1 4.2 4.3**
**4.1 4.2 4.3**
**5.1 5.2**
**5.1 5.2**
**5.1 5.2**
**7.1 7.2**
**7.1 7.2**
**7.1 7.2**

DIN	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Icon
371	8	1	90	18	8	6,2	5	7,55
	10	1	90	15	10	8	5	9,55
	10	1,25	100	20	10	8	5	9,45
	8	1	90	18	8	6,2	5	7,55
	10	1	90	15	10	8	5	9,55
	10	1,25	100	20	10	8	5	9,45
	8	1	90	18	8	6,2	2	7,55
	10	1	90	15	10	8	2	9,55
	10	1,25	100	20	10	8	2	9,45
	8	1	90	18	8	6,2	2	7,55
	10	1	90	15	10	8	2	9,55
	10	1,25	100	20	10	8	2	9,45

**CODICE - CODE**
**X2CCMF...TXC**

○

○

○

**X2CCMF...FOR-TG**

-

○

-

○

-

**X2CCMF...FORY-TG**

○ 4L/Z2

○ 4L/Z2

○ 4L/Z2

DIN	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Icon
374	12	1	100	22	9	7	6	11,55
	12	1,25	100	22	9	7	6	11,45
	12	1,5	100	22	9	7	6	11,30
	14	1,5	100	22	11	9	6	13,30
	16	1,5	100	22	12	9	6	15,30
	12	1	100	22	9	7	3	11,55
	12	1,25	100	22	9	7	3	11,45
	12	1,5	100	22	9	7	3	11,30
	14	1,5	100	22	11	9	3	13,30
	16	1,5	100	22	12	9	3	15,30

**CODICE - CODE**
**X2CCMF...TXC**

○

**X2CCMF...FOR-TG**

-

○

-

○

**X2CCMF...FORY-TG**

○ 6L/Z3

○ 6L/Z3

○ 6L/Z3

○ 6L/Z3

○ 6L/Z3

 N° lobi  
Lobes' Number  
Nº de Lobes

 N° canalini  
Oil grooves' Number  
Nº de ranuras  
de lubrifications



 Ad esaurimento scorte  
Stock clearance - Stock épousé

 Vedi nuova serie - See new series  
Voir nouvelle série: K-ROLL pag. XXXIX

 Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

• Standard

**70**
**70**
**70**

 Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

 Solo a richiesta  
Only on request / Sur demande



# Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN13

Metrishes ISO-Feingewinde DIN 13 – Maschinengewindebohrer

Filetage métrique ISO à pas fin DIN 13 – Tarauds machine

Rosca ISO métrica fina DIN 13 – Machos de roscar a máquina



## MASCHI A MACCHINA

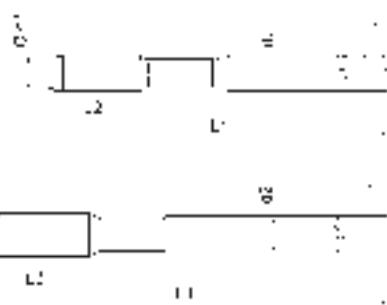
MACHINE TAPS - TARAUDS MACHINE

## X - SERIES

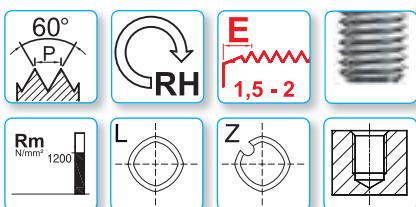
### MASCHI A RULLARE

Roll form taps - Tarauds à refouler

DIN  
371



DIN  
374



Profond. di filettatura - Thread depth - Profond. de filetage

Materiale - Material - Matériau

Tolleranza - Tolerance - Tolérance

Trattamento superficiale - Surface treatment - Revêtement

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

TOP



TOP



TOP



3xD

PM3

6HX

TiN-G

3xD

PM3

6HX

TiN-G

3xD

PM3

6HX

TiN-G

1.1 1.2 1.3 1.4 1.5	1.1 1.2 1.3 1.4 1.5	1.1 1.2 1.3 1.4 1.5
2.1 2.2 2.3 2.4	2.1 2.2 2.3 2.4	2.1 2.2 2.3 2.4
4.1 4.2 4.3	4.1 4.2 4.3	4.1 4.2 4.3
5.1 5.2 7.1 7.2	5.1 5.2 7.1 7.2	5.1 5.2 7.1 7.2

DIN 371	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>8</b>	<b>1</b>	90	18	8	6,2	5	7,55
	<b>10</b>	<b>1</b>	90	15	10	8	5	9,55
	<b>10</b>	<b>1,25</b>	100	20	10	8	5	9,45

X2SCEMF...TG	X2CCEMF...TG	CODICE - CODE X2CCEMF...FOR-TG
○	○	○
○	○	○
○	○	○

DIN 374	Ød1 MF	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>12</b>	<b>1</b>	100	22	9	7	6	11,55
	<b>12</b>	<b>1,25</b>	100	22	9	7	6	11,45
	<b>12</b>	<b>1,5</b>	100	22	9	7	6	11,30
	<b>14</b>	<b>1,5</b>	100	22	11	9	6	13,30
	<b>16</b>	<b>1,5</b>	100	22	12	9	6	15,30

X2SCEMF...TG	X2CCEMF...TG	CODICE - CODE X2CCEMF...FOR-TG
○	○	○
○	○	○
○	○	○
○	○	○



Ad esaurimento scorte  
Stock clearance - Stock épuisé

Vedi nuova serie - See new series - Voir nouvelle série  
K-ROLL pag. XL

E

1,5 - 2

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

● Standard

71

71

71

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

\* Solo a richiesta  
Only on request / Sur demande

Calibri a tampone filettati passa / non passa

### *Thread plug gauges go/no-go*

#### *Calibres de filetage entre/n'entre pas*



**Tolleranza - Tolerance - Tolérance**

6H

## Trattamento superficiale - Surface treatment - Revêtement

---

BR

$\varnothing d_1$ MF	P mm
<b>4</b>	0,5
<b>5</b>	0,5
<b>6</b>	0,75
<b>7</b>	0,75
<b>8</b>	0,75
<b>8</b>	1
<b>9</b>	1
<b>10</b>	0,75
<b>10</b>	1
<b>10</b>	1,25
<b>12</b>	1
<b>12</b>	1,25
<b>12</b>	1,5
<b>14</b>	1
<b>14</b>	1,25
<b>14</b>	1,5
<b>16</b>	1
<b>16</b>	1,5
<b>18</b>	1
<b>18</b>	1,5
<b>18</b>	2
<b>20</b>	1
<b>20</b>	1,5
<b>20</b>	2
<b>22</b>	1
<b>22</b>	1,5
<b>24</b>	1
<b>24</b>	1,5
<b>24</b>	2
<b>25</b>	1
<b>25</b>	1,5
<b>25</b>	2
<b>26</b>	1,5
<b>26</b>	2

Confezione: Singola  
Box: Single  
Collezione: Unique

€ Pag. listino - Price list - Liste des prix

- Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

108

★ Solo a richiesta  
*Only on request / Sur demande*

## CALIBRI FILETTATI

THREAD GAUGES - CALIBRES DE FILETAGE

UNI 5870 - ISO 1502

Calibri a tampone filettati passa / non passa

Thread plug gauges go/no-go

Calibres de filetage entre/n'entre pas



Tolleranza - Tolerance - Tolérance

6H

Trattamento superficiale - Surface treatment - Revêtement

BR

Ød1 MF	P mm	CODICE - CODE P-NPMF...
27	1	<input type="radio"/>
27	1,5	<input type="radio"/>
28	1,5	<input type="radio"/>
28	2	<input type="radio"/>
30	1	<input type="radio"/>
30	1,5	<input type="radio"/>
30	2	<input type="radio"/>
32	1	<input type="radio"/>
32	1,5	<input type="radio"/>
32	2	<input type="radio"/>
33	2	<input type="radio"/>
35	1,5	<input type="radio"/>
35	2	<input type="radio"/>
36	1,5	<input type="radio"/>
36	2	<input type="radio"/>
36	3	<input type="radio"/>
38	1,5	<input type="radio"/>
39	2	<input type="radio"/>
40	1,5	<input type="radio"/>
40	2	<input type="radio"/>
40	3	<input type="radio"/>
42	1,5	<input type="radio"/>
42	2	<input type="radio"/>
42	3	<input type="radio"/>
45	1,5	<input type="radio"/>
45	2	<input type="radio"/>
45	3	<input type="radio"/>
48	1,5	<input type="radio"/>
48	2	<input type="radio"/>
48	3	<input type="radio"/>
50	1,5	<input type="radio"/>
50	2	<input type="radio"/>
50	3	<input type="radio"/>

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

● Standard

 Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

108

★ Solo a richiesta  
Only on request / Sur demande

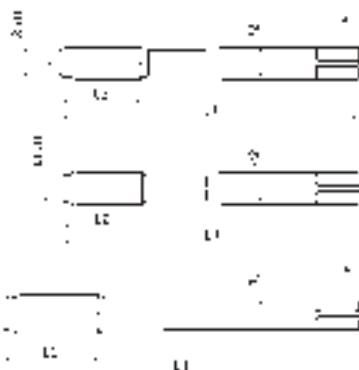
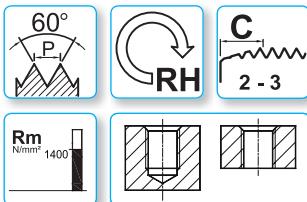
UNC

UNC







**DIN  
371**

**DIN  
371**
**DIN  
376**

**LINE**
**LINE**
**TOP**
**TOP**
**Profond. di filettatura - Thread depth - Profond. de filetage**
**3xD**
**3xD**
**3xD**
**3,5xD**
**Materiale - Material - Matériau**
**HSSE**
**HSSE**
**PM3**
**PM3**
**Tolleranza - Tolerance - Tolérance**
**2BX**
**2BX**
**2BX**
**2BX**

 Al Si>10%,  
 Ottone / Brass / Laiton  
 Bronzo / Bronze / Bronze  
 truciolo corto / short chip /  
 coupeaux courts

**Numero gruppi materiali**  
 Material's groups number  
 Nombre de groupes du matériau

**NQ**
**TiCN**
**TiAIN**
**TiAIN**

3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5
4.3 4.4 4.5 4.6 5.3	4.3 4.4 4.5 4.6 5.3	4.4 5.3 5.4	4.4 5.3 5.4
8.2 10.1	8.2 10.1	10.1	10.1

DIN 371	Ød1 UNC	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
▲ 6	<b>32</b>	3,505	56	11	4	3	3	2,85	
▲ 8	<b>32</b>	4,166	63	13	4,5	3,4	3	3,5	
▲ 10	<b>24</b>	4,826	70	13	6	4,9	3	3,9	
▲ 12	<b>24</b>	5,486	80	16	6	4,9	3	4,5	
▲ 1/4	<b>20</b>	6,350	80	16	7	5,5	3	5,1	
▲ 1/4	<b>20</b>	6,350	80	16	7	5,5	4	5,1	
5/16	<b>18</b>	7,938	90	18	8	6,2	4	6,6	
3/8	<b>16</b>	9,525	100	20	10	8	4	8	
1/4	<b>20</b>	6,350	80	16	7	5,5	3	5,1	
1/4	<b>20</b>	6,350	80	16	7	5,5	4	5,1	

E26UNC...NQ	E26UNC...CT	K26UNC...TX	
*	○	-	
*	○	-	
*	●	-	
*	○	-	
*	●	-	
-	-	○	
-	-	○	
-	-	○	
E26UNC...SP-NQ	E26UNC...SP-CT	K26UNC...SP-TX	K26UNC...FOR-TX
*	○	-	-
-	-	○	○

DIN 376	Ød1 UNC	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
▲ 5/16	<b>18</b>	7,938	90	18	6	4,9	4	6,6	
▲ 3/8	<b>16</b>	9,525	100	20	7	5,5	4	8	
7/16	<b>14</b>	11,113	100	20	8	6,2	4	9,4	
1/2	<b>13</b>	12,700	110	25	9	7	4	10,8	
9/16	<b>12</b>	14,288	110	28	11	9	4	12,2	
5/8	<b>11</b>	15,875	110	28	12	9	4	13,5	
3/4	<b>10</b>	19,050	125	32	14	11	4	16,5	
7/8	<b>9</b>	22,225	140	32	18	14,5	4	19,5	
1"	<b>8</b>	25,400	160	36	18	14,5	4	22,25	
3/4	<b>10</b>	19,050	125	32	14	11	5	16,5	
7/8	<b>9</b>	22,225	140	32	18	14,5	5	19,5	
1"	<b>8</b>	25,400	160	36	18	14,5	5	22,25	

E27UNC...NQ	E27UNC...CT	K27UNC...TX	K27UNC...FOR-TX
*	●	-	-
*	●	-	-
*	●	○	○
*	●	○	○
*	○	-	-
*	○	-	-
*	○	-	-
*	○	-	-

 Confezione / Box / Colis:  
 6 – 7/16: 10 pezzi / pcs  
 1/2 – 9/16: 5 pezzi / pcs  
 >9/16: singoli / single pcs

 € Pag. listino - Price list - Liste des prix  
 • Standard

 73  
 ○ Disponibilità da richiedere, prezzo a listino  
 On enquiry, standard price-list / Stock à vérifier

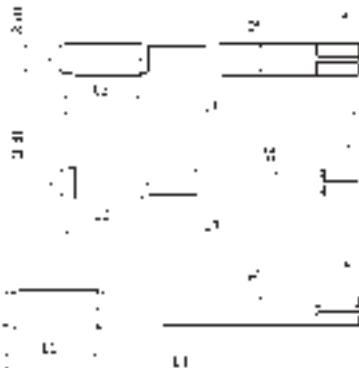
 73  
 ★ Solo a richiesta  
 Only on request / Sur demande





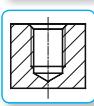
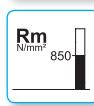
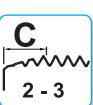
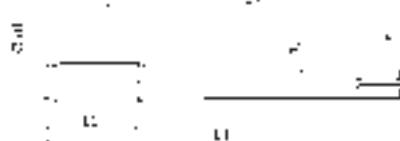




**N**
**USO GENERALE**
*General purpose - Usage Général*
**DIN  
371**

**LINE**

**LINE**

**LINE**

**DIN  
376**

**Profond. di filettatura - Thread depth - Profond. de filetage**
**1,5xD**
**1,5xD**
**1,5xD**
**1,5xD**
**Materiale - Material - Matériau**
**HSSE**
**HSSE**
**HSSE**
**HSSE**
**Tolleranza - Tolerance - Tolérance**
**2B**
**2B**
**2B**
**2B**
**Trattamento superficiale - Surface treatment - Revêtement**
**BR**
**V**
**TiN**
**XP**
**Numero gruppi materiali**
*Material's groups number*
*Nombre de groupes du matériau*

1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
4.1 4.2	4.1 4.2	3.3 3.4	3.3 3.4
5.1 5.2	5.1 5.2	4.1 4.2 4.3	4.2 4.3
	6.1 7.1	5.1 5.2	5.2

DIN 371	Ød1 UNC	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 6	32	3,505	56	11	4	3	3	2,85	
◀ 8	32	4,166	63	13	4,5	3,4	3	3,5	
◀ 10	24	4,826	70	13	6	4,9	3	3,9	
◀ 12	24	5,486	80	16	6	4,9	3	4,5	
◀ 1/4	20	6,350	80	16	7	5,5	3	5,1	
◀ 5/16	18	7,938	90	18	8	6,2	3	6,6	
◀ 3/8	16	9,525	100	20	10	8	3	8	

E40UNC...	CODICE - CODE	E40UNC...V	E40UNC...T	E40UNC...XP
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
○	○	○	○	○
○	○	○	○	○

DIN 376	Ød1 UNC	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 1/4	20	6,350	80	16	4,5	3,4	3	5,1	
◀ 5/16	18	7,938	90	18	6	4,9	3	6,6	
◀ 3/8	16	9,525	100	20	7	5,5	3	8	
7/16	14	11,113	100	20	8	6,2	3	9,4	
1/2	13	12,700	110	25	9	7	3	10,8	
9/16	12	14,288	110	28	11	9	3	12,2	
5/8	11	15,875	110	28	12	9	3	13,5	
3/4	10	19,050	125	32	14	11	4	16,5	
7/8	9	22,225	140	32	18	14,5	4	19,5	
1"	8	25,400	160	36	18	14,5	4	22,25	
1"1/8	7	28,575	180	46	22	18	4	25	
1"1/4	7	31,750	180	46	22	18	4	28	
1"3/8	6	34,925	200	50	28	22	4	30,75	
1"1/2	6	38,100	200	50	28	22	4	34	
1"3/4	5	44,450	220	60	36	29	5	39,5	
2"	4 1/2	50,800	250	65	40	32	5	45	

E41UNC...	CODICE - CODE	E41UNC...V	E41UNC...T	E41UNC...XP
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	★
●	○	○	○	★
○	○	○	○	★
○	○	○	○	★
●	○	○	○	★
○	○	○	○	★
○	○	○	○	★

■ = Acciaio HSS / HSS Steel / Acier hss

Confezione / Box / Colis:

6 – 7/16: 10 pezzi / pcs

1/2 – 9/16: 5 pezzi / pcs

&gt;9/16: singoli / single pcs

€ Pag. listino - Price list - Liste des prix

● Standard

○ Disponibilità da richiedere, prezzo a listino

On enquiry, standard price-list / Stock à vérifier

76

76

76

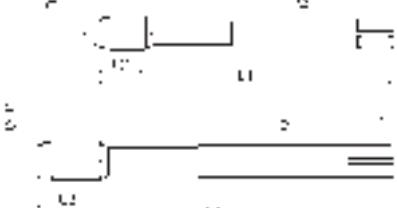
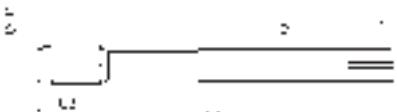
77

★ Solo a richiesta

Only on request / Sur demande



**N**
**USO GENERALE**
*General purpose - Usage Général*
**DIN  
371**

**DIN  
376**

**DIN  
376**


R40°

R40°

R40°

R40°

**Profond. di filettatura - Thread depth - Profond. de filetage**
**2,5xD**
**2,5xD**
**2,5xD**
**2,5xD**
**Materiale - Material - Matériau**
**HSSE**
**HSSE**
**HSSE**
**HSSE**
**Tolleranza - Tolerance - Tolérance**
**2B**
**2B**
**2B**
**2B**
**Trattamento superficiale - Surface treatment - Revêtement**
**BR**
**V**
**TiN**
**XP**
**Numero gruppi materiali**
*Material's groups number*
*Nombre de groupes du matériau*

1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
4.1 4.2	4.1 4.2	3.3 3.4	2.1 2.2 3.3 3.4
5.1 5.2	5.1 5.2	4.1 4.2 4.3	4.2 4.3
		5.1 5.2	5.2

DIN 371	Ød1 UNC	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 6	32	3,505	56	7	4	3	3	2,85	
◀ 8	32	4,166	63	7	4,5	3,4	3	3,5	
◀ 10	24	4,826	70	8	6	4,9	3	3,9	
◀ 12	24	5,486	80	10	6	4,9	3	4,5	
◀ 1/4	20	6,350	80	10	7	5,5	3	5,1	
5/16	18	7,938	90	13	8	6,2	3	6,6	
3/8	16	9,525	100	15	10	8	3	8	

E60UNC...	CODICE - CODE	E60UNC...V	E60UNC...T	E60UNC...XP
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
○	○	○	○	○
○	○	○	○	○

DIN 376	Ød1 UNC	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 1/4	20	6,350	80	10	4,5	3,4	3	5,1	
5/16	18	7,938	90	13	6	4,9	3	6,6	
3/8	16	9,525	100	15	7	5,5	3	8	
7/16	14	11,113	100	15	8	6,2	3	9,4	
1/2	13	12,700	110	18	9	7	3	10,8	
9/16	12	14,288	110	20	11	9	4	12,2	
5/8	11	15,875	110	20	12	9	4	13,5	
3/4	10	19,050	125	25	14	11	4	16,5	
7/8	9	22,225	140	25	18	14,5	4	19,5	
1"	8	25,400	160	30	18	14,5	4	22,25	
1"1/8	7	28,575	180	35	22	18	4	25	
1"1/4	7	31,750	180	35	22	18	4	28	
1"3/8	6	34,925	200	40	28	22	4	30,75	
1"1/2	6	38,100	200	40	28	22	4	34	
1"3/4	5	44,450	220	50	36	29	5	39,5	
2"	4 1/2	50,800	250	55	40	32	5	45	

E61UNC...	CODICE - CODE	E61UNC...V	E61UNC...T	E61UNC...XP
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
○	○	○	○	○
○	○	○	○	○

**Confezione / Box / Colis:**

6 – 7/16: 10 pezzi / pcs

1/2 – 9/16: 5 pezzi / pcs

&gt;9/16: singoli / single pcs

**€ Pag. listino - Price list - Liste des prix**

● Standard

**77**
**78**
**78**
**78**

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta

Only on request / Sur demande







Calibri a tampone filettati passa / non passa

### *Thread plug gauges go/no-go*

#### *Calibres de filetage entre/n'entre pas*



## Tolleranza - Tolerance - Tolérance

2B

## Trattamento superficiale - Surface treatment - Revêtement

BR

**Confezione: Singola  
Box: Single  
Collezione: Unique**

**€** Pag. listino - Price list - Liste des prix

• Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

109

★ Solo a richiesta  
*Only on request / Sur demande*



UNF

UNF











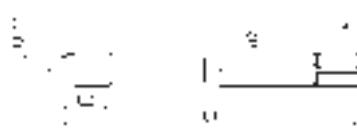
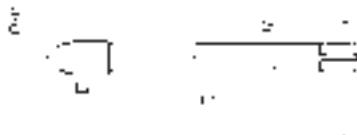
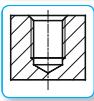
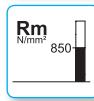
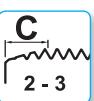
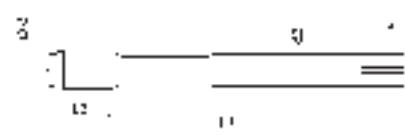










**N**
**USO GENERALE**
*General purpose - Usage Général*
**DIN  
371**

**DIN  
374**

**DIN  
374**


R40°



R40°



R40°



R40°

*Profond. di filettatura - Thread depth - Profond. de filetage*
**2,5xD**
**2,5xD**
**2,5xD**
**2,5xD**
*Materiale - Material - Matériau*
**HSSE**
**HSSE**
**HSSE**
**HSSE**
*Tolleranza - Tolerance - Tolérance*
**2B**
**2B**
**2B**
**2B**
*Trattamento superficiale - Surface treatment - Revêtement*
**BR**
**V**
**TiN**
**XP**
**Numero gruppi materiali**
*Material's groups number*
*Nombre de groupes du matériau*
**1.1 1.2 1.3 1.4**
**1.1 1.2 1.3 1.4**
**1.1 1.2 1.3 1.4**
**1.1 1.2 1.3 1.4**
**4.1 4.2**
**4.1 4.2**
**3.3 3.4**
**2.1 2.2 3.3 3.4**
**5.1 5.2**
**5.1 5.2**
**4.1 4.2 4.3**
**4.2 4.3**
**5.1 5.2**
**5.1 5.2**
**5.2**

DIN 371	Ød1 UNF	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 6	40	3,505	56	7	4	3	3	2,95	
◀ 8	36	4,166	63	7	4,5	3,4	3	3,5	
◀ 10	32	4,826	70	8	6	4,9	3	4,1	
◀ 12	28	5,486	80	10	6	4,9	3	4,6	
◀ 1/4	28	6,350	80	10	7	5,5	3	5,5	

E60UNF...	CODICE - CODE	E60UNF...V	E60UNF...T	E60UNF...XP
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○

DIN 374	Ød1 UNF	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
◀ 1/4	28	6,350	80	10	4,5	3,4	3	5,5	
5/16	24	7,938	90	13	6	4,9	3	6,9	
3/8	24	9,525	90	15	7	5,5	3	8,5	
7/16	20	11,113	100	15	8	6,2	3	9,9	
1/2	20	12,700	100	13	9	7	3	11,5	
9/16	18	14,288	100	15	11	9	4	12,9	
5/8	18	15,875	100	15	12	9	4	14,5	
3/4	16	19,050	110	17	14	11	4	17,5	
7/8	14	22,225	125	18	18	14,5	4	20,4	
1"	12	25,400	140	22	18	14,5	4	23,25	
1"1/8	12	28,575	150	22	22	18	4	26,5	
1"1/4	12	31,750	150	22	22	18	5	29,5	
1"3/8	12	34,925	170	24	28	22	5	32,75	
1"1/2	12	38,100	170	24	28	22	6	36	

E61UNF...	CODICE - CODE	E61UNF...V	E61UNF...T	E61UNF...XP
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○
●	○	○	○	○
●	○	○	○	○
○	○	○	○	○

Confezione / Box / Colis:  
6 - 7/16: 10 pezzi / pcs  
1/2 - 9/16: 5 pezzi / pcs  
>9/16: singoli / single pcs

€ Pag. listino - Price list - Liste des prix

● Standard

**86**
**86**
**86**
**87**

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta  
Only on request / Sur demande







ANSI / ASME B1.2

Calibri a tampone filettati passa / non passa

### *Thread plug gauges go/no-go*

#### *Calibres de filetage entre/n'entre pas*



## Tolleranza - Tolerance - Tolérance

2B

## Trattamento superficiale - Surface treatment - Revêtement

BR

Confezione: Singola  
Box: Single  
Collezione: Unique

**€** Pag. listino - Price list - Liste des prix

- Standard

- Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price list / Stock à vérifier

109

★ Solo a richiesta  
*Only on request / Sur demande*

# FILETTATURA AMERICANA UN

AMERICAN UNIFIED THREAD UN - FILETAGE AMÉRICAIN UN

	PASSO - PITCH																						
	8	9	10	11	12	13	14	16	18	20	24	27	28	32	36	40	44	48	56	60	64	72	80
Ø																							
0																							
1																			UNC	UNC			
2																		UNC		UNC			
3																		UNC	UNC				
4																		UNC	UNC				
5																		UNC	UNC				
6																		UNC		UNC			
9/64																							
8																		UNC	UNC				
11/64																							
10																		UNC	UNC	UNS	UNS	UNS	
12																		UNC	UNF	UNE	UNS		
15/64																							
1/4																		UNC	UNS			UNS	
9/32																		UNF	UNE	UNS	UNS		
5/16																		UNC	UNF	UNE	UNS		
3/8																		UNC	UNS	UN20	UN28	UNS	
7/16																		UNC	UNF	UNS	UN32		
1/2																		UNC	UNF	UNS	UN32		
9/16																		UNC	UNF	UNE			
5/8																		UNC	UNF	UN20	UN28		
11/16																		UN16	UNS	UNE			
3/4																		UNC	UNF	UNE	UN28		
13/16																		UN16	UNE				
7/8																		UNC	UN12	UNF	UNE	UNS	
15/16																			UN16	UNS			
1																		UNC	UNF	UN16	UNS	UNE	
1-1/16																		UN12	UN16	UNE	UN20		
1-1/8																		UN8	UNF	UN16	UN20		
1-3/16																		UN8	UN12	UN16			
1-1/4																		UN8	UNF	UN16	UNE	UN20	
1-5/16																		UN12	UN8	UN16			
1-3/8																		UN8	UNF	UNE	UN20		
1-7/16																		UN12	UN8	UNE			
1-1/2																		UN8	UNF	UN16	UNE		
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					

UNEF-UNS-UN...



UNEF UNS UN...









**8-UN  
12-UN  
16-UN**

## Filettatura americana UN ASME B1.1

UN thread ASME B1.1

Gewinde UN ASME B1.1 – Maschinengewindebohrer  
Filetage UN ASME B1.1 – Tarauds machine  
Rosca UN ASME B1.1 – Machos de roscar a máquina

**UFS**  
LINE

**UFS**  
plus

**UFS**  
TOP

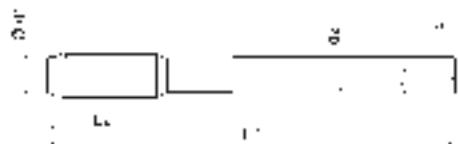
### MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

**N**

USO GENERALE

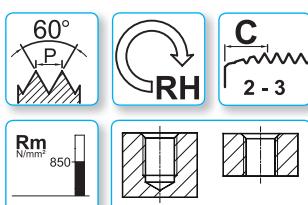
General purpose - Usage Général



LINE

LINE

LINE



BT

Profond. di filettatura - Thread depth - Profond. de filetage

1,5xD

1,5xD

2,5xD

Materiale - Material - Matériau

HSSE

HSSE

HSSE

Tolleranza - Tolerance - Tolérance

2B

2B

2B

Trattamento superficiale - Surface treatment - Revêtement

BR

BR

BR

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3 1.4 3.4

1.1 1.2 1.3 1.4 3.4

1.1 1.2 1.3 1.4 3.4

4.2 4.3 5.2 5.3

4.2 4.3 5.2 5.3

4.2 4.3 5.2 5.3

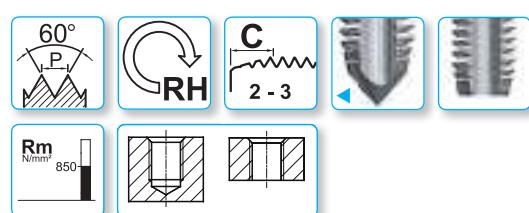
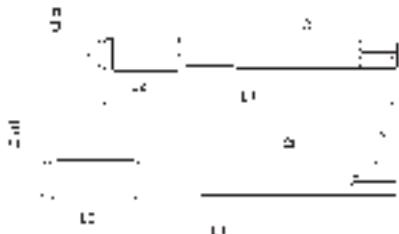
8.2

8.2

8.2

DIN 2184-1	Ød1 8-UN	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	
	<b>1"1/8</b>	<b>8</b>	28,575	180	40	22	18	4	25,4
	<b>1"1/4</b>	<b>8</b>	31,750	180	40	22	18	4	28,6
	<b>1"3/8</b>	<b>8</b>	34,925	200	50	28	22	4	31,75
	<b>1"1/2</b>	<b>8</b>	38,100	200	50	28	22	4	34,9
	<b>1"5/8</b>	<b>8</b>	41,275	200	50	32	24	5	38,1
	<b>1"3/4</b>	<b>8</b>	44,450	200	50	36	29	5	41,3
	<b>1"7/8</b>	<b>8</b>	47,625	225	60	36	29	5	44,45
	<b>2"</b>	<b>8</b>	50,800	225	60	40	32	5	47,6
	<b>2"1/4</b>	<b>8</b>	57,150	250	65	45	35	6	54
	<b>2"1/2</b>	<b>8</b>	63,500	275	70	50	39	6	60,3

CODICE - CODE									
E21-8UN...	E41-8UN...			E81-8UN...					
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**N**
**USO GENERALE**
*General purpose - Usage Général*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*
**UFS  
norm**

**LINE**
**LINE**

*Profond. di filettatura - Thread depth - Profond. de filetage*
**1,5xD**
**1,5xD**
*Materiale - Material - Matériau*
**HSSE**
**HSSE**
*Tolleranza - Tolerance - Tolérance*
**2B**
**2B**
*Trattamento superficiale - Surface treatment - Revêtement*
**BR**
**TiN**
*Numero gruppi materiali*
*Material's groups number*
*Nombre de groupes du matériau*
*1.1 1.2 1.3 1.4 3.4*
*1.1 1.2 1.3 1.4 3.4*
*4.2 4.3 5.2 5.3*
*4.2 4.3 5.2 5.3*
*8.2*
*8.2*

<b>UFS norm</b>	<b>Ød1</b>	<b>P</b>	<b>Ø mm</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>d<sub>2</sub> h9</b>	<b>a h12</b>	<b>Z</b>	
◀ <b>3/8</b>	<b>20</b>	9,525	100	20	7	5,5	3	8,3	
<b>5/8</b>	<b>20</b>	15,875	100	22	12	9	4	14,6	
<b>1"1/16</b>	<b>20</b>	26,988	140	25	20	16	4	25,7	
<b>1"1/8</b>	<b>20</b>	28,575	150	28	22	18	4	27,3	
<b>1"1/4</b>	<b>20</b>	31,750	150	28	22	18	5	30,5	
<b>1"3/8</b>	<b>20</b>	34,925	170	30	28	22	5	33,7	

**CODICE - CODE**
**E21-20UN...**
**E21-20UN...T**

<b>UFS norm</b>	<b>Ød1</b>	<b>P</b>	<b>Ø mm</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>d<sub>2</sub> h9</b>	<b>a h12</b>	<b>Z</b>	
◀ <b>3/8</b>	<b>28</b>	9,525	90	15	7	5,5	3	8,6	
<b>5/8</b>	<b>28</b>	15,875	100	22	12	9	4	15	

**CODICE - CODE**
**E21-28UN...**
**E21-28UN...T**

<b>UFS norm</b>	<b>Ød1</b>	<b>P</b>	<b>Ø mm</b>	<b>L<sub>1</sub></b>	<b>L<sub>2</sub></b>	<b>d<sub>2</sub> h9</b>	<b>a h12</b>	<b>Z</b>	
<b>7/16</b>	<b>32</b>	11,113	100	20	8	6,2	3	10,3	
<b>1/2</b>	<b>32</b>	12,700	100	20	9	7	3	11,9	

**CODICE - CODE**
**E21-32UN...**
**E21-32UN...T**

Confezione: Singola  
Box: Single  
Colis: Unique

€ Pag. listino - Price list - Liste des prix

**91**
**91**

● Standard

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta  
Only on request / Sur demande

## CALIBRI FILETTATI

## **THREAD GAUGES - CALIBRES DE FILETAGE**

ANSI / ASME B1.2

Calibri a tampone filettati passa / non passa

#### *Thread plug gauges go/no-go*

#### *Calibres de filetage entre/n'entre pas*



## Tolleranza - Tolerance - Tolérance

2B

Trattamento superficiale - Surface treatment - Revêtement

---

BR

<b>Ød1 UNEF</b>	<b>TPI</b>
<b>1/4</b>	32
<b>5/16</b>	32
<b>3/8</b>	32
<b>7/16</b>	28
<b>1/2</b>	28
<b>9/16</b>	24
<b>5/8</b>	24
<b>11/16</b>	24
<b>3/4</b>	20
<b>13/16</b>	20
<b>7/8</b>	20
<b>1"</b>	20
<b>1"1/16</b>	18
<b>1"1/8</b>	18
<b>1"3/16</b>	18
<b>1"1/4</b>	18
<b>1"3/8</b>	18
<b>1"7/16</b>	18
<b>1"1/2</b>	18

CODICE - CODE  
P-NPUJNEF

A richiesta sono eseguibili i seguenti tamponi:  
*On request we can provide the following gauges:*  
*Sur demande les tampons suivants:*

UNS  
8-UN  
12-UN  
16-UN  
20-UN  
28-UN  
32-UN

Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pc  
M12 – M16: 5 pezzi / pc

€ Pag. listino - Price list - Liste des prix

- Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

109

★ Solo a richiesta  
*Only on request / Sur demande*

GAS-Rp-NPSM-NPSF



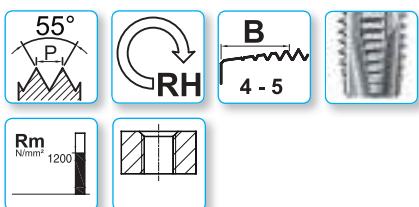
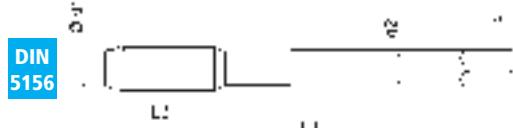
GAS Rp NPSM NPSF











**Profond. di filettatura - Thread depth - Profond. de filetage**

3xD

3,5xD

## Materiale - Material - Matériau

PM3

PM3

## **Tolleranza - Tolerance - Tolérance**

ISO 228X

ISO 228X

Al Si>10%,  
Ottone / Brass / Laiton  
Bronzo / Bronze / Bronze  
truciolo corto / short chip /  
coupeaux courts

## Numero gruppi materiali

*Material's groups number*

*Nombre de groupes du matériau*

Confezione / Box / Colis:  
1/8 G: 10 pezzi / pcs  
1/4 G: 3/8 G: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

94

94

- Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

★ Solo a richiesta  
*Only on request / Sur demande*

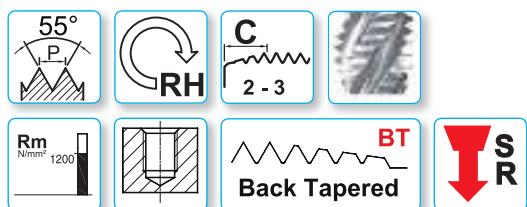












**Profond. di filettatura** - Thread depth - Profond. de filetage

2,5xD

3xD

## Materiale - Material - Matériau

PM3

PM3

## **Tolleranza - Tolerance - Tolérance**

ISO 228X

ISO 228X

Trattamento superficiale - Surface treatment - Revêtement

TXC

TXC

**Numero gruppi materiali**  
*Material's groups number*  
*Nombre de groupes du matériau*

Confezione: Singola  
Box: Single  
Collezione: Unique

## € Pag. listino - Price list - Liste des prix

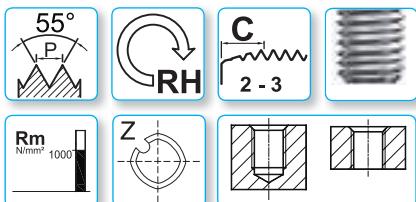
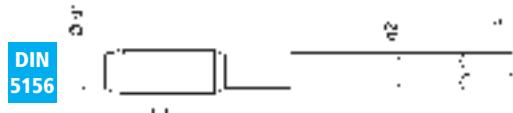
96

96

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

**★ Solo a richiesta**  
*Only on request / Sur demande*





**Profond. di filettatura** - *Thread depth* - *Profond. de filetage*

## Materiale - Material - Matériau

## Tolleranza - Tolerance - Tolérance

## Trattamento superficiale - Surface treatment - Revêtement

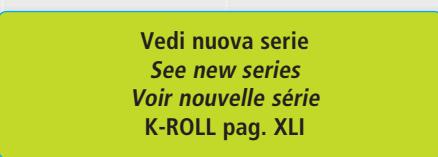
## **Numero gruppi materiali**

*Material's groups number*

*Nombre de groupes du matériau*



**Ad esaurimento scorte**  
*Stock clearance - Stock épuisé*



Confezione: Singola Box: Single Colis: Unique	<b>€ Pag. listino - Price list - Liste des prix</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>
	<input checked="" type="radio"/> Standard <input type="radio"/> Disponibilità da richiedere, prezzo a listino <i>On enquiry, standard price-list / Stock à vérifier</i>			<input type="radio"/> Solo a richiesta <i>Only on request / Sur demande</i>	

ISO 228

Calibri a tampone filettati passa / non passa

## *Thread plug gauges go/no-go*

#### *Calibres de filetage entre/n'entre pas*



## Tolleranza - Tolerance - Tolérance

## Trattamento superficiale - Surface treatment - Revêtement

---

BR

Confezione: Singola  
Box: Single  
Collezione: Unique

€ Png. listino - Price list - Liste des prix

- ### • Standard

○ Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

110

★ Solo a richiesta  
*Only on request / Sur demande*

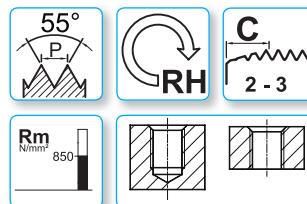
**MASCHI A MACCHINA**

MACHINE TAPS - TARAUDS MACHINE

**N**

**USO GENERALE**  
*General purpose - Usage Général*

DIN  
5156



Profond. di filettatura - Thread depth - Profond. de filetage

1,5xD

1,5xD

Materiale - Material - Matériau

HSSE

HSSE

Tolleranza - Tolerance - Tolérance

ISO 5969

ISO 5969

Trattamento superficiale - Surface treatment - Revêtement

BR

TiN

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3 1.4 | 3.4

1.1 1.2 1.3 1.4 | 3.4

4.2 4.3 5.2 5.3

4.2 4.3 5.2 5.3

8.2

8.2

DIN 5156	Ød1 GAS	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	z	
	<b>1/8</b>	<b>28</b>	9,73	90	15	7	5,5	3	8,6
	<b>1/4</b>	<b>19</b>	13,16	100	22	11	9	3	11,5
	<b>3/8</b>	<b>19</b>	16,66	100	22	12	9	3	15
	<b>1/2</b>	<b>14</b>	20,96	125	25	16	12	4	18,5
	<b>3/4</b>	<b>14</b>	26,44	140	25	20	16	4	24
	<b>1"</b>	<b>11</b>	33,25	160	30	25	20	5	30,25
	<b>1"1/4</b>	<b>11</b>	41,91	170	30	32	24	6	39
■	<b>1"1/2</b>	<b>11</b>	47,8	190	32	36	29	6	45
■	<b>2"</b>	<b>11</b>	59,61	220	40	45	35	6	56,5

# NPSM NPSF



NPSM NPSF







Rc-NPT-NPTF



Rc NPT NPTF



EN 10226 – (DIN 2999)

#### Calibri filettati per filettatura conica a due piani

## *Thread gauges for tapered threads with two plans*

## *Calibres de contrôle pour filetage conique sur deux étages*



## Tolleranza - Tolerance - Tolérance

## Trattamento superficiale - Surface treatment - Revêtement

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**BR**

Confezione: Singola  
Box: Single  
Collezione: Unique

**€** Pag. listino - Price list - Liste des prix

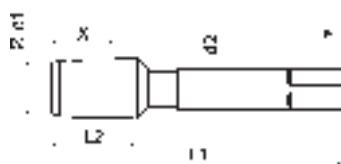
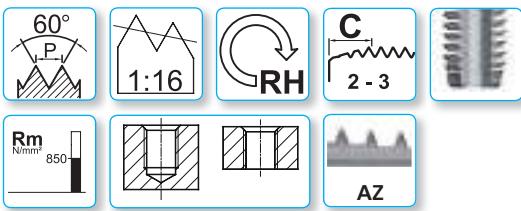
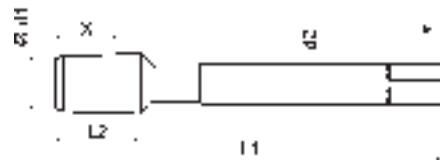
• Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

110

★ Solo a richiesta  
*Only on request / Sur demande*



**N**
**USO GENERALE**
*General purpose - Usage Général*
**MASCHI A MACCHINA**
*MACHINE TAPS - TARAUDS MACHINE*

**LINE**
**LINE**

**Profond. di filettatura - Thread depth - Profond. de filetage**
**Materiale - Material - Matériau**
**HSSE**
**HSSE**
**Tolleranza - Tolerance - Tolérance**
**Trattamento superficiale - Surface treatment - Revêtement**
**BR**
**BR**

**Numero gruppi materiali**  
Material's groups number  
Nombre de groupes du matériau

**1.1**
**1.1**
**2.1 2.2**
**2.1 2.2**
**4.1 4.2 5.1 5.2**
**4.1 4.2 5.1 5.2**

Ød1 NPT	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	X	F*
<b>1/16</b>	<b>27</b>	7,938	63	13	6	4,9	9,3	6,2
<b>1/8</b>	<b>27</b>	10,287	63	13	7	5,5	9,3	8,5
<b>1/4</b>	<b>18</b>	13,716	63	20	11	9	13,5	11
<b>3/8</b>	<b>18</b>	17,145	70	20	12	9	13,9	14,5
<b>1/2</b>	<b>14</b>	21,336	80	26	16	12	18,1	17,9
<b>3/4</b>	<b>14</b>	26,670	100	26	20	16	18,6	23,2
<b>1"</b>	<b>11,5</b>	33,401	110	32	25	20	22,3	29
<b>1 1/4"</b>	<b>11,5</b>	42,164	125	32	32	24	22,8	37,8
<b>1 1/2"</b>	<b>11,5</b>	48,260	140	32	36	29	22,8	44
<b>2"</b>	<b>11,5</b>	60,325	160	36	45	35	23,2	56

**E21CNPT...AZ**
**CODICE - CODE**

Ød1 NPT	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	X	F*
<b>1/16</b>	<b>27</b>	7,938	90	13	6	4,9	9,3	6,2
<b>1/8</b>	<b>27</b>	10,287	90	13	7	5,5	9,3	8,5
<b>1/4</b>	<b>18</b>	13,716	100	20	11	9	13,5	11
<b>3/8</b>	<b>18</b>	17,145	110	20	12	9	13,9	14,5
<b>1/2</b>	<b>14</b>	21,336	125	26	16	12	18,1	17,9
<b>3/4</b>	<b>14</b>	26,670	140	26	20	16	18,6	23,2
<b>1"</b>	<b>11,5</b>	33,401	160	32	25	20	22,3	29
<b>1 1/4"</b>	<b>11,5</b>	42,164	160	32	32	24	22,8	37,8
<b>1 1/2"</b>	<b>11,5</b>	48,260	190	32	36	29	22,8	44
<b>2"</b>	<b>11,5</b>	60,325	200	36	45	35	23,2	56

**E21LNPT...AZ**
**CODICE - CODE**

\* Diametri di foratura cilindrici.  
Per alesatura conica vedi tabella pag. 258

\* Cylindrical hole.  
For conic hole see on page 258

\* Diamètres de perçage cylindrique.  
Pour alésage conique voir tableau page 258

**Confezione: Singola**  
**Box: Single**  
**Colis: Unique**
**€ Pag. listino - Price list - Liste des prix**
**● Standard**
**98**
**99**

○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta  
Only on request / Sur demande

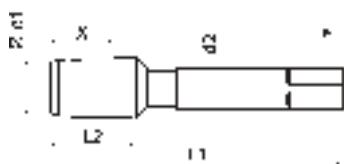
## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

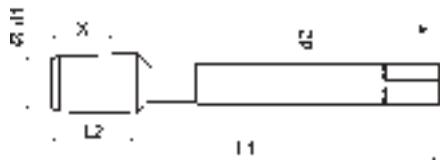
N

**USO GENERALE**

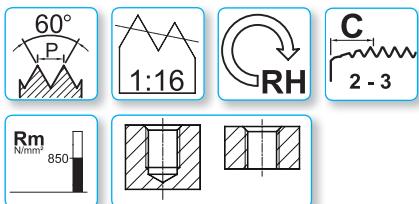
General purpose - Usage Général



LINE



LINE



LINE



Profond. di filettatura - Thread depth - Profond. de filetage

Materiale - Material - Matériau

HSSE

HSSE

HSSE

HSSE

Tolleranza - Tolerance - Tolérance

Trattamento superficiale - Surface treatment - Revêtement

BR

V

BR

TXC

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
3.3 3.4 4.2 4.3	2.1 2.2 2.3	3.3 3.4 4.2 4.3	2.1 2.2 2.3
5.3	3.1 3.2 3.3 3.4	5.3	3.1 3.2 3.3 3.4

Ød1 NPTF	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	X	F*	CODICE - CODE	
									E21CNPTF...	E41CNPTF...V
1/16 27	27	7,938	63	13	6	4,9	9,3	6,1	*	*
1/8 27	27	10,287	63	13	7	5,5	9,3	8,45	○	○
1/4 18	18	13,716	63	20	11	9	13,5	10,9	○	○
3/8 18	18	17,145	70	20	12	9	13,9	14,3	○	○
1/2 14	14	21,336	80	26	16	12	18,1	17,6	○	○
3/4 14	14	26,670	100	26	20	16	18,6	23,0	○	○
1" 11,5	11,5	33,401	110	32	25	20	22,3	28,75	○	○
1"1/4 11,5	11,5	42,164	125	32	32	24	22,8	37,5	○	○
1"1/2 11,5	11,5	48,260	140	32	36	29	22,8	43,75	○	○
2" 11,5	11,5	60,325	160	36	45	35	23,2	55,75	○	○

Ød1 NPTF	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	X	F*
1/16 27	27	7,938	90	13	6	4,9	9,3	6,1
1/8 27	27	10,287	90	13	7	5,5	9,3	8,45
1/4 18	18	13,716	100	20	11	9	13,5	10,9
3/8 18	18	17,145	110	20	12	9	13,9	14,3
1/2 14	14	21,336	125	26	16	12	18,1	17,6
3/4 14	14	26,670	140	26	20	16	18,6	23,0
1" 11,5	11,5	33,401	160	32	25	20	22,3	28,75
1"1/4 11,5	11,5	42,164	160	32	32	24	22,8	37,5
1"1/2 11,5	11,5	48,260	190	32	36	29	22,8	43,75
2" 11,5	11,5	60,325	200	36	45	35	23,2	55,75

Ød1 NPTF	P TPI	Ø mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	X	F*	CODICE - CODE	
									E21LNPTF...	E21LNPTF...TXC
1/16 27	27	7,938	90	13	6	4,9	9,3	6,1	*	*
1/8 27	27	10,287	90	13	7	5,5	9,3	8,45	○	○
1/4 18	18	13,716	100	20	11	9	13,5	10,9	○	○
3/8 18	18	17,145	110	20	12	9	13,9	14,3	○	○
1/2 14	14	21,336	125	26	16	12	18,1	17,6	○	○
3/4 14	14	26,670	140	26	20	16	18,6	23,0	○	○
1" 11,5	11,5	33,401	160	32	25	20	22,3	28,75	○	○
1"1/4 11,5	11,5	42,164	160	32	32	24	22,8	37,5	*	*
1"1/2 11,5	11,5	48,260	190	32	36	29	22,8	43,75	*	*
2" 11,5	11,5	60,325	200	36	45	35	23,2	55,75	*	*

■ = Acciaio HSS / HSS Steel / Acier HSS

\* Diametri di foratura cilindrici.  
Per alesatura conica vedi tabella pag. 258

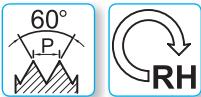
\* Cylindrical hole.  
For conic hole see on page 258

\* Diamètres de perçage cylindrique.  
Pour alésage conique voir tableau page 258

Confezione: Singola Box: Single Colis: Unique	€ Pag. listino - Price list - Liste des prix	99	99	99	99
	● Standard	○ Disponibilità da richiedere, prezzo a listino On enquiry, standard price-list / Stock à vérifier	★ Solo a richiesta Only on request / Sur demande		

#### Calibri filettati per filettatura conica a tre piani

## *Thread gauges for tapered threads with three plans Calibres de contrôle pour filetage conique sur trois étages*



## Tolleranza - Tolerance - Tolérance

## Trattamento superficiale - Surface treatment - Revêtement

BR

NPT ANSI/ASME B1.20.1	
Ød1	TPI
<b>1/8</b>	27
<b>1/4</b>	18
<b>3/8</b>	18
<b>1/2</b>	14
<b>3/4</b>	14
<b>1"</b>	11,5
<b>1"1/4</b>	11,5
<b>1"1/2</b>	11,5
<b>2"</b>	11,5

NPTF  
ANSI/ASME B1.20.3

A richiesta:  
*On request:*  
*Sur demande:*

**Confezione: Singola  
Box: Single  
Collezione: Unique**

€ Pag. listino - Price list - Liste des prix

### • Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

110

★ Solo a richiesta  
*Only on request / Sur demande*



BSW-PG-Tr-Rd



BSW PG Tr Rd















ISO529-EG M-KOMBI









# Filettatura metrica ISO passo grosso DIN 13

ISO Metric coarse thread DIN 13

Metrishes ISO-Regelgewinde DIN 13 – Maschinengewindebohrer

Filetage métrique ISO DIN 13 – Tarauds machine

Rosca ISO métrica regular DIN 13 – Machos de roscar a máquina



N

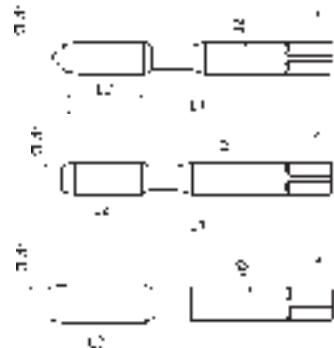
USO GENERALE

General purpose - Usage Général

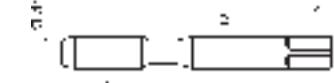
## MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

ISO  
529



ISO  
529



ISO  
529



LINE



R40°

LINE



R40°

LINE



Lunghezza filetto ridotta  
Thread length reduced  
Longueur du fillet réduite

10xP

LINE



Lunghezza filetto ridotta  
Thread length reduced  
Longueur du fillet réduite

10xP

Profond. di filettatura - Thread depth - Profond. de filetage

2,5xD

2,5xD

2,5xD

2,5xD

Materiale - Material - Matériau

HSSE

HSSE

HSSE

HSSE

Tolleranza - Tolerance - Tolérance

ISO2/6H

ISO2/6H

ISO2/6H

ISO2/6H

Trattamento superficiale - Surface treatment - Revêtement

BR

XP

BR

XP

Numero gruppi materiali  
Material's groups number  
Nombre de groupes du matériau

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4

1.1 1.2 1.3 1.4

4.1 4.2

2.1 2.2 3.3 3.4

5.1 5.2

2.1 2.2

5.1 5.2

4.2 4.3

5.2

5.2

ISO 529	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Image
3	0,5	48	11	3,15	2,5	3	2,5	
4	0,7	53	13	4	3,15	3	3,3	
5	0,8	58	16	5	4	3	4,2	
6	1	66	19	6,3	5	3	5	
8	1,25	72	22	8	6,3	3	6,8	
10	1,5	80	24	10	8	3	8,5	
12	1,75	89	29	9	7,1	3	10,30	
14	2	95	30	11,2	9	3	12	
16	2	102	32	12,5	10	4	14	
18	2,5	112	37	14	11,20	4	15,5	
20	2,5	112	37	14	11,20	4	17,5	

529E60M...

CODICE - CODE

529E60M...XP

5.2

5.2

ISO 529	Ød1 M	P mm	L <sub>1</sub>	L <sub>2</sub>	d <sub>2</sub> h9	a h12	Z	Image
3	0,5	48	5	3,15	2,5	3	2,5	
4	0,7	53	7	4	3,15	3	3,3	
5	0,8	58	8	5	4	3	4,2	
6	1	66	10	6,3	5	3	5	
8	1,25	72	13	8	6,3	3	6,8	
10	1,5	80	15	10	8	3	8,5	
12	1,75	89	18	9	7,1	3	10,30	
14	2	95	20	11,2	9	3	12	
16	2	102	20	12,5	10	4	14	
18	2,5	112	25	14	11,20	4	15,5	
20	2,5	112	25	14	11,20	4	17,5	

529E80M...

529E80M...

529E80M...XP

5.2

5.2



Solo a richiesta  
Only on request / Sur demande

RACCOMANDATO per filettatura rigida  
We recommend Syncro rigid threading  
Recommandé pour le taraudage rigide



Confezione / Box / Colis:  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

● Standard

105

105

105

105

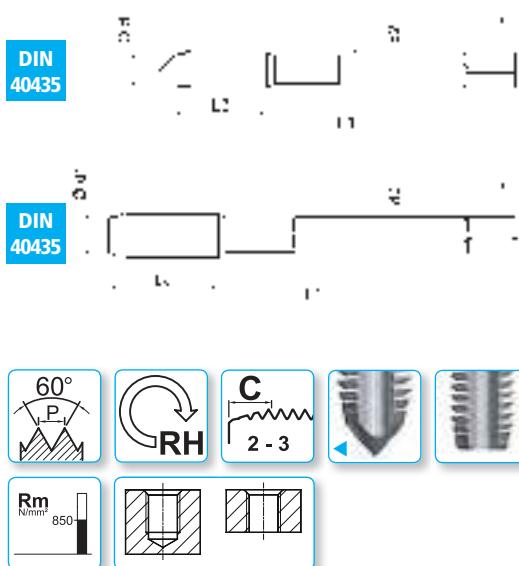
○ Disponibilità da richiedere, prezzo a listino  
On enquiry, standard price-list / Stock à vérifier

★ Solo a richiesta  
Only on request / Sur demande

# EG M



EG M



**Profond. di filettatura** - *Thread depth* - *Profond. de filetage*

1,5xD

1,5xD

## Materiale - Material - Matériaux

**HSSE**

## **Tolleranza - Tolerance - Tolérance**

6H mod

Trattamento superficiale - Surface treatment - Revêtement

---

BR

TiN

## Numero gruppi materiali Material's groups number Nombre de groupes du matériel

**Confezione / Box / Colis:**  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

105

105

- Standard

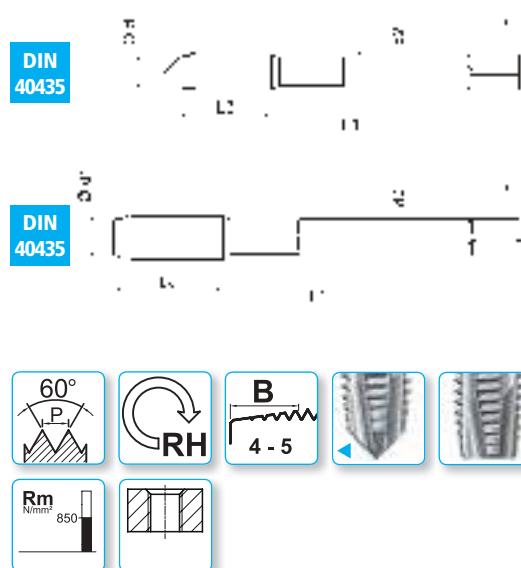
- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

**★ Solo a richiesta**  
*Only on request / Sur demande*

N

USO GENERALE

## **General purpose - Usage Général**



**Profond. di filettatura - Thread depth - Profond. de filetage**

3xD

3xD

## Materiale - Material - Matériaux

HSSE

HSSE

## Tolleranza - Tolerance - Tolérance

6H mod

6H mod

Trattamento superficiale - Surface treatment - Revêtement

BR

XP

## **Numero gruppi materiali**

*Material's groups number*

*Nombre de groupes du matériau*

**Confezione / Box / Colis:**  
M3 – M10: 10 pezzi / pcs  
M12 – M16: 5 pezzi / pcs

€ Pag. listino - Price list - Liste des prix

- Standard

106

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

★ Solo a richiesta  
*Only on request / Sur demande*



# KOMBI



KOMBI

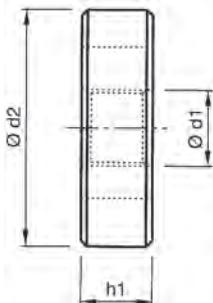




## **FILIERE TONDE IMBOCCO CORRETTO**

## ROUND SPLIT DIES WITH SPIRAL POINTED - FILIÈRES RONDES, ENTRÉE GUN

DIN - EN 22568



## Filettatura sinistra - LH *Left hand* *Filetage Gauche - LH*

Inox  
Stainless Steel

Materiale - Material - Matériaux				HSS	HSS	HSSE
Imbocco - Chamfer - Entrée				1,75xP	1,75xP	1,75xP
Tolleranza - Tolerance - Tolérance				ISO / 6g	ISO / 6g	ISO / 6g
Trattamento superficiale - Surface treatment - Revêtement				BR	BR	BR
Ød <sub>1</sub> M	P mm	Ød <sub>2</sub>	h <sub>1</sub>	100-99M...	CODICE - CODE 100S99M...	100E99XM...
2	0,4	16	5	○	-	-
2,2	0,45	16	5	○	-	-
2,3	0,4	16	5	○	-	-
2,5	0,45	16	5	○	-	-
2,6	0,45	16	5	○	-	-
3	0,5	20	5	○	○	○
3,5	0,6	20	5	○	-	-
4	0,7	20	5	○	○	○
4,5	0,75	20	7	○	-	-
5	0,8	20	7	○	○	○
6	1	20	7	○	○	○
7	1	25	9	○	○	-
8	1,25	25	9	○	○	○
9	1,25	25	9	○	○	-
10	1,5	30	11	○	○	○
11	1,5	30	11	○	○	-
12	1,75	38	14	○	○	○
14	2	38	14	○	○	○
16	2	45	18	○	○	○
18	2,5	45	18	○	○	○
20	2,5	45	18	○	○	○
22	2,5	55	22	○	○	○
24	3	55	22	○	○	○
27	3	65	25	○	○	○
30	3,5	65	25	○	○	○
33	3,5	65	25	○	○	○
36	4	65	25	○	○	○
39	4	75	30	○	○	○
42	4,5	75	30	○	○	○
45	4,5	90	36	○	○	○
48	5	90	36	○	○	○
52	5	90	36	○	○	○

Confezione: Singola  
Box: Single  
Colis: Unique

### **€ Paq. listino - Price list - Liste des prix**

- Standard

Disponibilità da richiedere, prezzo a listino

111

111

★ Solo a richiesta  
*Only on request / Sur demande*

# FILIERE TONDE IMBOCCO CORRETTO

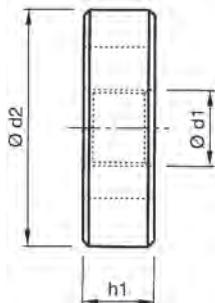
## **ROUND SPLIT DIES WITH SPIRAL POINTED - FILIÈRES RONDES, ENTRÉE GUN**

DIN - EN 22568

LINE

LINE

LINE



## Filettatura sinistra - LH *Left hand* Filetage Gauche - LH

Inox  
Stainless Steel

Materiale - Material - Matériau				HSS	HSS	HSSE
Imbocco - Chamfer - Entrée				1,75xP	1,75xP	1,75xP
Tolleranza - Tolerance - Tolérance				ISO / 6g	ISO / 6g	ISO / 6g
Trattamento superficiale - Surface treatment - Revêtement				BR	BR	BR
Ød <sub>1</sub> MF	P mm	Ød <sub>2</sub>	h <sub>1</sub>	110-99M...	CODICE - CODE 110S99M...	110E99XM...
2	0,25	16	5	○	*	-
2,2	0,25	16	5	○	*	-
2,5	0,35	16	5	○	*	-
3	0,35	20	5	○	*	*
4	0,5	20	5	○	○	○
5	0,5	20	5	○	○	○
6	0,75	20	7	○	○	○
7	0,75	25	9	○	○	*
8	0,75	25	9	○	○	*
8	1	25	9	○	○	○
9	0,75	25	9	○	○	*
9	1	25	9	○	○	*
10	0,75	30	11	○	○	○
10	1	30	11	○	○	○
10	1,25	30	11	○	○	*
11	1	30	10	○	○	*
12	1	38	10	○	○	○
12	1,25	38	10	○	○	○
12	1,5	38	10	○	○	○
13	1	38	10	○	*	*
13	1,5	38	10	○	*	*
14	1	38	10	○	○	○
14	1,25	38	10	○	○	○
14	1,5	38	10	○	○	○
15	1	38	10	○	○	*
15	1,5	38	10	○	○	*
16	1	45	14	○	○	○
16	1,25	45	14	○	○	*
16	1,5	45	14	○	○	○
18	1	45	14	○	○	○
18	1,5	45	14	○	○	○

Confezione: Singola  
Box: Single  
Collezione: Unique

€ Pag. listino - Price list - Liste des prix

- Standard

112

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

113

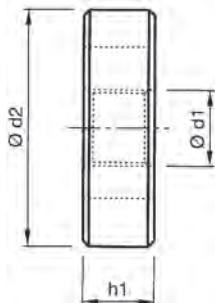
★ Solo a richiesta  
*Only on request / Sur demande*

237



DIN - EN 22568

LINE



## Materiale - Material - Matériau

HSS

### **Imbocco - Chamfer - Entrée**

1,75xP

## **Tolleranza - Tolerance - Tolérance**

---

BR

## Trattamento superficiale - Surface treatment - Revêtement

$\varnothing d_1$ MF	P mm	$\varnothing d_2$	h <sub>1</sub>
<b>34</b>	<b>1</b>	65	18
<b>34</b>	<b>1,5</b>	65	18
<b>35</b>	<b>1</b>	65	18
<b>35</b>	<b>1,5</b>	65	18
<b>35</b>	<b>2</b>	65	18
<b>36</b>	<b>1,5</b>	65	18
<b>36</b>	<b>2</b>	65	18
<b>36</b>	<b>3</b>	65	25
<b>38</b>	<b>1</b>	75	20
<b>38</b>	<b>1,5</b>	75	20
<b>38</b>	<b>2</b>	75	20
<b>39</b>	<b>1,5</b>	75	20
<b>39</b>	<b>2</b>	75	20
<b>39</b>	<b>3</b>	75	30
<b>40</b>	<b>1,5</b>	75	20
<b>40</b>	<b>2</b>	75	20
<b>40</b>	<b>3</b>	75	30
<b>42</b>	<b>1,5</b>	75	20
<b>42</b>	<b>2</b>	75	20
<b>42</b>	<b>3</b>	75	30
<b>45</b>	<b>1,5</b>	90	22
<b>45</b>	<b>2</b>	90	22
<b>45</b>	<b>3</b>	90	36
<b>48</b>	<b>1,5</b>	90	22
<b>48</b>	<b>2</b>	90	22
<b>48</b>	<b>3</b>	90	36
<b>50</b>	<b>1,5</b>	90	22
<b>50</b>	<b>2</b>	90	22
<b>50</b>	<b>3</b>	90	36
<b>52</b>	<b>1,5</b>	90	22
<b>52</b>	<b>2</b>	90	22
<b>52</b>	<b>3</b>	90	36

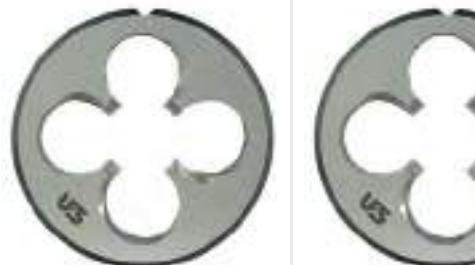
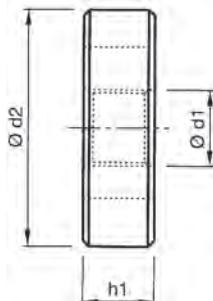
## FILIERE TONDE IMBOCCO CORRETTO

## **ROUND SPLIT DIES WITH SPIRAL POINTED - FILIÈRES RONDES, ENTRÉE GUN**

DIN - EN 22568

LINE

LINE



## Filettatura sinistra - LH *Left hand* *Filetage Gauche - LH*

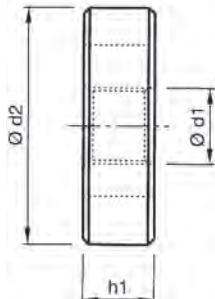
## FILIERE TONDE IMBOCCO CORRETTO

## **ROUND SPLIT DIES WITH SPIRAL POINTED - FILIÈRES RONDES, ENTRÉE GUN**

DIN - EN 22568

LINE

LINE



## Filettatura sinistra - LH *Left hand* Filetage Gauche - LH

**Confezione: Singola  
Box: Single  
Collezione: Unique**

**€** Pag. listino - Price list - Liste des prix

114

114

5

○ Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

★ Solo a richiesta  
*Only on request / Sur demande*

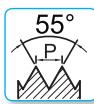
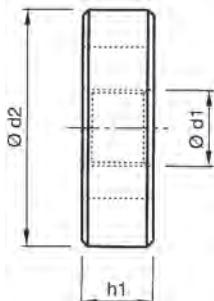


# FILIERE TONDE IMBOCCO CORRETTO

**ROUND SPLIT DIES WITH SPIRAL POINTED - FILIÈRES RONDES, ENTRÉE GUN**

DIN - EN 24230

LINE



## Materiale - Material - Matériaux

HSS

## Imbocco - Chamfer - Entrée

1,75xP

**Tolleranza - Tolerance - Tolérance**

---

BR

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Confezione: Singola  
Box: Single  
Collezione: Unique

**€** Pag. listino - Price list - Liste des prix

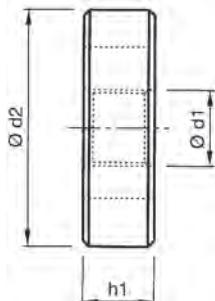
115

## • Standard

- Disponibilità da richiedere, prezzo a listino  
*On enquiry, standard price-list / Stock à vérifier*

★ Solo a richiesta  
*Only on request / Sur demande*





## Materiale - Material - Matériaux

HSS

### **Imbocco - Chamfer - Entrée**

1,75xP

## **Tolleranza - Tolerance - Tolérance**

BR

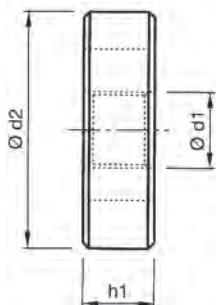
#### **Trattamento superficiale / Surface treatment / Revêtement**

## **FILIERE TONDE IMBOCCO CORRETTO**

## **ROUND SPLIT DIES WITH SPIRAL POINTED - FILIÈRES RONDES, ENTRÉE GUN**

DIN - EN 22568

LINE



## Materiale - Material - Matériau

HSS

### **Imbocco - Chamfer - Entrée**

1,75xP

**Tolleranza - Tolerance - Tolérance**

BB

## Trattamento superficiale - Surface treatment - Revêtement

BR

$\varnothing d_1$ PG	TPI	$\varnothing d_2$	$h_1$
<b>7</b>	<b>20</b>	38	14
<b>9</b>	<b>18</b>	38	14
<b>11</b>	<b>18</b>	45	14
<b>13,5</b>	<b>18</b>	45	14
<b>16</b>	<b>18</b>	55	16
<b>21</b>	<b>16</b>	65	18
<b>29</b>	<b>16</b>	65	18
<b>36</b>	<b>16</b>	90	22
<b>42</b>	<b>16</b>	105	22
<b>48</b>	<b>16</b>	105	22

*info*



*info*

# L'AZIENDA E I SUOI PRODOTTI

THE COMPANY AND ITS PRODUCTS - LA SOCIÉTÉ ET SES PRODUITS

## Materiali impiegati - Used material - Matériaux utilisés

La resa di un utensile è determinata da un insieme di fattori, ma alla base di tutto vi è il materiale con cui è stato costruito l'utensile stesso. La UFS si avvale dei migliori acciai super rapidi ad alto contenuto di cobalto (5% ed oltre, oppure ad alta percentuale di Vanadio) e di acciai da polveri sinterizzate (PM, PM1, PM3 con alte % di Co e Co + Vanadio). Questi ultimi presentano una struttura molto più omogenea, con distribuzione finissima dei carburi, con corrispondente minor pericolo di scheggiatura, minor usura e ottime prestazioni sui materiali ad alta resistenza.

- Acciaio HSSE con 5% di Cobalto impiegato per materiali da lavorare con  $R < 850 \text{ N/mm}^2$
- Acciaio HSSP con più alta percentuale di Cobalto impiegato per materiali da lavorare con  $R < 1000 \text{ N/mm}^2$
- Acciaio HSSV3 con alta percentuale di Vanadio impiegato per INOX
- Acciai PM sinterizzati ad alto contenuto di Cobalto e Vanadio impiegato per materiali da lavorare con  $R > 1000 \text{ N/mm}^2$

*The tool yield is determined by several factors, but most fundamental is the material. UFS uses the best high speed steels of high cobalt content (5% and over, or a high percentage of vanadium) and steels made from sintered powders (PM, PM1, PM3 high % of Co and Co + Va). This materials show a more homogeneous structure, with low carbide content, and with a correspondingly reduced risk of splintering, less wear and better performance on materials of high resistance.*

- HSSE steel with 5% of Cobalt used for materials to work with  $R < 850 \text{ N/mm}^2$
- HSSP steels with higher Cobalt percentage (or vanadium) used for materials to work with  $R < 1000 \text{ N/mm}^2$
- HSSV3 steel with high percentage of Vanadium, for Inox
- Sintered PM steels of a high cobalt and vanadium content used for materials to work with  $R > 1000 \text{ N/mm}^2$

*La performance d'un outil est déterminée par un certain nombre de facteurs, mais derrière tout cela il y a le matériau avec lequel il a été fabriqué. La société UFS fait usage des meilleurs aciers super rapide riches en cobalt (5 % et plus, ou avec un pourcentage élevé de vanadium) également des aciers fritté (PM, PM1, PM3 élevé en % de Co et Co + vanadium). Ces derniers ont une structure beaucoup plus homogène avec une concentration très fine de carbures, ce qui diminue considérablement les risques d'écaillage, diminue l'usure et acquièrent d'excellentes performances sur des matériaux de haute résistance.*

- Acier HSSE avec 5 % de cobalt pour les matériaux avec une résistance  $R < 850 \text{ N/mm}^2$
- Acier HSSP avec pourcentage plus élevé de Cobalt utilisé pour les matériaux avec une résistance  $R < 1000 \text{ N/mm}^2$
- HSSV3 acier avec un pourcentage de Vanadium utilisé pour l'acier inoxydable
- Aciers frittés PM avec un fort pourcentage de Cobalt Vanadium utilisés pour les matériaux avec une résistance  $R > 1000 \text{ N/mm}^2$



## Trattamenti termici - Heat Treatments - Traitements thermiques

Il trattamento termico è un fattore determinante per la resa dell'utensile e consiste in: **preriscaldi - tempra - rinvenimenti**. I preriscaldi sono graduali e la tempra è assistita da accuratissimi controlli della temperatura e dei tempi di austenitizzazione. Seguono 4-5 rinvenimenti per la trasformazione completa della struttura. Il controllo del grano austenitico avviene dopo l'austenitizzazione ed il controllo della durezza e della struttura dopo i rinvenimenti. Il trattamento termico viene eseguito in forni "sottovuoto" che garantiscono una tempra di alta qualità.

*Heat treatment is a conclusive factor for the yield of the tool and consists of preheating - hardening - tempering. The preheating is gradual and the tempering is assisted by very accurate controls of the temperature and the times of austenitisation. Then 4-5 recoveries follow for the complete transformation of the structure. The check of the austenitic grain occurs after the austenitisation and the hardness and the structure check after tempering. Heat treatment are performed in vacuum ovens, which guarantee high quality tempering.*

*Le traitement thermique est un facteur déterminant pour la performance de l'outil et se compose de: Préchauffe-trempe-revenu. Le préchauffage est progressif et le durcissement est secondé par des contrôles précis de la température. Suivent 4-5 revenus pour la transformation de la structure. Le Traitement thermique est effectué dans des fours sous « vide » de dernière génération qui garantissent une haute qualité.*

## Qualità dei prodotti - Products quality - Qualité des produits

I nostri controlli si basano da sempre su analisi metallografiche e dimensionali. Con la nuova realtà definita UFS Technology il prodotto, a campione, viene sottoposto a test di durata e a miglioramenti, specie per prodotti studiati su materiali particolari, a richiesta della Clientela. Il personale dedicato lavora a tempo pieno sia sull'avanzamento prodotto UFS sia nella definizione delle nuove forme di utensili adatti a materiali nuovi o di dichiarato interesse in Progetti di Ricerca Europei, in collaborazione con il Politecnico di Torino - Facoltà di Scienza dei Materiali - e di altre simili ed importanti Facoltà Europee, tra cui Aachen e Bilbao. Questo ci dà modo di sperimentare materiali di indubbia difficoltà, come le leghe ceramiche, ghise particolari, leghe aeronautiche e spaziali, per citarne alcune; i processi migliorativi definiti su tali materiali ci aiutano ad innalzare il livello qualitativo della normale produzione standard.

*Our checks have always been based on metallographic and dimensional tests. Thanks to the new UFS Technology, the sample product subjected is tested for durability and improved, especially with products designed using special materials at the customer's request. The staff appointed to these operations work full time both in UFS product improvement and in defining new tool shapes suitable for new materials or materials required for European Research Projects, together with Polytechnic University of Turin, Faculty of Materials Science as well as other important European Universities, including Aachen and Bilbao. This allows us to test undoubtedly difficult materials, like ceramic alloys, special cast iron, aeronautical and space alloys, among others; the improvement processes established for these materials help us to raise the quality level of the standard production.*

*Nos contrôles s'appuient toujours sur l'analyse métallographique et dimensionnelle. Avec la nouvelle structure D'UFS Technology le produit est testé pour une durabilité optimale. Le personnel travaille à plein temps sur des projets de recherche européens, en collaboration avec l'Université de Turin- la Faculté Polytechnique de science des matériaux- et d'autres institutions européennes importantes, dont Aachen et Bilbao. Cela nous donne une façon d'expérimenter des difficultés incontestables, des matériaux tels que céramiques, alliages, alliages de fer et alliage spéciaux pour l'aviation et l'espace.*



## Obiettivi - Purposes - Objectifs

Gli obiettivi definiti nel precedente catalogo sono stati ampiamente raggiunti e nel corso di questi ultimi anni i processi di produzione stabilizzati ci hanno dato modo di innalzare la qualità e la ripetibilità del prodotto.

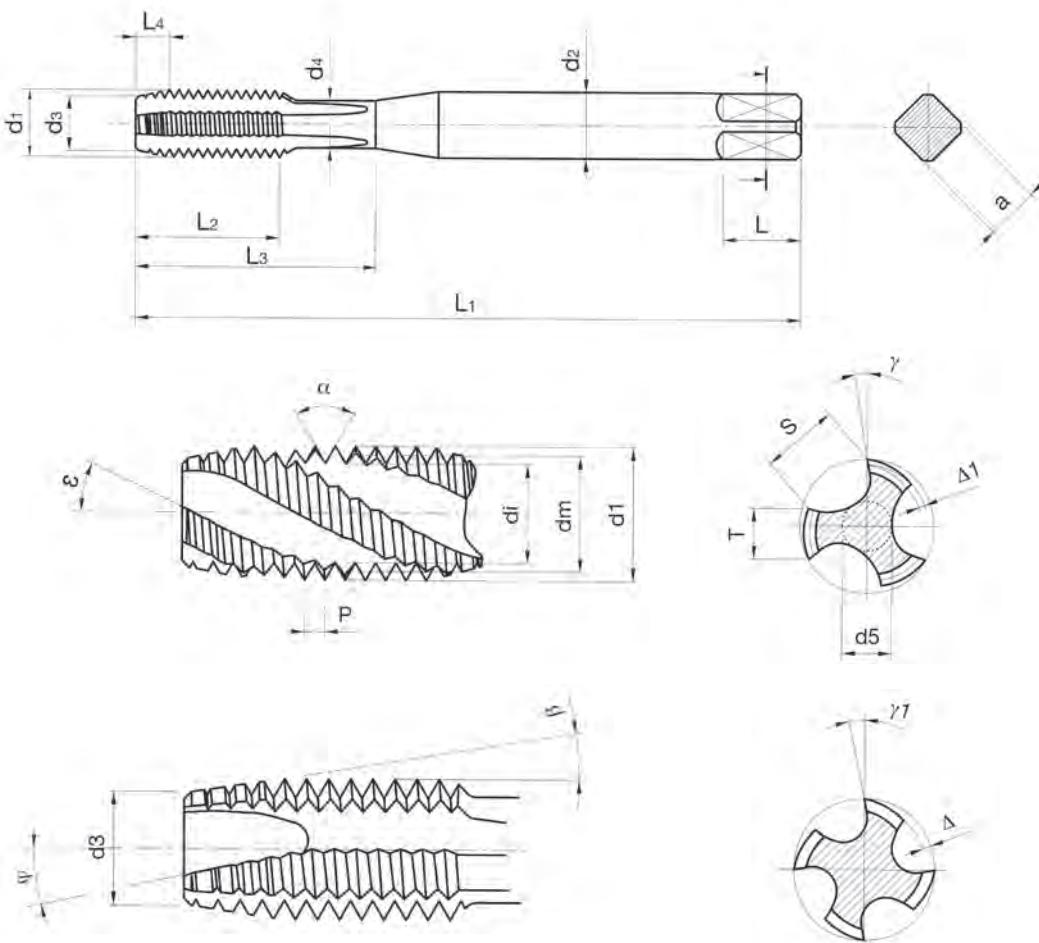
Non ci resta che confermare la rotta nella stessa direzione di miglioramento continuo, con la caparbietà che ci accompagna.

*The aims set out in our previous catalogue have been widely achieved and during these last few years the consolidated production processes have allowed us to increase product quality and repeatability. We only have to continue in this quest for continuous improvement, with our characteristic determination.*

*Les objectifs définis dans la liste précédente ont été largement atteints, et ces dernières années, les procédés de production stabilisés nous ont permis d'améliorer la qualité et la reproductibilité des outils.*

# TERMINOLOGIA DEI MASCHI

TAPS TERMINOLOGY - TERMINOLOGIE DES TARAUDS



## LEGENDA

LEGEND - LÉGENDE

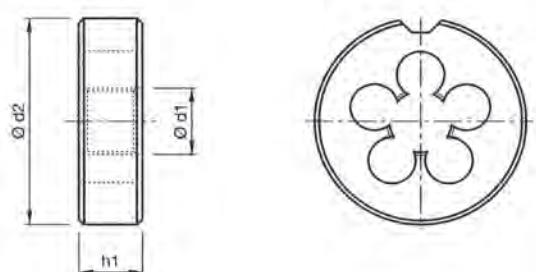
- L1:** Lunghezza totale – Total lenght - Longueur totale
- L2:** Lunghezza filetto – Thread lenght - Longueur du filet
- L4:** Lunghezza imbocco – Chamfer length - Longueur de l'entrée
- L3:** Lunghezza utile – Useful lenght - Longueur utile
- L:** Lunghezza quadro – Length of square - Longueur du cadre
- P:** Passo – Pitch - Pas
- S:** Larghezza scanalatura – Flute width - Largeur de la goujure
- d1:** Diametro est. nominale – Major diameter - Diamètre extérieur nominal
- d2:** Diametro del gambo – Shank diameter - Diamètre de queue
- d4:** Diametro del collarino – Neck diameter - Diamètre du cou
- d3:** Diametro di imbocco – Chamfer diameter - Diamètre de l'entrée
- dm:** Diametro medio – Pitch diameter - Diamètre moyen

- di:** Diametro interno – Minor diameter - Diamètre intérieur
- d5:** Diametro nucleo – Core diameter - Diamètre du noyau
- T:** Larghezza del dente – Width of land - Largeur de la dent
- alpha:** Angolo del profilo – Included angle of thread - Angle du profil
- gamma1:** Angolo di taglio frontale – Rake angle - Angle de coupe avant
- gamma:** Angolo di taglio sull'imbocco corretto – Rake angle of spiral point - Angle de coupe sur l'entrée
- beta:** Angolo di imbocco – Chamfer angle - Angle de l'entrée
- epsilon:** Inclinazione dell'elica – Spiral flute angle - Angle d'hélice
- Delta:** Spoglia sull'imbocco – Chamfer relief - Dépouille de l'entrée
- Delta1:** Spoglia sul filetto – Pitch diameter relief - Dépouille sur le filet
- a:** Quadro – Square - Carré
- phi:** Angolo inclinazione imbocco corretto – Spiral point angle - Angle d'inclinaison de l'entrée GUN

## TERMINOLOGIA FILIERE

DIES TERMINOLOGY - TERMINOLOGIE FILIERE

- d1:** Diametro nominale – Nominal diameter - Diamètre nominal
- d2:** Diametro esterno – External diameter - Diamètre extérieur
- h1:** Spessore – Thickness - Épaisseur

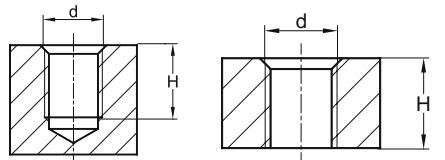


# TIPI DI FORO E RELATIVI MASCHI CONSIGLIATI

HOLE TYPES AND RECOMMENDED TAPS - TYPES DE TROU ET TARAUDS RECOMMANDÉS

## Fori ciechi e passanti

Blind and through holes - Trou borgnes et débouchant



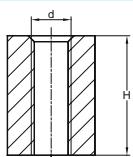
$H < 1,5 d$

E20



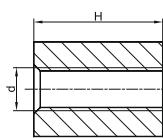
## Fori passanti

Through holes - Trou débouchant



$H < 3 d$

E24



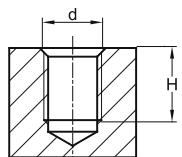
$H < 3 d$

E50



## Fori ciechi

Blind holes - Trou borgnes



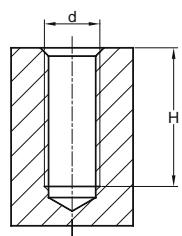
$H < 1,5 d$

E40



$H < 2,5 d$

E60



$H 2,5 \div 3 d$

E80



**BT**  
BT = Back Tapered  
Rastremazione posteriore del filetto  
Détalonnage arrière

$H > 3 d$

E82



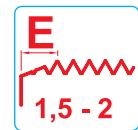
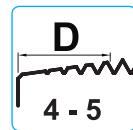
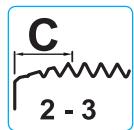
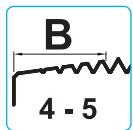
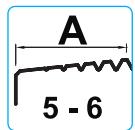
# TIPI DI IMBOCCO

CHAMFER TYPE - TYPES D'ENTRÉES

## Lunghezza

Length - Longueur

n° x P



# PREFORI DI MASCHIATURA PER MASCHI AD ASPORTAZIONE

TAPPING DRILL SIZES FOR CUTTING TAPS

PERÇAGE POUR TARAUDAGE NORMAL

## Filettatura metrica ISO DIN 13

ISO Metric coarse thread DIN 13 - Filetage métrique ISO DIN13

M	P mm		Ø di foratura 6H - drill sizes - perçage max	Ø di foratura 6H - drill sizes - perçage min
*M 1	0,25	<b>0,75</b>	0,729	0,785
*M 1,1	0,25	<b>0,85</b>	0,829	0,885
*M 1,2	0,25	<b>0,95</b>	0,929	0,985
*M 1,4	0,30	<b>1,10</b>	1,075	1,142
M 1, 6	0,35	<b>1,25</b>	1,221	1,321
M 1,70	,35	<b>1,35</b>	1,321	1,421
M 1,8	0,35	<b>1,45</b>	1,421	1,521
M 2	0,40	<b>1,60</b>	1,567	1,679
M 2,2	0,45	<b>1,75</b>	1,713	1,838
M 2,3	0,4	<b>1,90</b>	1,813	1,938
M 2,5	0,45	<b>2,05</b>	2,013	2,138
M 2,6	0,45	<b>2,10</b>	2,113	2,238
M 3	0,50	<b>2,50</b>	2,459	2,599
M 3,5	0,60	<b>2,90</b>	2,850	3,010
M 4	0,70	<b>3,30</b>	3,242	3,422
M 4, 5	0,75	<b>3,70</b>	3,688	3,878
M 5	0,80	<b>4,20</b>	4,134	4,334
M 6	1,00	<b>5,00</b>	4,917	5,153
M 7	1,00	<b>6,00</b>	5,917	6,153
M 8	1,25	<b>6,80</b>	6,647	6,912
M 9	1,25	<b>7,80</b>	7,647	7,912
M 10	1,50	<b>8,50</b>	8,376	8,676
M 11	1,50	<b>9,50</b>	9,376	9,676
M 12	1,75	<b>10,30</b>	10,106	10,441
M 14	2,00	<b>12,00</b>	11,835	12,210
M 16	2,00	<b>14,00</b>	13,835	14,210
M 18	2,50	<b>15,50</b>	15,294	15,744
M 20	2,50	<b>17,50</b>	17,294	17,744
M 22	2,50	<b>19,50</b>	19,294	19,744
M 24	3,00	<b>21,00</b>	20,752	21,252
M 27	3,00	<b>24,00</b>	23,752	24,252
M 30	3,50	<b>26,50</b>	26,211	26,771
M 33	3,50	<b>29,50</b>	29,211	29,771
M 36	4,00	<b>32,00</b>	31,670	32,270
M 39	4,00	<b>35,00</b>	34,670	35,270
M 42	4,50	<b>37,50</b>	37,129	37,799
M 45	4,50	<b>40,50</b>	40,129	40,799
M 48	5,00	<b>43,00</b>	42,587	43,297
M 52	5,00	<b>47,00</b>	46,587	47,297
M 56	5,50	<b>50,50</b>	50,046	50,796
M 60	5,50	<b>54,50</b>	54,046	54,796
M 64	6,00	<b>58,00</b>	57,505	58,308
M 68	6,00	<b>62,00</b>	61,505	62,305

## Filettatura MJ, MJ thread

DIN ISO 5855 - Filetage MJ

MJ	P mm		Ø di foratura 5H - drill sizes - perçage max	Ø di foratura 5H - drill sizes - perçage min
*MJ 3	0,50	<b>2,60</b>	2,513	2,653
*MJ 4	0,70	<b>3,40</b>	3,318	3,498
*MJ 5	0,80	<b>4,30</b>	4,221	4,421
MJ 6	1	<b>5,10</b>	5,026	5,216
MJ 8	1	<b>7,10</b>	7,026	7,216
MJ 8	1,25	<b>6,90</b>	6,782	6,994
MJ 10	1	<b>9,10</b>	9,026	9,216
MJ 10	1,25	<b>8,90</b>	8,782	8,994
MJ 10	1,5	<b>8,60</b>	8,539	8,775
MJ 12	1,25	<b>10,90</b>	10,782	10,994
MJ 12	1,5	<b>10,60</b>	10,539	10,775
MJ 12	1,75	<b>10,40</b>	10,295	10,560
MJ 14	1,5	<b>12,60</b>	12,539	12,775
MJ 14	2	<b>12,20</b>	12,051	12,351
MJ 16	1,5	<b>14,60</b>	14,539	14,775
MJ 16	2	<b>14,20</b>	14,051	14,351

\* Tolleranza - Tolerance - Tolérance: 6H

# PREFORI DI MASCHIATURA PER MASCHI AD ASPORTAZIONE

TAPPING DRILL SIZES FOR CUTTING TAPS

PERÇAGE POUR TARAUDAGE NORMAL

## Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13 - Filetage métrique ISO pas fin DIN13

MF	P mm		Ø di foratura 6H - drill sizes - perçage min	Ø di foratura 6H - drill sizes - perçage max
M 4	0,5	<b>3,50</b>	3,459	3,599
M 4,5	0,5	<b>4,00</b>	3,959	4,099
M 5	0,5	<b>4,50</b>	4,459	4,599
M 6	0,5	<b>5,50</b>	5,459	5,599
M 6	0,75	<b>5,25</b>	5,188	5,378
M 7	0,75	<b>6,25</b>	6,188	6,378
M 8	0,5	<b>7,50</b>	7,459	7,599
M 8	0,75	<b>7,25</b>	7,188	7,378
M 8	1	<b>7,00</b>	6,917	7,153
M 9	0,75	<b>8,25</b>	8,188	8,378
M 9	1	<b>8,00</b>	7,917	8,153
M 10	0,5	<b>9,50</b>	9,459	9,599
M 10	0,75	<b>9,25</b>	9,188	9,378
M 10	1	<b>9</b>	8,917	9,153
M 10	1,25	<b>8,75</b>	8,647	8,912
M 11	1	<b>10</b>	9,917	10,153
M 12	0,5	<b>11,5</b>	11,459	11,599
M 12	0,75	<b>11,25</b>	11,188	11,378
M 12	1	<b>11</b>	10,917	11,153
M 12	1,25	<b>10,75</b>	10,647	10,912
M 12	1,5	<b>10,5</b>	10,376	10,676
M 13	1	<b>12</b>	11,917	12,153
M 14	1	<b>13</b>	12,917	13,153
M 14	1,25	<b>12,75</b>	12,647	12,912
M 14	1,5	<b>12,5</b>	12,376	12,676
M 15	1	<b>14</b>	13,917	14,153
M 15	1,5	<b>13,5</b>	13,376	13,676
M 16	1	<b>15</b>	14,917	15,153
M 16	1,25	<b>14,8</b>	14,647	14,912
M 16	1,5	<b>14,5</b>	14,376	14,676
M 17	1	<b>16</b>	15,917	16,153
M 17	1,5	<b>15,5</b>	15,376	15,676
M 18	1	<b>17</b>	16,917	17,153
M 18	1,5	<b>16,5</b>	16,376	16,676
M 18	2	<b>16</b>	15,835	16,210
M 20	1	<b>19</b>	18,917	19,153
M 20	1,5	<b>18,5</b>	18,376	18,676
M 20	2	<b>18</b>	17,835	18,210
M 22	1	<b>21</b>	20,917	21,153
M 22	1,5	<b>20,5</b>	20,376	20,676
M 22	2	<b>20</b>	19,835	20,210
M 24	1	<b>23</b>	22,917	23,153
M 24	1,5	<b>22,5</b>	22,376	22,676
M 24	2	<b>22</b>	21,835	22,210
M 25	1	<b>24</b>	23,917	24,153
M 25	1,5	<b>23,5</b>	23,376	23,676
M 25	2	<b>23</b>	22,835	23,210
M 26	1,5	<b>24,5</b>	24,376	24,676
M 27	1	<b>26</b>	25,917	26,153
M 27	1,5	<b>25,5</b>	25,376	25,676
M 27	2	<b>25</b>	24,835	25,210

## Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13 - Filetage métrique ISO pas fin DIN13

MF	P mm		Ø di foratura 6H - drill sizes - perçage min	Ø di foratura 6H - drill sizes - perçage max
M 28	1	<b>27</b>	26,917	27,153
M 28	1,5	<b>26,5</b>	26,376	26,676
M 28	2	<b>26</b>	25,835	26,210
M 30	1	<b>29</b>	28,917	29,153
M 30	1,5	<b>28,5</b>	28,376	28,676
M 30	2	<b>28</b>	27,835	28,210
M 30	3	<b>27</b>	26,752	27,252
M 32	1,5	<b>30,5</b>	30,376	30,676
M 32	2	<b>30</b>	29,835	30,210
M 33	1,5	<b>31,5</b>	31,376	31,676
M 33	2	<b>31</b>	30,835	31,210
M 33	3	<b>30</b>	29,752	30,252
M 34	1,5	<b>32,5</b>	32,376	32,676
M 35	1,5	<b>33,5</b>	33,376	33,676
M 36	1,5	<b>34,5</b>	34,376	34,676
M 36	2	<b>34</b>	33,835	34,210
M 36	3	<b>33</b>	32,752	33,252
M 38	1,5	<b>36,5</b>	36,376	36,676
M 39	1,5	<b>37,5</b>	37,376	37,676
M 39	2	<b>37</b>	36,835	37,210
M 39	3	<b>36</b>	35,752	36,252
M 40	1,5	<b>38,5</b>	38,376	38,676
M 40	2	<b>38</b>	37,835	38,210
M 40	3	<b>37</b>	36,752	37,252
M 42	1,5	<b>40,5</b>	40,376	40,676
M 42	2	<b>40</b>	39,835	40,210
M 42	3	<b>39</b>	38,752	39,252
M 42	4	<b>38</b>	37,670	38,270
M 45	1,5	<b>43,5</b>	43,376	43,676
M 45	2	<b>43</b>	42,835	43,210
M 45	3	<b>42</b>	41,752	42,252
M 45	4	<b>41</b>	40,670	41,270
M 48	1,5	<b>46,5</b>	46,376	46,676
M 48	2	<b>46</b>	45,835	46,210
M 48	3	<b>45</b>	44,752	45,252
M 48	4	<b>44</b>	43,670	44,270
M 50	1,5	<b>48,5</b>	48,376	48,676
M 50	2	<b>48</b>	47,835	48,210
M 50	3	<b>47</b>	46,752	47,252
M 52	1,5	<b>50,5</b>	50,376	50,676
M 52	2	<b>50</b>	49,835	50,210
M 52	3	<b>47</b>	46,587	47,087
M 52	4	<b>48</b>	47,670	48,270
M 55	1,5	<b>53,5</b>	53,376	53,676
M 55	2	<b>53</b>	52,835	53,210
M 55	3	<b>52</b>	51,752	52,252
M 55	4	<b>51</b>	50,670	51,270
M 56	1,5	<b>54,5</b>	54,376	54,676
M 56	2	<b>54</b>	53,835	54,210
M 56	3	<b>53</b>	52,752	53,252
M 56	4	<b>52</b>	51,670	52,270

# PREFORI DI MASCHIATURA PER MASCHI AD ASPORTAZIONE

TAPPING DRILL SIZES FOR CUTTING TAPS

PERÇAGE POUR TARAUDAGE NORMAL

## Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13 - Filetage métrique ISO pas fin DIN13

MF	P mm		Ø di foratura 6H - drill sizes - perçage min	Ø di foratura 6H - drill sizes - perçage max
M 58	1,5	<b>56,5</b>	56,376	56,676
M 58	2	<b>56</b>	55,835	56,210
M 58	3	<b>55</b>	54,752	55,252
M 58	4	<b>54</b>	53,670	54,270
M 60	1,5	<b>58,5</b>	58,376	58,676
M 60	2	<b>58</b>	57,835	58,210
M 60	3	<b>57</b>	56,752	57,252
M 60	4	<b>56</b>	55,670	56,270
M 62	1,5	<b>60,5</b>	60,376	60,676
M 62	2	<b>60</b>	59,835	60,210
M 62	3	<b>59</b>	58,752	59,252
M 62	4	<b>58</b>	57,670	58,270
M 64	1,5	<b>62,5</b>	62,376	62,676
M 64	2	<b>62</b>	61,835	62,210
M 64	3	<b>61</b>	60,752	61,252
M 64	4	<b>60</b>	59,670	60,270
M 65	1,5	<b>63,5</b>	63,376	63,676
M 65	2	<b>63</b>	62,835	63,210
M 65	3	<b>62</b>	61,752	62,252
M 65	4	<b>61</b>	60,670	61,270
M 68	1,5	<b>66,5</b>	66,376	66,676
M 68	2	<b>66</b>	65,835	66,210
M 68	3	<b>65</b>	64,752	65,252
M 68	4	<b>64</b>	63,670	64,270
M 70	1,5	<b>68,5</b>	68,376	68,676
M 70	2	<b>68</b>	67,835	68,210
M 70	3	<b>67</b>	66,752	67,252
M 70	4	<b>66</b>	65,670	66,270
M 70	6	<b>64</b>	63,505	64,305
M 72	1,5	<b>70,5</b>	70,376	70,676
M 72	2	<b>70</b>	69,835	70,210
M 72	3	<b>69</b>	68,752	69,252
M 72	4	<b>68</b>	67,670	68,270
M 72	6	<b>66</b>	65,505	66,305
M 75	1,5	<b>73,5</b>	73,376	73,676
M 75	2	<b>73</b>	72,835	73,210
M 75	3	<b>72</b>	71,752	72,252
M 75	4	<b>71</b>	70,670	71,270
M 76	1,5	<b>74,5</b>	74,376	74,676
M 76	2	<b>74</b>	73,835	74,210
M 76	3	<b>73</b>	72,752	73,252
M 76	4	<b>72</b>	71,670	72,270
M 76	6	<b>70</b>	69,505	70,305
M 80	1,5	<b>78,5</b>	78,376	78,676
M 80	2	<b>78</b>	77,835	78,210
M 80	3	<b>77</b>	76,752	77,252
M 80	4	<b>76</b>	75,670	76,270
M 80	6	<b>74</b>	73,505	74,305
M 85	2	<b>83</b>	82,835	83,210
M 85	3	<b>82</b>	81,752	82,252
M 85	4	<b>81</b>	80,670	81,270
M 85	6	<b>79</b>	78,505	79,305

## Filettatura americana UNC ASME B1.1

UNC coarse thread ASME B1.1 - Filetage américain UNC ASME B1.1

UNC	P TPI		Ø di foratura 2B - drill sizes min	Ø di foratura 2B - drill sizes max
Nr. 6	32	<b>2,85</b>	2,642	2,896
Nr. 8	32	<b>3,50</b>	3,302	3,531
Nr. 10	24	<b>3,90</b>	3,683	3,937
Nr. 12	24	<b>4,50</b>	4,343	4,597
1/4	20	<b>5,10</b>	4,978	5,258
5/16	18	<b>6,60</b>	6,401	6,731
3/8	16	<b>8,00</b>	7,798	8,153
7/16	14	<b>9,40</b>	9,144	9,550
1/2	13	<b>10,80</b>	10,592	11,024
9/16	12	<b>12,20</b>	11,989	12,446
5/8	11	<b>13,50</b>	13,386	13,868
3/4	10	<b>16,50</b>	16,307	16,840
7/8	9	<b>19,50</b>	19,177	19,761
1"	8	<b>22,25</b>	21,971	22,606
1"-1/8	7	<b>25,00</b>	24,638	25,349
1"-1/4	7	<b>28,00</b>	27,813	28,524
1"-3/8	6	<b>30,75</b>	30,353	31,155
1"-1/2	6	<b>34,00</b>	33,528	34,290
1"-3/4	5	<b>39,50</b>	38,938	39,802
2"	4,5	<b>45,00</b>	44,679	45,593

## Filettatura UNJC ASME B1.15,

UNJC thread ASME B1.15 - Filetage UNJC ASME B1.15

UNJC	P TPI		Ø di foratura 3B - drill sizes min	Ø di foratura 3B - drill sizes max
Nr. 6	32	<b>2,80</b>	2,733	2,939
Nr. 8	32	<b>3,50</b>	3,393	3,599
Nr. 10	24	<b>3,90</b>	3,795	4,064
Nr. 12	24	<b>4,60</b>	4,455	4,704
1/4	20	<b>5,20</b>	5,113	5,387
5/16	18	<b>6,70</b>	6,563	6,833
3/8	16	<b>8,10</b>	7,978	8,255
7/16	14	<b>9,50</b>	9,347	9,639
1/2	13	<b>10,90</b>	10,798	11,095
9/16	12	<b>12,35</b>	12,228	12,482
5/8	11	<b>13,80</b>	13,627	13,904
3/4	10	<b>16,70</b>	16,576	16,881

# PREFORI DI MASCHIATURA PER MASCHI AD ASPORTAZIONE

TAPPING DRILL SIZES FOR CUTTING TAPS

PERÇAGE POUR TARAUDAGE NORMAL

## Filettatura americana UNF ASME B1.1

UNF fine thread ASME B1.1 - Filetage américain UNF ASME B1.1

UNF	P TPI		Ø di foratura 2B - drill sizes - perçage min	Ø di foratura 2B - drill sizes - perçage max
Nr. 6	40	<b>2,95</b>	2,819	3,023
Nr. 8	36	<b>3,50</b>	3,404	3,607
Nr. 10	32	<b>4,10</b>	3,962	4,166
Nr. 12	28	<b>4,60</b>	4,469	4,724
1/4	28	<b>5,50</b>	5,359	5,588
5/16	24	<b>6,90</b>	6,782	7,036
3/8	24	<b>8,50</b>	8,382	8,636
7/16	20	<b>9,90</b>	9,728	10,033
1/2	20	<b>11,50</b>	11,328	11,608
9/16	18	<b>12,90</b>	12,751	13,081
5/8	18	<b>14,50</b>	14,351	14,681
3/4	16	<b>17,50</b>	17,323	17,678
7/8	14	<b>20,40</b>	20,269	20,676
1"	12	<b>23,25</b>	23,114	23,571
1"-1/8	12	<b>26,50</b>	26,289	26,746
1"-1/4	12	<b>29,50</b>	29,464	29,921
1"-3/8	12	<b>32,75</b>	32,639	33,096
1-1/2	12	<b>36,00</b>	35,814	36,271

## Filettatura americana UNEF ASME B1.1

UNEF extra fine thread ASME B1.1 - Filetage américain UNEF ASME B1.1

UNEF	P TPI		Ø di foratura 2B - drill sizes - perçage min	Ø di foratura 2B - drill sizes - perçage max
1/4	32	<b>5,55</b>	5,487	5,690
5/16	32	<b>7,15</b>	7,087	7,264
3/8	32	<b>8,7</b>	8,662	8,865
7/16	28	<b>10,2</b>	10,135	10,338
1/2	28	<b>11,8</b>	11,710	11,938
9/16	24	<b>13,2</b>	13,132	13,386
5/8	24	<b>14,8</b>	14,732	14,986
11/16	24	<b>16,4</b>	16,307	16,561
3/4	20	<b>17,8</b>	17,679	17,958
13/16	20	<b>19,4</b>	19,254	19,558
7/8	20	<b>20,95</b>	20,854	21,133
15/16	20	<b>22,50</b>	22,429	22,733
1"	20	<b>24,15</b>	24,029	24,308
1"-1/16	18	<b>25,6</b>	25,451	25,781
1"-1/8	18	<b>27,15</b>	27,051	27,381
1"-3/16	18	<b>28,75</b>	28,626	28,956
1"-1/4	18	<b>30,3</b>	30,226	30,556
1"-3/8	18	<b>33,5</b>	33,401	33,731
1"-7/16	18	<b>35,1</b>	34,976	35,306
1"-1/2	18	<b>36,7</b>	36,576	36,881

## Filettatura UNJC ASME B1.15,

UNJC thread ASME B1.15 - Filetage UNJC ASME B1.15

UNJF	P TPI		Ø di foratura 3B - drill sizes - perçage min	Ø di foratura 3B - drill sizes - perçage max
Nr. 6	40	<b>2,95</b>	2,888	3,053
Nr. 8	36	<b>3,6</b>	3,480	3,663
Nr. 10	32	<b>4,15</b>	4,054	4,255
Nr. 12	28	<b>4,7</b>	4,602	4,816
1/4	28	<b>5,6</b>	5,466	5,662
5/16	24	<b>7</b>	6,906	7,109
3/8	24	<b>8,6</b>	8,494	8,679
7/16	20	<b>10</b>	9,876	10,084
1/2	20	<b>11,55</b>	11,463	11,661
9/16	18	<b>13</b>	12,913	13,122
5/8	18	<b>14,6</b>	14,501	14,702
3/4	16	<b>17,6</b>	17,506	17,722

## Filettatura americana 8-UN ASME B1.1

8-UN thread ASME B1.1 - Filetage américain 8-UN ASME B1.1

8-UN	P TPI		Ø di foratura 2B - drill sizes - perçage min	Ø di foratura 2B - drill sizes - perçage max
1"-1/8	8	<b>25,4</b>	25,146	25,781
1"-1/4	8	<b>28,6</b>	28,321	28,956
1"-3/8	8	<b>31,75</b>	31,496	32,131
1"-1/2	8	<b>34,9</b>	34,671	35,306
1"-5/8	8	<b>38,1</b>	37,846	38,481
1"-3/4	8	<b>41,3</b>	41,021	41,656
1"-7/8	8	<b>44,45</b>	44,196	44,831
2"	8	<b>47,6</b>	47,371	48,006
2"-1/4	8	<b>54</b>	53,721	54,356
2"-1/2	8	<b>60,30</b>	60,071	60,706

# PREFORI DI MASCHIATURA PER MASCHI AD ASPORTAZIONE

TAPPING DRILL SIZES FOR CUTTING TAPS

PERÇAGE POUR TARAUDAGE NORMAL

## Filettatura GAS Whitworth DIN EN ISO 228

*Whitworth pipe thread DIN EN ISO 228*

*Filetage Gaz cylindrique Whitworth DIN EN ISO 228*

GAS	P TPI		Ø di foratura - drill sizes min	Ø di foratura - drill sizes max
1/8	28	<b>8,8</b>	8,566	8,848
1/4	19	<b>11,8</b>	11,445	11,890
3/8	19	<b>15,25</b>	14,950	15,395
1/2	14	<b>19</b>	18,631	19,172
5/8	14	<b>21</b>	20,587	21,128
3/4	14	<b>24,5</b>	24,117	24,658
7/8	14	<b>28,25</b>	27,877	28,418
1"	11	<b>30,75</b>	30,291	30,931
1"1/8	11	<b>35,5</b>	34,939	35,579
1"1/4	11	<b>39,5</b>	38,952	39,592
1"1/2	11	<b>45,25</b>	44,845	45,485
1"3/4	11	<b>51,10</b>	50,788	51,428
2"	11	<b>57</b>	56,656	57,296
2"1/4	11	<b>63,10</b>	62,752	63,392
2"1/2	11	<b>72,6</b>	72,226	72,866
2"3/4	11	<b>79</b>	78,576	79,216
3"	11	<b>85,3</b>	84,926	85,566

## Filettatura gas cilindrica americana sec. ANSI B1.20.1

*American Standard straight pipe thread acc. ANSI B1.20.1*

*Filetage Gaz cylindrique américain ANSI B 1.20.1*

NPSM (NPSC)	P TPI		Ø di foratura - drill sizes NPSM	Ø di foratura - drill sizes NPSC
1/8	27		9,10	8,8
1/4	18		12	11,40
3/8	18		15,5	14,8
1/2	14		19	18,5
3/4	14		24,5	23,8
1"	11,5		30,5	29,9

## Filettatura gas cilindrica americana sec. ANSI B1.20.3

*American Standard straight pipe thread acc. ANSI B1.20.3*

*Filetage Gaz cylindrique américain ANSI B 1.20.3*

NPSF	P TPI		Ø di foratura - drill sizes min
1/8	27	<b>8,7</b>	8,651
1/4	18	<b>11,30</b>	11,232
3/8	18	<b>14,7</b>	14,671
1/2	14	<b>18,2</b>	18,118
3/4	14	<b>23,50</b>	23,465
1"	11,5	<b>29,50</b>	29,464

## Filettatura interna GAS cilindrica Whitworth ISO 7-1

*Cylindrical Whitworth internal pipe thread ISO 7-1*

*Filetage Gaz interne cylindrique Whitworth ISO 7-1*

Rp	P TPI		Ø di foratura - drill sizes min	Ø di foratura - drill sizes max
1/8	28	<b>8,6</b>	8,495	8,637
1/4	19	<b>11,5</b>	11,341	11,549
3/8	19	<b>15</b>	14,846	15,054
1/2	14	<b>18,5</b>	18,489	18,773
3/4	14	<b>24</b>	23,975	24,259
1"	11	<b>30,25</b>	30,111	30,471
1"1/4	11	<b>39</b>	38,772	39,132
1"1/2	11	<b>45</b>	44,665	45,025
2"	11	<b>56,5</b>	56,476	56,836

## Filettatura GAS Whitworth DIN EN ISO 228

*Whitworth pipe thread DIN EN ISO 228*

*Filetage Gaz cylindrique Whitworth DIN EN ISO 228*

BSW	P TPI		Ø di foratura - drill sizes min	Ø di foratura - drill sizes max
1/8	40	<b>2,5</b>	2,362	2,591
3/16	24	<b>3,6</b>	3,407	3,745
1/4	20	<b>5</b>	4,724	5,156
5/16	18	<b>6,5</b>	6,130	6,590
3/8	16	<b>7,9</b>	7,492	7,987
7/16	14	<b>9,2</b>	8,789	9,330
1/2	12	<b>10,5</b>	9,989	10,591
9/16	12	<b>12</b>	11,577	12,179
5/8	11	<b>13,4</b>	12,918	13,558
3/4	10	<b>16,4</b>	15,797	16,483
7/8	9	<b>19,25</b>	18,611	19,353
1"	8	<b>22</b>	21,334	22,147
1"1/8	7	<b>24,75</b>	23,928	24,832
1"1/4	7	<b>27,5</b>	27,103	28,007
1"1/2	6	<b>33,5</b>	32,679	33,703

# PREFORI DI MASCHIATURA PER MASCHI AD ASPORTAZIONE

TAPPING DRILL SIZES FOR CUTTING TAPS

PERÇAGE POUR TARAUDAGE NORMAL

## Filettatura per tubi corazzati DIN 40430

Steel conduit thread DIN 40430 - Filetage pour tube blindés DIN 40430

PG	P TPI		Ø di foratura - drill sizes min	Ø di foratura - drill sizes max
PG 7	20	<b>11,4</b>	11,28	11,43
PG 9	18	<b>14</b>	13,86	14,01
PG 11	18	<b>17,25</b>	17,26	17,41
PG 13,5	18	<b>19</b>	19,06	19,21
PG 16	18	<b>21,25</b>	21,16	21,31
PG 21	16	<b>27</b>	26,78	27,03
PG 29	16	<b>35,5</b>	35,48	35,73
PG 36	16	<b>45,5</b>	45,48	45,73
PG 42	16	<b>52,5</b>	52,48	52,73
PG 48	16	<b>58</b>	57,78	58,03

## Filettatura tonda DIN 405

Round thread DIN 405 - Filetage rond DIN 405

Rd	P TPI		Ø di foratura - drill sizes min	Ø di foratura - drill sizes max
8	10	<b>6</b>	5,714	6,274
9	10	<b>7</b>	6,714	7,274
10	10	<b>8</b>	7,714	8,274
11	10	<b>9</b>	8,714	9,274
12	10	<b>10</b>	9,714	10,274
14	8	<b>11,5</b>	11,142	11,812
16	8	<b>13,5</b>	13,142	13,812
18	8	<b>15,5</b>	15,142	15,812
20	8	<b>17,5</b>	17,142	17,812
22	8	<b>19,5</b>	19,142	19,812
24	8	<b>21,5</b>	21,142	21,812
26	8	<b>23,5</b>	23,142	23,812
28	8	<b>25,5</b>	25,142	25,812
30	8	<b>27,5</b>	27,142	27,812

## Filettatura ISO metrica trapezoidale DIN 103

ISO Metric trapezoidal thread DIN 103

Filetage ISO métrique trapézoïdal DIN 103

TR	P mm		Ø di foratura - drill sizes min	Ø di foratura - drill sizes max
10	2	<b>8,2</b>	8,000	8,236
10	3	<b>7,5</b>	-	-
12	2	<b>10,2</b>	10,000	10,236
12	3	<b>9,25</b>	9,000	9,315
14	3	<b>11,25</b>	11,000	11,315
14	4	<b>10,5</b>	-	-
16	4	<b>12,25</b>	12,000	12,375
18	4	<b>14,25</b>	14,000	14,375
20	4	<b>16,25</b>	16,000	16,375
22	5	<b>17,25</b>	17,000	17,450
24	5	<b>19,25</b>	19,000	19,450
26	5	<b>21,25</b>	21,000	21,450
28	5	<b>23,25</b>	23,000	23,450
30	6	<b>24,25</b>	24,000	24,500
32	6	<b>26,25</b>	26,000	26,500
36	6	<b>30,25</b>	30,000	30,500

## Filettatura ISO metrica DIN 8140-2 per filetti riportati

ISO Metric coarse thread DIN 8140-2 for wire thread inserts (STL)

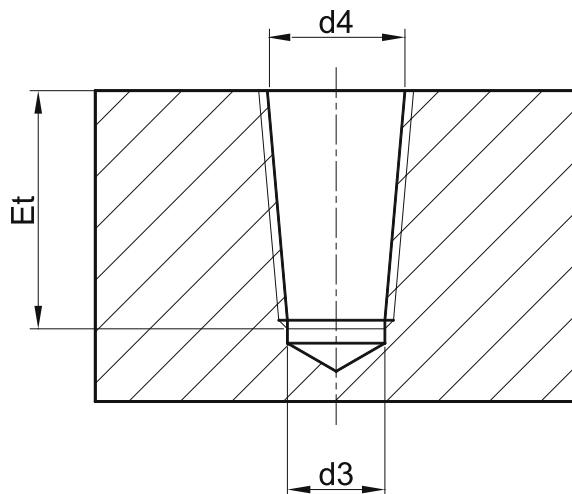
Filetage métrique ISO DIN8140-2 pour HELICOIL (flet-rapporté)

EGM	P mm		Ø di foratura - drill sizes min	Ø di foratura - drill sizes max
2	0,4	<b>2,10</b>	2,087	2,177
2,5	0,45	<b>2,65</b>	2,597	2,697
3	0,5	<b>3,15</b>	3,108	3,22
3,5	0,6	<b>3,70</b>	3,630	3,755
4	0,7	<b>4,20</b>	4,152	4,292
5	0,8	<b>5,25</b>	5,174	5,344
6	1	<b>6,30</b>	6,217	6,407
7	1	<b>7,30</b>	7,217	7,407
8	1,25	<b>8,40</b>	8,217	8,483
9	1,25	<b>9,40</b>	9,217	9,483
10	1,5	<b>10,50</b>	10,324	10,560
11	1,5	<b>11,50</b>	11,324	11,560
12	1,75	<b>12,50</b>	12,379	12,644
14	2	<b>14,50</b>	14,433	14,733
16	2	<b>16,50</b>	16,433	16,733
18	2,5	<b>18,75</b>	18,541	18,986
20	2,5	<b>20,75</b>	20,541	20,896

# PREFORI PER MASCHIATURA CONICA

TAPPING DRILL SIZES FOR CONICAL THREADING

PERÇAGE POUR LE TARAUDAGE CONIQUE



Filettatura gas conica americana, conicità 1:16 sec. ANSI/ASME B1.20.1

American tapered pipe thread, taper 1:16 acc. ANSI/ASME B1.20.1 - Filetage gaz conique américain, à cône 01:16 ANSI/ASME B 1.20.1

**NPT**



Ød1	P TPI	d3 cil./cyl. mm	d4 con./taper mm	Et = X
<b>1/16</b>	27	6,20	6,39	9,30
<b>1/8</b>	27	8,50	8,74	9,30
<b>1/4</b>	18	11	11,36	13,50
<b>3/8</b>	18	14,50	14,80	13,90
<b>1/2</b>	14	17,9	18,32	18,10
<b>3/4</b>	14	23,2	23,67	18,60
<b>1"</b>	11,5	29,00	29,69	22,30
<b>1"1/4</b>	11,5	37,8	38,45	22,80
<b>1"1/2</b>	11,5	44	44,52	22,80
<b>2"</b>	11,5	56	56,56	23,20

Filettatura gas conica americana, conicità 1:16 sec. ANSI/ASME B1.20.3

American tapered pipe thread, taper 1:16 acc. ANSI/ASME B1.20.3 - Filetage gaz conique American, à cône 01:16 ANSI/ASME B 1.20.3

**NPTF**

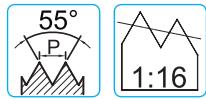


Ød1	P TPI	d3 cil./cyl. mm	d4 con./taper mm	Et = X
<b>1/16</b>	27	6,10	6,41	9,30
<b>1/8</b>	27	8,45	8,76	9,30
<b>1/4</b>	18	10,9	11,4	13,50
<b>3/8</b>	18	14,3	14,84	13,90
<b>1/2</b>	14	17,6	18,33	18,10
<b>3/4</b>	14	23,0	23,68	18,60
<b>1"</b>	11,5	28,75	29,72	22,30
<b>1"1/4</b>	11,5	37,5	38,48	22,80
<b>1"1/2</b>	11,5	43,75	44,55	22,80
<b>2"</b>	11,5	55,75	56,59	23,20

Filettatura gas conica Whitworth, conicità 1:16, ISO 7-1

Tapered Whitworth pipe thread, taper 1:16, ISO 7-1 - Filetage gaz conique Whitworth, à cône 01:16 ISO 7-1

**Rc**



Ød1	P TPI	d3 cil./cyl. mm	d4 con./taper mm	Et = X
<b>1/8</b>	28	8,20	8,57	10,1
<b>1/4</b>	19	11	11,45	15,0
<b>3/8</b>	19	14,5	14,95	15,4
<b>1/2</b>	14	18	18,63	20,4
<b>3/4</b>	14	23,5	24,12	21,7
<b>1"</b>	11	29,5	30,29	26
<b>1"1/4</b>	11	38	38,95	28,3
<b>1"1/2</b>	11	44	44,85	28,3
<b>2"</b>	11	55,5	56,66	32,6

# PREFORI DI MASCHIATURA PER MASCHI A RULLARE

TAPPING DRILL SIZES FOR ROLLING TAPS

PERÇAGE POUR LES TARAUDS À REFOULER

## Filettatura metrica ISO DIN 13

ISO metric coarse thread DIN 13 - Filetage métrique ISO DIN13

M	P mm		Toll.
2	0,4	<b>1,82</b>	± 0,02
2,2	0,45	<b>2,00</b>	± 0,02
2,3	0,4	<b>2,1</b>	± 0,02
2,5	0,45	<b>2,30</b>	± 0,02
2,6	0,45	<b>2,40</b>	± 0,02
3	0,5	<b>2,8</b>	± 0,03
3,5	0,6	<b>3,25</b>	± 0,03
4	0,7	<b>3,70</b>	± 0,03
5	0,8	<b>4,65</b>	± 0,03
6	1	<b>5,55</b>	± 0,05
8	1,25	<b>7,40</b>	± 0,05
10	1,5	<b>9,30</b>	± 0,05
12	1,75	<b>11,20</b>	± 0,05
14	2	<b>13,10</b>	± 0,05
16	2	<b>15,10</b>	± 0,05
18	2,5	<b>16,90</b>	± 0,05
20	2,5	<b>18,90</b>	± 0,05
22	2,5	<b>20,90</b>	± 0,05
24	3	<b>22,70</b>	± 0,05

## Filettatura metrica ISO passo fine DIN 13

ISO metric fine thread DIN 13 - Filetage métrique ISO pas fin DIN13

MF	P mm		Toll.
4	0,5	<b>3,80</b>	±0,03
5	0,5	<b>4,80</b>	±0,03
6	0,5	<b>5,80</b>	±0,03
6	0,75	<b>5,65</b>	±0,03
8	1	<b>7,55</b>	±0,05
10	1	<b>9,55</b>	±0,05
10	1,25	<b>9,40</b>	±0,05
12	1	<b>11,55</b>	±0,05
12	1,25	<b>11,40</b>	±0,05
12	1,5	<b>11,30</b>	±0,05
14	1	<b>13,55</b>	±0,05
14	1,25	<b>13,40</b>	±0,05
14	1,5	<b>13,30</b>	±0,05
16	1	<b>15,55</b>	±0,05
16	1,25	<b>15,40</b>	±0,05
16	1,5	<b>15,30</b>	±0,05
18	1	<b>17,55</b>	±0,05
18	1,25	<b>17,40</b>	±0,05
18	1,5	<b>17,30</b>	±0,05
20	1	<b>19,55</b>	±0,05
20	1,25	<b>19,40</b>	±0,05
20	1,5	<b>19,30</b>	±0,05
20	2	<b>19,10</b>	±0,05
22	1	<b>21,55</b>	±0,05
22	1,25	<b>21,40</b>	±0,05
22	1,5	<b>21,30</b>	±0,05
22	2	<b>21,10</b>	±0,05
24	1	<b>23,55</b>	±0,05
24	1,25	<b>23,40</b>	±0,05
24	1,5	<b>23,30</b>	±0,05
24	2	<b>23,10</b>	±0,05
26	1,5	<b>25,30</b>	±0,05
26	2	<b>25,10</b>	±0,05
27	1,5	<b>26,30</b>	±0,05
27	2	<b>26,10</b>	±0,05
28	1,5	<b>27,30</b>	±0,05
28	2	<b>27,10</b>	±0,05
30	1,5	<b>29,30</b>	±0,05
30	2	<b>29,10</b>	±0,05

# PREFORI DI MASCHIATURA PER MASCHI A RULLARE

TAPPING DRILL SIZES FOR ROLLING TAPS

PERÇAGE POUR LES TARAUDS À REFOULER

## Filettatura americana UNC ASME B1.1

UNC coarse thread ASME B1.1 - Filetage américain UNC ASME B1.1

UNC	P TPI		Toll.
6	32	<b>3,15</b>	±0,03
8	32	<b>3,80</b>	±0,03
10	24	<b>4,30</b>	±0,05
12	24	<b>5,00</b>	±0,05
1/4	20	<b>5,75</b>	±0,05
5/16	18	<b>7,25</b>	±0,05
3/8	16	<b>8,75</b>	±0,05
7/16	14	<b>10,30</b>	±0,05
1/2	13	<b>11,80</b>	±0,05
9/16	12	<b>13,30</b>	±0,05
5/8	11	<b>14,80</b>	±0,05
3/4	10	<b>17,9</b>	±0,05
7/8	9	<b>21</b>	±0,05
1'	8	<b>24</b>	±0,05

## Filettatura americana UNF ASME B1.1

UNF fine thread ASME B1.1 - Filetage américain UNF ASME B1.1

UNF	P TPI		Toll.
6	40	<b>3,20</b>	±0,03
8	36	<b>3,85</b>	±0,03
10	32	<b>4,45</b>	±0,03
12	28	<b>5,05</b>	±0,05
1/4	28	<b>5,90</b>	±0,05
5/16	24	<b>7,45</b>	±0,05
3/8	24	<b>9,00</b>	±0,05
7/16	20	<b>10,50</b>	±0,05
1/2	20	<b>12,10</b>	±0,05
9/16	18	<b>13,70</b>	±0,05
5/8	18	<b>15,25</b>	±0,05
3/4	16	<b>18,40</b>	±0,05
7/8	14	<b>21,40</b>	±0,05
1'	12	<b>24,45</b>	±0,05
1'-1/8	12	<b>27,60</b>	±0,05
1'-1/4	12	<b>30,80</b>	±0,05
1'-3/8	12	<b>34,00</b>	±0,05
1'-1/2	12	<b>37,15</b>	±0,05

## Filettatura GAS Whitworth DIN EN ISO 228

Whitworth pipe thread DIN EN ISO 228

Filetage Gaz cylindrique Whitworth DIN EN ISO 228

GAS	P TPI		Toll.
1/16	28	<b>7,25</b>	±0,05
1/8	28	<b>9,25</b>	±0,05
1/4	19	<b>12,5</b>	±0,05
3/8	19	<b>16</b>	±0,05
1/2	14	<b>20</b>	±0,05
5/8	14	<b>22</b>	±0,05
3/4	14	<b>25,5</b>	±0,05
7/8	14	<b>29,25</b>	±0,05
1'	11	<b>32</b>	±0,05
1'-1/8	11	<b>36,70</b>	±0,05
1'-1/4	11	<b>40,70</b>	±0,05

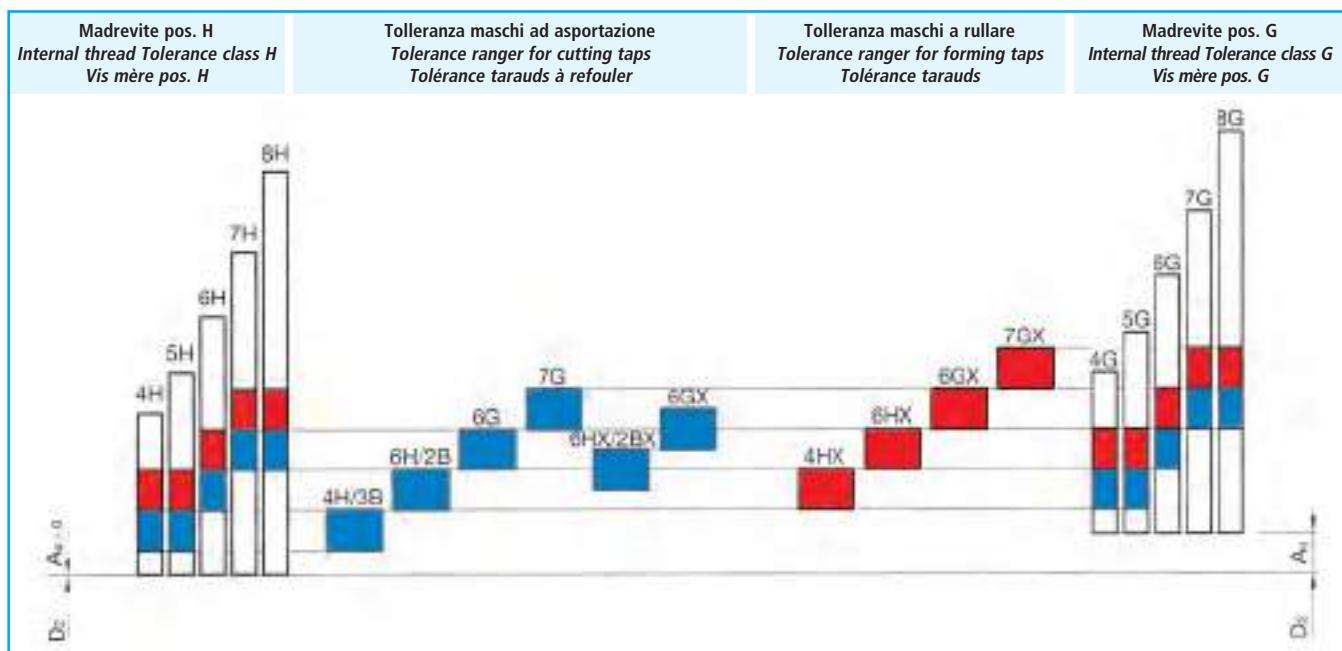
# CLASSI DI TOLLERANZA DEI MASCHI-EN22857

TOLERANCE CLASSES OF TAPS - EN 22857

CLASSES DE TOLÉRANCE DES TARAUDS - EN 22857

ISO	Maschio - Tap -Taraud		Madrevite Internal thread, nut - Vis-Mère					Accoppiamento Fit - Accouplement
	DIN	ANSI/ASME	4H	5H				
ISO 1	4H	3B	4H	5H				Senza gioco Fit without allowance - Sans jeu
ISO 2	6H	2B	4G	5G	6H			Con gioco standard Standard fit - Avec jeu standard
ISO 3	6G	1B			6G	7H	8H	Con gioco speciali Special fit with allowance - Avec jeu spécial
	7G					7G	8G	Largo per successivi rivestimenti Loose fit, for subsequent coating Large pour les revêtements subséquents

Posizione della tolleranza  
Tolerance classes - Emplacement de la tolérance



L'accoppiamento più comunemente utilizzato è quello relativo alle classe ISO 2, 6H o 2B. Per accoppiamenti più precisi, senza gioco tra i fianchi del filetto, deve essere utilizzato un accoppiamento "più stretto" di classe ISO 1, 4H o 3B. Le tolleranze ISO 3, 6G o 1B sono utilizzate per accoppiamenti grossolani, applicate nel caso di ricoprimenti superficiali successivi al processo di filettatura.

Standard fit for a thread is according tolerance ISO 2, 6H or 2B and so, for more precise fit, without any allowance on thread flanks, You have to choose ISO 1, 4H and 3B, for American threading. For following coatings to be applied after threading You have to use ISO 3, 6G, 1B.

Le couplage plus couramment utilisé est lié à la classe ISO 2, 6H ou 2B. Pour les assemblages plus précis sans jeu entre les côtés du filet, doit être utilisé un « resserrement » ISO classe 1, 4H ou 3B. Tolérances ISO 3, 6G ou 1B sont utilisés pour les pas grossiers, appliqués dans le cas des revêtements de surface suite au processus de taraudage.

Vengono inoltre realizzate tolleranze intermedie 6HX e 6GX applicate su tipologie di maschi che lavorano materiali abrasivi, come la ghisa, per aumentare la durata. Un'altra applicazione delle tolleranze intermedie X è quella relativa ai maschi a rullare, che realizzano la filettatura mediante processo di deformazione plastica; in questo caso, ad esempio, per ottenere una filettatura 6H il maschio viene realizzato in tolleranza 6HX per compensare il ritorno elastico del materiale lavorato.

Taps'manufacturers produce taps with tolerance 6HX and 6GX and not only 6H and 6G. These taps are used for cast iron, to increase tools'life or for forming taps. In those cases You have to use 6HX tap to compensate the elastic return of the material.

Il a également les 6GX 6HX tolérances intermédiaire appliquées et sur les types de tarauds travaillant les matériaux abrasifs, comme la fonte, pour une durabilité accrue. Une autre application de tolérances intermédiaire X sont les tarauds à refouler, effectuant le filetage à travers les processus de déformation plastique; dans ce cas, par exemple, pour obtenir un 6H le taraud est en tolérance 6HX pour compenser le retour élastique du matériau travaillé.

Nelle pagine successive sono riportati gli scostamenti standard (6H e 2B) per le filettature M, MF,UNC, UNF e GAS.

In the following pages shows the standard fit (6H and 2B) for threads M, MF, UNC, UNF and GAS

Dans les pages qui suivent sont les écarts-types (6H et 2B) pour les filetages M, MF, UNC, UNF et GAZ

# TOLLERANZE DI FABBRICAZIONE SUI DIAMETRI MEDI DEI MASCHI

MANUFACTURING TOLERANCES ON PITCH DIAMETER

TOLÉRANCES DE LA FABRICATION SUR LES DIAMÈTRES MOYENS DES TARAUDS

**M - ISO Passo GROSSO** - ISO Metric Coarse Thread - M-ISO pas gros

Ød1	P mm	Diametri medi 6H Pitch diameter 6H - Diamètres moyens 6H	
		Min	Max
2	0,4	1,761	1,776
2,5	0,45	2,231	2,246
3	0,5	2,699	2,715
3,5	0,6	3,137	3,155
4	0,7	3,574	3,593
4,5	0,75	4,042	4,061
5	0,8	4,510	4,530
6	1	5,385	5,409
7	1	6,385	6,409
8	1,25	7,226	7,251
9	1,25	8,226	8,251
10	1,5	9,068	9,096
11	1,5	10,068	10,096
12	1,75	10,911	10,943
14	2	12,752	12,786
16	2	14,752	14,786
18	2,5	16,430	16,466
20	2,5	18,430	18,466
22	2,5	20,430	20,466
24	3	22,115	22,157
27	3	25,115	25,157
30	3,5	27,794	27,839
33	3,5	30,794	30,839
36	4	33,473	33,520
39	4	36,473	36,520
42	4,5	39,152	39,202
45	4,5	42,152	42,202
48	5	44,832	44,885
52	5	48,832	48,885
56	5,5	52,512	52,568
60	5,5	56,512	56,568
64	6	60,193	60,253
68	6	64,193	64,253

**M, MF, UNC, UNF**

Dimensioni in mm

Dimensions in mm

$$H = 0,866 \ 03 \ P$$

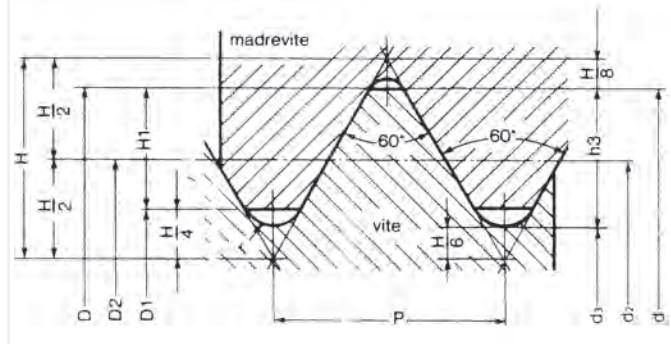
$$H_1 = \frac{5}{8} H = 0,541 \ 27 \ P$$

$$h_3 = \frac{17}{24} H = 0,613 \ 43 \ P$$

$$d_2 = D_2 = d - \frac{3}{4} H = d - 0,649 \ 52 \ P$$

$$d_3 = d - 2 h_3 = d - 1,223 \ 87 \ P$$

$$r = \frac{H}{6} = 0,144 \ 34 \ P$$



**MF - ISO Passo FINE** - ISO Metric Fine Thread - MF- ISO pas fin

Ød1	P mm	Diametri medi 6H Pitch diameter 6H - Diamètres moyens 6H	
		Min	Max
2,5	0,35	2,293	2,307
3	0,35	2,794	2,809
3,5	0,35	3,294	3,309
4	0,5	3,699	3,715
4,5	0,5	4,199	4,215
5	0,5	4,699	4,715
5,5	0,5	5,199	5,215
6	0,75	5,545	5,566
7	0,75	6,545	6,566
8	1	7,385	7,409
9	1	8,385	8,409
10	1	9,385	9,409
10	1,25	9,226	9,251
12	1,25	11,230	11,258
12	1,5	11,071	11,101
14	1,25	13,230	13,258
12	1,5	11,071	11,101
15	1,5	14,071	14,101
16	1,5	15,071	15,101
17	1,5	16,071	16,101
18	1,5	17,071	17,101
18	2	16,752	16,786
20	1,5	19,071	19,101
20	2	18,752	18,786
22	1,5	21,071	21,101
22	2	20,752	20,786
24	1,5	23,074	23,106
24	2	22,755	22,791
25	1,5	24,074	24,106
25	2	23,755	23,791
27	1,5	26,074	26,106
27	2	25,755	25,791
28	1,5	27,074	27,106
28	2	26,755	26,791
30	1,5	29,074	29,106
30	2	28,755	28,791
30	3	28,115	28,157
32	1,5	31,074	31,106
32	2	30,755	30,791
33	1,5	32,074	32,106
33	2	31,755	31,791
33	3	31,115	31,157

Ød1	P mm	Diametri medi 6H Pitch diameter 6H - Diamètres moyens 6H	
		Min	Max
35	1,5	34,074	34,106
36	1,5	35,074	35,106
36	2	34,755	34,791
36	3	34,115	34,157
39	1,5	38,074	38,106
39	2	37,755	37,791
39	3	37,115	37,157
40	1,5	39,074	39,106
40	2	38,755	38,791
40	3	38,115	38,157
42	1,5	41,074	41,106
42	2	40,755	40,791
42	3	40,115	40,157
42	4	39,473	39,520
45	1,5	44,074	44,106
45	2	43,755	43,791
45	3	43,115	43,157
45	4	42,473	42,520
48	1,5	47,077	47,111
48	2	46,758	46,796
48	3	46,118	46,163
48	4	45,477	45,527
50	1,5	49,077	49,111
50	2	48,758	48,796
50	3	48,118	48,163
52	1,5	51,077	51,111
52	2	50,758	50,796
52	3	50,118	50,163
55	4	52,477	52,527
55	1,5	54,077	54,111
55	2	53,758	53,796
55	3	53,118	53,163
55	4	52,477	52,527
56	1,5	55,077	55,111
56	2	54,758	54,796
56	3	54,118	54,163
56	4	53,477	53,527

# TOLLERANZE DI FABBRICAZIONE SUI DIAMETRI MEDI DEI MASCHI

MANUFACTURING TOLERANCES ON PITCH DIAMETER

TOLÉRANCES DE LA FABRICATION SUR LES DIAMÈTRES MOYENS DES TARAUDS

Filettatura UNC (ASME B1.1) - UNC Coarse Thread - Filetage UNC

Ød1	P TPI	Diametri medi 2B Pitch diameter 2B - Diamètres moyens 2B	
		Min	Max
Nr. 1	64	1,611	1,626
Nr. 2	56	1,904	1,919
Nr. 3	48	2,186	2,201
Nr. 4	40	2,447	2,462
Nr. 5	40	2,777	2,792
Nr. 6	32	3,009	3,029
Nr. 8	32	3,670	3,690
Nr. 10	24	4,158	4,178
Nr. 12	24	4,818	4,838
1/4	20	5,570	5,590
5/16	18	7,066	7,086
3/8	16	8,538	8,558
7/16	14	9,979	9,999
1/2	13	11,475	11,495
9/16	12	12,957	12,977
5/8	11	14,425	14,445
3/4	10	17,450	17,470
7/8	9	20,452	20,472
1	8	23,397	23,417
1-1/8	7	26,292	26,317
1-1/4	7	29,467	29,492
1-3/8	6	32,249	32,274
1-1/2	6	35,424	35,449
1-3/4	5	41,240	41,270
2	5	47,223	47,253
2-1/4	5	53,583	53,603
2-1/2	4	59,475	59,495
2-3/4	4	65,826	65,846
3	4	72,176	72,196

Filettatura UNF (ASME B1.1) - UNF Fine Thread - Filetage UNF

Ød1	P TPI	Diametri medi 2B Pitch diameter 2B - Diamètres moyens 2B	
		Min	Max
Nr. 0	80	1,333	1,348
Nr. 1	72	1,640	1,655
Nr. 2	64	1,941	1,956
Nr. 3	56	2,235	2,250
Nr. 4	48	2,516	2,531
Nr. 5	44	2,815	2,830
Nr. 6	40	3,107	3,122
Nr. 8	36	3,727	3,747
Nr. 10	32	4,330	4,350
Nr. 12	28	4,916	4,936
1/4	28	5,800	5,820
5/16	24	7,290	7,310
3/8	24	8,877	8,897
7/16	20	10,333	10,353
1/2	20	11,920	11,940
9/16	18	13,416	13,436
5/8	18	15,004	15,024
3/4	16	18,064	18,084
7/8	14	21,097	21,127
1	12	24,075	24,105
1-1/8	12	27,250	27,280
1-1/4	12	30,425	30,455
1-3/8	12	33,600	33,630
1-1/2	12	36,775	36,805

## GAS

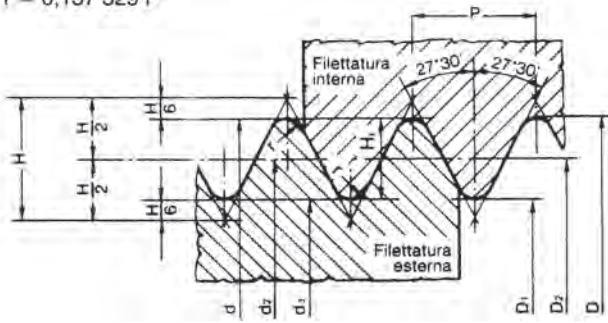
Dimensioni in mm  
Dimensions in mm

$$P = \frac{25,4}{z}$$

$$H = 0,960\ 491\ P$$

$$H_1 = 0,640\ 327\ P$$

$$r = 0,137\ 329\ P$$



## Filettatura GAS Cilindrica

Whitworth pipe Thread - Filetage GAZ cylindrique

Ød1	P TPI	Diametri medi 2B Pitch diameter - Diamètres moyens	
		Min	Max
1/8	28	9,189	9,209
1/4	19	12,349	12,369
3/8	19	15,849	15,869
1/2	14	19,848	19,868
5/8	14	21,798	21,818
3/4	14	25,328	25,348
7/8	14	29,088	29,108
1	11	31,831	31,851
1-1/8	11	36,481	36,501
1-1/4	11	40,491	40,511
1-3/8	11	42,901	42,921
1-1/2	11	46,391	46,411
1-3/4	11	52,351	52,371
2	11	58,211	58,231
2-1/4	11	64,321	64,341
2-3/8	11	68,011	68,031
2-1/2	11	73,791	73,811
2-3/4	11	80,151	80,171
3	11	86,501	86,521
3-1/4	11	92,601	92,621
3-1/2	11	98,951	98,971
3-3/4	11	105,301	105,321
4	11	111,651	111,671

# RIVESTIMENTI E TRATTAMENTI SUPERFICIALI

COATINGS AND SURFACE TREATMENTS  
REVÊTEMENTS ET TRAITEMENTS DE SURFACE

	Codice UFS	Microdurezza HV 0,05	Coefficiente di attrito	Temperatura di massima lavorazione	Proprietà		Applicazione
	UFS Code	Micro hardness Micro - dureté	Friction coefficient Coefficient frottement	Max working temperature Température travail max.	Properties Propriétés		Applications Application
<b>TiN</b>	T	2300	0,4	600	◇	Rivestimento di base per applicazioni generali e lavorazione degli acciai basso e medio legati. <i>Coating for general applications and machining low and medium alloy steels.</i> <i>Revêtement de base pour les applications générales et le traitement de bas- et moyen des aciers alliés.</i>	
<b>TiN-G</b>	TG	2300	0,2	600	◇	Applicazioni generali per maschiatura a rullare ad alto rendimento, UFS TOP serie X2 ed X3. <i>General applications for high-performance former taps, UFS TOP series X2 and X3.</i> <i>Applications générales pour taraudage à refouler à haut rendement, UFS TOP série X2 et X3.</i>	
<b>TiCN</b>	CT	3000	0,4	400	◇	Applicazione su materiali abrasivi come la ghisa, leghe di nichel e titanio. <i>Application on abrasive materials (ex. cast iron), nickel and titanium alloys.</i> <i>Application sur les matériaux abrasifs tels que fonte, alliages de nickel et de titane.</i>	
<b>new CrN</b> Nitruro di cromo Chromium nitride Nitrate de chrome	NC	3000	0,25	850	♦ *	Applicazione su acciaio di medio - bassa resistenza. Particolarmente indicato per rame, ottone, bronzo e zama. <i>Application on medium - low resistance steel. Particularly suitable for copper, brass, bronze and zamak.</i> <i>Application sur acier de moyenne- faible résistance. Particulièrement adapté pour le cuivre, laiton, Laiton et zamak.</i>	
<b>TiAIN</b> Tinalox	TX	3500	0,4	900	♦	Applicazione per materiali abrasivi (ghisa), a secco e per alte velocità di taglio. Lavorazioni su acciai ad alta resistenza legati e temprati. <i>Application for abrasive materials (cast iron), dry machining and for high speed cutting. Working on high-strength alloy steel and hardened.</i> <i>Application pour matériaux abrasifs (fonte), Usinage a sec et haute vitesses. Travaillant sur les aciers à haute résistance et prés-traités.</i>	
<b>ZrN</b> Nitruro di zirconio Zirconium nitride Nitrate de zirconium	TZ	1600	-	-	*	Ad esaurimento scorte o su richiesta. <i>Applicazione per alluminio e sue leghe.</i> <i>Exhausted for standard item or on request.</i> <i>Application for aluminium and its alloys.</i> <i>Sur demande épuisement des stocks.</i> <i>Application pour l'aluminium et ses alliages.</i>	
<b>new VS</b> Vaporizzazione Super Super steam tempering Vaporisation Super	VS	1600	0,15	380	*	Nuovo rivestimento di ultima generazione, evoluzione della classica vaporizzazione. Trova applicazione su alluminio a basso contenuto di silicio, acciai dolci e materiali teneri con tendenza ad incollare. <i>New coating, latest generation, evolution of the classic steam tempering for low % Si aluminium, low resistance steel and soft materials with a tendency to stick.</i> <i>Nouvelle génération de revêtement, évolution de la vaporisation classique. Application sur l'aluminium à faible pourcentage de silicium, aciers doux et matériaux tendre avec tendance de soudures a froid.</i>	
<b>new XP</b> TiN-X Plus	XP	2300	0,15	600	◇ *	Nuovo rivestimento per acciai di medio bassa resistenza, particolarmente consigliato per maschiatura compensata. <i>New coating for medium-low resistance steel, recommended for tapping with axial compensation.</i> <i>Nouveau revêtement pour les aciers de moyenne - faible Résistance, particulièrement recommandée pour Taraudage compensé.</i>	
<b>TXC</b> Tinalox + Carbon	TXC	3500	0,15	850	♦ *	Combinazione di un rivestimento 3500 HV ed uno strato autolubrificante, consigliato per maschiatura di fori ciechi profondi. Applicazione su INOX ed Alluminio con alto contenuto di Si. <i>Combination of a coating 3500 HV and a lubricating layer, recommended for tapping blind deep holes. Application on stainless steel and aluminium with a high % of Si.</i> <i>Combinaison d'un revêtement de 3500 HV et une couche autolubrifiant recommandé pour exploiter des trous borgnes profonds.</i> <i>Application pour acier inoxydable et aluminium à haute teneur de Si.</i>	

# RIVESTIMENTI E TRATTAMENTI SUPERFICIALI

COATINGS AND SURFACE TREATMENTS

REVÊTEMENTS ET TRAITEMENTS DE SURFACE

	Codice UFS	Microdurezza HV 0,05	Coefficiente di attrito	Temperatura di massima lavorazione	Proprietà		Applicazione
	UFS Code	Micro hardness Micro - dureté	Friction coefficient Coefficient frottement	Max working temperature Température travail max.	Properties Propriétés		Applications Application
<b>V</b> Vaporizzazione Steam Tempering Vaporisation	V	400	-	-	*		Trattamento superficiale di base indicato per la lavorazione degli acciai dolci o basso legati, acciai automatici (AVP) e alluminio puro o con basso contenuto di silicio. <i>Basic surface treatment suited for machining soft steel, low alloy steels, automatic steel (AVP), pure aluminium and aluminium low % Si.</i> <i>Traitemet de surface base propres à la transformation des aciers doux ou faiblement alliés, Acier de décolletage (AVP) et aluminium pur ou à faible composition de silicium.</i>
<b>NQ</b> Nitridazione NQ Nitriding NQ Nituration NQ	NQ	1300	-	-	◇		Trattamento superficiale di tipo tradizionale utilizzato per lavorazioni della ghisa e del bronzo a truciolo corto. <i>Traditional surface treatment used for machining cast iron and short chip bronze.</i> <i>Traitemet de surface traditionnel Utilisé pour l'usinage de la fonte et bronze copeaux courts.</i>
<b>TXS</b>	TXS	3200	0,25	1100	*		Applicazione su ghisa ed elevata resa produttiva. <i>Application for cast iron and high yield.</i> <i>Application sur la fonte et à haut rendement.</i>

◇ Resistenza all'usura

*Wear resistance - Résistance à l'usure*

◆ Resistenza all'usura e all'ossidazione

*Oxidation and wear resistance - Résistance à l'usure et l'oxydation*

\* Facilita lo scorrimento del truciolo

*Chip evacuation - Fluage du copeau*

\* Resistenza all'usura, stabilità termica, durezza a caldo

*Wear resistance, thermal shock stability and hot hardness - Résistance à l'usure, stabilité thermique, dureté chaude*

## VAPORIZZAZIONE

STEAM TEMPERING - VAPORISATION

## TiN

TiN

Tanti sono i trattamenti superficiali specifici per i materiali da filettare, ma volendo semplificare al massimo, 2 sono quelli che si dividono la maggior percentuale d'impiego e, quindi, di vendita.

*There are so many specific surface treatments for threaded materials, but to simplify it as much as possible, most applications use two different types.*

*Il existe de nombreux traitements de surface spéciaux pour les matériaux à fileter, mais pour vouloir simplifier au maximum, 2 sont ceux qui divisent le plus grand pourcentage d'utilisation et de vente.*



# COMPARAZIONE DUREZZE

## HARDNESS COMPARISON TABLE

## COMPARAISON DE DURETÉ

HV Vickers Durezza	HRC Rockwell Durezza	HB Brinell Durezza	Resistenza Tensile Strength - Résistance N/mm <sup>2</sup>	Tons/sq. in.
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	124
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 Durezza	HRC Rockwell Durezza	HB Brinell Durezza	Resistenza Tensile Strength - Résistance N/mm <sup>2</sup>	Tons/sq. in.
434	44	416	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	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

Secondo norma ISO 18265:2003 per gli acciai (ad esclusione degli acciai rapidi)

According to ISO 18265:2003 for steels (except high speed steels) - Selon la norme ISO 18265:2003 pour les aciers (sauf les aciers rapides)

# GRUPPI MATERIALE

MATERIAL GROUPS

GROUPES DE MATÉRIAUX

1 Acciaio

*Steel - Aciers*

268 ÷ 269 ►

Acciaio legato – Alta resistenza e Temprato

*Alloyed steel – high strength steel an hardened steel / Aciers allié - haute résistance - acier trempé*

269 ÷ 270 ►

2 Acciaio INOX

*Stainless Steel*

270 ÷ 271 ►

3 Ghisa

*Cast Iron*

272 ►

4 Alluminio, Magnesio

*Aluminum, Magnesium - Aluminium, magnésium*

273 ÷ 274 ►

5 Rame

*Cooper - Cuivre*

274 ÷ 275 ►

6 Titanio

*Titanium - Titane*

275 ►

7 Nichel

*Nickel*

275 ÷ 276 ►

8 Materie plastiche

*Synthetic materials - Plastiques*

276 ►

9 Materiali Speciali

*Special Materials - Matériaux spéciaux*

277 ►

10 Grafite

*Graphite*

277 ►

<b>1</b>	<b>Acciaio - Steel - Acier</b>				
<b>1.1</b>	<b>Acciaio dolce magnetico Rm &lt; 400 N/mm<sup>2</sup>, &lt; 120 HB</b>				
	<i>Magnetic soft steel - Acier doux magnétique</i>				
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>		
	1.1013	RFe100	-		
	1.1014	Rfe80	-		
	1.1015	Rfe60	-		
<b>1.2</b>	<b>Acciaio da costruzione, da cementazione, automatico Rm &lt; 700 N/mm<sup>2</sup>, &lt; 200 HB</b>				
	<i>Structural steel, case carburizing steel, free cutting steel - Acier de construction, en acier trempé</i>				
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>		
Acciaio da costruzione  Structural steel  Acier de construction	1.0037	St37-2	Fe360B		
	1.0044	St44-2	Fe430B		
	1.0050	St50-2	Fe490		
	1.0060	St60-2	Fe590		
	1.0070	St70-2	Fe690		
	1.0570	St52-3	Fe510B, C, D		
	1.0301	C10	C10		
	1.0401	C15	C15		
	1.0402	C22	C20, C21		
	1.0406	C25	C25		
Acciaio da cementazione  Case carburizing steel  Acier trempé	1.7131	16MnCr5	16MnCr5		
	1.7147	20MnCr5	20MnCr5		
	1.5919	15CrNi6	16CrNi4		
	1.6523	21NiCrMo2	20NiCrMo2		
	1.6587	17CrNiMo6	18NiCrMo7		
	1.0711	9S20	CF10S20		
	1.0715	9SMn28	CF9SMn28		
	1.0718	9SMnPb28	CF9SMnPb28		
	1.0726	35S20	CF35SMn10		
	1.0736	9SMn36	CF9SMn36		
Acciaio automatico (AVP)  Free cutting steel  Acier automatique	1.0737	9SMnPb36	CF9SMnPb36		
	<b>1.3</b>	<b>Acciaio al carbonio Rm &lt; 850 N/mm<sup>2</sup>, &lt; 250 HB</b>			
		<i>Plain carbon steel - Acier au carbone</i>			
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>		
Da bonifica  Heat-treatable steel  De revenu	1.0528	C30	-		
	1.0501	C35	C35		
	1.0511	C40	C40		
	1.0503	C45	C45		
	1.0540	C50	-		
	1.0535	C55	C55		
	1.0601	C60	C60		
	1.1178	Ck30	-		
	1.1181	Ck35	C35		
	1.1191	Ck45	C46		

Continua Acciaio al carbonio / Continue Plain carbon steel / Acier au carbone à suivre

	W-Nr.	DIN - Germany	UNI - Italy
Per molle <i>Spring steel</i> <i>Pour les ressorts</i>	1.1231	Ck67	C70
	1.1248	Ck75	C75
	1.1269	Ck85	C85
	1.1274	Ck101	C100
Da tempra superficiale <i>Surface hardening</i> <i>De durcissement de surface</i>	1.1183	Cf35	C36, C38
	1.1193	Cf45	C43
	1.1213	Cf53	C53
Acciaio legato <i>Alloyed steel</i> - <i>Acier allié</i>	<b>1.4</b>	<b>Acciaio legato - bonificato, fusioni d'acciaio Rm &lt; 850 N/mm<sup>2</sup>, &lt; 250 HB</b> Alloyed steel, tempered steel, steel castings - Acier allié, trempé et revenu, fusion d'acier	
	<b>1.5</b>	<b>Acciaio legato - bonificato Rm 850 ÷ 1200 N/mm<sup>2</sup>, 250 ÷ 350 HB</b> Alloyed steel, tempered steel - Acier allié, trempé et revenu	
	<b>1.6</b>	<b>Acciaio legato - alta resistenza Rm 1200 ÷ 1400 N/mm<sup>2</sup>, 38 ÷ 45 HRC</b> Alloyed steel, high strength steel - Acier allié - haute résistance	
	<b>1.7</b>	<b>Acciaio legato - alta resistenza Rm 1400 ÷ 1600 N/mm<sup>2</sup>, 45 ÷ 49 HRC</b> Alloyed steel, high strength steel - Acier allié - haute résistance	
	<b>1.8</b>	<b>Acciaio legato - temprato 49 ÷ 62 HRC</b> Hardened steel - Acier trempé	
	1.7035	41Cr4	41Cr4
	1.8159	50CrV4, 51CrV4	51CrV4
	1.7218	25CrMo4	25CrMo4
Da bonifica <i>Heat-treatable steel</i> <i>De revenu</i>	1.7220	34CrMo4	35CrMo4
	1.7225	42CrMo4	42CrMo4
	1.7228	50CrMo4	-
	1.7242	16CrMo4	18CrMo4
	1.6580	30CrNiMo8	30NiCrMo8
	1.6582	34CrNiMo6	35NiCrMo6 (KW)
	1.6511	36CrNiMo4	38NiCrMo4 (KB)
	1.6773	36NiCrMo16	34NiCrMo16
Da nitrurazione <i>Nitriding steel</i> <i>De nitruration</i>	1.6565	40NiCrMo6	-
	1.8515	31CrMo12	31CrMo12
	1.8519	31CrMoV9	-
	1.8507	34CrAlMo7	34CrAlMo7
	1.8509	41CrAlMo7	41CrAlMo7
Da cuscinetti <i>Ball bearing steel</i> <i>Roulements</i>	1.3505	100Cr6	100Cr6
	1.3537	100CrMo7	100CrMo7
Per molle <i>Spring steel</i> <i>Ressorts</i>	1.5025	51Si7	48Si7
	1.5026	56Si7	55Si7
	1.5027	60Si7	-
	1.7108	60SiCr7	60SiCr8
	1.8159	50CrV4	50CrV4
	1.7176	55Cr3	55Cr3
	1.7701	51CrMoV4	-
	1.0446	GS-45	-
Fusioni d'acciaio (ghisa acciaiosa) <i>Steel castings</i> <i>Acier coulé</i>	1.0552	GS-52	-
	1.5919	GS-15CrNi6	-
	1.7218	GS-25CrMo4	-
	1.7220	GS-34CrMo4	-
	1.7379	GS-18CrMo9-10	-

Continua Acciaio legato / Continue Alloyed steel / Acier allié à suivre

	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
Per tempra superficiale <i>Surface hardening</i> <i>De durcissement de surface</i>	1.7005	45Cr2	-
	1.7006	46Cr2	46Cr2
	1.7043	38Cr4	-
	1.7034	37Cr4	36CrMn4
	1.7223	41CrMo4	41CrMo4
Per lavorazioni a caldo <i>Hot work tool steel</i> <i>Travail à chaud</i>	1.2767	45NiCrMo16	42NiCrMo 15 7
	1.2713	55NiCrMoV6	-
	1.2714	55NiCrMoV7	55NiCrMoV7KU
	1.2311	40CrMnMo7	35CrMo8KU
	1.2365	X32CrMoV3-3	30CrMoV12-27KU
	1.2343	X38CrMoV5-1	X37CrMoV5-1KU
	1.2344	X40CrMoV5-1	X40CrMoV5-1-1KU
	1.2567	X30WCrV5-3	X30WCrV5-3KU
	1.2581	X30WCrV9-3	X30WCrV9-3KU
	1.2080	X210Cr12	X205Cr12KU
Per lavorazioni a freddo <i>Cold work tool steel</i> <i>Travail à froid</i>	1.2083	X42Cr13	-
	1.2363	X100CrMoV5-1	X100CrMoV5-1KU
	1.2379	X155CrVMo12-1	X155CrVMo12-1KU
	1.2510	100MnCrW4	95MnWCr5KU
	1.2550	60WCrV7	55WCrV8KU
Acciaio rapido HSS, HSS-E <i>High speed steel</i> <i>Acier rapide</i>	1.2842	90MnCrV8	90MnVCr8KU
	1.3202	S 12-1-4-5	(T15)
	1.3207	S 10-4-3-10	HS 10-4-3-10 (T42)
	1.3243	S 6-5-2-5	HS 6-5-2-5 (M35)
	1.3247	S 2-10-1-8	HS 2-9-1-8 (M42)
	1.3343	S 6-5-2	HS 6-5-2 (M2)
	1.3344	S 6-5-3	(M3/2)
	1.3348	S 2-9-2	HS 2-9-2 (M7)
	-	HS 6-5-3-8	(ASP2030, ASP30)
	-	HS 10-2-5-8	(ASP2052, ASP52)
1.7 Acciaio speciale Rm<1600 N/mm <sup>2</sup> <i>Special steel</i> <i>Acier spécial</i>	-	HS 6-7-6-10	(ASP2060, ASP60)
	-	-	HARDOX 400
	-	-	HARDOX 450
1.8 Acciaio speciale 49 – 62 HRC <i>Special steel</i> <i>Acier spécial</i>	-	-	HARDOX 500
	-	-	HARDOX 600

## 2

### Acciaio INOX - Stainless Steel - Acier inoxydable

Acciaio INOX automatico Rm < 850 N/mm<sup>2</sup>, < 250 HB

Free machining stainless steel - Automatique acier inoxydable

<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
1.4104	X14CrMoS17	X10CrS17 (AISI 430F)
1.4305	X8CrNiS18-9	X10CrNiS18-9 (AISI 303)

Continua Acciaio INOX / Continue Stainless Steel / Acier inoxydable à suivre

<b>2.2</b>	<b>Austenitico Rm &lt; 850 N/mm<sup>2</sup>, &lt; 250 HB</b> <i>Austenitic stainless steel - Austénitique</i>		
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
	1.4301	X5CrNi18-10	X5CrNi18-10 (AISI 304)
	1.4306	X2CrNi19-11	X2CrNi18-11 (AISI 304L)
	1.4401	X5CrNiMo18-10	X5CrNiMo17-12 (AISI 316)
	1.4404	X2CrNiMo17-13-2	X2CrNiMo17-12 (AISI 316L)
	1.4406	X2CrNiMoN17-12-2	X2CrNiMoN17-12 (AISI 316LN)
	1.4435	X2CrNiMo18-14-3	X2CrNiMo17-13
	1.4438	X2CrNiMo18-16-4	X2CrNiMo18-15 (AISI 317L)
	1.4541	X6CrNiTi18-10	X6CrNiTi18-11 (AISI 321)
	1.4550	X6CrNiNb18-10	X8CrNiNb18-11 (AISI 347)
	1.4828	X15CrNiSi20-12	X16CrNi23-14
	1.4841	X15CrNiSi25-20	X16CrNiSi25-20 (AISI 314)
	1.4845	X12CrNi25-21	X6CrNi25-20 (AISI 310S)
<b>2.3</b>	<b>Ferritico, Ferritico + Austenitico, Martensitico Rm &lt; 1100 N/mm<sup>2</sup>, &lt; 320 HB</b> <i>Ferritic, ferritic + austenitic, martensitic - Ferritique, ferritique + austénitique, martensitique</i>		
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
	1.4002	X6CrAl13	X6CrAl13 (AISI 405)
	1.4003	X2Cr11	X2CrNi12
	1.4016	X6Cr17	X8Cr17 (AISI 430)
	1.4510	X6CrTi17	X6CrTi17 (AISI 430Ti)
	1.4509	X2CrTiNb18	X2CrTiNb18
	1.4512	X5CrTi12	X6CrTi12 (AISI 409)
	1.4462	X2CrNiMoN22-5-3	X2CrNiMoN22-5-3
	1.4501	X2CrNiMoCuWN25-7-4	X2CrNiMoCuWN25-7-4
	1.4006	X10Cr13	X12Cr13 (AISI 410)
	1.4005	X12CrS13	X12CrS13 (AISI 416)
	1.4021	X20Cr13	X20Cr13 (AISI 420)
<b>2.4</b>	<b>Martensitico Rm 1100 ÷ 1400 N/mm<sup>2</sup>, 330 ÷ 410 HB</b> <i>Martensitic Rm 1100 ÷ 1400 N/mm<sup>2</sup>, 330 ÷ 410 HB</i>		
	<i>Cr-Ni alloys high temperatures resistant - Alliages Cr-Ni résistant à des températures élevées</i>		
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
	1.4542	X5CrNiCuNb16-4	(AISI 630, 17-4 PH)
	1.4545	X4CrNiCu16-6	(15-5 PH)
	1.4568	X7CrNiAl17-7	(17-7 PH)
	1.4922	X20CrMoV11-1	-
	1.4939	X12CrNiMo12	-
	1.4944	-	(AISI 660)
	1.4980	X6NiCrTiMoVB25-15-2	

**3****Ghisa - Cast Iron - Fonte**

3.1

**Ghisa grigia lamellare Rm < 600 N/mm<sup>2</sup>, < 180 HB***Lamellar grey cast iron - Fonte grise lamellaire*

W-Nr.	DIN - Germany	UNI - Italy
0.6010	GG-10	G 10
0.6015	GG-15	G 15
0.6020	GG-20	G 20

**Ghisa grigia lamellare Rm 600 ÷ 1000 N/mm<sup>2</sup>, 180 ÷ 300 HB**

3.2

*Lamellar grey cast iron - Fonte grise lamellaire*

W-Nr.	DIN - Germany	UNI - Italy
0.6025	GG-25	G 25
0.6030	GG-30	G 30
0.6035	GG-35	G 35
0.6040	GG-40	G 40

**Ghisa sferoidale Rm < 1000 N/mm<sup>2</sup>, < 300 HB**

3.3

*Nodular cast iron - Fonte ductile*

W-Nr.	DIN - Germany	UNI - Italy
0.7033	GGG-35.3	-
0.7040	GGG-40	GS400-12
0.7043	GGG-40.3	GSO 42/17
0.7050	GGG-50	GS500-7
0.7060	GGG-60	GS600-3
0.7070	GGG-70	GS700-2
0.7080	GGG-80	GS800-2
0.7670	GGG-Ni22	-
0.7683	GGG-Ni35	-
0.7660	GGG-NiCr20-2	-
0.7677	GGG-NiCr30-1	-
0.7685	GGG-NiCr35-3	-

**Ghisa malleabile Rm < 700 N/mm<sup>2</sup>, < 210 HB**

3.4

*Malleable cast iron - Fonte malléable*

W-Nr.	DIN - Germany	UNI - Italy
0.8035	GTW-35-04	-
0.8045	GTW-45-07	-
0.8145	GTS-45-06	-
0.8165	GTS-65-02	-
0.8170	GTS-70-02	-

**Ghisa vermicolare a grafite compatta Rm 700 ÷ 1000 N/mm<sup>2</sup>, 200 ÷ 300 HB**

3.5

*Compacted cast iron with vermicular graphite - Fonte vermiculaire à graphite compacté*

W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
		(CGI)
		(GGV)
		(GJV)

<b>4</b>	<b>Alluminio, Magnesio - Aluminium, Magnesium - Alliage, Magnésium</b>		
<b>4.1</b>	<b>Alluminio / Magnesio non legato Rm &lt; 350 N/mm<sup>2</sup>, &lt; 100 HB</b>		
	<i>Alluminium / Magnesium unalloyed - Aluminium / Magnésium non allié</i>		
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
	3.0205	Al99	3567 (9001/1)
	3.0255	Al99.5	4507 (9001/2)
	3.0285	Al99.8	4509 (9001/4)
	3.0305	Al99.9	-
	3.3208	Al99.9MgSi	-
	3.3308	Al99.9Mg0.5	-
	3.3318	Al99.9Mg1	-
<b>4.2</b>	<b>Leghe di Al, Si &lt; 0,5% - truciolo lungo Rm &lt; 500 N/mm<sup>2</sup>, &lt; 150 HB</b>		
	<i>Al alloys, long chipping - Alliage, coupeaux longs</i>		
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
Si < 0,5% Leghe da deformazione plastica <i>Al wrought alloys</i> <i>Alliages par déformation plastique</i>	3.0505	AlMn0.5Mg0.5	(AISI 3105)
	3.0915	AlFeSi	(AISI 8011A)
	3.3315	AlMg1	5764 (5005, Peraluman100)
	3.3525	AlMg2Mn0.3	(AISI 5251)
	3.3527	AlMg2Mn0.8	(AISI 5049)
	3.3545	AlMg4Mn	(AISI 5086)
	3.3555	AlMg5	(AISI 5056A)
	3.0615	AlMgSiPb	(AISI 6012)
	3.1255	AlCuSiMn	3581 (AISI2014)
	3.1325	AlCuMg1	3579 (AISI 2017A, Avional 100)
	3.1355	AlCuMg2	3583 (AISI 2024, Avional 150)
	3.3547	AlMg4.5Mn	7790 (AISI 5083, Peraluman 460)
	3.3206	AlMgSi0.5	3569 (AISI 6060, Anticorodal 050)
	3.2315	AlMgSi1	3571 (AISI 6082, Anticorodal 110)
	3.4365	AlZnMgCu1.5	3735 (AISI 7075, Ergal 55)
Si < 0,5% Leghe da getti <i>Al casting alloys</i> <i>Tarauds pour alliages coulée</i>	3.1371	G-AlCu4TiMg	-
	3.3241	G-AlMg3Si	-
	3.3261	G-AlMg5Si	-
	3.3541	G-AlMg3	-
<b>4.3</b>	<b>Leghe di Al, Si &lt; 10% - truciolo medio Rm &lt; 500 N/mm<sup>2</sup>, &lt; 150 HB</b>		
	<i>Al alloys, medium chipping - Alliage Al - coupeaux moyen</i>		
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
Si < 10% Leghe da getti <i>Al casting alloys</i> <i>Tarauds pour alliages coulée</i>	3.2134	G-AlSi5Cu1Mg	3600
	3.2161	G-AlSi8Cu3	5075
	3.2162.05	GD-AlSi8Cu3	-
	3.2371	G-AlSi7Mg	7257
	3.2373	G-AlSi9Mg	3051
<b>4.4</b>	<b>Leghe Al, Si &gt; 10% - truciolo corto Rm &lt; 600 N/mm<sup>2</sup>, &lt; 180HB</b>		
	<i>Al alloys, short chipping - Alliage Al - coupeaux courts</i>		
	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>UNI - Italy</b>
Si > 10% Leghe da getti <i>Al casting alloys</i> <i>Tarauds pour alliages coulée</i>	3.2381	G-AlSi10Mg	3049
	3.2383	G-AlSi10Mg(Cu)	-
	3.2581	G-AlSi12	5079
	3.2583	G-AlSi12(Cu)	3048

Continua leghe di Magnesio / Continue Magnesium alloys / Alliages de Magnésium à suivre

		<b>Leghe standard di magnesio Rm 120 ÷ 300 N/mm<sup>2</sup></b>
<b>4.5</b>		<i>Magnesium standard alloys - Alliages de magnésium standards</i>
	<b>W-Nr.</b>	<b>DIN - Germany</b>
	3.5200	MgMn2
	3.5312	MgAl3Zn
	3.5632	MgAl6Zu3
	3.5812	MgAl8Zn1
	3.5912	MgAl9Zn1
		<b>Denom. comm./Trade name/Nom comm.</b>
		(MAGNUMINIUM 133)
		(AZ31)
		(AZ63)
		(AZ81 hp)
		(AZ91 hp)
		<b>Leghe di magnesio ad alta resistenza Rm 240 ÷ 400 N/mm<sup>2</sup>, 70 ÷ 120 HB</b>
<b>4.6</b>		<i>High strength magnesium alloys - Alliages de magnésium de haute résistance</i>
	3.5161	MgZn6Zr
	3.5612	MgAl6Zn1
		<b>(ZK60)</b>
		<b>(AZ61)</b>
<b>5</b>	<b>RAME - Cooper - Cuivre</b>	
		<b>Rame puro, rame elettrolitico - truciolo lungo Rm &lt; 350 N/mm<sup>2</sup>, &lt; 100 HB</b>
<b>5.1</b>		<i>Cooper unalloyed, long chipping - Cuivre pur, cuivre électrolytique, coupeaux longs</i>
	<b>W-Nr.</b>	<b>DIN - Germany</b>
	2.0040	OF-Cu
	2.0060	E-Cu57
	2.0065	E-Cu58
	2.0070	Se-Cu
	2.0076	SW-Cu
	2.0090	SF-Cu
		<b>Denom. comm./Trade name/Nom comm.</b>
		-
		-
		-
		-
		-
		-
		<b>Leghe di rame, α ottone - truciolo lungo Rm &lt; 700 N/mm<sup>2</sup>, &lt; 200 HB</b>
<b>5.2</b>		<i>Cooper alloys, soft brass, long chipping - Alliages de cuivre, laiton, coupeaux longs</i>
Ottone / Brass / Laiton	<b>W-Nr.</b>	<b>DIN - Germany</b>
	2.0240	CuZn15, Ms85
	2.0250	CuZn20, Ms80
	2.0265	CuZn30, Ms70
	2.0280	CuZn33, Ms67
	2.0321	CuZn37, Ms63
	2.0335	CuZn36, Ms64
Bronzo / Bronze		
	2.1016	CuSn4
	2.1020	CuSn6
	2.1030	CuSn8
	2.1080	CuSn6Zn6
		<b>Denom. comm./Trade name/Nom comm.</b>
		-
		-
		-
		-
		-
		-
		-
		<b>Leghe di rame, β ottone, bronzo - truciolo corto Rm &lt; 700 N/mm<sup>2</sup>, &lt; 200 HB</b>
<b>5.3</b>		<i>Cooper alloys, hard brass, bronze, short chipping - Alliages de cuivre, laiton, bronze, coupeaux courts</i>
Ottone / Brass / Laiton	<b>W-Nr.</b>	<b>DIN - Germany</b>
	2.0360	CuZn40 (Ms60)
	2.0380	CuZn39Pb2 (Ms58)
	2.0410	CuZn44Pb2 (Ms56)
	2.0510	CuZn37Al1
	2.0550	CuZn40Al2
	2.0561	CuZn40Al1
	2.0580	CuZn40Mn1Pb
Bronzo / Bronze		
	2.2140	G-ZnAl4
	2.1086	G-CuSn10Zn
	2.1093	G-CuSn6ZnNi
	2.1096	G-CuSn5ZnPb
		<b>Denom. comm./Trade name/Nom comm.</b>
		-
		-
		-
		(ZAMAK)
		-
		-
		-
		-

Continua Bronzo / Continue Bronze / Bronze à suivre

5.4	<b>Bronzo ad alta resistenza Rm &lt; 1500 N/mm<sup>2</sup>, &lt; 440 HB</b> <i>High strength bronze - Bronze haute résistance</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 2px;">W-Nr.</th><th style="text-align: center; padding: 2px;">DIN - Germany</th><th style="text-align: center; padding: 2px;">Denom. comm./Trade name/Nom comm.</th></tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">2.0932</td><td style="text-align: center; padding: 2px;">CuAl8Fe3</td><td style="text-align: center; padding: 2px;">(Ampco12)</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.0936</td><td style="text-align: center; padding: 2px;">CuAl10Fe3Mn2</td><td style="text-align: center; padding: 2px;">(Ampco16, Ampco 15)</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.0940</td><td style="text-align: center; padding: 2px;">CuAl10Fe</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.0966</td><td style="text-align: center; padding: 2px;">CuAl10Ni5Fe4</td><td style="text-align: center; padding: 2px;">(Ampco)</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.0978</td><td style="text-align: center; padding: 2px;">CuAl11Ni6Fe5</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">-</td><td style="text-align: center; padding: 2px;">CuAl11Fe4</td><td style="text-align: center; padding: 2px;">(Ampco 20)</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.0882</td><td style="text-align: center; padding: 2px;">CuNi30MnFe</td><td style="text-align: center; padding: 2px;">-</td></tr> </tbody> </table>			W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.	2.0932	CuAl8Fe3	(Ampco12)	2.0936	CuAl10Fe3Mn2	(Ampco16, Ampco 15)	2.0940	CuAl10Fe	-	2.0966	CuAl10Ni5Fe4	(Ampco)	2.0978	CuAl11Ni6Fe5	-	-	CuAl11Fe4	(Ampco 20)	2.0882	CuNi30MnFe	-
W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.																									
2.0932	CuAl8Fe3	(Ampco12)																									
2.0936	CuAl10Fe3Mn2	(Ampco16, Ampco 15)																									
2.0940	CuAl10Fe	-																									
2.0966	CuAl10Ni5Fe4	(Ampco)																									
2.0978	CuAl11Ni6Fe5	-																									
-	CuAl11Fe4	(Ampco 20)																									
2.0882	CuNi30MnFe	-																									
6	<b>Titanio - Titanium - Titane</b>																										
6.1	<b>Titanio non legato Rm &lt; 700 N/mm<sup>2</sup>, &lt; 200 HB</b> <i>Titanium unalloyed - Titane non allié</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 2px;">W-Nr.</th><th style="text-align: center; padding: 2px;">DIN - Germany</th><th style="text-align: center; padding: 2px;">Altro / Other / Autres</th></tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">3.7024</td><td style="text-align: center; padding: 2px;">Ti99.8</td><td style="text-align: center; padding: 2px;">T35, Grade 1</td></tr> <tr> <td style="text-align: center; padding: 2px;">3.7034</td><td style="text-align: center; padding: 2px;">Ti99.7</td><td style="text-align: center; padding: 2px;">T40, Grade 2</td></tr> <tr> <td style="text-align: center; padding: 2px;">3.7055</td><td style="text-align: center; padding: 2px;">Ti99.6</td><td style="text-align: center; padding: 2px;">T50, Grade 3</td></tr> <tr> <td style="text-align: center; padding: 2px;">3.7064</td><td style="text-align: center; padding: 2px;">Ti99.5</td><td style="text-align: center; padding: 2px;">T60, Grade 4</td></tr> </tbody> </table>			W-Nr.	DIN - Germany	Altro / Other / Autres	3.7024	Ti99.8	T35, Grade 1	3.7034	Ti99.7	T40, Grade 2	3.7055	Ti99.6	T50, Grade 3	3.7064	Ti99.5	T60, Grade 4									
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3.7034	Ti99.7	T40, Grade 2																									
3.7055	Ti99.6	T50, Grade 3																									
3.7064	Ti99.5	T60, Grade 4																									
6.2	<b>Leghe di titanio Rm &lt; 900 N/mm<sup>2</sup>, &lt; 270 HB</b> <i>Titanium alloys - Alliages de titane</i>																										
6.3	<b>Leghe di titanio Rm &lt; 1400 N/mm<sup>2</sup>, &lt; 410 HB</b> <i>Titanium alloys - Alliages de titane</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 2px;">W-Nr.</th><th style="text-align: center; padding: 2px;">DIN - Germany</th><th style="text-align: center; padding: 2px;">Altro / Other / Autres</th></tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">3.7124</td><td style="text-align: center; padding: 2px;">TiCu2</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">3.7154</td><td style="text-align: center; padding: 2px;">TiAl6Zr5</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">3.7164, 3.7165</td><td style="text-align: center; padding: 2px;">TiAl6V4</td><td style="text-align: center; padding: 2px;">Grade 5</td></tr> <tr> <td style="text-align: center; padding: 2px;">3.7174</td><td style="text-align: center; padding: 2px;">TiAl6V6Sn2</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">3.7184</td><td style="text-align: center; padding: 2px;">TiAl4Mo4Sn2</td><td style="text-align: center; padding: 2px;">-</td></tr> </tbody> </table>			W-Nr.	DIN - Germany	Altro / Other / Autres	3.7124	TiCu2	-	3.7154	TiAl6Zr5	-	3.7164, 3.7165	TiAl6V4	Grade 5	3.7174	TiAl6V6Sn2	-	3.7184	TiAl4Mo4Sn2	-						
W-Nr.	DIN - Germany	Altro / Other / Autres																									
3.7124	TiCu2	-																									
3.7154	TiAl6Zr5	-																									
3.7164, 3.7165	TiAl6V4	Grade 5																									
3.7174	TiAl6V6Sn2	-																									
3.7184	TiAl4Mo4Sn2	-																									
7	<b>Nichel - Nickel - Nickel</b>																										
7.1	<b>Nichel non legato Rm &lt; 500 N/mm<sup>2</sup>, &lt; 150 HB</b> <i>Nickel unalloyed - Nickel non allié</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 2px;">W-Nr.</th><th style="text-align: center; padding: 2px;">DIN - Germany</th><th style="text-align: center; padding: 2px;">Denom. comm./Trade name/Nom comm.</th></tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">1.3911</td><td style="text-align: center; padding: 2px;">Rni24</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">1.3926</td><td style="text-align: center; padding: 2px;">Rni12</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">1.3927</td><td style="text-align: center; padding: 2px;">Rni8</td><td style="text-align: center; padding: 2px;">-</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.4061</td><td style="text-align: center; padding: 2px;">Ni99,6</td><td style="text-align: center; padding: 2px;">Nickel 205</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.4066</td><td style="text-align: center; padding: 2px;">Ni99,2</td><td style="text-align: center; padding: 2px;">Nickel 200</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.4068</td><td style="text-align: center; padding: 2px;">LC-Ni99</td><td style="text-align: center; padding: 2px;">Nickel 201</td></tr> </tbody> </table>			W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.	1.3911	Rni24	-	1.3926	Rni12	-	1.3927	Rni8	-	2.4061	Ni99,6	Nickel 205	2.4066	Ni99,2	Nickel 200	2.4068	LC-Ni99	Nickel 201			
W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.																									
1.3911	Rni24	-																									
1.3926	Rni12	-																									
1.3927	Rni8	-																									
2.4061	Ni99,6	Nickel 205																									
2.4066	Ni99,2	Nickel 200																									
2.4068	LC-Ni99	Nickel 201																									
7.2	<b>Leghe di Nichel Rm &lt; 900 N/mm<sup>2</sup>, &lt; 270 HB</b> <i>Nickel alloys - Alliages de Nickel</i>																										
7.3	<b>Leghe di Nichel Rm &lt; 1600 N/mm<sup>2</sup>, &lt; 470 HB</b> <i>Nickel alloys - Alliages de Nickel</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 2px;">W-Nr.</th><th style="text-align: center; padding: 2px;">DIN - Germany</th><th style="text-align: center; padding: 2px;">Denom. comm./Trade name/Nom comm.</th></tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">1.3912</td><td style="text-align: center; padding: 2px;">X2Ni36</td><td style="text-align: center; padding: 2px;">Invar</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.4360</td><td style="text-align: center; padding: 2px;">NiCu30Fe</td><td style="text-align: center; padding: 2px;">Monel 400</td></tr> <tr> <td style="text-align: center; padding: 2px;">2.4375</td><td style="text-align: center; padding: 2px;">NiCu30Al</td><td style="text-align: center; padding: 2px;">Monel K500</td></tr> </tbody> </table>			W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.	1.3912	X2Ni36	Invar	2.4360	NiCu30Fe	Monel 400	2.4375	NiCu30Al	Monel K500												
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2.4360	NiCu30Fe	Monel 400																									
2.4375	NiCu30Al	Monel K500																									

Continua leghe Nichel / Continue Nickel alloys / Alliages de Nickel à suivre

<b>7.2 – 7.3</b>	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>Denom. comm./Trade name/Nom comm.</b>
	2.4602	NiCr17Mo17FeW	Hastelloy C
	2.4630	Ni-Cr20Ti	Nimonic 75
	2.4631	NiCr20TiAl	Nimonic 80A
	2.4634	NiCo20Cr15MoAlTi	Nimonic 105
	2.4636	NiCo15Cr15MoAlTi	Udimet 700
	2.4654	NiCr20Co14MoTi	Wasaloy
	2.4662	NiCr13Mo6Ti3	Nimonic 901
	2.4665	NiCr22Fe18Mo	Hastelloy X
	2.4668	NiCr19Fe19NbMo	Inconel 718
	2.4670	G-NiCr13Al6MoNb	Nimocast 713
	2.4674	NiCo15Cr10MoAlTi	Nimocast PK24
	2.4816	NiCr15Fe	Inconel 600
	2.4856	NiCr22Mo9Nb	Inconel 625

## 8

### Materie plastiche - Synthetic materials - Matériaux de plastique

#### Materiali termoplastici - truciolo extralungo Rm < 80 N/mm<sup>2</sup>

Thermoplastics, extra long chipping - Matériaux thermoplastique, coupeaux extra-longue

<b>8.1</b>	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>Denom. comm./Trade name/Nom comm.</b>
	-	-	ABS
	PE	Polyethylene	Hostalen
	PP	Polypropylene	Hostalen PP
	PVC	Polyvinyl chloride	Hostalit, Vestolit, Vinoflex
	PS	Polystyrene	Polystyrol
	PMMA	Polymethyle acryle	Plexiglas
	PTFE	Polytetrafluorethylene	Teflon
	PA	Polyamide	Nylon, Ultramid
	PC	Polycarbonate	Makralon
	PI	Thermoplastic polyamide	Kinel

#### Materiali termoindurenti - truciolo corto Rm < 110 N/mm<sup>2</sup>

Thermosetting plastics, short chipping - Matériaux thermodurcissables, coupeaux courts

<b>8.2</b>	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>Denom. comm./Trade name/Nom comm.</b>
	PF	Phenol formaldehyde	Pertinax
	MF	Melamine formaldehyde	Albanit, Resopal
	UF	Urea formaldehyde	Bakelite

#### Materie plastiche con fibre di rinforzo Rm 800 ÷ 1500 N/mm<sup>2</sup>, 240 ÷ 440 HB

Reinforced plastic materials - Plastiques avec fibres de renfort

<b>8.3</b>	<b>W-Nr.</b>	<b>DIN - Germany</b>	<b>Denom. comm./Trade name/Nom comm.</b>
	AFK	Aramid	Kevlar
	BFK	Boron	Boro
	CFK	Carbon fibre	Resine + Fibra di carbonio
	GFK	Glass fibre	Resine + fibre di vetro
	SFK	Synthetic fibre	Resine + fibre sintetiche

9	<b>Materiali Speciali - Special Materials - Matériaux spéciaux</b>		
9.1	<b>Materiali metallo – ceramici (Cermets) Rm &lt; 1700 N/mm<sup>2</sup>, &lt; 51 HRC</b> <i>TIC - Hard materials - Matériaux métalliques, céramiques (Cermet)</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
			Ferritan
			Ferro Titanit
			Ferrotic
9.2	<b>Leghe a base Cobalto Rm &lt; 1200 N/mm<sup>2</sup>, &lt; 350 HB</b> <i>Alloys on cobalt base - Alliages à base de cobalt</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
			AiResist
			Biodur
			Celsit
			Haynes Alloy
			Stellite
9.3	<b>Leghe di tungsteno Rm &lt; 1800 N/mm<sup>2</sup>, &lt; 52 HRC</b> <i>Tungsten alloys - Alliages de tungstène</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
			Anviloy
			Denal
			Densimet
			Mallory
10	<b>Grafite - Graphite</b>		
10.1	<b>Grafite Rm &lt; 100 N/mm<sup>2</sup></b> <i>Graphite</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
			Graphit R8340
			Technograph 15
			Technograph 30
			R8510
			R8650
			Union Poco EDM1
			Union Poco EDM3

# CONDIZIONI GENERALI DI VENDITA

SALES GENERAL CONDITIONS

CONDITIONS GÉNÉRALES DE VENTE

## Accettazione dell'ordine - Acceptance of the order - Prise en compte de la commande

Sono considerati ordini validi solo quelli scritti. In caso di ordine telefonico dovrà seguire pertanto la conferma scritta.

*Only written orders are considered as valid. Telephone orders must be confirmed in writing.*

*Sont considérés comme ordres valides, les commandes suivies d'une confirmation écrite.*

*Idem pour les commandes Commande téléphoniques.*

## Consegna - Delivery - Livraison

Gli ordini verranno evasi dal nostro magazzino in Sparone (TO) in base alla disponibilità dello stesso.  
I termini di consegna da noi indicati nelle offerte si intendono validi, salvo imprevisti.

*The orders will be sent from our store in Sparone (TO) depending on the availability of the goods.  
Our delivery terms shown in the offers are intended as valid, circumstances permitting.*

*Les commandes seront expédiées depuis notre entrepôt de Sparone (TO), sous réserve de disponibilité des produits.  
Les délais de livraison indiqués dans nos offres sont exacts, sauf « circonstances imprévues ».*

## Spedizione - Shipment - Expédition

La merce viaggia sempre a rischio e pericolo del committente, anche in caso di merce franco destino. Saranno utilizzati i corrieri celeri, giornalieri, ad esclusione del servizio postale, se non richiesto espressamente dal cliente. In tal caso il rischio di mancato recapito, o di mancata rintracciabilità della merce sarà di esclusiva competenza del cliente. I prodotti sono confezionati in contenitori in P.P. singoli o multipli, atti a preservare l'integrità degli utensili durante il trasporto.

*The goods always travels at the buyer's risk, also in the case of goods free at destination. Fast couriers are used which deliver on the same day as ordered, not using the postal service, unless expressly requested by the customer. If the goods do not arrive, or if the goods cannot be traced, it will be the exclusive responsibility of the customer and the goods are shipped after payment.  
The products are packaged in single or multiple P.P. containers, to preserve the integrity of the tools during transport.*

*Les marchandises voyagent toujours aux risques et périls du client, même en cas de marchandise franco de port. Nous utilisons les transports rapides, tous les jours, à l'exclusion de la poste, sauf demande du client. Dans ce cas, le risque de défaut de livraison ou non-tracabilité des marchandises sont sous la seule responsabilité du client. Les produits sont conditionnés dans un emballage en P.P. simples ou multiples, afin de préserver l'intégrité des outils pendant le transport.*

\*\*\*

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*Les informations et les spécifications sont sujettes à modification sans préavis. Les données techniques qui y figurent sont sous réserve d'erreurs ou d'omissions.*

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# QUESTIONARIO TECNICO

## Maschiatura ad asportazione e rullatura

Campionatura / Quantità: \_\_\_\_\_  Ordine / Quantità: \_\_\_\_\_  Reclamo

Cliente:

Tel:

Fax:

Persona di rif:

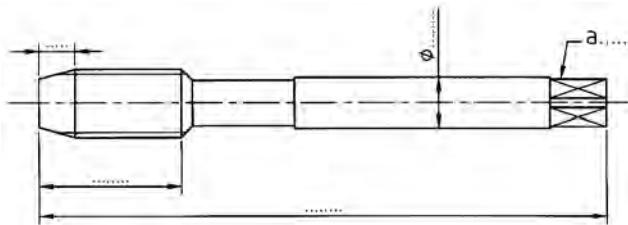
e-mail:

### 1. Filettatura

Ø x Passo

Toll. \_\_\_\_\_ Norma: \_\_\_\_\_

Descrizione



### 2. Particolare da lavorare:

Truciolo:  corto  medio  lungo

Materiale:

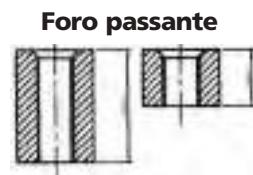
Sigla:

resistenza N/mm<sup>2</sup>

Durezza:  HB  
 HRC

Caratteristiche particolari del materiale:

	Ø preforo
ottenuto per...	
<input type="checkbox"/> Foratura	<input type="checkbox"/> Prefuso
<input type="checkbox"/> Prestampato	<input type="checkbox"/> Tornitura



....x D



....x D



....x D

Alesatura: SI NO

Verticale  Obliqua  
 Orizzontale  Altro

### 3. Macchina marca e tipo:

Avanzamento  Patrona  Manuale  
 Idraulico  Meccanico

CNC Andata Ritorno

%Prog. avanzamento assiale

Vc (m/min) Andata Ritorno

### Parametri di taglio

N°giri (1/min)

### 3.1. Mandrino (marca):

N° mandrini  Adduzione interna  
-----

### Maschiatura rigida:

In pinza  Calettamento  
 Micro - compensazione  Weldon  
 Altro:

### Maschiatura compensata:

Compensazione assiale in rientro e sfilamento  Solo sfilamento  
 Altro:

### 4. Lubrificante:

Emulsione

% -----

Olio intero

Lubrificazione

Aria

Minimale (MMS)

### 5. Problematica:

### 6. Dati concorrenza:

Rivestimento:

Resa:

# TECHNICAL FORM

## Thread cutting and thread forming

Writer:

Date:

N° Prot:

 Sampling / Quantity: \_\_\_\_\_ Order / Quantity: \_\_\_\_\_ Complaint

Customer:

Phone:

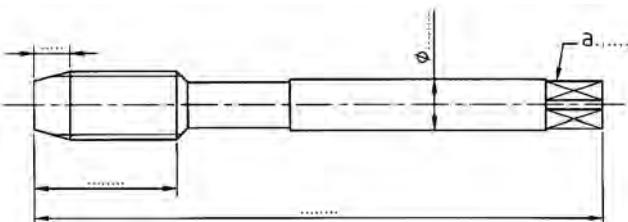
Fax:

Reference person:

e-mail:

### 1. Thread size

Ø x Pitch



Tolerance

Norm:

Description tap

### 2. Work-Piece:

Chip type:  short  medium  long

Material:

Code:

Tensile strength N/mm<sup>2</sup>Hardness:  HB  
 HRC

Particular characteristic of material:

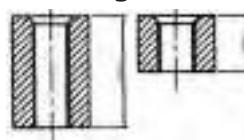


Ø Core hole

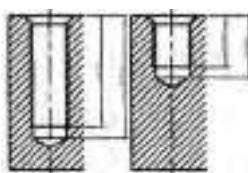
Obtained from...

 Drilling  
 Molding
 
 Prefuse  
 Turning
 

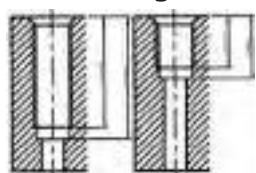
#### Through hole



#### Blind hole



#### Blind/through hole



Boring: YES NOT

....x D

....x D

....x D

### 3. Machine brand and type:

 Vertical  
 Horizontal  
 Obliquely  
 Other
 

Feed

 Leadscrew  Manual
 

Vc (m/min)

Advance

Reverse

 Hydraulic  Mechanic
 
 CNC
 

Advance

Reverse

%Prog. axial feed

#### Cutting speed

N°giri (1/min)

### 3.1. Tool holder (Manufacturer):

N° spindle

 Internal coolant supply

-----

#### Rigid tapping:

 Collets  Fitting  
 Micro - compensation  Weldon  
 Other:
 

#### Tapping with compensation:

 With axial compensation in compression and extension  
 Extension only  
 Other:
 

### 4. Coolant (brand):

 Emulsion
 
 Cutting oil
 
 Minimal lubrication
 
 To dry
 

% -----

(MMS)

### 5. Problems:

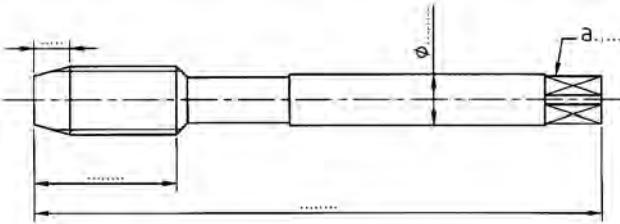
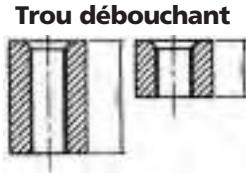
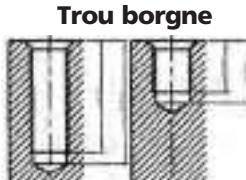
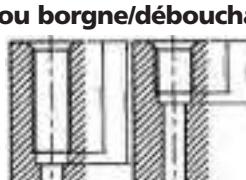
### 6. Competitor's characteristics:

Surface treatment:

Tool's life:

# QUESTIONNAIRE TECHNIQUE

## Taraudage normal ou par déformation

		Compilateur :	Date:	
		Protocole:		
<input type="checkbox"/> Échantillonnage/quantité: _____		<input type="checkbox"/> Commande/ Quantité: _____		
<input type="checkbox"/> Reclamation				
Client: référence client:		Tel:	Fax:	
		e-mail:		
<b>1. Filetage</b> $\varnothing \times$ Pass Tolérance      Norme:				
Description				
<b>2. Pièce à usiner:</b>		Matériaux:	Norme:	
		Résistance N/mm <sup>2</sup>	Dureté: <input type="checkbox"/> HB <input type="checkbox"/> HRC	
Copeau: <input type="checkbox"/> court <input type="checkbox"/> moyen <input type="checkbox"/> long		Particularités de la matière:		
 Ø préforo obtenue par... <input type="checkbox"/> Perçage <input type="checkbox"/> Fusion <input type="checkbox"/> Moulage <input type="checkbox"/> Tournage		<b>Trou débouchant</b> 	<b>Trou borgne</b> 	<b>Trou borgne/débouchant</b> 
Alésage:	OUI	NON	....x D	....x D
<b>3. Machine marque et type:</b>		<input type="checkbox"/> Vertical	<input type="checkbox"/> Oblique	
		<input type="checkbox"/> Horizontal	<input type="checkbox"/> Autres	
<b>Avance</b> <input type="checkbox"/> CNC % Prog. avance axiale		<input type="checkbox"/> Patronne <input type="checkbox"/> Manuelle <input type="checkbox"/> Hydraulique <input type="checkbox"/> Mécanique	Vc (m/min) <b>Paramètres de coupe</b> N ° tours (1/min)	Aller      Retour
<b>3.1. Broche (marque):</b>		Type de Mandrin	<input type="checkbox"/> lubrification axiale	
		-----		
<b>Taraudage rigide :</b> <input type="checkbox"/> Par pinces <input type="checkbox"/> Micro-compensation <input type="checkbox"/> Autres:		<b>Taraudage compensé :</b> <input type="checkbox"/> Compensation axiale en compression et en extension <input type="checkbox"/> Seulement en extension <input type="checkbox"/> Autres:		
<b>4. Lubrifiant:</b> <input type="checkbox"/> Émulsion % _____		<input type="checkbox"/> Huile Entière	<input type="checkbox"/> Lubrification Minimale (MMS)	<input type="checkbox"/> Air
<b>5. Problématique :</b>		<b>6. Données de la concurrence:</b>		
		Revêtement :	Resa:	
<b>UFS srl via Giotto 20, 10080 Sparone (TO) Italy • ufssrl@ufs.it - Tel 0039-0124-818001 - Fax 0039-0124-818003</b>				

## Note



## Note





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