TECHNICAL CATALOGUE

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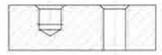
TABELLA D'IMPIEGO
APPLICATION TABLE - TABLEAU D'APPLICATION



Applicazione per foro cieco e passante
Blind and through hole application
Application pour trou borgne et débouchant

Applicazione per foro passante
Through hole application
Application pour trou débouchant

Applicazione per foro cieco
Blind hole application
Application pour trou borgne

LH	Filettatura sinistra Left hand thread - Filetage à gauche
Ms58	Applicazione specifica per ottone Ms58 Specific application for brass Ms58 - Spécifique pour laiton Ms58
AZ	Alternatura del filetto Interrupted threads - Taraud avec filets alternés
SR	Synchro Rigid, maschiatura rigida sincronizzata Rigid tapping Synchro - Synchro Rigide, taraudage rigide synchronisée
XL	Maschi con gambo lungo Taps with long shank - Tarauds série longue
BT	Back Tapered, rastremazione posteriore a botte del filetto Back tapered thread - Détalonnage arrière
IT	Inox Tapered, rastremazione posteriore orizzontale del filetto Horizontal back tapered for inox application INOX Tapered, détalonné conique horizontale pour application Inox
con1:16	Maschi con filettatura conica Taps with tapered thread - Tarauds à filetage conique
AL	Applicazione specifica per alluminio e leghe d'alluminio Specific application for aluminium and aluminium alloys Application spécifique pour l'aluminium et alliages d'aluminium
Cu	Applicazione specifica per rame e leghe rame Specific application for cooper and cooper 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
Ni	Applicazione specifica per nichel e leghe di nichel Specific application for nickel and nikel alloys - Application spécifique pour le nickel et ses alliages

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■ Utilizzo raccomandato - velocità di taglio m/min
■ Recommended Use - cutting speed m/min
■ Utilisation-Recommandée - vitesse de coupe m/min

❍ Utilizzo accettabile - velocità di taglio m/min
❍ Acceptable Use - cutting speed m/min
❍ Utilisation acceptable - vitesse de coupe m/min

Descrizione Description - Description		
Tipi di foro Hole Types - Type de trous		
CODICE - CODE		
Linea - Product line - Gamme		
Elica / NOTE Flute Tipe / Notes - Hélice / Notes		
M MJ	ISO2/6H	
	ISO1/4H	
	ISO3/6G	
	7G	6H+0,1
MF MJ (F)	ISO2/6H	
	ISO1/4H	
	ISO3/6G	
	7G	6H+0,1
UNC	2B	3BX
UNF	2B	3BX
UNEF	2B	
UNS	2B	
8-12 UN	2B	
G, RP		
NPSM		
NPSF		
Rc		
NPT		
NPTF		
BSW		
PG, Tr, Rd		
EG-M		
Imbocco/Chamfer/Entrée		
Materiale/Steel tap/Substrat		
Rivestimento/Coating/Revêtement		
Applicazione / Application		
Profondità / Depth / Profondeur		

P	1.1	Acciaio dolce magnetico	Magnetic soft steel	Acier doux magnétique		Rm N/mm² < 400
	1.2	Acciaio da costruzione, da cementazione	Construction steel, case hardening steel	Acier de construction et de cémentation		< 700
	1.3	Acciaio al carbonio	Carbon steel	Acier au carbone		< 850
	1.4	Acciaio legato - Bonificato	Alloyed steel - Heat treatable steel	Acier allié - trempé et revenu		< 850
	1.5	Acciaio legato - Bonificato	Alloyed steel - Heat treatable steel	Acier allié - trempé et revenu		850 - 1200
	1.6	Acciaio alta resistenza	High strength steel	Acier haute résistance	38 - 45 HRC	1200 - 1400
H	1.7	Acciaio temprato < 52 HRC	Hardened steel < 52 HRC	Acier trempé < 52 HRC	45 - 52 HRC	1400 - 1800
	1.8	Acciaio temprato < 63 HRC	Hardened steel < 63 HRC	Acier trempé < 63 HRC	52 - 63 HRC	
M	2.1	Acciaio inox automatico	Free machining stainless steel	Acier inoxydable de décolletage		< 850
	2.2	Acciaio inox austenitico	Austenitic stainless steel	Acier inoxydable austénitique		< 850
	2.3	Ferritico + Austenitico, Martensitico	Ferritic + Austenitic, Martensitic	Ferritique + Austénitique, Martensitiques		< 1100
	2.4	Inox termostabili, leghe Cr-Ni	High temperatures resistant, Cr-Ni alloy	Résistants aux hautes températures, Cr-Ni alliage		< 1400
K	3.1	Ghisa grigia GJL <180 HB	Grey cast iron GJL <180 HB	Fonte grise GJL < 180 HB	< 180 HB	< 250
	3.2	Ghisa grigia GJL < 250 HB	Grey cast iron GJL< 250 HB	Fonte grise GJL < 250 HB	< 250 HB	< 500
	3.3	Ghisa sferoidale (GJS)	Nodular cast iron (GJS)	Fonte à graphite sphèroïdal (GJS)	< 350 HB	< 800
	3.4	Ghisa malleabile	Malleable cast iron	Fonte malléable	< 260 HB	< 700
	3.5	Ghisa austemperata ADI	Austempered Ductile Iron ADI	Fonte ductile trempée ADI	< 480HB	< 1400
N	4.1	Alluminio non legato	Unalloyed aluminium	Aluminium non allié		< 250
	4.2	Leghe di Al, Si < 0,5% - Truciolo lungo	Al alloys, Si < 0,5% - Long chipping	Alliage Al, Si < 0,5% copeaux longs		< 500
	4.3	Leghe di Al, Si < 10% - Truciolo medio	Al alloys, Si < 10% - Medium chipping	Alliage Al, Si < 10% - Copeaux moyen		< 500
	4.4	Leghe Al, Si > 10% - Truciolo corto	Al alloys, Si > 10% - Short chipping	Alliage Al, Si > 10% copeaux courts		< 600
	4.5	Leghe di magnesio	Magnesium alloys	Alliages de magnésium		< 500
N	5.1	Rame puro / elettrolitico - Truciolo lungo	Copper unalloyed - Long chipping	Cuivre pur / électrolytique - Copeaux longs		< 250
	5.2	Leghe di rame, ottone - Truciolo lungo	Copper alloys, soft brass - Long chipping	Alliages de cuivre, laiton - Copeaux longs		<700
	5.3	Leghe di rame, ottone - Truciolo corto	Copper alloys, hard brass - Short chipping	Alliages de cuivre, laiton - Coupeaux courts		<700
	5.4	Bronzo ad alta resistenza	High strength bronze	Bronze haute résistance		<1500
S	6.1	Titanio puro	Pure titanium	Titane pur		< 700
	6.2	Leghe di titanio	Titanium alloys	Alliage de titane		< 900
	6.3	Leghe di titanio	Titanium alloys	Alliage de titane		< 1400
S	7.1	Nichel puro	Pure nickel	Nickel pure		< 500
	7.2	Leghe di Nichel	Nickel alloys	Alliages de nickel		< 900
	7.3	Leghe di Nichel	Nickel alloys	Alliages de nickel		< 1600
N	8.1	Materiali termoplastici - Truciolo lungo	Thermoplastics – long chipping	Thermoplastiques - copeaux longue		< 80
	8.2	Materiali termoindurenti - Truciolo corto	Duroplastic – Short chipping	Matières thermodurcissables - copeaux courts		< 110
	8.3	Materie plastiche con fibre di rinforzo	Reinforced plastic materials	Matières synthétiques renforcés par fibres		< 1500

CERTIFICATE OF REGISTRATION

This is to certify that the Multi-Site:

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**	Original Certification Date:	**20/06/2006**
Issue Date:	**18/06/2021**	Current Certification Date:	**18/06/2021**
		Certificate Expiry Date:	**18/06/2024**

Certified System ISO 9001 Quality

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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 splinter during use; protective goggles or shield should therefore be used.

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

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TAPS, ROLL TAPS, THREAD PLUG GAUGES AND DIES

THREADING TOOLS ITALIAN MANUFACTURER

Il Piemonte, una terra d'eccellenza

Piedmont, a land of excellence

I tre stabilimenti UFS hanno sede a Sparone, a circa 50 km a nord di Torino. Siamo quindi in Piemonte, al confine con Francia e Svizzera, noto per le sue industrie, in particolare quelle dell'automotive, informatiche e della meccanica, ma anche per i suoi paesaggi pittoreschi, la storia, la cultura e l'enogastronomia.
Piemonte significa "ai piedi dei monti", perchè le montagne si stagliano subito alte dalla pianura. Da una parte l'arco alpino con le vette più alte d'Europa, dall'altra le splendide colline del Monferrato e delle Langhe; verso est inizia la grande Pianura Padana, il naturale sfogo del fiume Po, da cui la pianura prende il nome.

Una specie di arena naturale, un'oasi che contraddistingue e forma il carattere dei suoi abitanti che si abituano ad essa già da bambini. Diventando adulti, questo baluardo territoriale diventa parte del proprio carattere.
C'è del vero nell'opinione che considera generalmente il piemontese come una persona seria e dal carattere riservato. Ma la stessa condizione geografica gli ha donato anche molti lati positivi; progredire in una terra nata dal ritiro di immensi ghiacciai tempra nel profondo e dona pazienza e tenacia, prudenza ma anche coraggio oltre all'intraprendenza e alla capacità creativa testimoniata da tutta la storia politica, sociale ed economica.
Un senso di appartenenza e orgoglio locale con l'attaccamento viscerale per usi, costumi e tradizioni; ma anche una naturale predisposizione alla solidarietà, rispetto e grande onestà nel rapporto con le persone.

Simbolo della cultura piemontese è sicuramente Torino, il capoluogo della regione che è stato fulcro e motore dell'unificazione italiana. La residenza di casa Savoia, la dinastia reale che ha governato la regione dal Medioevo alla nascita della Repubblica italiana, ha da sempre avuto un ruolo centrale nella delineazione del profilo culturale della regione, durante secoli di notevoli scambi commerciali e culturali dovuti alla sua posizione geografica tra il mare e il centro Europa, ne hanno strutturato il progresso.
Il Piemonte è stata la prima regione italiana a industrializzarsi e parallelamente, inevitabilmente, a dotarsi delle relative competenze e conoscenze.

L'industria principale è senza dubbio quella automobilistica, trainante e stimolante per la nascita di un gran numero di attività minori; il cosiddetto "indotto" che annovera eccellenze riconosciute in tutto il mondo.

The three UFS factories are located in Sparone, 50 km north of Turin. We're in the region of Piedmont, on the borders of France and Switzerland, renowned for its car industry, its sweets and cakes, and also for its wonderful scenery, history, culture, food and wine.
Piedmont means "the foot of the mountains", because the mountains indeed rise suddenly from the plain. On one side the Alps, with Europe's highest peaks, on the other the lovely hills of Monferrato and the Langhe; to the east the edge of the great Padan Plain, the natural outlet of the river Po, which lends it its name.

It's a kind of natural arena, an oasis that distinguishes and shapes the character of its inhabitants, who become used to it from childhood. As they grow into adults, this geographical bastion becomes part of their character.
There's some truth in the view that Piedmont people are generally serious and private. But their very geography has also given them many positive sides: surviving in a land shaped by the receding of vast glaciers toughens you up and gives patience and tenacity, caution but also courage, as well as initiative and a creative capacity evidenced by the region's political, social and economic history.
A feeling of belonging and local pride, with a visceral attachment to customs and traditions; but also a predisposition to solidarity, respect and great honesty in personal relationships.

The symbol of Piedmontese culture is undoubtedly Turin, the regional capital, which was the centre and driver of Italian unification. The home of the Savoys, the royal dynasty that governed the region from the Middle Ages to the birth of the Italian Republic, has always played a central role in the region's cultural life, as centuries of trade and cultural connections shaped progress due to the city's geographical position between the sea and central Europe.
Piedmont was the first Italian region to industrialise and, in parallel, to gain the consequent expertise and knowledge.

The main industry is undoubtedly automotive, and this drives and stimulates a large number of lesser activities; the spin-offs that include excellent brands and products that are renowned worldwide.

La bandiera della Regione Piemonte
The flag of the Piedmont Region

UFS

La UFS, acronimo di Utensili Filettatori Sparone, è un produttore italiano specializzato in utensili per la filettatura. Da oltre 75 anni è presente sul mercato e con il proprio brand. Progetta, produce e commercializza una gamma di prodotti presenti a catalogo con circa 8.000 codici standard. Fornisce inoltre prodotti in "private label" per catene di vendita specializzate. Realizza anche molti prodotti "speciali", con tolleranze o a disegno del cliente.

Da anni, perseguendo l'indirizzo di costante espansione, esporta in quasi tutti i paesi europei e in molti extraeuropei; in particolare nel mercato asiatico e sud-americano.
L'azione continua dell'assistenza post vendita e delle attività degli agenti diretti ne consolida sempre più la presenza ottenendo apprezzamento sia per la qualità del prodotto che per il livello dei servizi forniti.

Azienda ancora oggi condotta da un management familiare, conta complessivamente circa 60 unità tra dipendenti e collaboratori diretti a cui si aggiungono agenti plurimandatari. Negli ultimi 10 anni è stata in grado di adeguare le proprie risorse alle necessità del mercato con trasformazioni tecniche, produttive e organizzative che ne hanno caratterizzato un costante sviluppo in competizione con i migliori produttori del settore.
Personale specializzato, laboratori metrologici e sale prova sono i pilastri sui quali si è trasformata la tecnica produttiva seguendo le innovazioni progettuali applicate allo sviluppo degli utensili filettatori.

Ampliamenti produttivi, nuovi reparti di ricerca, l'uso di sistemi computerizzati di ultima generazione per la gestione e programmazione degli ordini e le certificazioni di qualità sono state evoluzioni naturali e continuative che hanno consolidato l'organizzazione delle risorse interne e dei relativi compiti; permettendo di raggiungere un'ottima produttività e il controllo completo di tutto il processo operativo. Vari magazzini automatici suddivisi per le materie prime, i semilavorati e i prodotti finiti, unitamente ad una logistica ben organizzata, garantiscono consegne degli utensili standard nelle 24-48 ore dalla conferma d'ordine in tutta Europa.

Tre stabilimenti costituiscono l'intera area operativa della UFS con una produzione di oltre 500.000 utensili all'anno. L'attività diversificata consente di ottimizzare le lavorazioni complementari dell'intero ciclo di prodotto: torneria, tempra e rinvenimento degli sbozzati per poi passare alla definizione delle geometrie delle scanalature e delle rettifiche degli utensili per arrivare ai rivestimenti PVD sui prodotti "bianchi" finiti.
A monte di tutta l'organizzazione di produzione c'è l'ufficio tecnico che progetta gli utensili, avvalendosi del contributo del reparto R&D dell'azienda il quale interviene, con test e verifiche, in ogni fase del ciclo di lavorazione.

UFS, the acronym for Utensili Filettatori Sparone, is an Italian company specialising in threading tools.
The company has been operating with its own brand for over 75 years. We design, manufacture and distribute a wide range of products, with approximately 8,000 standard items. We also supply private label products for specialist retailers, and numerous special items with specific tolerances or made to the customer's own design.

In the interests of constant expansion, we have exported to many European and non-European countries for some years; Asian and South American markets in particular.
Our ongoing after-sales assistance service and the work of our representatives further consolidates our market presence, meaning we are respected for both product quality and services provided.

The company is still family-run, and employs some 60 staff directly, as well as a number of multi-firm agents.
In the past 10 years we have upgraded our facilities to meet market demand, with changes to technology, production processes and organisation as part of an ongoing transformation, competing with the leaders in our sector. Our specialist staff, metrology lab and testing rooms are the pillars of quality that determine the transformation of our production processes, following innovation in the development of threading machinery.

Expansion of production, new research labs, state-of-the-art computerised systems for the management and planning of orders and quality certification are natural and ongoing developments that have strengthened the organisation of workers and their tasks, allowing us to achieve exceptional productivity levels and complete control of the entire process. Several automated warehouses divided by raw material, semi-finished and finished goods, combined with well-organised logistics, guarantee delivery of standard items within 24-48 hours from order confirmation, anywhere in Europe.

Three factories - Sites 1, 2 and 3 - make up the operational area of UFS, with an annual production of over 500,000 tools. Diversification allows us to optimise processes throughout the production cycle: turning, hardening and tempering items, followed by definition of the grooving geometry and the adjustment of tools, which are then PVD coated. Upstream from the manufacturing process is our technical department, which designs the tools in collaboration with the R&D department, with checks and testing at every stage of development.

SITO 1

Lo stabilimento, sede storica della “Fratelli Doglietto” nata nel 1947 e che produceva attrezzature per la ferratura dei cavalli, ha subito la prima trasformazione alla fine degli anni ‘60; momento nel quale la UFS si è ammodernata decidendo di essere presente anche nel settore automotive, a quei tempi espressione di un’industria fiorente e in continuo sviluppo in particolare in Piemonte. Una tappa significativa per iniziare il percorso di crescita che porta oggi l’azienda a distinguersi tra i primi produttori in Italia di maschi per filettare.

A cavallo del millennio la struttura è stata nuovamente ristrutturata e ingrandita. Con un forte spirito imprenditoriale, per volere di Graziano e Stefano Doglietto, eredi dei fratelli fondatori dell’azienda, si sono acquistati nuovi macchinari; attrezzature moderne capaci di aumentare notevolmente la produzione. Investimenti tecnologici all’avanguardia in un settore di nicchia in continua evoluzione.
La produzione dello stabilimento è alimentata dal magazzino dei semilavorati che, dal Sito 3, arrivano in forma di sbozzati temprati e verificati nelle loro componenti geometriche e metallografiche.
La giacenza media di oltre 250.000 semilavorati permette di mantenere costantemente attive le linee produttive e una notevole riduzione dei tempi di consegna.
50 unità produttive, prevalentemente rettifiche speciali a controllo numerico, ma anche sistemi di lavaggio, di lucidatura, di foratura, di marcatura, di verniciatura e di etichettatura sono i mezzi disponibili che consentono di soddisfare il mercato realizzando su due turni di lavorazione la capacità produttiva richiesta. Nel magazzino dei prodotti finiti rimangono in giacenza media oltre 500.000 utensili standard, di diametri da 2 mm. fino a 3 pollici.

Un sistema di pianificazione della produzione (certificazione I.4.0) consente, oltre alla programmazione di tutte le commesse, di ottimizzare il magazzino con l’uso di software previsionale capace di ottimizzare i lotti produttivi, garantendo un alto livello di servizio delle vendite dei prodotti standard. Stessi vantaggi che si riscontrano anche nella fornitura dei prodotti speciali.
Oltre alla produzione, nel Sito 1 sono collocati molti uffici strategici. L’ufficio tecnico, la pianificazione, la logistica, l’amministrazione e gli acquisti. La stessa direzione aziendale con a fianco l’ufficio personale.
Il rapporto con il personale dipendente è fondamentale per la proprietà e il management UFS. Molti degli stessi dipendenti si definiscono una famiglia e considerano amici i colleghi di lavoro.
In UFS si respira aria di sinergia, di volontà di contribuire al risultato sia per propria soddisfazione che per il rispetto di chi lavora al proprio fianco.

The factory, originally home to “Fratelli Doglietto”, was built in 1947 and originally produced equipment for horse shoeing; it underwent its first transformation in the late 1960s, when UFS modernised, seeking to be a part of the development of the car industry, at the time flourishing, particularly in Piedmont. A significant moment that led to the growth that allowed UFS to become one of Italy’s leading manufacturers of threading tools.
At the turn of the century, the factory was further refurbished and extended. In true entrepreneurial spirit and on the orders of Graziano and Stefano Doglietto - heirs to the brothers who founded the company - new machinery was acquired; modern plant that considerably increased production. Investment in cutting-edge technology in a constantly-changing niche sector.

Our production area covers over 5,000 square metres and is split between 3 sites. Production is fed by the semi-finished goods warehouse on Site 3, which delivers blanks that are tempered and checked for geometric precision and metal composition.
The average stock of more than 250,000 semi-finished items means we can keep our production lines operating constantly, reducing delivery times.
There are 50 workstations, mainly for numerically-controlled special adjustments but also washing, polishing, perforation, marking, painting and labelling; this allows us to meet market demand, working in two shifts to maximise production capacity.
The finished goods warehouse contains an average of 500,000 standard tools, of diameters ranging from 2 mm to 3 inches. A production planning system (I.4.0 certification) allows all orders to be programmed, as well as optimising the warehouse using forecasting software that can optimise batches, ensuring an excellent level of service in sales of standard products. Similar advantages are found in the supply of special items.

In addition to production, Site 1 contains a number of offices - technical, planning, logistics, administration and acquisitions - the company leadership, and the HR office.
Our relationship with employees is a key factor for the UFS owners and management. Many of our staff think of themselves as a family and consider their colleagues to be friends.
At UFS there’s a mood of synergy, a willingness to contribute to the results for both personal satisfaction and respect for colleagues.

SITO 2

A breve distanza dall'1 è collocato il Sito 2. Lo stabilimento è stato attrezzato a fine anni '90 e adibito per ospitare la parte tecnologica più avanzata. Lo si chiamava, appunto, UFS Technology.
Inizialmente come centro di testing sui maschi costruiti internamente a confronto degli utensili realizzati dalla concorrenza. Poco alla volta ha acquisito lo status di centro di ricerca per le migliorie sulle geometrie degli utensili e di autentico polo di sviluppo per i rivestimenti.

Alla ricerca e sviluppo UFS assegna un ruolo prioritario, così da permettere all'azienda di crescere in termini di qualità e poter garantire sempre una costante di performance dei maschi realizzati.
Da una parte l'esperienza dei progettisti rimane la parte fondamentale in un settore di nicchia: professionisti che impegnano competenze e tempo per capire il perché di ogni comportamento dell'utensile in fase di maschiatura. Nulla è lasciato al caso. Dall'altra, è strategica la capacità di seguire il cliente in fase di produzione. Proprio questo è il fattore che rappresenta uno dei tratti distintivi dell'R&D.

Nel 2010, la ex Technology è stata ampliata e attrezzata per i rivestimenti a plasma (PVD) che caratterizzano gli utensili allorchè utilizzati nelle lavorazioni di serie altamente automatizzate e per le quali la caratteristica principale per il cliente è la quantità delle filettature realizzabili.
Questo richiede all'utensile resistenza all'usura e alle alte temperature di lavorazione, oltre alla facilità di evacuazione del truciolo. Caratteristiche possibili solo ricoprendo la superfice dell'utensile con depositi di metalli speciali, applicando ricette specifiche ai forni di generazione del plasma. I trattamenti superficiali, a partire dalla vaporizzazione, alla ricopertura con nitruro di Cromo, nitruro di Titanio, carbonitruro di Titanio, nitruro di Titanio e Alluminio; rivestimenti calibrati e customizzati in relazione alle prestazioni che si richiedono al prodotto.

La produzione interna dei rivestimenti ha consentito alla UFS di diventare molto performante in termini di ciclo produttivo garantendo una migliore qualità, una maggiore ripetitività e tempi di consegna brevi e certi.
Tutta la programmazione dei rivestimenti è gestita dal sistema di pianificazione centrale e quindi perfettamente allineata nel processo di lavorazione.

Da alcuni anni è stato implementato il laboratorio metrologico "B", con annessa sala prove, per verificare la funzionalità e la vita dei prodotti rivestiti. Attraverso un costante confronto incrociato tra l'ufficio tecnico, il reparto di produzione e l'area R&D si sperimenta, si testa, si correggono i disegni, si sviluppa: poi si ripassa ai test.

Site 2 is a short distance from Site 1. The factory was installed in the late 90s and organised to contain the most advanced technologies. In fact, it was named UFS Technology.
It was originally a testing centre for UFS-produced threading tools compared with items produced by our competitors. Little by little it gained the status of a research centre, working on improvements to the geometry of the tools and developments in coating processes.

UFS prioritises research and development, which allows us to grow in terms of quality, always guaranteeing consistent performance in the tools we make.
On the one hand, the experience of our engineers remains the the key element in a niche sector: professionals who devote their time and expertise to understand the behaviour of the tools during tapping. Nothing is left to chance. On the other hand, our ability to support our customers during the production phase is essential. This is one of the distinctive factors of the R&D department.

In 2010, the former UFS Technology was extended and equipped for the plasma coatings (PVD) which characterise tools when used in highly automated standard processes, in which the main criterion for the customer is the amount of threading possible. This demands resistance to wear and tear and high working temperatures, as well as easy removal of shavings. These can only be achieved by coating the surface of the tool with special metal deposits, using specific recipes and plasma-generating kilns. Surface treatments are carried out by the vapour deposition of chromium nitride, titanium nitride, titanium carbonitride, titanium and aluminium nitride; coatings that are calibrated and customised for the specific intended use of the product.

Our in-house production of coatings has allowed UFS to considerably improve its performance in terms of the production cycle, guaranteeing higher quality, greater repeatability and rapid, secure delivery times.
The entire coating process is handled by a central planning system, and is therefore perfectly aligned with the production process.

Some years ago we established metrology lab B, with adjoining testing rooms, in order to check the properties and lifespan of our coated products. By means of constant cross-referencing and comparison between the technical office, the production department and the R&D department, items are trialled, tested, corrected, developed and tested again.

SITO 3

Lo sviluppo aziendale di UFS, in una logistica montana che inevitabilmente impone alcune limitazioni quanto a disponibilità di superfici, ha richiesto l'espansione della produzione non più assorbibile nello stabilimento principale trovando posto in aree vicine a poche centinaia di metri l'una dall'altra.
E' stata una necessità che ha indotto profonde modifiche all'organizzazione produttiva con una razionalizzazione dei processi tecnologici. In particolare i trattamenti termici, con i forni di tempra e rivestimenti PVD, in modo da renderli autonomi sia come aree logistiche che come gestione operativa.

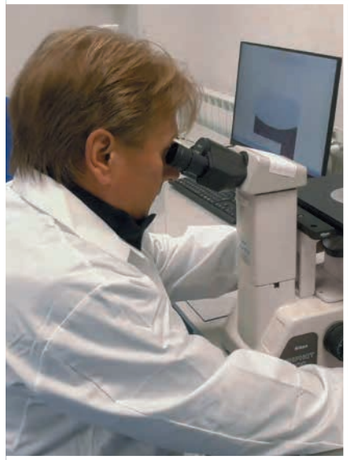
E' nato così il Sito 3, un modernissimo stabilimento completamente funzionante dal 2020, che concentra in se tutte le attività di realizzazione degli sbozzati, profilati e temprati che sono alla base di tutte le altre lavorazioni perché sono realizzati secondo le caratteristiche progettuali di base, forma, diametro e lunghezza.
Trovano collocazione i reparti di produzione della torneria, il reparto di tempra e di rinvenimento degli utensili e il laboratorio metrologico "A" adibito a tutte le analisi necessarie al controllo del materiale in ingresso e del temprato. Attente verifiche di tutte le caratteristiche metallografiche con l'analisi delle barre degli acciai speciali con l'uso di spettrometro di massa.
Nello stabilimento è collocato un magazzino automatico per la gestione di oltre 40 tonnellate di materia prima, suddivise in oltre 260 codici di barre con diametri differenti, di acciai speciali convenzionali e a polveri sinterizzate. Sul materiale temprato si effettuano analisi delle durezze delle cariche e il controllo dei carburi. UFS, nel corso di anni di studio, ha individuato quali siano i cicli più performanti per ogni tipo di lega.
Le temperature di sosta e di raffreddamento sono fondamentali nei trattamenti termici a garanzia della qualità certificata dei prodotti prima che siano trasferiti negli altri reparti produttivi di completamento.

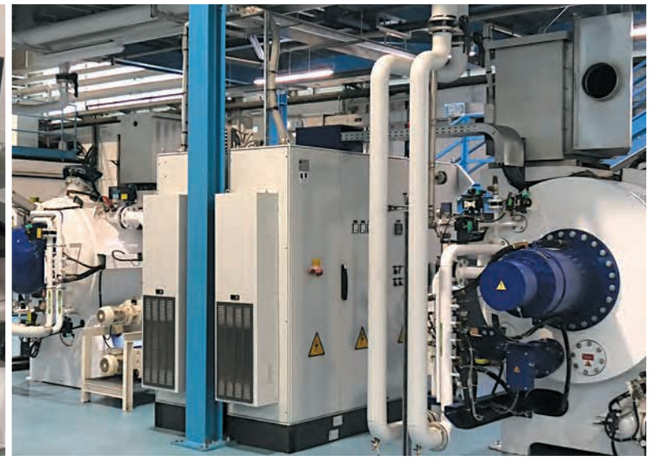
Nella palazzina dello stabile è stata recentemente trasferita l'area commerciale UFS con reception, uffici e sala riunioni. Operazione resasi necessaria per dare quel confort, al cliente in visita, che non era più possibile riservare nell'affollato e frenetico Sito 1.
Oltremodo ben gradite, le richieste dei clienti di far visita agli impianti UFS sono costantemente in aumento. Il prodotto di maschiatura, una nicchia nel settore degli utensili da taglio, esige cultura dell'argomento e un continuo aggiornamento da parte del produttore. E' quindi significativo, da parte del cliente, rendersi conto de-visu in fase di costruzione dell'utensile quali siano le difficoltà per ricavare il massimo delle prestazioni nei più svariati campi applicativi.

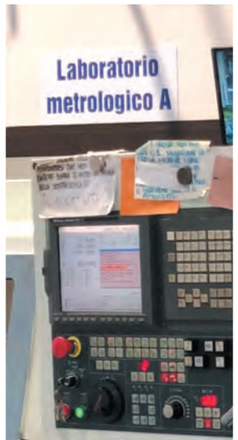
The expansion of UFS in a mountainous area - which inevitably imposes certain limits in terms of availability of space - required moving production which could not be absorbed by the main factory; premises were found in an area just a few hundred metres away.
This necessity entailed in-depth changes to the organisation of production, and a rationalisation of technical processes. This applied particularly to heat treatments, which use kilns for tempering and PVD coatings, making them autonomous in both logistics and management terms.

This led us to Site 3, an ultra-modern facility that has been in full operation since 2020, containing all processes related to the manufacture of blanks, profiles and tempered items which form the base of all other processes, since they are produced to basic characteristics of shape, length and diameter.
Here we find the turning, tempering and vulcanisation departments and metrology lab A, which carries out all the necessary checks on incoming materials and tempering.
All metal properties are meticulously checked by analysing bars of special steels using a mass spectrometer.
The factory contains an automatic machine that can handle over 40 tonnes of raw material, divided into over 260 barcodes, with conventional diameters of special steels and sintered powders. Tempered materials are analysed for hardness and checked for carbides. Over the years UFS has identified the best-performing processes for every type of alloy. Residence and cooling times are fundamental in heat treatments, guaranteeing certified quality in the products before they are moved to other departments for finishing.

The commercial department of UFS was recently moved to new premises, with a reception area, offices and a meeting room. This was necessary in order to accommodate visiting customers, which was not possible in the busy and crowded Site 1.
Customer requests to visit the UFS factory are extremely welcome and constantly increasing. Tapping products - a niche segment in cutting tools - require expertise in the field and constant updating by the manufacturer. It is therefore important for customers to view the construction of the tool and understand the difficulties of achieving maximum performance in a wide range of applications.







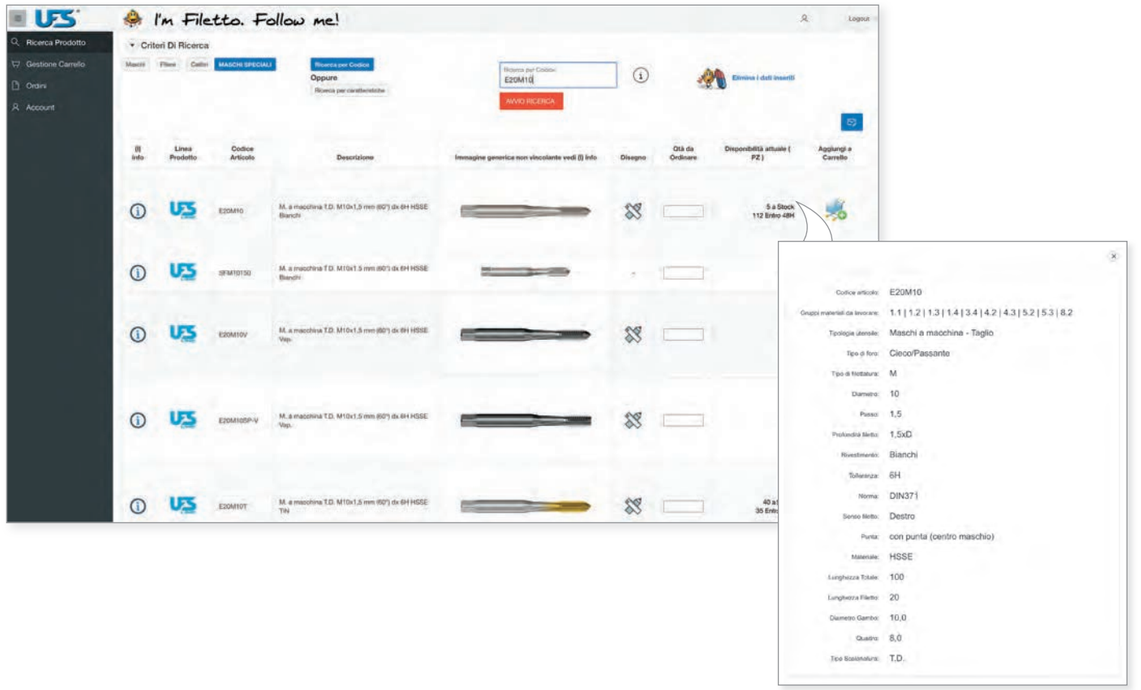
B2B

La consulenza è spesso il “terreno naturale” dell’approccio B2B quando sia selezionato un prodotto; da oltre 15 anni la UFS commercializza anche tramite la piattaforma on line, dedicata ai propri clienti, tramite la quale da visibilità della disponibilità immediata degli utensili a magazzino, il prezzo relativo sulla base dell scontistica riservata e altre informazioni e suggerimenti di prodotti tecnicamente simili che rappresentano vantaggi solitamente apprezzati da chi utilizza una piattaforma rivolta al professionale.
Il primo accesso alla piattaforma è consentito dopo una semplice richiesta di accredito al Customer Service UFS il quale provvederà immediatamente alla configurazione e all’invio delle credenziali.
Qualora sia interessato all’acquisto, l’utente può quindi immediatamente eseguire gli ordinativi on-line attraverso il classico carrello; ordinativi che ricevono rapide conferme d’ordine, grazie a un sistema completamente automatizzato, a cui segue l’immediata spedizione del prodotto che il cliente riceve, solitamente, nell’arco di 24-48 ore.

Nel B2B sono ora disponibili e acquistabili anche i maschi speciali e i maschi andati obsoleti e quindi presentati agli acquirenti con una speciale Promozione molto accattivante dal lato economico, trattandosi di maschi validi ma non più compresi nel presente Nuovo Catalogo 40.
Sono visualizzabili facendo una normale ricerca per caratteristiche. Le schede dei prodotti sono corredate con tutte le informazioni tecniche e le descrizioni delle relative caratteristiche speciali.

Consultancy is often the natural grounds for B2B contact when a product is chosen: for over 15 years UFS has also sold its goods via an online platform for its customers, which shows the immediate availability of the tools, the price, calculated on the basis of the customer’s discount, and other information and suggestions for similar products that may offer advantages only evident to users of a professional platform.
Initial access to the platform is granted following a simple request to UFS Customer Service, which will immediately set up an account and provide login data.
When the customer wants to make a purchase, they can immediately place the order online using the classic basket; orders receive rapid confirmation thanks to a completely automated system, followed by the immediate shipping of goods, which are usually delivered within 24-48 hours.

The B2B section now includes special taps and items that are obsolete and therefore offered at special highly discounted prices, as these tools are completely usable but no longer appear in our new catalogue.
The items can be viewed via a normal search for characteristics. Product specifications are provided with all technical information and descriptions of the various special characteristics.



CUSTOMER SERVICE

+39 0124 818001 • customerservice@ufs.it

Il Customer Service UFS si articola nell’assistenza al cliente prima, durante e dopo l’acquisto di un utensile per filettare. Fornisce anche informazioni, le più specifiche, anche a chi non è ancora cliente.
E’ un sistema organizzato, supervisionato dalla Segreteria Commerciale, che ha come scopo la soddisfazione rispetto ad un quesito tecnico o commerciale o alla soluzione di un’eventuale problematica nel post-vendita.
Attività ed iniziative che UFS mette in pratica per comprendere i bisogni del consumatore professionale, mettendolo in contatto con l’ufficio di riferimento, preposto ad analizzare e a soddisfare la specifica richiesta.
Svolge anche funzione di Customer Satisfaction, ossia verifica periodica che il cliente sia complessivamente soddisfatto dei servizi offerti dell’azienda.

In passato il cliente si limitava ad acquistare un prodotto scegliendo in base al prezzo o alla qualità dell’utensile; oggi l’approccio è profondamente differente.
Il consumatore non è più semplice spettatore ma diventa protagonista. Giustamente pretende un prodotto qualitativamente congruo alle sue richieste ma anche un servizio e un supporto nella scelta ottimale dell’utensile.
UFS crede al fatto che l’organizzazione di un Customer Service di alta qualità porti un vantaggio competitivo non indifferente. E dedica le risorse idonee perché il livello di soddisfazione deve essere tangibile.

The UFS Customer Service focuses on assistance before, during and after the purchase of a threading tool. It also provides specific information for potential customers.
The well-organised system is overseen by the sales secretary, whose task is to give satisfaction in technical or commercial issues and solve any problems post-sale.
UFS implements various activities and initiatives to understand the needs of professional customers, putting them in touch with the relevant department, which can analyse and respond to their specific requests.
The office also handles Customer Satisfaction, in other words checks periodically that customers are fully satisfied with the service provided.

In the past, a customer would choose a product on the basis of price or quality; today the approach is completely different. The consumer is no longer merely a spectator, but part of the process. Quite rightly, customers want products that meet their expectations in terms of quality, but they also want a service that offers excellent support in their choice of tool. At UFS we believe that high quality Customer Service brings a considerable competitive advantage. And we give it the appropriate resources, because the level of satisfaction has to be tangible.

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SISTEMA DI CODIFICA UFS
UFS CODING SYSTEM - SYSTÈME DE CODAGE UFS

MASCHI AD ASPORTAZIONE
CUTTING TAPS - TARAUDS COUPANTS

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E	**24**	**M**	**...**	**AZ**	**-**	**T**
Acciaio del maschio Tap steel Matière du taraud	Tipo di scanalatura Flute type Type de goujure	Tipo di filettatura del maschio Thread type Type de filetage	Indicazione del diametro Diameter location Désignation du diamètre	Particolari tecnici aggiuntivi del maschio Technical added information Détails techniques supplémentaires du taraud		Trattamento o rivestimento superficiale Coating or treatment surface Traitements de surface et revêtements

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21	Scanalature diritte, gambo passante Straight flutes and reduced shank Goujures droites queue passante
22	Scanalature diritte, geometria rompitruciolo, gambo rinforzato Straight flutes - chip breaker geometry - reinforced shank Goujures droites - géométrie brise copeaux - queue renforcée
23	Scanalature diritte, geometria rompitruciolo, gambo passante Straight flutes - chip breaker geometry - reduced shank Goujures droites - géométrie brise copeaux - queue passante
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25	Imbocco corretto, gambo passante Spiral pointed and reduced shank Goujures droites avec entrée gun, queue passante
26	Scanalature diritte per GHISA, gambo rinforzato Straight flutes for cast iron and reinforced shank Goujures droites pour fonte, queue renforcée
27	Scanalature diritte per GHISA, gambo passante Straight flutes for cast iron and reduced shank Goujures droites pour fonte, queue passante
40	Elica 15°, gambo rinforzato Spiral flutes 15° and reinforced shank Goujures hélicoïdales 15°, queue renforcée
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52	Elica 10-15° sinistra per leghe di Ti e Ni, gambo rinforzato Left-hand spiral flutes 10-15° for Ti and Ni alloy and reinforced shank Goujures hélicoïdales à gauche 10-15°, pour Ti et Ni alliage – queue renforcée
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81	Elica 40°, rastremati, gambo passante Spiral flutes 40°, back tapered thread - reduced shank Goujures hélicoïdales 40°, conicité arrière - queue passante
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① ACCIAI PER MASCHI
STEELS FOR TAPS - ACIERS POUR TARAUDS

	Acciai super rapidi High speed steel Acier rapide			Acciai sinterizzati da polveri Powdered metallurgy high speed steel Acier fritté		
	E	**V**	**P**	**K**		**XT**
	HSS	**HSSE**	**HSSV3**	**HSSP**	**HSSE-PM**	**PM3**	**PM1**
	Ø ≥ 42	R < 850 N/mm²	INOX	R < 1000 N/mm²	R < 1200 N/mm² N/mm²	R < 1400 N/mm² ≤ 45 HRC	≤ 52 HRC

FILETTATURE
THREADS - FILETAGES ③

- **M - MJ**
- **MF - MJF**
- **UNC - UNJC**
- **UNF - UNJF**
- **UNEF**
- **UNS**
- **8-UN**
- **12-UN**
- **GAS**
- **Rp**
- **NPSM**
- **NPSF**
- **Rc**
- **NPT**
- **NPTF**
- **BSW**
- **PG**
- **Tr**
- **Rd**
- **EGM**
- **EGUNC**
- **EGUNF**

④ SIMBOLI ED ABBREVIAZIONI
SYMBOLS AND ABBREVIATIONS - PICTOGRAMMES ET ABRÉVIATIONS

LH	Filettatura sinistra Left hand thread Filetage à gauche	LH
AZ	Filetti alternati Interrupted threads Filets alternés	
FOR	Lubrificazione interna con uscita assiale Through coolant, axial flow Lubrification interne avec sortie axial	
FORY	Lubrificazione interna con uscita radiale Through coolant, radial flow Lubrification interne avec sortie radiales	
SP	Senza punta anteriore Without centre male Sans pointe avant	SP
OT	Applicazione specifica per OTTONE Specific application for BRASS Application spécifique pour le laiton	
AL	Applicazione specifica per Alluminio, rame e ferro Specific application for Aluminium and copper and iron Application spécifique pour l'aluminium, cuivre et fer	
NI	Applicazione specifica per leghe di Nichel Specific application for Nickel alloys Application spécifique pour alliages de Nickel	
	Maschiatura rigida sincronizzata Rigid tapping Synchro Taraudage rigide synchronisé	SR
	Maschiatura convenzionale Conventional tapping Taraudage conventionel	CO
	Lavorazione con macchine CNC in maschiatura rigida Tapping with CNC machines Taraudage avec CNC machines	CNC

RIVESTIMENTI E TRATTAMENTI SUPERFICIALI
COATINGS AND SURFACE TREATMENT - TRAITEMENTS DE SURFACE ET REVÊTEMENTS ⑤

T	**CT**	**TX**	**VS**	**XP**	**TXC**	**TG**	**AHI**	**V**	**NQ**
TiN	TiCN	TiAlN	WC/C	TiN+ WC/C	TiAlN+ WC/C	TiN-G	AlCrN	OX	NIT+OX

MASCHI A RULLARE
ROLL FORM TAPS - TARAUDS À REFOULER

P - ROLL R < 850 N/mm²	Maschi a rullare per medio - bassa resistenza, INOX, leghe di alluminio e rame Rolling taps for medium - low resistance, stainless steel, aluminium and copper alloys Tarauds à refouler pour moyenne - faible résistance, acier inoxydable, alliages d'aluminium et de cuivre
K-ROLL R < 1200 N/mm²	Maschi a rullare ad alto rendimento per acciai ed acciai legati High performance forming taps for steels and alloyed steel Tarauds machine à refouler à haut rendement pour acier et acier allié

SISTEMA DI CODIFICA UFS
UFS CODING SYSTEM - SYSTÈME DE CODAGE UFS

①	②	③	④		⑤		⑥
P	2	CC	M	...	FOR	-	T
Acciaio del maschio Tap steel Matière du taraud	Tolleranza Thread tolerance Tolérance du filetage	Forme delle scanalature Lubrication groove forms Formes des rainures	Tipo di filettatura del maschio Thread type Type de filetage	Indicazione del diametro Diameter location Désignation du diamètre	Particolari tecnici aggiuntivi del maschio Technical added information Détails techniques supplémentaires du taraud		Rivestimenti Coating Revêtements

ACCIAO PER MASCHI A RULLARE
STEEL FOR ROLL TAPS - ACIER POUR TARAUDS À REFOULER ①

P, K	PM8	Acciaio per maschi a rullare ad alto contenuto di cobalto High Cobalt Forming Tap Steel - Acier pour tarauds à refouler à haute teneur en cobalt

TOLLERANZE
THREAD TOLERANCE - TOLERANCE DU FILETAGE ②

2	6HX	2BX	ISO228X
3	6GX		

FORME DELLE SCANALATURE
③ LUBRICATION GROOVE FORMS - FORMES DES RAINURES

CC	Con canalini di lubrificazione With lubrication grooves Avec rainures de lubrification	
SC	Senza canalini di lubrificazione Without lubrication grooves Sans rainures de lubrification	

FILETTATURA,
THREAD, FILETAGE ④

M	MF	UNC	UNF	GAS

PARTICOLARI TECNICI AGGIUNTIVI
TECHNICAL ADDED INFORMATION - DETAILS TECHNIQUES SUPPLEMENTAIRES DU TARAUD ⑤

FOR		FORY	

RIVESTIMENTI SUPERFICIALI
COATING - REVÊTEMENTS ⑥

T	TG	AHI	TXC
TiN	TiN-G	AlCrN	TiAlN+WC/C

CAMPI APPLICATIVI
APPLICATION FIELD - DOMAINES D'APPLICATION

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL	
U	APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS
HR	ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE
INOX	ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE
GG	GHISA - CAST IRON - FONTE
AL-CU-FE	ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER
OT	OTTONE - BRASS - LAITON
Ti	TITANIO - TITANIUM - TITANE
Ni	NICHEL - NICKEL
RT	ROMPITRUCIOLO - CHIP BREAKER - BRISE COPEAUX
SYNCHRO RIGID	MASCHIATURA RIGIDA SNCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

P - ROLL	MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER Rm < 850 N/mm²
K-ROLL	MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER Rm < 1200 N/mm²

LINEE PRODOTTI
PRODUCTS LINES - GAMMES DE PRODUITS

La LINE è la serie commerciale di base della UFS ed è rivolta ad un utilizzo più generico; è la gamma più completa a catalogo.

LINE is the basic tap series of UFS for general use; it is the most complete range in the catalogue.

LINE est la série de tarauds de base UFS à usage général; c'est la gamme la plus complète du catalogue.

La PLUS è la serie di maschi intermedia di UFS. Rispetto alla LINE utilizza acciai più performanti con tenore di cobalto superiore.

The PLUS is the intermediate tap series from UFS. Compared to LINE, it uses more performing steels with a higher cobalt content.

Le PLUS est la série de tarauds intermédiaires d'UFS. Par rapport à LINE, il utilise des aciers plus performants avec une teneur en cobalt plus élevée.

La TOP è la massima espressione del prodotto UFS. Oltre che avere di base gli acciai sinterizzati da polvere, i maschi TOP si identificano in base al tipo di materiale da lavorare mediante sistema ad anelli colorati.

The TOP is the maximum expression of the UFS product. In addition to having powder sintered steel as a basis, TOP males are identified on the basis of the type of material to be machined by means of a colored ring system.

Le TOP est l'expression maximale du produit UFS. En plus d'avoir comme base de l'acier fritté en poudre, les mâles TOP sont identifiés en fonction du type de matériau à usiner au moyen d'un système de bagues colorées.

Universal	HR	INOX Stainless steel Acier inoxydable	Al-Cu-Fe	Ghisa Cast iron Fonte	Ti	Ni	SR Synchro RIGID

NEW

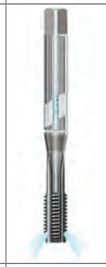
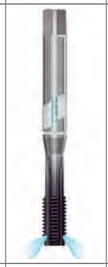
Nuova serie per acciai tenaci fino a 1000 N/mm². Realizzata in acciaio HSSP ed HSSE-PM, in abbinamento a sistemi di finitura di ultima generazione, e rivestimento TiN-G sviluppato e realizzato negli impianti UFS.

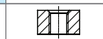
New series for tough steels up to 1000 N/mm². Made of HSSP and HSSE-PM steel, combined with latest generation finishing systems, and TiN-G coating developed and manufactured in the UFS plants.

Nouvelle série pour les aciers durs jusqu'à 1000 N/mm². Fabriqué en acier HSSP et HSSE-PM, associé à des systèmes de finition de dernière génération et à un revêtement TiN-G développé et fabriqué dans les usines UFS.

	Maschi a mano - serie 3 pezzi Hand taps - sets of three pieces Tarauds à main - jeux de trois pièces			Maschi a mano sinistri - serie 3 pezzi Left hand taps - sets of 3 pieces Tarauds à main à gauche - jeux de 3 pièces			Maschi a mano per INOX - serie 3 pezzi Hand taps for stainless steel - sets of 3 pieces Tarauds à main pour acier inoxydable - jeux de 3 pièces			Maschi a mano - serie 2 pezzi Hand taps - sets of 2 pieces Tarauds à main - jeux de 2 pièces	
	00…			00…LH			00…X-VS			00…	
	LINE			LINE			LINE			LINE	
											
				LH	LH	LH					
ISO2/6H	46	46	46	46	46	46	47	47	47		
ISO1/4H											
ISO3/6G											
7G / +0,1											
ISO2/6H										108	108
ISO1/4H											
ISO3/6G											
7G / +0,1											
UNC	160	160	160								
UNF										178	178
UNEF											
UNS											
8-12 UN											
G										204	204
NPSM											
NPSF											
Rc											
NPT											
NPTF											
BSW	232	232	232								
PG,Tr,Rd											
EG											
	A (5-6)	D (4-5)	C (2-3)	A (5-6)	D (4-5)	C (2-3)	A (5-6)	D (4-5)	C (2-3)	A (5-6)	C (2-3)
	HSS	HSS	HSS	HSS	HSS	HSS	HSSE	HSSE	HSSE	HSS	HSS
							VS	VS	VS		
							INOX	INOX	INOX		
	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD	2xD
1.1		•			•			•		•	
1.2		•			•			•		•	
1.3		•			•			•		•	
1.4		•			•			•		•	
1.5								❍			
1.6											
1.7											
1.8											
2.1		❍			❍			•		❍	
2.2		❍			❍			•		❍	
2.3		❍			❍			•		❍	
2.4											
3.1		❍			❍			•		❍	
3.2								❍			
3.3								❍			
3.4		❍			❍			•		❍	
3.5											
4.1		•			•			•		•	
4.2		•			•			•		•	
4.3		•			•			•		•	
4.4		❍			❍			•		❍	
4.5											
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											

	Maschi a macchina per dadi Machine nut taps Tarauds machine pour écrous		Maschi per OTTONE e BRONZO Machine taps for BRASS and BRONZE Tarauds machine pour LAITON et BRONZE		Maschi a macchina - scanalature diritte Machine taps - straight flutes Tarauds machine - goujures droites		Scanalature diritte - sinistri Straight flutes - left thread Goujures droites - filetage à gauche	Scanalature diritte - filetti alternati Straight flutes - interrupted threads Goujures droites - filets alternés	
	10FC…	10FP…	LANCIA…	E20…OT	E20/E21…	E20/E21…T	E20/E21…LH	E20/E21…AZ	E20/E21…AZ-V
	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE
									
			Ms58				LH	AZ	AZ
ISO2/6H	48	48	49	49	50, 51	50, 51	52	53	53
ISO1/4H									
ISO3/6G									
7G / +0,1									
ISO2/6H					109, 110, 111, 112		113		
ISO1/4H									
ISO3/6G									
7G / +0,1									
UNC					161				
UNF					179				
UNEF					196				
UNS					200				
8-12 UN					201				
G, Rp					205 (219RP)	205 (219RP)			
NPSM					220	220			
NPSF					221	221			
Rc									
NPT									
NPTF									
BSW									
PG,Tr,Rd									
EG									
	C (2-3)	20xP	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
						TiN			V
			OT	OT				Al-Cu-Fe	Al-Cu-Fe
	1,5xD	1,5xD	3xD	3xD	1,5xD	1,5xD	1,5xD	1,5xD	1,5xD
1.1	• 10-15	• 18-20			❍ 10-15	• 20-30	❍10-15	• 10-15	• 10-15
1.2	• 10-15	• 15-18			• 10-15	• 20-30	• 10-15		
1.3	• 10-12	• 12-15			• 10-12	• 20-25	• 10-12		
1.4	❍ 8-10	❍10-12			❍ 8-10	• 15-20	❍ 8-10		
1.5									
1.6									
1.7									
1.8									
2.1									
2.2									
2.3									
2.4									
3.1									
3.2									
3.3									
3.4					❍8-10	❍15-20	❍8-10		
3.5									
4.1								• 10-15	• 10-15
4.2					❍ 15-20	❍25-30	❍15-20	• 15-20	• 15-20
4.3					❍ 10-15	❍20-25	❍10-15		
4.4									
4.5									
5.1								• 8-12	• 8-12
5.2					❍ 10-15	❍20-25	❍10-15	• 10-15	• 10-15
5.3			• 15-20	■ 15-20	❍ 15-20	❍25-30	❍15-20		
5.4									
6.1									
6.2									
6.3									
7.1									
7.2									
7.3									
8.1								❍ 20-25	❍20-25
8.2			❍ 8-10	❍8-10	❍8-10	❍ 10-15	❍ 8-10		
8.3			❍3-5	❍3-5					

	Maschi a macchina per GHISA - HSSE Machine taps for CAST IRON - HSSE Tarauds machine pour FONTE - HSSE			Maschi a macchina per GHISA - PM3 Machine taps for CAST IRON - PM3 Tarauds machine pour FONTE - PM3			Maschi a macchina per GHISA - imbocco E Machine taps for CAST IRON - chamfer E Tarauds machine pour FONTE - entrée E			Maschi SYNCHRO Synchro taps Synchro tarauds	
											
	E26/E27...NQ	E26/E27...CT	E26/E27...FOR-CT	K26/K27...TX	K26/K27...FOR-TX	K26/K27...FORY-TX	K26/K27E...AHI	K26/K27E...FOR-AHI	K26/K27E...FORY-AHI	S20...TXC	S20...FOR-TXC
	LINE	LINE	LINE	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP
											
ISO2/6H	54	54	54	55	55	55	56	56	56	57	57
ISO1/4H											
ISO3/6G											
7G / +0,1											
ISO2/6H	114	114	114	115	115	115	116	116	116	117	117
ISO1/4H											
ISO3/6G											
7G / +0,1											
UNC		162	162								
UNF		180	180								
UNEF											
UNS											
8-12 UN											
G	206	206		206	206						
NPSM											
NPSF											
Rc											
NPT											
NPTF											
BSW											
PG,Tr,Rd											
EG											
	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)
	HSSE	HSSE	HSSE	PM3	PM3	PM3	PM3	PM3	PM3	PM3	PM3
	NQ	TiCN	TiCN	TiAlN	TiAlN	TiAlN	AHI	AHI	AHI	TXC	TXC
	GG	GG	GG	GG	GG	GG	GG	GG	GG	Synchro R	Synchro R
	3xD	3xD	3,5xD	3xD	3,5xD	3,5xD	3xD	3,5xD	3,5xD	3xD	3,5xD
1.1											
1.2											
1.3											
1.4											
1.5										➲ 10-15	➲ 10-15
1.6										• 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	• 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	• 20-25	• 20-25	• 20-25	• 20-25
3.3	➲ 8-10	➲ 15-20	➲ 15-20	➲ 20-25	➲ 20-25	➲ 20-25	➲ 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	➲ 25-30	➲ 25-30	➲ 25-30	➲ 25-30
3.5				• 10-15	• 10-15	• 10-15	• 10-15	• 10-15	• 10-15	• 10-15	• 10-15
4.1											
4.2											
4.3											
4.4	• 10-15	• 25-30	• 25-30							• 25-30	• 25-30
4.5	• 10-15	• 20-30	• 20-30							• 30-40	• 30-40
5.1											
5.2											
5.3	• 18-20	• 25-30	• 25-30							• 35-40	• 35-40
5.4										➲ 8-10	➲ 8-10
6.1											
6.2											
6.3											
7.1											
7.2											
7.3											
8.1											
8.2	• 8-10	• 10-15	• 10-15							• 20-25	• 20-25
8.3										• 10-15	• 10-15

	Rompitruciolo Chip breaker Brise copeaux	Maschi per alta resistenza Taps for high strength materials Tarauds pour matériaux à haute résistance		Maschi con imbocco coretto per fori passanti Spiral point taps for through holes Tarauds entrée gun pour trous débouchant				Maschi con imbocco corretto per fori passanti sinistri Spiral point taps for through holes - left thread Tarauds entrée gun pour trous débouchant - filetage à gauche		
										
	K22/K23...FOR-TXC	K20/K21...TXC	XT20...AHI	E24/E25...	E24/E25...V	E24/E25...T	E24/E25...XP	E24/E25...LH	E24/E25...LH-V	E24/E25...LH-T
	TOP	TOP	TOP	LINE	LINE	LINE	LINE	LINE	LINE	LINE
										
		≤45HRC	≤52HRC					LH	LH	LH
ISO2/6H	58	59	59	60-61	60-61	60-61	60-61	62	62	62
ISO1/4H				63		63				
ISO3/6G				63		63				
7G / +0,1				64		64				
ISO2/6H	118	119		120, 121, 122	120, 121, 122	120, 121, 122	120, 121, 122	123		123
ISO1/4H				124						
ISO3/6G				124						
7G / +0,1				124						
UNC				163	163	163				
UNF				181	181	181				
UNEF				197						
UNS										
8-12 UN										
G				207	207	207				
NPSM										
NPSF										
Rc										
NPT										
NPTF										
BSW				233		233				
PG,Tr,Rd										
EG				242 (EGM)			242 (EGM)			
	C (2-3)	C (2-3)	C (2-3)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)
	PM3	PM3	PM1	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE
	TXC	TXC	AHI		V	TiN	XP		V	TiN
	RT	HR	HR							
	3,5xD	1,5xD	1,5xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD
1.1				➲ 10-15	• 10-15	• 20-30	• 20-30	➲ 10-15	• 10-15	• 20-30
1.2				• 10-15	• 10-15	• 20-30	• 20-30	• 10-15	• 10-15	• 20-30
1.3	• 25-30			• 10-12	• 10-12	• 20-25	• 20-25	• 10-12	• 10-12	• 20-25
1.4	• 20-25			➲ 8-10	➲ 8-10	• 15-20	• 15-20	➲ 8-10	➲ 8-10	• 15-20
1.5	• 5-12	➲ 5-12								
1.6	➲ 5-8	• 5-8								
1.7			• 1-3							
1.8										
2.1							➲ 10-15			
2.2							➲ 8-10			
2.3										
2.4										
3.1	➲ 25-30									
3.2	➲ 20-25									
3.3	• 20-25					➲ 10-15	➲ 10-15			➲ 10-15
3.4	• 25-30					• 15-20	• 15-20			• 15-20
3.5										
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				➲ 20-25	➲ 20-25			➲ 20-25
4.4	➲ 25-30	• 25-30								
4.5	➲ 20-30	• 20-30								
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								
5.4		➲ 5-8	• 5-8							
6.1										
6.2										
6.3										
7.1										
7.2										
7.3										
8.1										
8.2		• 10-15								
8.3	➲ 6-10	• 6-10								

	Maschi imbocco corretto gambo lungo Spiral point taps, long shank Tarauds entrée gun, queue longue		Maschi imbocco corretto per Al-Fe-Cu Spiral point taps for Al-Fe-Cu materials Tarauds entrée gun, matériaux Al-Fe-Cu		Maschi imbocco corretto - filetti alternati Spiral point taps - Interrupted threads Tarauds entrée gun - filets alternés		Maschi imbocco corretto per fori passanti HSSP 8%Co Spiral point taps for through holes - HSSP steel 8% Co Tarauds entrée gun pour trous débouchant - HSSP acier 8% Co			Maschi imbocco corretto applicazioni uni.v Spiral point taps universal applications Tarauds entrée gun usinage universels	
	L24/25...	L24/25...CT	E24/25...AL	E24/25...AL-TXC	E24/25...AZ	E24/25...AZ-TXC	P24/25...	P24/25...V	P24/25...TG	K24/25...XP	K24/25...FORY-XP
	LINE	LINE	LINE	TOP	LINE	LINE	PLUS	PLUS	***S-PLUS***	TOP	TOP
	XL	XL	AL	AL	AZ	AZ					
ISO2/6H	65	65	66	66	67	67	68	68	68	69	69
ISO1/4H											
ISO3/6G											
7G / +0,1											
ISO2/6H			125						126	126	126
ISO1/4H											
ISO3/6G											
7G / +0,1											
UNC									164	164	164
UNF									182	182	182
UNEF											
UNS											
8-12 UN											
G									208	208	208
NPSM											
NPSF											
Rc											
NPT											
NPTF											
BSW											
PG,Tr,Rd											
EG											
	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	HSSP	HSSP	HSSP	PM3	PM3
		TiCN		TXC		TXC		V	TiN-G	XP	XP
				Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe	Al-Cu-Fe			U	U
	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3,5xD
1.1	○10-15	• 20-30	• 10-15	• 20-30	• 10-15	• 20-30				○20-30	○20-30
1.2	• 10-15	• 20-30			○10-15	• 20-30	• 10-15	• 10-15	• 20-30	• 20-30	• 20-30
1.3	• 10-12	• 20-25					• 10-12	• 10-12	• 20-25	• 20-25	• 20-25
1.4	○8-10	• 15-20					• 8-10	• 8-10	• 15-20	• 15-20	• 15-20
1.5									○5-12	• 5-12	• 5-12
1.6											
1.7											
1.8											
2.1		○10-15								• 10-15	• 10-15
2.2		○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
3.4		• 15-20							• 15-20	• 15-20	• 15-20
3.5											
4.1	○10-15		• 10-15	• 20-25	• 10-15	• 20-25					
4.2	• 15-20	• 25-30	• 15-20	• 25-30	• 15-20	• 25-30				• 25-30	• 25-30
4.3		○20-25		○20-25			• 10-15	• 10-15	• 20-25	• 20-25	• 20-25
4.4											
4.5											
5.1	○8-12		• 8-12	• 15-20	• 8-12	• 15-20					
5.2	○10-15	• 20-25	• 10-15	• 20-25	• 10-15	• 20-25	• 10-15	• 10-15	• 20-25	• 20-25	• 20-25
5.3											
5.4											
6.1			• 5-8		○5-8						
6.2											
6.3											
7.1			• 6-8		○6-8						
7.2											
7.3											
8.1			• 20-25		○20-25						
8.2											
8.3											

	Maschi imbocco corretto Synchro Synchro spiral point taps Tarauds entrée gun synchronisé	Maschi imbocco corretto HR Spiral point taps - HR Tarauds entrée gun - HR	Maschi imbocco corretto per INOX Spiral point taps for stainless steel Tarauds entrée gun pour acier inoxydable			Maschi per fori passanti - Titanio Taps for through hole - Titanium Tarauds pour trous débouchant - Titane		Maschi per fori passanti - Nichel Taps for through hole - Nickel Tarauds pour trous débouchant - Nickel	
	S24...TXC	K24/25...TXC	V24/25…VS	V24/25...TXC	K24/25...X-TXC	K52/53...CT	K52/53..J...CT	K52/53...NI-CT	K52/53...J...NI-CT
	TOP	TOP	LINE	TOP	TOP	TOP	TOP	TOP	TOP
							J		J
						L15°	L15°	L10°	L10°
ISO2/6H	70	71	72	72	72	74		75	
ISO1/4H							74 (4H)		75 (4H)
ISO3/6G									
7G / +0,1									
ISO2/6H	127	128	129	129	129	130		131	
ISO1/4H							130 (4H)		131 (4H)
ISO3/6G									
7G / +0,1									
UNC				165		166	166 (3B)		
UNF				183		184	184 (3B)		
UNEF									
UNS									
8-12 UN									
G	209			210					
NPSM									
NPSF									
Rc									
NPT									
NPTF									
BSW									
PG,Tr,Rd									
EG									
	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)
	PM3	PM3	HSSV3	HSSV3	PM3	PM3	PM3	PM3	PM3
	TXC	TXC	TXC	TXC	TXC	TiCN	TiCN	TiCN	TiCN
	Synchro R	HR	INOX	INOX	INOX	Ti	Ti	Ni	Ni
	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD
1.1	• 40-45		• 10-15						
1.2	• 40-45		• 10-15						
1.3	• 35-40			• 20-25	• 20-25				
1.4	• 25-30			• 15-20	• 15-20				
1.5	• 10-15	• 5-12		○5-12	• 5-12				
1.6		• 5-8			○5-8	• 5-8	• 5-8	○5-8	○5-8
1.7								• 1-3	• 1-3
1.8									
2.1	• 20-25		• 6-8	• 10-15	• 10-15				
2.2	• 15-20		• 5-7	• 8-10	• 8-10				
2.3	• 10-15		• 3-5	• 6-8	• 6-8				
2.4	• 10-12			○3-6	• 3-6	• 3-6	• 3-6		
3.1									
3.2									
3.3	• 20-25	• 15-20				• 15-20	• 15-20		
3.4	• 25-30	• 20-25				• 20-25	• 20-25		
3.5									
4.1	• 30-40								
4.2	• 45-50								
4.3	• 30-40								
4.4		○25-30				○25-30	○25-30		
4.5									
5.1	• 20-25								
5.2	• 25-30								
5.3		• 25-30				• 25-30	• 25-30		
5.4						○5-8	○5-8	• 5-8	• 5-8
6.1	• 20-30								
6.2	○12-15					• 4-8	• 4-8		
6.3						• 2-4	• 2-4		
7.1	• 20-30								
7.2	○8-12					• 2-4	• 2-4	○2-4	○2-4
7.3								• 1-3	• 1-3
8.1									
8.2									
8.3									

	Maschi elicoidali 15° per fori ciechi Spiral flute taps 15° for blind holes Tarauds à goujure hélicoïdale 15° pour trous borgnes				Maschi elica 15° - filetti alternati Spiral flute taps 15° - interrupted threads Goujures hélicoïdales 15° - filets alternés	Maschi elicoidali 15° applicazioni Univ. Spiral flute taps 15° - Univ. applications Goujures hélicoïdales 15° - usinage Univ.		Maschi elicoidali a 15° - rompitruciolo Spiral flute taps 15°- chip breaker Goujures hélicoïdales 15° - brise copeaux
	E40/E41...	**E40/E41...V**	**E40/E41...T**	**E40/E41...FOR-T**	**E40/E41...AZ**	**K40/K41...XP**	**K40/K41...FOR-XP**	**K44/K45...FOR-XP**
	LINE	LINE	LINE	LINE	LINE	TOP	TOP	TOP
					AZ			
	R15°	R15°	R15°	R15°	R15°	R15°	R15°	R15°
ISO2/6H	76-77	76-77	76-77	76-77	79	80	80	80
ISO1/4H								
ISO3/6G	78		78					
+0,1	78		78					
ISO2/6H	132-133	132-133	132-133	132-133		134	134	134
ISO1/4H								
ISO3/6G								
7G / +0,1								
UNC	167		167					
UNF	185		185					
UNEF								
UNS								
8-12 UN								
G	211	211	211					
NPSM								
NPSF								
Rc								
NPT								
NPTF								
BSW								
PG,Tr,Rd								
EG								
	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-PM	HSSE-PM	HSSE-PM
		V	TiN	TiN		XP	XP	XP
	N	N	N	N	Al-Cu-Fe	U	U	U
	1,5xD	1,5xD	1,5xD	2,5xD	1,5xD	1,5xD	2,5xD	3xD
1.1	◑10-15	• 10-15	• 20-30	• 20-30	• 10-15			
1.2	• 10-15	• 10-15	• 20-30	• 20-30	◑10-15			
1.3	• 10-12	• 10-12	• 20-25	• 20-25		• 20-25	• 20-25	• 20-25
1.4	◑8-10	◑8-10	• 15-20	• 15-20		• 15-20	• 15-20	• 15-20
1.5						• 5-12	• 5-12	• 5-12
1.6						• 5-8	• 5-8	• 5-8
1.7								
1.8								
2.1								
2.2								
2.3								
2.4								
3.1								
3.2								
3.3			◑10-15	◑10-15		• 15-20	• 15-20	
3.4			• 15-20	• 15-20		• 20-25	• 20-25	
3.5								
4.1	◑10-15	• 10-15	◑20-25	◑20-25	• 10-15			
4.2	• 15-20	• 15-20	• 25-30	• 25-30	• 15-20			
4.3			◑20-25	◑20-25		• 20-25	• 20-25	
4.4								
4.5								
5.1	◑8-12	• 8-12	◑15-20	◑15-20	• 8-12			
5.2	◑10-15	• 10-15	• 20-25	• 20-25	• 10-15			
5.3								
5.4								
6.1					◑5-8			
6.2						• 2-3	• 2-3	
6.3								
7.1					◑6-8			
7.2						• 2-3	• 2-3	
7.3								
8.1					◑20-25			
8.2								
8.3								

	Maschi elicoidali 15° - Alta resistenza Spiral flute taps 15° - HR Goujures hélicoïdales - Haute résistance		Maschi elicoidali 15° - Titanio Spiral flute taps 15° - Titanium Tarauds goujures hélicoïdales 15° - Titane			Maschi elicoidali 15° - Nickel Spiral flute taps 15° - Nickel Tarauds goujures hélicoïdales - Nickel		Maschi elicoidali 40° Spiral flute taps 40° Tarauds goujures hélicoïdales 40°			
	K40/K41...TXC	**K40/K41...FOR-TXC**	**K42/K43...V**	**K42/K43...CT**	**K42/K43...J...CT**	**K42...NI-CT**	**K42...J...NI-CT**	**E60/E61...**	**E60/E61...V**	**E60/E61...T**	**E60/E61...XP**
	TOP	TOP	TOP	TOP	TOP	TOP	TOP	LINE	LINE	LINE	LINE
					J		J				
	R15°	R15°	R15°	R15°	R15°	R10°	R10°	R40°	R40°	R40°	R40°
ISO2/6H	81	81	82	82		83		84-85	84-85	84-85	84-85
ISO1/4H					82		83	87			87
ISO3/6G								87			87
7G / +0,1								88			88
ISO2/6H				136		137		138-139-140-141	138-139-140-141	138-139-140-141	138-139-140
ISO1/4H					136		137				
ISO3/6G								143			143
+0,1								143			143
UNC				168	168 (3B)			169	169	169	169
UNF				186	186 (3B)			187	187	187	187
UNEF								198			
UNS											
8-12 UN											
G, Rp								212	212	212 (219 RP)	212
NPSM								220		220	
NPSF								221		221	
Rc											
NPT											
NPTF											
BSW								234		234	
PG,Tr,Rd											
EG								243-244-245			243-244-245
	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	HSSE	HSSE	HSSE	HSSE
	TXC	TXC	V	TiCN	TiCN	TiCN	TiCN		V	TiN	XP
	HR	HR	Ti	Ti	Ti	Ni	Ni	N	N	N	N
	1,5xD	2,5xD	1,5xD	1,5xD	1,5xD	1,5xD	1,5xD	2,5xD	2,5xD	2,5xD	2,5xD
1.1								◑10-15	• 10-15	• 20-30	• 20-30
1.2								• 10-15	• 10-15	• 20-30	• 20-30
1.3								• 10-12	• 10-12	• 20-25	• 20-25
1.4								◑8-10	◑8-10	• 15-20	• 15-20
1.5	• 5-12	• 5-12									
1.6	• 5-8	• 5-8		• 5-8	• 5-8	◑5-8	◑5-8				
1.7						• 1-3	• 1-3				
1.8											
2.1											◑10-15
2.2											◑8-10
2.3											
2.4				• 3-6	• 3-6						
3.1											
3.2											
3.3	• 15-20	• 15-20		• 15-20	• 15-20					◑10-15	◑10-15
3.4	• 20-25	• 20-25		• 20-25	• 20-25					• 15-20	• 15-20
3.5											
4.1								◑10-15	• 10-15	◑20-25	
4.2								• 15-20	• 15-20	• 25-30	• 25-30
4.3										◑20-25	◑20-25
4.4	◑25-30	◑25-30		◑25-30	25-30						
4.5	◑20-30	◑20-30									
5.1								◑8-12	• 8-12	◑15-20	
5.2								◑10-15	• 10-15	• 20-25	• 20-25
5.3	• 25-30	• 25-30		• 25-30	• 25-30						
5.4				◑5-8	◑5-8	• 5-8	• 5-8				
6.1			• 5-10								
6.2				• 4-8	• 4-8						
6.3				• 2-4	• 2-4						
7.1											
7.2				• 2-4	• 2-4	◑2-4	◑2-4				
7.3						• 1-3	• 1-3				
8.1											
8.2											
8.3											

	Maschi elicoidali 35° - filettatura sinistra Spiral flute taps 35° - left thread Tarauds à goujure hélicoïdale 35° - filetage à gauche			Elicoidali 40° - gambo lungo Spiral flute taps 40° - long shank Goujure hélicoïdale 40° - queue long		Maschi elicoidali 45° per Al-Cu-Fe Spiral flute taps 45° for Al-Cu-Fe Goujure hélicoïdale 45° pour Al-Cu-Fe		Maschi elicoidali 40° - acciaio HSSP 8% Co Spiral flute taps 40° - HSSP steel 8%Co Tarauds à goujure hélicoïdale 40° - HSSP acier8%Co		
	E60/E61...LH	**E60/E61...LH-V**	**E60/E61...LH-XP**	**L60/L61...**	**L60/L61...CT**	**E70/E71...**	**E70/E71...TXC**	**P60/P61...**	**P60/P61...V**	**P60/P61...XP**
	LINE	LINE	LINE	LINE	LINE	LINE	TOP	PLUS	PLUS	PLUS
	LH	LH	LH	XL	XL	AL	AL			
	L35°	L35°	L35°	R40°	R40°	R45°	R45°	R40°	R40°	R40°
ISO2/6H	86	86	86	89	89	90	90	91	91	91
ISO1/4H										
ISO3/6G										
7G / +0,1										
ISO2/6H	142	142	142			144				
ISO1/4H										
ISO3/6G										
7G / +0,1										
UNC										
UNF										
UNEF										
UNS										
8-12 UN										
G, Rp										
NPSM										
NPSF										
Rc										
NPT										
NPTF										
BSW										
PG,Tr,Rd										
EG										
	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	HSSP	HSSP	HSSP
		V	XP		TiCN		TXC		V	XP
						Al-Cu-Fe	Al-Cu-Fe			
	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	3xD	3xD	2,5xD	2,5xD	2,5xD
1.1	◔10-15	• 10-15	• 20-30	◔10-15	• 20-30	• 10-15	• 20-30			
1.2	• 10-15	• 10-15	• 20-30	• 10-15	• 20-30			• 10-15	• 10-15	• 20-30
1.3	• 10-12	• 10-12	• 20-25	• 10-12	• 20-25			• 10-12	• 10-12	• 20-25
1.4	◔8-10	◔ 8-10	• 15-20	◔8-10	• 15-20			• 8-10	• 8-10	• 15-20
1.5										◔ 5-12
1.6										
1.7										
1.8										
2.1			◔10-15		◔10-15					◔10-15
2.2			◔8-10		◔ 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	• 10-15		◔10-15		• 10-15	• 20-25			
4.2	• 15-20	• 15-20	• 25-30	• 15-20	• 25-30	• 15-20	• 25-30	◔15-20	◔15-20	◔25-30
4.3			◔20-25		◔20-25		◔20-25	• 10-15	• 10-15	• 20-25
4.4										
4.5										
5.1	◔8-12	• 8-12		◔8-12		• 8-12	• 15-20			
5.2	◔10-15	• 10-15	• 20-25	◔10-15	• 20-25	• 10-15	• 20-25	• 10-15	• 10-15	• 20-25
5.3										
5.4										
6.1						• 5-8				
6.2										
6.3										
7.1						• 6-8				
7.2										
7.3										
8.1						• 20-25				
8.2										
8.3										

	Elica 40°, rastremazione posteriore Spiral flute 40°, back tapered thread Goujures hélicoïdales 40, conicité arrière		Elicoidali 45° per fori ciechi - sistema controllo truciolo Spiral flute taps 45° for blind holes - chip system control Goujures hélicoïdales 45° pour trous borgnes - système de contrôle des copeaux				Elicoidali 45° - sistema controllo truciolo - Maschiatura SR Spiral flute taps 45° - Chip system control - SR tapping Goujures hélicoïdales 45° - système de contrôle des copeaux - Taraudage SR	
	E81...	**E81...XP**	**E92/E93...**	**E92/E93...V**	**E92/E93...TG**	**E93E...XP**	**E94/E95...TXC**	**E94/E95...FOR-TXC**
	LINE	LINE	LINE	LINE	***S-PLUS***	LINE	TOP	TOP
	BT	BT	BT	BT	BT	BT	BT	BT
	R40°	R40°	R45°	R45°	R45°	R45°	R45°	R45°
ISO2/6H			92	92	92		93	93
ISO1/4H								
ISO3/6G								
7G / +0,1								
ISO2/6H			145	145	145			
ISO1/4H								
ISO3/6G								
7G / +0,1								
UNC			170	170	170			
UNF			188	188	188			
UNEF								
UNS								
8-12 UN	201	201						
G			213	213	213	213		
NPSM								
NPSF								
Rc								
NPT								
NPTF								
BSW								
PG,Tr,Rd								
EG								
	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	E (1,5-2)	C (2-3)	C (2-3)
	HSSE	HSSE	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM
		XP		V	TiN-G	XP	TXC	TXC
	2,5xD	2,5xD	3xD	3xD	3xD	3xD	3xD	3,5xD
1.1	◔10-15	• 20-30	◔10-15	• 10-15				
1.2	• 10-15	• 20-30	• 10-15	• 10-15	• 20-30	• 20-30	• 20-30	• 20-30
1.3	• 10-12	• 20-25	• 10-12	• 10-12	• 20-25	• 20-25	• 20-25	• 20-25
1.4	◔8-10	• 15-20	◔8-10	◔8-10	• 15-20	• 15-20	• 15-20	• 15-20
1.5					◔5-12	◔5-12	◔5-12	◔5-12
1.6								
1.7								
1.8								
2.1		◔10-15		• 6-8		• 10-15	• 10-15	• 10-15
2.2		◔8-10		• 5-7		• 8-10	• 8-10	• 8-10
2.3						• 6-8	• 6-8	• 6-8
2.4								
3.1								
3.2								
3.3		◔10-15						
3.4		• 15-20						
3.5								
4.1	◔10-15							
4.2	• 15-20	• 25-30	• 15-20					
4.3		◔20-25			• 20-25			
4.4								
4.5								
5.1	◔8-12		• 8-12					
5.2	◔10-15	• 20-25	• 10-15		• 20-25			
5.3								
5.4								
6.1								
6.2								
6.3								
7.1								
7.2								
7.3								
8.1								
8.2								
8.3								

	Elicoidali 45° - sistema controllo truciolo - imbocco E Spiral flute taps 45° - Chip system control - chamfer E Goujures hélicoïdales 45° - Système de contrôle des copeaux		Maschi elicoidali a 45° applicazioni universali Spiral flute taps 45° - Universal applications Goujures hélicoïdales 45° - Usinage universels		Elicoidali a 40° - Maschiatura SR Spiral flute taps 40° - SR tapping Goujures hélicoïdales 40° - Taraudage SR		Maschi elicoidali 40° HR alta resistenza Spiral flute taps 40° - HR high resistance Goujures hélicoïdales 40° - HR haute résistance	
	E94E/E95E...TXC	**E94E/E95E...FOR-TXC**	**K82/K83...XP**	**K82/K83...FOR-XP**	**S80...TXC**	**S80...FOR-TXC**	**K80/K81...TXC**	**K80/K81...FOR-TXC**
	TOP	TOP	TOP	TOP	TOP	TOP	TOP	TOP
								
	BT	BT	BT	BT	BT	BT	BT	BT
	R45°	R45°	R45°	R45°	R40°	R40°	R40°	R40°
ISO2/6H	94	94	95	95	96	96	97	97
ISO1/4H								
ISO3/6G								
7G / +0,1								
ISO2/6H			146	146	147	147	148	148
ISO1/4H								
ISO3/6G								
7G / +0,1								
UNC			171	171				
UNF			189	189				
UNEF								
UNS								
8-12 UN								
G			214	214	215	215		
NPSM								
NPSF								
Rc								
NPT								
NPTF								
BSW								
PG,Tr,Rd								
EG								
	E (1,5-2)	E (1,5-2)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
	HSSE-PM	HSSE-PM	PM3	PM3	PM3	PM3	PM3	PM3
	TXC	TXC	XP	XP	TXC	TXC	TXC	TXC
			U	U	Synchro R	Synchro R	HR	HR
	3xD	3,5xD	3xD	3,5xD	2,5xD	3xD	2,5xD	3xD
1.1			❍20-30	❍20-30	• 40-45	• 40-45		
1.2	• 20-30	• 20-30	• 20-30	• 20-30	• 40-45	• 40-45		
1.3	• 20-25	• 20-25	• 20-25	• 20-25	• 35-40	• 35-40		
1.4	• 15-20	• 15-20	• 15-20	• 15-20	• 25-30	• 25-30	• 15-20	• 15-20
1.5	❍5-12	❍5-12	• 5-12	• 5-12	• 10-15	• 10-15	• 5-12	• 5-12
1.6								
1.7								
1.8								
2.1	• 10-15	• 10-15	• 10-15	• 10-15	• 20-25	• 20-25		
2.2	• 8-10	• 8-10	• 8-10	• 8-10	• 15-20	• 15-20		
2.3	• 6-8	• 6-8	• 6-8	• 6-8	• 10-15	• 10-15		
2.4					• 10-12	• 10-12		
3.1								
3.2								
3.3			• 10-15	• 10-15	• 20-25	• 20-25	• 15-20	• 15-20
3.4			• 15-20	• 15-20	• 25-30	• 25-30	• 20-25	• 20-25
3.5								
4.1					• 30-40	• 30-40		
4.2			• 25-30	• 25-30	• 45-50	• 45-50		
4.3			• 20-25	• 20-25	• 30-40	• 30-40		
4.4								
4.5								
5.1					• 20-25	• 20-25		
5.2			• 20-25	• 20-25	• 25-30	• 25-30		
5.3								
5.4								
6.1					• 20-30	• 20-30		
6.2					❍12-15	❍12-15		
6.3								
7.1					• 20-30	• 20-30		
7.2					❍8-12	❍8-12		
7.3								
8.1								
8.2								
8.3								

	Maschi elicoidali a 48° - Acciaio INOX Spiral flute taps 48° - Stainless steel Tarauds à goujure hélicoïdale 48° - Acier inoxydable				Maschi a rullare senza canaline Roll form taps without oil grooves Tarauds à refouler sans rainures		Maschi a rullare con canaline Roll form taps with oil grooves Tarauds à refouler avec rainures de lubrification		
	E92/E93...VS	**V82/V83...TXC**	**V82/V83...FOR-TXC**	**K82/K83...X-TXC**	**P2SC...T**	**P3SC...T**	**P2CC...T**	**P2CC...AHI**	**P3CC...T**
	LINE	TOP	TOP	TOP	*ROLL*	*ROLL*	*ROLL*	*ROLL*	*ROLL*
									
	BT			SR-IT					
	R45°	R48°	R48°	R48°	P-ROLL	P-ROLL	P-ROLL	P-ROLL	P-ROLL
ISO2/6H	98	98	98	98	100		101	101	
ISO1/4H									
ISO3/6G						100			101
7G / +0,1									
ISO2/6H	149	149	149				150		
ISO1/4H									
ISO3/6G									150
7G / +0,1									
UNC		172	172				173		
UNF		190	190				191		
UNEF									
UNS									
8-12 UN									
G		216	216				217		
NPSM									
NPSF									
Rc									
NPT									
NPTF									
BSW									
PG,Tr,Rd									
EG									
	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	HSSV3	HSSV3	PM3	PM8	PM8	PM8	PM8	PM8
	VS	TXC	TXC	TXC	TiN	TiN	TiN	AHI	TiN
	INOX	INOX	INOX	INOX					
	3xD	3,5xD	3,5xD	3,5xD	3xD	3xD	3xD	3xD	3xD
1.1	• 10-15				• 20-30	• 20-30	• 20-30	• 20-30	• 20-30
1.2	• 10-15				• 20-30	• 20-30	• 20-30	• 20-30	• 20-30
1.3		• 20-25	• 20-25	• 20-25	❍20-25	❍20-25	• 20-25	• 20-25	• 20-25
1.4		• 15-20	• 15-20	• 15-20			❍15-20	❍15-20	❍15-20
1.5		• 5-12	• 5-12	• 5-12					
1.6									
1.7									
1.8									
2.1	• 6-8	• 10-15	• 10-15	• 10-15	❍10-15	❍10-15	❍10-15	• 10-15	❍10-15
2.2	• 5-7	• 8-10	• 8-10	• 8-10	❍10-12	❍10-12	❍10-12	• 10-12	❍10-12
2.3	• 3-5	• 6-8	• 6-8	• 6-8			❍6-10	• 6-10	❍6-10
2.4		❍3-6	❍3-6	• 3-6					
3.1									
3.2									
3.3									
3.4									
3.5									
4.1					• 35-40	• 35-40	❍35-40	• 35-40	❍35-40
4.2					• 40-45	• 40-45	❍40-45	• 40-45	❍40-45
4.3					❍35-40	❍35-40	❍35-40	• 35-40	❍35-40
4.4									
4.5									
5.1					• 15-20	• 15-20	❍15-20	• 15-20	❍15-20
5.2					❍15-20	❍15-20	❍15-20	• 15-20	❍15-20
5.3									
5.4									
6.1									
6.2									
6.3									
7.1									
7.2									
7.3									
8.1									
8.2									
8.3									

	Maschi a rullare con canaline Roll form taps with oil grooves Tarauds à refouler avec rainures de lubrification			Maschi a rullare - sinistri Roll form taps - left thread Tarauds à refouler - filet. à gauche	Maschi a rullare con canaline - lubrificazione interna Roll form taps with oil grooves - Internal coolant Tarauds à refouler - lubrification interne			Maschi a rullare con canaline - imbocco E Roll form taps with oil grooves - Chamfer E Tarauds à refouler - Entrée E		
	K2CC...TG	K2CC...AHI	K3CC…TG	P2CC...LH-TG	K2CC...FOR-TG	K2CC...FOR-AHI	K2CC...FORY-TG	K2CCE...TG	K2CCE...AHI	K2CCE...FOR-TG
	ROLL	ROLL	ROLL	ROLL	ROLL	ROLL	ROLL	ROLL	ROLL	ROLL
				LH	FOR	FOR	FORY			FOR
	K-ROLL	K-ROLL	K-ROLL	P-ROLL	K-ROLL	K-ROLL	K-ROLL	K-ROLL	K-ROLL	K-ROLL
ISO2/6H	102	102		101	103	103	103	104	104	104
ISO1/4H										
ISO3/6G			102							
7G / +0,1										
ISO2/6H	151	151		150	152	152	152	153		153
ISO1/4H										
ISO3/6G			151							
7G / +0,1										
UNC	173						173			
UNF	191						191			
UNEF										
UNS										
8-12 UN										
G	217				217					
NPSM										
NPSF										
Rc										
NPT										
NPTF										
BSW										
PG,Tr,Rd										
EG										
	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)
	PM8	PM8	PM8	PM8	PM8	PM8	PM8	PM8	PM8	PM8
	TiN-G	AHI	TiN-G	TiN-G	TiN-G	TiN-G	TiN-G	TiN-G	AHI	TiN-G
	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD
1.1				• 20-30						
1.2				• 20-30						
1.3	• 30-35	• 30-35	• 30-35	• 20-25	• 30-35	• 30-35	• 30-35	• 30-35	• 30-35	• 30-35
1.4	• 25-30	• 25-30	• 25-30	ↄ15-20	• 25-30	• 25-30	• 25-30	• 25-30	• 25-30	• 25-30
1.5	• 15-20	• 15-20	• 15-20		• 15-20	• 15-20	• 15-20	• 15-20	• 15-20	• 15-20
1.6										
1.7										
1.8										
2.1				ↄ10-15						
2.2	ↄ10-12	ↄ 10-12	ↄ10-12	ↄ10-12	ↄ10-12	ↄ10-12	ↄ10-12	ↄ10-12	ↄ10-12	ↄ10-12
2.3	ↄ6-10	ↄ 6-10	ↄ6-10	ↄ6-10	ↄ 6-10	ↄ6-10	ↄ6-10	ↄ6-10	ↄ6-10	ↄ6-10
2.4	ↄ6-8	ↄ 6-8	ↄ6-8		ↄ6-8	ↄ6-8	ↄ6-8	ↄ6-8	ↄ6-8	ↄ6-8
3.1										
3.2										
3.3										
3.4										
3.5										
4.1				ↄ35-40						
4.2				ↄ40-45						
4.3				ↄ35-40						
4.4										
4.5										
5.1				ↄ15-20						
5.2				ↄ15-20						
5.3										
5.4										
6.1										
6.2										
6.3										
7.1										
7.2										
7.3										
8.1										
8.2										
8.3										

	Maschi conici CORTI Tapered taps short shank Tarauds coniques court tige		Maschi conici LUNGHI Tapered taps long shank Tarauds coniques longue tige		Maschi conici filetto alternato Tapered taps interrupted threads Tarauds coniques filets alternés		Maschi filettatura PG per tubi corazzati Steel conduit thread taps - PG thread Tarauds pour filetage électrique PG	
	E21C...	E41C...V	E21L...	E21L...TXC	E21C...AZ	E21L...AZ	E21PG...	E21PG...T
	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE
		R15°			AZ	AZ		
	con1:16	con1:16	con1:16	con1:16	con1:16	con1:16		
ISO2/6H								
ISO1/4H								
ISO3/6G								
7G / +0,1								
ISO2/6H								
ISO1/4H								
ISO3/6G								
7G / +0,1								
UNC								
UNF								
UNEF								
UNS								
8-12 UN								
G, Rp								
NPSM								
NPSF								
Rc	224	224	224	224				
NPT	226	226	226	226	227	227		
NPTF	228	228	228	228				
BSW								
PG							235	235
EG								
	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
		V		TXC				TiN
	-	-	-	-	-	-	1,5xD	1,5xD
1.1	ↄ12-15	• 12-15	ↄ12-15	ↄ12-15	• 12-15	• 12-15	ↄ10-15	• 20-30
1.2	ↄ10-12	• 10-12	ↄ10-12	ↄ10-12	ↄ10-12	ↄ10-12	• 10-15	• 20-30
1.3	• 8-10	ↄ8-10	• 8-10	• 8-10			• 10-12	• 20-25
1.4	• 6-8	ↄ6-8	• 6-8	• 6-8			ↄ8-10	ↄ15-20
1.5								
1.6								
1.7								
1.8								
2.1		• 3-5		ↄ3-5	• 3-5	• 3-5		
2.2		ↄ2-4		ↄ2-4	• 2-4	• 2-4		
2.3		ↄ2-3		• 2-3	ↄ2-3	ↄ2-3		
2.4								
3.1	ↄ8-10		ↄ8-10	ↄ8-10				
3.2	ↄ6-8		ↄ6-8	ↄ6-8				
3.3	• 8-10		• 8-10	• 8-10				
3.4	• 10-12		• 10-12	• 10-12			ↄ8-10	ↄ15-20
3.5								
4.1					• 12-15	• 12-15		
4.2		• 12-15			• 10-12	• 10-12	ↄ15-20	ↄ25-30
4.3	ↄ10-12	ↄ10-12	ↄ10-12	ↄ10-12			ↄ10-15	ↄ20-25
4.4	• 8-10		• 8-10	• 8-10				
4.5								
5.1					• 10-12	• 10-12		
5.2	ↄ6-8	• 6-8	ↄ6-8	ↄ6-8	• 6-8	• 6-8	ↄ15-20	ↄ20-25
5.3	• 10-12	ↄ10-12	• 10-12	• 10-12			ↄ15-20	ↄ25-30
5.4								
6.1								
6.2								
6.3								
7.1								
7.2								
7.3								
8.1								
8.2							ↄ 8-10	ↄ10-15
8.3								

	Maschi trapezoidali Trapezoidal Thread Taps Tarauds à filetage trapézoïdal		Maschi trapezoidali - filettatura sinistra Trapezoidal Thread Taps - Left hand Filetage trapézoïdal - Filetage à gauche		Maschi elicoidali - filettatura trapezoidale Spiral flute taps - Trapezoidal thread Goujures hélicoïdales - Fil. Trapézoïdal		Maschi filettatura tonda Rd Rd knuckle thread taps Taraud machine filetage rond Rd		Maschi combinati fora e filetta Combination drill taps Foret-taraudeur		KOMBI
	E21TPN...	E21TPN...V	E21TPN...LH	E21TPN...LH-V	E51TPN...	E51TPN...LH	E21RD...	E21RD...T	EPF...	EPF...VS	EPFALU...
	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE
			LH	LH		LH			R30°	R30°	R30°
ISO2/6H									246	246	246
ISO1/4H											
ISO3/6G											
7G / +0,1											
ISO2/6H									246		
ISO1/4H											
ISO3/6G											
7G / +0,1											
UNC											
UNF											
UNEF											
UNS											
8-12 UN											
G, Rp											
NPSM											
NPSF											
Rc											
NPT											
NPTF											
BSW											
Tr,Rd	236	236	236	236	237	237	238	238			
EG											
	24xP	24xP	24xP	24xP	24xP	24xP	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
		V		V				TiN		VS	
											Al
	2xD	2xD	2xD	2xD	2xD	2xD	1xD	1xD	1,5xD	1,5xD	1,5xD
1.1	›6-8	›6-8	›6-8	›6-8	• 6-8	• 6-8	›4-6	›6-8	• 10-15	• 10-15	
1.2	›4-6	›4-6	›4-6	›4-6	• 4-6	• 4-6	• 4-6	• 6-8	• 10-15	• 10-15	
1.3	›2-4	›2-4	›2-4	›2-4	• 2-4	• 2-4	• 6-8	• 8-10	• 10-12	• 10-12	
1.4	›2-4	›2-4	›2-4	›2-4	• 2-4	• 2-4	›4-6	• 6-8	›8-10	›8-10	
1.5											
1.6											
1.7											
1.8											
2.1											
2.2											
2.3											
2.4											
3.1	• 6-8	• 6-8	• 6-8	• 6-8				›7-9			
3.2	• 3-5	• 3-5	• 3-5	• 3-5				›3-5			
3.3	›3-5	›3-5	›3-5	›3-5	• 3-5	• 3-5		›3-5		›10-15	
3.4	›6-8	›6-8	›6-8	›6-8	• 3-5	• 3-5		• 6-8		›15-20	
3.5											
4.1											• 10-15
4.2							›8-10		›15-20	• 15-20	• 15-20
4.3								›12-15	• 10-15	• 10-15	
4.4	• 6-8	• 6-8	• 6-8	• 6-8	• 8-10	• 8-10		›8-10			
4.5											
5.1											›8-12
5.2					• 6-8	• 6-8	›5-7	›8-10	›10-15	›10-15	›10-15
5.3	• 3-5	• 3-5	• 3-5	• 3-5	›3-5	›3-5	›8-12	›12-15	›10-15	›10-15	
5.4											
6.1											
6.2											
6.3											
7.1											
7.2											
7.3											
8.1											›8-10
8.2											
8.3											

CSC

SISTEMA CONTROLLO TRUCIOLO
CHIP SYSTEM CONTROL
SYSTÈME DE CONTRÔLE DES COPEAUX

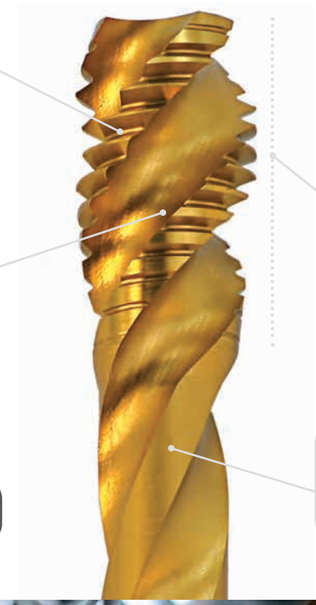
E92 - E93
E94 - E95

Maschi a macchina elicoidali a 45° per filettatura cieca profonda fino a 3xD.
Innovativa geometria di taglio per favorire la fuoriuscita del truciolo ed evitare la formazione della matassa.

Machine taps spiral flutes 45° for deep blind holes up to 3xD.
Innovative cutting geometry to improved chip ejection and prevent the formation of skein.

Tarauds machine goujures hélicoïdales 45° pour trous borgnes profonds jusqu'à 3xD.
Géométrie de coupe innovante pour faciliter l'évacuation du copeau et éviter la formation de l'écheveau.

Filettature/Threads/Taraudages: M - MF - UNC - UNF - GAS



La Sacra di San Michele

The Sacra di San Michele

La Sacra di San Michele è il simbolo del Piemonte e una delle più eminenti architetture religiose del territorio alpino tra Italia e Francia. Sulla vetta del monte Pirchiriano, a circa mille metri di altezza, la magica Sacra domina la Val di Susa.

La data di costruzione dell'edificio è incerta; probabilmente è stata eretta tra il 983 e il 987, anche se altre fonti più recenti sostengono che l'abbazia sia stata edificata qualche anno dopo.
Sorta come abbazia benedettina, è uno dei più antichi luoghi di culto dedicati all'Arcangelo Michele. Fu il vescovo Annuncone che costruì per primo un tempietto dedicato a San Michele, l'arcangelo capo dell'esercito degli angeli e protettore dei cristiani.
Nel 1836 Carlo Alberto di Savoia, desideroso di far risplendere il luogo sacro, decise di collocarvi stabilmente una congregazione religiosa. Da allora i Padri Rosminiani sono gli amministratori della Sacra ed operano insieme a un gruppo di volontari e ascritti.

La Sacra di San Michele, che si dice abbia ispirato "Il nome della rosa" di Umberto Eco, è avvolta da un alone di mistero e di magia.
Stiamo parlando della linea magica di San Michele, una linea energetica che unisce tre abbazie dedicate all'Arcangelo Michele.
Si trova esattamente al centro di un percorso spirituale di oltre duemila chilometri che parte da Mont Saint-Michel in Francia e arriva a Monte Sant'Angelo in Puglia.
Secondo gli esperti di magia bianca, il punto energetico sarebbe situato su una piccola piastrella del pavimento subito dopo l'entrata nella Chiesa; lì si percepirebbe la potente energia della linea di San Michele.

The Sacra di San Michele is the symbol of Piedmont and one of the most eminent examples of religious architecture in this mountain region between Italy and France. Standing on the summit of Mount Pirchiriano at an altitude of some 1000 metres, the stunning abbey complex dominates the Susa Valley.

The date of construction is uncertain; it was probably built between 983 and 987, although recent sources claim it was built a few years earlier.
Originally a Benedictine abbey, this is one of the most ancient religious sites dedicated to the Archangel Michael. It was Bishop Annuncone of Turin who first built a church here dedicated to St Michael, the leader of the army of angels and the protector of Christians.
In 1836 Charles Albert of Savoy, wishing to bring glory to the holy place, decided to establish a religious order there. Since then the Rosminian Fathers have been in charge of the abbey, working alongside a group of volunteers and supporters.

The Sacra di San Michele, which is said to have inspired Umberto Eco's The Name of the Rose, is surrounded by an aura of mystery and magic.
This is related to the sacred Line of Saint Michael, a ley line that connects three abbeys dedicated to the archangel. The Sacra is at the exact centre of a spiritual route more than 2,000 kilometres long, starting at Mont Saint Michel in France and ending at Monte Sant'Angelo in Puglia.
According to experts in white magic, the key point is a small floor tile just inside the door of the church; here the powerful energy of St Michael's line can be felt.

La Sacra di San Michele
St. Michael Abbey

NEWS
HIGHLIGHTS

NEW

GG AHI E 1,5 - 2

M Pag. 56 | MF Pag. 116

K26E-K27E AHI

Maschi a tagli diritti per ghisa, imbocco E.
Novità: rivestimento AHI

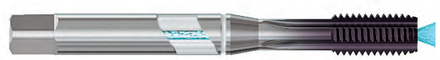
Straight flutes for cast iron – chamfer E
New: AHI coating

Goujures droites pour fonte forme d'entrée E
New : revêtement AHI

GG AHI E 1,5 - 2

M Pag. 56 | MF Pag. 116

K26E-K27E FOR-AHI



Maschi a tagli diritti per ghisa, imbocco E
Lubrificazione interna con uscita frontale (FOR)
Novità: rivestimento AHI

Straight flutes for cast iron – chamfer E
Axial coolant (FOR)
New: AHI coating

Goujures droites pour fonte forme d'entrée E
Lubrification interne axiale (FOR)
New : revêtement AHI

GG AHI E 1,5 - 2

M Pag. 56 | MF Pag. 116

K26E-K27E FORY-AHI

Maschi a tagli diritti per ghisa, imbocco E
Lubrificazione interna con uscite radiali (FORY)
Novità: rivestimento AHI

Straight flutes for cast iron – chamfer E
Radial coolant (FORY)
New: AHI coating

Goujures droites pour fonte forme d'entrée E
Lubrification interne radiale (FORY)
New : revêtement AHI

HR AHI ≤ 52HRC

M Pag. 59

XT20 AHI

Maschi per acciai trattati fino a 52 HRC
Novità: rivestimento AHI

Pour des matières à haute résistance jusqu'à 52 HRC
New : revêtement AHI

INOX VS

M Pag. 72 | MF Pag. 129

V24-V25 VS

Maschi imbocco corretto per INOX
Novità: rivestimento VS, vaporizzazione super

Straight flutes with spiral point for stainless steel
New: VS coating – super steam tempering

Goujures droites avec entrée gun pour aciers inox
New : revêtement VS - super vaporisation

INOX VS HSSE PM R45°

M Pag. 98 | MF Pag. 149

E92-E93 VS

Maschi elicoidali a 45° per INOX
Novità: rivestimento VS, vaporizzazione super

Spiral flutes 45° for stainless steel
New: VS coating – super steam tempered

Goujures hélicoïdales 45° pour acier inoxydable
New : revêtement VS - super vaporisation

INOX TXC R45°

M Pag. 98 | MF Pag. 149 | UNC Pag. 172 | UNF Pag. 190 | GAS Pag. 216

V82-V83 FOR-TXC

Maschi elicoidali a 48° per INOX,
Anello blu, serie TOP
Novità: lubrificazione interna con uscita frontale FOR

Spiral flutes 45° for stainless steel
Blue ring - top series
New: axial coolant (FOR)

Goujures hélicoïdales 45° pour acier inoxydable
Bague bleue - Gamme de produit TOP
New : Lubrification interne axiale (FOR)

NEW

Ti TiCN AVIO

MJ Pag. 74 | MJF Pag. 130 | UNJC Pag. 166 | UNJF Pag. 184

K52 J CT

Maschi elicoidali 15° per fori passanti
Per leghe di titanio
Novità: filettatura aerospaziale J

Left-hand spiral flutes 15° for through holes
For titanium alloys
New: J - Thread for aerospace applications

Goujures 15° hélicoïdales à gauche pour trous débouchant
Pour alliages de titane
New : filetage J pour l'industrie aéronautique et spatiale

Ti TiCN AVIO

MJ Pag. 82 | MJF Pag. 136 | UNJC Pag. 168 | UNJF Pag. 186

K42 J CT

Maschi elicoidali 15° per fori ciechi
Per leghe di titanio
Novità: filettatura aerospaziale J

Spiral flutes 15° for blind holes
For titanium alloys
New: J - Thread for aerospace applications

Goujures hélicoïdales 15° pour trous borgnes
Pour alliages de titane
New : filetage J pour l'industrie aéronautique et spatiale

Ni TiCN AVIO

M Pag. 75 | MF Pag. 131

K52 J NI-CT

Maschi elicoidali 10° per fori passanti
Per leghe di Nichel
Novità: filettatura aerospaziale J

Left-hand spiral flutes 10° for through holes
For nickel alloys
New: J - Thread for aerospace applications

Goujures 15° hélicoïdales à gauche pour trous débouchant
Pour alliages de nickel
New : filetage J pour l'industrie aéronautique et spatiale

Ni TiCN AVIO

M Pag. 83 | MF Pag. 137

K42 J NI-CT

Maschi elicoidali 10° per fori ciechi
Per leghe di nichel
Novità: filettatura aerospaziale J

Spiral flutes10° for blind holes
For nickel alloys
New: J - Thread for aerospace applications

Goujures hélicoïdales 10° pour trous borgnes
Pour alliages de nickel
New : filetage J pour l'industrie aéronautique et spatiale

U XP

M Pag. 80 | MF Pag. 134

K40 - K41 XP

Maschi elicoidali a 15° per fori ciechi
Per applicazioni universali ad alto rendimento.

Spiral flutes15° for blind holes
For universal applications - High performance

Goujures hélicoïdales 15° pour trous borgnes
Usinage universels

U XP

M Pag. 80 | MF Pag. 134

K40 - K41 FOR-XP

Maschi elicoidali a 15° per fori ciechi
Per applicazioni universali ad alto rendimento.
Lubrificazione interna con uscita frontale (FOR)

Spiral flutes15° for blind holes
For universal applications - High performance
Axial coolant (FOR)

Goujures hélicoïdales 15° pour trous borgnes
Usinages universels
Lubrification interne axiale (FOR)

U XP

M Pag. 80 | MF Pag. 134

K44 - K45 FOR-XP

Maschi elicoidali a 15° per fori ciechi - ROMPITRUCIOLO
Per applicazioni universali ad alto rendimento.
Lubrificazione interna con uscita frontale F

Spiral flutes15° for blind holes – CHIP BREAKER
For universal applications - High performance
Axial coolant (FOR)

Goujures hélicoïdales 15° pour trous borgnes – BRISE COPEAUX
Usinages universels
Lubrification interne axiale (FOR)

NEW

R40° | CO

NPSM Pag. 220 | NPSF Pag. 221

E61

Maschi elicoidali 40° per fori ciechi
Novità- Estensione filettature NPSM ed NPSF

Spiral flutes 40° for blind holes
New - Range extension for NPSM and NPSF threads

Goujures hélicoïdales 40° pour trous borgnes
Nouveau - Extension de gamme pour les filetages NPSM et NPSF

R40° | TiN | CO

RP Pag. 219 | NPSM Pag. 220 | NPSF Pag. 221

E61 TiN

Maschi elicoidali 40° per fori ciechi
Novità - Estensione filettature RP, NPSM ed NPSF

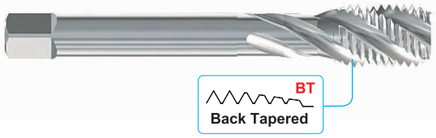
Spiral flutes 40° for blind holes
New - Range extension for RP, NPSM and NPSF threads

Goujures hélicoïdales 40° pour trous borgnes
Nouveau - Extension de gamme pour les filetages RP, NPSM et NPSF

R40° | CO

8-UN Pag. 201 | 12-UN Pag. 201

E81



Maschi elicoidali 40°per fori ciechi rastremati
Novità – Estensione filettature 8 UN e 12 UN

Spiral flutes 40° - back tapered thread
New - Range extension for 8-UN and 12-UN threads

Goujures hélicoïdales 40°, conicité arrière
Nouveau - Extension de gamme pour les filetages 8-UN et 12-UN

R40° | XP | CO

8-UN Pag. 201 | 12-UN Pag. 201

E81 XP

Maschi elicoidali 40°per fori ciechi rastremati
Novità – Estensione filettature 8 UN e 12 UN

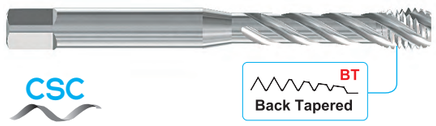
Spiral flutes 40° - back tapered thread
New - Range extension for 8-UN and 12-UN threads

Goujures hélicoïdales 40°, conicité arrière
Nouveau - Extension de gamme pour les filetages

HSSE PM | R45° | BR | CO

M Pag. 92 | MF Pag. 145 | UNC Pag. 170 | UNF Pag. 188 | GAS Pag. 213

E92 - E93



Elica destra a 45°- sistema controllo truciolo
Novità - Estensione filettature UNC, UNF e GAS

Spiral flutes 45° for blind holes chip system control
New - Range extension for UNC, UNF and GAS

Goujures hélicoïdales 45° pour trous borgnes système de contrôle des copeaux
Nouveau - Extension de gamme pour les filetages UNC, UNF et GAS

HSSE PM | R45° | V | CO

M Pag. 92 | MF Pag. 145 | UNC Pag. 170 | UNF Pag. 188 | GAS Pag. 213

E92 - E93 V

Elica destra a 45°- sistema controllo truciolo
Novità - Estensione filettature UNC, UNF e GAS

Spiral flutes 45° for blind holes - chip system control
New - Range extension for UNC, UNF and GAS

Goujures hélicoïdales 45° pour trous borgnes
Système de contrôle des copeaux
Nouveau - Extension de gamme pour les filetages UNC, UNF et GAS

HSSE PM | TG | s-plus

M Pag. 68 | MF Pag. 126 | UNC Pag. 164 | UNF Pag. 182 | GAS Pag. 208

P24 - P25 TG

Maschi imbocco corretto per fori passanti
Novità - nuova serie S-PLUS

Straight flutes with spiral point for through holes
New - new S-PLUS series

Goujures droites, entrée gun, pour trous débouchant
Nouveau - nouvelle série S-PLUS

HSSE PM | R45° | TiN | CO | s-plus

M Pag. 92 | MF Pag. 145 | UNC Pag. 170 | UNF Pag. 188 | GAS Pag. 213

E92 - E93 TG

Elica destra a 45°- sistema controllo truciolo
Novità - nuova serie S-PLUS

Spiral flutes 45° for blind holes - chip system control
New - new S-PLUS series

Goujures hélicoïdales 45° pour trous borgnes
Système de contrôle des copeaux
Nouveau - nouvelle série S-PLUS

NEW

HSSE PM | R45° | XP | CO | E 1,5 - 2

GAS Pag. 213

E93 E XP

Elica destra a 45° - sistema controllo truciolo
Novità - Filettatura GAS imbocco E

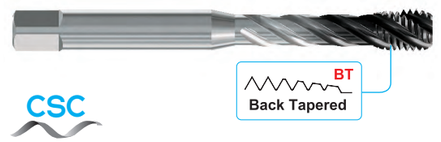
Spiral flutes 45° for blind holes chip system control
New - GAS thread, chamfer E

Goujures hélicoïdales 45° pour trous borgnes
Système de contrôle des copeaux
Nouveau - filetage GAZ, entrée E

HSSE PM | R45° | TXC | SR

M Pag. 93

E94 - E95 TXC



Elica destra a 45° per fori ciechi
Sistema controllo truciolo
Maschiatura rigida sincronizzata

Spiral flutes 45° for blind holes
Chip system control
Rigid tapping Synchro

Goujures hélicoïdales 45° pour trous borgnes
Système de contrôle des copeaux
Taraudage rigide synchronisé

HSSE PM | R45° | TXC | SR

M Pag. 93

E94 - E95 FOR TXC

Elica destra a 45° per fori ciechi - Sistema controllo truciolo
Maschiatura rigida sincronizzata
Lubrificazione interna con uscita frontale

Spiral flutes 45° for blind holes - Chip system control
Rigid tapping Synchro
Through coolant, axial flow

Goujures hélicoïdales 45° pour trous borgnes
Système de contrôle des copeaux
Taraudage rigide synchronisé
Lubrification interne avec sortie axial

HSSE PM | R45° | TXC | SR | E 1,5 - 2

M Pag. 94

E94E - E95E TXC

Elica destra a 45° per fori ciechi
Sistema controllo truciolo
Maschiatura rigida sincronizzata

Spiral flutes 45° for blind holes
Chip system control
Rigid tapping Synchro

Goujures hélicoïdales 45° pour trous borgnes
Système de contrôle des copeaux
Taraudage rigide synchronisé

HSSE PM | R45° | TXC | SR | E 1,5 - 2

M Pag. 94

E94E - E95E FOR-TXC

Elica destra a 45° per fori ciechi- Sistema controllo truciolo
Maschiatura rigida sincronizzata
Lubrificazione interna con uscita frontale

Spiral flutes 45° for blind holes -Chip system control
Rigid tapping Synchro
Through coolant, axial flow

Goujures hélicoïdales 45° pour trous borgnes
Système de contrôle des copeaux
Taraudage rigide synchronisé
Lubrification interne avec sortie axial

L5° | 24 x P

Tr Pag. 237

E51TPN

Scanalature elicoidali a 5° per fori passanti
Guida anteriore

Spiral flutes 5° for through holes
With cylindrical pilots

Goujures hélicoïdales 5° pour trous débouchant
Avec pilotes cylindriques

R5° | LH | 24 x P

Tr Pag. 237

E51TPN LH

Scanalature elicoidali a 5° per fori passanti
Guida anteriore
Filettatura sinistra - LH

Spiral flutes 5° for through holes
With cylindrical pilots
Left hand thread - LH

Goujures hélicoïdales 5° pour trous débouchant
Avec pilotes cylindriques
Filetage à gauche - LH

NEW

E60 - E61 EG

Filetti riportati
Wire thread inserts (STI)
Filets rapportés

Maschi elicoidali 40° per fori ciechi
Novità: Estensione filettature EG UNC, EG UNF

Spiral flutes 40° for blind holes
New: range extension for EG UNC and EG UNF threads

Goujures hélicoïdales 40° pour trous borgnes
New : extension de gamme pour les filetages EG UNC et EG UNF

EG M Pag. 243 | EG UNC Pag. 244 | EG UNF Pag. 245

E60 - E61 EG XP

XP

Filetti riportati
Wire thread inserts (STI)
Filets rapportés

Maschi elicoidali 40° per fori ciechi
Novità: Estensione filettature EG UNC, EG UNF

Spiral flutes 40° for blind holes
New: range extension for EG UNC and EG UNF threads

Goujures hélicoïdales 40° pour trous borgnes
New : extension de gamme pour les filetages EG UNC et EG UNF

EG M Pag. 243 | EG UNC Pag. 244 | EG UNF Pag. 245

P2CC AHI

P ROLL | AHI

Maschi a rullare per acciai Rm ≤ 850 N/mm², inox, leghe di alluminio e leghe di rame.
Novità: rivestimento AHI

Roll form taps for steel Rm ≤ 850 N/mm², stainless steel, Al alloy and copper alloy
New: AHI coating

Tarauds à refouler pour acier Rm ≤ 850 N/mm², acier inoxydable, Alliage d'aluminium et alliage de cuivre
New : revêtement AHI

M Pag. 101

K2CC TG

K ROLL | TG

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
New: estensione filettature UNC, UNF

Forming taps for high strength steel Rm ≤ 1200 N/mm²
New: range extension for UNC and UNF threads

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
New : extension de gamme pour les filetages UNC et UNF

M Pag. 102 | MF Pag. 151 | UNC Pag. 173 | UNF Pag. 191 | GAS Pag. 217

K3CC TG

K ROLL | TG | 6GX

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
New: tolleranza 6GX

Forming taps for high strength steel Rm ≤ 1200 N/mm²
New: 6GX tolerance

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
New : tolérance 6GX

M Pag. 102 | MF Pag. 151

K2 CC AHI

K ROLL | AHI

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
Novità: rivestimento AHI

Forming taps for high strength steel Rm ≤ 1200 N/mm²
New: AHI coating

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
New : revêtement AHI

M Pag. 102 | MF Pag. 151

NEW

K2 CC FOR-TG

K ROLL | TG

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
Lubrificazione interna con uscita frontale (FOR)

Forming taps for high strength steel Rm ≤ 1200 N/mm²
Axial coolant (FOR)

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
Lubrification interne axiale (FOR)

M Pag. 43 | MF Pag. 152 | GAS Pag. 217

K2 CC FOR-AHI

K ROLL | AHI

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
Lubrificazione interna con uscita frontale (FOR)
Novità: rivestimento AHI

Forming taps for high strength steel
Rm ≤ 1200 N/mm²
Axial coolant (FOR)
New: AHI coating

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
Lubrification interne axiale (FOR)
New : revêtement AHI

M Pag. 103 | MF Pag. 152

K2 CC FORY-AHI

K ROLL | TG

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
Lubrificazione interna con uscite radiali (FORY)
Novità: estensione filettature UNC, UNF

Forming taps for high strength steel Rm ≤ 1200 N/mm²
Radial coolant (FORY)
New: range extension for UNC and UNF threads

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
Lubrification interne radiale (FORY)
New : extension de gamme pour les filetages UNC et UNF

M Pag. 103 | MF Pag. 152 | UNC Pag. 173 | UNF Pag. 191

K2 CC E TG

K ROLL | TG | E 1,5 - 2

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
Imbocco E (1,5 – 2 x P)

Forming taps for high strength steel Rm ≤ 1200 N/mm²
Chamfer E (1,5 – 2 x P)

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
Forme d'entrée E (1,5 – 2 x P)

M Pag. 104 | MF Pag. 153

K2 CC E AHI

K ROLL | AHI | E 1,5 - 2

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
Imbocco E (1,5 – 2 x P)
Novità: rivestimento AHI

Forming taps for high strength steel Rm ≤ 1200 N/mm²
Chamfer E (1,5 – 2 x P)
New: AHI coating

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
Forme d'entrée E (1,5 – 2 x P)
New : revêtement AHI

M Pag. 104

K2 CC E FOR-TG

K ROLL | TG | E 1,5 - 2

Maschi a rullare per medio - alta resistenza
Rm ≤ 1200 N/mm²
Imbocco E (1,5 – 2 x P)
Lubrificazione interna con uscita frontale (FOR)

Forming taps for high strength steel Rm ≤ 1200 N/mm²
Chamfer E (1,5 – 2 x P)
Axial coolant (FOR)

Tarauds à refouler pour acier Rm ≤ 1200 N/mm²
Forme d'entrée E (1,5 – 2 x P)
Lubrification interne axiale (FOR)

M Pag. 104 | MF Pag. 153

Le alte cime

The high peaks

Tra le cime più alte in Piemonte c'è il Gran Paradiso. Il toponimo deriva dal patois valdostano Granta Parei, che vuol dire grande parete.
Il Parco Nazionale Gran Paradiso, un'eccellenza della regione a pochi chilometri dagli stabilimenti UFS, si estende su 70.000 ettari di territorio d'alta montagna, tra gli 800 metri di fondovalle e i 4.061 metri della vetta.
La sua storia è legata alla protezione dello stambecco. Nel 1856, infatti, il re Vittorio Emanuele II dichiarò queste montagne riserva reale di caccia e salvò così lo stambecco dall'estinzione. Il re creò anche un corpo di guardie specializzate e fece costruire una rete viaria per la protezione della fauna e per le escursioni. Nel 1920, Vittorio Emanuele III donò la riserva allo Stato italiano perché ne facesse un parco che fu effettivamente istituito nel 1922.

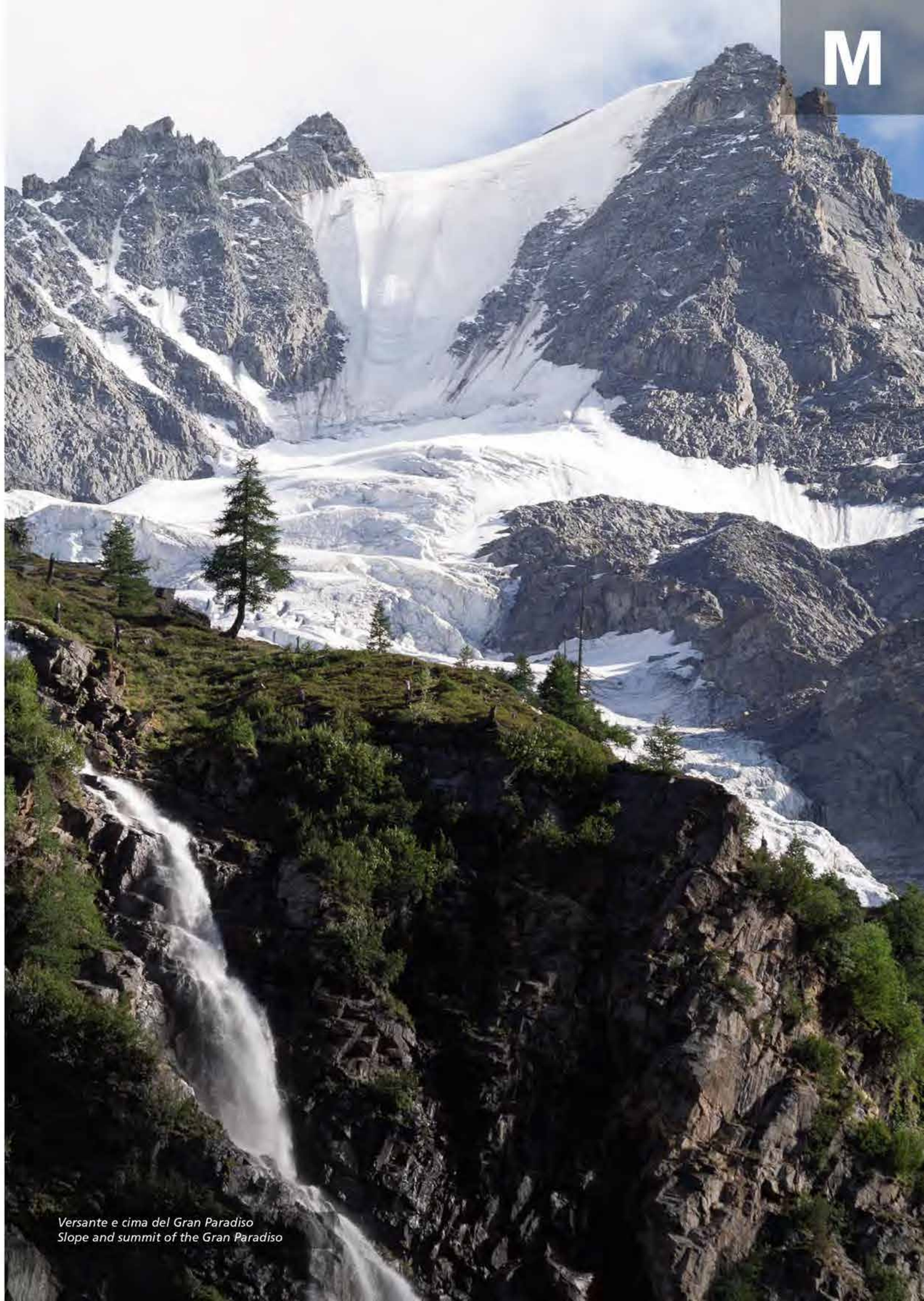
La montagna piemontese costituisce un'importante risorsa per il sistema economico e sociale regionale. I beni naturali e paesaggistici fruibili attraverso un turismo ambientalmente sostenibile, le produzioni agricole, le tipicità agroalimentari e artigianali concorrono, attraverso il contributo delle piccole imprese presenti, delle associazioni dei professionisti della montagna e degli amministratori locali, a formare un patrimonio per la crescita sostenibile.
La Regione Piemonte sta investendo per valorizzarne le peculiarità, promuoverne lo sviluppo sociale ed economico.
Centrali sono gli ambiti energetico e ambientale, con progetti che puntano a investire su impianti di energia rinnovabile così da portare il Piemonte ad essere una delle Regioni più green d'Italia e d'Europa. Le linee guida sono chiare: con la legge regionale dell'aprile 2019 sono state riconosciute le specificità delle aree montane, dove si stanno portando avanti progetti di efficienza energetica.

Moltissimi piccoli borghi della montagna piemontese sono tornati alla vita. Non tantissimi anni fa, nonostante la bellezza della natura circostante, molti erano solo una manciata di case di pietra disabitate. Oggi, grazie a interventi di riqualificazione, gli edifici diroccati sono stati rimessi a nuovo per ospitare imprese, turisti, ma anche persone che hanno fatto di queste baite la loro casa.
Per ripopolare i borghi in montagna, e in generale le aree a rischio spopolamento servono anzitutto servizi, dalla viabilità ai servizi per i cittadini; che facciano da incentivo per chi vuole andarci ad abitare e questo genera un circolo virtuoso.

One of Piedmont's highest mountains is Gran Paradiso. The name derives from the Val d'Aosta dialect term *Granta Parei*, meaning great wall.
The Gran Paradiso National Park, a regional treasure just a few kilometres from our UFS headquarters, covers 70,000 hectares of high mountains, ranging from 800 metres in the valley to 4,061 metres at the summit.
The story of the park is linked to the conservation of the Alpine ibex. In 1856, King Victor Emmanuel II declared these mountains a royal hunting reserve, and thus saved the Alpine ibex from extinction. The king also created a specialist guard corps and ordered the construction of a network of roads, to protect the area's fauna and facilitate excursions. In 1920, Victor Emmanuel donated the reserve to the Italian state to create a national park, which was established in 1922.

The Piedmont mountains are an important resource for the region's economy and society. Natural spaces and landscapes enjoyed through environmentally sustainable tourism, agriculture, food products and handicrafts combine to form a legacy for sustainable growth, thanks to the contribution of small businesses, associations of mountain professionals and local administrations.
The Piedmont Region is investing to promote these special qualities and encourage social and economic development.
Energy and the environment are key, with projects focusing investment on renewable energy production, making Piedmont one of the greenest regions in Italy and Europe. The guidelines are clear: the regional law of April 2019 recognised the special nature of the mountain areas, where energy efficiency projects are ongoing.

A large number of small villages in the mountains of Piedmont have returned to life. Not so many years ago, despite their stunning natural surroundings, many of these were reduced to a handful of abandoned stone houses. Today, thanks to redevelopment schemes, derelict buildings have been rebuilt to house businesses and tourists, but also local people who have made these hamlets their homes.
To repopulate mountain villages - and places at risk of abandonment in general - the first thing needed is services, from roads to amenities for residents; these can be an incentive for those seeking to live here, creating a virtuous circle.

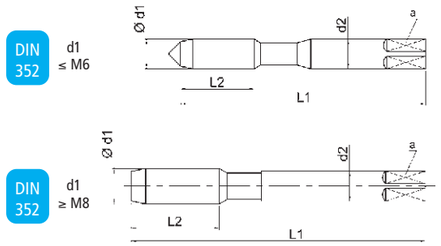


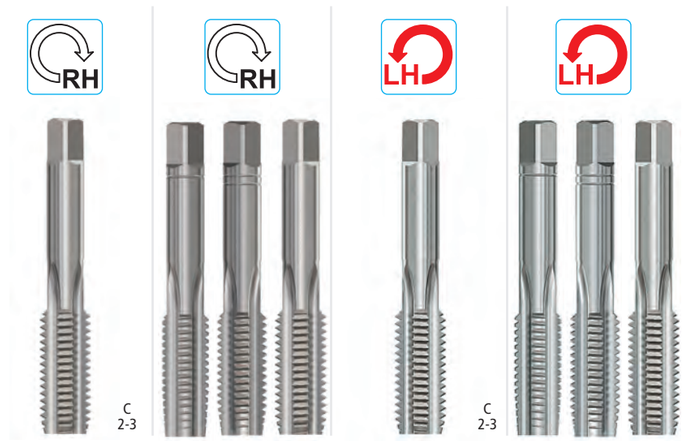
Versante e cima del Gran Paradiso
Slope and summit of the Gran Paradiso

M

MASCHI A MANO - Per fori ciechi e passanti in serie di tre pezzi
HAND TAPS - For blind and through holes in sets of three pieces
TARAUDS À MAIN - Pour trous borgnes et débouchant en jeux de trois pièces

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL





Profondità di filettatura - Thread depth - Prof. de filetage	**2xD**	**2xD**	**2xD**	**2xD**
Materiale - Tool Material - Substrat	**HSS**	**HSS**	**HSS**	**HSS**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**	**ISO2/6H**	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement				

DIN 352	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		Finitore Bottoming - Finisseur	Serie Set - Jeu	Finitore Bottoming - Finisseur	Serie Set - Jeu
◀	**2**	**0,4**	36	8	2,8	2,1	3	1,6	03M2	00M2	-	-
◀	**2,5**	**0,45**	40	9	2,8	2,1	3	2,05	03M2,5	00M2,5	-	-
◀	**3**	**0,5**	40	9	3,5	2,7	3	2,5	03M3	00M3	03M3LH	00M3LH
◀	**4**	**0,7**	45	11	4,5	3,4	3	3,3	03M4	00M4	03M4LH	00M4LH
◀	**5**	**0,8**	50	13	6	4,9	3	4,2	03M5	00M5	03M5LH	00M5LH
◀	**6**	**1**	56	15	6	4,9	3	5	03M6	00M6	03M6LH	00M6LH
	8	**1,25**	63	19	6	4,9	3	6,8	03M8	00M8	03M8LH	00M8LH
	10	**1,5**	70	22	7	5,5	3	8,5	03M10	00M10	03M10LH	00M10LH
	12	**1,75**	75	28	9	7	4	10,3	03M12	00M12	03M12LH	00M12LH
	14	**2**	80	30	11	9	4	12	03M14	00M14	03M14LH	00M14LH
	16	**2**	80	30	12	9	4	14	03M16	00M16	03M16LH	00M16LH
	18	**2,5**	95	34	14	11	4	15,5	03M18	00M18	-	-
	20	**2,5**	95	34	16	12	4	17,5	03M20	00M20	-	-
	22	**2,5**	100	34	18	14,5	4	19,5	03M22	00M22	-	-
	24	**3**	110	38	18	14,5	4	21	03M24	00M24	-	-
	27	**3**	110	38	20	16	4	24	03M27	00M27	-	-
	30	**3,5**	125	45	22	18	4	26,5	03M30	00M30	-	-
	36	**4**	150	55	28	22	4	32	03M36	00M36	-	-

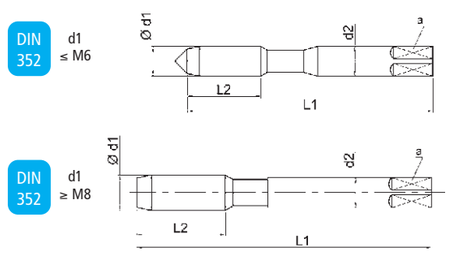
ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali Material groups Groupes de matières				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1	•1.2	•1.3	•1.4	
M	Acciaio INOX – Stainless steel - Acier inoxydable	◦2.1	◦2.2	◦2.3		
K	Ghisa - Cast iron - Fonte	◦3.1	◦3.4			
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1	•4.2	•4.3	◦4.4	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1	•5.2	◦5.3		

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

M

MASCHI A MANO - Per fori ciechi e passanti in serie di tre pezzi
HAND TAPS - For blind and through holes in sets of three pieces
TARAUDS À MAIN - Pour trous borgnes et débouchant en jeux de 3 pièces

DIN13 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE



Profondità di filettatura - Thread depth - Prof. de filetage	**2xD**	**2xD**
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**	**6HX**
Trattamento superficiale - Surface treatment - Revêtement	**VS**	**VS**

DIN 352	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		Finitore Bottoming - Finisseur	Serie Set - Jeu
◀	**3**	**0,5**	40	9	3,5	2,7	3	2,5	03M3X-VS	00M3X-VS
◀	**4**	**0,7**	45	11	4,5	3,4	3	3,3	03M4X-VS	00M4X-VS
◀	**5**	**0,8**	50	13	6	4,9	3	4,2	03M5X-VS	00M5X-VS
◀	**6**	**1**	56	15	6	4,9	3	5	03M6X-VS	00M6X-VS
	8	**1,25**	63	19	6	4,9	3	6,8	03M8X-VS	00M8X-VS
	10	**1,5**	70	22	7	5,5	3	8,5	03M10X-VS	00M10X-VS
	12	**1,75**	75	28	9	7	4	10,3	03M12X-VS	00M12X-VS
	14	**2**	80	30	11	9	4	12	03M14X-VS	00M14X-VS
	16	**2**	80	30	12	9	4	14	03M16X-VS	00M16X-VS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali Material groups Groupes de matières				
P	Acciaio - Steel - Acier - Rm ≤ 1000 N/mm²	•1.1	•1.2	•1.3	•1.4	◦1.5
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1	•2.2	•2.3		
K	Ghisa - Cast iron - Fonte	•3.1	◦3.2	◦3.3	•3.4	
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1	•4.2	•4.3	•4.4	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1	•5.2	•5.3		

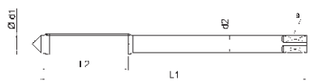
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

M

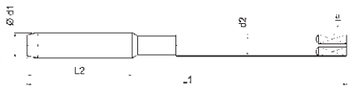
MASCHI A MACCHINA PER DADI - Scanalature diritte
MACHINE NUT TAPS - Straight flutes
TARAUDS MACHINE POUR ÉCROUS - Goujures droites

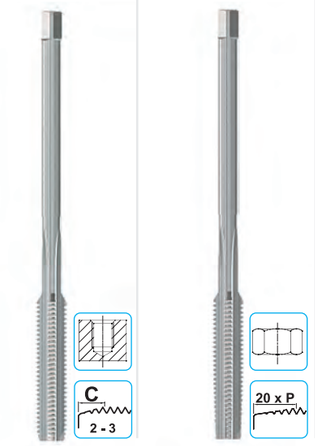
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 357 d1 ≤ M6



DIN 357 d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**		
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**		
Trattamento superficiale - Surface treatment - Revêtement				

DIN 357	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**3**	**0,5**	70	22	2,2	1,75	3	2,5	10FCM3	10FPM3
◀	**4**	**0,7**	90	25	2,8	2,1	3	3,3	10FCM4	10FPM4
◀	**5**	**0,8**	100	28	3,5	2,7	3	4,2	10FCM5	10FPM5
◀	**6**	**1**	110	32	4,5	3,4	3	5	10FCM6	10FPM6
	8	**1,25**	125	40	6	4,9	3	6,8	10FCM8	10FPM8
	10	**1,5**	140	45	7	5,5	3	8,5	10FCM10	10FPM10
	12	**1,75**	180	50	9	7	3	10,3	10FCM12	10FPM12
	14	**2**	200	56	11	9	3	12	10FCM14	10FPM14
	16	**2**	200	63	12	9	3	14	10FCM16	10FPM16

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 18-20	•1.2 15-18	•1.3 12-15	◑1.4 10-12

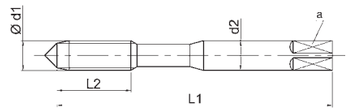
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

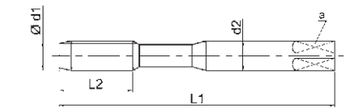
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

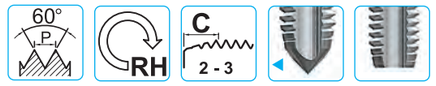
DIN13 | OT | OTTONE - BRASS - LAITON

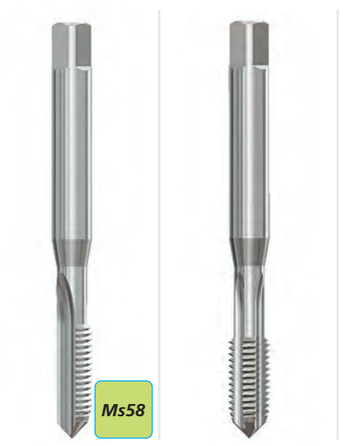
DIN 371 d1 ≤ M6



DIN 371 d1 ≥ M8







Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**	**3xD**		
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**		
Trattamento superficiale - Surface treatment - Revêtement				

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**3**	**0,5**	56	10	3,5	2,7	2	2,5	LANCIAM3	-
◀	**4**	**0,7**	63	13	4,5	3,4	2	3,3	LANCIAM4	-
◀	**5**	**0,8**	70	13	6	4,9	2	4,2	LANCIAM5	-
◀	**6**	**1**	80	16	6	4,9	2	5	LANCIAM6	-
	8	**1,25**	90	18	8	6,2	2	6,8	LANCIAM8	-
	10	**1,5**	100	20	10	8	2	8,5	LANCIAM10	-
◀	**3**	**0,5**	56	10	3,5	2,7	3	2,5		E20M3-OT
◀	**4**	**0,7**	63	13	4,5	3,4	3	3,3		E20M4-OT
◀	**5**	**0,8**	70	13	6	4,9	3	4,2		E20M5-OT
◀	**6**	**1**	80	16	6	4,9	3	5		E20M6-OT
	8	**1,25**	90	18	8	6,2	3	6,8		E20M8-OT
	10	**1,5**	100	20	10	8	3	8,5		E20M10-OT

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 15-20				•5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	◑8.2 8-10	◑8.3 3-50			◑8.2 8-10	◑8.3 3-50		

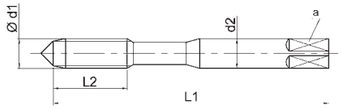
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

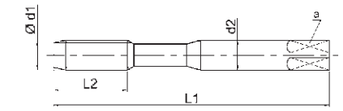
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

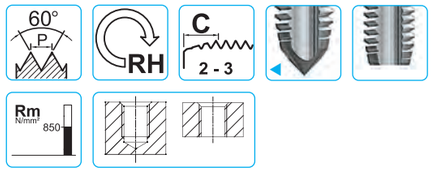
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M7



DIN 371 d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement		**TiN**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	**1**	**0,25**	40	5	2,5	2,1	-	0,75
◀	**1,2**	**0,25**	40	5	2,5	2,1	-	0,95
◀	**1,4**	**0,3**	40	7	2,5	2,1	-	1,1
◀	**1,6**	**0,35**	40	8	2,5	2,1	-	1,25
◀	**1,7**	**0,35**	40	8	2,5	2,1	-	1,35
◀	**1,8**	**0,35**	40	8	2,5	2,1	-	1,45
◀	**2**	**0,4**	45	10	2,8	2,1	3	1,6
◀	**2,2**	**0,45**	45	10	2,8	2,1	3	1,75
◀	**2,5**	**0,45**	50	13	2,8	2,1	3	2,05
◀	**2,6**	**0,45**	50	13	2,8	2,1	3	2,15
◀	**3**	**0,5**	56	10	3,5	2,7	3	2,5
◀	**3,5**	**0,6**	56	11	4	3	3	2,9
◀	**4**	**0,7**	63	13	4,5	3,4	3	3,3
◀	**4,5**	**0,75**	70	13	6	4,9	3	3,7
◀	**5**	**0,8**	70	13	6	4,9	3	4,2
◀	**6**	**1**	80	16	6	4,9	3	5
◀	**7**	**1**	80	16	7	5,5	3	6
	8	**1,25**	90	18	8	6,2	3	6,8
	9	**1,25**	90	18	9	7	3	7,8
	10	**1,5**	100	20	10	8	3	8,5

CODE	
E20M1	-
E20M1,2	-
E20M1,6	-
E20M1,7	-
E20M1,8	-
E20M2	-
E20M2,2	-
E20M2,5	-
E20M2,6	-
E20M3	E20M3T
E20M3,5	E20M3,5T
E20M4	E20M4T
E20M4,5	E20M4,5T
E20M5	E20M5T
E20M6	E20M6T
E20M7	E20M7T
E20M8SP	E20M8SP-T
E20M9	E20M9T
E20M10SP	E20M10SP-T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
K	Ghisa - Cast iron - Fonte	❍3.4 8-10				❍3.4 15-20			
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.2 15-20	❍4.3 10-15			❍4.2 25-30	❍4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.2 10-15	❍5.3 15-20			❍5.2 20-25	❍5.3 25-30		
N	Materiali termoindurenti Duroplastic - Thermodurcissables	❍8.2 8-10				❍8.2 10-15			

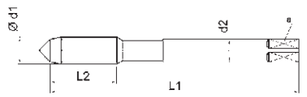
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

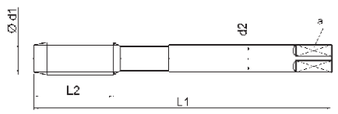
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

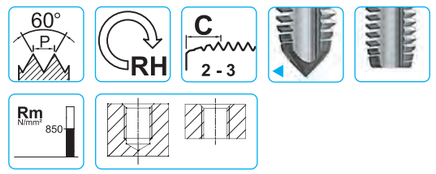
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

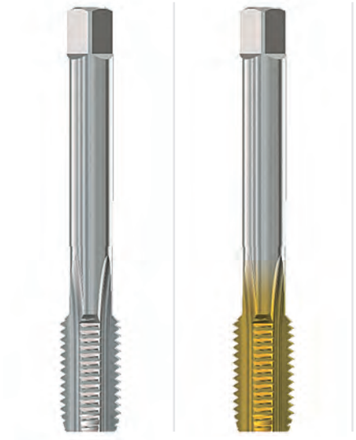
DIN 376 d1 ≤ M6



DIN 376 d1 ≥ M8







Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement		**TiN**

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	**4**	**0,7**	63	13	2,8	2,1	3	3,3
◀	**5**	**0,8**	70	13	3,5	2,7	3	4,2
◀	**6**	**1**	80	16	4,5	3,4	3	5
	8	**1,25**	90	18	6	4,9	3	6,8
	10	**1,5**	100	20	7	5,5	3	8,5
	11	**1,5**	100	20	8	6,2	3	9,5
	12	**1,75**	110	25	9	7	3	10,3
	14	**2**	110	28	11	9	3	12
	16	**2**	110	28	12	9	3	14
	18	**2,5**	125	33	14	11	4	15,5
	20	**2,5**	140	33	16	12	4	17,5
	22	**2,5**	140	33	18	14,5	4	19,5
	24	**3**	160	39	18	14,5	4	21
	27	**3**	160	39	20	16	4	24
	30	**3,5**	180	46	22	18	4	26,5
	33	**3,5**	180	46	25	20	4	29,5
	36	**4**	200	50	28	22	4	32
	39	**4**	200	50	32	24	4	35
	42	**4,5**	200	55	32	24	5	37,5
■	**45**	**4,5**	220	60	36	29	5	40,5
■	**48**	**5**	250	65	36	29	6	43
■	**52**	**5**	250	65	40	32	6	47

■ = HSS

CODE	
E21M4	E21M4T
E21M5	E21M5T
E21M6	E21M6T
E21M8SP	E21M8SP-T
E21M10SP	E21M10SP-T
E21M11	E21M11T
E21M12	E21M12T
E21M14	E21M14T
E21M16	E21M16T
E21M18	E21M18T
E21M20	E21M20T
E21M22	E21M22T
E21M24	E21M24T
E21M27	E21M27T
E21M30	E21M30T
E21M33	E21M33T
E21M36	E21M36T
E21M39	E21M39T
E21M42	E21M42T
E21M45	E21M45T
E21M48	E21M48T
E21M52	E21M52T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
K	Ghisa - Cast iron - Fonte	❍3.4 8-10				❍3.4 15-20			
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.2 15-20	❍4.3 10-15			❍4.2 25-30	❍4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.2 10-15	❍5.3 15-20			❍5.2 20-25	❍5.3 25-30		
N	Materiali termoindurenti Duroplastic - Thermodurcissables	❍8.2 8-10				❍8.2 10-15			

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

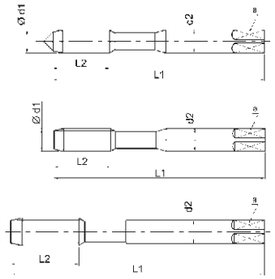
MASCHI A MACCHINA - Scanalature diritte filettatura sinistra
MACHINE TAPS - Straight flutes left thread
TARAUDS MACHINE - Goujures droites filetage à gauche

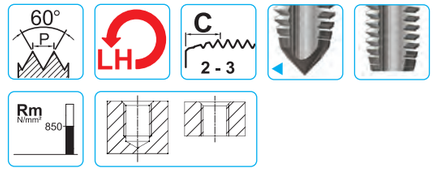
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M6

DIN 371 d1 =M8, M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement	

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	**3**	**0,5**	56	10	3,5	2,7	3	2,5	E20M3LH
◀	**4**	**0,7**	63	13	4,5	3,4	3	3,3	E20M4LH
◀	**5**	**0,8**	70	13	6	4,9	3	4,2	E20M5LH
◀	**6**	**1**	80	16	6	4,9	3	5	E20M6LH
	8	**1,25**	90	18	8	6,2	3	6,8	E20M8LH-SP
	10	**1,5**	100	20	10	8	3	8,5	E20M10LH-SP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	12	**1,75**	110	25	9	7	3	10,3	E21M12LH
	14	**2**	110	28	11	9	3	12	E21M14LH
	16	**2**	110	28	12	9	3	14	E21M16LH
	18	**2,5**	125	33	14	11	4	15,5	E21M18LH
	20	**2,5**	140	33	16	12	4	17,5	E21M20LH
	22	**2,5**	140	33	18	14,5	4	19,5	E21M22LH
	24	**3**	160	39	18	14,5	4	21	E21M24LH
	27	**3**	160	39	20	16	4	24	E21M27LH
	30	**3,5**	180	46	22	18	4	26,5	E21M30LH

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	
K	Ghisa - Cast iron - Fonte	◑3.4 8-10				
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.2 15-20	◑4.3 10-15			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.2 10-15	◑5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	◑8.2 8-10				

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

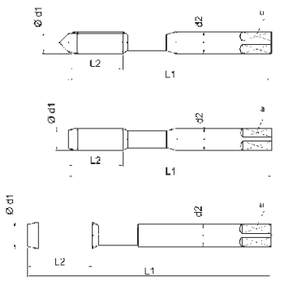
MASCHI A MACCHINA - Scanalature diritte filetti alternati
MACHINE TAPS - Straight flutes interrupted threads
TARAUDS MACHINE - Goujures droites filets alternés

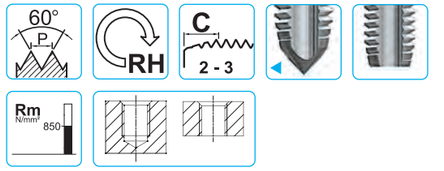
DIN13 | AL-CU-FE | ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER

DIN 371 d1 ≤ M7

DIN 371 d1 =M8, M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement		**V**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**3**	**0,5**	56	10	3,5	2,7	3	2,5	E20M3AZ	E20M3AZ-V
◀	**4**	**0,7**	63	13	4,5	3,4	3	3,3	E20M4AZ	E20M4AZ-V
◀	**5**	**0,8**	70	13	6	4,9	3	4,2	E20M5AZ	E20M5AZ-V
◀	**6**	**1**	80	16	6	4,9	3	5	E20M6AZ	E20M6AZ-V
◀	**7**	**1**	80	16	7	5,5	3	6	E20M7AZ	E20M7AZ-V
	8	**1,25**	90	18	8	6,2	3	6,8	E20M8AZ-SP	E20M8AZ-SP-V
	10	**1,5**	100	20	10	8	3	8,5	E20M10AZ-SP	E20M10AZ-SP-V

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	**1,75**	110	25	9	7	3	10,3	E21M12AZ	E21M12AZ-V
	14	**2**	110	28	11	9	3	12	E21M14AZ	E21M14AZ-V
	16	**2**	110	28	12	9	3	14	E21M16AZ	E21M16AZ-V

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 400 N/mm²	•1.1 10-15		•1.1 10-15	
N	Leghe di Allumino - Al alloys - Alliage Al	•4.1 10-15	•4.2 15-20	•4.1 10-15	•4.2 15-20
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 15-15	•5.1 8-12	•5.2 15-15
N	Materiali termoindurenti Duroplastic - Thermodurcissables	◑8.1 20-25		◑8.1 20-25	

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

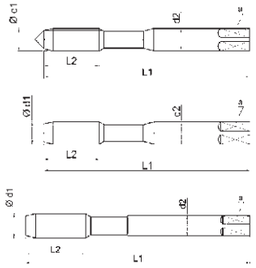
MASCHI A MACCHINA - Scanalature diritte per ghisa
MACHINE TAPS - Straight flutes for cast iron
TARAUDS MACHINE - Goujures droites pour fonte

DIN13 | GG | GHISA - CAST IRON - FONTE

DIN 371 d1 ≤ M6

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M8



Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	NQ	TiCN	TiCN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	3	0,7	56	10	3,5	2,7	3	2,5	-	E26M3CT	
◀	4	0,7	63	13	4,5	3,4	3	3,3	-	E26M4CT	
◀	5	0,8	70	13	6	4,9	3	4,2	E26M5NQ	E26M5CT	
◀	6	1	80	16	6	4,9	3	5	E26M6NQ	E26M6CT	
	6	1	80	16	6	4,9	3	5	-	E26M6SP-CT	E26M6FOR-CT
	8	1,25	90	18	8	6,2	4	6,8	E26M8SP-NQ	E26M8SP-CT	E26M8FOR-CT
	9	1,25	90	18	9	7	4	7,8	-	E26M9CT	-
	10	1,5	100	20	10	8	4	8,5	E26M10SP-NQ	E26M10SP-CT	E26M10FOR-CT

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	8	1,25	90	18	6	4,9	4	6,8	E27M8SP-NQ	E27M8SP-CT	-
	10	1,5	100	20	7	5,5	4	8,5	E27M10SP-NQ	E27M10SP-CT	-
	12	1,75	110	25	9	7	4	10,3	E27M12NQ	E27M12CT	E27M12FOR-CT
	14	2	110	28	11	9	4	12	-	E27M14CT	E27M14FOR-CT
	16	2	110	28	12	9	4	14	E27M16NQ	E27M16CT	E27M16FOR-CT
	18	2,5	125	33	14	11	4	15,5	-	E27M18CT	E27M18FOR-CT
	20	2,5	140	33	16	12	4	17,5	-	E27M20CT	E27M20FOR-CT
	22	2,5	140	33	18	14,5	4	19,5	-	E27M22CT	E27M22FOR-CT
	24	3	160	39	18	14,5	4	21	-	E27M24CT	E27M24FOR-CT
	27	3	160	39	20	16	4	24	-	E27M27CT	-
	30	3,5	180	46	22	18	4	26,5	-	E27M30CT	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
K	Ghisa - Cast iron - Fonte	•3.1 10-15	•3.2 8-10	❍3.3 8-10	❍3.4 10-15	•3.1 20-25	•3.2 15-20	❍3.3 15-20	❍3.4 20-25	•3.1 20-25	•3.2 15-20	❍3.3 15-20	❍3.4 20-25
N	Leghe Al, Si > 10% Al alloys, Si > 10% - Alliage Al, Si > 10%	•4.4 10-15				•4.4 25-30				•4.4 25-30			
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 10-15				•4.5 20-30				•4.5 20-30			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 18-20				•5.3 25-30				•5.3 25-30			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	•8.2 8-10				•8.2 10-15				•8.2 10-15			

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

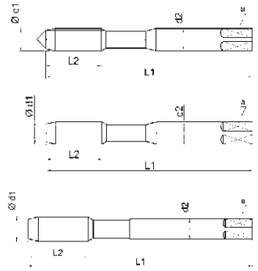
MASCHI A MACCHINA - Scanalature diritte per ghisa
MACHINE TAPS - Straight flutes for cast iron
TARAUDS MACHINE - Goujures droites pour fonte

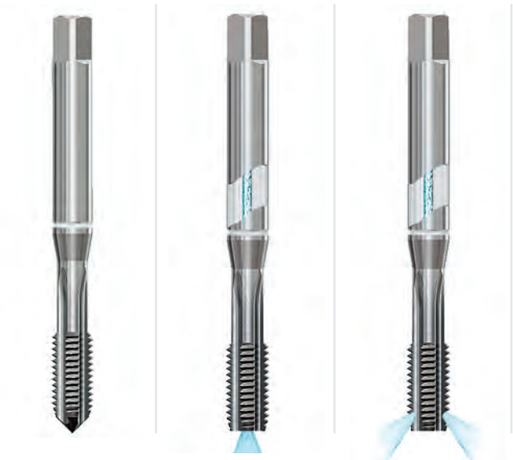
DIN13 | GG | GHISA - CAST IRON - FONTE

DIN 371 d1 ≤ M6

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	3,5xD
Materiale - Tool Material - Substrat	PM3	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiAlN	TiAlN	TiAlN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	4	0,7	63	13	4,5	3,4	3	3,3	K26M4TX		
◀	5	0,8	70	13	6	4,9	3	4,2	K26M5TX		
◀	6	1	80	16	6	4,9	4	5	K26M6TX		
	8	1,25	90	18	8	6,2	4	6,8	K26M8SP-TX		
	10	1,5	100	20	10	8	4	8,5	K26M10SP-TX		
	6	1	80	16	6	4,9	4	5		K26M6FOR-TX	K26M6FORY-TX
	8	1,25	90	18	8	6,2	4	6,8		K26M8FOR-TX	K26M8FORY-TX
	10	1,5	100	20	10	8	4	8,5		K26M10FOR-TX	K26M10FORY-TX

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1,75	110	25	9	7	4	10,3	K27M12TX	K27M12FOR-TX	K27M12FORY-TX
	14	2	110	28	11	9	4	12	K27M14TX	K27M14FOR-TX	K27M14FORY-TX
	16	2	110	28	12	9	4	14	K27M16TX	K27M16FOR-TX	K27M16FORY-TX
	18	2,5	125	33	14	11	5	15,5	K27M18TX	K27M18FOR-TX	K27M18FORY-TX
	20	2,5	140	33	16	12	5	17,5	K27M20TX	K27M20FOR-TX	K27M20FORY-TX
	22	2,5	140	33	18	14,5	5	19,5	K27M22TX	K27M22FOR-TX	K27M22FORY-TX
	24	3	160	39	18	14,5	5	21	K27M24TX	K27M24FOR-TX	K27M24FORY-TX

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
K	Ghisa - Cast iron - Fonte	•3.1 25-30	•3.2 20-25	❍3.3 20-25	❍3.4 25-30	•3.5 10-15	

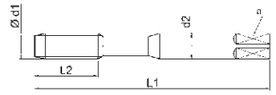
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

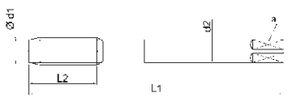
MASCHI A MACCHINA - Scanalature diritte per ghisa imbocco E
MACHINE TAPS - Straight flutes for cast iron chamfer E
TARAUDS MACHINE - Goujures droites pour fonte forme d'entrée E

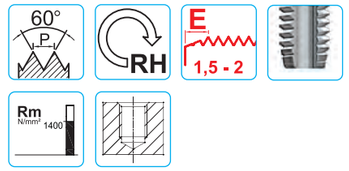
DIN13 | GG | GHISA - CAST IRON - FONTE

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





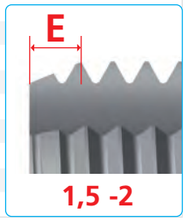
Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	3,5xD
Materiale - Tool Material - Substrat	PM3	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	AHI	AHI	AHI

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	6	1	80	16	6	4,9	4	5
	8	1,25	90	18	8	6,2	4	6,8
	10	1,5	100	20	10	8	4	8,5

CODE		
K26EM6AHI	K26EM6FOR-AHI	K26EM6FORY-AHI
K26EM8AHI	K26EM8FOR-AHI	K26EM8FORY-AHI
K26EM10AHI	K26EM10FOR-AHI	K26EM10FORY-AHI

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	1,75	110	25	9	7	4	10,3

CODE		
K27EM12AHI	K27EM12FOR-AHI	K27EM12FORY-AHI



ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
K	Ghisa - Cast iron - Fonte	•3.1 20-25 · •3.2 15-20 · ❍3.3 15-20 · ❍3.4 20-25 · •3.5 10-15

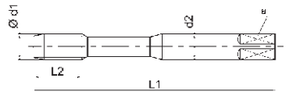
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

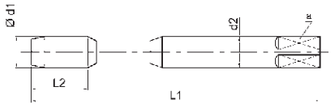
MASCHI A MACCHINA - Scanalature diritte
MACHINE TAPS - Straight flutes
TARAUDS MACHINE - Goujures droites

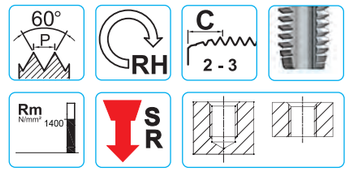
DIN13 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

DIN 371 d1 ≤ M10



UFS Norm d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	
Materiale - Tool Material - Substrat	PM3	PM3	
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC	

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h6	a h12	Z	
	6	1	80	10	6	4,9	4	5
	8	1,25	90	13	8	6,2	4	6,8
	10	1,5	100	15	10	8	4	8,5

CODE	
S20M6SP-TXC	S20M6FOR-TXC
S20M8TXC	S20M8FOR-TXC
S20M10TXC	S20M10FOR-TXC

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h6	a h12	Z	
	12	1,75	110	25	12	7	4	10,3
	16	2	110	20	16	12	4	14

CODE	
S20M12TXC	S20M12FOR-TXC
S20M16TXC	S20M16FOR-TXC

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 1400 N/mm²	❍1.5 10-15 · •1.6 8-10
K	Ghisa - Cast iron - Fonte	•3.1 25-30 · •3.2 20-25 · ❍3.3 20-25 · ❍3.4 25-30 · •3.5 10-15
N	Leghe di Allumino - Al alloys - Alliage Al	•4.4 25-30
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 30-40
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 35-40 · ❍5.4 8-10
N	Materiali termoindurenti Duroplastic - Thermodurcissables	•8.2 20-25 · •8.3 10-15

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

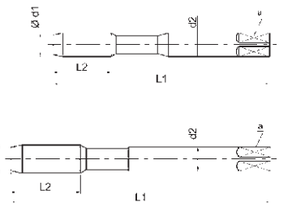
M

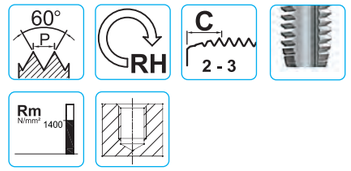
MASCHI A MACCHINA - Scanalature diritte - geometria di taglio rompitruciolo
MACHINE TAPS - Straight flutes - chip breaker cutting edge geometry
TARAUDS MACHINE - Goujures droites - géométrie brise copeaux

DIN13 | RT | ROMPITRUCIOLO - CHIP BREAKER - BRISE COPEAUX

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**3,5xD**			
Materiale - Tool Material - Substrat	**PM3**			
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**			
Trattamento superficiale - Surface treatment - Revêtement	**TXC**			

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	6	**1**	80	10	6	4,9	4	5
	8	**1,25**	90	13	8	6,2	4	6,8
	10	**1,5**	100	15	10	8	4	8,5

CODE
K22M6FOR-TXC
K22M8FOR-TXC
K22M10FOR-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	**1,75**	110	25	9	7	3	10,3
	14	**2**	110	28	11	9	3	12
	16	**2**	110	28	12	9	3	14
	18	**2,5**	125	33	14	11	3	15,5
	20	**2,5**	140	33	16	12	3	17,5
	22	**2,5**	140	33	18	14,5	3	19,5
	24	**3**	160	39	18	14,5	4	21

CODE
K23M12FOR-TXC
K23M14FOR-TXC
K23M16FOR-TXC
K23M18FOR-TXC
K23M20FOR-TXC
K23M22FOR-TXC
K23M24FOR-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 1400 N/mm²	•1.3 25-30	•1.4 20-25	•1.5 5-12	○1.6 5-8	
K	Ghisa - Cast iron - Fonte	○3.1 25-30	○3.2 20-25	•3.3 20-25	•3.4 25-30	
N	Leghe di Allumino - Al alloys - Alliage Al	○4.4 25-30				
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	○4.5 20-30				
N	Ottone a truciolo corto Hard brass short chipping - Laiton coupeaux courts	○5.3 25-30				
N	Materie plastiche con fibre di rinforzo - Reinforced plastic materials - Matiéres synthétiques renforcés par fibres	○8.3 6-10				

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

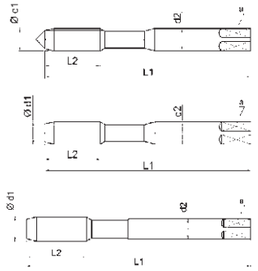
MASCHI A MACCHINA - Scanalature diritte per alta resistenza
MACHINE TAPS - Straight flutes for high resistance
TARAUDS MACHINE - Goujures droites pour haute résistance

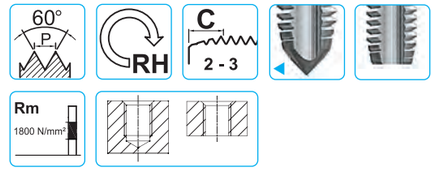
DIN13 | HR | ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

DIN 371 d1 ≤ M6

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**
Materiale - Tool Material - Substrat	**PM3**	**PM1**
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**	**6HX**
Trattamento superficiale - Surface treatment - Revêtement	**TXC**	**AHI**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◄	**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	4	5
	8	**1,25**	90	18	8	6,2	4	6,8
	10	**1,5**	100	20	10	8	4	8,5

CODE
K20M3TXC
K20M4TXC
K20M5TXC
K20M6TXC
K20M8TXC
K20M10TXC

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	**1,75**	110	25	9	7	4	10,3
	14	**2**	110	28	11	9	4	12
	16	**2**	110	28	12	9	4	14

CODE
K21M12TXC
K21M14TXC
K21M16TXC

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
*	**6**	**1**	80	18	6	4,9	4	5
*	**8**	**1,25**	90	25	8	6,2	5	6,8
*	**10**	**1,5**	100	30	10	8	5	8,5
*	**12**	**1,75**	110	30	12	9	5	10,3

CODE
XT20M6AHI
XT20M8AHI
XT20M10AHI
XT20M12AHI

* Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel – Acier < 45 HRC	○1.5 5-12	•1.6 5-8			
H	Acciaio temprato Hardened steel - Acier trempé < 52 HRC				•1.7 1-3	
N	Leghe di Allumino – Al alloys - Alliage Al	○4.3 30-40	•4.4 25-30			
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 20-30				
N	Ottone a truciolo corto Hard brass short chipping – Laiton coupeaux courts	•5.3 25-30				
N	Bronzo ad alta resistenza High strength bronze - Bronze haute résistance	○5.4 5-8			•5.4 5-8	
N	Materie plastiche con fibre di rinforzo - Reinforced plastic materials - Matiéres synthétiques renforcés par fibres	•8.2 10-15	•8.3 6-10			

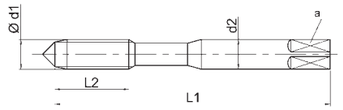
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

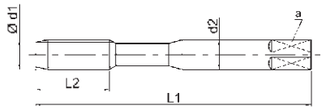
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M10



DIN 371 d1 =M9



Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	1	0,25	40	5	2,5	2,1	-	0,75
◀	1,2	0,25	40	5	2,5	2,1	-	0,95
◀	1,4	0,3	40	7	2,5	2,1	-	1,1
◀	1,6	0,35	40	8	2,5	2,1	-	1,25
◀	1,7	0,35	40	8	2,5	2,1	-	1,35
◀	1,8	0,35	40	8	2,5	2,1	-	1,45
◀	2	0,4	45	10	2,8	2,1	3	1,6
◀	2,5	0,45	50	13	2,8	2,1	3	2,05
◀	2,6	0,45	50	13	2,8	2,1	3	2,15
◀	3	0,5	56	10	3,5	2,7	3	2,5
◀	3,5	0,6	56	11	4	3	3	2,9
◀	4	0,7	63	13	4,5	3,4	3	3,3
◀	4,5	0,75	70	13	6	4,9	3	3,7
◀	5	0,8	70	13	6	4,9	3	4,2
◀	6	1	80	16	6	4,9	3	5
◀	7	1	80	16	7	5,5	3	6
◀	8	1,25	90	18	8	6,2	3	6,8
	9	1,25	90	18	9	7	3	7,8
◀	10	1,5	100	20	10	8	3	8,5

CODE			
E24M1	-	-	-
E24M1,2	-	-	-
E24M1,4	-	-	-
E24M1,6	-	-	-
E24M1,7	-	-	-
E24M1,8	-	-	-
E24M2	E24M2V	-	* E24M2VS
E24M2,5	E24M2,5V	-	* E24M2,5VS
E24M2,6	E24M2,6V	-	* E24M2,6VS
E24M3	E24M3V	E24M3T	E24M3XP
E24M3,5	E24M3,5V	E24M3,5T	E24M3,5XP
E24M4	E24M4V	E24M4T	E24M4XP
E24M4,5	E24M4,5V	E24M4,5T	E24M4,5XP
E24M5	E24M5V	E24M5T	E24M5XP
E24M6	E24M6V	E24M6T	E24M6XP
E24M7	E24M7V	E24M7T	E24M7XP
E24M8	E24M8V	E24M8T	E24M8XP
E24M9	E24M9V	E24M9T	E24M9XP
E24M10	E24M10V	E24M10T	E24M10XP

* Rivestimento VS - Coating VS - Revêtement VS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio – Steel – Acier - Rm ≤ 850 N/mm²	◔1.1 10-15	•1.2 10-15	•1.3 10-12	◔1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◔1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													◔2.1 10-15	◔2.2 8-10		
K	Ghisa - Cast iron - Fonte									◔3.3 10-15	•3.4 15-20			◔3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	◔4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◔4.1 20-25	•4.2 25-30	◔4.3 20-25		•4.2 25-30	◔4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◔5.1 8-12	◔5.2 10-15			•5.1 8-12	•5.2 10-15			◔5.1 15-20	•5.2 20-25			•5.2 20-25			

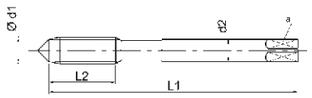
• Raccomandato - Optimal - Recommandé ◔ Adatto - Suitable - Adaptè

M

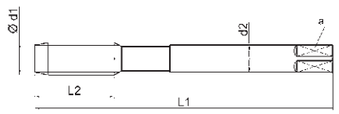
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

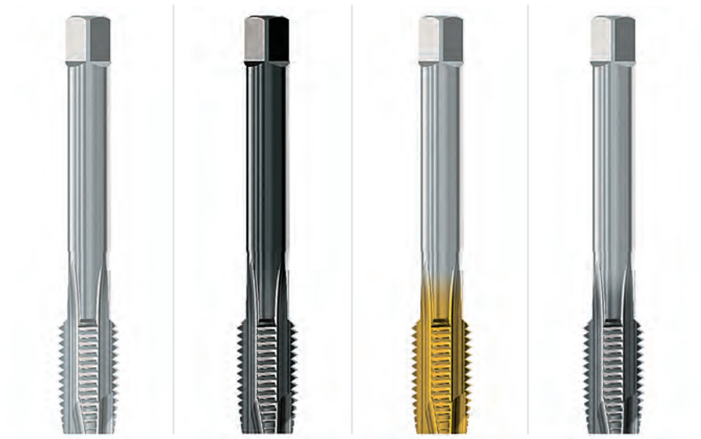
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 376 d1 ≤ M10



DIN 376 d1 ≥ M11





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	4	0,7	63	13	2,8	2,1	3	3,3
◀	5	0,8	70	13	3,5	2,7	3	4,2
◀	6	1	80	16	4,5	3,4	3	5
◀	8	1,25	90	18	6	4,9	3	6,8
◀	10	1,5	100	20	7	5,5	3	8,5
	11	1,5	100	20	8	6,2	3	9,5
	12	1,75	110	25	9	7	3	10,3
	14	2	110	28	11	9	3	12
	16	2	110	28	12	9	3	14
	18	2,5	125	33	14	11	4	15,5
	20	2,5	140	33	16	12	4	17,5
	22	2,5	140	33	18	14,5	4	19,5
	24	3	160	39	18	14,5	4	21
	27	3	160	39	20	16	4	24
	30	3,5	180	46	22	18	4	26,5
	33	3,5	180	46	25	20	4	29,5
	36	4	200	50	28	22	4	32
	39	4	200	50	32	24	4	35
	42	4,5	200	55	32	24	5	37,5
■	45	4,5	220	60	36	29	5	40,5
■	48	5	250	65	36	29	5	43
■	52	5	250	65	40	32	5	47

CODE			
E25M4	E25M4V	E25M4T	-
E25M5	E25M5V	E25M5T	-
E25M6	E25M6V	E25M6T	-
E25M8	E25M8V	E25M8T	E25M8XP
E25M10	E25M10V	E25M10T	E25M10XP
E25M11	E25M11V	E25M11T	E25M11XP
E25M12	E25M12V	E25M12T	E25M12XP
E25M14	E25M14V	E25M14T	E25M14XP
E25M16	E25M16V	E25M16T	E25M16XP
E25M18	E25M18V	E25M18T	E25M18XP
E25M20	E25M20V	E25M20T	E25M20XP
E25M22	E25M22V	E25M22T	-
E25M24	E25M24V	E25M24T	-
E25M27	E25M27V	E25M27T	-
E25M30	E25M30V	E25M30T	-
E25M33	E25M33V	E25M33T	-
E25M36	E25M36V	E25M36T	-
E25M39	E25M39V	E25M39T	-
E25M42	E25M42V	E25M42T	-
E25M45	E25M45V	E25M45T	-
E25M48	E25M48V	E25M48T	-
E25M52	E25M52V	E25M52T	-

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio – Steel – Acier - Rm ≤ 850 N/mm²	◔1.1 10-15	•1.2 10-15	•1.3 10-12	◔1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◔1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													◔2.1 10-15	◔2.2 8-10		
K	Ghisa - Cast iron - Fonte									◔3.3 10-15	•3.4 15-20			◔3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	◔4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◔4.1 20-25	•4.2 25-30	◔4.3 20-25		•4.2 25-30	◔4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◔5.1 8-12	◔5.2 10-15			•5.1 8-12	•5.2 10-15			◔5.1 15-20	•5.2 20-25			•5.2 20-25			

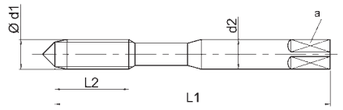
• Raccomandato - Optimal - Recommandé ◔ Adatto - Suitable - Adaptè

M

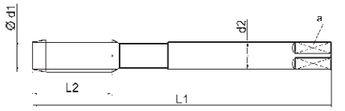
MASCHI A MACCHINA - Imbocco corretto per fori passanti filettatura sinistra
MACHINE TAPS - Straight flutes with spiral point for through holes left thread
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant filetage à gauche

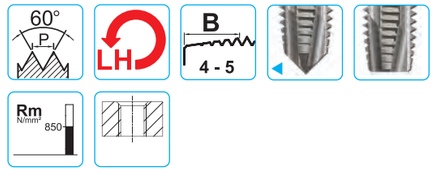
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	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	E24M5LH	E24M5LH-V	E24M5LH-T
◀	6	1	80	16	6	4,9	3	5	E24M6LH	E24M6LH-V	E24M6LH-T
◀	8	1,25	90	18	8	6,2	3	6,8	E24M8LH	E24M8LH-V	E24M8LH-T
◀	10	1,5	100	20	10	8	3	8,5	E24M10LH	E24M10LH-V	E24M10LH-T

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1,75	110	25	9	7	3	10,3	E25M12LH	E25M12LH-V	E25M12LH-T
	14	2	110	28	11	9	3	12	E25M14LH	E25M14LH-V	E25M14LH-T
	16	2	110	28	12	9	3	14	E25M16LH	E25M16LH-V	E25M16LH-T
	18	2,5	125	33	14	11	4	15,5	E25M18LH	E25M18LH-V	E25M18LH-T
	20	2,5	140	33	16	12	4	17,5	E25M20LH	E25M20LH-V	E25M20LH-T
	22	2,5	140	33	18	14,5	4	19,5	E25M22LH	E25M22LH-V	E25M22LH-T
	24	3	160	39	18	14,5	4	21	E25M24LH	E25M24LH-V	E25M24LH-T
	27	3	160	39	20	16	4	24	E25M27LH	E25M27LH-V	E25M27LH-T
	30	3,5	180	46	22	18	4	26,5	E25M30LH	E25M30LH-V	E25M30LH-T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min												
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			

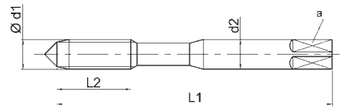
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

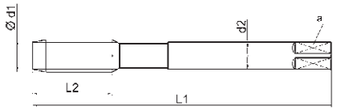
MASCHI A MACCHINA - Imbocco corretto per fori passanti toll. 4H e 6G
MACHINE TAPS - Straight flutes with spiral point for through holes tolerance 4H and 6G
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant tolérance 4H et 6G

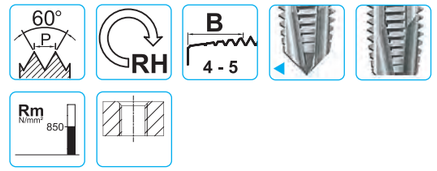
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO1/4H	ISO1/4H	ISO3/6G	ISO3/6G
Trattamento superficiale - Surface treatment - Revêtement		TiN		TiN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	3	0,5	56	10	3,5	2,7	3	2,5	-	-	E24M3-6G	E24M3T-6G
◀	4	0,7	63	13	4,5	3,4	3	3,3	-	-	E24M4-6G	E24M4T-6G
◀	5	0,8	70	13	6	4,9	3	4,2	E24M5-4H	E24M5T-4H	E24M5-6G	E24M5T-6G
◀	6	1	80	16	6	4,9	3	5	E24M6-4H	E24M6T-4H	E24M6-6G	E24M6T-6G
◀	8	1,25	90	18	8	6,2	3	6,8	E24M8-4H	E24M8T-4H	E24M8-6G	E24M8T-6G
◀	10	1,5	100	20	10	8	3	8,5	E24M10-4H	E24M10T-4H	E24M10-6G	E24M10T-6G

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	12	1,75	110	25	9	7	3	10,3	E25M12-4H	E25M12T-4H	E25M12-6G	E25M12T-6G

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20							○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25			○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25		

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

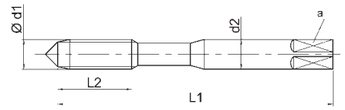
M

MASCHI A MACCHINA - Imbocco corretto per fori passanti toll. 7G e 6H+0,1
MACHINE TAPS - Straight flutes with spiral point for through holes tolerance 7G and 6H+0,1
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant tolérance 7G et 6H+0,1

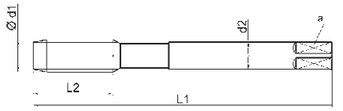
UFS LINE

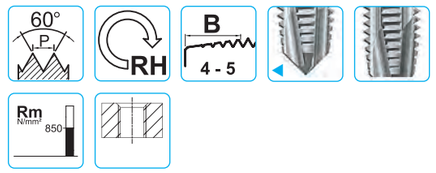
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	7G	7G	6H+0,1	6H+01
Trattamento superficiale - Surface treatment - Revêtement		TiN		TiN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	3	0,5	56	10	3,5	2,7	3	2,5	-	-	E24M3+0,1	E24M3T+0,1
◀	4	0,7	63	13	4,5	3,4	3	3,3	-	-	E24M4+0,1	E24M4T+0,1
◀	5	0,8	70	13	6	4,9	3	4,2	E24M5-7G	E24M5T-7G	E24M5+0,1	E24M5T+0,1
◀	6	1	80	16	6	4,9	3	5	E24M6-7G	E24M6T-7G	E24M6+0,1	E24M6T+0,1
◀	8	1,25	90	18	8	6,2	3	6,8	E24M8-7G	E24M8T-7G	E24M8+0,1	E24M8T+0,1
◀	10	1,5	100	20	10	8	3	8,5	E24M10-7G	E24M10T-7G	E24M10+0,1	E24M10T+0,1

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	12	1,75	110	25	9	7	3	10,3	E25M12-7G	E25M12T-7G	E25M12+0,1	E25M12T+0,1

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20							○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25			○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25		

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Imbocco corretto per fori passanti **gambo lungo**
MACHINE TAPS - Straight flutes with spiral point for through holes **long shank**
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant **queue long**

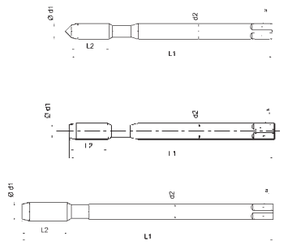
UFS LINE

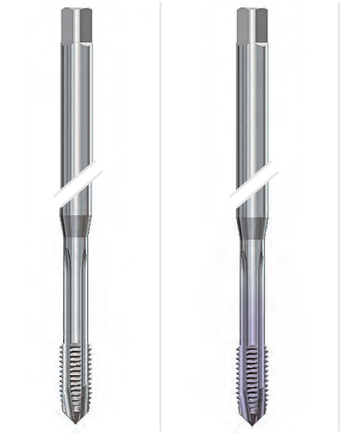
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

UFS Norm d1 ≤ M6

UFS Norm d1 ≤ M10

UFS Norm d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		TiCN

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	4	0,7	125	12	4,5	3,4	3	3,3	L24M4	L24M4CT
◀	5	0,8	140	14	6	4,9	3	4,2	L24M5	L24M5CT
◀	6	1	160	18	6	4,9	3	5	L24M6	L24M6CT
	8	1,25	180	20	8	6,2	3	6,8	L24M8	L24M8CT
	10	1,5	180	20	10	8	3	8,5	L24M10	L24M10CT

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	1,75	225	24	9	7	3	10,3	L25M12	L25M12CT
	14	2	225	26	11	9	3	12	L25M14	L25M14CT
	16	2	225	32	12	9	3	14	L25M16	L25M16CT

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable					○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.2 20-25			

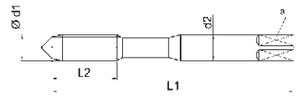
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

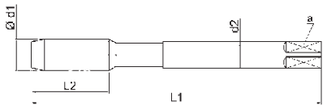
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

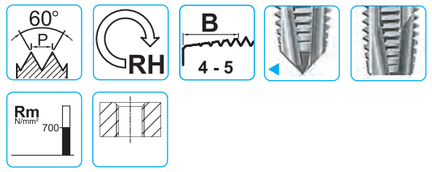
DIN13 | AL-CU-FE | ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**	**3xD**		
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**		
Trattamento superficiale - Surface treatment - Revêtement		**TXC**		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**3**	**0,5**	56	10	3,5	2,7	2	2,5	E24M3AL	E24M3AL-TXC
◀	**4**	**0,7**	63	13	4,5	3,4	2	3,3	E24M4AL	E24M4AL-TXC
◀	**5**	**0,8**	70	13	6	4,9	2	4,2	E24M5AL	E24M5AL-TXC
◀	**6**	**1**	80	16	6	4,9	2	5	E24M6AL	E24M6AL-TXC
◀	**8**	**1,25**	90	18	8	6,2	2	6,8	E24M8AL	E24M8AL-TXC
◀	**10**	**1,5**	100	20	10	8	2	8,5	E24M10AL	E24M10AL-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	**1,75**	110	25	9	7	3	10,3	E25M12AL	E25M12AL-TXC
	14	**2**	110	28	11	9	3	12	E25M14AL	E25M14AL-TXC
	16	**2**	110	28	12	9	3	14	E25M16AL	E25M16AL-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio dolce magnetico - Magnetic soft steel Acier doux magnétique - Rm <400 N/mm²	•1.1 10-15		•1.1 20-30	
N	Leghe di Allumino - Al alloys - Alliage Al	•4.1 10-15	•4.2 15-20	•4.1 20-25	•4.2 25-30	○4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15	•5.1 15-20	•5.2 20-25
S	Titanio puro - Pure titanium - Titane pur	•6.1 5-8			
S	Nichel puro - Pure nickel - Nickel pure	•7.1 6-8			
N	Materiali termoplastici - Thermoplastics - Thermoplastiques Truciolo lungo - Long chipping - Copeaux longue	•8.1 20-25			

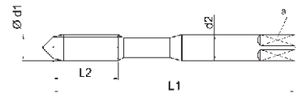
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

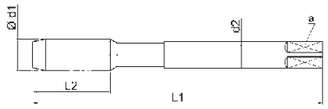
MASCHI A MACCHINA - Imbocco corretto per fori passanti filetti alternati
MACHINE TAPS - Straight flutes with spiral point for through holes interrupted thread
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant filets alternés

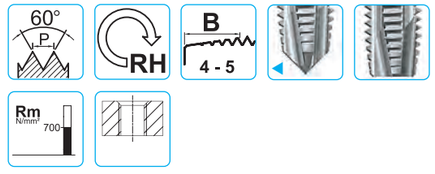
DIN13 | AL-CU-FE | ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER

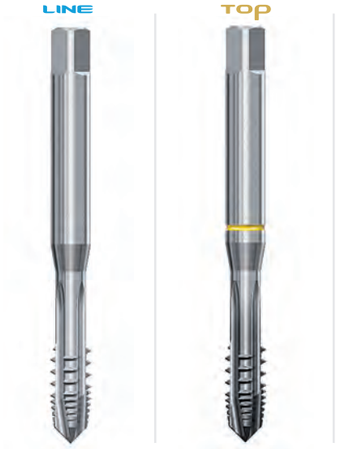
DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**	**3xD**		
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**		
Trattamento superficiale - Surface treatment - Revêtement		**TXC**		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**3**	**0,5**	56	10	3,5	2,7	3	2,5	E24M3AZ	E24M3AZ-TXC
◀	**4**	**0,7**	63	13	4,5	3,4	3	3,3	E24M4AZ	E24M4AZ-TXC
◀	**4,5**	**0,75**	70	13	6	4,9	3	3,7	E24M4,5AZ	E24M4,5AZ-TXC
◀	**5**	**0,8**	70	13	6	4,9	3	4,2	E24M5AZ	E24M5AZ-TXC
◀	**6**	**1**	80	16	6	4,9	3	5	E24M6AZ	E24M6AZ-TXC
◀	**8**	**1,25**	90	18	8	6,2	3	6,8	E24M8AZ	E24M8AZ-TXC
◀	**10**	**1,5**	100	20	10	8	3	8,5	E24M10AZ	E24M10AZ-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	**1,75**	110	25	9	7	3	10,3	E25M12AZ	E25M12AZ-TXC
	14	**2**	110	28	11	9	3	12	E25M14AZ	E25M14AZ-TXC
	16	**2**	110	28	12	9	3	14	E25M16AZ	E25M16AZ-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 700 N/mm²	•1.1 10-15	○1.2 10-15	•1.1 20-30	•1.2 20-30	
N	Leghe di Allumino - Al alloys - Alliage Al Truciolo lungo - Long chipping - Copeaux longs	•4.1 10-15	•4.2 15-20	•4.1 20-25	•4.2 25-30	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15	•5.1 15-20	•5.2 20-25	
S	Titanio puro - Pure titanium - Titane pur	○6.1 5-8				
S	Nichel puro - Pure nickel - Nickel pure	○7.1 6-8				
N	Materiali termoplastici – Thermoplastics - Thermoplastiques Truciolo lungo – Long chipping - Copeaux longue	○8.1 20-25				

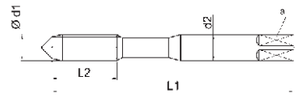
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

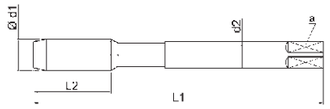
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

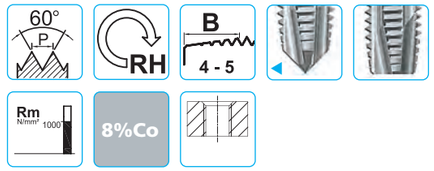
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSP	HSSP	HSSP
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN-G

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	3	0,5	56	10	3,5	2,7	3	2,5	P24M3	P24M3V	P24M3TG
◀	4	0,7	63	13	4,5	3,4	3	3,3	P24M4	P24M4V	P24M4TG
◀	5	0,8	70	13	6	4,9	3	4,2	P24M5	P24M5V	P24M5TG
◀	6	1	80	16	6	4,9	3	5	P24M6	P24M6V	P24M6TG
◀	8	1,25	90	18	8	6,2	3	6,8	P24M8	P24M8V	P24M8TG
◀	10	1,5	100	20	10	8	3	8,5	P24M10	P24M10V	P24M10TG

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1,75	110	25	9	7	4	10,3	P25M12	P25M12V	P25M12TG
	14	2	110	28	11	9	4	12	P25M14	P25M14V	P25M14TG
	16	2	110	28	12	9	4	14	P25M16	P25M16V	P25M16TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm < 1000 N/mm²	•1.2 10-15	•1.3 10-12	•1.4 8-10	•1.2 10-15	•1.3 10-12	•1.4 8-10	•1.2 20-30	•1.3 20-25	•1.4 15-20	❍1.5 5-12
K	Ghisa - Cast iron - Fonte							•3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al - Si < 10% Truciolo medio - Medium chipping - Copeaux moyen	•4.3 10-15			•4.3 10-15			•4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 10-15			•5.2 10-15			•5.2 20-25			

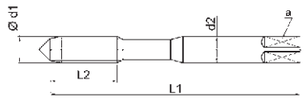
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

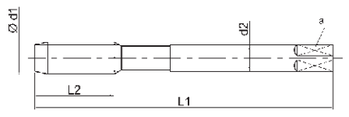
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

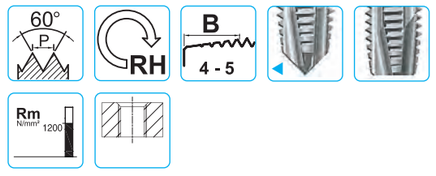
DIN13 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	
Materiale - Tool Material - Substrat	PM3	PM3	
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	
Trattamento superficiale - Surface treatment - Revêtement	XP	XP	

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	3	0,5	56	10	3,5	2,7	3	2,5	K24M3XP	-
◀	4	0,7	63	13	4,5	3,4	3	3,3	K24M4XP	-
◀	5	0,8	70	13	6	4,9	3	4,2	K24M5XP	-
◀	6	1	80	16	6	4,9	3	5	K24M6XP	K24M6FORY-XP
◀	8	1,25	90	18	8	6,2	3	6,8	K24M8XP	K24M8FORY-XP
◀	10	1,5	100	20	10	8	3	8,5	K24M10XP	K24M10FORY-XP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	1,75	110	25	9	7	4	10,3	K25M12XP	K25M12FORY-XP
	14	2	110	28	11	9	4	12	K25M14XP	-
	16	2	110	28	12	9	4	14	K25M16XP	-
	18	2,5	125	33	14	11	4	15,5	K25M18XP	-
	20	2,5	140	33	16	12	4	17,5	K25M20XP	-
	22	2,5	140	33	18	14,5	4	19,5	K25M22XP	-
	24	3	160	39	18	14,5	4	21	K25M24XP	-
New	27	3	160	39	20	16	4	24	K25M27XP	-
New	30	3,5	180	46	22	18	4	26,5	K25M30XP	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	❍1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12	
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8			
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20				
N	Leghe di Allumino – Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25				
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.2 20-25					

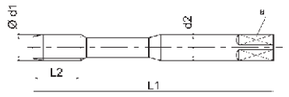
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

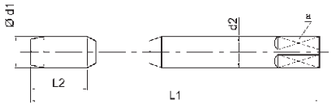
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

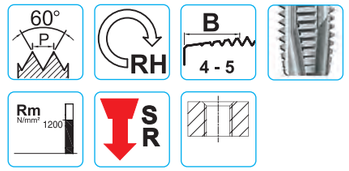
DIN13 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

DIN 371 d1 ≤ M10



UFS Norm d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**
Materiale - Tool Material - Substrat	**PM3**
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**
Trattamento superficiale - Surface treatment - Revêtement	**TXC**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h6	a h12	Z		CODE
	6	**1**	80	10	6	6,2	3	6,8	S24M6TXC
	8	**1,25**	90	13	8	6,2	3	6,8	S24M8TXC
	10	**1,5**	100	15	10	8	3	8,5	S24M10TXC

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h6	a h12	Z		CODE
	12	**1,75**	110	25	12	9	3	10,3	S24M12TXC
	16	**2**	110	20	16	12	4	14	S24M16TXC

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.1 40-45	•1.2 40-45	•1.3 35-40	•1.4 25-30	•1.5 10-15
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 20-25	•2.2 15-20	•2.3 10-15	•2.4 10-12	
K	Ghisa - Cast iron - Fonte	•3.3 20-25	•3.4 25-30			
N	Leghe di Allumino – Al alloys - Alliage Al Si < 10%	•4.1 30-40	•4.2 45-50	•4.3 30-40		
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.1 20-25	•5.2 25-30			
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<900 N/mm²	•6.1 20-30	○6.2 12-15			
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.1 20-30	○7.2 8-12			

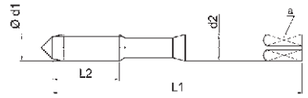
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

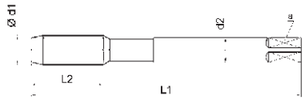
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

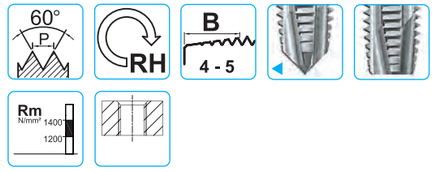
DIN13 | HR | ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**
Materiale - Tool Material - Substrat	**PM3**
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**
Trattamento superficiale - Surface treatment - Revêtement	**TXC**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◄	**3**	**0,5**	56	10	3,5	2,7	3	2,5	K24M3TXC
◄	**4**	**0,7**	63	13	4,5	3,4	3	3,3	K24M4TXC
◄	**5**	**0,8**	70	13	6	4,9	3	4,2	K24M5TXC
◄	**6**	**1**	80	16	6	4,9	3	5	K24M6TXC
◄	**8**	**1,25**	90	18	8	6,2	3	6,8	K24M8TXC
◄	**10**	**1,5**	100	20	10	8	3	8,5	K24M10TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	12	**1,75**	110	25	9	7	4	10,3	K25M12TXC
	14	**2**	110	28	11	9	4	12	K25M14TXC
	16	**2**	110	28	12	9	4	14	K25M16TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min		
P	Acciaio - Steel - Acier - Rm < 1400 N/mm²	•1.5 5-12	•1.6 5-8	
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25	
N	Leghe di Allumino – Al alloys - Alliage Al Si > 10%	○4.4 25-30		
N	Ottone a truciolo corto - hard brass short chipping - laiton coupeaux courts	•5.3 25-30		

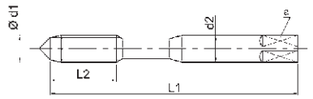
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

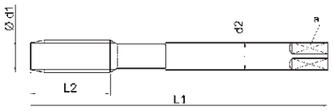
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

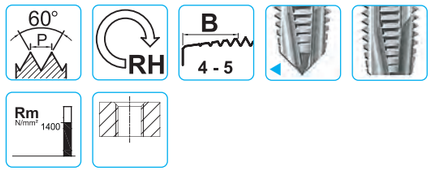
DIN13 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





	LINE	TOP	TOP
Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSV3	HSSV3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	VS	TXC	TXC

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	3	0,5	56	10	3,5	2,7	3	2,5	V24M3VS	V24M3TXC	K24M3X-TXC
◀	4	0,7	63	13	4,5	3,4	3	3,3	V24M4VS	V24M4TXC	K24M4X-TXC
◀	5	0,8	70	13	6	4,9	3	4,2	V24M5VS	V24M5TXC	K24M5X-TXC
◀	6	1	80	16	6	4,9	3	5	V24M6VS	V24M6TXC	K24M6X-TXC
◀	8	1,25	90	18	8	6,2	3	6,8	V24M8VS	V24M8TXC	K24M8X-TXC
◀	10	1,5	100	20	10	8	3	8,5	V24M10VS	V24M10TXC	K24M10X-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	1,75	110	25	9	7	4	10,3	V25M12VS	V25M12TXC
	14	2	110	28	11	9	4	12	V25M14VS	V25M14TXC
	16	2	110	28	12	9	4	14	V25M16VS	V25M16TXC
	18	2,5	125	33	14	11	4	15,5	V25M18VS	V25M18TXC
	20	2,5	140	33	16	12	4	17,5	V25M20VS	V25M20TXC
	22	2,5	140	33	18	14,5	4	19,5	V25M22VS	V25M22TXC
	24	3	160	39	18	14,5	4	21	V25M24VS	V25M24TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min												
P	Acciaio - Steel - Acier - Rm ≤ 1400 N/mm²	•1.1 10-15	•1.2 10-15		•1.3 20-25	•1.4 15-20	◦1.5 5-12		•1.3 20-25	•1.4 15-20	•1.5 5-12	◦1.6 5-8		
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 6-8	•2.2 5-7	•2.3 3-5	•2.1 10-15	•2.2 8-10	•2.3 6-8	◦2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	•2.4 3-6		

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MJ UNJC UNJF AVIO

DIAMETRO ESTERNO ARROTONDATO
WITH ROUNDED CREST
DIAMÈTRE EXTÉRIEUR ARRONDI

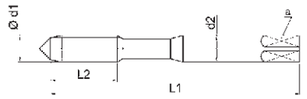
Ti | TITANIO - TITANIUM - TITANE

M

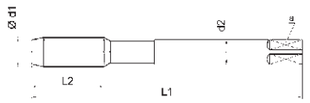
MASCHI A MACCHINA - Elica 15° sinistra per fori passanti
MACHINE TAPS - Left-hand spiral flutes 15° for through holes
TARAUDS MACHINE - Goujures 15° hélicoïdales à gauche pour trous débouchant

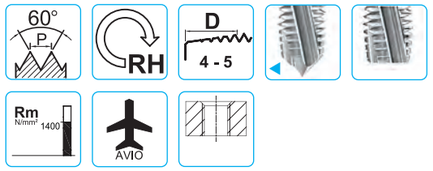
DIN13 | Ti | TITANIO - TITANIUM - TITANE

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	4H		
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	3	0,5	56	10	3,5	2,7	3	*2,5	K52M3CT	K52MJ3CT
◀	4	0,7	63	13	4,5	3,4	3	*3,3	K52M4CT	K52MJ4CT
◀	5	0,8	70	13	6	4,9	3	*4,2	K52M5CT	K52MJ5CT
◀	6	1	80	16	6	4,9	3	*5	K52M6CT	K52MJ6CT
◀	8	1,25	90	18	8	6,2	3	*6,8	K52M8CT	K52MJ8CT
◀	10	1,5	100	20	10	8	3	*8,5	K52M10CT	K52MJ10CT

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	12	1,75	110	25	9	7	3	*10,3	K53M12CT
	16	2	110	28	12	9	3	*14	K53M16CT

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²	•1.6 5-8	
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²	•2.4 3-6	
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	❍4.4 25-30	
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze	•5.3 25-30	❍5.4 5-8
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<1400 N/mm²	•6.2 4-8	•6.3 2-4
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.2 2-4	

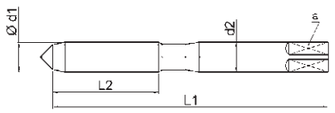
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

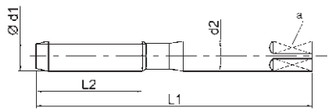
MASCHI A MACCHINA - Elica 10° sinistra per fori passanti
MACHINE TAPS - Left-hand spiral flutes 10° for through holes
TARAUDS MACHINE - Goujures 10° hélicoïdales à gauche pour trous débouchant

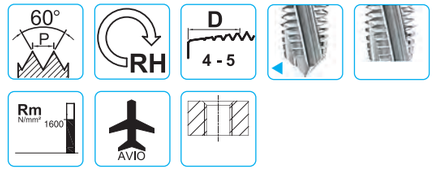
DIN13 | Ni | NICHEL - NICKEL

UFS Norm d1 ≤ M6



UFS Norm d1 =M8, M10





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	4H		
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN		

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	3	0,5	56	10	3,5	2,7	3	*2,5	K52M3NI-CT	K52MJ3NI-CT
◀	4	0,7	63	13	4,5	3,4	3	*3,3	K52M4NI-CT	K52MJ4NI-CT
◀	5	0,8	70	15	6	4,9	3	*4,2	K52M5NI-CT	K52MJ5NI-CT
◀	6	1	80	18	6	4,9	3	*5	K52M6NI-CT	K52MJ6NI-CT
	8	1,25	90	25	8	6,2	3	*6,8	K52M8NI-CT	K52MJ8NI-CT
	10	1,5	100	30	10	8	3	*8,5	K52M10NI-CT	K52MJ10NI-CT

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio - Steel - Acier - Rm ≤ 1600 N/mm²	❍1.6 5-8	•1.7 1-3
N	Bronzo ad alta resistenza - High strength bronze - Bronze haute résistance Rm<1500 N/mm²	•5.4 5-8	
S	Leghe di Nichel - Nickel alloys - Alliages de nickel Rm<1600 N/mm²	❍7.2 2-4	•7.3 1-3

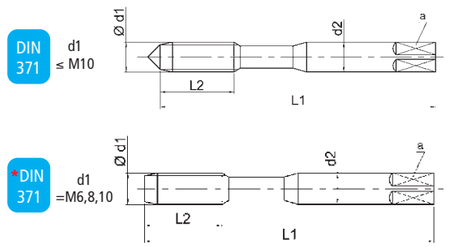
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

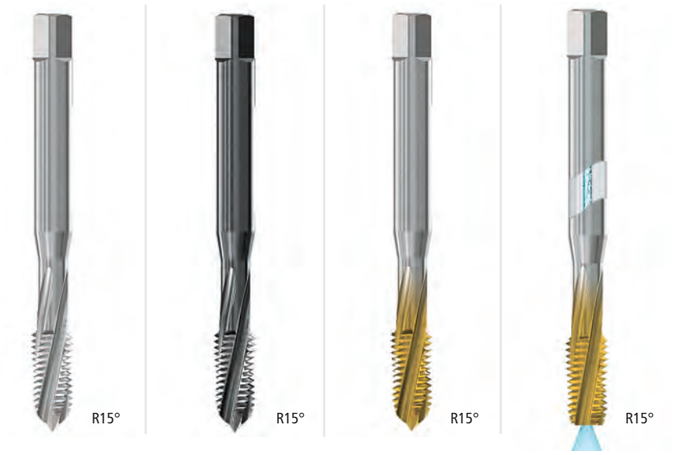
M

MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

UFS LINE

DIN13 USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	1,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	TiN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	2	0,4	45	10	2,8	2,1	3	1,6	E40M2	E40M2V	-	
◀	2,2	0,45	45	10	2,8	2,1	3	1,75	E40M2,2	E40M2,2V	-	
◀	2,5	0,45	50	13	2,8	2,1	3	2,05	E40M2,5	E40M2,5V	-	
◀	2,6	0,45	50	13	2,8	2,1	3	2,15	E40M2,6	E40M2,6V	-	
◀	3	0,5	56	10	3,5	2,7	3	2,5	E40M3	E40M3V	E40M3T	
◀	3,5	0,6	56	11	4	3	3	2,9	E40M3,5	E40M3,5V	E40M3,5T	
◀	4	0,7	63	13	4,5	3,4	3	3,3	E40M4	E40M4V	E40M4T	
◀	5	0,8	70	13	6	4,9	3	4,2	E40M5	E40M5V	E40M5T	
◀	6	1	80	16	6	4,9	3	5	E40M6	E40M6V	E40M6T	
◀	7	1	80	16	7	5,5	3	6	E40M7	E40M7V	E40M7T	
◀	8	1,25	90	18	8	6,2	3	6,8	E40M8	E40M8V	E40M8T	
◀	10	1,5	100	20	10	8	3	8,5	E40M10	E40M10V	E40M10T	
*	6	1	80	16	6	4,9	3	5				E40M6FOR-T
*	8	1,25	90	18	8	6,2	3	6,8				E40M8FOR-T
*	10	1,5	100	20	10	8	3	8,5				E40M10FOR-T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	○1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable																
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			○5.1 15-20	•5.2 20-25		

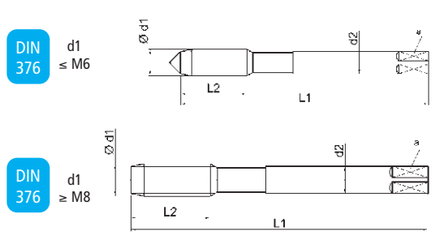
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

UFS LINE

DIN13 USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL



Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	1,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	TiN

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	4	0,7	63	13	2,8	2,1	3	3,3	E41M4	E41M4V	E41M4T	-
◀	5	0,8	70	13	3,5	2,7	3	4,2	E41M5	E41M5V	E41M5T	-
◀	6	1	80	16	4,5	3,4	3	5	E41M6	E41M6V	E41M6T	-
	8	1,25	90	18	6	4,9	3	6,8	E41M8SP	E41M8SP-V	E41M8SP-T	-
	10	1,5	100	20	7	5,5	3	8,5	E41M10SP	E41M10SP-V	E41M10SP-T	-
	11	1,5	100	20	8	6,2	3	9,5	E41M11	E41M11V	E41M11T	-
	12	1,75	110	25	9	7	3	10,3	E41M12	E41M12V	E41M12T	E41M12FOR-T
	14	2	110	28	11	9	3	12	E41M14	E41M14V	E41M14T	E41M14FOR-T
	16	2	110	28	12	9	3	14	E41M16	E41M16V	E41M16T	E41M16FOR-T
	18	2,5	125	33	14	11	4	15,5	E41M18	E41M18V	E41M18T	-
	20	2,5	140	33	16	12	4	17,5	E41M20	E41M20V	E41M20T	-
	22	2,5	140	33	18	14,5	4	19,5	E41M22	E41M22V	E41M22T	-
	24	3	160	39	18	14,5	4	21	E41M24	E41M24V	E41M24T	-
	27	3	160	39	20	16	4	24	E41M27	E41M27V	E41M27T	-
	30	3,5	180	46	22	18	4	26,5	E41M30	E41M30V	E41M30T	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	○3.3 10-15	•3.4 15-20	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable																
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			○5.1 15-20	•5.2 20-25		

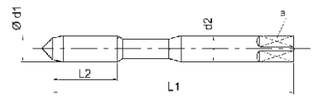
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

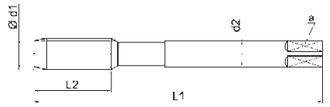
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi toll 6G e 6H+0,1
MACHINE TAPS - Spiral flutes 15° for blind holes tolerance 6G e 6H+0,1
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes tolérance 6G et 6H+0,1

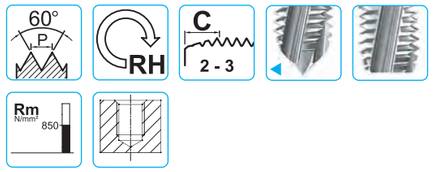
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

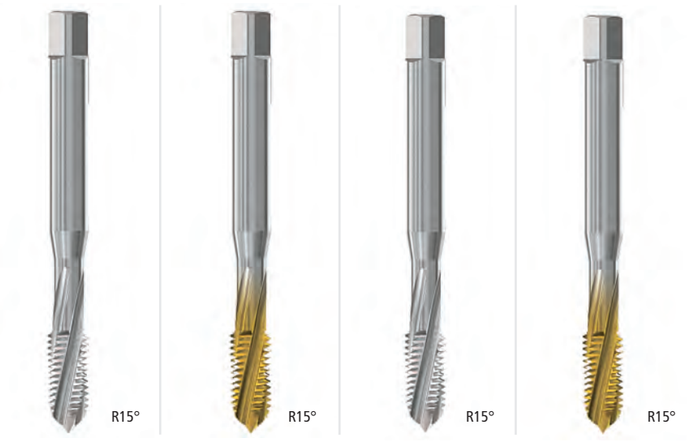
DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**	**1,5xD**	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**	**HSSE**	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO3/6G**	**ISO3/6G**	**6H+0,1**	**6H+0,1**
Trattamento superficiale - Surface treatment - Revêtement		**TiN**		**TiN**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◄	**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

CODE			
E40M3-6G	E40M3T-6G	E40M3+0,1	E40M3T+0,1
E40M4-6G	E40M4T-6G	E40M4+0,1	E40M4T+0,1
E40M5-6G	E40M5T-6G	E40M5+0,1	E40M5T+0,1
E40M6-6G	E40M6T-6G	E40M6+0,1	E40M6T+0,1
E40M8-6G	E40M8T-6G	E40M8+0,1	E40M8T+0,1
E40M10-6G	E40M10T-6G	E40M10+0,1	E40M10T+0,1

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	**1,75**	110	25	9	7	4	10,3

CODE			
-	-	E41M12+0,1	E41M12T+0,1

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable																
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20							○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25			○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25		

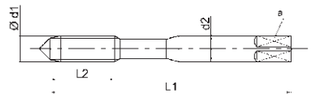
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

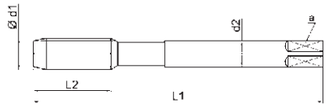
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi filetti alternati
MACHINE TAPS - Spiral flutes 15° for blind holes interrupted threads
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes filets alternés

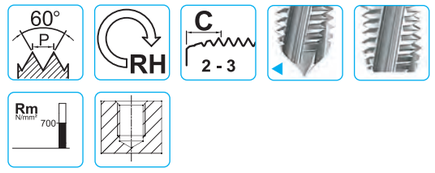
DIN13 | AL-CU-FE | ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**			
Materiale - Tool Material - Substrat	**HSSE**			
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**			
Trattamento superficiale - Surface treatment - Revêtement				

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◄	**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

CODE
E40M3AZ
E40M4AZ
E40M5AZ
E40M6AZ
E40M8AZ
E40M10AZ

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	**1,75**	110	25	9	7	3	10,3
	14	**2**	110	28	11	9	3	12
	16	**2**	110	28	12	9	3	14

CODE
E41M12AZ
E41M14AZ
E41M16AZ

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 700 N/mm²	• 1.1 10-15	○1.2 10-15														
N	Leghe di Allumino - Al alloys - Alliage Al Truciolo lungo - Long chipping - Copeaux longs	•4.1 10-15	•4.2 15-20														
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15														
S	Titanio puro - Pure titanium - Titane pur	○6.1 5-8															
S	Nichel puro - Pure nickel - Nickel pure	○7.1 6-8															
N	Materiali termoplastici - Thermoplastics - Thermoplastiques Truciolo lungo - Long chipping - Copeaux longue	○8.1 20-25															

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

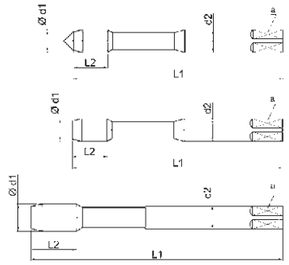
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

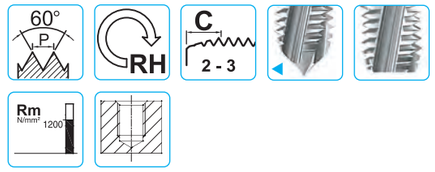
DIN13 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 371 d1 ≤ M6

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**2,5xD**	**3xD**
Materiale - Tool Material - Substrat	**HSSE-PM**	**HSSE-PM**	**HSSE-PM**
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**	**6HX**	**6HX**
Trattamento superficiale - Surface treatment - Revêtement	**XP**	**XP**	**XP**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	**3**	**0,5**	56	5	3,5	2,7	3	2,5	K40M3XP	-	-
◀	**4**	**0,7**	63	7	4,5	3,4	3	3,3	K40M4XP	-	-
◀	**5**	**0,8**	70	8	6	4,9	3	4,2	K40M5XP	-	-
◀	**6**	**1**	80	10	6	4,9	3	5	K40M6XP	K40M6FOR-XP	K44M6FOR-XP
	8	**1,25**	90	13	8	6,2	3	6,8	K40M8XP	K40M8FOR-XP	K44M8FOR-XP
	10	**1,5**	100	15	10	8	3	8,5	K40M10XP	K40M10FOR-XP	K44M10FOR-XP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	**1,75**	110	18	9	7	3	10,3	K41M12XP	K41M12FOR-XP	K45M12FOR-XP
	14	**2**	110	20	11	9	3	12	K41M14XP	-	-
	16	**2**	110	20	12	9	3	14	K41M16XP	K41M16FOR-XP	K45M16FOR-XP
	18	**2,5**	125	25	14	11	4	15,5	K41M18XP	-	-
	20	**2,5**	140	25	16	12	4	17,5	K41M20XP	-	-
	22	**2,5**	140	25	18	14,5	4	19,5	K41M22XP	-	-
	24	**3**	160	30	18	14,5	4	21	K41M24XP	-	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.3 20-25	•1.4 15-20	•1.5 5-12	•1.6 5-8	•1.3 20-25	•1.4 15-20	•1.5 5-12	•1.6 5-8	•1.3 20-25	•1.4 15-20	•1.5 5-12	•1.6 5-8
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25			•3.3 15-20	•3.4 20-25						
N	Leghe di Allumino – Al alloys - Alliage Al - Si < 10% Truciolo medio - Medium chipping - Copeaux moyen	•4.3 20-25				•4.3 20-25							
S	Leghe di titanio - Titanium alloys - Alliage de titane Rm<900 N/mm²	•6.2 2-3				•6.2 2-3							
S	Leghe di Nichel - Nickel alloys - Alliages de nickel Rm<900 N/mm²	•7.2 2-3				•7.2 2-3							

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

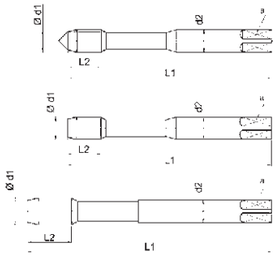
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

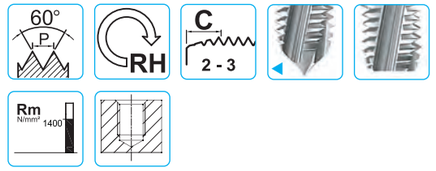
DIN13 | HR | ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

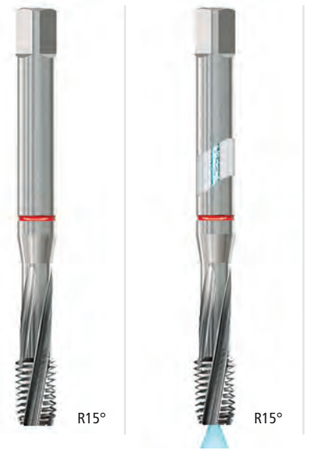
DIN 371 d1 ≤ M6

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**2,5xD**
Materiale - Tool Material - Substrat	**PM3**	**PM3**
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**	**6HX**
Trattamento superficiale - Surface treatment - Revêtement	**TXC**	**TXC**

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**3**	**0,5**	56	5	3,5	2,7	3	2,5	K40M3TXC	
◀	**4**	**0,7**	63	7	4,5	3,4	3	3,3	K40M4TXC	
◀	**5**	**0,8**	70	8	6	4,9	3	4,2	K40M5TXC	
◀	**6**	**1**	80	10	6	4,9	3	5	K40M6TXC	
	8	**1,25**	90	13	8	6,2	3	6,8	K40M8TXC	
	10	**1,5**	100	15	10	8	3	8,5	K40M10TXC	
	6	**1**	80	10	6	4,9	3	5		K40M6FOR-TXC
	8	**1,25**	90	13	8	6,2	3	6,8		K40M8FOR-TXC
	10	**1,5**	100	15	10	8	3	8,5		K40M10FOR-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	**1,75**	110	18	9	7	4	10,3	K41M12TXC	K41M12FOR-TXC
	14	**2**	110	20	11	9	4	12	K41M14TXC	K41M14FOR-TXC
	16	**2**	110	20	12	9	4	14	K41M16TXC	K41M16FOR-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm < 1400 N/mm²	•1.5 5-12	•1.6 5-8										
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25										
N	Leghe di Allumino – Al alloys - Alliage Al Si > 10%	○4.4 25-30											
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	○4.5 20-30											
N	Ottone a truciolo corto Hard brass short chipping – Laiton coupeaux courts	•5.3 25-30											

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

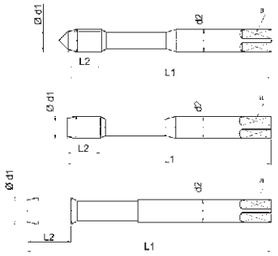
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

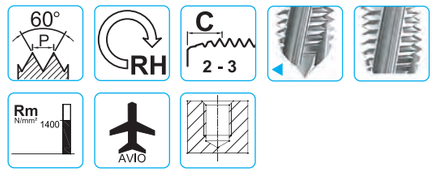
DIN13 | Ti | TITANIO - TITANIUM - TITANE

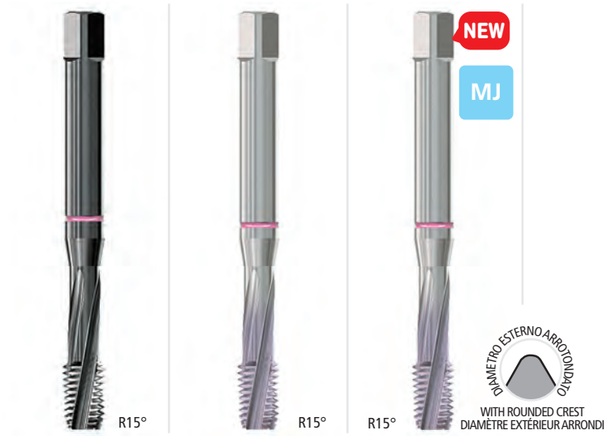
DIN 371 d1 ≤ M6

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	1,5xD
Materiale - Tool Material - Substrat	PM3	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	4H
Trattamento superficiale - Surface treatment - Revêtement	V	TiCN	TiCN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	3	0,5	56	5	3,5	2,7	3	*2,5	K42M3V	K42M3CT	K42MJ3CT
◀	4	0,7	63	7	4,5	3,4	3	*3,3	K42M4V	K42M4CT	K42MJ4CT
◀	5	0,8	70	8	6	4,9	3	*4,2	K42M5V	K42M5CT	K42MJ5CT
◀	6	1	80	10	6	4,9	3	*5	K42M6V	K42M6CT	K42MJ6CT
	8	1,25	90	13	8	6,2	3	*6,8	K42M8V	K42M8CT	K42MJ8CT
	10	1,5	100	15	10	8	3	*8,5	K42M10V	K42M10CT	K42MJ10CT

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	1,75	110	18	9	7	4	*10,3	K43M12V	K43M12CT
	16	2	110	20	12	9	4	*14	K43M16V	K43M16CT

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²			•1.6 5-8		•1.6 5-8			
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²			•2.4 3-6		•2.4 3-6			
K	Ghisa - Cast iron - Fonte			•3.3 15-20	•3.4 20-25	•3.3 15-20	•3.4 20-25		
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%			❍4.4 25-30		❍4.4 25-30			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze			•5.3 25-30	❍5.4 5-8	•5.3 25-30	❍5.4 5-8		
S	Titanio puro - Pure titanium - Titane pur	•6.1 5-10							
S	Leghe di titanio - Titanium alloys - Alliage de titane Rm<1400 N/mm²			•6.2 4-8	•6.3 2-4	•6.2 4-8	•6.3 2-4		
S	Leghe di Nichel - Nickel alloys - Alliages de nickel Rm<900 N/mm²			•7.2 2-4		•7.2 2-4			

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

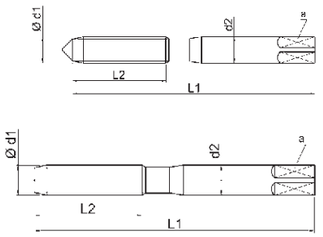
M

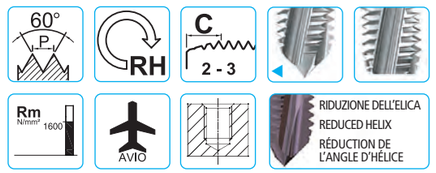
MASCHI A MACCHINA - Elica 10° destra per fori ciechi
MACHINE TAPS - Spiral flutes 10° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 10° pour trous borgnes

DIN13 | Ni | NICHEL - NICKEL

UFS Norm d1 ≤ M6

UFS Norm d1 =M8, M10





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD			
Materiale - Tool Material - Substrat	PM3	PM3			
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	4H			
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN			

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	3	0,5	56	10	3,5	2,7	3	*2,5	K42M3NI-CT	K42MJ3NI-CT
◀	4	0,7	63	13	4,5	3,4	3	*3,3	K42M4NI-CT	K42MJ4NI-CT
◀	5	0,8	70	15	6	4,9	3	*4,2	K42M5NI-CT	K42MJ5NI-CT
◀	6	1	80	18	6	4,9	3	*5	K42M6NI-CT	K42MJ6NI-CT
	8	1,25	90	25	8	6,2	3	*6,8	K42M8NI-CT	K42MJ8NI-CT
	10	1,5	100	30	10	8	3	*8,5	K42M10NI-CT	K42MJ10NI-CT

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 1600 N/mm²	❍1.6 5-8	•1.7 1-3						
N	Bronzo ad alta resistenza - High strength bronze - Bronze haute résistance Rm<1500 N/mm²	•5.4 5-8							
S	Leghe di Nichel - Nickel alloys - Alliages de nickel Rm<1600 N/mm²	❍7.2 2-4	•7.3 1-3						

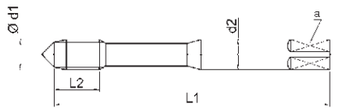
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

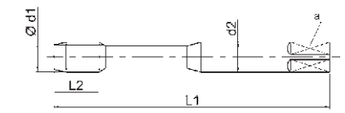
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

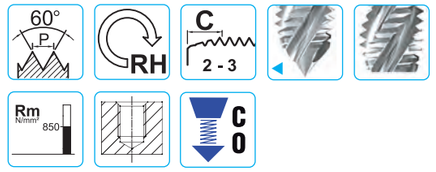
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

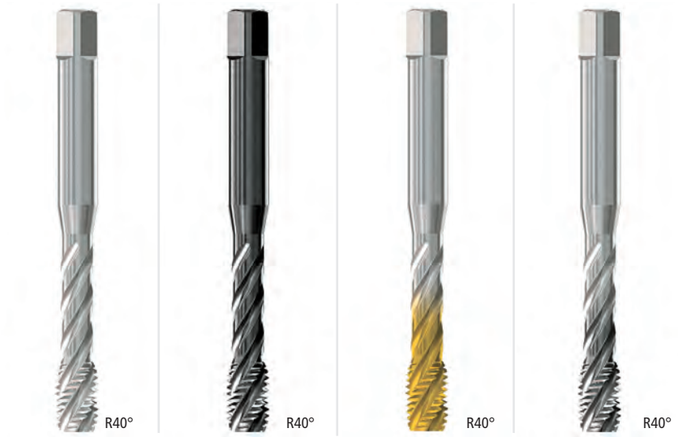
DIN 371 d1 ≤ M6



DIN 371 d1 ≥ M7







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	1	0,25	40	5	2,5	2,1	-	0,75	E60M1	-	-	-
◀	1,2	0,25	40	5	2,5	2,1	-	0,95	E60M1,2	-	-	-
◀	1,4	0,3	40	7	2,5	2,1	-	1,1	E60M1,4	-	-	-
◀	1,6	0,35	40	8	2,5	2,1	-	1,25	E60M1,6	-	-	-
◀	1,7	0,35	40	8	2,5	2,1	-	1,35	E60M1,7	-	-	-
◀	1,8	0,35	40	8	2,5	2,1	-	1,45	E60M1,8	-	-	-
◀	2	0,4	45	7	2,8	2,1	3	1,6	E60M2	E60M2V	-	* E60M2VS
◀	2,5	0,45	50	9	2,8	2,1	3	2,05	E60M2,5	E60M2,5V	-	* E60M2,5VS
◀	2,6	0,45	50	9	2,8	2,1	3	2,15	E60M2,6	E60M2,6V	-	* E60M2,6VS
◀	3	0,5	56	5	3,5	2,7	3	2,5	E60M3	E60M3V	E60M3T	E60M3XP
◀	3,5	0,6	56	7	4	3	3	2,9	E60M3,5	E60M3,5V	E60M3,5T	E60M3,5XP
◀	4	0,7	63	7	4,5	3,4	3	3,3	E60M4	E60M4V	E60M4T	E60M4XP
◀	4,5	0,75	70	8	6	4,9	3	3,7	E60M4,5	E60M4,5V	E60M4,5T	E60M4,5XP
◀	5	0,8	70	8	6	4,9	3	4,2	E60M5	E60M5V	E60M5T	E60M5XP
◀	6	1	80	10	6	4,9	3	5	E60M6	E60M6V	E60M6T	E60M6XP
	7	1	80	10	7	5,5	3	6	E60M7	E60M7V	E60M7T	E60M7XP
	8	1,25	90	13	8	6,2	3	6,8	E60M8	E60M8V	E60M8T	E60M8XP
	9	1,25	90	18	9	7	3	7,8	E60M9	E60M9V	E60M9T	E60M9XP
	10	1,5	100	15	10	8	3	8,5	E60M10	E60M10V	E60M10T	E60M10XP

* Rivestimento VS - Coating VS - Revêtement VS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

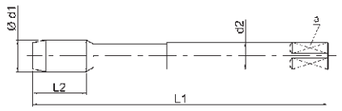
M

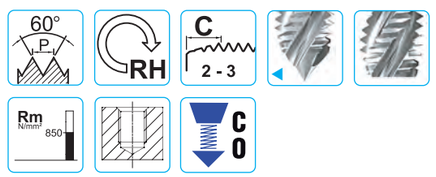
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

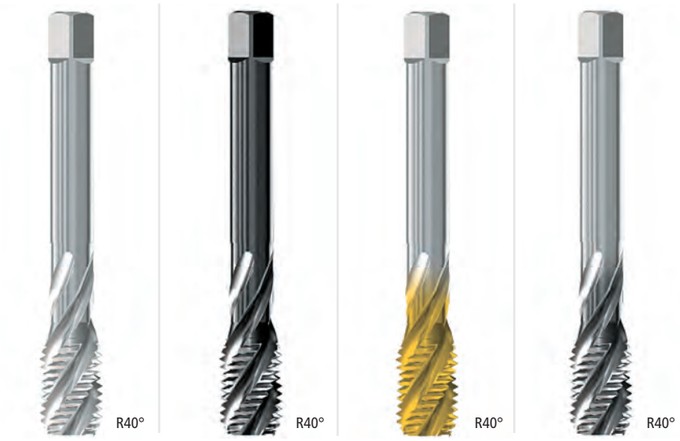
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 376 d1 ≤ M6

DIN 376 d1 ≥ M8







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	5	0,8	70	8	3,5	2,7	3	4,2	E61M5	E61M5V	E61M5T	-
◀	6	1	80	10	4,5	3,4	3	5	E61M6	E61M6V	E61M6T	-
	8	1,25	90	13	6	4,9	3	6,8	E61M8	E61M8V	E61M8T	E61M8XP
	10	1,5	100	15	7	5,5	3	8,5	E61M10	E61M10V	E61M10T	E61M10XP
	11	1,5	100	15	8	6,2	3	9,5	E61M11	E61M11V	E61M11T	E61M11XP
	12	1,75	110	18	9	7	3	10,3	E61M12	E61M12V	E61M12T	E61M12XP
	14	2	110	20	11	9	3	12	E61M14	E61M14V	E61M14T	E61M14XP
	16	2	110	20	12	9	4	14	E61M16	E61M16V	E61M16T	E61M16XP
	18	2,5	125	25	14	11	4	15,5	E61M18	E61M18V	E61M18T	E61M18XP
	20	2,5	140	25	16	12	4	17,5	E61M20	E61M20V	E61M20T	E61M20XP
	22	2,5	140	25	18	14,5	4	19,5	E61M22	E61M22V	E61M22T	E61M22XP
	24	3	160	30	18	14,5	4	21	E61M24	E61M24V	E61M24T	E61M24XP
	27	3	160	30	20	16	4	24	E61M27	E61M27V	E61M27T	E61M27XP
	30	3,5	180	35	22	18	4	26,5	E61M30	E61M30V	E61M30T	E61M30XP
	33	3,5	180	35	25	20	4	29,5	E61M33	E61M33V	E61M33T	-
	36	4	200	40	28	22	4	32	E61M36	E61M36V	E61M36T	-
	39	4	200	40	32	24	4	35	E61M39	E61M39V	-	-
	42	4,5	200	40	32	24	5	37,5	E61M42	E61M42V	-	-
■	45	4,5	220	50	36	29	5	40,5	E61M45	E61M45V	-	-
■	48	5	250	50	36	29	5	43	E61M48	E61M48V	-	-
■	52	5	250	50	40	32	5	47	E61M52	-	-	-

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Elicoidali 35° per fori ciechi filettatura sinistra
MACHINE TAPS - Spiral flutes 35° for blind holes left thread
TARAUDS MACHINE - Goujures hélicoïdales 35° pour trous borgnes filetage à gauche

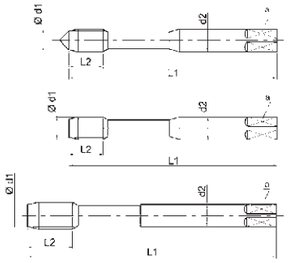
UFS LINE

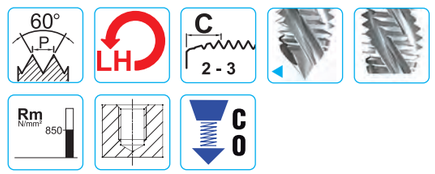
DIN13 USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

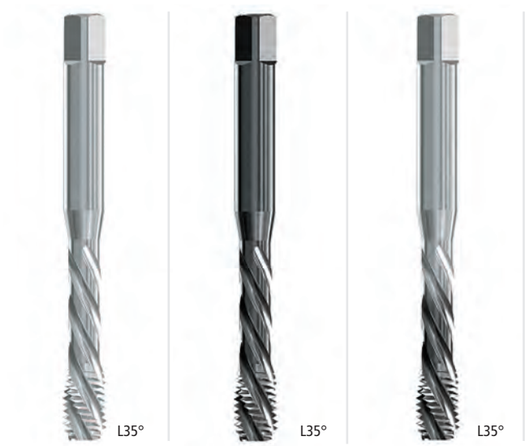
DIN 371 d1 ≤ M6

DIN 371 d1 M8, M10

DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	XP

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	4	0,7	63	7	4,5	3,4	3	3,3	E60M4LH	E60M4LH-V	E60M4LH-XP
◀	5	0,8	70	8	6	4,9	3	4,2	E60M5LH	E60M5LH-V	E60M5LH-XP
◀	6	1	80	10	6	4,9	3	5	E60M6LH	E60M6LH-V	E60M6LH-XP
	8	1,25	90	13	8	6,2	3	6,8	E60M8LH	E60M8LH-V	E60M8LH-XP
	10	1,5	100	15	10	8	3	8,5	E60M10LH	E60M10LH-V	E60M10LH-XP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1,75	110	18	9	7	3	10,3	E61M12LH	E61M12LH-V	E61M12LH-XP
	14	2	110	20	11	9	3	12	E61M14LH	E61M14LH-V	E61M14LH-XP
	16	2	110	20	12	9	4	14	E61M16LH	E61M16LH-V	E61M16LH-XP
	18	2,5	125	25	14	11	4	15,5	E61M18LH	E61M18LH-V	E61M18LH-XP
	20	2,5	140	25	16	12	4	17,5	E61M20LH	E61M20LH-V	E61M20LH-XP
	22	2,5	140	25	18	14,5	4	19,5	E61M22LH	E61M22LH-V	E61M22LH-XP
	24	3	160	30	18	14,5	4	21	E61M24LH	E61M24LH-V	E61M24LH-XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min												
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	
M	Acciaio inox - Stainless steel - Acier inoxydable									◑2.1 10-15	◑2.2 8-10			
K	Ghisa - Cast iron - Fonte									◑3.3 10-15	•3.4 15-20			
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			•4.2 25-30	◑4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.1 8-12	•5.2 10-15			•5.2 20-25				

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Elicoidali 40° per fori ciechi tolleranza 4H e 6G
MACHINE TAPS - Spiral flutes 40° for blind holes tolerance 4H and 6G
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes tolérance 4H et 6G

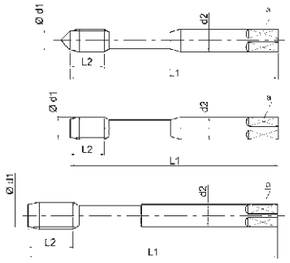
UFS LINE

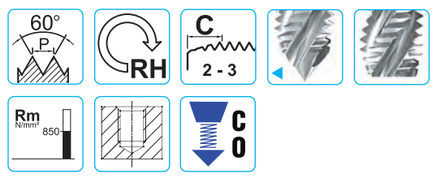
DIN13 USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

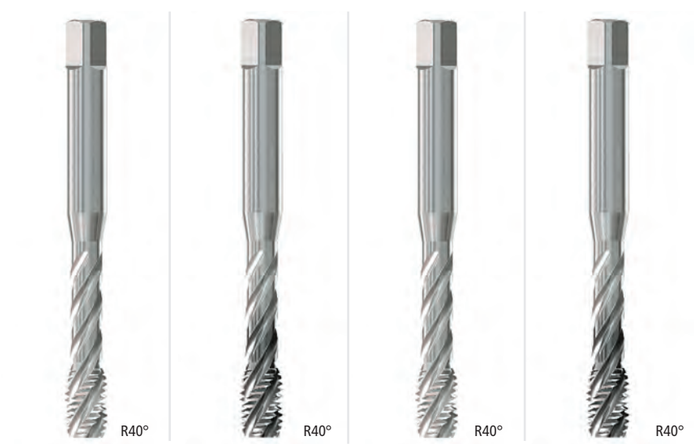
DIN 371 d1 ≤ M6

DIN 371 d1 M8, M10

DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO1/4H	ISO1/4H	ISO3/6G	ISO3/6G
Trattamento superficiale - Surface treatment - Revêtement		XP		XP

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	3	0,5	56	5	3,5	2,7	3	2,5	E60M3-4H	E60M3XP-4H	E60M3-6G	E60M3XP-6G
◀	4	0,7	63	7	4,5	3,4	3	3,3	E60M4-4H	E60M4XP-4H	E60M4-6G	E60M4XP-6G
◀	5	0,8	70	8	6	4,9	3	4,2	E60M5-4H	E60M5XP-4H	E60M5-6G	E60M5XP-6G
◀	6	1	80	10	6	4,9	3	5	E60M6-4H	E60M6XP-4H	E60M6-6G	E60M6XP-6G
	8	1,25	90	13	8	6,2	3	6,8	E60M8-4H	E60M8XP-4H	E60M8-6G	E60M8XP-6G
	10	1,5	100	15	10	8	3	8,5	E60M10-4H	E60M10XP-4H	E60M10-6G	E60M10XP-6G

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	12	1,75	110	18	9	7	3	10,3	E61M12-4H	E61M12XP-4H	E61M12-6G	E61M12XP-6G
	14	2	110	20	11	9	3	12	E61M14-4H	E61M14XP-4H	E61M14-6G	E61M14XP-6G
	16	2	110	20	12	9	4	14	E61M16-4H	E61M16XP-4H	E61M16-6G	E61M16XP-6G
	18	2,5	125	25	14	11	4	15,5	E61M18-4H	E61M18XP-4H	E61M18-6G	E61M18XP-6G
	20	2,5	140	25	16	12	4	17,5	E61M20-4H	E61M20XP-4H	E61M20-6G	E61M20XP-6G
	22	2,5	140	25	18	14,5	4	19,5	E61M22-4H	E61M22XP-4H	E61M22-6G	E61M22XP-6G
	24	3	160	30	18	14,5	4	21	E61M24-4H	E61M24XP-4H	E61M24-6G	E61M24XP-6G

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable					◑2.1 10-15	◑2.2 8-10							◑2.1 10-15	◑2.2 8-10		
K	Ghisa - Cast iron - Fonte					◑3.3 10-15	•3.4 15-20							◑3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.2 25-30	◑4.3 20-25			◑4.1 10-15	•4.2 15-20			•4.2 25-30	◑4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.2 20-25				◑5.1 8-12	◑5.2 10-15			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

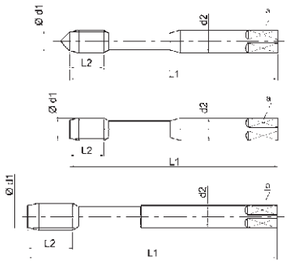
MASCHI A MACCHINA - Elicoidali 40° per fori ciechi tolleranza 7G e 6H+0,1
MACHINE TAPS - Spiral flutes 40° for blind holes tolerance 7G and 6H+0,1
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes tolérance 7G et 6H+0,1

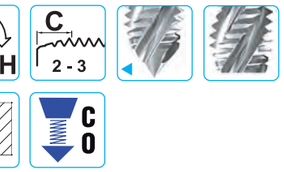
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

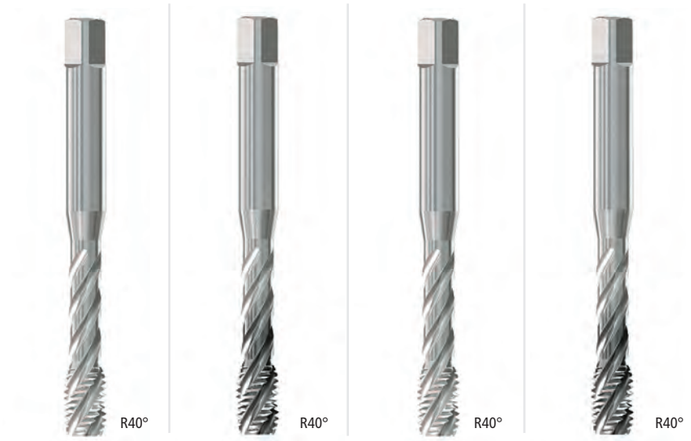
DIN 371 d1 ≤ M6

DIN 371 d1 M8, M10

DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	7G	7G	6H+0,1	6H+0,1
Trattamento superficiale - Surface treatment - Revêtement		XP		XP

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	3	0,5	56	5	3,5	2,7	3	2,5	E60M3-7G	E60M3XP-7G	E60M3+0,1	E60M3XP+0,1
◀	4	0,7	63	7	4,5	3,4	3	3,3	E60M4-7G	E60M4XP-7G	E60M4+0,1	E60M4XP+0,1
◀	5	0,8	70	8	6	4,9	3	4,2	E60M5-7G	E60M5XP-7G	E60M5+0,1	E60M5XP+0,1
◀	6	1	80	10	6	4,9	3	5	E60M6-7G	E60M6XP-7G	E60M6+0,1	E60M6XP+0,1
	8	1,25	90	13	8	6,2	3	6,8	E60M8-7G	E60M8XP-7G	E60M8+0,1	E60M8XP+0,1
	10	1,5	100	15	10	8	3	8,5	E60M10-7G	E60M10XP-7G	E60M10+0,1	E60M10XP+0,1

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	12	1,75	110	18	9	7	3	10,3	E61M12-7G	E61M12XP-7G	E61M12+0,1	E61M12XP+0,1
	14	2	110	20	11	9	3	12	E61M14-7G	E61M14XP-7G	E61M14+0,1	E61M14XP+0,1
	16	2	110	20	12	9	4	14	E61M16-7G	E61M16XP-7G	E61M16+0,1	E61M16XP+0,1
	18	2,5	125	25	14	11	4	15,5	E61M18-7G	E61M18XP-7G	E61M18+0,1	E61M18XP+0,1
	20	2,5	140	25	16	12	4	17,5	E61M20-7G	E61M20XP-7G	E61M20+0,1	E61M20XP+0,1
	22	2,5	140	25	18	14,5	4	19,5	E61M22-7G	E61M22XP-7G	E61M22+0,1	E61M22XP+0,1
	24	3	160	30	18	14,5	4	21	E61M24-7G	E61M24XP-7G	E61M24+0,1	E61M24XP+0,1

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable					◦2.1 10-15	◦2.2 8-10							◦2.1 10-15	◦2.2 8-10		
K	Ghisa - Cast iron - Fonte					◦3.3 10-15	•3.4 15-20							◦3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◦4.1 10-15	•4.2 15-20			•4.2 25-30	◦4.3 20-25			◦4.1 10-15	•4.2 15-20			•4.2 25-30	◦4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.1 8-12	◦5.2 10-15			•5.2 20-25				◦5.1 8-12	◦5.2 10-15			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

M

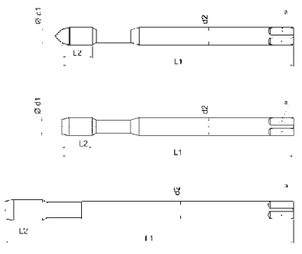
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi **gambo lungo**
MACHINE TAPS - Spiral flutes 40° for blind holes **long shank**
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes **queue long**

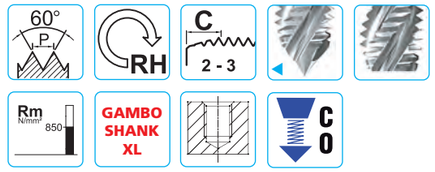
DIN13 — USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

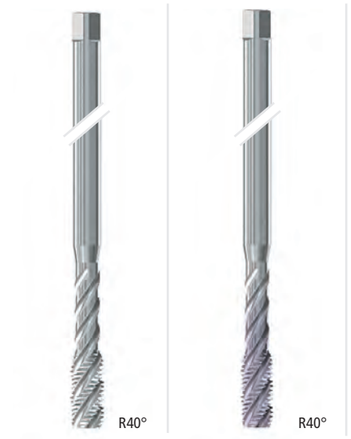
UFS Norm d1 ≤ M6

UFS Norm d1 M8, M10

UFS Norm d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD		
Materiale - Tool Material - Substrat	HSSE	HSSE		
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H		
Trattamento superficiale - Surface treatment - Revêtement		TiCN		

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	4	0,7	125	7	4,5	3,4	3	3,3	L60M4	L60M4CT		
◀	5	0,8	140	8	6	4,9	3	4,2	L60M5	L60M5CT		
◀	6	1	160	10	6	4,9	3	5	L60M6	L60M6CT		
	8	1,25	180	13	8	6,2	3	6,8	L60M8	L60M8CT		
	10	1,5	180	16	10	8	3	8,5	L60M10	L60M10CT		

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	12	1,75	225	23	9	7	3	10,3	L61M12	L61M12CT		
	14	2	225	23	11	9	3	12	L61M14	L61M14CT		
	16	2	225	23	12	9	4	14	L61M16	L61M16CT		

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20								
M	Acciaio inox - Stainless steel - Acier inoxydable					◦2.1 10-15	◦2.2 8-10										
K	Ghisa - Cast iron - Fonte					◦3.3 10-15	•3.4 15-20										
N	Leghe di Allumino - Al alloys - Alliage Al	◦4.1 10-15	•4.2 15-20			•4.2 25-30	◦4.3 20-25										
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.1 8-12	◦5.2 10-15			•5.2 20-25											

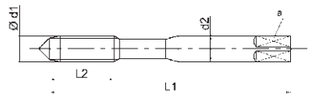
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

M

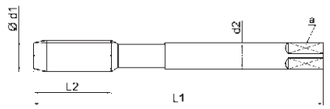
MASCHI A MACCHINA - Elica destra a 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

DIN13 | AL-CU-FE | ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER

DIN 371 d1 ≤ M10



DIN 376 d1 = M12



60° P | RH | C 2 - 3 | Rm N/mm² 700

LINE

TOP

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	HSSE	HSSE		
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H		
Trattamento superficiale - Surface treatment - Revêtement		TXC		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	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

CODE		
E70M3	E70M3TXC	
E70M4	E70M4TXC	
E70M5	E70M5TXC	
E70M6	E70M6TXC	
E70M8	E70M8TXC	
E70M10	E70M10TXC	

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	1,75	110	25	9	7	3	10,3
	14	2	110	28	11	9	3	12
	16	2	110	28	12	9	3	14

CODE	
E71M12	E71M12TXC
E71M14	E71M14TXC
E71M16	E71M16TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
P	Acciaio dolce magnetico - Magnetic soft steel - Acier doux magnétique - Rm <400 N/mm²	•1.1 10-15		•1.1 20-30			
N	Leghe di Allumino - Al alloys - Alliage Al	•4.1 10-15	•4.2 15-20	•4.1 20-25	•4.2 25-30	○4.2 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15	•5.1 15-202	•5.2 20-25		
S	Titanio puro - Pure titanium - Titane pur	•6.1 5-8					
S	Nichel puro - Pure nickel - Nickel pure	•7.1 6-8					
N	Materiali termoplastici - Thermoplastics - Thermoplastiques Truciolo lungo - Long chipping - Copeaux longue	•8.1 20-25					

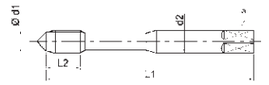
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

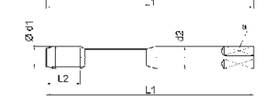
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

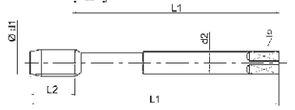
DIN 371 d1 ≤ M6



DIN 371 d1 = M8, M10



DIN 376 d1 ≥ M12



60° P | RH | C 2 - 3 | Rm N/mm² 1000 | 8%Co | S R

Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	
Materiale - Tool Material - Substrat	HSSP	HSSP	HSSP	
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	
Trattamento superficiale - Surface treatment - Revêtement		V	XP	

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	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

CODE		
P60M3	P60M3V	P60M3XP
P60M4	P60M4V	P60M4XP
P60M5	P60M5V	P60M5XP
P60M6	P60M6V	P60M6XP
P60M8	P60M8V	P60M8XP
P60M10	P60M10V	P60M10XP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	1,75	110	18	9	7	4	10,3
	14	2	110	20	11	9	4	12
	16	2	110	20	12	9	4	14

CODE		
P61M12	P61M12V	P61M12XP
P61M14	P61M14V	P61M14XP
P61M16	P61M16V	P61M16XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm ≤ 1000 N/mm²	•1.2 10-15	•1.3 10-12	•1.4 8-10		•1.2 10-15	•1.3 10-12	•1.4 8-10		•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable									○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.2 15-20	•4.3 10-15			○4.2 15-20	•4.3 10-15			○4.2 25-30	•4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 10-15				•5.2 10-15				•5.2 20-25			

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

CSC CHIP SYSTEM CONTROL

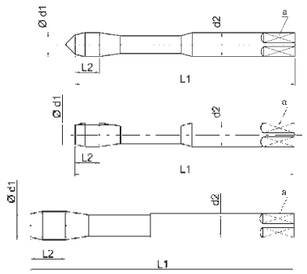
UFS LINE

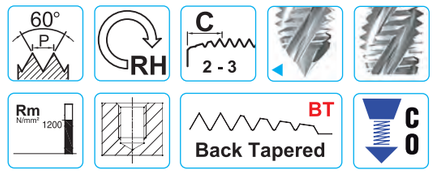
DIN13 USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M6

DIN 371 d1 = M8, M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE-PM	HSSE-PM	HSSE-PM
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement		V	TiN-G

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	3	0,5	56	5	3,5	2,7	3	2,5	E92M3	E92M3V	E92M3TG
◀	4	0,7	63	7	4,5	3,4	3	3,3	E92M4	E92M4V	E92M4TG
◀	5	0,8	70	8	6	4,9	3	4,2	E92M5	E92M5V	E92M5TG
◀	6	1	80	10	6	4,9	3	5	E92M6	E92M6V	E92M6TG
	8	1,25	90	13	8	6,2	3	6,8	E92M8	E92M8V	E92M8TG
	10	1,5	100	15	10	8	3	8,5	E92M10	E92M10V	E92M10TG

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1,75	110	18	9	7	3	10,3	E93M12	E93M12V	E93M12TG
	14	2	110	20	11	9	3	12	E93M14	E93M14V	E93M14TG
	16	2	110	20	12	9	4	14	E93M16	E93M16V	E93M16TG
	18	2,5	125	25	14	11	4	15,5	E93M18	E93M18V	E93M18TG
	20	2,5	140	25	16	12	4	17,5	E93M20	E93M20V	E93M20TG
	22	2,5	140	25	18	14,5	4	19,5	E93M22	E93M22V	E93M22TG
	24	3	160	30	18	14,5	4	21	E93M24	E93M24V	E93M24TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min										
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.2 20-30	•1.3 20-25	•1.4 15-20	❍1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable					•2.1 6-8	•2.2 5-7						
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 15-20								•4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15							•5.2 20-25			

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

CSC CHIP SYSTEM CONTROL

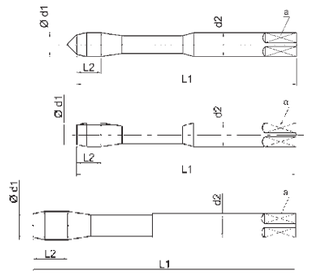
UFS LINE

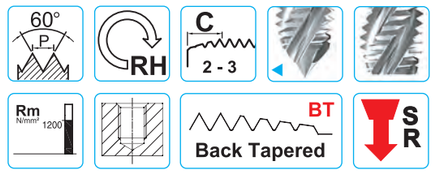
DIN13 USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

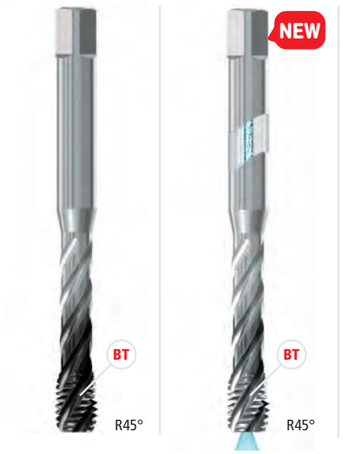
DIN 371 d1 ≤ M6

DIN 371 d1 = M8, M10

DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD
Materiale - Tool Material - Substrat	HSSE-PM	HSSE-PM
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	3	0,5	56	5	3,5	2,7	3	2,5	E94M3TXC	-
◀	4	0,7	63	7	4,5	3,4	3	3,3	E94M4TXC	-
◀	5	0,8	70	8	6	4,9	3	4,2	E94M5TXC	-
◀	6	1	80	10	6	4,9	3	5	E94M6TXC	E94M6FOR-TXC
	8	1,25	90	13	8	6,2	3	6,8	E94M8TXC	E94M8FOR-TXC
	10	1,5	100	15	10	8	3	8,5	E94M10TXC	E94M10FOR-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	1,75	110	18	9	7	3	10,3	E95M12TXC	E95M12FOR-TXC
	14	2	110	20	11	9	3	12	E95M14TXC	E95M14FOR-TXC
	16	2	110	20	12	9	4	14	E95M16TXC	E95M16FOR-TXC
	18	2,5	125	25	14	11	4	15,5	E95M18TXC	E95M18FOR-TXC
	20	2,5	140	25	16	12	4	17,5	E95M20TXC	E95M20FOR-TXC
	22	2,5	140	25	18	14,5	4	19,5	E95M22TXC	E95M22FOR-TXC
	24	3	160	30	18	14,5	4	21	E95M24TXC	E95M24FOR-TXC

SR Per filettatura rigida
Syncro rigid threading
Pour le taraudage rigide

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.2 20-30	•1.3 20-25	•1.4 15-20	❍1.5 5-12	•1.2 20-30	•1.3 20-25	•1.4 15-20	❍1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8		•2.1 10-15	•2.2 8-10	•2.3 6-8		
N	Leghe di Allumino – Al alloys - Alliage Al - Si < 10% Truciolo medio - Medium chipping - Copeaux moyen									
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs									

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

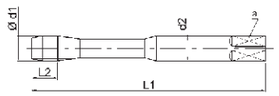
MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

CSC CHIP SYSTEM CONTROL

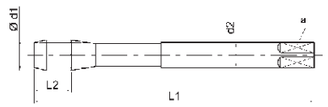
UFS LINE

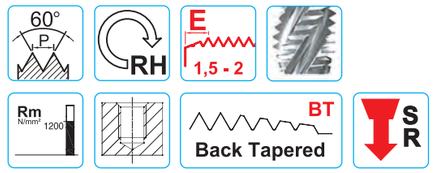
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD		
Materiale - Tool Material - Substrat	HSSE-PM	HSSE-PM		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX		
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	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

CODE	
E94EM3TXC	-
E94EM4TXC	-
E94EM5TXC	-
E94EM6TXC	E94EM6FOR-TXC
E94EM8TXC	E94EM8FOR-TXC
E94EM10TXC	E94EM10FOR-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	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

CODE	
E95EM12TXC	E95EM12FOR-TXC
E95EM14TXC	E95EM14FOR-TXC
E95EM16TXC	E95EM16FOR-TXC

S R Per filettatura rigida
Syncro rigid threading
Pour le taraudage rigide

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.2 20-30	•1.3 20-25	•1.4 15-20	◑1.5 5-12	•1.2 20-30	•1.3 20-25	•1.4 15-20	◑1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8		•2.1 10-15	•2.2 8-10	•2.3 6-8		

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

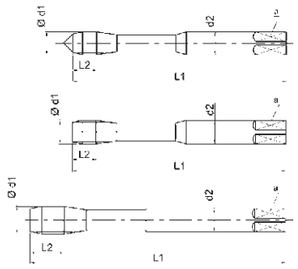
TOP UFS

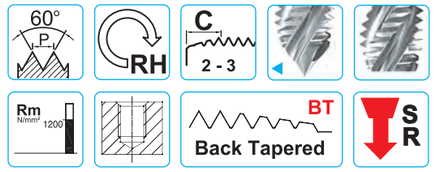
DIN13 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 371 d1 ≤ M6

DIN 371 d1 = M8, M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX		
Trattamento superficiale - Surface treatment - Revêtement	XP	XP		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	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

CODE	
K82M3XP	-
K82M4XP	-
K82M5XP	-
K82M6XP	K82M6FOR-XP
K82M8XP	K82M8FOR-XP
K82M10XP	K82M10FOR-XP

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	1,75	110	18	9	7	4	10,3
	14	2	110	20	11	9	4	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
	27	3	160	30	20	16	4	24
	30	3,5	180	35	22	18	4	26,5

CODE	
K83M12XP	K83M12FOR-XP
K83M14XP	K83M14FOR-XP
K83M16XP	K83M16FOR-XP
K83M18XP	K83M18FOR-XP
K83M20XP	K83M20FOR-XP
K83M22XP	K83M22FOR-XP
K83M24XP	K83M24FOR-XP
K83M27XP	K83M27FOR-XP
K83M30XP	K83M30FOR-XP

S R Raccomandato per filettatura rigida
We recommend Syncro rigid threading
Recommandè pour le taraudage rigide

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	◑1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12	◑1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8			•2.1 10-15	•2.2 8-10	•2.3 6-8		
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20				•3.3 10-15	•3.4 15-20			
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25				•4.2 25-30	•4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25					•5.2 20-25				

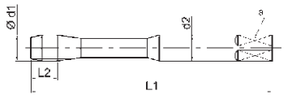
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

M

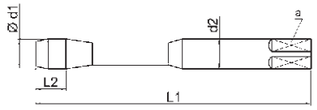
MASCHI A MACCHINA - Elicoidali 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

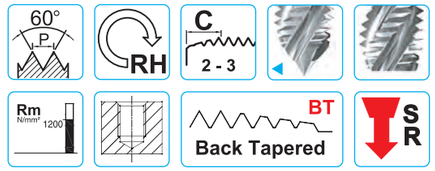
DIN13 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

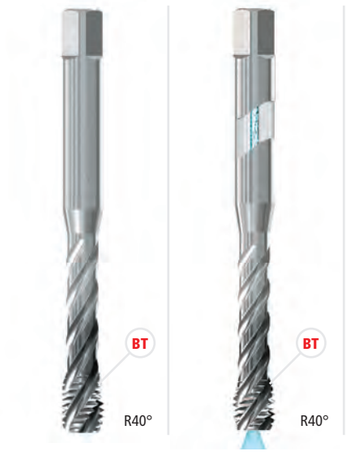
DIN 371 d1 ≤ M10



UFS Norm d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX		
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h6	a h12	Z	
	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

CODE	
S80M6TXC	S80M6FOR-TXC
S80M8TXC	S80M8FOR-TXC
S80M10TXC	S80M10FOR-TXC

UFS Norm	Ød1 M	P mm	L_1	L_2	d_2 h6	a h12	Z	
	12	1,75	110	18	12	9	3	10,3
	14	2	110	20	12	9	3	12
	16	2	110	20	16	12	4	14

CODE	
S80M12TXC	S80M12FOR-TXC
S80M14TXC	S80M14FOR-TXC
S80M16TXC	S80M16FOR-TXC

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

Raccomandato per filettatura rigida
We recommend Syncro rigid threading
Recommandè pour le taraudage rigide

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.1 40-45	•1.2 40-45	•1.3 35-40	•1.4 25-30	•1.5 10-15
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 20-25	•2.2 15-20	•2.3 10-15	•2.4 10-12	
K	Ghisa - Cast iron - Fonte	•3.3 20-25	•3.4 25-30			
N	Leghe di Allumino – Al alloys - Alliage Al Si < 10%	•4.1 30-40	•4.2 45-50	•4.3 30-40		
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.1 20-25	•5.2 25-30			
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<900 N/mm²	•6.1 20-30	◦6.2 12-15			
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.1 20-30	◦7.2 8-12			

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

M

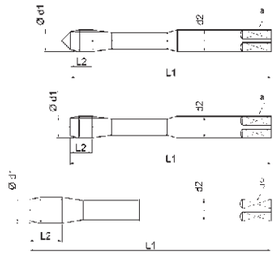
MASCHI A MACCHINA - Elicoidali 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

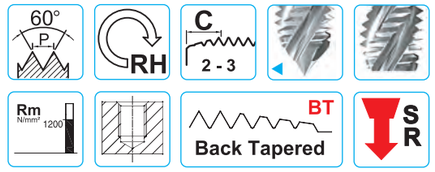
DIN13 | HR | ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

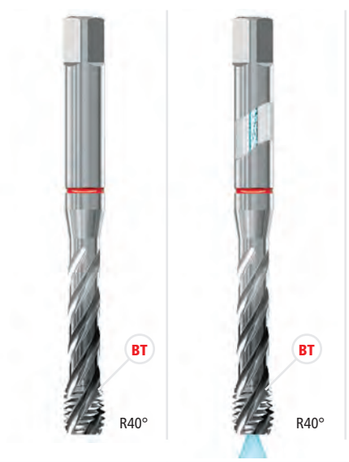
DIN 371 d1 ≤ M6

DIN 371 d1 =M8, M10

DIN 376 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX		
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◄	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

CODE	
K80M3TXC	-
K80M4TXC	-
K80M5TXC	-
K80M6TXC	K80M6FOR-TXC
K80M8TXC	K80M8FOR-TXC
K80M10TXC	K80M10FOR-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	1,75	110	18	9	7	4	10,3
	14	2	110	20	11	9	4	12
	16	2	110	20	12	9	4	14

CODE	
K81M12TXC	K81M12FOR-TXC
K81M14TXC	K81M14FOR-TXC
K81M16TXC	K81M16FOR-TXC

Raccomandato per filettatura rigida
We recommend Syncro rigid threading
Recommandè pour le taraudage rigide

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.4 15-20	•1.5 5-12			
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25			

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

M

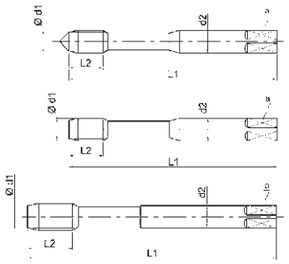
MASCHI A MACCHINA - Elicoidali 45°/48° per fori ciechi
MACHINE TAPS - Spiral flutes 45°/48° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45°/48° pour trous borgnes

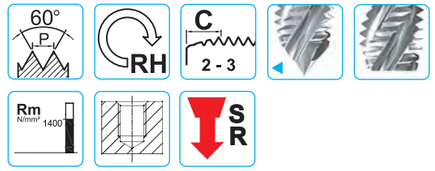
DIN13 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

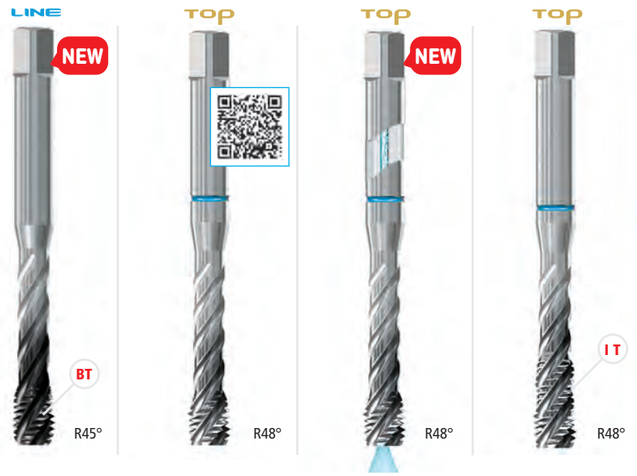
DIN 371 d1 ≤ M6

DIN 371 d1 = M8, M10

DIN 376 d1 ≥ M12







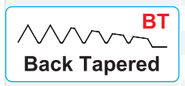
	LINE	TOP	TOP	TOP
Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	3,5xD	3,5xD
Materiale - Tool Material - Substrat	HSSE-PM	HSSV3	HSSV3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	VS	TXC	TXC	TXC

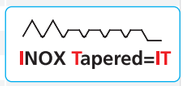
DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
◀	3	0,5	56	5	3,5	2,7	3	2,5
◀	4	0,7	63	7	4,5	3,4	3	3,3
◀	5	0,8	70	8	6	4,9	3	4,2
◀	6	1	80	10	6	4,9	3	5
	8	1,25	90	13	8	6,2	3	6,8
	10	1,5	100	15	10	8	3	8,5

CODE			
E92M3VS	V82M3TXC	-	K82M3X-TXC
E92M4VS	V82M4TXC	-	K82M4X-TXC
E92M5VS	V82M5TXC	-	K82M5X-TXC
E92M6VS	V82M6TXC	V82M6FOR-TXC	K82M6X-TXC
E92M8VS	V82M8TXC	V82M8FOR-TXC	K82M8X-TXC
E92M10VS	V82M10TXC	V82M10FOR-TXC	K82M10X-TXC

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	
	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

CODE			
E93M12VS	V83M12TXC	V83M12FOR-TXC	K83M12X-TXC
E93M14VS	V83M14TXC	V83M14FOR-TXC	K83M14X-TXC
E93M16VS	V83M16TXC	V83M16FOR-TXC	K83M16X-TXC
E93M18VS	V83M18TXC	-	-
E93M20VS	V83M20TXC	-	-
E93M22VS	V83M22TXC	-	-
E93M24VS	V83M24TXC	-	-





ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 1400 N/mm²	•1.1 10-15	•1.2 10-15		•1.3 20-25	•1.4 15-20	•1.5 5-12		•1.3 20-25	•1.4 15-20	•1.5 5-12		•1.3 20-25	•1.4 15-20	•1.5 5-12	
M	Acciaio INOX - Stainless steel - Acier inoxydable	•2.1 6-8	•2.2 5-7	•2.3 3-5	•2.1 10-15	•2.2 8-10	•2.3 6-8	◦2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	◦2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	•2.4 3-6

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

P - ROLL MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER Rm < 850 N/mm²

K-ROLL MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER Rm < 1200 N/mm²

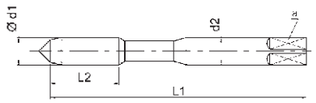
M

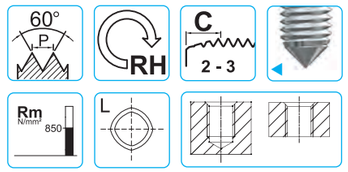
MASCHI A MACCHINA - Per fori ciechi e passanti senza canaline
MACHINE TAPS - For blind and through holes without oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant sans rainures de lubrification

DIN13 | P - ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

Rm < 850 Nm/m²

DIN 371 d1 ≤ M10





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	PM8	PM8		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6GX		
Trattamento superficiale - Surface treatment - Revêtement	TiN	TiN		

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	2	0,4	45	10	2,8	2,1	-	1,82	P2SCM2T	-
◀	2,5	0,45	50	13	2,8	2,1	-	2,30	P2SCM2,5T	-
◀	3	0,5	56	10	3,5	2,7	-	2,80	P2SCM3T	P3SCM3T
◀	4	0,7	63	13	4,5	3,4	-	3,70	P2SCM4T	P3SCM4T
◀	5	0,8	70	13	6	4,9	-	4,65	P2SCM5T	P3SCM5T
◀	6	1	80	16	6	4,9	-	5,55	P2SCM6T	P3SCM6T
◀	8	1,25	90	18	8	6,2	-	7,40	P2SCM8T	P3SCM8T
◀	10	1,5	100	20	10	8	-	9,30	P2SCM10T	P3SCM10T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 20-30	•1.2 20-30	❍1.3 20-25													
M	Acciaio INOX – Stainless steel - Acier inoxydable	❍2.1 10-15	❍2.2 10-12														
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1 35-40	•4.2 40-45	❍4.3 35-40													
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 15-20	❍5.2 15-20														

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

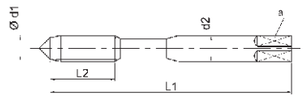
M

MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

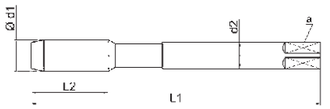
DIN13 | P - ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

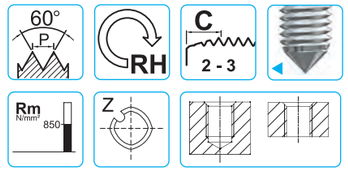
Rm < 850 Nm/m²

DIN 371 d1 ≤ M10



DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6GX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiN	AHI	TiN	TiN

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	3	0,5	56	10	3,5	2,7	2	2,80	P2CCM3T	P2CCM3AHI	P3CCM3T	P2CCM3LH-T
◀	4	0,7	63	13	4,5	3,4	4	3,70	P2CCM4T	P2CCM4AHI	P3CCM4T	P2CCM4LH-T
◀	5	0,8	70	13	6	4,9	5	4,65	P2CCM5T	P2CCM5AHI	P3CCM5T	P2CCM5LH-T
◀	6	1	80	16	6	4,9	5	5,55	P2CCM6T	P2CCM6AHI	P3CCM6T	P2CCM6LH-T
◀	8	1,25	90	18	8	6,2	5	7,40	P2CCM8T	P2CCM8AHI	P3CCM8T	P2CCM8LH-T
◀	10	1,5	100	20	10	8	5	9,30	P2CCM10T	P2CCM10AHI	P3CCM10T	P2CCM10LH-T

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	12	1,75	110	25	9	7	5	11,20	P2CCM12T
	14	2	110	28	11	9	6	13,10	P2CCM14T
	16	2	110	28	12	9	6	15,10	P2CCM16T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 20-30	•1.2 20-30	•1.3 20-25	❍1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	❍1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	❍1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	❍1.4 15-20
M	Acciaio INOX – Stainless steel - Acier inoxydable	❍2.1 10-15	❍2.2 10-12	❍2.3 6-10		•2.1 10-15	•2.2 10-12	•2.3 6-10		❍2.1 10-15	❍2.2 10-12	❍2.3 6-10		❍2.1 10-15	❍2.2 10-12	❍2.3 6-10	
N	Leghe di Allumino – Al alloys - Alliage Al	❍4.1 35-40	❍4.2 40-45	❍4.3 35-40		•4.1 35-40	•4.2 40-45	•4.3 35-40		❍4.1 35-40	❍4.2 40-45	❍4.3 35-40		❍4.1 35-40	❍4.2 40-45	❍4.3 35-40	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.1 15-20	❍5.2 15-20			•5.1 15-20	•5.2 20-25			❍5.1 15-20	❍5.2 15-20			❍5.1 15-20	❍5.2 15-20		

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

DIN13 | K-ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

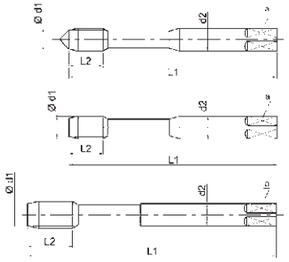
UFS ROLL

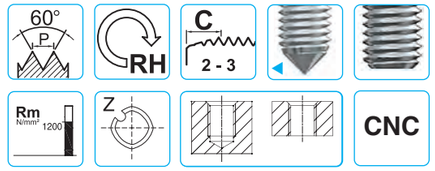
Rm < 1200 Nm/m²

DIN 371 d1 ≤ M5

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6GX
Trattamento superficiale - Surface treatment - Revêtement	TiN-G	AHI	TiN-G

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◄	3	0,7	56	5	3,5	2,7	4	2,80	K2CCM3TG	K2CCM3AHI	K3CCM3TG
◄	4	0,7	63	7	4,5	3,4	4	3,70	K2CCM4TG	K2CCM4AHI	K3CCM4TG
◄	5	0,8	70	8	6	4,9	5	4,65	K2CCM5TG	K2CCM5AHI	K3CCM5TG
	6	1	80	10	6	4,9	5	5,55	K2CCM6TG	K2CCM6AHI	K3CCM6TG
	8	1,25	90	13	8	6,2	5	7,40	K2CCM8TG	K2CCM8AHI	K3CCM8TG
	10	1,5	100	15	10	8	8	9,30	K2CCM10TG	K2CCM10AHI	K3CCM10TG

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1,75	110	18	9	7	8	11,20	K2CCM12TG	K2CCM12AHI	K3CCM12TG
	14	2	110	20	11	9	8	13,10	K2CCM14TG	K2CCM14AHI	K3CCM14TG
	16	2	110	20	12	9	8	15,10	K2CCM16TG	K2CCM16AHI	K3CCM16TG
New	18	2,5	125	25	14	11	8	16,9	K2CCM18TG	K2CCM18AHI	-
New	20	2,5	140	25	16	12	8	18,9	K2CCM20TG	K2CCM20AHI	-
New	22	2,5	140	25	18	14,5	8	20,9	K2CCM22TG	K2CCM22AHI	-
New	24	3	160	30	18	14,5	8	22,7	K2CCM24TG	K2CCM24AHI	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20
M	Acciaio INOX - Stainless steel - Acier inoxydable	❍2.2 10-12	❍2.3 6-10	❍2.4 6-8	❍2.2 10-12	❍2.3 6-10	❍2.4 6-8	❍2.2 10-12	❍2.3 6-10	❍2.4 6-8

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

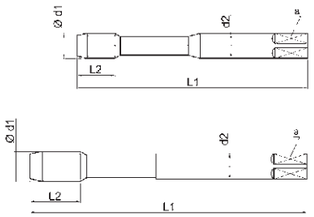
DIN13 | K-ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

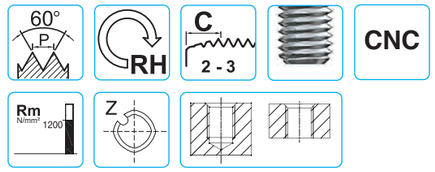
UFS ROLL

Rm < 1200 Nm/m²

DIN 371 d1 ≤ M10

DIN 376 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiN-G	AHI	TiN-G

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	6	1	80	10	6	4,9	5	5,55	K2CCM6FOR-TG	K2CCM6FOR-AHI	K2CCM6FORY-TG
	8	1,25	90	13	8	6,2	5	7,40	K2CCM8FOR-TG	K2CCM8FOR-AHI	K2CCM8FORY-TG
	10	1,5	100	15	10	8	8	9,30	K2CCM10FOR-TG	K2CCM10FOR-AHI	K2CCM10FORY-TG

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1,75	110	18	9	7	8	11,20	K2CCM12FOR-TG	K2CCM12FOR-AHI	K2CCM12FORY-TG
	14	2	110	20	11	9	8	13,10	K2CCM14FOR-TG	K2CCM14FOR-AHI	K2CCM14FORY-TG
	16	2	110	20	12	9	8	15,10	K2CCM16FOR-TG	K2CCM16FOR-AHI	K2CCM16FORY-TG
New	18	2,5	125	25	14	11	8	16,9	K2CCM18FOR-TG	K2CCM18FOR-AHI	K2CCM18FORY-TG
New	20	2,5	140	25	16	12	8	18,9	K2CCM20FOR-TG	K2CCM20FOR-AHI	K2CCM20FORY-TG
New	22	2,5	140	25	18	14,5	8	20,9	K2CCM22FOR-TG	K2CCM22FOR-AHI	K2CCM22FORY-TG
New	24	3	160	30	18	14,5	8	22,7	K2CCM24FOR-TG	K2CCM24FOR-AHI	K2CCM24FORY-TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20
M	Acciaio INOX - Stainless steel - Acier inoxydable	❍2.2 10-12	❍2.3 6-10	❍2.4 6-8	❍2.2 10-12	❍2.3 6-10	❍2.4 6-8	❍2.2 10-12	❍2.3 6-10	❍2.4 6-8

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

M

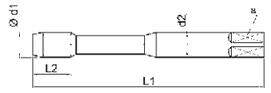
MASCHI A MACCHINA - Per fori ciechi con canalini di lubrificazione
MACHINE TAPS - For blind holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes avec rainures de lubrification

DIN13 | K-ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

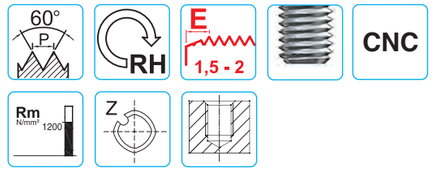
UFS ROLL

Rm < 1200 Nm/m²

DIN 371 d1 ≤ M10



DIN 376 d1 M12, M16



Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiN-G	AHI	TiN-G

DIN 371	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	6	**1**	80	10	6	4,9	5	5,55	K2CCEM6TG	K2CCEM6AHI	K2CCEM6FOR-TG
	8	**1,25**	90	13	8	6,2	5	7,40	K2CCEM8TG	K2CCEM8AHI	K2CCEM8FOR-TG
	10	**1,5**	100	15	10	8	8	9,30	K2CCEM10TG	K2CCEM10AHI	K2CCEM10FOR-TG

DIN 376	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
New	**12**	**1,75**	110	18	9	7	8	11,20	K2CCEM12TG	K2CCEM12AHI	K2CCEM12FOR-TG
New	**16**	**2**	110	20	12	9	8	15,10	K2CCEM16TG	K2CCEM16AHI	K2CCEM16FOR-TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20
M	Acciaio INOX - Stainless steel - Acier inoxydable	○2.2 10-12	○2.3 6-10	○2.4 6-8	○2.2 10-12	○2.3 6-10	○2.4 6-8	○2.2 10-12	○2.3 6-10	○2.4 6-8

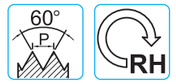
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

M

Calibri a tampone filettati Passa / Non passa
Thread plug gauges Go / No-Go
Tampon de filetage Entre / N'entre pas

DIN13

DIN ISO 1502



Tolleranza - Thread tolerance - Tolérance du filetage	6H
Trattamento superficiale - Surface treatment - Revêtement	

Ød1 M	P mm	CODE
2	**0,4**	P-NPM2
2,2	**0,45**	P-NPM2,2
2,5	**0,45**	P-NPM2,5
3	**0,5**	P-NPM3
3,5	**0,6**	P-NPM3,5
4	**0,7**	P-NPM4
4,5	**0,75**	P-NPM4,5
5	**0,8**	P-NPM5
6	**1**	P-NPM6
7	**1**	P-NPM7
8	**1,25**	P-NPM8
9	**1,25**	P-NPM9
10	**1,5**	P-NPM10
11	**1,5**	P-NPM11
12	**1,75**	P-NPM12
14	**2**	P-NPM14
16	**2**	P-NPM16
18	**2,5**	P-NPM18
20	**2,5**	P-NPM20
22	**2,5**	P-NPM22
24	**3**	P-NPM24
27	**3**	P-NPM27
30	**3,5**	P-NPM30
33	**3,5**	P-NPM33
36	**4**	P-NPM36
39	**4**	P-NPM39
42	**4,5**	P-NPM42
45	**4,5**	P-NPM45
48	**5**	P-NPM48

Le morbide colline

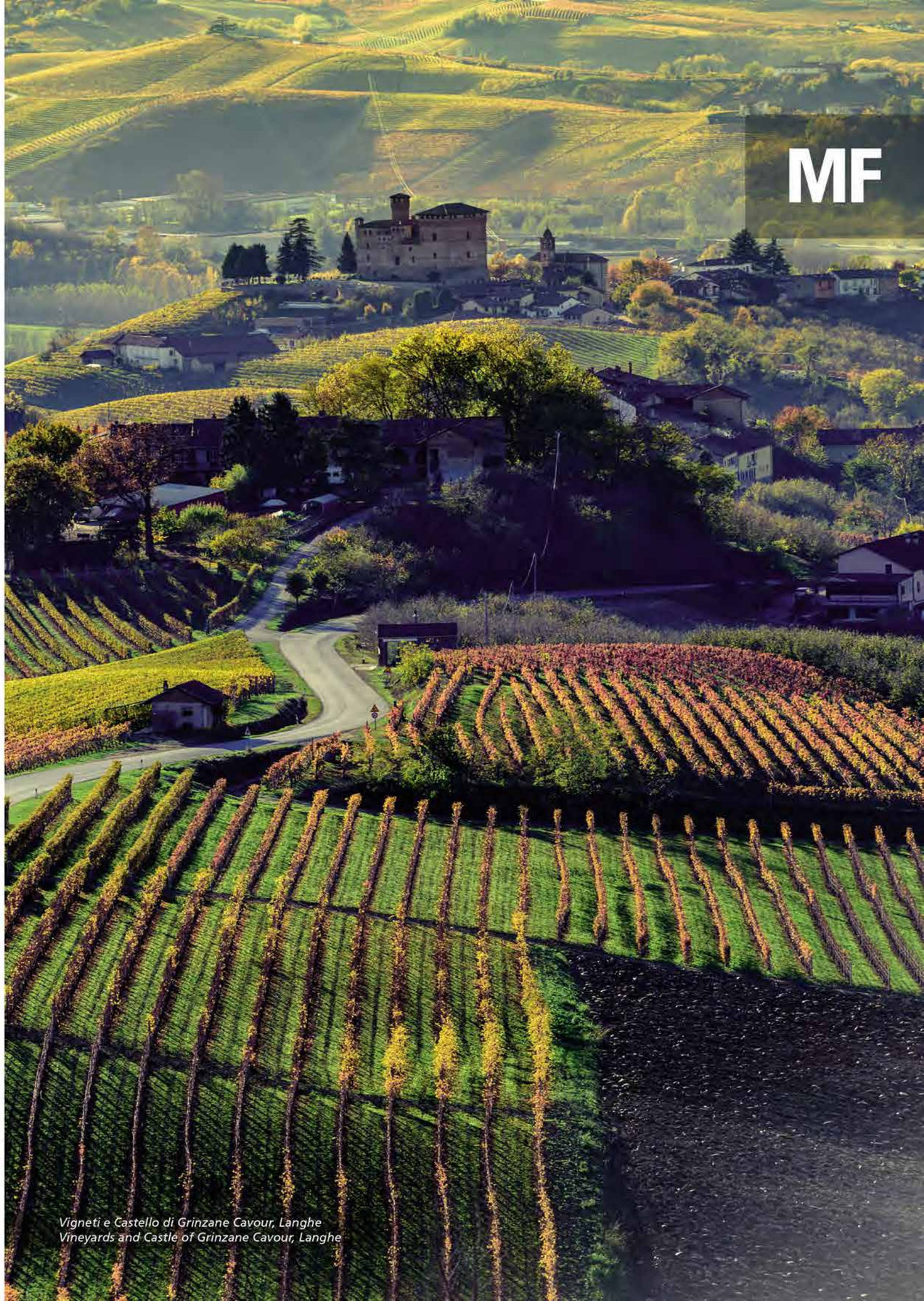
The rolling hills

Le Langhe sono un territorio incantato reso sublime da prodotti enogastronomici di eccellenza e dai suoi paesaggi, con geometrie ondulate di vigneti curati come giardini che in Alta Langa cedono il passo a boschi, noccioleti e pascoli.
Uno scrigno di cultura, patria di indimenticati scrittori che hanno saputo raccontare l'essenza di questi luoghi; di storia, che si legge nel patrimonio artistico di queste colline; di tradizione, soprattutto enologica, che si esprime nei suoi vini apprezzati in tutto il mondo.
Le colline armoniose del Monferrato profumano di vino, tradizione, arte e cultura. La storia ha lasciato tra queste colline bellezze artistiche che vanno dal Romanico al Barocco, un patrimonio di castelli, torri, borghi, palazzi, opere d'arte e antiche pievi, che regalano itinerari tutti da scoprire.
Il Roero è una scoperta continua tra borghi e natura, le dolci colline che convivono accanto a boschi e frutteti. L'elemento più caratteristico del Roero sono certamente le Rocche, veri e propri canyon che tagliano la terra. E' il regalo lasciato dal fiume Tanaro che ha deviato il suo corso, che qui ricopriva ogni cosa. Paesaggi insoliti, boschi che si alternano a balconi panoramici, vite rigogliosa grazie ad un terreno che non ha eguali.

In questi contesti nascono i vini del Piemonte, vere e proprie eccellenze mondiali. Un lungo viaggio tra storia, cultura, millenarie tradizioni e stupendi paesaggi di lunghe distese di vigneti. Le origini della viticoltura piemontese risale alla media età del Bronzo, intorno al 1500 a.C. La viticoltura, mirata alla qualità più che alla quantità del prodotto, è stata dettata dalla particolare conformità morfologica del territorio e dalle condizioni ambientali ai piedi delle montagne. Ciò ha anche permesso alla regione di essere riconosciuta a livello mondiale come zona vinicola di grande importanza.
Il Piemonte può vantare un patrimonio di 18 D.O.C.G. e 42 D.O.C. in un gran numero di vitigni; il Barbera, con più di 16 mila ettari, è quello più diffuso sul territorio regionale seguito da Moscato, Dolcetto e Nebbiolo.
Ma anche Erbaluce, Avanà, Ruchè, Timorasso, Quagliano, Neretta, Avarengo, Freisa, Bonarda, Arneis, Favorita e Malvasia nera oltre a numerosi vitigni autoctoni minori.
Nel 1980 sono state costituite le enoteche regionali e delle botteghe del vino, strutture finalizzate alla valorizzazione sia del prodotto che del territorio di produzione.

The Langhe is a delightful area, made sublime by the excellence of its food and wine and its beautiful scenery, with rolling hills of well-tended vineyards which, in the Upper Langa, give way to woods, hazelnut groves and pasture land.
It's a treasure chest of culture, the birthplace of unforgettable writers who have captured the essence of this land; of history, seen in the artistic heritage of the hill country; and of tradition, particularly wine-making, expressed in wines that are renowned worldwide.
The peaceful hills of Monferrato are steeped in wine, tradition, art and culture. Here history has left art and architecture that ranges from the Romanesque to the Baroque: a legacy of castles, towers, fortified villages and palaces, artworks and ancient churches, in itineraries just waiting to be explored.
The Roero area is a continuous journey of discovery, with its villages and nature, and its gentle hills flanked by woods and orchards. The most distinctive feature of the Roero is undoubtedly the Rocche, a series of gorges that cut through the land. They are the gift of the river Tanaro, which once covered the whole area, but has since changed its course. Extraordinary landscapes, woods interspersed with rocky viewpoints and vines growing luxuriantly in the area's unparalleled soil.

This is the birthplace of Piedmont's wines, a true global excellence. A long journey among history, culture, ancient traditions and breathtaking views of extensive vineyards. The origins of Piedmontese winemaking date back to the Bronze Age around 1500 BC. Vine growing, aiming for quality rather than quantity, was dictated by the specific morphological layout of the land and the weather conditions at the foot of the mountains. These have since led the region to global recognition as an important winemaking area.
Piedmont boasts a total of 18 DOCGs and 42 DOCs for a large number of grape varieties; Barbera, with over 16,000 hectares, is the most widespread in the region, followed by Moscato, Dolcetto and Nebbiolo.
But there are also Erbaluce, Avanà, Ruchè, Timorasso, Quagliano, Neretta, Avarengo, Freisa, Bonarda, Arneis, Favorita and Malvasia nera, as well as numerous minor native grapes.
In 1980 regional wineries and shops were established, to promote both the product and the production area.

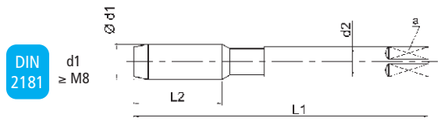


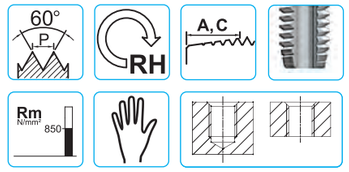
Vigneti e Castello di Grinzane Cavour, Langhe
Vineyards and Castle of Grinzane Cavour, Langhe

MF

MASCHI A MANO - Per fori ciechi e passanti in serie di due pezzi
HAND TAPS - For blind and through holes in sets in sets of two pieces
TARAUDS À MAIN - Pour trous borgnes et débouchant en jeu de deux pièces

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL





Profondità di filettatura - Thread depth - Prof. de filetage	**2xD**	**2xD**	
Materiale - Tool Material - Substrat	**HSS**	**HSS**	
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**	
Trattamento superficiale - Surface treatment - Revêtement			

	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		Finitore Bottoming - Finisseur	Serie Set - Jeu
	8	**1**	63	19	6	4,9	3	7	03MF8X1	00MF8X1
	10	**1**	63	20	7	5,5	3	9	03MF10X1	00MF10X1
	10	**1,25**	70	22	7	5,5	3	8,75	03MF10X1,25	00MF10X1,25
	12	**1**	70	22	9	7	4	11	03MF12X1	00MF12X1
	12	**1,25**	70	22	9	7	4	10,75	03MF12X1,25	00MF12X1,25
	12	**1,5**	70	22	9	7	4	10,5	03MF12X1,5	00MF12X1,5
	14	**1,5**	70	22	11	9	4	12,5	03MF14X1,5	00MF14X1,5
	16	**1**	70	22	12	9	4	15	03MF16X1	00MF16X1
	16	**1,5**	70	22	12	9	4	14,5	03MF16X1,5	00MF16X1,5
	18	**1,5**	80	22	14	11	4	16,5	03MF18X1,5	00MF18X1,5
	20	**1**	80	22	16	12	4	19	03MF20X1	00MF20X1
	20	**1,5**	80	22	16	12	4	18,5	03MF20X1,5	00MF20X1,5
	22	**1**	80	22	18	14,5	4	21	03MF22X1	00MF22X1
	22	**1,5**	80	22	18	14,5	4	20,5	03MF22X1,5	00MF22X1,5
	24	**1,5**	90	22	18	14,5	4	22,5	03MF24X1,5	00MF24X1,5
	24	**2**	90	22	18	14,5	4	22	03MF24X2	00MF24X2
	27	**2**	90	22	20	16	4	25	03MF27X2	00MF27X2
	30	**1,5**	90	22	22	18	4	28,5	03MF30X1,5	00MF30X1,5
	30	**2**	90	22	22	18	4	28	03MF30X2	00MF30X2

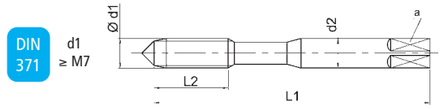
ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1	•1.2	•1.3	•1.4	•1.1	•1.2	•1.3	•1.4
M	Acciaio INOX – Stainless steel - Acier inoxydable	◦2.1	◦2.2	◦2.3		◦2.1	◦2.2	◦2.3	
K	Ghisa - Cast iron - Fonte	◦3.1	◦3.4			◦3.1	◦3.4		
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1	•4.2	•4.3	◦4.4	•4.1	•4.2	•4.3	◦4.4
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1	•5.2	◦5.3		•5.1	•5.2	◦5.3	

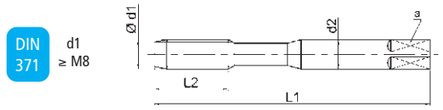
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

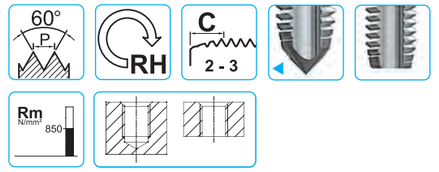
MF

MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL







Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**		
Materiale - Tool Material - Substrat	**HSSE**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**		
Trattamento superficiale - Surface treatment - Revêtement			

	DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	**4**	**0,5**	63	13	4,5	3,4	3	3,5		E20MF4X0,5
◀	**5**	**0,5**	70	13	6	4,9	3	4,5		E20MF5X0,5
◀	**6**	**0,5**	80	16	6	4,9	3	5,5		E20MF6X0,5
◀	**6**	**0,75**	80	16	6	4,9	3	5,25		E20MF6X0,75
◀	**7**	**0,75**	80	16	7	5,5	3	6,25		E20MF7X0,75
	8	**0,5**	90	18	8	6,2	3	7,5		E20MF8X0,5SP
	8	**0,75**	90	18	8	6,2	3	7,25		E20MF8X0,75SP
	8	**1**	90	18	8	6,2	3	7		E20MF8X1SP
	9	**0,5**	90	18	9	7	3	8,5		E20MF9X0,5
	9	**0,75**	90	18	9	7	3	8,25		E20MF9X0,75
	9	**1**	90	18	9	7	3	8		E20MF9X1
	10	**0,5**	90	15	10	8	3	9,5		E20MF10X0,5SP
	10	**0,75**	90	15	10	8	3	9,25		E20MF10X0,75SP
	10	**1**	90	15	10	8	3	9		E20MF10X1SP
	10	**1,25**	100	20	10	8	3	8,75		E20MF10X1,25SP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10
K	Ghisa - Cast iron - Fonte	◦3.4 8-10			
N	Leghe di Allumino – Al alloys - Alliage Al	◦4.2 15-20	◦4.3 10-15		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.2 10-15	◦5.3 15-20		
N	Materiali termoindurenti Duroplastic - Thermodurcissables	◦8.2 8-10			

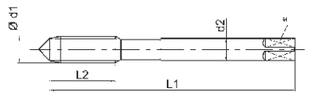
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MF

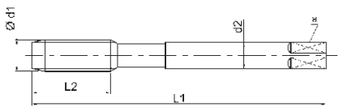
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

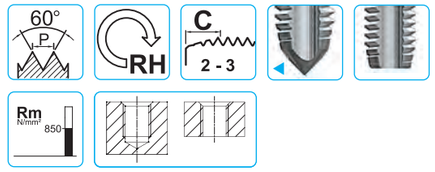
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374 d1 ≤ M6



DIN 374 d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement	

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	**5**	**0,5**	70	13	3,5	2,7	3	4,5	E21MF5X0,5
◀	**6**	**0,5**	80	16	4,5	3,4	3	5,5	E21MF6X0,5
◀	**6**	**0,75**	80	16	4,5	3,4	3	5,25	E21MF6X0,75
◀	**7**	**0,75**	80	16	5,5	4,3	3	6,25	E21MF7X0,75
	8	**0,5**	90	18	6	4,9	3	7,5	E21MF8X0,5SP
	8	**0,75**	90	18	6	4,9	3	7,25	E21MF8X0,75SP
	8	**1**	90	18	6	4,9	3	7	E21MF8X1SP
	9	**1**	90	18	7	5,5	3	8	E21MF9X1
	10	**0,5**	90	15	7	5,5	3	9,5	E21MF10X0,5SP
	10	**0,75**	90	15	7	5,5	3	9,25	E21MF10X0,75SP
	10	**1**	90	15	7	5,5	3	9	E21MF10X1SP
	10	**1,25**	100	20	7	5,5	3	8,75	E21MF10X1,25SP
	11	**0,75**	90	15	8	6,2	3	10,25	E21MF11X0,75
	11	**1**	90	15	8	6,2	3	10	E21MF11X1
	12	**0,5**	100	22	9	7	3	11,5	E21MF12X0,5
	12	**0,75**	100	22	9	7	3	11,25	E21MF12X0,75
	12	**1**	100	22	9	7	3	11	E21MF12X1
	12	**1,25**	100	22	9	7	3	10,75	E21MF12X1,25
	12	**1,5**	100	22	9	7	3	10,5	E21MF12X1,5
	13	**1**	100	22	11	9	4	12	E21MF13X1
	13	**1,25**	100	22	11	9	4	12,75	E21MF13X1,25
	13	**1,5**	100	22	11	9	4	12,5	E21MF13X1,5
	14	**1**	100	22	11	9	4	13	E21MF14X1
	14	**1,25**	100	22	11	9	4	12,75	E21MF14X1,25

Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
14	**1,5**	100	22	11	9	4	12,5	E21MF14X1,5
15	**1**	100	22	12	9	4	14	E21MF15X1
15	**1,25**	100	22	12	9	4	13,75	E21MF15X1,25
15	**1,5**	100	22	12	9	4	13,5	E21MF15X1,5
16	**1**	100	22	12	9	4	15	E21MF16X1
16	**1,25**	100	22	12	9	4	14,75	E21MF16X1,25
16	**1,5**	100	22	12	9	4	14,5	E21MF16X1,5
17	**1**	110	25	14	11	4	16	E21MF17X1
17	**1,5**	110	25	14	11	4	15,5	E21MF17X1,5
18	**1**	110	25	14	11	4	17	E21MF18X1
18	**1,5**	110	25	14	11	4	16,5	E21MF18X1,5
18	**2**	125	33	14	11	4	16	E21MF18X2
19	**1**	110	25	14	11	4	18	E21MF19X1
19	**1,5**	110	25	14	11	4	17,5	E21MF19X1,5
20	**1**	125	25	16	12	4	19	E21MF20X1
20	**1,5**	125	25	16	12	4	18,5	E21MF20X1,5
20	**2**	140	33	16	12	4	18	E21MF20X2
21	**1**	125	25	16	12	4	20	E21MF21X1
21	**1,5**	125	25	16	12	4	19,5	E21MF21X1,5
22	**1**	125	25	18	14,5	4	21	E21MF22X1
22	**1,25**	125	25	18	14,5	4	20,75	E21MF22X1,25

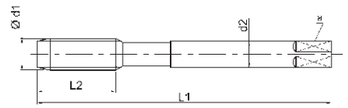
Segue diametri / Diameters continue / Diamètres à suivre

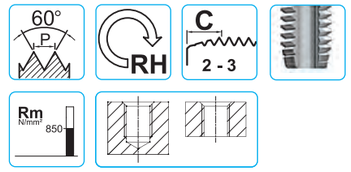
ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	
K	Ghisa - Cast iron - Fonte	○3.4 8-10				
N	Leghe di Allumino – Al alloys - Alliage Al	○4.2 15-20	○4.3 10-15			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 10-15	○5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	○8.2 8-10				

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

MF
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement	

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	22	**1,5**	125	25	18	14,5	4	20,5	E21MF22X1,5
	22	**2**	140	33	18	14,5	4	20	E21MF22X2
	23	**1**	125	25	18	14,5	4	22	E21MF23X1
	23	**1,5**	125	25	18	14,5	4	21,5	E21MF23X1,5
	24	**1**	140	25	18	14,5	4	23	E21MF24X1
	24	**1,5**	140	25	18	14,5	4	22,5	E21MF24X1,5
	24	**2**	140	25	18	14,5	4	22	E21MF24X2
	25	**1**	140	25	18	14,5	4	24	E21MF25X1
	25	**1,5**	140	25	18	14,5	4	23,5	E21MF25X1,5
	25	**2**	140	25	18	14,5	4	23	E21MF25X2
	26	**1**	140	25	18	14,5	4	25	E21MF26X1
	26	**1,5**	140	25	18	14,5	4	24,5	E21MF26X1,5
	26	**2**	140	25	18	14,5	4	24	E21MF26X2
	27	**1**	140	25	20	16	4	26	E21MF27X1
	27	**1,5**	140	25	20	16	4	25,5	E21MF27X1,5
	27	**2**	140	25	20	16	4	25	E21MF27X2
	28	**1**	140	25	20	16	4	27	E21MF28X1
	28	**1,5**	140	25	20	16	4	26,5	E21MF28X1,5
	28	**2**	140	25	20	16	4	26	E21MF28X2
	30	**1**	150	28	22	18	4	29	E21MF30X1
	30	**1,5**	150	28	22	18	4	28,5	E21MF30X1,5
	30	**2**	150	28	22	18	4	28	E21MF30X2
	30	**3**	180	46	22	18	4	27	E21MF30X3
	32	**1,5**	150	28	22	18	5	30,5	E21MF32X1,5

Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
32	**2**	150	28	22	18	5	30	E21MF32X2
33	**1,5**	160	30	25	20	5	31,5	E21MF33X1,5
33	**2**	160	30	25	20	5	31	E21MF33X2
33	**3**	180	46	25	20	4	30	E21MF33X3
34	**1**	170	30	28	22	5	33	E21MF34X1
34	**1,5**	170	30	28	22	5	32,5	E21MF34X1,5
34	**2**	170	30	28	22	5	32	E21MF34X2
35	**1,5**	170	30	28	22	5	33,5	E21MF35X1,5
35	**2**	170	30	28	22	5	33	E21MF35X2
35	**3**	200	50	28	22	4	32	E21MF35X3
36	**1**	170	30	28	22	5	35	E21MF36X1
36	**1,25**	170	30	28	22	5	34,75	E21MF36X1,25
36	**1,5**	170	30	28	22	5	34,5	E21MF36X1,5
36	**2**	170	30	28	22	5	34	E21MF36X2
36	**3**	200	50	28	22	4	33	E21MF36X3
37	**1**	170	30	28	22	6	36	E21MF37X1
37	**1,5**	170	30	28	22	6	35,5	E21MF37X1,5
38	**1**	170	30	28	22	6	37	E21MF38X1
38	**1,5**	170	30	28	22	6	36,5	E21MF38X1,5
38	**2**	170	30	28	22	6	36	E21MF38X2
38	**3**	200	50	28	22	4	35	E21MF38X3

Segue diametri / Diameters continue / Diamètres à suivre

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	
K	Ghisa - Cast iron - Fonte	○3.4 8-10				
N	Leghe di Allumino – Al alloys - Alliage Al	○4.2 15-20	○4.3 10-15			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 10-15	○5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	○8.2 8-10				

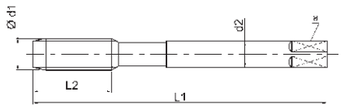
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

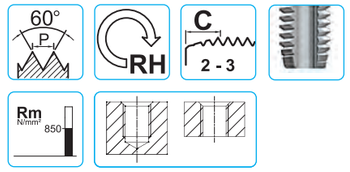
MF

MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement	

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	39	**1**	170	30	32	24	6	38	E21MF39X1
	39	**1,5**	170	30	32	24	6	37,5	E21MF39X1,5
	39	**2**	170	30	32	24	6	37	E21MF39X2
	39	**3**	200	50	32	24	4	36	E21MF39X3
	40	**1**	170	30	32	24	6	39	E21MF40X1
	40	**1,5**	170	30	32	24	6	38,5	E21MF40X1,5
	40	**2**	170	30	32	24	6	38	E21MF40X2
	42	**1,5**	170	30	32	24	6	40,5	E21MF42X1,5
	42	**2**	170	30	32	24	6	40	E21MF42X2
	42	**3**	200	55	32	24	5	39	E21MF42X3
	45	**1,5**	180	32	36	29	6	43,5	E21MF45X1,5
	45	**2**	180	32	36	29	6	43	E21MF45X2
	48	**1,5**	190	32	36	29	6	46,5	E21MF48X1,5
	48	**2**	190	32	36	29	6	46	E21MF48X2
	***48**	**3**	220	65	36	29	6	45	E21MF48X3
	50	**1,5**	190	32	36	29	6	48,5	E21MF50X1,5
	50	**2**	190	32	36	29	6	48	E21MF50X2
	***50**	**3**	220	65	36	29	6	47	E21MF50X3
	52	**1,5**	190	32	40	32	6	50,5	E21MF52X1,5
	52	**2**	190	32	40	32	6	50	E21MF52X2
	***52**	**3**	220	65	40	32	6	49	E21MF52X3
	***54**	**1,5**	190	32	40	32	6	52,5	E21MF54X1,5
	***54**	**2**	190	32	40	32	6	52	E21MF54X2

Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
***55**	**1,5**	190	32	40	32	6	53,5	E21MF55X1,5
***55**	**2**	190	32	40	32	6	53	E21MF55X2
***56**	**2**	190	32	40	32	6	54	E21MF56X2
***56**	**3**	220	65	40	32	6	53	E21MF56X3
***56**	**4**	220	65	40	32	6	52	E21MF56X4
***60**	**1,5**	190	32	45	35	6	58,5	E21MF60X1,5
***60**	**2**	190	32	45	35	6	58	E21MF60X2
***60**	**3**	220	65	45	35	6	57	E21MF60X3
***60**	**4**	220	65	45	35	6	56	E21MF60X4
***62**	**1,5**	190	32	50	39	6	60,5	E21MF62X1,5
***63**	**1,5**	190	32	50	39	6	61,5	E21MF63X1,5
***64**	**1,5**	190	32	50	39	6	62,5	E21MF64X1,5
***64**	**2**	190	32	50	39	6	62	E21MF64X2
***64**	**4**	220	65	50	39	6	60	E21MF64X4

* Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

HSS Ø ≥ 45 — Acciaio HSS oltre ø ≥ 45
HSS Steel over ø ≥ 45
Acier HSS supérieur à ø ≥ 45

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	
K	Ghisa - Cast iron - Fonte	○3.4 8-10				
N	Leghe di Allumino – Al alloys - Alliage Al	○4.2 15-20	○4.3 10-15			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 10-15	○5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	○8.2 8-10				

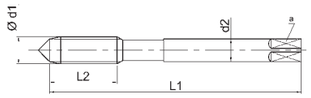
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

MF

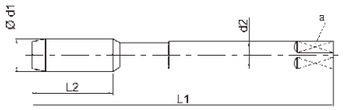
MASCHI A MACCHINA - Scanalature diritte filettatura sinistra
MACHINE TAPS - Straight flutes left thread
TARAUDS MACHINE - Goujures droites filetage à gauche

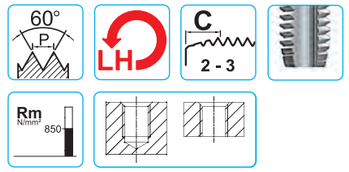
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374 d1 = M6



DIN 374 d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement	

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◄	**6**	**0,75**	80	16	4,5	3,4	3	5,25	E21MF6X0,75LH
	8	**1**	90	18	6	4,9	3	7	E21MF8X1LH-SP
	10	**1**	90	15	7	5,5	3	9	E21MF10X1LH-SP
	10	**1,25**	100	20	7	5,5	3	8,75	E21MF10X1,25LH-SP
	12	**1,25**	100	22	9	7	3	10,75	E21MF12X1,25LH
	12	**1,5**	100	22	9	7	3	10,5	E21MF12X1,5LH
	14	**1,5**	100	22	11	9	4	12,5	E21MF14X1,5LH
	16	**1,5**	100	22	12	9	4	14,5	E21MF16X1,5LH
	18	**1,5**	110	25	14	11	4	16,5	E21MF18X1,5LH
	20	**1,5**	125	25	16	12	4	18,5	E21MF20X1,5LH

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	
K	Ghisa - Cast iron - Fonte	○3.4 8-10				
N	Leghe di Allumino – Al alloys - Alliage Al	○4.2 15-20	○4.3 10-15			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 10-15	○5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	○8.2 8-10				

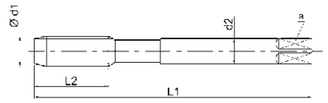
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

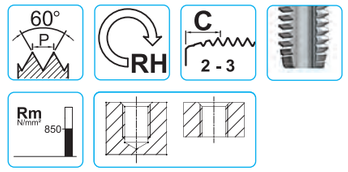
MF

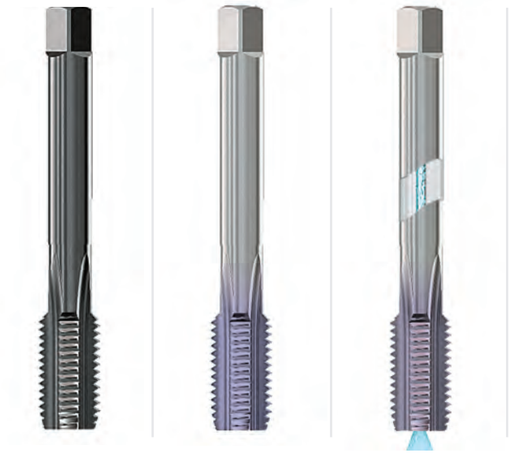
MASCHI A MACCHINA - Scanalature diritte per ghisa
MACHINE TAPS - Straight flutes for cast iron
TARAUDS MACHINE - Goujures droites pour fonte

DIN13 | GG | GHISA - CAST IRON - FONTE

DIN 374 d1 ≥ M8







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	NQ	TiCN	TiCN

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	8	1	90	18	6	4,9	4	7	E27MF8X1SP-NQ	E27MF8X1SP-CT	E27MF8X1FOR-CT
	9	1	90	18	7	5,5	4	9	-	E27MF9X1CT	E27MF9X1FOR-CT
	10	1	90	15	7	5,5	4	9	E27MF10X1SP-NQ	E27MF10x1SP-CT	E27MF10X1FOR-CT
	10	1,25	100	20	7	5,5	4	8,75	E27MF10X1,25SP-NQ	E27MF10X1,25SP-CT	E27MF10X1,25FOR-CT
	12	1	100	22	9	7	4	11	-	E27MF12X1CT	E27MF12X1FOR-CT
	12	1,25	100	22	9	7	4	10,75	E27MF12X1,25NQ	E27MF12X1,25CT	E27MF12X1,25FOR-CT
	12	1,5	100	22	9	7	4	10,5	E27MF12X1,5NQ	E27MF12X1,5CT	E27MF12X1,5FOR-CT
	14	1,5	100	22	11	9	4	12,5	E27MF14X1,5NQ	E27MF14X1,5CT	E27MF14X1,5FOR-CT
	16	1,5	100	22	12	9	4	14,5	E27MF16X1,5NQ	E27MF16X1,5CT	E27MF16X1,5FOR-CT
	18	1,5	110	25	14	11	4	16,5	E27MF18X1,5NQ	E27MF18X1,5CT	E27MF18X1,5FOR-CT
	20	1,5	125	25	16	12	4	18,5	E27MF20X1,5NQ	E27MF20X1,5CT	E27MF20X1,5FOR-CT
	22	1,5	125	25	18	14,5	4	20,5	E27MF22X1,5NQ	E27MF22X1,5CT	E27MF22X1,5FOR-CT
	24	1,5	140	25	18	14,5	4	22,5	E27MF24X1,5NQ	E27MF24X1,5CT	E27MF24X1,5FOR-CT
	26	1,5	140	25	18	14,5	4	24,5	E27MF26X1,5NQ	E27MF26X1,5CT	-
	27	1,5	140	25	20	16	4	25,5	E27MF27X1,5NQ	E27MF27x1,5CT	E27MF27X1,5FOR-CT
	30	1,5	150	28	22	18	4	28,5	-	E27MF30X1,5CT	E27MF30X1,5FOR-CT

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
K	Ghisa - Cast iron - Fonte	•3.1 10-15	•3.2 8-10	○3.3 8-10	○3.4 10-15	•3.1 20-25	•3.2 15-20	○3.3 15-20	○3.4 20-25	•3.1 20-25	•3.2 15-20	○3.3 15-20	○3.4 20-25
N	Leghe Al, Si > 10% Al alloys, Si > 10% - Alliage Al, Si > 10%	•4.4 10-15				•4.4 25-30				•4.4 25-30			
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 10-15				•4.5 20-30				•4.5 20-30			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 18-20				•5.3 25-30				•5.3 25-30			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	•8.2 8-10				•8.2 10-15				•8.2 10-15			

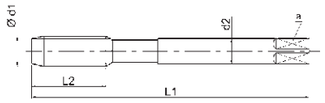
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

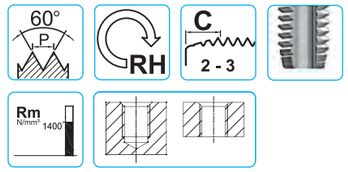
MF

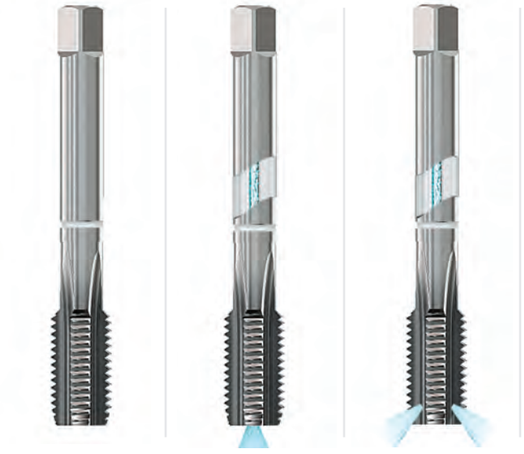
MASCHI A MACCHINA - Scanalature diritte per ghisa
MACHINE TAPS - Straight flutes for cast iron
TARAUDS MACHINE - Goujures droites pour fonte

DIN13 | GG | GHISA - CAST IRON - FONTE

DIN 374 d1 ≥ M8







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	3,5xD
Materiale - Tool Material - Substrat	PM3	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiAlN	TiAlN	TiAlN

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	8	1	90	18	6	4,9	4	7	K27MF8X1TX	K27MF8X1FOR-TX	K27MF8X1FORY-TX
	10	1	90	15	7	5,5	4	9	K27MF10X1TX	K27MF10X1FOR-TX	K27MF10X1FORY-TX
	10	1,25	100	20	7	5,5	4	8,75	K27MF10X1,25TX	K27MF10X1,25FOR-TX	K27MF10X1,25FORY-TX
	12	1,25	100	22	9	7	4	10,75	K27MF12X1,25TX	K27MF12X1,25FOR-TX	K27MF12X1,25FORY-TX
	12	1,5	100	22	9	7	4	10,5	K27MF12X1,5TX	K27MF12X1,5FOR-TX	K27MF12X1,5FORY-TX
	14	1,5	100	22	11	9	4	12,5	K27MF14X1,5TX	K27MF14X1,5FOR-TX	K27MF14X1,5FORY-TX
	16	1,5	100	22	12	9	4	14,5	K27MF16X1,5TX	K27MF16X1,5FOR-TX	K27MF16X1,5FORY-TX
	18	1,5	110	25	14	11	5	16,5	K27MF18X1,5TX	K27MF18X1,5FOR-TX	K27MF18X1,5FORY-TX
	20	1,5	125	25	16	12	5	18,5	K27MF20X1,5TX	K27MF20X1,5FOR-TX	K27MF20X1,5FORY-TX
	22	1,5	125	25	18	14,5	5	20,5	K27MF22X1,5TX	K27MF22X1,5FOR-TX	K27MF22X1,5FORY-TX
	24	1,5	140	25	18	14,5	5	22,5	K27MF24X1,5TX	K27MF24X1,5FOR-TX	K27MF24X1,5FORY-TX

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
K	Ghisa - Cast iron - Fonte	•3.1 25-30	•3.2 20-25	○3.3 20-25	○3.4 25-30	•3.5 10-15	

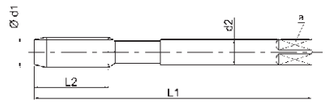
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

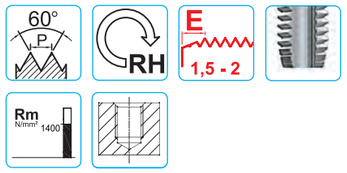
MF

MASCHI A MACCHINA - Scanalature diritte per ghisa imbocco E
MACHINE TAPS - Straight flutes for cast iron chamfer E
TARAUDS MACHINE - Goujures droites pour fonte forme d'entrée E

DIN13 | GG | GHISA - CAST IRON - FONTE

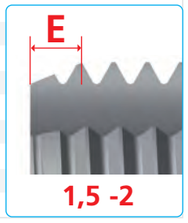
DIN 374 d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	3,5xD
Materiale - Tool Material - Substrat	PM3	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	AHI	AHI	AHI

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	8	1	90	18	6	4,9	4	7	K27EMF8X1AHI	K27EMF8X1FOR-AHI	K27EMF8X1FORY-AHI
	10	1	90	15	7	5,5	4	9	K27EMF10X1AHI	K27EMF10X1FOR-AHI	K27EMF10X1FORY-AHI
	10	1,25	100	20	7	5,5	4	8,75	K27EMF10X1,25AHI	K27EMF10X1,25FOR-AHI	K27EMF10X1,25FORY-AHI
	12	1,25	100	22	9	7	4	10,75	K27EMF12X1,25AHI	K27EMF12X1,25FOR-AHI	K27EMF12X1,25FORY-AHI
	12	1,5	100	22	9	7	4	10,5	K27EMF12X1,5AHI	K27EMF12X1,5FOR-AHI	K27EMF12X1,5FORY-AHI
	14	1,5	100	22	11	9	4	12,5	K27EMF14X1,5AHI	K27EMF14X1,5FOR-AHI	K27EMF14X1,5FORY-AHI
	16	1,5	100	22	12	9	4	14,5	K27EMF16X1,5AHI	K27EMF16X1,5FOR-AHI	K27EMF16X1,5FORY-AHI



ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
K	Ghisa - Cast iron - Fonte	•3.1 25-30	•3.2 20-25	❍3.3 20-25	❍3.4 25-30	•3.5 10-15	

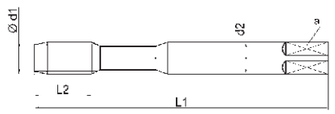
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

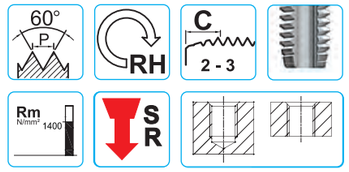
MF

MASCHI A MACCHINA - Scanalature diritte
MACHINE TAPS - Straight flutes
TARAUDS MACHINE - Goujures droites

DIN13 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

*UFS norm d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD
Materiale - Tool Material - Substrat	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC

UFS norm	Ød1 MF	P mm	L_1	L_2	d_2 h6	a h12	Z		CODE	
	8	1	90	13	8	6,2	4	7	S20MF8X1TXC	S20MF8X1FOR-TXC
	10	1	100	15	10	8	4	9	S20MF10X1TXC	S20MF10X1FOR-TXC
	10	1,25	100	15	10	8	4	8,75	S20MF10X1,25TXC	S20MF10X1,25FOR-TXC
	12	1,25	110	18	12	9	4	10,75	S20MF12X1,25TXC	S20MF12X1,25FOR-TXC
	12	1,5	110	18	12	9	4	10,5	S20MF12X1,5TXC	S20MF12X1,5FOR-TXC
	14	1,5	110	20	12	9	4	12,5	S20MF14X1,5TXC	S20MF14X1,5FOR-TXC
	16	1,5	110	20	16	12	4	14,5	S20MF16X1,5TXC	S20MF16X1,5FOR-TXC

*Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
P	Acciaio - Steel - Acier - Rm ≤ 1400 N/mm²	❍1.5 10-15	•1.6 8-10				
K	Ghisa - Cast iron - Fonte	•3.1 25-30	•3.2 20-25	❍3.3 20-25	❍3.4 25-30	•3.5 10-15	
N	Leghe di Allumino - Al alloys - Alliage Al	•4.4 25-30					
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 30-40					
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 35-40	❍5.4 8-10				
N	Materiali termoindurenti Duroplastic - Thermodurcissables	•8.2 20-25	•8.3 10-15				

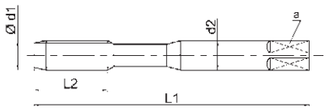
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

MF

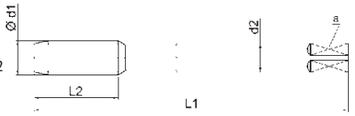
MASCHI A MACCHINA - Scanalature diritte - geometria di taglio rompitruciolo
MACHINE TAPS - Straight flutes - chip breaker cutting edge geometry
TARAUDS MACHINE - Goujures droites - géométrie brise copeaux

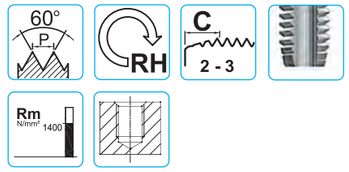
DIN13 | RT | ROMPITRUCIOLO - CHIP BREAKER - BRISE COPEAUX

DIN 371 d1 ≤ M10



DIN 374 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	**3,5xD**			
Materiale - Tool Material - Substrat	**PM3**			
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**			
Trattamento superficiale - Surface treatment - Revêtement	**TXC**			

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
New	**8**	**1**	90	18	8	6,2	3	7	K22MF8X1FOR-TXC
New	**10**	**1**	100	20	10	8	3	9	K22MF10X1FOR-TXC
New	**10**	**1,25**	100	20	10	8	3	8,75	K22MF10X1,25FOR-TXC

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
New	**12**	**1,25**	100	22	9	7	3	10,75	K23MF12x1,25FOR-TXC
	12	**1,5**	100	22	9	7	3	10,5	K23MF12X1,5FOR-TXC
	14	**1,5**	100	22	11	9	3	12,5	K23MF14X1,5FOR-TXC
	16	**1,5**	100	22	12	9	3	14,5	K23MF16X1,5FOR-TXC
	18	**1,5**	110	25	14	11	3	16,5	K23MF18X1,5FOR-TXC
	20	**1,5**	125	25	16	12	3	18,5	K23MF20X1,5FOR-TXC
	22	**1,5**	125	25	18	14,5	3	20,5	K23MF22X1,5FOR-TXC
	24	**1,5**	140	25	18	14,5	4	22,5	K23MF24X1,5FOR-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 1400 N/mm²	•1.3 25-30	•1.4 20-25	•1.5 5-12	○1.6 5-8
K	Ghisa - Cast iron - Fonte	○3.1 25-30	○3.2 20-25	•3.3 20-25	•3.4 25-30
N	Leghe di Allumino Al alloys - Alliage Al – Si >10%	○4.4 25-30			
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	○4.5 20-30			
N	Ottone a truciolo corto hard brass short chipping - laiton coupeaux courts	○5.3 25-30			
N	Materie plastiche con fibre di rinforzo - Reinforced plastic materials - Matiéres synthétiques renforcés par fibres	○8.3 6-10			

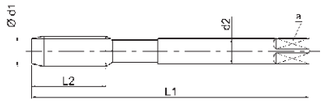
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

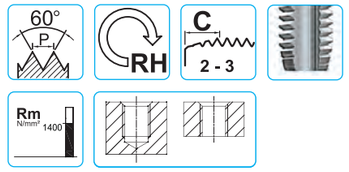
MF

MASCHI A MACCHINA - Scanalature diritte per alta resistenza
MACHINE TAPS - Straight flutes for high resistance
TARAUDS MACHINE - Goujures droites pour haute résistance

DIN13 | HR | ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

DIN 374 d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**			
Materiale - Tool Material - Substrat	**PM3**			
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**			
Trattamento superficiale - Surface treatment - Revêtement	**TXC**			

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	8	**1**	90	18	6	4,9	4	7	K21MF8X1TXC
	10	**1**	90	15	7	5,5	4	9	K21MF10X1TXC
	10	**1,25**	100	20	7	5,5	4	8,75	K21MF10X1,25TXC
	12	**1,25**	100	22	9	7	4	10,75	K21MF12X1,25TXC
	12	**1,5**	100	22	9	7	4	10,5	K21MF12X1,5TXC
	14	**1,5**	100	22	11	9	4	12,5	K21MF14X1,5TXC
	16	**1,5**	100	22	12	9	4	14,5	K21MF16X1,5TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier < 45 HRC	○1.5 5-12	•1.6 5-8		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.3 30-40	•4.4 25-30		
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 20-30			
N	Ottone a truciolo corto Hard brass short chipping - Laiton coupeaux courts	•5.3 25-30			
N	Bronzo ad alta resistenza High strength bronze - Bronze haute résistance	○5.4 5-8			
N	Materie plastiche con fibre di rinforzo - Reinforced plastic materials - Matiéres synthétiques renforcés par fibres	•8.2 10-15	•8.3 6-10		

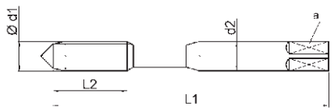
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

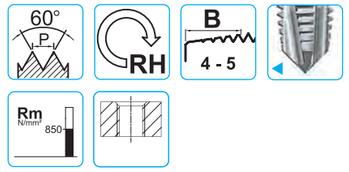
MF

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 371 d1 ≤ M10





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	5	0,5	70	13	6	4,9	3	4,5	E24MF5X0,5	E24MF5X0,5V	E24MF5X0,5T	E24MF5X0,5XP
◀	6	0,75	80	16	6	4,9	3	5,25	E24MF6X0,75	E24MF6X0,75V	E24MF6X0,75T	E24MF6X0,75XP
◀	7	0,75	80	16	7	5,5	3	6,25	E24MF7X0,75	E24MF7X0,75V	E24MF7X0,75T	E24MF7X0,75XP
◀	8	0,75	90	18	8	6,2	3	7,25	E24MF8X0,75	E24MF8X0,75V	E24MF8X0,75T	E24MF8X0,75XP
◀	8	1	90	18	8	6,2	3	7	E24MF8X1	E24MF8X1V	E24MF8X1T	E24MF8X1XP
◀	10	0,75	90	15	10	8	4	9,25	E24MF10X0,75	E24MF10X0,75V	E24MF10X0,75T	E24MF10X0,75XP
◀	10	1	90	15	10	8	4	9	E24MF10X1	E24MF10X1V	E24MF10X1T	E24MF10X1XP
◀	10	1,25	100	20	10	8	3	8,75	E24MF10X1,25	E24MF10X1,25V	E24MF10X1,25T	E24MF10X1,25XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													◑2.1 10-15	◑2.2 8-10		
K	Ghisa - Cast iron - Fonte									◑3.3 10-15	•3.4 15-20			◑3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◑4.1 20-25	•4.2 25-30	◑4.3 20-25		•4.2 25-30	◑4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.1 8-12	•5.2 10-15			◑5.1 15-20	•5.2 20-25			•5.2 20-25			

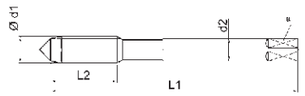
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

MF

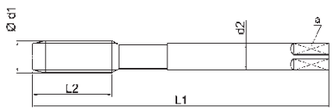
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

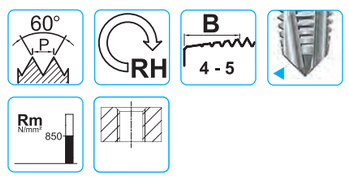
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374 d1 ≤ M10



DIN 374 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	8	1	90	18	6	4,9	3	7	E25MF8X1	E25MF8X1V	E25MF8X1T	E25MF8X1XP
◀	10	1	90	15	7	5,5	4	9	E25MF10X1	E25MF10X1V	E25MF10X1T	E25MF10X1XP
◀	10	1,25	100	20	7	5,5	3	8,75	E25MF10X1,25	E25MF10X1,25V	E25MF10X1,25T	E25MF10X1,25XP
	12	1	100	22	9	7	3	11	E25MF12X1	E25MF12X1V	E25MF12X1T	E25MF12X1XP
	12	1,25	100	22	9	7	3	10,75	E25MF12X1,25	E25MF12X1,25V	E25MF12X1,25T	E25MF12X1,25XP
	12	1,5	100	22	9	7	3	10,5	E25MF12X1,5	E25MF12X1,5V	E25MF12X1,5T	E25MF12X1,5XP
	14	1	100	22	11	9	4	13	E25MF14X1	E25MF14X1V	E25MF14X1T	E25MF14X1XP
	14	1,5	100	22	11	9	4	12,5	E25MF14X1,5	E25MF14X1,5V	E25MF14X1,5T	E25MF14X1,5XP
	16	1	100	22	12	9	4	15	E25MF16X1	E25MF16X1V	E25MF16X1T	E25MF16X1XP
	16	1,5	100	22	12	9	4	14,5	E25MF16X1,5	E25MF16X1,5V	E25MF16X1,5T	E25MF16X1,5XP
	18	1	110	25	14	11	4	17	E25MF18X1	E25MF18X1V	E25MF18X1T	E25MF18X1XP
	18	1,5	110	25	14	11	4	16,5	E25MF18X1,5	E25MF18X1,5V	E25MF18X1,5T	E25MF18X1,5XP
	20	1	125	25	16	12	4	19	E25MF20X1	E25MF20X1V	E25MF20X1T	E25MF20X1XP
	20	1,5	125	25	16	12	4	18,5	E25MF20X1,5	E25MF20X1,5V	E25MF20X1,5T	E25MF20X1,5XP
	22	1	125	25	18	14,5	4	21	E25MF22X1	E25MF22X1V	E25MF22X1T	-
	22	1,5	125	25	18	14,5	4	20,5	E25MF22X1,5	E25MF22X1,5V	E25MF22X1,5T	-
	24	1	140	25	18	14,5	4	23	E25MF24X1	E25MF24X1V	E25MF24X1,5T	-
	24	1,5	140	25	18	14,5	4	22,5	E25MF24X1,5	E25MF24X1,5V	E25MF24X1T	-
	24	2	140	25	18	14,5	4	22	E25MF24X2	E25MF24X2V	E25MF24X2T	-
	25	1,5	140	25	18	14,5	4	23,5	E25MF25X1,5	E25MF25X1,5V	E25MF25X1,5T	-
	25	2	140	25	18	14,5	4	23	E25MF25X2	E25MF25X2V	E25MF25X2T	-
	26	1,5	140	25	18	14,5	4	24,5	E25MF26X1,5	E25MF26X1,5V	E25MF26X1,5T	-
	26	2	140	25	18	14,5	4	24	E25MF26X2	E25MF26X2V	E25MF26X2T	-

Segue diametri / Diameters continue / Diamètres à suivre

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													◑2.1 10-15	◑2.2 8-10		
K	Ghisa - Cast iron - Fonte									◑3.3 10-15	•3.4 15-20			◑3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◑4.1 20-25	•4.2 25-30	◑4.3 20-25		•4.2 25-30	◑4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.1 8-12	•5.2 10-15			◑5.1 15-20	•5.2 20-25			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

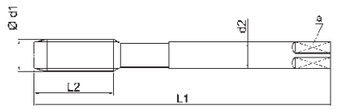
MF

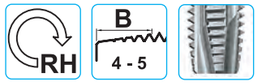
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

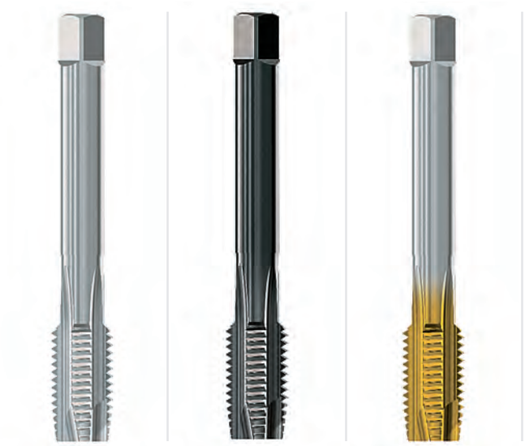
DIN13

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	27	1	140	25	20	16	4	26	E25MF27X1	E25MF27X1V	E25MF27X1T
	27	1,5	140	25	20	16	4	25,5	E25MF27X1,5	E25MF27X1,5V	E25MF27X1,5T
	27	2	140	25	20	16	4	25	E25MF27X2	E25MF27X2V	E25MF27X2T
	28	1,5	140	25	20	16	4	26,5	E25MF28X1,5	E25MF28X1,5V	E25MF28X1,5T
	28	2	140	25	20	16	4	26	E25MF28X2	E25MF28X2V	E25MF28X2T
	30	1,5	150	28	22	18	4	28,5	E25MF30X1,5	E25MF30X1,5V	E25MF30X1,5T
	30	2	150	28	22	18	4	28	E25MF30X2	E25MF30X2V	E25MF30X2T
	30	3	180	46	22	18	4	27	E25MF30X3	E25MF30X3V	E25MF30X3T
	32	1,5	150	28	22	18	5	30,5	E25MF32X1,5	E25MF32X1,5V	E25MF32X1,5T
	32	2	150	28	22	18	5	30	E25MF32X2	E25MF32X2V	E25MF32X2T
	33	1,5	160	30	25	20	5	31,5	E25MF33X1,5	E25MF33X1,5V	E25MF33X1,5T
	33	2	160	30	25	20	5	31	E25MF33X2	E25MF33X2V	E25MF33X2T
	34	1,5	170	30	28	22	5	32,5	E25MF34X1,5	E25MF34X1,5V	E25MF34X1,5T
	35	1,5	170	30	28	22	5	33,5	E25MF35X1,5	E25MF35X1,5V	E25MF35X1,5T
	36	1,5	170	30	28	22	5	34,5	E25MF36X1,5	E25MF36X1,5V	E25MF36X1,5T
	36	2	170	30	28	22	5	34	E25MF36X2	E25MF36X2V	E25MF36X2T
	36	3	200	50	28	22	4	33	E25MF36X3	E25MF36X3V	E25MF36X3T
	38	1,5	170	30	28	22	6	36,5	E25MF38X1,5	E25MF38X1,5V	E25MF38X1,5T
	40	1,5	170	30	32	24	6	38,5	E25MF40X1,5	E25MF40X1,5V	E25MF40X1,5T
	40	2	170	30	32	24	6	38	E25MF40X2	E25MF40X2V	E25MF40X2T
	42	1,5	170	30	32	24	6	40,5	E25MF42X1,5	E25MF42X1,5V	E25MF42X1,5T
	42	2	170	30	32	24	6	40	E25MF42X2	E25MF42X2V	E25MF42X2T
	42	3	200	55	32	24	5	39	E25MF42X3	E25MF42X3V	E25MF42X3T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable												
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25		

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

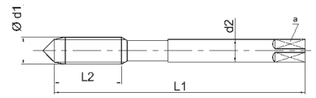
MF

MASCHI A MACCHINA - Imbocco corretto per fori passanti filettatura sinistra
MACHINE TAPS - Straight flutes with spiral point for through holes left thread
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant filetage à gauche

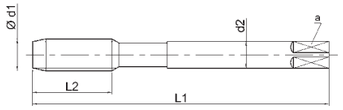
DIN13

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374 d1 ≤ M10



DIN 374 d1 ≥ M12



Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	
Materiale - Tool Material - Substrat	HSSE	HSSE	
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	
Trattamento superficiale - Surface treatment - Revêtement		TiN	TXC

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◄	8	1	90	18	6	4,9	3	7	E25MF8X1LH	E25MF8X1LH-T
◄	10	1	90	15	7	5,5	4	9	E25MF10X1LH	E25MF10X1LH-T
◄	10	1,25	100	20	7	5,5	3	8,75	E25MF10X1,25LH	E25MF10X1,25LH-T
	12	1,25	100	22	9	7	3	10,75	E25MF12X1,25LH	E25MF12X1,25LH-T
	12	1,5	100	22	9	7	3	10,5	E25MF12X1,5LH	E25MF12X1,5LH-T
	14	1,5	100	22	11	9	4	12,5	E25MF14X1,5LH	E25MF14X1,5LH-T
	16	1,5	100	22	12	9	4	14,5	E25MF16X1,5LH	E25MF16X1,5LH-T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20				
M	Acciaio inox - Stainless steel - Acier inoxydable												
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20						
N	Leghe di Allumino – Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25					
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25						

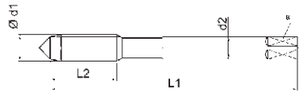
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

MF

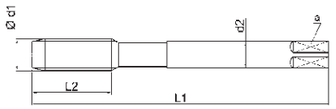
MASCHI A MACCHINA - Imbocco corretto per fori passanti toll. 4H, 6G, 7G e 6H+0,1
MACHINE TAPS - Straight flutes with spiral point for through holes tol. 4H, 6G, 7G and 6H+0,1
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant tol. 4H, 6G, 7G et 6H+0,1

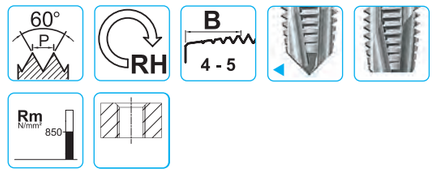
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

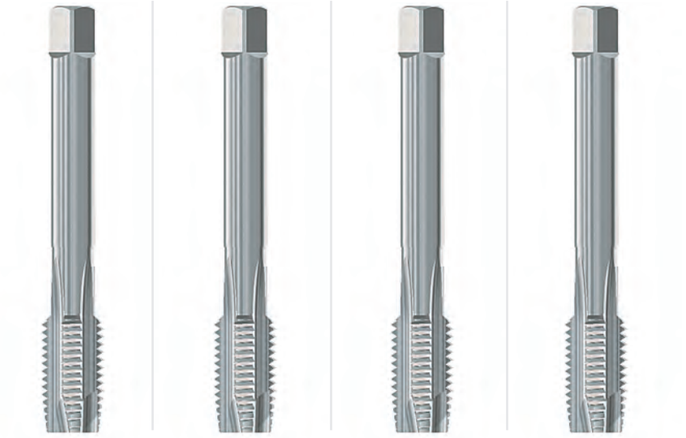
DIN 374 d1 ≤ M10



DIN 374 d1 ≥ M12







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO1/4H	ISO3/6G	7G	6H+0,1
Trattamento superficiale - Surface treatment - Revêtement				

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	8	1	90	18	6	4,9	3	7	E25MF8X1-4H	E25MF8X1-6G	E25MF8X1-7G	E25MF8X1+0,1
◀	10	1	90	15	7	5,5	4	9	E25MF10X1-4H	E25MF10X1-6G	E25MF10X1-7G	E25MF10X1+0,1
◀	10	1,25	100	20	7	5,5	3	8,75	E25MF10X1,25-4H	E25MF10X1,25-6G	E25MF10X1,25-7G	E25MF10X1,25+0,1
	12	1,25	100	22	9	7	3	10,75	E25MF12X1,25-4H	E25MF12X1,25-6G	E25MF12X1,25-7G	E25MF12X1,25+0,1
	12	1,5	100	22	9	7	3	10,5	E25MF12X1,5-4H	E25MF12X1,5-6G	E25MF12X1,5-7G	E25MF12X1,5+0,1
	14	1,5	100	22	11	9	4	12,5	E25MF14X1,5-4H	E25MF14X1,5-6G	E25MF14X1,5-7G	E25MF14X1,5+0,1
	16	1,5	100	22	12	9	4	14,5	E25MF16X1,5-4H	E25MF16X1,5-6G	E25MF16X1,5-7G	E25MF16X1,5+0,1

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10
M	Acciaio inox - Stainless steel - Acier inoxydable				
K	Ghisa - Cast iron - Fonte				
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15		

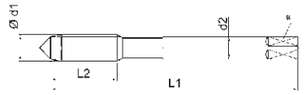
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

MF

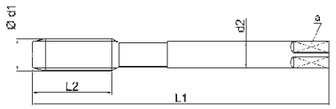
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

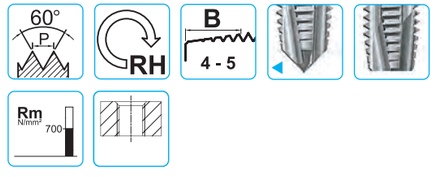
DIN13 | AL-CU-FE | ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER

DIN 374 d1 ≤ M10



DIN 374 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD			
Materiale - Tool Material - Substrat	HSSE			
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H			
Trattamento superficiale - Surface treatment - Revêtement				

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	6	0,75	80	16	4,5	3,4	2	5,25	E25MF6X0,75AL
◀	8	1	90	18	6	4,9	2	7	E25MF8X1AL
◀	10	1	90	15	7	5,5	2	9	E25MF10X1AL
◀	10	1,25	100	20	7	5,5	2	8,75	E25MF10X1,25AL
	12	1,25	100	22	9	7	3	10,75	E25MF12X1,25AL
	12	1,5	100	22	9	7	3	10,5	E25MF12X1,5AL
	14	1,5	100	22	11	9	3	12,5	E25MF14X1,5AL
	16	1,5	100	22	12	9	3	14,5	E25MF16X1,5AL

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min		
P	Acciaio dolce magnetico - Magnetic soft steel - Acier doux magnétique - Rm <400 N/mm²	◑1.1 10-15		
N	Leghe di Allumino - Al alloys - Alliage Al	•4.1 10-15	•4.2 15-20	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15	
S	Titanio puro - Pure titanium - Titane pur	•6.1 5-8		
S	Nichel puro - Pure nickel - Nickel pure	•7.1 6-8		
N	Materiali termoplastici – Thermoplastics - Thermoplastiques Truciolo lungo - Long chipping - Copeaux longue	•8.1 20-25		

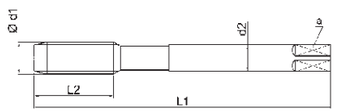
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

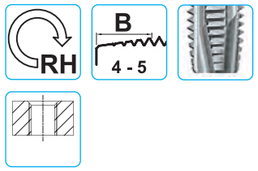
MF

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

DIN13 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 374





s-plus NEW

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD		3xD
Materiale - Tool Material - Substrat	PM3	PM3		HSSP
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX		ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement	XP	XP		TiN-G

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
8	**1**	90	18	6	4,9	3	7		K25MF8X1XP	K25MF8X1FORY-XP		P25MF8X1TG
10	**1**	90	15	7	5,5	4	9		K25MF10X1XP	K25MF10X1FORY-XP		P25MF10X1TG
10	**1,25**	100	20	7	5,5	3	8,75		K25MF10X1,25XP	K25MF10X1,25FORY-XP		P25MF10X1,25TG
12	**1**	100	22	9	7	4	11		-	-		P25MF12X1TG
12	**1,25**	100	22	9	7	4	10,75		-	-		P25MF12X1,25TG
12	**1,5**	100	22	9	7	4	10,5		K25MF12X1,5XP	K25MF12X1,5FORY-XP		P25MF12x1,5TG
14	**1,5**	100	22	11	9	4	12,5		K25MF14X1,5XP	K25MF14X1,5FORY-XP		P25MF14X1,5TG
16	**1,5**	100	22	12	9	4	14,5		K25MF16X1,5XP	K25MF16X1,5FORY-XP		P25MF16X1,5TG
18	**1,5**	110	25	14	11	4	16,5		K25MF18X1,5XP	K25MF18X1,5FORY-XP		P25MF18X1,5TG
20	**1,5**	125	25	16	12	4	18,5		K25MF20X1,5XP	K25MF20X1,5FORY-XP		P25MF20X1,5TG
22	**1,5**	125	25	18	14,5	4	20,5		K25MF22X1,5XP	K25MF22X1,5FORY-XP		P25MF22X1,5TG
24	**1,5**	140	25	18	14,5	4	22,5		K25MF24X1,5XP	K25MF24X1,5FORY-XP		P25MF24X1,5TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min										
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	○1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12			•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.5 5-12
M	Acciaio INOX - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8								
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20						•3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25						•4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25							•5.2 20-25			

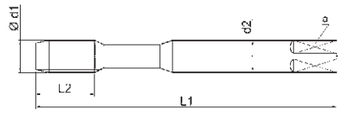
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

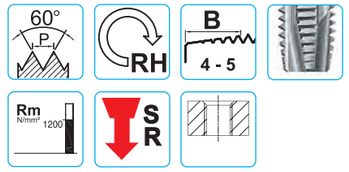
MF

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

DIN13 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

UFS Norm





Profondità di filettatura - Thread depth - Prof. de filetage	3xD			
Materiale - Tool Material - Substrat	PM3			
Tolleranza - Thread tolerance - Tolérance du filetage	6HX			
Trattamento superficiale - Surface treatment - Revêtement	TXC			

UFS Norm	Ød1 MF	P mm	L_1	L_2	d_2 h6	a h12	Z		CODE
8	**1**	90	13	8	6,2	3	7		S24MF8X1TXC
10	**1**	100	15	10	8	3	9		S24MF10X1TXC
10	**1,25**	100	15	10	8	3	8,75		S24MF10X1,25TXC
12	**1,25**	110	18	12	9	3	10,75		S24MF12X1,25TXC
12	**1,5**	110	18	12	9	3	10,5		S24MF12X1,5TXC
14	**1,5**	110	20	12	9	3	12,5		S24MF14X1,5TXC
16	**1,5**	110	20	16	12	4	14,5		S24MF16X1,5TXC

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.1 40-45	•1.2 40-45	•1.3 35-40	•1.4 25-30	•1.5 10-15	
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 20-25	•2.2 15-20	•2.3 10-15	•2.3 10-12		
K	Ghisa - Cast iron - Fonte	•3.3 20-25	•3.4 25-30				
N	Leghe di Allumino – Al alloys - Alliage Al Si < 10%	•4.1 30-40	•4.2 45-50	•4.3 30-40			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.1 20-25	•5.2 25-30				
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<900 N/mm²	•6.1 20-30	○6.2 12-15				
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.1 20-30	○7.2 8-12				

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

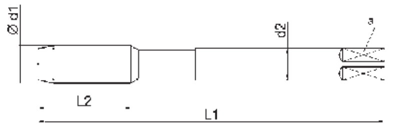
MF

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

TOP UFS

DIN13 | HR | ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

DIN 374



60° P | RH | B 4 - 5 | Rm N/mm² 1400 1200

Profondità di filettatura - Thread depth - Prof. de filetage	3xD
Materiale - Tool Material - Substrat	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX
Trattamento superficiale - Surface treatment - Revêtement	TXC

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
8	1	90	18	6	4,9	3	7		K25MF8X1TXC
10	1	90	15	7	5,5	3	9		K25MF10X1TXC
10	1,25	100	20	7	5,5	3	8,75		K25MF10X1,25TXC
12	1,25	100	22	9	7	4	10,75		K25MF12X1,25TXC
12	1,5	100	22	9	7	4	10,5		K25MF12X1,5TXC
14	1,5	100	22	11	9	4	12,5		K25MF14X1,5TXC
16	1,5	100	22	12	9	4	14,5		K25MF16X1,5TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio - Steel - Acier - Rm < 1400 N/mm²	•1.5 5-12	•1.6 5-8
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	❍4.4 25-30	
N	Ottone a truciolo corto - Hard brass short chipping Laiton coupeaux courts	•5.3 25-30	

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

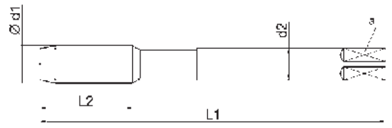
MF

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

TOP UFS | UFS LINE

DIN13 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 374



60° P | RH | B 4 - 5 | Rm N/mm² 1400

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSV3	HSSV3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	VS	TXC	TXC

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
8	1	90	18	6	4,9	3	7		V25MF8X1VS	V25MF8X1TXC	K25MF8X1X-TXC
10	1	90	15	7	5,5	3	9		V25MF10X1VS	V25MF10X1TXC	K25MF10X1X-TXC
10	1,25	100	20	7	5,5	3	8,75		V25MF10X1,25VS	V25MF10X1,25TXC	K25MF10X1,25X-TXC
12	1,25	100	22	9	7	4	10,75		V25MF12X1,25VS	V25MF12X1,25TXC	K25MF12X1,25X-TXC
12	1,5	100	22	9	7	4	10,5		V25MF12X1,5VS	V25MF12X1,5TXC	K25MF12X1,5X-TXC
14	1,5	100	22	11	9	4	12,5		V25MF14X1,5VS	V25MF14X1,5TXC	K25MF14X1,5X-TXC
16	1,5	100	22	12	9	4	14,5		V25MF16X1,5VS	V25MF16X1,5TXC	K25MF16X1,5X-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm < 1400 N/mm²	•1.1 10-15	•1.2 10-15			•1.3 20-25	•1.4 15-20	❍1.5 5-12		•1.3 20-25	•1.4 15-20	•1.5 5-12	❍1.6 5-8
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 6-8	•2.2 5-7	•2.3 3-5		•2.1 10-15	•2.2 8-10	•2.3 6-8	❍2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	•2.4 3-6

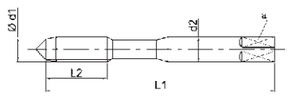
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

MF

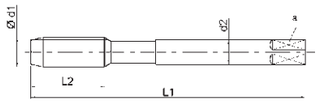
MASCHI A MACCHINA - Elica 15° sinistra per fori passanti
MACHINE TAPS - Left-hand spiral flutes 15° for through holes
TARAUDS MACHINE - Goujures 15° hélicoïdales à gauche pour trous débouchant

DIN13 | Ti | TITANIO - TITANIUM - TITANE

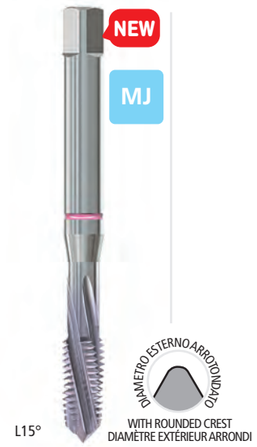
DIN 371 d1 ≤ M10



DIN 374 d1 ≥ M12



60° P RH D 4 - 5 Rm N/mm² 1400 AVIO



Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	4H		
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN		

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	8	1	90	18	8	6,2	3	*7	K52MF8X1CT	K52MJF8X1CT
◀	10	1	90	15	10	8	3	*9	K52MF10X1CT	K52MJF10X1CT
◀	10	1,25	100	20	10	8	3	*8,75	K52MF10X1,25CT	K52MJF10X1,25CT

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	12	1,25	100	22	9	7	3	*10,75	K53MF12X1,25CT
	12	1,5	100	22	9	7	3	*10,5	K53MF12X1,5CT

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²	•1.6 5-8	
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²	•2.4 3-6	
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	◦4.4 25-30	
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze	•5.3 25-30	◦5.4 5-8
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<1400 N/mm²	•6.2 4-8	•6.3 2-4
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.2 2-4	

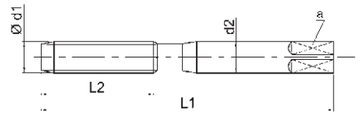
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MF

MASCHI A MACCHINA - Elica 10° sinistra per fori passanti
MACHINE TAPS - Left-hand spiral flutes 10° for through holes
TARAUDS MACHINE - Goujures 10° hélicoïdales à gauche pour trous débouchant

DIN13 | Ni | NICHEL - NICKEL

UFS Norm



60° P RH D 4 - 5 Rm N/mm² 1600 AVIO

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	4H		
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN		

UFS Norm	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	8	1	90	25	8	6,2	3	*7	K52MF8X1NI-CT	K52MJF8X1NI-CT
	10	1	100	30	10	8	3	*9	K52MF10X1,25NI-CT	K52MJF10X1NI-CT
	10	1,25	100	30	10	8	3	*8,75	K52MF10X1NI-CT	K52MJF10X1,25NI-CT
	12	1,25	110	25	12	9	3	*10,75	K52MF12X1,25NI-CT	-
	12	1,5	110	25	12	9	3	*10,5	K52MF12X1,5NI-CT	-

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min		
P	Acciaio – Steel – Acier - Rm ≤ 1600 N/mm²	◦1.6 5-8	•1.7 1-3	
N	Bronzo ad alta resistenza - High strength bronze - Bronze haute résistance Rm<1500 N/mm²	•5.4 5-8		
S	Leghe di Nichel - Nickel alloys - Alliages de nickel Rm<1600 N/mm²	◦7.2 2-4	•7.3 1-3	

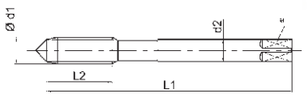
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MF

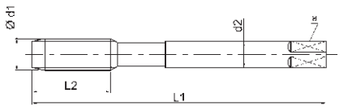
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

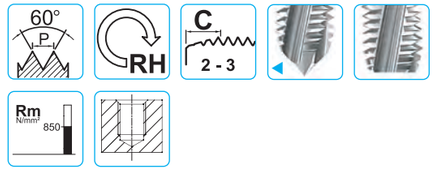
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374 d1 = M6



DIN 374 d1 ≥ M8





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	1,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	TiN

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◄	6	0,75	80	16	4,5	3,4	3	5,25	E41MF6X0,75	E41MF6X0,75V	E41MF6X0,75T	-
	8	0,75	90	18	6	4,9	3	7,25	E41MF8X0,75SP	E41MF8X0,75SP-V	E41MF8X0,75SP-T	-
	8	1	90	18	6	4,9	3	7	E41MF8X1SP	E41MF8X1SP-V	E41MF8X1SP-T	E41MF8X1FOR-T
	10	0,75	90	15	7	5,5	3	9,15	E41MF10X0,75SP	E41MF10X0,75SP-V	E41MF10X0,75SP-T	-
	10	1	90	15	7	5,5	3	9	E41MF10X1SP	E41MF10X1SP-V	E41MF10X1SP-T	E41MF10X1FOR-T
	10	1,25	100	20	7	5,5	3	8,75	E41MF10X1,25SP	E41MF10X1,25SP-V	E41MF10X1,25SP-T	E41MF10X1,25FOR-T
	11	1,25	100	20	8	6,2	3	9,75	E41MF11X1,25	E41MF11X1,25V	E41MF11X1,25T	-
	12	1	100	22	9	7	3	11	E41MF12X1	E41MF12X1V	E41MF12X1T	-
	12	1,25	100	22	9	7	3	10,75	E41MF12X1,25	E41MF12X1,25V	E41MF12X1,25T	E41MF12X1,25FOR-T
	12	1,5	100	22	9	7	3	10,5	E41MF12X1,5	E41MF12X1,5V	E41MF12X1,5T	E41MF12X1,5FOR-T
	14	1	100	22	11	9	3	13	E41MF14X1	E41MF14X1V	E41MF14X1T	-
	14	1,25	100	22	11	9	3	12,75	E41MF14X1,25	E41MF14X1,25V	E41MF14X1,25T	-
	14	1,5	100	22	11	9	3	12,5	E41MF14X1,5	E41MF14X1,5V	E41MF14X1,5T	E41MF14X1,5FOR-T
	16	1	100	22	12	9	3	15	E41MF16X1	E41MF16X1V	E41MF16X1T	-
	16	1,25	100	22	12	9	3	14,75	E41MF16X1,25	E41MF16X1,25V	E41MF16X1,25T	-
	16	1,5	100	22	12	9	3	14,5	E41MF16X1,5	E41MF16X1,5V	E41MF16X1,5T	E41MF16X1,5FOR-T
	18	1	110	25	14	11	4	17	E41MF18X1	E41MF18X1V	E41MF18X1T	-
	18	1,5	110	25	14	11	4	16,5	E41MF18X1,5	E41MF18X1,5V	E41MF18X1,5T	E41MF18X1,5FOR-T
	20	1	125	25	16	12	4	19	E41MF20X1	E41MF20X1V	E41MF20X1T	-
	20	1,5	125	25	16	12	4	18,5	E41MF20X1,5	E41MF20X1,5V	E41MF20X1,5T	E41MF20X1,5FOR-T

Segue diametri / Diameters continue / Diamètres à suivre

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable																
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			○5.1 15-20	•5.2 20-25		

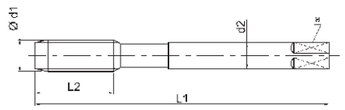
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

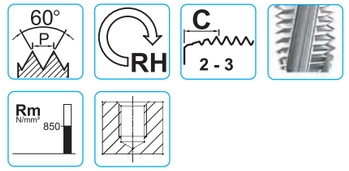
MF

MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	1,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	TiN

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	22	1,5	125	25	18	14,5	4	20,5	E41MF22X1,5	E41MF22X1,5V	E41MF22X1,5T	E41MF22X1,5FOR-T
	24	1	140	25	18	14,5	4	23	E41MF24X1	E41MF24X1V	E41MF24X1T	-
	24	1,5	140	25	18	14,5	4	22,5	E41MF24X1,5	E41MF24X1,5V	E41MF24X1,5T	E41MF24X1,5FOR-T
	24	2	140	25	18	14,5	4	22	E41MF24X2	E41MF24X2V	E41MF24X2T	-
	25	1	140	25	18	14,5	4	24	E41MF25X1	E41MF25X1V	E41MF25X1T	-
	25	1,5	140	25	18	14,5	4	23,5	E41MF25X1,5	E41MF25X1,5V	E41MF25X1,5T	-
	26	1	140	25	18	14,5	4	25	E41MF26X1	E41MF26X1V	E41MF26X1T	-
	26	1,5	140	25	18	14,5	4	24,5	E41MF26X1,5	E41MF26X1,5V	E41MF26X1,5T	E41MF26X1,5FOR-T
	27	2	140	25	20	16	4	25	E41MF27X2	E41MF27X2V	E41MF27X2T	-
	28	1,5	140	25	20	16	4	26,5	E41MF28X1,5	E41MF28X1,5V	E41MF28X1,5T	E41MF28X1,5FOR-T
	30	1	150	28	22	18	4	29	E41MF30X1	E41MF30X1V	E41MF30X1T	-
	30	1,5	150	28	22	18	4	28,5	E41MF30X1,5	E41MF30X1,5V	E41MF30X1,5T	-
	30	2	150	28	22	18	4	28	E41MF30X2	E41MF30X2V	E41MF30X2T	-
	36	2	170	30	28	22	5	34	E41MF36X2	-	-	-
	42	2	170	30	32	24	6	40	E41MF42X2	-	-	-
■	45	1,5	180	32	36	29	6	43,5	E41MF45X1,5	-	-	-
■	48	1,5	190	32	36	29	6	46,5	E41MF48X1,5	-	-	-
■	48	2	190	32	36	29	6	46	E41MF48X2	-	-	-
■	48	3	220	65	36	29	6	45	E41MF48X3	-	-	-
■	56	4	220	65	40	32	6	52	E41MF56X4	-	-	-

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable																
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			○5.1 15-20	•5.2 20-25		

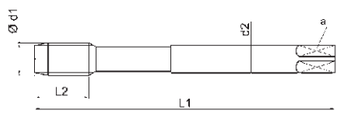
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

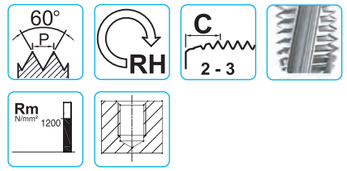
MF

MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

DIN13 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 374





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	2,5xD	3xD
Materiale - Tool Material - Substrat	HSSE-PM	HSSE-PM	HSSE-PM
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	XP	XP	XP

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
	8	1	90	13	6	4,9	3	7
	10	1	90	15	7	5,5	3	9
	10	1,25	100	15	7	5,5	3	8,75
	12	1,25	100	13	9	7	3	10,75
	12	1,5	100	13	9	7	3	10,5
	14	1,5	100	15	11	9	4	12,5
	16	1,5	100	15	12	9	4	14,5
	18	1,5	110	17	14	11	4	16,5
	20	1,5	125	17	16	12	4	18,5
	22	1,5	125	18	18	14,5	4	20,5
	24	1,5	140	20	18	14,5	4	22,5
	26	1,5	140	20	18	14,5	4	24,5
	28	1,5	140	20	20	16	4	26,5

CODE		
K41MF8X1XP	K41MF8X1FOR-XP	K45MF8X1FOR-XP
K41MF10X1XP	K41MF10X1FOR-XP	K45MF10X1FOR-XP
K41MF10X1,25XP	K41MF10X1,25FOR-XP	K45MF10X1,25FOR-XP
K41MF12X1,25XP	K41MF12X1,25FOR-XP	K45MF12X1,25FOR-XP
K41MF12X1,5XP	K41MF12X1,5FOR-XP	K45MF12X1,5FOR-XP
K41MF14X1,5XP	K41MF14X1,5FOR-XP	K45MF14X1,5FOR-XP
K41MF16X1,5XP	K41MF16X1,5FOR-XP	K45MF16X1,5FOR-XP
K41MF18X1,5XP	K41MF18X1,5FOR-XP	K45MF18X1,5FOR-XP
K41MF20X1,5XP	K41MF20X1,5FOR-XP	K45MF20X1,5FOR-XP
K41MF22X1,5XP	K41MF22X1,5FOR-XP	K45MF22X1,5FOR-XP
K41MF24X1,5XP	K41MF24X1,5FOR-XP	K45MF24X1,5FOR-XP
K41MF26X1,5XP	K41MF26X1,5FOR-XP	K45MF26X1,5FOR-XP
K41MF28X1,5XP	K41MF28X1,5FOR-XP	K45MF28X1,5FOR-XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.3 20-25	•1.4 15-20	•1.5 5-12	•1.6 5-8	•1.3 20-25	•1.4 15-20	•1.5 5-12	•1.6 5-8	•1.3 20-25	•1.4 15-20	•1.5 5-12	•1.6 5-8
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25			•3.3 15-20	•3.4 20-25						
N	Leghe di Allumino - Al alloys - Alliage Al - Si < 10% Truciolo medio - Medium chipping - Copeaux moyen	•4.3 20-25				•4.3 20-25							
S	Leghe di titanio - Titanium alloys - Alliage de titane Rm<900 N/mm²	•6.2 2-3				•6.2 2-3							
S	Leghe di Nichel - Nickel alloys - Alliages de nickel Rm<900 N/mm²	•7.2 2-3				•7.2 2-3							

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MJ UNJC UNJF AMS

DIAMETRO ESTERNO ARROTONDATO
WITH ROUNDED CREST
DIAMÈTRE EXTÉRIEUR ARRONDI

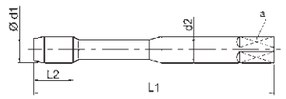
Ni | NICHEL - NICKEL

MF

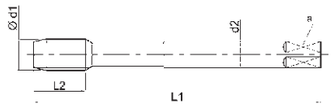
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

DIN13 | Ti | TITANIO - TITANIUM - TITANE

DIN 371 d1 ≤ M10



DIN 374 d1 ≥ M12



60° P | RH | C 2 - 3 | Rm N/mm² 1400 | AVIO

Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD
Materiale - Tool Material - Substrat	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	4H
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	8	**1**	90	13	8	6,2	3	*7	K42MF8X1CT	K42MJF8X1CT
	10	**1**	90	15	10	8	3	*9	K42MF10X1CT	K42MJF10X1CT
	10	**1,25**	100	15	10	8	3	*8,75	K42MF10X1,25CT	K42MJF10X1,25CT

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	**1,25**	100	13	9	7	4	*10,75	K43MF12X1,25CT	-
	12	**1,5**	100	13	9	7	4	*10,5	K43MF12X1,5CT	-
	14	**1,5**	100	15	11	9	4	*12,5	K43MF14X1,5CT	-
	16	**1,5**	100	15	12	9	4	*14,5	K43MF16X1,5CT	-

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²	•1.6 5-8	
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²	•2.4 3-6	
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	◦4.4 25-30	
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze	•5.3 25-30	◦5.4 5-8
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<1400 N/mm²	•6.2 4-8	•6.3 2-4
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.2 2-4	

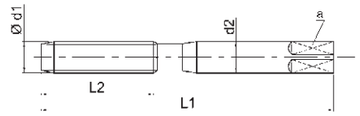
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MF

MASCHI A MACCHINA - Elica 10° destra per fori ciechi
MACHINE TAPS - Spiral flutes 10° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 10° pour trous borgnes

DIN13 | Ni | NICHEL - NICKEL

UFS Norm



60° P | RH | C 2 - 3 | Rm N/mm² 1600 | AVIO

RIDUZIONE DELL'ELICA
REDUCED HELIX
RÉDUCTION DE L'ANGLE D'HÉLICE

Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD
Materiale - Tool Material - Substrat	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	4H
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN

UFS Norm	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	8	**1**	90	25	8	6,2	3	*7	K42MF8X1NI-CT	K42MJF8X1NI-CT
	10	**1**	100	30	10	8	3	*9	K42MF10X1NI-CT	K42MJF10X1NI-CT
	10	**1,25**	100	30	10	8	3	*8,75	K42MF10X1,25NI-CT	K42MJF10X1,25NI-CT
	12	**1,25**	110	25	12	9	3	*10,75	K42MF12X1,25NI-CT	-
	12	**1,5**	110	25	12	9	3	*10,5	K42MF12X1,5NI-CT	-

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

* Diametri di preforo MJ a pag: 269 - Bore hole for thread MJ to page: 269 - Pour MJ voir le tableau de perçage page: 269

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio – Steel – Acier - Rm ≤ 1600 N/mm²	◦1.6 5-8	•1.7 1-3
N	Bronzo ad alta resistenza - High strength bronze - Bronze haute résistance Rm<1500 N/mm²	•5.4 5-8	
S	Leghe di Nichel - Nickel alloys - Alliages de nickel Rm<1600 N/mm²	◦7.2 2-4	•7.3 1-3

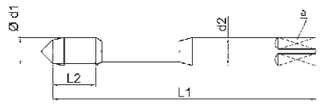
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MF

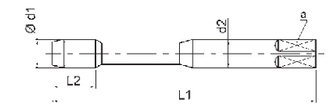
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

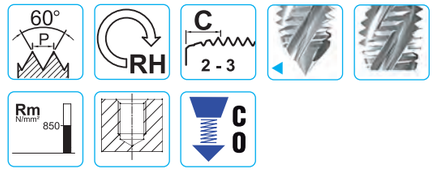
DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

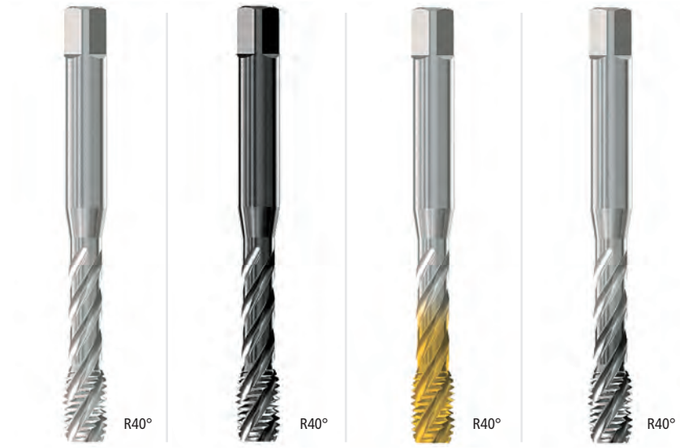
DIN 371 d1 ≤ M6



DIN 371 d1 ≥ M8







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
◄	4	0,75	63	7	4,5	3,4	3	3,5
◄	5	0,75	70	8	6	4,9	3	4,5
◄	6	0,75	80	10	6	4,9	3	5,25
	8	0,75	90	13	8	6,2	3	7,25
	8	1	90	13	8	6,2	3	7
	10	1	90	15	10	8	3	9
	10	1,25	100	15	10	8	3	8,75

CODE			
E60MF4X0,5	E60MF4X0,5V	E60MF4X0,5T	E60MF4X0,5XP
E60MF5X0,5	E60MF5X0,5V	E60MF5X0,5T	E60MF5X0,5XP
E60MF6X0,75	E60MF6X0,75V	E60MF6X0,75T	E60MF6X0,75XP
E60MF8X0,75	E60MF8X0,75V	E60MF8X0,75T	E60MF8X0,75XP
E60MF8X1	E60MF8X1V	E60MF8X1T	E60MF8X1XP
E60MF10X1	E60MF10X1V	E60MF10X1T	E60MF10X1XP
E60MF10X1,25	E60MF10X1,25V	E60MF10X1,25T	E60MF10X1,25XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			•5.2 20-25			

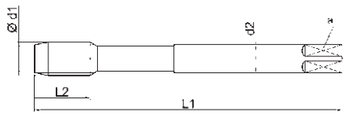
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

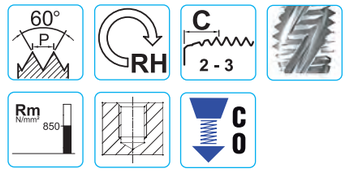
MF

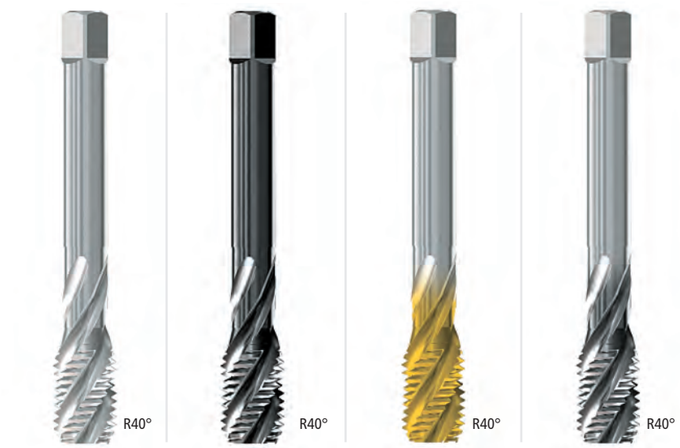
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
	8	1	90	13	6	4,9	3	7
	9	1	90	18	7	5,5	3	8
	10	1	90	15	7	5,5	3	9
	10	1,25	100	15	7	5,5	3	8,75
	12	1	100	13	9	7	3	11
	12	1,25	100	13	9	7	3	10,75
	12	1,5	100	13	9	7	3	10,5
	13	1	100	15	11	9	4	12
	14	1	100	15	11	9	4	13
	14	1,25	100	15	11	9	4	12,75
	14	1,5	100	15	11	9	4	12,5
	15	1	100	22	12	9	4	14
	16	1	100	15	12	9	4	15
	16	1,5	100	15	12	9	4	14,5
	17	1	110	25	14	11	4	16
	18	1	110	17	14	11	4	17
	18	1,5	110	17	14	11	4	16,5
	18	2	125	25	14	11	4	16

CODE			
E61MF8X1	E61MF8X1V	E61MF8X1T	E61MF8X1XP
E61MF9X1	E61MF9X1V	E61MF9X1T	E61MF9X1XP
E61MF10X1	E61MF10X1V	E61MF10X1T	E61MF10X1XP
E61MF10X1,25	E61MF10X1,25V	E61MF10X1,25T	E61MF10X1,25XP
E61MF12X1	E61MF12X1V	E61MF12X1T	E61MF12X1XP
E61MF12X1,25	E61MF12X1,25V	E61MF12X1,25T	E61MF12X1,25XP
E61MF12X1,5	E61MF12X1,5V	E61MF12X1,5T	E61MF12X1,5XP
E61MF13X1	E61MF13X1V	E61MF13X1T	E61MF13X1XP
E61MF14X1	E61MF14X1V	E61MF14X1T	E61MF14X1XP
E61MF14X1,25	E61MF14X1,25V	E61MF14X1,25T	E61MF14X1,25XP
E61MF14X1,5	E61MF14X1,5V	E61MF14X1,5T	E61MF14X1,5XP
E61MF15X1	E61MF15X1V	E61MF15X1T	E61MF15X1XP
E61MF16X1	E61MF16X1V	E61MF16X1T	E61MF16X1XP
E61MF16X1,5	E61MF16X1,5V	E61MF16X1,5T	E61MF16X1,5XP
E61MF17X1	E61MF17X1V	E61MF17X1T	E61MF17X1XP
E61MF18X1	E61MF18X1V	E61MF18X1T	E61MF18X1XP
E61MF18X1,5	E61MF18X1,5V	E61MF18X1,5T	E61MF18X1,5XP
E61MF18X2	E61MF18X2V	E61MF18X2T	E61MF18X2XP

Segue diametri / Diameters continue / Diamètres à suivre

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			•5.2 20-25			

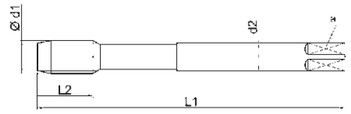
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

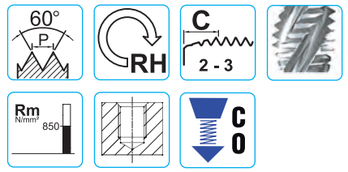
MF

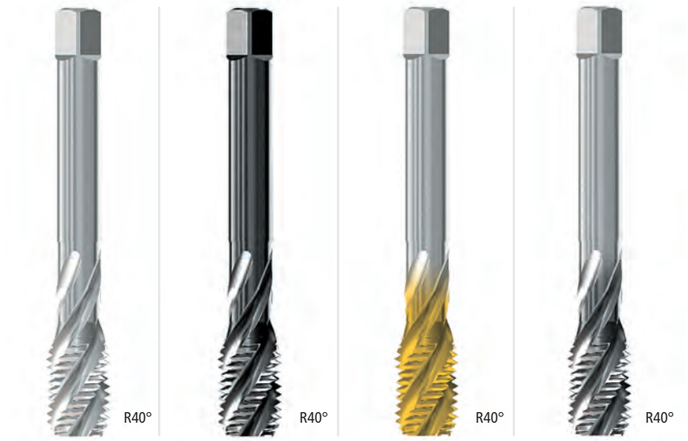
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	20	**1**	125	17	16	12	4	19	E61MF20X1	E61MF20X1V	E61MF20X1T	E61MF20X1XP
	20	**1,5**	125	17	16	12	4	18,5	E61MF20X1,5	E61MF20X1,5V	E61MF20X1,5T	E61MF20X1,5XP
	20	**2**	140	25	16	12	4	18	E61MF20X2	E61MF20X2V	E61MF20X2T	E61MF20X2XP
	22	**1,5**	125	18	18	14,5	4	20,5	E61MF22X1,5	E61MF22X1,5V	E61MF22X1,5T	E61MF22X1,5XP
	22	**2**	140	25	18	14,5	4	20	E61MF22X2	E61MF22X2V	E61MF22X2T	E61MF22X2XP
	24	**1**	140	20	18	14,5	4	23	E61MF24X1	E61MF24X1V	E61MF24X1T	E61MF24X1XP
	24	**1,5**	140	20	18	14,5	4	22,5	E61MF24X1,5	E61MF24X1,5V	E61MF24X1,5T	E61MF24X1,5XP
	24	**2**	140	20	18	14,5	4	22	E61MF24X2	E61MF24X2V	E61MF24X2T	-
	25	**1**	140	20	18	14,5	4	24	E61MF25X1	E61MF25X1V	E61MF25X1T	-
	25	**1,5**	140	20	18	14,5	4	23,5	E61MF25X1,5	E61MF25X1,5V	E61MF25X1,5T	-
	26	**1,5**	140	20	18	14,5	4	24,5	E61MF26X1,5	E61MF26X1,5V	E61MF26X1,5T	-
	27	**1,5**	140	20	20	16	4	25,5	E61MF27X1,5	E61MF27X1,5V	E61MF27X1,5T	-
	27	**2**	140	20	20	16	4	25	E61MF27X2	E61MF27X2V	E61MF27X2T	-
	28	**1,5**	140	20	20	16	4	26,5	E61MF28X1,5	E61MF28X1,5V	E61MF28X1,5T	-
	30	**1,5**	150	22	22	18	4	28,5	E61MF30X1,5	E61MF30X1,5V	E61MF30X1,5T	-
	30	**2**	150	22	22	18	4	28	E61MF30X2	E61MF30X2V	E61MF30X2T	-
	32	**1,5**	150	22	22	18	5	30,5	E61MF32X1,5	E61MF32X1,5V	E61MF32X1,5T	-
	32	**2**	150	22	22	18	5	30	E61MF32X2	E61MF32X2V	E61MF32X2T	-

Segue diametri / Diameters continue / Diamètres à suivre

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			•5.2 20-25			

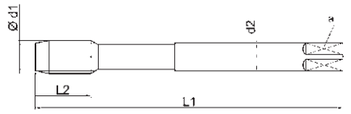
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

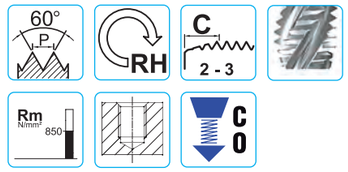
MF

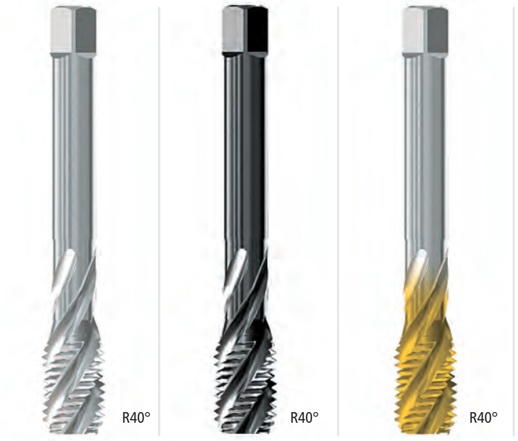
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	TiN

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	33	**2**	160	24	25	20	5	31	E61MF33X2	E61MF33X2V	E61MF33X2T
	33	**3**	180	35	25	20	4	30	E61MF33X3	E61MF33X3V	E61MF33X3T
	36	**1,5**	170	24	28	22	5	34,5	E61MF36X1,5	E61MF36X1,5V	E61MF36X1,5T
	36	**2**	170	24	28	22	5	34	E61MF36X2	E61MF36X2V	E61MF36X2T
	36	**3**	200	40	28	22	4	33	E61MF36X3	E61MF36X3V	E61MF36X3T
	39	**3**	200	40	32	24	4	36	E61MF39X3	E61MF39X3V	E61MF39X3T
	42	**2**	170	25	32	24	6	40	E61MF42X2	E61MF42X2V	E61MF42X2T
	42	**3**	200	40	32	24	5	39	E61MF42X3	E61MF42X3V	E61MF42X3T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable												
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25		

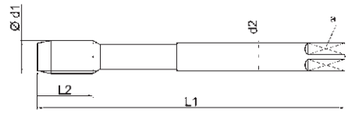
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

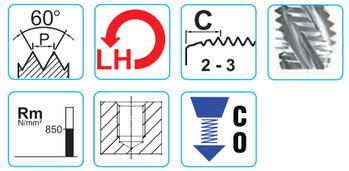
MF

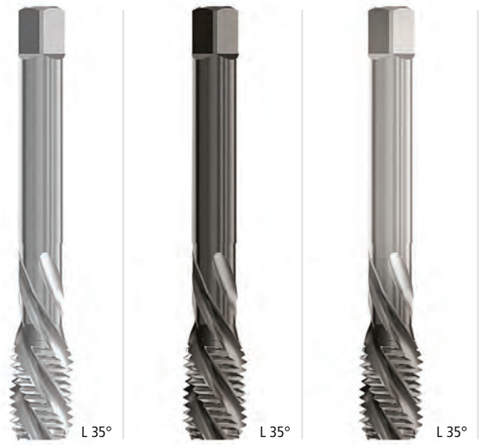
MASCHI A MACCHINA - Elicoidali 35° per fori ciechi filettatura sinistra
MACHINE TAPS - Spiral flutes 35° for blind holes left thread
TARAUDS MACHINE - Goujures hélicoïdales 35° pour trous borgnes filetage à gauche

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO2/6H	ISO2/6H	ISO2/6H
Trattamento superficiale - Surface treatment - Revêtement		V	XP

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
	8	**1**	90	13	6	4,9	3	7
	10	**1**	90	15	7	5,5	3	9
	10	**1,25**	100	15	7	5,5	3	8,75
	12	**1,25**	100	13	9	7	3	10,75
	12	**1,5**	100	13	9	7	3	10,5
	14	**1,5**	100	15	11	9	4	12,5
	16	**1,5**	100	15	12	9	4	14,5

CODE		
E61MF8X1LH	E61MF8X1LH-V	E61MF8X1LH-XP
E61MF10X1LH	E61MF10X1LH-V	E61MF10X1LH-XP
E61MF10X1,25LH	E61MF10X1,25LH-V	E61MF10X1,25LH-XP
E61MF12X1,25LH	E61MF12X1,25LH-V	E61MF12X1,25LH-XP
E61MF12X1,5LH	E61MF12X1,5LH-V	E61MF12X1,5LH-XP
E61MF14X1,5LH	E61MF14X1,5LH-V	E61MF14X1,5LH-XP
E61MF16X1,5LH	E61MF16X1,5LH-V	E61MF16X1,5LH-XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min												
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	
M	Acciaio inox - Stainless steel - Acier inoxydable									◑2.1 10-15	◑2.2 8-10			
K	Ghisa - Cast iron - Fonte									◑3.3 10-15	•3.4 15-20			
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			•4.2 25-30	◑4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.1 8-12	•5.2 10-15			•5.2 20-25				

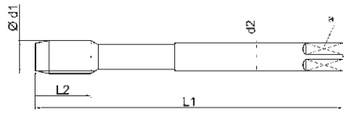
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

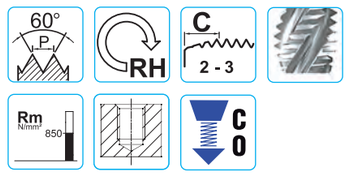
MF

MASCHI A MACCHINA - Elicoidali 40° per fori ciechi tolleranza 6G e 6H+0,1
MACHINE TAPS - Spiral flutes 40° for blind holes tolerance 6G and 6H+0,1
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes tolérance 6G et 6H+0,1

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374





Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO3/6G	ISO3/6G	6H+0,1	6H+0,1
Trattamento superficiale - Surface treatment - Revêtement		XP		XP

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
	8	**1**	90	13	6	4,9	3	7
	10	**1**	90	15	7	5,5	3	9
	10	**1,25**	100	15	7	5,5	3	8,75
	12	**1,25**	100	13	9	7	3	10,75
	12	**1,5**	100	13	9	7	3	10,5
	14	**1,5**	100	15	11	9	4	12,5
	16	**1,5**	100	15	12	9	4	14,5

CODE			
E61MF8X1-6G	E61MF8X1XP-6G	E61MF8X1+0,1	E61MF8X1XP+0,1
E61MF10X1-6G	E61MF10X1XP-6G	E61MF10X1+0,1	E61MF10X1XP+0,1
E61MF10X1,25-6G	E61MF10X1,25XP-6G	E61MF10X1,25+0,1	E61MF10X1,25XP+0,1
E61MF12X1,25-6G	E61MF12X1,25XP-6G	E61MF12X1,25+0,1	E61MF12X1,25XP+0,1
E61MF12X1,5-6G	E61MF12X1,5XP-6G	E61MF12X1,5+0,1	E61MF12X1,5XP+0,1
E61MF14X1,5-6G	E61MF14X1,5XP-6G	E61MF14X1,5+0,1	E61MF14X1,5XP+0,1
E61MF16X1,5-6G	E61MF16X1,5XP-6G	E61MF16X1,5+0,1	E61MF16X1,5XP+0,1

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min												
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable					◑2.1 10-15	◑2.2 8-10							◑2.1 10-15	◑2.2 8-10		
K	Ghisa - Cast iron - Fonte					◑3.3 10-15	•3.4 15-20							◑3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.2 25-30	◑4.3 20-25			◑4.1 10-15	•4.2 15-20			•4.2 25-30	◑4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.2 20-25				◑5.1 8-12	◑5.2 10-15			•5.2 20-25			

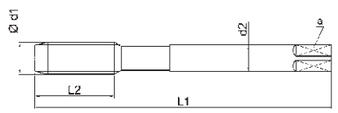
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

MF

MASCHI A MACCHINA - Elica destra a 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

DIN13 | AL-CU-FE | ALLUMINIO, RAME, FERRO - ALUMINIUM, COPPER, IRON - ALUMINIUM, CUIVRE, FER

DIN 374



Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**				
Materiale - Tool Material - Substrat	**HSSE**				
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**				
Trattamento superficiale - Surface treatment - Revêtement					

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	CODE
8	**1**	90	18	6	4,9	2	7	E71MF8X1SP
10	**1**	90	15	7	5,5	2	9	E71MF10X1SP
10	**1,25**	100	20	7	5,5	2	8,75	E71MF10X1,25SP
12	**1**	100	22	9	7	3	11	E71MF12X1
12	**1,25**	100	22	9	7	3	10,75	E71MF12X1,25
12	**1,5**	100	22	9	7	3	10,5	E71MF12X1,5
14	**1,5**	100	22	11	9	3	12,5	E71MF14X1,5
16	**1,5**	100	22	12	9	3	14,5	E71MF16X1,5

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio dolce magnetico - Magnetic soft steel - Acier doux magnétique - Rm <400 N/mm²	•1.1 10-15
N	Leghe di Allumino - Al alloys - Alliage Al	•4.1 10-15 · •4.2 15-20
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12 · •5.2 10-15
S	Titanio puro - Pure titanium - Titane pur	•6.1 5-8
S	Nichel puro - Pure nickel - Nickel pure	•7.1 6-8
N	Materiali termoplastici - Thermoplastics - Thermoplastiques Truciolo lungo - Long chipping - Copeaux longue	•8.1 20-25

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

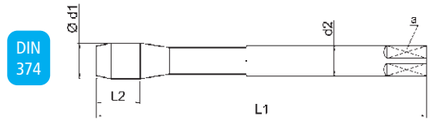
MF

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

CSC CHIP SYSTEM CONTROL

DIN13 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 374



Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**	**3xD**	**3xD**
Materiale - Tool Material - Substrat	**HSSE-PM**	**HSSE-PM**	**HSSE-PM**
Tolleranza - Thread tolerance - Tolérance du filetage	**6HX**	**6HX**	**6HX**
Trattamento superficiale - Surface treatment - Revêtement		**V**	**TiN-G**

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	CODE		
8	**1**	90	13	6	4,9	3	7	E93MF8X1	E93MF8X1V	E93MF8X1TG
10	**1**	90	15	7	5,5	3	9	E93MF10X1	E93MF10X1V	E93MF10X1TG
10	**1,25**	100	15	7	5,5	3	8,75	E93MF10X1,25	E93MF10X1,25V	E93MF10X1,25TG
12	**1**	100	13	9	7	3	11	E93MF12X1	E93MF12X1V	E93MF12X1TG
12	**1,25**	100	13	9	7	3	10,75	E93MF12X1,25	E93MF12X1,25V	E93MF12X1,25TG
12	**1,5**	100	13	9	7	3	10,5	E93MF12X1,5	E93MF12X1,5V	E93MF12X1,5TG
14	**1,5**	100	15	11	9	4	12,5	E93MF14X1,5	E93MF14X1,5V	E93MF14X1,5TG
16	**1,5**	100	15	12	9	4	14,5	E93MF16X1,5	E93MF16X1,5V	E93MF16X1,5TG
18	**1,5**	110	17	14	11	4	16,5	E93MF18X1,5	E93MF18X1,5V	E93MF18X1,5TG
20	**1,5**	125	17	16	12	4	18,5	E93MF20X1,5	E93MF20X1,5V	E93MF20X1,5TG
22	**1,5**	125	18	18	14,5	4	20,5	E93MF22X1,5	E93MF22X1,5V	E93MF22X1,5TG
24	**1,5**	140	20	18	14,5	4	22,5	E93MF24X1,5	E93MF24X1,5V	E93MF24X1,5TG

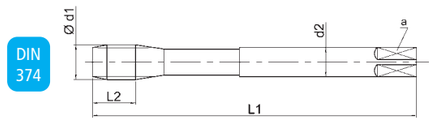
ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	◦1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ◦1.4 8-10 · •1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ◦1.4 8-10 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20 · ◦1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 6-8 · •2.2 5-7
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 15-20 · •4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12 · •5.2 10-15 · •5.2 20-25

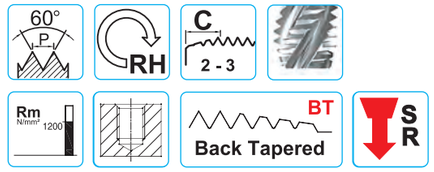
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MF

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

DIN13 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	
Materiale - Tool Material - Substrat	PM3	PM3	
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	
Trattamento superficiale - Surface treatment - Revêtement	XP	XP	

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
8	**1**	90	13	6	4,9	3	7		K83MF8X1XP	K83MF8X1FOR-XP
10	**1**	90	15	7	5,5	3	9		K83MF10X1XP	K83MF10X1,25FOR-XP
10	**1,25**	100	15	7	5,5	3	8,75		K83MF10X1,25XP	K83MF10X1FOR-XP
12	**1**	100	13	9	7	4	11		K83MF12X1XP	K83MF12X1,25FOR-XP
12	**1,25**	100	13	9	7	4	10,75		K83MF12X1,25XP	K83MF12X1,5FOR-XP
12	**1,5**	100	13	9	7	4	10,5		K83MF12X1,5XP	K83MF12X1FOR-XP
14	**1,5**	100	15	11	9	4	12,5		K83MF14X1,5XP	K83MF14X1,5FOR-XP
16	**1,5**	100	15	12	9	4	14,5		K83MF16X1,5XP	K83MF16X1,5FOR-XP
18	**1,5**	110	17	14	11	4	16,5		K83MF18X1,5XP	K83MF18X1,5FOR-XP
20	**1,5**	125	17	16	12	4	18,5		K83MF20X1,5XP	K83MF20X1,5FOR-XP
22	**1,5**	125	18	18	14,5	4	20,5		K83MF22X1,5XP	K83MF22X1,5FOR-XP
24	**1,5**	140	20	18	14,5	4	22,5		K83MF24X1,5XP	K83MF24X1,5FOR-XP

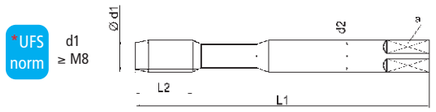
ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	◦1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20 · •1.5 5-12
M	Acciaio INOX - Stainless steel - Acier inoxydable	•2.1 10-15 · •2.2 8-10 · •2.3 6-8
K	Ghisa - Cast iron - Fonte	•3.3 10-15 · •3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30 · •4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25

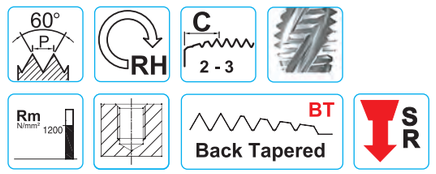
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

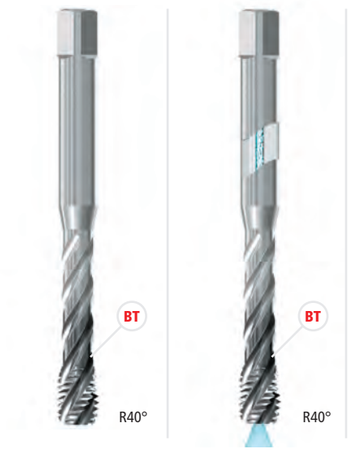
MF

MASCHI A MACCHINA - Elicoidali 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

DIN13 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	3xD	
Materiale - Tool Material - Substrat	PM3	PM3	
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC	

UFS norm	Ød1 MF	P mm	L_1	L_2	d_2 h6	a h12	Z		CODE	
8	**1**	90	13	8	6,2	3	7		S80MF8X1TXC	S80MF8X1FOR-TXC
10	**1**	100	15	10	8	3	9		S80MF10X1TXC	S80MF10X1FOR-TXC
10	**1,25**	100	15	10	8	3	8,75		S80MF10X1,25TXC	S80MF10X1,25FOR-TXC
12	**1,25**	110	18	12	9	3	10,75		S80MF12X1,25TXC	S80MF12X1,25FOR-TXC
12	**1,5**	110	18	12	9	3	10,5		S80MF12X1,5TXC	S80MF12X1,5FOR-TXC
14	**1,5**	110	20	12	9	4	12,5		S80MF14X1,5TXC	S80MF14X1,5FOR-TXC
16	**1,5**	110	20	16	12	4	14,5		S80MF16X1,5TXC	S80MF16X1,5FOR-TXC

* Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.1 40-50 · •1.2 40-50 · •1.3 35-40 · •1.4 25-30 · •1.5 10-15
M	Acciaio INOX - Stainless steel - Acier inoxydable	•2.1 20-25 · •2.2 15-20 · •2.3 10-15 · •2.4 10-12
K	Ghisa - Cast iron - Fonte	•3.3 20-25 · •3.4 25-30
N	Leghe di Allumino - Al alloys - Alliage Al Si < 10%	•4.1 30-40 · •4.2 45-50 · •4.3 30-40
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.1 20-25 · •5.2 25-30
S	Leghe di Titanio Titanium alloys - Alliage de Titane Rm<900 N/mm²	•6.1 20-30 · ◦6.2 12-15
S	Leghe di Nichel - Nickel alloys - Alliages de Nickel Rm<900 N/mm²	•7.1 20-30 · ◦7.2 8-12

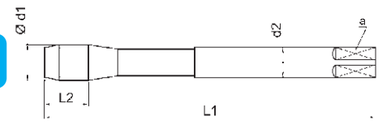
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

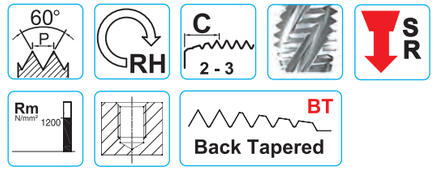
MF

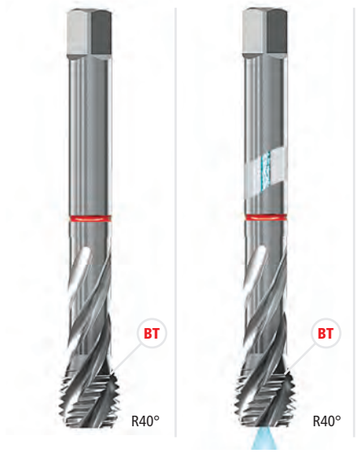
MASCHI A MACCHINA - Elicoidali 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

DIN13 | HR | ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

DIN 374







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	3xD
Materiale - Tool Material - Substrat	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
8	**1**	90	13	6	4,9	3	7		K81MF8X1TXC	K81MF8X1FOR-TXC
10	**1**	90	15	7	5,5	3	9		K81MF10X1TXC	K81MF10X1FOR-TXC
10	**1,25**	100	15	7	5,5	3	8,75		K81MF10X1,25TXC	K81MF10X1,25FOR-TXC
12	**1,25**	100	13	9	7	4	10,75		K81MF12X1,25TXC	K81MF12X1,25FOR-TXC
12	**1,5**	100	13	9	7	4	10,5		K81MF12X1,5TXC	K81MF12X1,5FOR-TXC
14	**1,5**	100	15	11	9	4	12,5		K81MF14X1,5TXC	K81MF14X1,5FOR-TXC
16	**1,5**	100	15	12	9	4	14,5		K81MF16X1,5TXC	K81MF16X1,5FOR-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.4 15-20	•1.5 5-12
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25

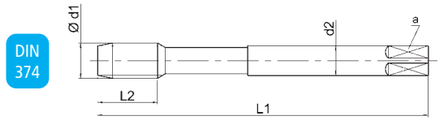
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

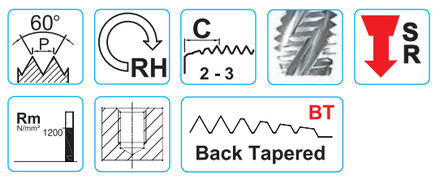
MF

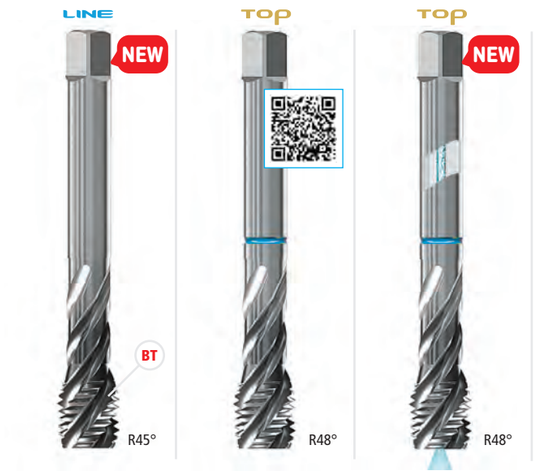
MASCHI A MACCHINA - Elicoidali 45°/48° per fori ciechi
MACHINE TAPS - Spiral flutes 45°/48° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45°/48° pour trous borgnes

DIN13 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 374







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	3,5xD
Materiale - Tool Material - Substrat	HSSE	HSSV3	HSSV3
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	VS	TXC	TXC

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
8	**1**	90	13	6	4,9	3	7		E93MF8X1VS	V83MF8X1TXC	V83MF8X1FOR-TXC
10	**1**	90	15	7	5,5	3	9		E93MF10X1VS	V83MF10X1TXC	V83MF10X1FOR-TXC
10	**1,25**	100	15	7	5,5	3	8,75		E93MF10X1,25VS	V83MF10X1,25TXC	V83MF10X1,25FOR-TXC
12	**1**	100	13	9	7	4	11		E93MF12X1VS	V83MF12X1TXC	-
12	**1,25**	100	13	9	7	4	10,75		E93MF12X1,25VS	V83MF12X1,25TXC	V83MF12X1,25FOR-TXC
12	**1,5**	100	13	9	7	4	10,5		E93MF12X1,5VS	V83MF12X1,5TXC	V83MF12X1,5FOR-TXC
14	**1,5**	100	15	11	9	4	12,5		E93MF14X1,5VS	V83MF14X1,5TXC	V83MF14X1,5FOR-TXC
16	**1,5**	100	15	12	9	4	14,5		E93MF16X1,5VS	V83MF16X1,5TXC	V83MF16X1,5FOR-TXC
18	**1,5**	110	17	14	11	4	16,5		-	V83MF18X1,5TXC	-
20	**1,5**	125	17	16	12	4	18,5		-	V83MF20X1,5TXC	-
22	**1,5**	125	18	18	14,5	4	20,5		-	V83MF22X1,5TXC	-
24	**1,5**	140	20	18	14,5	4	22,5		-	V83MF24X1,5TXC	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm < 1200 N/mm²	•1.1 20-25	•1.2 15-20		•1.3 20-25	•1.4 15-20	◦1.5 5-12		•1.3 20-25	•1.4 15-20	◦1.5 5-12	
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 6-8	•2.2 5-7	•2.3 3-5	•2.1 10-15	•2.2 8-10	•2.3 6-8	◦2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	•2.4 3-6

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

MF

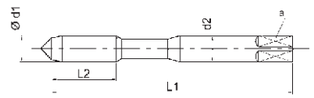
MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

DIN13 | P - ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

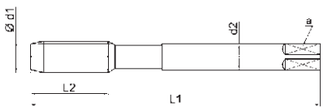
UFS ROLL

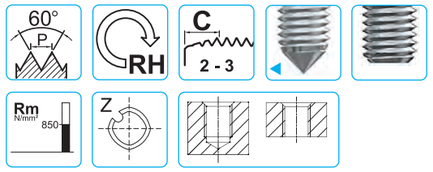
Rm < 850 Nm/m²

DIN 371 d1 ≤ M10



DIN 374 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6GX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiN	TiN	TiN

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
◄	8	1	90	18	8	6,2	5	7,55
◄	10	1,25	100	20	10	8	5	9,40

CODE		
P2CCMF8X1T	P3CCMF8X1T	P2CCMF8X1LH-T
P2CCMF10X1,25T	P3CCMF10X1,25T	P2CCMF10X1,25LH-T

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
	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	6	19,30

CODE		
P2CCMF12X1,5T	P3CCMF12X1,5T	P2CCMF12X1,5LH-T
P2CCMF14X1,5T	P3CCMF14X1,5T	P2CCMF14X1,5LH-T
P2CCMF16X1,5T	P3CCMF16X1,5T	P2CCMF16X1,5LH-T
P2CCMF18X1,5T	P3CCMF18X1,5T	-
P2CCMF20X1,5T	P3CCMF20X1,5T	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	❍2.1 10-15 · ❍2.2 10-12 · ❍2.3 6-10
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.1 35-40 · ❍4.2 40-45 · ❍4.2 35-40
N	Leghe di rame - Copper alloys - Alliages de cuivre	❍5.1 15-20 · ❍5.2 15-20

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

MF

MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

DIN13 | K-ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

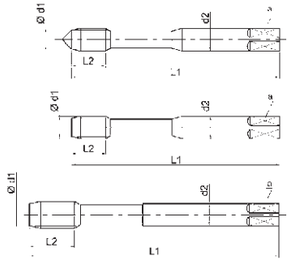
UFS ROLL

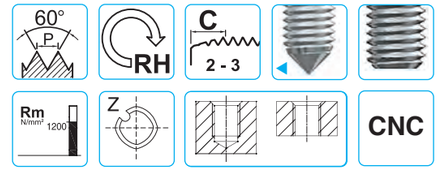
Rm < 1200 Nm/m²

DIN 371 d1 ≤ M5

DIN 371 d1 ≤ M10

DIN 374 d1 ≥ M12





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6GX
Trattamento superficiale - Surface treatment - Revêtement	TiN-G	AHI	

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
◄	4	0,5	63	7	4,5	3,4	4	3,80
◄	5	0,5	70	8	6	4,9	5	4,80
	6	0,75	80	10	6	4,9	5	5,65
	8	1	90	13	8	6,2	5	7,55
	10	1	90	10	10	8	8	9,55
	10	1,25	100	15	10	8	8	9,40

CODE		
K2CCMF4X0,5TG	K2CCMF4X0,5AHI	K3CCMF4X0,5TG
K2CCMF5X0,5TG	K2CCMF5X0,5AHI	K3CCMF5X0,5TG
K2CCMF6X0,75TG	K2CCMF6X0,75AHI	K3CCMF6X0,75TG
K2CCMF8X1TG	K2CCMF8X1AHI	K3CCMF8X1TG
K2CCMF10X1TG	K2CCMF10X1AHI	K3CCMF10X1TG
K2CCMF10X1,25TG	K2CCMF10X1,25AHI	K3CCMF10X1,25TG

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	
	12	1	100	15	9	7	8	11,55
	12	1,25	100	15	9	7	8	11,45
	12	1,5	100	15	9	7	8	11,30
	14	1,25	100	15	11	9	8	13,45
	14	1,5	100	15	11	9	8	13,30
	16	1,5	100	15	12	9	8	15,30
New	18	1,5	110	17	14	11	8	17,30
New	20	1,5	125	17	16	12	8	19,30
New	22	1,5	125	18	18	14,5	8	21,30
New	24	1,5	140	20	18	14,5	8	23,30

CODE		
K2CCMF12X1TG	K2CCMF12X1AHI	K3CCMF12X1TG
K2CCMF12X1,25TG	K2CCMF12X1,25AHI	K3CCMF12X1,25TG
K2CCMF12X1,5TG	K2CCMF12X1,5AHI	K3CCMF12X1,5TG
K2CCMF14X1,25TG	K2CCMF14X1,25AHI	K3CCMF14X1,25TG
K2CCMF14X1,5TG	K2CCMF14X1,5AHI	K3CCMF14X1,5TG
K2CCMF16X1,5TG	K2CCMF16X1,5AHI	K3CCMF16X1,5TG
K2CCMF18X1,5TG	K2CCMF18X1,5AHI	K3CCMF18X1,5TG
K2CCMF20X1,5TG	K2CCMF20X1,5AHI	K3CCMF20X1,5TG
K2CCMF22X1,5TG	K2CCMF22X1,5AHI	K3CCMF22X1,5TG
K2CCMF24X1,5TG	K2CCMF24X1,5AHI	K3CCMF24X1,5TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 35-50 · •1.4 25-30 · •1.5 15-20 · •1.3 35-50 · •1.4 25-30 · •1.5 15-20 · •1.3 35-50 · •1.4 25-30 · •1.5 15-20
M	Acciaio INOX - Stainless steel - Acier inoxydable	❍2.2 10-12 · ❍2.3 6-10 · ❍2.4 6-8 · ❍2.2 10-12 · ❍2.3 6-10 · ❍2.4 6-8 · ❍2.2 10-12 · ❍2.3 6-10 · ❍2.4 6-8

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

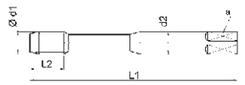
MF

MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

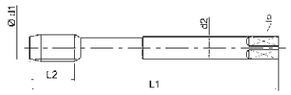
DIN13 | K-ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

Rm < 1200 Nm/mm²

DIN 371 d1 ≤ M10



DIN 374 d1 ≥ M12



60° P | RH | C 2 - 3 | CNC | Rm N/mm² 1200 | Z

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiN-G	AHI	TiN-G

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	8	1	90	13	8	6,2	5	7,55	K2CCMF8X1FOR-TG	K2CCMF8X1FOR-AHI	K2CCMF8X1FORY-TG
	10	1	90	10	10	8	8	9,55	K2CCMF10X1FOR-TG	K2CCMF10X1FOR-AHI	K2CCMF10X1FORY-TG
	10	1,25	100	15	10	8	8	9,45	K2CCMF10X1,25FOR-TG	K2CCMF10X1,25FOR-AHI	K2CCMF10X1,25FORY-TG

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	12	1	100	15	9	7	8	11,55	K2CCMF12X1FOR-TG	K2CCMF12X1FOR-AHI	K2CCMF12X1FORY-TG
	12	1,25	100	15	9	7	8	11,45	K2CCMF12X1,25FOR-TG	K2CCMF12X1,25FOR-AHI	K2CCMF12X1,25FORY-TG
	12	1,5	100	15	9	7	8	11,30	K2CCMF12X1,5FOR-TG	K2CCMF12X1,5FOR-AHI	K2CCMF12X1,5FORY-TG
	14	1,5	100	15	11	9	8	13,30	K2CCMF14X1,5FOR-TG	K2CCMF14X1,5FOR-AHI	K2CCMF14X1,5FORY-TG
	16	1,5	100	15	12	9	8	15,30	K2CCMF16X1,5FOR-TG	K2CCMF16X1,5FOR-AHI	K2CCMF16X1,5FORY-TG
New	18	1,5	110	17	14	11	8	17,30	K2CCMF18X1,5FOR-TG	K2CCMF18X1,5FOR-AHI	K2CCMF18X1,5FORY-TG
New	20	1,5	125	17	16	12	8	19,30	K2CCMF20X1,5FOR-TG	K2CCMF20X1,5FOR-AHI	K2CCMF20X1,5FORY-TG
New	22	1,5	125	18	18	14,5	8	21,30	K2CCMF22X1,5FOR-TG	K2CCMF22X1,5FOR-AHI	K2CCMF22X1,5FORY-TG
New	24	1,5	140	20	18	14,5	8	23,30	K2CCMF24X1,5FOR-TG	K2CCMF24X1,5FOR-AHI	K2CCMF24X1,5FORY-TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 35-50	•1.4 25-30	•1.5 15-20	•1.3 35-50	•1.4 25-30	•1.5 15-20	•1.3 35-50	•1.4 25-30	•1.5 15-20
M	Acciaio INOX - Stainless steel - Acier inoxydable	○2.2 10-12	○2.3 6-10	○2.4 6-8	○2.2 10-12	○2.3 6-10	○2.4 6-8	○2.2 10-12	○2.3 6-10	○2.4 6-8

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

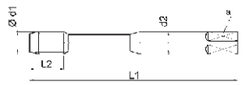
MF

MASCHI A MACCHINA - Per fori ciechi con canalini di lubrificazione
MACHINE TAPS - For blind holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes avec rainures de lubrification

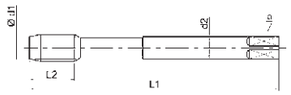
DIN13 | K-ROLL | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

Rm < 1200 Nm/mm²

DIN 371 d1 ≤ M10



DIN 374 d1 ≥ M12



60° P | RH | E 1,5 - 2 | CNC | Rm N/mm² 1200 | Z

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	6HX	6HX
Trattamento superficiale - Surface treatment - Revêtement	TiN-G	TiN-G

DIN 371	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	8	1	90	13	8	6,2	5	7,55	K2CCEMF8X1TG	K2CCEMF8X1FOR-TG
	10	1	90	10	10	8	8	9,55	K2CCEMF10X1TG	K2CCEMF10X1FOR-TG
	10	1,25	100	15	10	8	8	9,45	K2CCEMF10X1,25TG	K2CCEMF10X1,25FOR-TG

DIN 374	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	12	1	100	15	9	7	8	11,55	K2CCEMF12X1TG	K2CCEMF12X1FOR-TG
	12	1,25	100	15	9	7	8	11,45	K2CCEMF12X1,25TG	K2CCEMF12X1,25FOR-TG
	12	1,5	100	15	9	7	8	11,30	K2CCEMF12X1,5TG	K2CCEMF12X1,5FOR-TG
	14	1,5	100	15	11	9	8	13,30	K2CCEMF14X1,5TG	K2CCEMF14X1,5FOR-TG
	16	1,5	100	15	12	9	8	15,30	K2CCEMF16X1,5TG	K2CCEMF16X1,5FOR-TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20			
M	Acciaio INOX - Stainless steel - Acier inoxydable	○2.2 10-12	○2.3 6-10	○2.4 6-8	○2.2 10-12	○2.3 6-10	○2.4 6-8			

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

MF

Calibri a tampone filettati Passa / Non passa
Thread plug gauges Go / No-Go
Tampon de filetage Entre / N'entre pas

DIN13

DIN ISO 1502

Tolleranza - Thread tolerance - Tolérance du filetage	**6H**
Trattamento superficiale - Surface treatment - Revêtement	

Ød1 MF	P mm	CODE
4	**0,5**	P-NPMF4X0,5
5	**0,5**	P-NPMF5X0,5
6	**0,75**	P-NPMF6X0,75
7	**0,75**	P-NPMF7X0,75
8	**0,75**	P-NPMF8X0,75
8	**1**	P-NPMF8X1
9	**1**	P-NPMF9X1
10	**0,75**	P-NPMF10X0,75
10	**1**	P-NPMF10X1
10	**1,25**	P-NPMF10X1,25
12	**1**	P-NPMF12X1
12	**1,25**	P-NPMF12X1,25
12	**1,5**	P-NPMF12X1,5
14	**1**	P-NPMF14X1
14	**1,25**	P-NPMF14X1,25
14	**1,5**	P-NPMF14X1,5
16	**1**	P-NPMF16X1
16	**1,5**	P-NPMF16X1,5
18	**1**	P-NPMF18X1
18	**1,5**	P-NPMF18X1,5
18	**2**	P-NPMF18X2
20	**1**	P-NPMF20X1
20	**1,5**	P-NPMF20X1,5
20	**2**	P-NPMF20X2
22	**1**	P-NPMF22X1
22	**1,5**	P-NPMF22X1,5
24	**1**	P-NPMF24X1
24	**1,5**	P-NPMF24X1,5
24	**2**	P-NPMF24X2
25	**1**	P-NPMF25X1
25	**1,5**	P-NPMF25X1,5
25	**2**	P-NPMF25X2
26	**1,5**	P-NPMF26X1,5
26	**2**	P-NPMF26X2

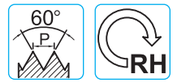
Segue diametri / Diameters continue / Diamètres à suivre >

MF

Calibri a tampone filettati Passa / Non passa
Thread plug gauges Go / No-Go
Tampon de filetage Entre / N'entre pas

DIN13

DIN ISO 1502



Tolleranza - Thread tolerance - Tolérance du filetage	**6H**
Trattamento superficiale - Surface treatment - Revêtement	

Ød1 MF	P mm	CODE
27	**1**	P-NPMF27X1
27	**1,5**	P-NPMF27X1,5
28	**1,5**	P-NPMF28X1,5
28	**2**	P-NPMF28X2
30	**1**	P-NPMF30X1
30	**1,5**	P-NPMF30X1,5
30	**2**	P-NPMF30X2
32	**1**	P-NPMF32X1
32	**1,5**	P-NPMF32X1,5
32	**2**	P-NPMF32X2
33	**2**	P-NPMF33X2
35	**1,5**	P-NPMF35X1,5
35	**2**	P-NPMF35X2
36	**1,5**	P-NPMF36X1,5
36	**2**	P-NPMF36X2
36	**3**	P-NPMF36X3
38	**1,5**	P-NPMF38X1,5
39	**2**	P-NPMF39X2
40	**1,5**	P-NPMF40X1,5
40	**2**	P-NPMF40X2
40	**3**	P-NPMF40X3
42	**1,5**	P-NPMF42X1,5
42	**2**	P-NPMF42X2
42	**3**	P-NPMF42X3
45	**1,5**	P-NPMF45X1,5
45	**2**	P-NPMF45X2
45	**3**	P-NPMF45X3
48	**1,5**	P-NPMF48X1,5
48	**2**	P-NPMF48X2
48	**3**	P-NPMF48X3
50	**1,5**	P-NPMF50X1,5
50	**2**	P-NPMF50X2
50	**3**	P-NPMF50X3

FILETTATURA AMERICANA UN
AMERICAN UNIFIED THREAD UN - FILETAGE AMÉRICAIN UN

Ø	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
0																							UNF
1																					UNC	UNF	
2																			UNC		UNF		
3																		UNC	UNF				
4																UNC		UNF					
5																UNC	UNF						
6														UNC		UNF							
9/64																							
8														UNC	UNF								
11/64																							
10											UNC			UNF		UNS		UNS	UNS				
12											UNC		UNF	UNEF	UNS								
15/64																							
1/4										UNC	UNS		UNF	UNEF	UNS	UNS			UNS				
9/32																							
5/16									UNC		UNF			UNEF		UNS							
3/8								UNC	UNS	UN20	UNF	UNS	UN28	UNEF		UNS							
7/16							UNC			UNF	UNS	UNS	UNEF	UN32									
1/2						UNC				UNF	UNS	UNS	UNEF	UN32									
9/16					UNC				UNF		UNEF												
5/8				UNC				UN16	UNF	UN20	UNEF	UNS	UN28										
11/16								UN16	UNS		UNEF												
3/4			UNC					UNF	UNS	UNEF		UNS	UN28										
13/16								UN16		UNEF													
7/8		UNC			UN12		UNF	UN16	UNS	UNEF	UNS												
15/16								UN16	UNS														
1	UNC				UNF		UNS	UN16	UNS	UNEF	UNS			UN32									
1-1/16					UN12			UN16	UNEF	UN20													
1-1/8	UN8				UNF			UN16	UNEF	UN20													
1-3/16	UN8				UN12			UN16	UNEF														
1-1/4	UN8				UNF		UNS	UN16	UNEF	UN20													
1-5/16					UN12		UNS	UN16															
1-3/8	UN8				UNF				UNEF	UN20													
1-7/16					UN12				UNEF														
1-1/2	UN8				UNF			UN16	UNEF														
1-9/16																							
1-5/8	UN8				UN12																		
1-11/16																							
1-3/4	UN8				UN12																		
1-13/16																							
1-7/8	UN8				UN12					UN20													
1-15/16																							
2	UN8				UN12			UN16															
2-1/8																							
2-1/4	UN8																						
2-3/8																							
2-1/2	UN8				UN12																		
2-3/4																							
2-7/8	UN8																						
3	UN8																						

HR ALTA RESISTENZA - HIGH RESISTANCE - HAUTE RÉSISTANCE

Il grande fiume

The great river

Il grande fiume è il terminale di una rete nella quale sono convogliati tutti i "messaggi" che provengono dal territorio. Dalle Alpi, dalle colline, dalla pianura, il Po può rappresentare la colonna vertebrale del Piemonte manifestandosi come eccellenza.

Il sogno di riportare il Fiume Po e i terreni che lo fiancheggiano al loro ruolo originario è nato tanti anni fa nelle stanze della Regione Piemonte. Fin da allora era chiaro che un fiume in condizioni ottimali avrebbe rappresentato un vantaggio e si è cominciato a parlare di servizi ecosistemici, intesi come "benefici multipli forniti dagli ecosistemi al genere umano".
Il mantenimento della biodiversità, l'autodepurazione delle acque, la ricarica delle falde, il trasporto dei sedimenti, la mitigazione dei rischi alluvionali, la modellazione del paesaggio. La Regione Piemonte è l'unica ad aver tutelato il Fiume Po nel suo insieme ed è la sola ad aver dato una pianificazione all'intero suo tratto.
Negli anni '90 fu istituito un sistema di aree protette fatto di pezzi, di parti, di riserve naturali, collegati tra loro da una zona di salvaguardia avente funzione di raccordo. Nel 2021 è nato il Parco naturale del Po piemontese, asse portante delle Aree protette del Po piemontese; raduna tutte le attuali riserve naturali presenti lungo il corso del fiume Po, con significativi ampliamenti della superficie tutelata e si estende per circa 200 km.

La sorgente del Po si trova sulle Alpi Cozie, in Piemonte, nella provincia di Cuneo e precisamente in località Pian del Re, a 2020 mt di quota, nel comune di Crissolo, alle pendici del Monviso. Grazie all'apporto di molte altre sorgenti, il fiume prende a scorrere nella valle che da esso prende il nome di Valle Po e dopo appena una ventina di chilometri, sbocca nella pianura padana. In questo tratto vari affluenti arricchiscono la portata del fiume il quale entra poi nella provincia di Torino, attraversandone il capoluogo a solo un centinaio di chilometri dalla sorgente, presentandosi con un letto ampio 200 metri. All'interno della città di Torino vi confluiscono il Sangone, la Dora Riparia e la Stura di Lanzo.
Oltre Torino, con andamento verso est costeggia le estreme propaggini del Monferrato giungendo nella piana Vercellese dove si arricchisce dell'apporto di importanti affluenti come la Dora Baltea e il Sesia. Piegando con corso verso sud, continua poi a lambire in sponda destra il Monferrato in provincia di Alessandria, bagnando le città di Casale Monferrato e Valenza. Presso Bassignana, il fiume punta definitivamente verso est anche per merito della forte spinta del Tanaro, suo principale tributario di destra. Dopo questa confluenza il Grande Fiume, ormai possente, entra in territorio lombardo scorrendo in provincia di Pavia.

The great river is the culmination of a network that brings "messages" from all over the region.
From the Alps, from the hills and from the plain, the Po represents the spine of Piedmont and one of its glories.

The dream of returning the Po and the land surrounding it to their original role was born many years ago in the offices of the regional government. From the outset it was clear that a river in optimum condition would be advantageous, and people began talking about ecosystemic services, defined as "multiple benefits provided by ecosystems to humans".
The preservation of biodiversity, the self-purification of water, the replenishment of the water table, the transport of sediments, the mitigation of flood risk, the shaping of the landscape. The Piedmont Region is the only regional government to protect the Po as a whole, and the only one to draw up plans covering its entire length.
The 90s saw the establishment of a series of protected areas, consisting of sections and nature reserves joined by a conservation zone that functions as a connector. In 2021 the Parco Naturale del Po Piemontese came into being as an essential axis for the protected areas of the Po in Piedmont; it brings together all the existing nature reserves of the Po, with a considerable increase in the protected area. An environmental corridor extending for some 200 km.

The source of the Po is in the Cottian Alps in Piedmont; to be exact, the river rises at 2,020 metres above sea level in Pian del Re in the municipality of Crissolo, on the slopes of Monviso. With the contributions of many other springs, the river runs down the valley that takes its name, and just twenty or so kilometres later, emerges onto the Padan Plain. Here the river is joined by several tributaries before entering the province of Turin, traversing the city just a hundred kilometres from its source in a bed 200 metres wide. Three rivers flow into the Po in Turin: the Sangone, the Dora Riparia and the Stura di Lanzo.
Moving east from the city, the river flanks the edge of the Monferrato area, reaching the Vercelli Plain, where it is joined by large tributaries like the Dora Baltea and the Sesia. Turning south, it continues to brush the right edge of Monferrato in the province of Alessandria, bathing the towns of Casale Monferrato and Valenza. Reaching Bassignana, the river turns definitively to the east, partly due to the strong impetus of the Tanaro, the main tributary on its right bank. After this confluence, the Po - now a powerful river - enters Lombardy and the province of Pavia.

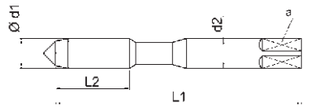
Sponde del Po, passeggiata Murazzi, Torino
Banks of the Po river near the Murazzi waterfront, Turin

UNC

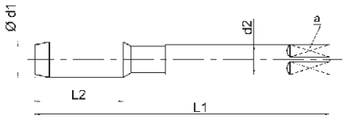
MASCHI A MANO - Per fori ciechi e passanti in serie di tre pezzi
HAND TAPS - For blind and through holes in sets of three pieces
TARAUDS À MAIN - Pour trous borgnes et débouchant en jeux de trois pièces

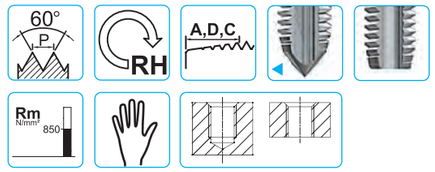
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-2 d1 ≤ 1/4



DIN 2184-2 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	**2xD**	**2xD**
Materiale - Tool Material - Substrat	**HSS**	**HSS**
Tolleranza - Thread tolerance - Tolérance du filetage	**2B**	**2B**
Trattamento superficiale - Surface treatment - Revêtement		

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	Finitore Bottoming - Finisseur	Serie Set - Jeu
◀	**6**	**32**	3,505	45	10	4	3	3	2,85	03UNC6-32	00UNC6-32
◀	**8**	**32**	4,166	45	11	4,5	3,4	3	3,5	03UNC8-32	00UNC8-32
◀	**10**	**24**	4,826	50	13	6	4,9	3	3,9	03UNC10-24	00UNC10-24
◀	**12**	**24**	5,486	56	15	6	4,9	3	4,5	03UNC12-24	00UNC12-24
◀	**1/4**	**20**	6,350	56	16	6	4,9	3	5,1	03UNC1/4	00UNC1/4
	5/16	**18**	7,938	63	19	6	4,9	3	6,6	03UNC5/16	00UNC5/16
	3/8	**16**	9,525	70	22	7	5,5	3	8	03UNC3/8	00UNC3/8
	7/16	**14**	11,113	70	22	8	6,2	3	9,4	03UNC7/16	00UNC7/16
	1/2	**13**	12,700	75	28	9	7	3	10,8	03UNC1/2	00UNC1/2
	9/16	**12**	14,288	80	30	11	9	4	12,2	03UNC9/16	00UNC9/16
	5/8	**11**	15,875	80	30	12	9	4	13,5	03UNC5/8	00UNC5/8
	3/4	**10**	19,050	95	34	14	11	4	16,5	03UNC3/4	00UNC3/4
	7/8	**9**	22,225	100	34	18	14,5	4	19,5	03UNC7/8	00UNC7/8
	1"	**8**	25,400	110	38	18	14,5	4	22,25	03UNC1"	00UNC1"
	1"1/8	**7**	28,575	125	45	22	18	4	25	03UNC1"1/8	00UNC1"1/8
	1"1/4	**7**	31,750	125	45	22	18	4	28	03UNC1"1/4	00UNC1"1/4

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1	•1.2	•1.3	•1.4
M	Acciaio INOX – Stainless steel - Acier inoxydable	❍2.1	❍2.2	❍2.3	
K	Ghisa - Cast iron - Fonte	❍3.1	❍3.4		
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1	•4.2	•4.3	❍4.4
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1	•5.2	❍5.3	

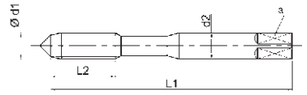
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

UNC

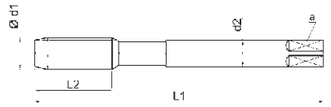
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

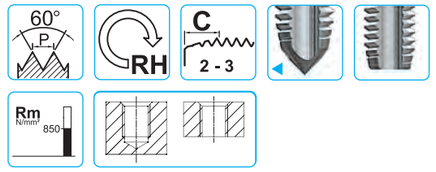
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	
Materiale - Tool Material - Substrat	**HSSE**	
Tolleranza - Thread tolerance - Tolérance du filetage	**2B**	
Trattamento superficiale - Surface treatment - Revêtement		

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
◀	**6**	**32**	3,505	45	10	4	3	3	2,85	E20UNC6-32
◀	**8**	**32**	4,166	45	11	4,5	3,4	3	3,5	E20UNC8-32
◀	**10**	**24**	4,826	50	13	6	4,9	3	3,9	E20UNC10-24
◀	**12**	**24**	5,486	56	15	6	4,9	3	4,5	E20UNC12-24
◀	**1/4**	**20**	6,350	56	16	6	4,9	3	5,1	E20UNC1/4

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
	5/16	**18**	7,938	90	18	6	4,9	3	6,6	E21UNC5/16SP
	3/8	**16**	9,525	100	20	7	5,5	3	8	E21UNC3/8SP
	7/16	**14**	11,113	100	20	8	6,2	3	9,4	E21UNC7/16
	1/2	**13**	12,700	110	25	9	7	3	10,8	E21UNC1/2
	9/16	**12**	14,288	110	28	11	9	3	12,2	E21UNC9/16
	5/8	**11**	15,875	110	28	12	9	3	13,5	E21UNC5/8
	3/4	**10**	19,050	125	32	14	11	4	16,5	E21UNC3/4
	7/8	**9**	22,225	140	32	18	14,5	4	19,5	E21UNC7/8
	1"	**8**	25,400	160	36	18	14,5	4	22,25	E21UNC1"
	1"1/8	**7**	28,575	180	46	22	18	4	25	E21UNC1"1/8
	1"1/4	**7**	31,750	180	46	22	18	4	28	E21UNC1"1/4
	1"3/8	**6**	34,925	200	50	28	22	4	30,75	E21UNC1"3/8
	1"1/2	**6**	38,100	200	50	28	22	4	34	E21UNC1"1/2

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10
K	Ghisa - Cast iron - Fonte	❍3.4 8-10			
N	Leghe di Allumino – Al alloys - Alliage Al	❍4.2 15-20	❍4.3 10-15		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.2 10-15	❍5.3 15-20		
N	Materiali termoindurenti Duroplastic - Thermodurcissables	❍8.2 8-10			

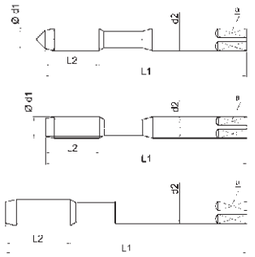
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

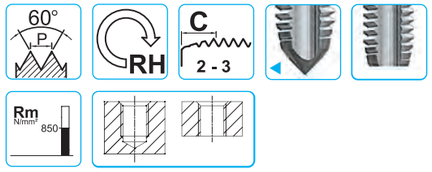
UNC

MASCHI A MACCHINA - Scanalature diritte per ghisa
MACHINE TAPS - Straight flutes for cast iron
TARAUDS MACHINE - Goujures droites pour fonte

ASME B1.1 | GG | GHISA - CAST IRON - FONTE

DIN 2184-1 d1 ≤ 1/4
DIN 2184-1 *d1 =1/4
DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	
Materiale - Tool Material - Substrat	HSSE	HSSE	
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX	
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN	

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	32	3,505	56	11	4	3	3	2,85	E26UNC6-32CT	-
◀	8	32	4,166	63	13	4,5	3,4	3	3,5	E26UNC8-32CT	-
◀	10	24	4,826	70	13	6	4,9	3	3,9	E26UNC10-24CT	-
◀	1/4	20	6,350	80	16	7	5,5	3	5,1	E26UNC1/4CT	-
*	1/4	20	6,350	80	16	7	5,5	3	5,1	E26UNC1/4SP-CT	E26UNC1/4FOR-CT

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	5/16	18	7,938	90	18	6	4,9	4	6,6	E27UNC5/16SP-CT	E27UNC5/16FOR-CT
	3/8	16	9,525	100	20	7	5,5	4	8	E27UNC3/8SP-CT	E27UNC3/8FOR-CT
	7/16	14	11,113	100	20	8	6,2	4	9,4	E27UNC7/16CT	E27UNC7/16FOR-CT
	1/2	13	12,700	110	25	9	7	4	10,8	E27UNC1/2CT	E27UNC1/2FOR-CT
	5/8	11	15,875	110	28	12	9	4	13,5	E27UNC5/8CT	E27UNC5/8FOR-CT
	3/4	10	19,050	125	32	14	11	4	16,5	E27UNC3/4CT	E27UNC3/4FOR-CT
	1"	8	25,400	160	36	18	14,5	4	22,25	E27UNC1"CT	E27UNC1"FOR-CT

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
K	Ghisa - Cast iron - Fonte	•3.1 20-25	•3.2 15-20	❍3.3 15-20	❍3.4 20-25				
N	Leghe Al, Si > 10% Al alloys, Si > 10% - Alliage Al, Si > 10%	•4.4 25-30							
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 20-30							
N	Leghe di rame - Copper alloys - Alliages de cuivre	•5.3 25-30							
N	Materiali termoindurenti Duroplastic - Thermodurcissables	•8.2 10-15							

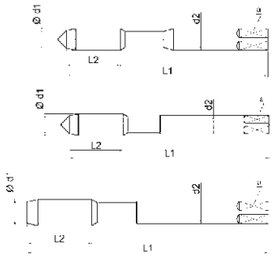
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

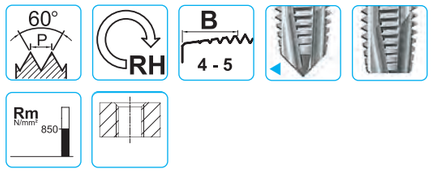
UNC

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4
DIN 2184-1 d1 ≤ 3/8
DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	2B	2B	2B
Trattamento superficiale - Surface treatment - Revêtement		V	TiN

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	4	40	2,845	56	10	3,5	2,7	2	2,35	E24UNC4-40	E24UNC4-40V	E24UNC4-40T
◀	5	40	3,175	56	10	3,5	2,7	3	2,65	E24UNC5-40	E24UNC5-40V	E24UNC5-40T
◀	6	32	3,505	56	11	4	3	3	2,85	E24UNC6-32	E24UNC6-32V	E24UNC6-32T
◀	8	32	4,166	63	13	4,5	3,4	3	3,5	E24UNC8-32	E24UNC8-32V	E24UNC8-32T
◀	10	24	4,826	70	13	6	4,9	3	3,9	E24UNC10-24	E24UNC10-24V	E24UNC10-24T
◀	12	24	5,486	80	16	6	4,9	3	4,5	E24UNC12-24	E24UNC12-24V	E24UNC12-24T
◀	1/4	20	6,350	80	16	7	5,5	3	5,1	E24UNC1/4	E24UNC1/4V	E24UNC1/4T

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	5/16	18	7,938	90	18	6	4,9	3	6,6	E25UNC5/16	E25UNC5/16V	E25UNC5/16T
◀	3/8	16	9,525	100	20	7	5,5	3	8	E25UNC3/8	E25UNC3/8V	E25UNC3/8T
	7/16	14	11,113	100	20	8	6,2	3	9,4	E25UNC7/16	E25UNC7/16V	E25UNC7/16T
	1/2	13	12,700	110	25	9	7	3	10,8	E25UNC1/2	E25UNC1/2V	E25UNC1/2T
	9/16	12	14,288	110	28	11	9	3	12,2	E25UNC9/16	E25UNC9/16V	E25UNC9/16T
	5/8	11	15,875	110	28	12	9	3	13,5	E25UNC5/8	E25UNC5/8V	E25UNC5/8T
	3/4	10	19,050	125	32	14	11	4	16,5	E25UNC3/4	E25UNC3/4V	E25UNC3/4T
	7/8	9	22,225	140	32	18	14,5	4	19,5	E25UNC7/8	E25UNC7/8V	E25UNC7/8T
	1"	8	25,400	160	36	18	14,5	4	22,25	E25UNC1"	E25UNC1"V	E25UNC1"T
	1"1/8	7	28,575	180	46	22	18	4	25	E25UNC1"1/8	E25UNC1"1/8V	-
	1"1/4	7	31,750	180	46	22	18	4	28	E25UNC1"1/4	E25UNC1"1/4V	-
	1"3/8	6	34,925	200	50	28	22	4	30,75	E25UNC1"3/8	E25UNC1"3/8V	-
	1"1/2	6	38,100	200	50	28	22	4	34	E25UNC1"1/2	E25UNC1"1/2V	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min										
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable											
K	Ghisa - Cast iron - Fonte									❍3.3 10-15	•3.4 15-20	
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			❍4.1 20-25	•4.2 25-30	❍4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.1 8-12	❍5.2 10-15			•5.1 8-12	•5.2 10-15			❍5.1 15-20	•5.2 20-25	

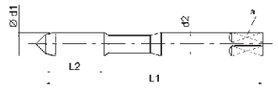
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

UNC

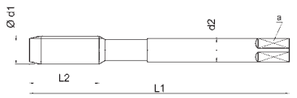
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

ASME B1.1 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 d1 ≥ 7/16



60° P | RH | B 4 - 5 | Rm N/mm² 1200

s-plus NEW

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD		3xD
Materiale - Tool Material - Substrat	PM3	PM3		HSSP
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX		2B
Trattamento superficiale - Surface treatment - Revêtement	XP	XP		TiN-G

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	4	40	2,845	56	10	3,5	2,7	2	2,35	K24UNC4-40XP	-		-
◀	5	40	3,175	56	10	3,5	2,7	3	2,65	K24UNC5-40XP	-		-
◀	6	32	3,505	56	11	4	3	3	2,85	K24UNC6-32XP	-		P24UNC6-32TG
◀	8	32	4,166	63	13	4,5	3,4	3	3,5	K24UNC8-32XP	-		P24UNC8-32TG
◀	10	24	4,826	70	13	6	4,9	3	3,9	K24UNC10-24XP	-		P24UNC10-24TG
◀	1/4	20	6,350	80	16	7	5,5	3	5,1	K24UNC1/4XP	K24UNC1/4FORY-XP		P24UNC1/4TG
◀	5/16	18	7,938	90	18	8	6,2	3	6,6	K24UNC5/16XP	K24UNC5/16FORY-XP		P24UNC5/16TG
◀	3/8	16	9,525	100	20	10	8	3	8	K24UNC3/8XP	K24UNC3/8FORY-XP		P24UNC3/8TG

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	7/16	14	11,113	100	20	8	6,2	3	9,4	K25UNC7/16XP	K25UNC7/16FORY-XP		
	1/2	13	12,700	110	25	9	7	4	10,8	K25UNC1/2XP	K25UNC1/2FORY-XP		
	9/16	12	14,288	110	28	11	9	4	12,2	K25UNC9/16XP	-		
	5/8	11	15,875	110	28	12	9	4	13,5	K25UNC5/8XP	-		
	3/4	10	19,050	125	32	14	11	4	16,5	K25UNC3/4XP	-		
	7/8	9	22,225	140	32	18	14,5	4	19,5	K25UNC7/8XP	-		
	1"	8	25,400	160	36	18	14,5	4	22,25	K25UNC1"XP	-		
	7/16	14	11,113	100	20	8	6,2	3	9,4	-	-		P25UNC7/16TG
	1/2	13	12,700	110	25	9	7	3	10,8	-	-		P25UNC1/2TG
	9/16	12	14,288	110	28	11	9	3	12,2	-	-		P25UNC9/16TG
	5/8	11	15,875	110	28	12	9	3	13,5	-	-		P25UNC5/8TG
	3/4	10	19,050	125	32	14	11	4	16,5	-	-		P25UNC3/4TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	○1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12			•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8								
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20						•3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25						•4.3 20-25			
N	Leghe di rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25							•5.2 20-25			

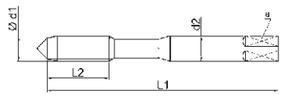
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

UNC

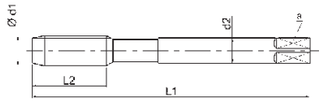
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

ASME B1.1 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 d1 ≥ 7/16



60° P | RH | B 4 - 5 | Rm N/mm² 1000

Profondità di filettatura - Thread depth - Prof. de filetage	3xD			
Materiale - Tool Material - Substrat	HSSV3			
Tolleranza - Thread tolerance - Tolérance du filetage	2BX			
Trattamento superficiale - Surface treatment - Revêtement	TXC			

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	6	32	3,505	56	11	4	3	3	2,85	V24UNC6-32TXC
◀	8	32	4,166	63	13	4,5	3,4	3	3,5	V24UNC8-32TXC
◀	10	24	4,826	70	13	6	4,9	3	3,9	V24UNC10-24TXC
◀	1/4	20	6,350	80	16	7	5,5	3	5,1	V24UNC1/4TXC
◀	5/16	18	7,938	90	18	8	6,2	3	6,6	V24UNC5/16TXC
◀	3/8	16	9,525	100	20	10	8	3	8	V24UNC3/8TXC

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	7/16	14	11,113	100	20	8	6,2	3	9,4	V25UNC7/16TXC
	1/2	13	12,700	110	25	9	7	4	10,8	V25UNC1/2TXC
	9/16	12	14,288	110	28	11	9	4	12,2	V25UNC9/16TXC
	5/8	11	15,875	110	28	12	9	4	13,5	V25UNC5/8TXC
	3/4	10	19,050	125	32	14	11	4	16,5	V25UNC3/4TXC
	7/8	9	22,225	140	32	18	14,5	4	19,5	V25UNC7/8TXC
	1"	8	25,400	160	36	18	14,5	4	22,25	V25UNC1"TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 20-25	•1.4 15-20	•1.5 5-12		
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8	○2.4 3-6	

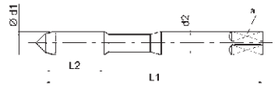
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

UNC

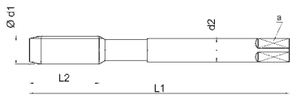
MASCHI A MACCHINA - Elica 15° sinistra per fori passanti
MACHINE TAPS - Left-hand spiral flutes 15° for through holes
TARAUDS MACHINE - Goujures 15° hélicoïdales à gauche pour trous débouchant

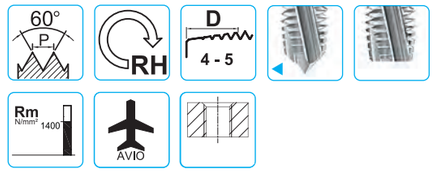
ASME B1.1 | Ti | TITANIO - TITANIUM - TITANE

DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	3B		
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN		

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	32	3,505	56	11	4	3	3	*2,85	K52UNC6-32CT	K52UNJC6-32CT
◀	8	32	4,166	63	13	4,5	3,4	3	*3,5	K52UNC8-32CT	K52UNJC8-32CT
◀	10	24	4,826	70	13	6	4,9	3	*3,9	K52UNC10-24CT	K52UNJC10-24CT
◀	1/4	20	6,350	80	16	7	5,5	3	*5,1	K52UNC1/4CT	K52UNJC1/4CT
◀	5/16	18	7,938	90	18	8	6,2	3	*6,6	K52UNC5/16CT	-
◀	3/8	16	9,525	100	20	10	8	3	*8	K52UNC3/8CT	-

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	7/16	14	11,113	100	20	8	6,2	3	*9,4	K53UNC7/16CT
	1/2	13	12,700	110	25	9	7	3	*10,8	K53UNC1/2CT

* Diametri di preforo UNJC a pag: 271 - Bore hole for thread UNJC to page: 271 - Pour UNJC voir le tableau de perçage page: 271

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min		
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²	•1.6 5-8		
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²	•2.4 3-6		
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25	
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	◦4.4 25-30		
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze	•5.3 25-30	◦5.4 5-8	
S	Leghe di Titanio - Titanium alloys Alliage de titane Rm<1400 N/mm²	•6.2 4-8	•6.3 2-4	
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.2 2-4		

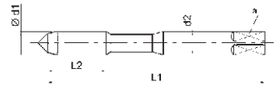
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

UNC

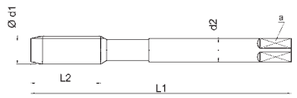
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

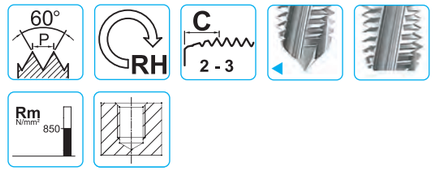
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

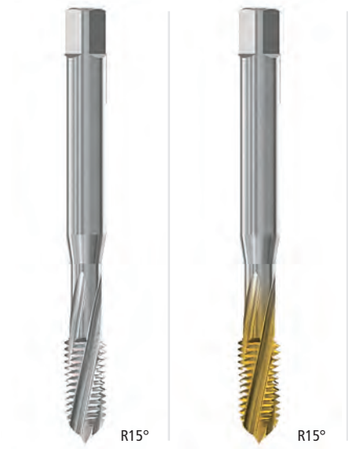
DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16







Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD		
Materiale - Tool Material - Substrat	HSSE	HSSE		
Tolleranza - Thread tolerance - Tolérance du filetage	2B	2B		
Trattamento superficiale - Surface treatment - Revêtement		TiN		

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	32	3,505	56	11	4	3	3	2,85	E40UNC6-32	E40UNC6-32T
◀	8	32	4,166	63	13	4,5	3,4	3	3,5	E40UNC8-32	E40UNC8-32T
◀	10	24	4,826	70	13	6	4,9	3	3,9	E40UNC10-24	E40UNC10-24T
◀	12	24	5,486	80	16	6	4,9	3	4,5	E40UNC12-24	E40UNC12-24T
◀	1/4	20	6,350	80	16	7	5,5	3	5,1	E40UNC1/4	E40UNC1/4T

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	5/16	18	7,938	90	18	6	4,9	3	6,6	E41UNC5/16SP	E41UNC5/16SP-T
	3/8	16	9,525	100	20	7	5,5	3	8	E41UNC3/8SP	E41UNC3/8SP-T
	7/16	14	11,113	100	20	8	6,2	3	9,4	E41UNC7/16	E41UNC7/16T
	1/2	13	12,700	110	25	9	7	3	10,8	E41UNC1/2	E41UNC1/2T
	9/16	12	14,288	110	28	11	9	3	12,2	E41UNC9/16	E41UNC9/16T
	5/8	11	15,875	110	28	12	9	3	13,5	E41UNC5/8	E41UNC5/8T
	3/4	10	19,050	125	32	14	11	4	16,5	E41UNC3/4	E41UNC3/4T
	7/8	9	22,225	140	32	18	14,5	4	19,5	E41UNC7/8	E41UNC7/8T
	1"	8	25,400	160	36	18	14,5	4	22,25	E41UNC1"	E41UNC1"T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable								
K	Ghisa - Cast iron - Fonte					◦3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◦4.1 10-15	•4.2 15-20			◦4.1 20-25	•4.2 25-30	◦4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.1 8-12	◦5.2 10-15			◦5.1 15-20	•5.2 20-25		

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

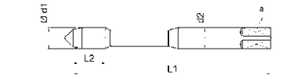
UNC

MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

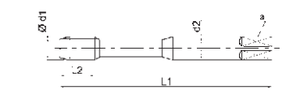
TOP UFS

ASME B1.1 | Ti | TITANIO - TITANIUM - TITANE

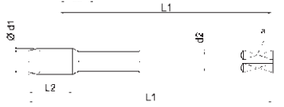
DIN 2184-1 d1 ≤ 1/4

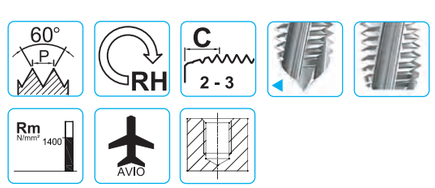


DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	
Materiale - Tool Material - Substrat	PM3	PM3	
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	3B	
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN	

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	32	3,505	56	7	4	3	3	*2,85	K42UNC6-32CT	K42UNJC6-32CT
◀	8	32	4,166	63	7	4,5	3,4	3	*3,5	K42UNC8-32CT	K42UNJC8-32CT
◀	10	24	4,826	70	8	6	4,9	3	*3,9	K42UNC10-24CT	K42UNJC10-24CT
◀	1/4	20	6,350	80	10	7	5,5	3	*5,1	K42UNC1/4CT	K42UNJC1/4CT
	5/16	18	7,938	90	13	8	6,2	3	*6,6	K42UNC5/16CT	-
	3/8	16	9,525	100	15	10	8	3	*8	K42UNC3/8CT	-

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	7/16	14	11,113	100	15	8	6,2	4	*9,4	K43UNC7/16CT
	1/2	13	12,700	110	18	9	7	4	*10,8	K43UNC1/2CT
	5/8	11	15,875	110	20	12	9	4	*13,5	K43UNC5/8CT
	3/4	10	19,050	125	25	14	11	4	*16,5	K43UNC3/4CT

* Diametri di preforo UNJC a pag: 271 - Bore hole for thread UNJC to page: 271 - Pour UNJC voir le tableau de perçage page: 271

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min	
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²	•1.6 5-8	
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²	•2.4 3-6	
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	◦4.4 25-30	
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze	•5.3 25-30	◦5.4 5-8
S	Leghe di Titanio - Titanium alloys Alliage de titane Rm<1400 N/mm²	•6.2 4-8	•6.3 2-4
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.2 2-4	

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

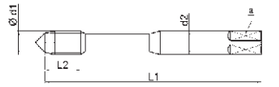
UNC

MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

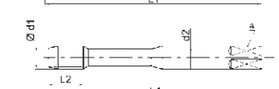
UFS LINE

ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

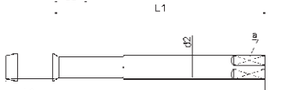
DIN 2184-1 d1 ≤ 1/4

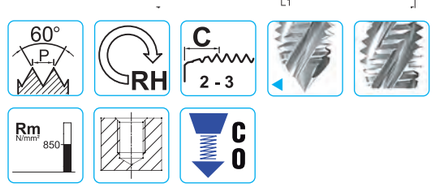


DIN 2184-1 d1 = 5/16



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	2B	2B	2B	2B
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	4	40	2,845	56	5	3,5	2,7	2	2,35	E60UNC4-40	E60UNC4-40V	E60UNC4-40T	E60UNC4-40XP
◀	5	40	3,175	56	5	3,5	2,7	3	2,65	E60UNC5-40	E60UNC5-40V	E60UNC5-40T	E60UNC5-40XP
◀	6	32	3,505	56	7	4	3	3	2,85	E60UNC6-32	E60UNC6-32V	E60UNC6-32T	E60UNC6-32XP
◀	8	32	4,166	63	7	4,5	3,4	3	3,5	E60UNC8-32	E60UNC8-32V	E60UNC8-32T	E60UNC8-32XP
◀	10	24	4,826	70	8	6	4,9	3	3,9	E60UNC10-24	E60UNC10-24V	E60UNC10-24T	E60UNC10-24XP
◀	12	24	5,486	80	10	6	4,9	3	4,5	E60UNC12-24	E60UNC12-24V	E60UNC12-24T	E60UNC12-24XP
◀	1/4	20	6,350	80	10	7	5,5	3	5,1	E60UNC1/4	E60UNC1/4V	E60UNC1/4T	E60UNC1/4XP
*	5/16	18	7,938	90	13	8	6,2	3	6,6	E60UNC5/16	E60UNC5/16V	E60UNC5/16T	E60UNC5/16XP

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	5/16	18	7,938	90	13	6	4,9	3	6,6	E61UNC5/16	E61UNC5/16V	E61UNC5/16T	E61UNC5/16XP
	3/8	16	9,525	100	15	7	5,5	3	8	E61UNC3/8	E61UNC3/8V	E61UNC3/8T	E61UNC3/8XP
	7/16	14	11,113	100	15	8	6,2	3	9,4	E61UNC7/16	E61UNC7/16V	E61UNC7/16T	E61UNC7/16XP
	1/2	13	12,700	110	18	9	7	3	10,8	E61UNC1/2	E61UNC1/2V	E61UNC1/2T	E61UNC1/2XP
	9/16	12	14,288	110	20	11	9	4	12,2	E61UNC9/16	E61UNC9/16V	E61UNC9/16T	E61UNC9/16XP
	5/8	11	15,875	110	20	12	9	4	13,5	E61UNC5/8	E61UNC5/8V	E61UNC5/8T	E61UNC5/8XP
	3/4	10	19,050	125	25	14	11	4	16,5	E61UNC3/4	E61UNC3/4V	E61UNC3/4T	E61UNC3/4XP
	7/8	9	22,225	140	25	18	14,5	4	19,5	E61UNC7/8	E61UNC7/8V	E61UNC7/8T	E61UNC7/8XP
	1"	8	25,400	160	30	18	14,5	4	22,25	E61UNC1"	E61UNC1"V	E61UNC1"T	E61UNC1"XP
	1"1/8	7	28,575	180	35	22	18	4	25	E61UNC1"1/8	-	-	-
	1"1/4	7	31,750	180	35	22	18	4	28	E61UNC1"1/4	-	-	-
	1"3/8	6	34,925	200	40	28	22	4	30,75	E61UNC1"3/8	-	-	-
	1"1/2	6	38,100	200	40	28	22	4	34	E61UNC1"1/2	-	-	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													◦2.1 10-15	◦2.2 8-10		
K	Ghisa - Cast iron - Fonte									◦3.3 10-15	•3.4 15-20			◦3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◦4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◦4.1 20-25	•4.2 25-30	◦4.3 20-25		•4.2 25-30	◦4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.1 8-12	◦5.2 10-15			•5.1 8-12	•5.2 10-15			◦5.1 15-20	•5.2 20-25			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

UNC

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

CSC CHIP SYSTEM CONTROL

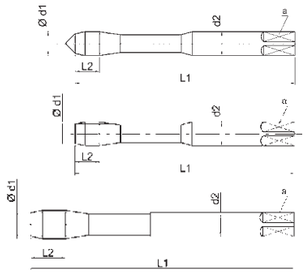
UFS LINE

ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4

DIN 2184-1 d1 ≤ 3/8

DIN 2184-1 d1 ≥ 7/16



60° P

RH

C 2 - 3

Rm N/mm² 1200

BT Back Tapered

C O

S R

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE-PM	HSSE-PM	HSSE-PM
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX	2BX
Trattamento superficiale - Surface treatment - Revêtement		V	TiN-G

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	6	32	3,505	56	7	4	3	3	2,85	E92UNC6-32	E92UNC6-32V	E92UNC6-32TG
◀	8	32	4,166	63	7	4,5	3,4	3	3,5	E92UNC8-32	E92UNC8-32V	E92UNC8-32TG
◀	10	24	4,826	70	8	6	4,9	3	3,9	E92UNC10-24	E92UNC10-24V	E92UNC10-24TG
◀	1/4	20	6,350	80	10	7	5,5	3	5,1	E92UNC1/4	E92UNC1/4V	E92UNC1/4TG
	5/16	18	7,938	90	13	8	6,2	3	6,6	E92UNC5/16	E92UNC5/16V	E92UNC5/16TG
	3/8	16	9,525	100	15	10	8	3	8	E92UNC3/8	E92UNC3/8V	E92UNC3/8TG

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	7/16	14	11,113	100	15	8	6,2	3	9,4	E93UNC7/16	E93UNC7/16V	E93UNC7/16TG
	1/2	13	12,700	110	18	9	7	3	10,8	E93UNC1/2	E93UNC1/2V	E93UNC1/2TG
	9/16	12	14,288	110	20	11	9	3	12,2	E93UNC9/16	E93UNC9/16V	E93UNC9/16TG
	5/8	11	15,875	110	20	12	9	3	13,5	E93UNC5/8	E93UNC5/8V	E93UNC5/8TG
	3/4	10	19,050	125	25	14	11	4	16,5	E93UNC3/4	E93UNC3/4V	E93UNC3/4TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min												
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.2 20-30	•1.3 20-25	•1.4 15-20	◑1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable					•2.1 6-8	•2.2 5-7							
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 15-20								•4.3 20-25				
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15							•5.2 20-25				

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

UNC

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

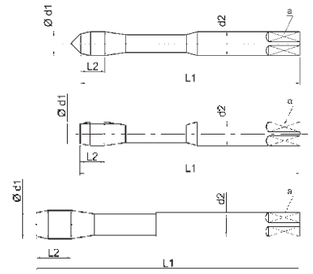
TOP UFS

ASME B1.1 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 2184-1 d1 ≤ 1/4

DIN 2184-1 d1 ≤ 3/8

DIN 2184-1 d1 ≥ 7/16



60° P

RH

C 2 - 3

Rm N/mm² 1200

BT Back Tapered

S R

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD
Materiale - Tool Material - Substrat	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX
Trattamento superficiale - Surface treatment - Revêtement	XP	XP

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	4	40	2,845	56	5	3,5	2,7	3	2,35	K82UNC4-40XP	-
◀	5	40	3,175	56	5	3,5	2,7	3	2,65	K82UNC5-40XP	-
◀	6	32	3,505	56	7	4	3	3	2,85	K82UNC6-32XP	-
◀	8	32	4,166	63	7	4,5	3,4	3	3,5	K82UNC8-32XP	-
◀	10	24	4,826	70	8	6	4,9	3	3,9	K82UNC10-24XP	-
◀	1/4	20	6,350	80	10	7	5,5	3	5,1	K82UNC1/4XP	K82UNC1/4FOR-XP
	5/16	18	7,938	90	13	8	6,2	3	6,1	K82UNC5/16XP	K82UNC5/16FOR-XP
	3/8	16	9,525	100	15	10	8	3	8	K82UNC3/8XP	K82UNC3/8FOR-XP

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	7/16	14	11,113	100	15	8	6,2	3	9,4	K83UNC7/16XP	K83UNC7/16FOR-XP
	1/2	13	12,700	110	18	9	7	4	10,8	K83UNC1/2XP	K83UNC1/2FOR-XP
	9/16	12	14,288	110	20	11	9	4	12,2	K83UNC9/16XP	K83UNC9/16FOR-XP
	5/8	11	15,875	110	20	12	9	4	13,5	K83UNC5/8XP	K83UNC5/8FOR-XP
	3/4	10	19,050	125	25	14	11	4	16,5	K83UNC3/4XP	K83UNC3/4FOR-XP
	7/8	9	22,225	140	25	18	14,5	4	19,5	K83UNC7/8XP	K83UNC7/8FOR-XP
	1"	8	25,400	160	30	18	14,5	4	22,25	K83UNC1"XP	K83UNC1"FOR-XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	◑1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8			
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20				
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25				
N	Leghe di rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25					

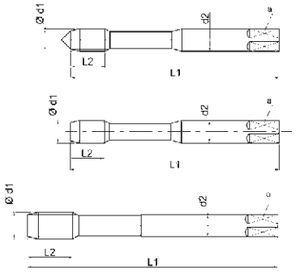
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

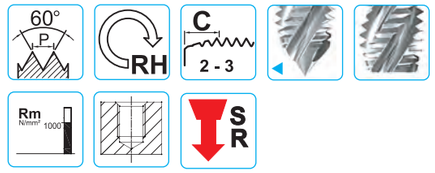
UNC

MASCHI A MACCHINA - Elicoidali 48° per fori ciechi
MACHINE TAPS - Spiral flutes 48° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 48° pour trous borgnes

ASME B1.1 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 2184-1 d1 ≤ 1/4
DIN 2184-1 d1 ≤ 3/8
DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	3,5xD	3,5xD	
Materiale - Tool Material - Substrat	HSSV3	HSSV3	
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX	
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC	

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	32	3,505	56	7	4	3	3	2,85	V82UNC6-32TXC	-
◀	8	32	4,166	63	7	4,5	3,4	3	3,5	V82UNC8-32TXC	-
◀	10	24	4,826	70	8	6	4,9	3	3,9	V82UNC10-24TXC	-
◀	1/4	20	6,350	80	10	7	5,5	3	5,1	V82UNC1/4TXC	V82UNC1/4FOR-TXC
	5/16	18	7,938	90	13	8	6,2	3	6,1	V82UNC5/16TXC	V82UNC5/16FOR-TXC
	3/8	16	9,525	100	15	10	8	3	8	V82UNC3/8TXC	V82UNC3/8FOR-TXC

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	7/16	14	11,113	100	15	8	6,2	3	9,4	V83UNC7/16TXC	V83UNC7/16FOR-TXC
	1/2	13	12,700	110	18	9	7	3	10,8	V83UNC1/2TXC	V83UNC1/2FOR-TXC
	9/16	12	14,288	110	20	11	9	4	12,2	V83UNC9/16TXC	V83UNC9/16FOR-TXC
	5/8	11	15,875	110	20	12	9	4	13,5	V83UNC5/8TXC	V83UNC5/8FOR-TXC
	3/4	10	19,050	125	25	14	11	4	16,5	V83UNC3/4TXC	V83UNC3/4FOR-TXC
	7/8	9	22,225	140	25	18	14,5	4	19,5	V83UNC7/8TXC	V83UNC7/8FOR-TXC
	1"	8	25,400	160	30	18	14,5	4	22,25	V83UNC1"TXC	V83UNC1"FOR-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 1000 N/mm²	•1.3 20-25	•1.4 15-20	❍1.5 5-12		•1.3 20-25	•1.4 15-20	❍1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8	❍2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	❍2.4 3-6

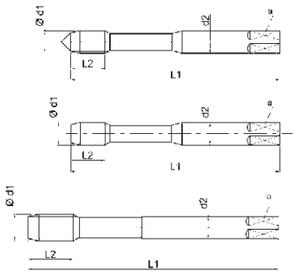
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

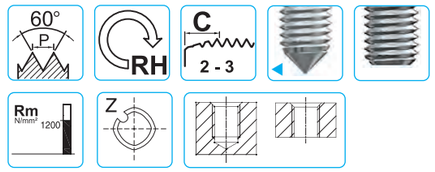
UNC

MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

ASME B1.1 | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

DIN 2184-1 d1 ≤ 3/8
DIN 2184-1 *d1
DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	
Materiale - Tool Material - Substrat	PM8	PM8	PM8	
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX	2BX	
Trattamento superficiale - Surface treatment - Revêtement	TiN	TiN-G	TiN-G	

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
◀	6	32	3,505	56	11	4	3	2	P2CCUNC6-32T
◀	8	32	4,166	63	13	4,5	3,4	4	P2CCUNC8-32T
◀	10	24	4,826	70	13	6	4,9	4	P2CCUNC10-24T
◀	12	24	5,486	80	16	6	4,9	5	P2CCUNC12-24T
◀	1/4	20	6,350	80	16	7	5,5	5	P2CCUNC1/4T
◀	5/16	18	7,938	90	18	8	6,2	5	P2CCUNC5/16T
◀	3/8	16	9,525	100	20	10	8	5	P2CCUNC3/8T
	7/16	14	11,113	100	20	8	6,2	5	P2CCUNC7/16T
	1/2	13	12,700	110	25	9	7	5	P2CCUNC1/2T
	9/16	12	14,288	110	28	11	9	6	P2CCUNC9/16T
	5/8	11	15,875	110	28	12	9	6	P2CCUNC5/8T
	3/4	10	19,050	125	32	14	11	6	P2CCUNC3/4T

	Ød1 UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE	
◀	6	32	3,505	56	8	4	3	4	K2CCUNC6-32TG	-
◀	8	32	4,166	63	8	4,5	3,4	4	K2CCUNC8-32TG	-
◀	10	24	4,826	70	10	6	4,9	5	K2CCUNC10-24TG	-
*	1/4	20	6,350	80	13	7	5,5	5	K2CCUNC1/4TG	K2CCUNC1/4FORY-TG
*	5/16	18	7,938	90	13	8	6,2	5	K2CCUNC5/16TG	K2CCUNC5/16FORY-TG
*	3/8	16	9,525	100	15	10	8	8	K2CCUNC3/8TG	K2CCUNC3/8FORY-TG
	7/16	14	11,113	100	18	8	6,2	8	K2CCUNC7/16TG	K2CCUNC7/16FORY-TG
	1/2	13	12,700	110	20	9	7	8	K2CCUNC1/2TG	K2CCUNC1/2FORY-TG
	5/8	11	15,875	110	23	12	9	8	K2CCUNC5/8TG	K2CCUNC5/8FORY-TG
	3/4	10	19,050	125	25	14	11	8	K2CCUNC3/4TG	K2CCUNC3/4FORY-TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	❍2.1 10-15	❍2.2 10-12	❍2.3 6-10		❍2.2 10-12	❍2.3 6-10	❍2.4 6-8	❍2.2 10-12	❍2.3 6-10	❍2.4 6-8
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.1 35-40	❍4.2 40-45	❍4.3 35-40							
N	Leghe di rame - Copper alloys - Alliages de cuivre	❍5.1 15-20	❍5.2 15-20								

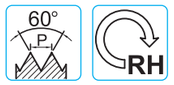
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

UNC

Calibri a tampone filettati Passa / Non passa
Thread plug gauges Go / No-Go
Tampon de filetage Entre / N'entre pas

ASME B1.1

ANSI / ASME B1.2



Tolleranza - Thread tolerance - Tolérance du filetage	**2B**
Trattamento superficiale - Surface treatment - Revêtement	

Ød1 UNC	P TPI	CODE
4	**40**	P-NPUNC4-40
5	**40**	P-NPUNC5-40
6	**32**	P-NPUNC6-32
8	**32**	P-NPUNC8-32
10	**24**	P-NPUNC10-24
12	**24**	P-NPUNC12-24
1/4	**20**	P-NPUNC1/4-20
5/16	**18**	P-NPUNC5/16-18
3/8	**16**	P-NPUNC3/8-16
7/16	**14**	P-NPUNC7/16-14
1/2	**13**	P-NPUNC1/2-13
9/16	**12**	P-NPUNC9/16-12
5/8	**11**	P-NPUNC5/8-11
3/4	**10**	P-NPUNC3/4-10
7/8	**9**	P-NPUNC7/8-9
1"	**8**	P-NPUNC1"-8
1"1/8	**7**	P-NPUNC1"1/8-7
1"1/4	**7**	P-NPUNC1"1/4-7
1"3/8	**6**	P-NPUNC1"3/8-6
1"1/2	**6**	P-NPUNC1"1/2-6
1"3/4	**5**	P-NPUNC1"3/4-5
2"	**4,5**	P-NPUNC2"-4,5

La cultura secolare

The culture of centuries

1404: Ludovico di Savoia-Acaia promuove la formazione di un centro di insegnamento superiore, su sollecitazione di alcuni "magistri" fuggiti dalle sedi universitarie di Pavia e Piacenza; la sede prescelta è Torino, città vescovile.
1424: Amedeo VIII avvia una riforma per rendere più organico ed efficiente lo studium torinese, e nomina il collegio dei riformatori, principale organo di governo dell'Università, al quale appartiene il sigillo che in seguito fu adottato come logo dell'Università di Torino. Il consolidamento dell'Università si accompagna al rafforzamento del ruolo di Torino come capitale subalpina, fatto che le garantisce quasi un secolo di stabilità.
1506: Erasmo da Rotterdam consegue a Torino la laurea in Teologia. Con i governanti di casa Savoia Emanuele Filiberto e Carlo Emanuele I l'Ateneo visse una stagione di successo per la presenza di un corpo studentesco numeroso e culturalmente motivato. L'Ateneo ha invece un lungo periodo di crisi intorno alla metà del Seicento a causa di peste, carestie e continue guerre.
1800: il secondo Governo provvisorio piemontese trasforma l'Ateneo in Università Nazionale. L'adeguamento al sistema francese porta l'introduzione nel Piemonte francese del nuovo ordinamento imperiale, con il quale a capo di ogni Università veniva posto un Rettore. Per dimensioni, numero di cattedre, docenti e studenti, l'Ateneo piemontese è il secondo dell'Impero, dopo quello di Parigi. Le facoltà sono sostituite da 8 scuole speciali: Chimica, Chirurgia, Belle Arti, Giurisprudenza, Medicina, Fisica e Matematica, Letteratura e Medicina Veterinaria.
1801-1817: l'Impero Napoleonico istituisce le 5 facoltà di teologia, legge, medicina, scienze e letteratura e viene istituito un corso di Economia politica e la Scuola di Medicina Veterinaria apre a Venaria Reale.
Nel XVIII e XIX secolo l'Ateneo torinese, grazie alla presenza di moltissime Facoltà, è la seconda istituzione universitaria d'Italia preceduta solo da Napoli. All'Inizio del '900 da una costola dell'Università si costituisce il primo nucleo del Politecnico ad opera di Galileo Ferraris e vengono fondati l'Istituto per la Storia dell'Arte Medievale e Moderna e l'Istituto per l'Archeologia.
Tantissimi nomi illustri hanno frequentato l'ateneo. I Presidenti della repubblica italiana Luigi Einaudi e Giuseppe Saragat. l'Università di Torino è stata protagonista di quella straordinaria stagione culturale che diede al paese personaggi del calibro di Antonio Gramsci, Palmiro Togliatti, Norberto Bobbio, Alessandro Galante Garrone, Leone Ginzburg, Massimo Mila, Vittorio Foa, Giorgio Agosti, Dante Livio Bianco, Cesare Pavese, Primo Levi, Fernanda Pivano e Tullio Regge oltre a molti altri.
I premi Nobel Salvatore Luria, Rita Levi Montalcini e Renato Dulbecco si sono laureati in Medicina e Chirurgia.

1404: Ludovico of Savoy-Acaia orders the founding of a higher education centre, at the request of certain "learned men" from the universities of Pavia and Piacenza; the chosen site is Turin, because it is an episcopal city.
1424: Amadeus VIII embarks on reforms to make Turin's university more organic and efficient; he appoints a board of reformers as the institution's main governance body, with a seal which is subsequently adopted as the logo of the University of Turin. The strengthening of the university coincides with the consolidation of Turin as the subalpine capital, leading to almost a century of stability.
1506: Erasmus of Rotterdam gains a degree in Theology at the University of Turin. Under the Savoy rulers Emmanuel Philibert and Charles Emmanuel I, the university experiences a period of success, thanks to large numbers of cultured and motivated students. But around the mid 17th century, it undergoes a lengthy time of crisis, due to plague, famine and constant wars.
1800: The second provisional Piedmont government declares the institution to be a State University. The adoption of the French system brings new imperial organisation to French-ruled Piedmont, with a Rector appointed to lead the university. In terms of size, number of lecturers, teachers and students, Piedmont's university is the second-largest in the empire, after Paris. The faculties are replaced by eight special schools: Chemistry, Surgery, Fine Arts, Law, Medicine, Physics and Mathematics, Literature, and Veterinary Medicine.
1801-1817: The Napoleonic Empire establishes the five faculties of Theology, Law, Medicine, Science and Literature; an Economics and Politics course is introduced and the School of Veterinary Medicine opens at Venaria Reale.
In the 18th and 19th centuries the University of Turin is Italy's second most important university after Naples, with a large number of faculties. In the early 20th century a branch of the university establishes the first section of the Politecnico, thanks to Galileo Ferraris, with the foundation of the Institute for Medieval Art History and the Institute for Archaeology.
Many illustrious names have been educated at the university, Including presidents of the Italian Republic Luigi Einaudi and Giuseppe Saragat. The University of Turin played a key role in the extraordinary cultural boom that gave the world figures including Antonio Gramsci, Palmiro Togliatti, Norberto Bobbio, Alessandro Galante Garrone, Leone Ginzburg, Massimo Mila, Vittorio Foa, Giorgio Agosti, Dante Livio Bianco, Cesare Pavese, Primo Levi, Fernanda Pivano, Tullio Regge and many others.
Nobel prize winners Salvatore Luria, Rita Levi Montalcini and Renato Dulbecco graduated in Medicine and Surgery.

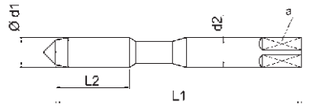
Campus Universitario Luigi Einaudi, Torino
Luigi Einaudi University Campus, Turin

UNF

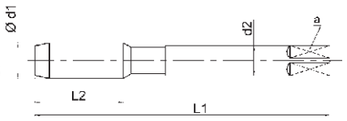
MASCHI A MANO - Per fori ciechi e passanti in serie di due pezzi
HAND TAPS - for blind and through holes in sets in sets of two pieces
TARAUDS À MAIN - pour trous borgnes et débouchant en jeu de deux pièces

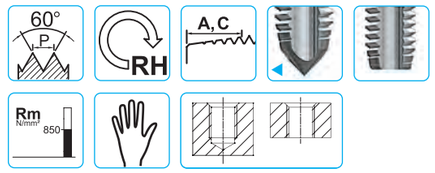
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

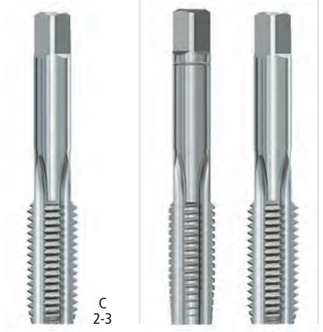
DIN 2184-2 d1 ≤ 1/4



DIN 2184-2 d1 ≥ 5/16







Profondità di filettatura - Thread depth - Prof. de filetage	**2xD**	**2xD**	
Materiale - Tool Material - Substrat	**HSS**	**HSS**	
Tolleranza - Thread tolerance - Tolérance du filetage	**2B**	**2B**	
Trattamento superficiale - Surface treatment - Revêtement			

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	Finitore Bottoming - Finisseur	Serie Set - Jeu
◀	**6**	**40**	3,505	45	10	4	3	3	03UNF6-40	00UNF6-40
◀	**8**	**36**	4,166	45	11	4,5	3,4	3	03UNF8-36	00UNF8-36
◀	**10**	**32**	4,826	50	13	6	4,9	3	03UNF10-32	00UNF10-32
◀	**12**	**28**	5,486	56	15	6	4,9	3	03UNF12-28	00UNF12-28
◀	**1/4**	**28**	6,350	56	16	6	4,9	3	03UNF1/4	00UNF1/4
	5/16	**24**	7,938	63	19	6	4,9	3	03UNF5/16	00UNF5/16
	3/8	**24**	9,525	63	19	7	5,5	3	03UNF3/8	00UNF3/8
	7/16	**20**	11,113	70	22	8	6,2	3	03UNF7/16	00UNF7/16
	1/2	**20**	12,700	70	22	9	7	4	03UNF1/2	00UNF1/2
	9/16	**18**	14,288	70	22	11	9	4	03UNF9/16	00UNF9/16
	5/8	**18**	15,875	70	22	12	9	4	03UNF5/8	00UNF5/8
	3/4	**16**	19,050	80	22	14	11	4	03UNF3/4	00UNF3/4
	7/8	**14**	22,225	80	22	18	14,5	4	03UNF7/8	00UNF7/8
	1"	**12**	25,400	90	22	18	14,5	4	03UNF1"	00UNF1"

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min						
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1	•1.2	•1.3	•1.4			
M	Acciaio INOX – Stainless steel - Acier inoxydable	◦2.1	◦2.2	◦2.3				
K	Ghisa - Cast iron - Fonte	◦3.1	◦3.4					
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1	•4.2	•4.3	◦4.4			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1	•5.2	◦5.3				

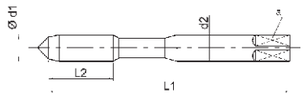
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

UNF

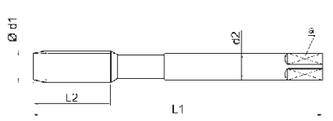
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

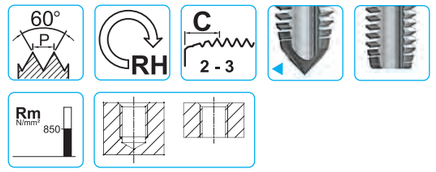
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**		
Materiale - Tool Material - Substrat	**HSSE**		
Tolleranza - Thread tolerance - Tolérance du filetage	**2B**		
Trattamento superficiale - Surface treatment - Revêtement			

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
◀	**6**	**40**	3,505	56	11	4	3	3	E20UNF6-40
◀	**8**	**36**	4,166	63	13	4,5	3,4	3	E20UNF8-36
◀	**10**	**32**	4,826	70	13	6	4,9	3	E20UNF10-32
◀	**12**	**28**	5,486	80	16	6	4,9	3	E20UNF12-28
◀	**1/4**	**28**	6,350	80	16	7	5,5	3	E20UNF1/4

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
	5/16	**24**	7,938	90	18	6	4,9	3	6,9	E21UNF5/16SP
	3/8	**24**	9,525	90	15	7	5,5	3	8,5	E21UNF3/8SP
	7/16	**20**	11,113	100	20	8	6,2	3	9,9	E21UNF7/16
	1/2	**20**	12,700	100	20	9	7	3	11,5	E21UNF1/2
	9/16	**18**	14,288	100	22	11	9	4	12,9	E21UNF9/16
	5/8	**18**	15,875	100	22	12	9	4	14,5	E21UNF5/8
	3/4	**16**	19,050	110	25	14	11	4	17,5	E21UNF3/4
	7/8	**14**	22,225	125	25	18	14,5	4	20,4	E21UNF7/8
	1"	**12**	25,400	140	28	18	14,5	4	23,25	E21UNF1"

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min						
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10			
K	Ghisa - Cast iron - Fonte	◦3.4 8-10						
N	Leghe di Allumino – Al alloys - Alliage Al	◦4.2 15-20	◦4.3 10-15					
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.2 10-15	◦5.3 15-20					
N	Materiali termoindurenti Duroplastic - Thermodurcissables	◦8.2 8-10						

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

UNF

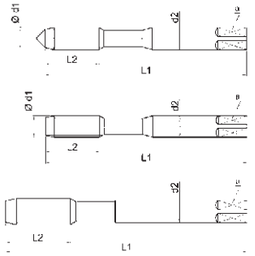
MASCHI A MACCHINA - Tagli diritti per ghisa
MACHINE TAPS - Straight flutes for cast iron
TARAUDS MACHINE - Goujures droites pour fonte

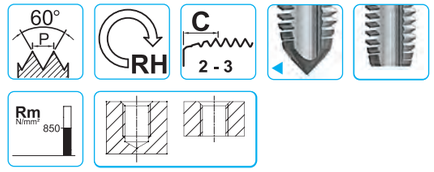
ASME B1.1 | GG | GHISA - CAST IRON - FONTE

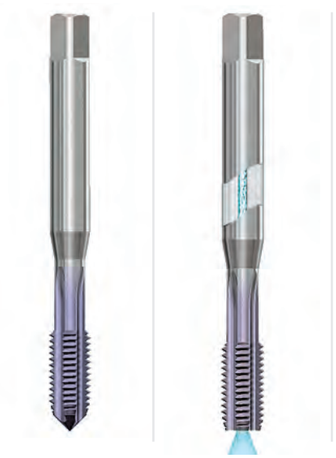
DIN 2184-1 d1 ≤ 1/4

DIN 2184-1 *d1 = 1/4

DIN 2184-1 d1 ≥ 5/16







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	40	3,505	56	11	4	3	3	2,95	E26UNF6-40CT	
◀	8	36	4,166	63	13	4,5	3,4	3	3,5	E26UNF8-36CT	
◀	10	32	4,826	70	13	6	4,9	3	4,1	E26UNF10-32CT	
◀	12	28	5,486	80	16	6	4,9	3	4,6	E26UNF12-28CT	
◀	1/4	28	6,350	80	16	7	5,5	3	5,5	E26UNF1/4CT	
*	1/4	28	6,350	80	16	7	5,5	3	5,5	-	E26UNF1/4FOR-CT

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	5/16	24	7,938	90	18	6	4,9	4	6,9	E27UNF5/16SP-CT	E27UNF5/16FOR-CT
	3/8	24	9,525	90	15	7	5,5	4	8,5	E27UNF3/8SP-CT	E27UNF3/8FOR-CT
	7/16	20	11,113	100	20	8	6,2	4	9,9	E27UNF7/16CT	E27UNF7/16FOR-CT
	1/2	20	12,700	100	20	9	7	4	11,5	E27UNF1/2CT	E27UNF1/2FOR-CT
	9/16	18	14,288	100	22	11	9	4	12,9	E27UNF9/16CT	E27UNF9/16FOR-CT
	5/8	18	15,875	100	22	12	9	4	14,5	E27UNF5/8CT	E27UNF5/8FOR-CT
	3/4	16	19,050	110	25	14	11	4	17,5	E27UNF3/4CT	E27UNF3/4FOR-CT
	7/8	14	22,225	125	25	18	14,5	4	20,4	E27UNF7/8CT	E27UNF7/8FOR-CT
	1"	12	25,400	140	28	18	14,5	4	23,25	E27UNF1"CT	E27UNF1"FOR-CT

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
K	Ghisa - Cast iron - Fonte	•3.1 20-25	•3.2 15-20	◦3.3 15-20	◦3.4 20-25						
N	Leghe Al, Si > 10% Al alloys, Si > 10% - Alliage Al, Si > 10%	•4.4 25-30									
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 20-30									
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 25-30									
N	Materiali termoindurenti Duroplastic - Thermodurcissables	•8.2 10-15									

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

UNF

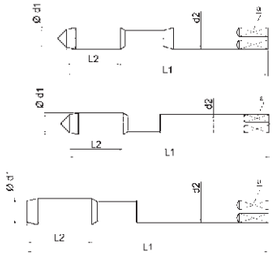
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

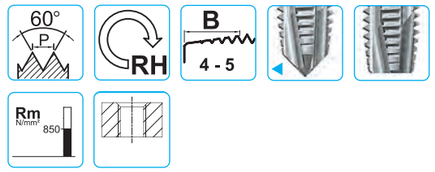
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4

DIN 2184-1 d1 ≤ 3/8

DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	2B	2B	2B
Trattamento superficiale - Surface treatment - Revêtement		V	TiN

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	6	40	3,505	56	11	4	3	3	2,95	E24UNF6-40	E24UNF6-40V	E24UNF6-40T
◀	8	36	4,166	63	13	4,5	3,4	3	3,5	E24UNF8-36	E24UNF8-36V	E24UNF8-36T
◀	10	32	4,826	70	13	6	4,9	3	4,1	E24UNF10-32	E24UNF10-32V	E24UNF10-32T
◀	12	28	5,486	80	16	6	4,9	3	4,6	E24UNF12-28	E24UNF12-28V	E24UNF12-28T
◀	1/4	28	6,350	80	16	7	5,5	3	5,5	E24UNF1/4	E24UNF1/4V	E24UNF1/4T

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	5/16	24	7,938	90	18	6	4,9	3	6,9	E25UNF5/16	E25UNF5/16V	E25UNF5/16T
◀	3/8	24	9,525	90	15	7	5,5	3	8,5	E25UNF3/8	E25UNF3/8V	E25UNF3/8T
	7/16	20	11,113	100	20	8	6,2	3	9,9	E25UNF7/16	E25UNF7/16V	E25UNF7/16T
	1/2	20	12,700	100	20	9	7	3	11,5	E25UNF1/2	E25UNF1/2V	E25UNF1/2T
	9/16	18	14,288	100	22	11	9	4	12,9	E25UNF9/16	E25UNF9/16V	E25UNF9/16T
	5/8	18	15,875	100	22	12	9	4	14,5	E25UNF5/8	E25UNF5/8V	E25UNF5/8T
	3/4	16	19,050	110	25	14	11	4	17,5	E25UNF3/4	E25UNF3/4V	E25UNF3/4T
	7/8	14	22,225	125	25	18	14,5	4	20,4	E25UNF7/8	E25UNF7/8V	E25UNF7/8T
	1"	12	25,400	140	28	18	14,5	4	23,25	E25UNF1"	E25UNF1"V	E25UNF1"T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20				
M	Acciaio inox - Stainless steel - Acier inoxydable																
K	Ghisa - Cast iron - Fonte									◦3.3 10-15	•3.4 15-20						
N	Leghe di Allumino - Al alloys - Alliage Al	◦4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◦4.1 20-25	•4.2 25-30	◦4.3 20-25					
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.1 8-12	◦5.2 10-15			•5.1 8-12	•5.2 10-15			◦5.1 15-20	•5.2 20-25						

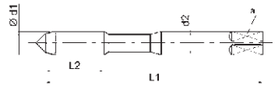
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

UNF

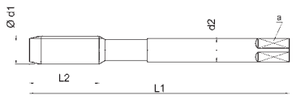
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

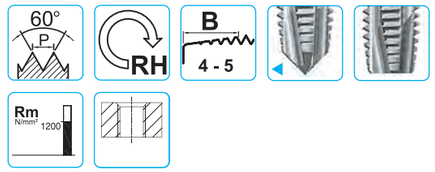
ASME B1.1 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16





s-plus NEW

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD		3xD
Materiale - Tool Material - Substrat	PM3	PM3		HSSP
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX		2B
Trattamento superficiale - Surface treatment - Revêtement	XP	XP		TiN-G

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	4	48	2,845	56	10	3,5	2,7	3	2,4	K24UNF4-48XP	-	-
◀	6	40	3,505	56	11	4	3	3	2,95	K24UNF6-40XP	-	P24UNF6-40TG
◀	8	36	4,166	63	13	4,5	3,4	3	3,5	K24UNF8-36XP	-	P24UNF8-36TG
◀	10	32	4,826	70	13	6	4,9	3	4,1	K24UNF10-32XP	-	P24UNF10-32TG
◀	1/4	28	6,35	80	16	7	5,5	3	5,5	K24UNF1/4XP	K24UNF1/4FORY-XP	P24UNF1/4TG

Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
5/16	24	7,938	90	18	6	4,9	3	6,9	K25UNF5/16XP	K25UNF5/16FORY-XP	P25UNF5/16TG
3/8	24	9,525	90	15	7	5,5	3	8,5	K25UNF3/8XP	K25UNF3/8FORY-XP	P25UNF3/8TG
7/16	20	11,113	100	20	8	6,2	3	9,9	K25UNF7/16XP	K25UNF7/16FORY-XP	P25UNF7/16TG
1/2	20	12,700	100	20	9	7	4	11,5	K25UNF1/2XP	K25UNF1/2FORY-XP	P25UNF1/2TG
9/16	18	14,288	100	22	11	9	4	12,9	K25UNF9/16XP	-	P25UNF9/16TG
5/8	18	15,875	100	22	12	9	4	14,5	K25UNF5/8XP	-	P25UNF5/8TG
3/4	16	19,050	110	25	14	11	4	17,5	K25UNF3/4XP	-	P25UNF3/4TG
7/8	14	22,225	125	25	18	14,5	4	20,4	K25UNF7/8XP	-	-
1"	12	25,400	140	28	18	14,5	4	23,25	K25UNF1"XP	-	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	○1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12			•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.5 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8								
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20						•3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25						•4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25							•5.2 20-25			

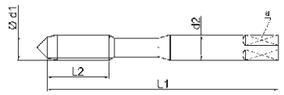
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

UNF

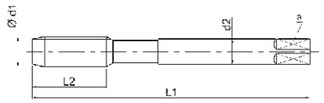
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

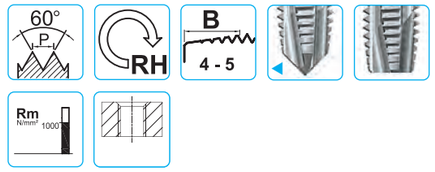
ASME B1.1 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD			
Materiale - Tool Material - Substrat	HSSV3			
Tolleranza - Thread tolerance - Tolérance du filetage	2BX			
Trattamento superficiale - Surface treatment - Revêtement	TXC			

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	6	40	3,505	56	11	4	3	3	2,95	V24UNF6-40TXC
◀	8	36	4,166	63	13	4,5	3,4	3	3,5	V24UNF8-36TXC
◀	10	32	4,826	70	13	6	4,9	3	4,1	V24UNF10-32TXC
◀	1/4	28	6,350	80	16	7	5,5	3	5,5	V24UNF1/4TXC

Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
5/16	24	7,938	90	18	6	4,9	3	6,9	V25UNF5/16TXC
3/8	24	9,525	90	15	7	5,5	3	8,5	V25UNF3/8TXC
7/16	20	11,113	100	20	8	6,2	3	9,9	V25UNF7/16TXC
1/2	20	12,700	100	20	9	7	4	11,5	V25UNF1/2TXC
9/16	18	14,288	100	22	11	9	4	12,9	V25UNF9/16TXC
5/8	18	15,875	100	22	12	9	4	14,5	V25UNF5/8TXC
3/4	16	19,050	110	25	14	11	4	17,5	V25UNF3/4TXC
7/8	14	22,225	125	25	18	14,5	4	20,4	V25UNF7/8TXC
1"	12	25,400	140	28	18	14,5	4	23,25	V25UNF1"TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 20-25	•1.4 15-20	•1.5 5-12		
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8	○2.4 3-6	

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

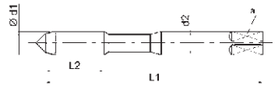
UNF

MASCHI A MACCHINA - Elica 15° sinistra per fori passanti
MACHINE TAPS - Left-hand spiral flutes 15° for through holes
TARAUDS MACHINE - Goujures 15° hélicoïdales à gauche pour trous débouchant

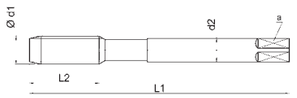
TOP UFS

ASME B1.1 | Ti | TITANIO - TITANIUM - TITANE

DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 d1 ≥ 7/16



60° P | RH | D 4 - 5 | Rm N/mm² 1400 | AVIO

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	3B		
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN		

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	40	3,505	56	11	4	3	3	*2,95	K52UNF6-40CT	-
◀	8	36	4,166	63	13	4,5	3,4	3	*3,5	K52UNF8-36CT	-
◀	10	32	4,826	70	13	6	4,9	3	*4,1	K52UNF10-32CT	K52UNJF10-32CT
◀	1/4	28	6,350	80	16	7	5,5	3	*5,5	K52UNF1/4CT	K52UNJF1/4CT
◀	5/16	24	7,938	90	18	8	6,2	3	*6,9	K52UNF5/16CT	K52UNJF5/16CT
◀	3/8	24	9,525	100	20	10	8	3	*8,5	K52UNF3/8CT	K52UNJF3/8CT

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	7/16	20	11,113	100	20	8	6,2	3	*9,9	K53UNF7/16CT
	1/2	20	12,700	100	20	9	7	3	*11,5	K53UNF1/2CT

* Diametri di preforo UNJF a pag: 272 - Bore hole for thread UNJF to page: 272 - Pour UNJF voir le tableau de perçage page: 272

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min		
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²	•1.6 5-8		
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²	•2.4 3-6		
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25	
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	◦4.4 25-30		
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze	•5.3 25-30	◦5.4 5-8	
S	Leghe di Titanio - Titanium alloys Alliage de titane Rm<1400 N/mm²	•6.2 4-8	•6.3 2-4	
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.2 2-4		

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

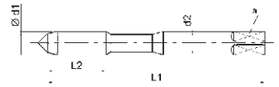
UNF

MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

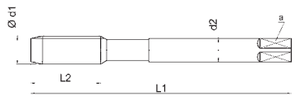
UFS LINE

ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16



60° P | RH | C 2 - 3 | Rm N/mm² 850

Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD		
Materiale - Tool Material - Substrat	HSSE	HSSE		
Tolleranza - Thread tolerance - Tolérance du filetage	2B	2B		
Trattamento superficiale - Surface treatment - Revêtement		TiN		

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	40	3,505	56	11	4	3	3	2,95	E40UNF6-40	E40UNF6-40T
◀	8	36	4,166	63	13	4,5	3,4	3	3,5	E40UNF8-36	E40UNF8-36T
◀	10	32	4,826	70	13	6	4,9	3	4,1	E40UNF10-32	E40UNF10-32T
◀	12	28	5,486	80	16	6	4,9	3	4,6	E40UNF12-28	E40UNF12-28T
◀	1/4	28	6,350	80	16	7	5,5	3	5,5	E40UNF1/4	E40UNF1/4T

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	5/16	24	7,938	90	18	6	4,9	3	6,9	E41UNF5/16SP	E41UNF5/16SP-T
	3/8	24	9,525	90	15	7	5,5	3	8,5	E41UNF3/8SP	E41UNF3/8SP-T
	7/16	20	11,113	100	20	8	6,2	3	9,9	E41UNF7/16	E41UNF7/16T
	1/2	20	12,700	100	20	9	7	3	11,5	E41UNF1/2	E41UNF1/2T
	9/16	18	14,288	100	22	11	9	3	12,9	E41UNF9/16	E41UNF9/16T
	5/8	18	15,875	100	22	12	9	3	14,5	E41UNF5/8	E41UNF5/8T
	3/4	16	19,050	110	25	14	11	4	17,5	E41UNF3/4	E41UNF3/4T
	7/8	14	22,225	125	25	18	14,5	4	20,4	E41UNF7/8	E41UNF7/8T
	1"	12	25,400	140	28	18	14,5	4	23,25	E41UNF1"	E41UNF1"T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15	•1.2 10-15	•1.3 10-12	◦1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable								
K	Ghisa - Cast iron - Fonte					◦3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◦4.1 10-15	•4.2 15-20			◦4.1 20-25	•4.2 25-30	◦4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.1 8-12	◦5.2 10-15			◦5.1 15-20	•5.2 20-25		

• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

UNF

MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

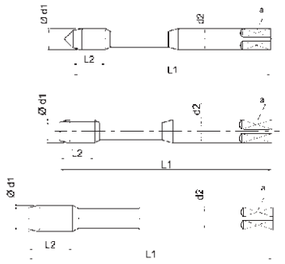
TOP UFS

ASME B1.1 | Ti | TITANIO - TITANIUM - TITANE

DIN 2184-1 d1 ≤ 1/4

DIN 2184-1 d1 ≤ 3/8

DIN 2184-1 d1 ≥ 7/16



60° P RH C 2 - 3 Rm N/mm² 1400 AVIO

Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD		
Materiale - Tool Material - Substrat	PM3	PM3		
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	3B		
Trattamento superficiale - Surface treatment - Revêtement	TiCN	TiCN		

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	40	3,505	56	7	4	3	3	*2,95	K42UNF6-40CT	-
◀	8	36	4,166	63	7	4,5	3,4	3	*3,5	K42UNF8-36CT	-
◀	10	32	4,826	70	8	6	4,9	3	*4,1	K42UNF10-32CT	K42UNJF10-32CT
◀	1/4	28	6,350	80	10	7	5,5	3	*5,5	K42UNF1/4CT	K42UNJF1/4CT
	5/16	24	7,938	90	13	8	6,2	3	*6,9	K42UNF5/16CT	K42UNJF5/16CT
	3/8	24	9,525	100	15	10	8	3	*8,5	K42UNF3/8CT	K42UNJF3/8CT

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	7/16	20	11,113	100	15	8	6,2	3	*9,9	K43UNF7/16CT
	1/2	20	12,700	100	13	9	7	4	*11,5	K43UNF1/2CT

* Diametri di preforo UNJF a pag: 272 - Bore hole for thread UNJF to page: 272 - Pour UNJF voir le tableau de perçage page: 272

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 1200-1400 N/mm²	•1.6 5-8				•1.6 5-8											
M	Inox - Stainless steel - Acier inoxydable Cr–Ni, Rm < 1400 N/mm²	•2.4 3-6				•2.4 3-6											
K	Ghisa - Cast iron - Fonte	•3.3 15-20	•3.4 20-25			•3.3 15-20	•3.4 20-25										
N	Leghe di Allumino - Al alloys - Alliage Al Si > 10%	◑4.4 25-30				◑4.4 25-30											
N	Leghe di Rame - Copper alloys - Alliages de cuivre Ottone, Bronzo - Hard brass, bronze - Laiton, bronze	•5.3 25-30	◑5.4 5-8			•5.3 25-30	◑5.4 5-8										
S	Leghe di Titanio - Titanium alloys Alliage de titane Rm<1400 N/mm²	•6.2 4-8	•6.3 2-4			•6.2 4-8	•6.3 2-4										
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.2 2-4				•7.2 2-4											

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

UNF

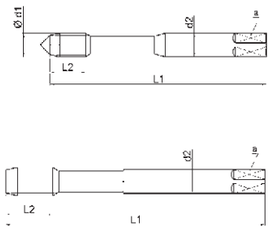
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

UFS LINE

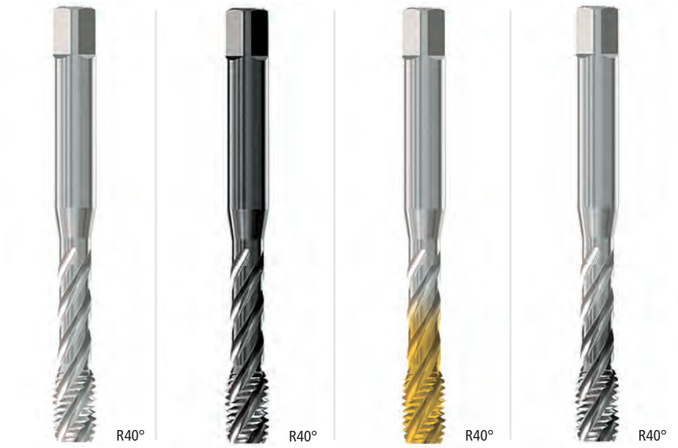
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4

DIN 2184-1 d1 ≥ 5/16



60° P RH C 2 - 3 Rm N/mm² 850 C O



Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	2B	2B	2B	2B
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
◀	6	40	3,505	56	7	4	3	3	2,95	E60UNF6-40	E60UNF6-40V	E60UNF6-40T	E60UNF6-40XP
◀	8	36	4,166	63	7	4,5	3,4	3	3,5	E60UNF8-36	E60UNF8-36V	E60UNF8-36T	E60UNF8-36XP
◀	10	32	4,826	70	8	6	4,9	3	4,1	E60UNF10-32	E60UNF10-32V	E60UNF10-32T	E60UNF10-32XP
◀	12	28	5,486	80	10	6	4,9	3	4,6	E60UNF12-28	E60UNF12-28V	E60UNF12-28T	E60UNF12-28XP
◀	1/4	28	6,350	80	10	7	5,5	3	5,5	E60UNF1/4	E60UNF1/4V	E60UNF1/4T	E60UNF1/4XP

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	5/16	24	7,938	90	13	6	4,9	3	6,9	E61UNF5/16	E61UNF5/16V	E61UNF5/16T	E61UNF5/16XP
	3/8	24	9,525	90	15	7	5,5	3	8,5	E61UNF3/8	E61UNF3/8V	E61UNF3/8T	E61UNF3/8XP
	7/16	20	11,113	100	15	8	6,2	3	9,9	E61UNF7/16	E61UNF7/16V	E61UNF7/16T	E61UNF7/16XP
	1/2	20	12,700	100	13	9	7	3	11,5	E61UNF1/2	E61UNF1/2V	E61UNF1/2T	E61UNF1/2XP
	9/16	18	14,288	100	15	11	9	4	12,9	E61UNF9/16	E61UNF9/16V	E61UNF9/16T	E61UNF9/16XP
	5/8	18	15,875	100	15	12	9	4	14,5	E61UNF5/8	E61UNF5/8V	E61UNF5/8T	E61UNF5/8XP
	3/4	16	19,050	110	17	14	11	4	17,5	E61UNF3/4	E61UNF3/4V	E61UNF3/4T	E61UNF3/4XP
	7/8	14	22,225	125	18	18	14,5	4	20,4	E61UNF7/8	E61UNF7/8V	E61UNF7/8T	E61UNF7/8XP
	1"	12	25,400	140	22	18	14,5	4	23,25	E61UNF1"	E61UNF1"V	E61UNF1"T	E61UNF1"XP
	1"1/4	12	31,750	150	22	22	18	5	29,5	E61UNF1"1/4	-	-	-
	1"1/2	12	38,100	170	24	28	22	6	36	E61UNF1"1/2	-	-	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													◑2.1 10-15	◑2.2 8-10		
K	Ghisa - Cast iron - Fonte									◑3.3 10-15	•3.4 15-20			◑3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◑4.1 20-25	•4.2 25-30	◑4.3 20-25		•4.2 25-30	◑4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.1 8-12	•5.2 10-15			◑5.1 15-20	•5.2 20-25			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

UNF

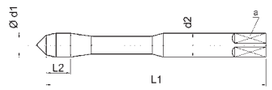
MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

CSC CHIP SYSTEM CONTROL

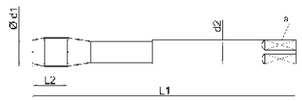
UFS LINE

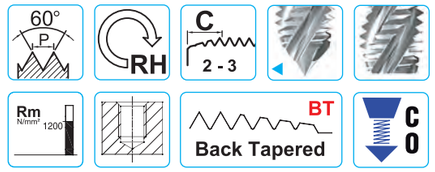
ASME B1.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE-PM	HSSE-PM	HSSE-PM
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX	2BX
Trattamento superficiale - Surface treatment - Revêtement		V	TiN-G

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
◀	6	40	3,505	56	7	4	3	3	2,95	E92UNF6-40	E92UNF6-40V	E92UNF6-40TG
◀	8	36	4,166	63	7	4,5	3,4	3	3,5	E92UNF8-36	E92UNF8-36V	E92UNF8-36TG
◀	10	32	4,826	70	8	6	4,9	3	4,1	E92UNF10-32	E92UNF10-32V	E92UNF10-32TG
◀	12	28	5,846	80	10	6	4,9	3	4,6	E92UNF12-28	E92UNF12-28V	E92UNF12-28TG
◀	1/4	28	6,350	80	10	7	5,5	3	5,5	E92UNF1/4	E92UNF1/4V	E92UNF1/4TG

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
	5/16	24	7,938	90	13	6	4,9	3	6,9	E93UNF5/16	E93UNF5/16V	E93UNF5/16TG
	3/8	24	9,525	90	15	7	5,5	3	8,5	E93UNF3/8	E93UNF3/8V	E93UNF3/8TG
	7/16	20	11,113	100	15	8	6,2	3	9,9	E93UNF7/16	E93UNF7/16V	E93UNF7/16TG
	1/2	20	12,700	100	13	9	7	3	11,5	E93UNF1/2	E93UNF1/2V	E93UNF1/2TG
	9/16	18	14,288	100	15	11	9	4	12,9	E93UNF9/16	E93UNF9/16V	E93UNF9/16TG
	5/8	18	15,875	100	15	12	9	4	14,5	E93UNF5/8	E93UNF5/8V	E93UNF5/8TG
	3/4	16	19,050	110	17	14	11	4	17,5	E93UNF3/4	E93UNF3/4V	E93UNF3/4TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	○1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ○1.4 8-10 · •1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ○1.4 8-10 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20 · ○1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 6-8 · •2.2 5-7
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 15-20 · •4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12 · •5.2 10-15 · •5.2 20-25

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

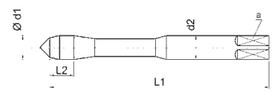
UNF

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

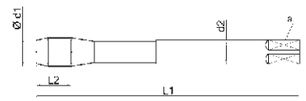
TOP UFS

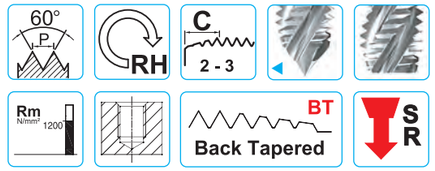
ASME B1.1 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD
Materiale - Tool Material - Substrat	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX
Trattamento superficiale - Surface treatment - Revêtement	XP	XP

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	4	48	2,845	56	5	3,5	2,7	3	2,4	K82UNF4-48XP	-
◀	6	40	3,505	56	7	4	3	3	2,95	K82UNF6-40XP	-
◀	8	36	4,166	63	7	4,5	3,4	3	3,5	K82UNF8-36XP	-
◀	10	32	4,826	70	8	6	4,9	3	4,1	K82UNF10-32XP	-
◀	1/4	28	6,350	80	10	7	5,5	3	5,5	K82UNF1/4XP	K82UNF1/4FOR-XP

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	5/16	24	7,938	90	13	6	4,9	3	6,9	K83UNF5/16XP	K83UNF5/16FOR-XP
	3/8	24	9,525	90	15	7	5,5	3	8,5	K83UNF3/8XP	K83UNF3/8FOR-XP
	7/16	20	11,113	100	15	8	6,2	3	9,9	K83UNF7/16XP	K83UNF7/16FOR-XP
	1/2	20	12,700	100	13	9	7	4	11,5	K83UNF1/2XP	K83UNF1/2FOR-XP
	9/16	18	14,288	100	15	11	9	4	12,9	K83UNF9/16XP	-
	5/8	18	15,875	100	15	12	9	4	14,5	K83UNF5/8XP	-
	3/4	16	19,050	110	17	14	11	4	17,5	K83UNF3/4XP	-
	7/8	14	22,225	125	18	18	14,5	4	20,4	K83UNF7/8XP	-
	1"	12	25,400	140	22	18	14,5	4	23,25	K83UNF1"XP	-

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	○1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20 · •1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15 · •2.2 8-10 · •2.3 6-8
K	Ghisa - Cast iron - Fonte	•3.3 10-15 · •3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30 · •4.3 20-25
N	Leghe di rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25

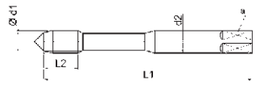
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

UNF

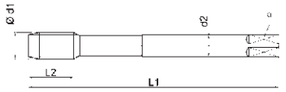
MASCHI A MACCHINA - Elicoidali 48° per fori ciechi
MACHINE TAPS - Spiral flutes 48° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 48° pour trous borgnes

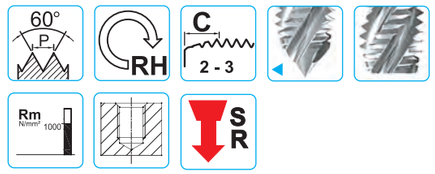
ASME B1.1 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	3,5xD	3,5xD		
Materiale - Tool Material - Substrat	HSSV3	HSSV3		
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX		
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC		

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	40	3,505	56	7	4	3	3	2,95	V82UNF6-40TXC	-
◀	8	36	4,166	63	7	4,5	3,4	3	3,5	V82UNF8-36TXC	-
◀	10	32	4,826	70	8	6	4,9	3	4,1	V82UNF10-32TXC	-
◀	1/4	28	6,350	80	10	7	5,5	3	5,5	V82UNF1/4TXC	V82UNF1/4FOR-TXC

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	5/16	24	7,938	90	13	6	4,9	3	6,9	V83UNF5/16TXC	V83UNF5/16FOR-TXC
	3/8	24	9,525	90	15	7	5,5	3	8,5	V83UNF3/8TXC	V83UNF3/8FOR-TXC
	7/16	20	11,113	100	15	8	6,2	3	9,9	V83UNF7/16TXC	V83UNF7/16FOR-TXC
	1/2	20	12,700	100	13	9	7	4	11,5	V83UNF1/2TXC	V83UNF1/2FOR-TXC
	9/16	18	14,288	100	15	11	9	4	12,9	V83UNF9/16TXC	V83UNF9/16FOR-TXC
	5/8	18	15,875	100	15	12	9	4	14,5	V83UNF5/8TXC	V83UNF5/8FOR-TXC
	3/4	16	19,050	110	17	14	11	4	17,5	V83UNF3/4TXC	V83UNF3/4FOR-TXC
	7/8	14	22,225	125	18	18	14,5	4	20,4	V83UNF7/8TXC	V83UNF7/8FOR-TXC
	1”	12	25,400	140	22	18	14,5	4	23,25	V83UNF1"TXC	V83UNF1"FOR-TXC

ISO	Campo di impiego Application range Gamme d’application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 1000 N/mm²	•1.3 20-25	•1.4 15-20	❍1.5 5-12		•1.3 20-25	•1.4 15-20	❍1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8	❍2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	❍2.4 3-6

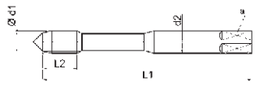
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

UNF

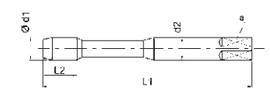
MASCHI A MACCHINA per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - for blind and through holes with oil grooves
TARAUDS MACHINE - pour trous borgnes et débouchant avec rainures de lubrification

ASME B1.1 | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

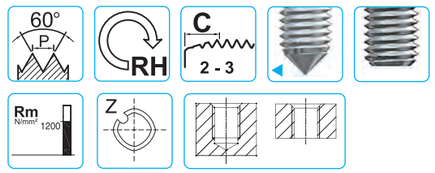
DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 *d1



DIN 2184-1 d1 ≥ 7/16



Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	
Materiale - Tool Material - Substrat	PM8	PM8	PM8	
Tolleranza - Thread tolerance - Tolérance du filetage	2BX	2BX	2BX	
Trattamento superficiale - Surface treatment - Revêtement	TiN	TiN-G	TiN-G	

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	6	40	3,505	56	11	4	3	2	3,20	P2CCUNF6-40T
◀	8	36	4,166	63	13	4,5	3,4	4	3,85	P2CCUNF8-36T
◀	10	32	4,826	70	13	6	4,9	4	4,45	P2CCUNF10-32T
◀	1/4	28	6,350	80	16	7	5,5	5	5,9	P2CCUNF1/4T
◀	5/16	24	7,938	90	18	8	6,2	5	7,45	P2CCUNF5/16T
◀	3/8	24	9,525	90	15	10	8	5	9	P2CCUNF3/8T
	7/16	20	11,113	100	18	8	6,2	5	10,5	P2CCUNF7/16T
	1/2	20	12,700	100	20	9	7	6	12,1	P2CCUNF1/2T
	9/16	18	14,288	100	22	11	9	6	13,7	P2CCUNF9/16T
	3/4	16	19,050	110	25	14	11	8	18,4	P2CCUNF3/4T
	1”	12	25,400	140	28	18	14,5	8	24,45	P2CCUNF1"T

	Ød1 UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	40	3,505	56	8	4	3	4	3,20	K2CCUNF6-40TG	-
◀	8	36	4,166	63	8	4,5	3,4	4	3,85	K2CCUNF8-36TG	-
◀	10	32	4,826	70	10	6	4,9	5	4,45	K2CCUNF10-32TG	-
*	1/4	28	6,350	80	13	7	5,5	5	5,9	K2CCUNF1/4TG	K2CCUNF1/4FORY-TG
*	5/16	24	7,938	90	13	8	6,2	5	7,45	K2CCUNF5/16TG	K2CCUNF5/16FORY-TG
*	3/8	24	9,525	90	15	10	8	8	9	K2CCUNF3/8TG	K2CCUNF3/8FORY-TG
	7/16	20	11,113	100	13	8	6,2	8	10,5	K2CCUNF7/16TG	K2CCUNF7/16FORY-TG
	1/2	20	12,700	100	13	9	7	8	12,1	K2CCUNF1/2TG	K2CCUNF1/2FORY-TG
	9/16	18	14,288	100	15	11	9	8	13,7	K2CCUNF9/16TG	K2CCUNF9/16FORY-TG
	3/4	16	19,050	110	16	14	11	8	18,4	K2CCUNF3/4TG	K2CCUNF3/4FORY-TG
	1”	12	25,400	140	22	18	14,5	8	24,45	K2CCUNF1"TG	K2CCUNF1"FORY-TG

ISO	Campo di impiego Application range Gamme d’application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min										
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.1 20-30	•1.2 20-30	•1.3 20-25	❍1.4 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20		•1.3 30-35	•1.4 25-30	•1.5 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	❍2.1 10-15	❍2.2 10-12	❍2.3 6-10		❍2.2 10-12	❍2.3 6-10	❍2.4 6-8		❍2.2 10-12	❍2.3 6-10	❍2.4 6-8
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.1 35-40	❍4.2 40-45	❍4.3 35-40								
N	Leghe di rame - Copper alloys - Alliages de cuivre	❍5.1 15-20	❍5.2 15-20									

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

UNF

Calibri a tampone filettati Passa / Non passa
Thread plug gauges Go / No-Go
Tampon de filetage Entre / N'entre pas

ASME B1.1

ANSI / ASME B1.2

Tolleranza - Thread tolerance - Tolérance du filetage	**2B**
Trattamento superficiale - Surface treatment - Revêtement	

Ød1 UNF	P TPI	CODE
5	**44**	P-NPUNF5-44
6	**40**	P-NPUNF6-40
8	**36**	P-NPUNF8-36
10	**32**	P-NPUNF10-32
12	**28**	P-NPUNF12-28
1/4	**28**	P-NPUNF1/4-28
5/16	**24**	P-NPUNF5/16-24
3/8	**24**	P-NPUNF3/8-24
7/16	**20**	P-NPUNF7/16-20
1/2	**20**	P-NPUNF1/2-20
9/16	**18**	P-NPUNF9/16-18
5/8	**18**	P-NPUNF5/8-18
3/4	**16**	P-NPUNF3/4-16
7/8	**14**	P-NPUNF7/8-14
1"	**12**	P-NPUNF1"-12
1"1/8	**12**	P-NPUNF1"1/8-12
1"1/4	**12**	P-NPUNF1"1/4-12
1"3/8	**12**	P-NPUNF1"3/8-12
1"1/2	**12**	P-NPUNF1"1/2-12
1"1/2	**6**	P-NPUNC1"1/2-6
1"3/4	**5**	P-NPUNC1"3/4-5
2"	**4,5**	P-NPUNC2"-4,5

Le Residenze Sabaude

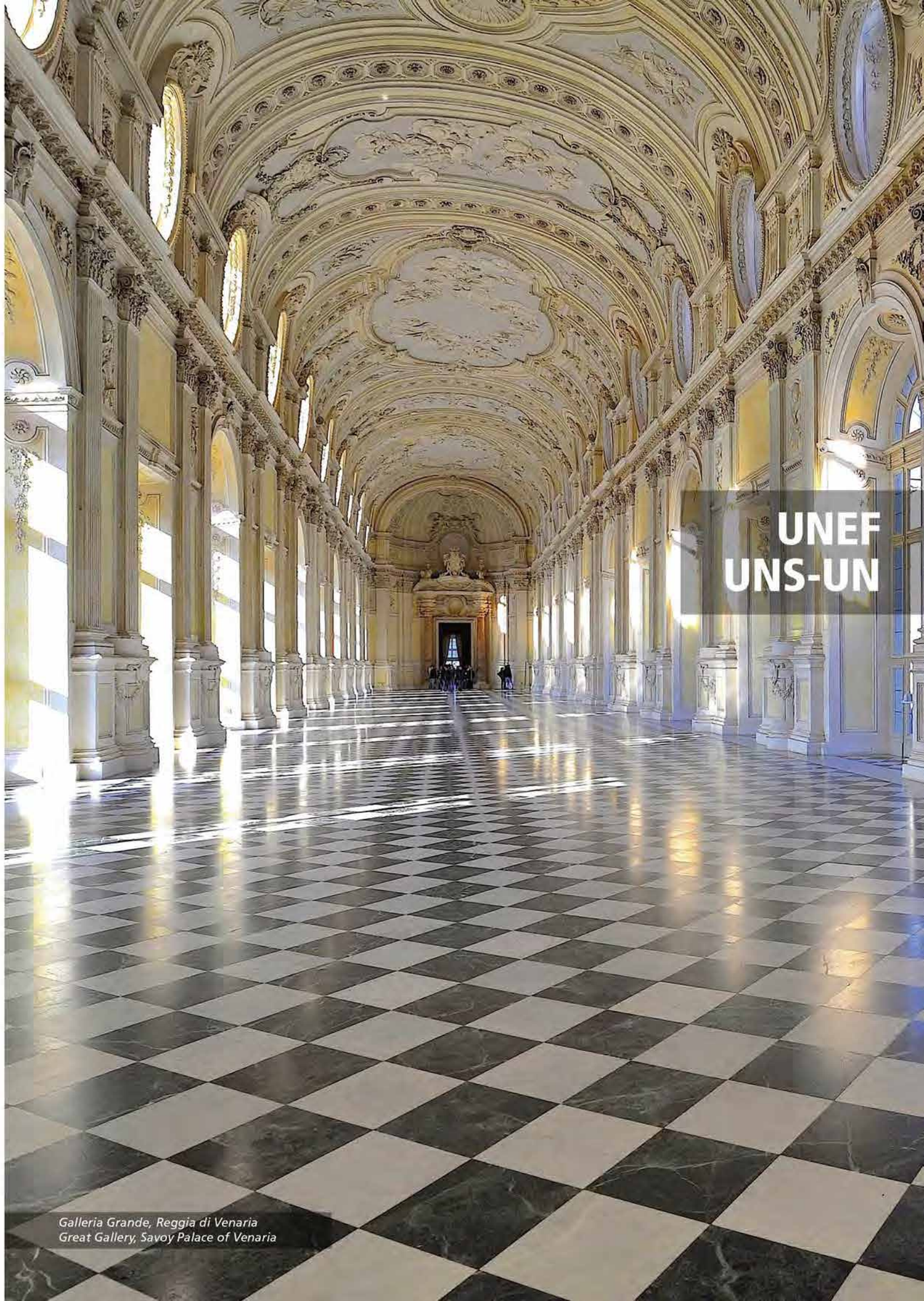
The Savoy Residences

Le residenze sabaude in Piemonte, molti delle quali sono eccellenze perchè iscritte nella Lista del Patrimonio Mondiale dell'UNESCO, sono l'insieme degli edifici residenziali della Casa Reale dei Savoia.
Dinastia che deriva il suo nome dall'omonima regione in cui originariamente aveva i propri possedimenti. Regnò nel corso di circa un millennio sul ducato di Savoia, sul Piemonte, sul regno di Sicilia, sul regno di Sardegna e infine sul regno d'Italia (Stato Sabaudo).
Il sistema delle Residenze Sabaude ha origine nel 1563 quando il duca di Savoia, Emanuele Filiberto, fa di Torino la capitale del ducato e decide di avviare un progetto di riorganizzazione complessiva del territorio con l'obiettivo di celebrare il potere assoluto della casa regnante. I suoi successori, tra il XVII e il XVIII secolo, realizzano il programma con l'organizzazione della "Zona di Comando", nel centro della città, e la creazione di un sistema di maisons de plaisance, la "Corona di Delizie", mediante la rifunzionalizzazione di residenze preesistenti e la costruzione di nuovi edifici destinati alla pratica venatoria e al loisir della corte.
Il carattere unitario del complesso di edifici, che rappresentano un panorama completo dell'architettura monumentale europea del XVII e XVIII secolo, è dato dalla omogeneità stilistica dovuta al gruppo di architetti e artisti di corte operanti in maniera diffusa nelle residenze e nei palazzi governativi.

Il sito seriale è composto da 22 edifici, 11 nel centro di Torino e gli altri intorno alla città.
A Torino un ampio complesso di edifici connessi alla corte, dove il potere accentrato veniva esercitato nelle sue forme politiche, amministrative e culturali e comprende il Palazzo Reale, l'Armeria Reale, il Palazzo della Prefettura e Archivio di Stato, il Teatro Regio, l'Accademia Militare, la Cavallerizza Reale destinata agli esercizi e agli spettacoli equestri di corte, la Regia Zecca, Palazzo Chiablese, Palazzo Madama e Palazzo Carignano che nel 1859 ospitava il primo Parlamento italiano.
Le residenze extraurbane dedicate allo svago, alle feste e alla caccia. Comprendono il Castello del Valentino sul Po, la Villa della Regina sulla collina di Torino, il Castello di Moncalieri, il Castello di Rivoli, il Castello di Venaria Reale, la Palazzina di Caccia di Stupinigi, il Castello di Agliè, il Borgo Castello de La Mandria, il Castello di Racconigi, il Castello di Pollenzo e il Castello di Govone.
Spiccano per bellezza e particolarità, costruiti in una miscela di stili, dal manieristico al trionfante barocco piemontese. Gioielli progettati o rimaneggiati da architetti del calibro di Filippo Juvarra, Amedeo e Carlo di Castellamonte, Guarino Guarini, Benedetto Alfieri, Claudio Francesco Beaumont e Pelagio Palagi.

The Savoy Residences of Piedmont, many of which are listed as UNESCO World Heritage sites, are a series of homes belonging to the Royal House of Savoy.
The dynasty takes its name from the region where its original properties were. The family ruled for almost a thousand years over the Duchy of Savoy, Piedmont, Sicily, the Kingdom of Sardinia and, finally, the Kingdom of Italy (the State of Savoy).
The Savoy Residences originated in 1563 when the Duke of Savoy, Emmanuel Philibert, made Turin the capital of the Duchy and embarked on a comprehensive reorganisation of the region with the aim of celebrating the absolute power of the ruling family. During the 17th and 18th centuries, his successors implemented the plan, establishing the "Area of Command" in the city centre and a system of maisons de plaisance, known as the "Corona di Delizie", by refurbishing already existing residences and building new ones for the court's hunting and leisure activities.
The uniform character of the series of buildings, which offer a complete panorama of European monumental architecture of the 17th and 18th centuries, is due to the shared style of the group of court architects and artists who worked on the various residences and government buildings.

In total there are 22 buildings, 11 in the centre of Turin and the others located around the city.
In Turin there is a substantial complex of court-related buildings used for the political, administrative and cultural exercise of centralised power. These include the Royal Palace, the Royal Armoury, the Palazzo della Prefettura and the State Archive, the Royal Theatre, the Military Academy, the Cavallerizza Reale - used for equestrian practice and the court's horsemanship displays - the Regia Zecca, Palazzo Chiablese, Palazzo Madama and Palazzo Carignano, home to the first Italian parliament in 1859.
Rural residences devoted to leisure, parties and hunting. These include the Valentino Castle on the bank of the Po, the Villa della Regina on the hill of Turin, the castles of Moncalieri and Rivoli, Venaria Reale, the Stupinigi hunting lodge, Agliè Castle, the castles of La Mandria, Racconigi, Pollenzo and Govone.
All outstanding for their extraordinary beauty, they are built in a mix of styles, ranging from Mannerism to triumphant Piedmont Baroque. The residences are architectural gems designed or restored by the likes of Filippo Juvarra, Amedeo and Carlo di Castellamonte, Guarino Guarini, Benedetto Alfieri, Claudio Francesco Beaumont and Pelagio Palagi.



Galleria Grande, Reggia di Venaria
Great Gallery, Savoy Palace of Venaria

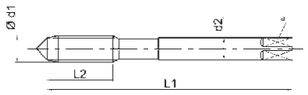
UNEF

MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

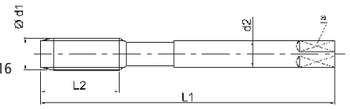
ASME B1.1

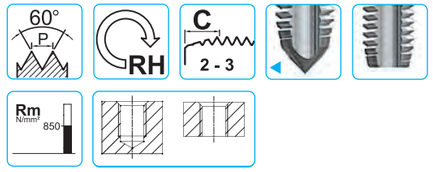
USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 = 1/4



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**2B**
Trattamento superficiale - Surface treatment - Revêtement	

	Ød1 UNEF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
◀	1/4	32	6,350	80	16	4,5	3,4	3	E21UNEF1/4
◀	5/16	32	7,938	90	18	6	4,9	3	E21UNEF5/16SP
	3/8	32	9,525	90	15	7	5,5	3	E21UNEF3/8SP
	7/16	28	11,113	100	20	8	6,2	3	E21UNEF7/16
	1/2	28	12,700	100	20	9	7	3	E21UNEF1/2
	9/16	24	14,288	100	22	11	9	4	E21UNEF9/16
	5/8	24	15,875	100	22	12	9	4	E21UNEF5/8
	11/16	24	17,462	110	25	14	11	4	E21UNEF11/16
	3/4	20	19,050	110	25	14	11	4	E21UNEF3/4
	13/16	20	20,638	125	25	18	14,5	4	E21UNEF13/16
	7/8	20	22,225	125	25	18	14,5	4	E21UNEF7/8
	1"	20	25,400	140	28	18	14,5	4	E21UNEF1"
	1"1/16	18	26,988	140	25	20	16	4	E21UNEF1"1/16
	1"1/8	18	28,575	150	28	22	18	4	E21UNEF1"1/8
	1"3/16	18	30,163	150	28	22	18	4	E21UNEF1"3/16
	1"1/4	18	31,750	150	28	22	18	5	E21UNEF1"1/4
	1"3/8	18	34,925	170	30	28	22	5	E21UNEF1"3/8
	1"7/16	18	36,513	170	30	28	22	6	E21UNEF1"7/16
	1"1/2	18	38,100	170	30	28	22	6	E21UNEF1"1/2

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	
K	Ghisa - Cast iron - Fonte	◑3.4 8-10				
N	Leghe di Allumino – Al alloys - Alliage Al	◑4.2 15-20	◑4.3 10-15			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.2 10-15	◑5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	◑8.2 8-10				

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

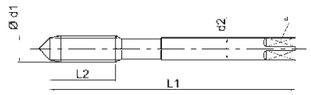
UNEF

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

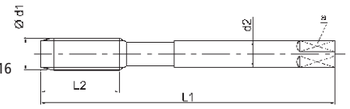
ASME B1.1

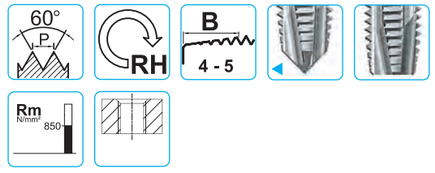
USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**2B**
Trattamento superficiale - Surface treatment - Revêtement	

	Ød1 UNEF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
◀	1/4	32	6,350	80	16	4,5	3,4	3	E25UNEF1/4
◀	5/16	32	7,938	90	18	6	4,9	3	E25UNEF5/16
◀	3/8	32	9,525	90	15	7	5,5	3	E25UNEF3/8
	7/16	28	11,113	100	20	8	6,2	3	E25UNEF7/16
	1/2	28	12,700	100	20	9	7	3	E25UNEF1/2
	9/16	24	14,288	100	22	11	9	4	E25UNEF9/16
	5/8	24	15,875	100	22	12	9	4	E25UNEF5/8
	11/16	24	17,462	110	25	14	11	4	E25UNEF11/16
	3/4	20	19,050	110	25	14	11	4	E25UNEF3/4
	13/16	20	20,638	125	25	18	14,5	4	E25UNEF13/16
	7/8	20	22,225	125	25	18	14,5	4	E25UNEF7/8
	1"	20	25,400	140	28	18	14,5	4	E25UNEF1"
	1"1/16	18	26,988	140	25	20	16	4	E25UNEF1"1/16
	1"1/8	18	28,575	150	28	22	18	4	E25UNEF1"1/8
	1"3/16	18	30,163	150	28	22	18	4	E25UNEF1"3/16
	1"1/4	18	31,750	150	28	22	18	5	E25UNEF1"1/4
	1"3/8	18	34,925	170	30	28	22	5	E25UNEF1"3/8
	1"7/16	18	36,513	170	30	28	22	6	E25UNEF1"7/16
	1"1/2	18	38,100	170	30	28	22	6	E25UNEF1"1/2

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	
M	Acciaio inox - Stainless steel - Acier inoxydable					
K	Ghisa - Cast iron - Fonte					
N	Leghe di Allumino – Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

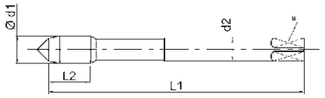
UNEF

MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

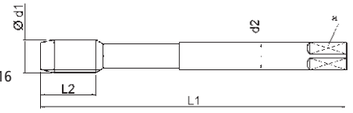
ASME B1.1

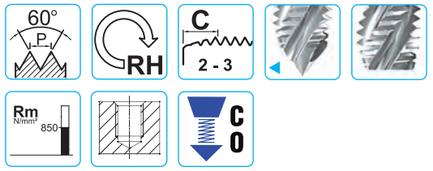
USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 = 1/4



DIN 2184-1 d1 ≥ 5/16





Profondità di filettatura - Thread depth - Prof. de filetage	**2,5xD**
Materiale - Tool Material - Substrat	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**2B**
Trattamento superficiale - Surface treatment - Revêtement	

	Ød1 UNEF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE
◀	**1/4**	**32**	6,350	80	10	4,5	3,4	3	5,55	E61UNEF1/4
	5/16	**32**	7,938	90	13	6	4,9	3	7,15	E61UNEF5/16
	3/8	**32**	9,525	90	15	7	5,5	3	8,7	E61UNEF3/8
	7/16	**28**	11,113	100	15	8	6,2	3	10,2	E61UNEF7/16
	1/2	**28**	12,700	100	13	9	7	3	11,8	E61UNEF1/2
	9/16	**24**	14,288	100	15	11	9	4	13,2	E61UNEF9/16
	5/8	**24**	15,875	110	15	12	9	4	14,8	E61UNEF5/8
	11/16	**24**	17,462	110	17	14	11	4	16,4	E61UNEF11/16
	3/4	**20**	19,050	110	17	14	11	4	17,8	E61UNEF3/4
	13/16	**20**	20,638	125	18	16	12	4	19,4	E61UNEF13/16
	7/8	**20**	22,225	125	18	18	14,5	4	20,95	E61UNEF7/8
	1”	**20**	25,400	140	22	18	14,5	4	24,15	E61UNEF1"
	1”1/16	**18**	26,988	140	20	20	16	4	25,6	E61UNEF1"1/16
	1”1/8	**18**	28,575	150	22	22	18	4	27,15	E61UNEF1"1/8
	1”3/16	**18**	30,163	150	22	22	18	4	28,75	E61UNEF1"3/16
	1”1/4	**18**	31,750	150	22	22	18	5	30,3	E61UNEF1"1/4
	1”3/8	**18**	34,925	170	24	28	22	5	33,5	E61UNEF1"3/8
	1”7/16	**18**	36,513	170	24	28	22	6	35,1	E61UNEF1"7/16
	1”1/2	**18**	38,100	170	24	28	22	6	36,7	E61UNEF1"1/2

ISO	Campo di impiego Application range Gamme d’application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10
M	Acciaio inox - Stainless steel - Acier inoxydable				
K	Ghisa - Cast iron - Fonte				
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15		

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

UNEF

Calibri a tampone filettati Passa / Non passa
Thread plug gauges Go / No-Go
Tampon de filetage Entre / N’entre pas

ASME B1.1

ANSI / ASME B1.2

Tolleranza - Thread tolerance - Tolérance du filetage	**2B**
Trattamento superficiale - Surface treatment - Revêtement	

Ød1 UNEF	P TPI	CODE
1/4	**32**	P-NPUNEF1/4-32
5/16	**32**	P-NPUNEF5/16-32
3/8	**32**	P-NPUNEF3/8-32
7/16	**28**	P-NPUNEF7/16-28
1/2	**28**	P-NPUNEF1/2-28
9/16	**24**	P-NPUNEF9/16-24
5/8	**24**	P-NPUNEF5/8-24
11/16	**24**	P-NPUNEF11/16-24
3/4	**20**	P-NPUNEF3/4-20
13/16	**20**	P-NPUNEF13/16-20
7/8	**20**	P-NPUNEF7/8-20
1"	**20**	P-NPUNEF1"-20
1”1/16	**18**	P-NPUNEF1"1/16-18
1"1/8	**18**	P-NPUNEF1"1/8-18
1”3/16	**18**	P-NPUNEF1"3/16-18
1"1/4	**18**	P-NPUNEF1"1/4-18
1"3/8	**18**	P-NPUNEF1"3/8-18
1”7/16	**18**	P-NPUNEF1"7/16-18
1"1/2	**18**	P-NPUNEF1"1/2-18

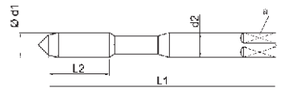
UNS

MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

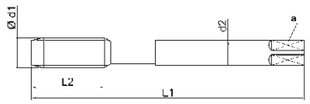
ASME B1.1

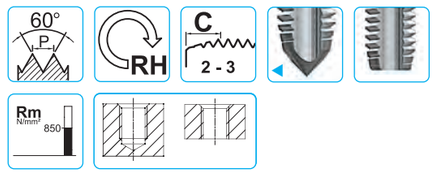
USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4



DIN 2184-1 d1 ≥ 3/8





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD						
Materiale - Tool Material - Substrat	HSSE						
Tolleranza - Thread tolerance - Tolérance du filetage	2B						
Trattamento superficiale - Surface treatment - Revêtement							

	Ød1 UNS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
◀	10	40	4,826	70	13	6	4,9	3	4,2	E20-40UNS10
◀	10	48	4,826	70	13	6	4,9	3	4,3	E20-48UNS10
◀	12	36	5,486	80	16	6	4,9	3	4,8	E20-36UNS12
◀	1/4	24	6,350	80	16	7	5,5	3	5,3	E20-24UNS1/4
◀	1/4	36	6,350	80	16	7	5,5	3	5,6	E20-36UNS1/4
◀	1/4	40	6,350	80	16	7	5,5	3	5,7	E20-40UNS1/4

	Ød1 UNS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
	3/8	40	9,525	100	15	7	5,5	3	8,9	E21-40UNS3/8SP
	7/16	24	11,113	100	20	8	6,2	3	10,05	E21-24UNS7/16
	1/2	24	12,700	100	20	9	7	3	11,6	E21-24UNS1/2
	1"	14	25,400	140	28	18	14,5	4	23,6	E21-14UNS1"

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min				
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	
K	Ghisa - Cast iron - Fonte	❍3.4 8-10				
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.2 15-20	❍4.3 10-15			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.2 10-15	❍5.3 15-20			
N	Materiali termoindurenti Duroplastic - Thermodurcissables	❍8.2 8-10				

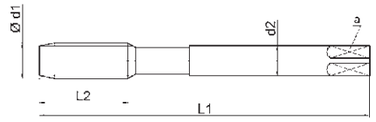
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

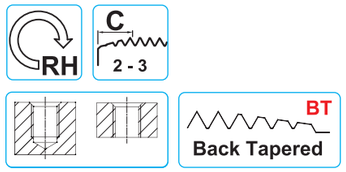
8-UN 12-UN

MASCHI A MACCHINA - Scanalature diritte ed elicoidali a 40° rastremati
MACHINE TAPS - Straight flutes and 40° spiral flutes back tapered
TARAUDS MACHINE - Goujures droites et goujures hélicoïdales 40° conicité arrière

ASME B1.1

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	2,5xD	2,5xD	
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	
Tolleranza - Thread tolerance - Tolérance du filetage	2B	2B	2B	
Trattamento superficiale - Surface treatment - Revêtement			XP	

DIN 2184-1	Ød1 8-UN	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
■	1"1/8	8	28,575	180	40	22	18	4	25,4	E21-8UN1"1/8	E81-8UN1"1/8	E81-8UN1"1/8XP
	1"1/4	8	31,750	180	40	22	18	4	28,6	E21-8UN1"1/4	E81-8UN1"1/4	E81-8UN1"1/4XP
	1"3/8	8	34,925	200	50	28	22	4	31,75	E21-8UN1"3/8	E81-8UN1"3/8	E81-8UN1"3/8XP
	1"1/2	8	38,100	200	50	28	22	4	34,9	E21-8UN1"1/2	E81-8UN1"1/2 (Z=5)	E81-8UN1"1/2XP (Z=5)
	1"5/8	8	41,275	200	50	32	24	5	38,1	E21-8UN1"5/8	E81-8UN1"5/8	E81-8UN1"5/8XP
■	1"3/4	8	44,450	200	50	36	29	5	41,3	E21-8UN1"3/4	E81-8UN1"3/4	E81-8UN1"3/4XP
■	1"7/8	8	47,625	225	60	36	29	5	44,45	E21-8UN1"7/8	E81-8UN1"7/8	E81-8UN1"7/8XP
■	2"	8	50,800	225	60	40	32	5	47,6	E21-8UN2"	E81-8UN2"	E81-8UN2"XP
■	2"1/4	8	57,150	250	65	45	35	6	54	E21-8UN2"1/4	E81-8UN2"1/4	E81-8UN2"1/4XP
■	2"1/2	8	63,500	275	70	50	39	6	60,3	E21-8UN2"1/2	E81-8UN2"1/2	E81-8UN2"1/2XP

UFS Norm	Ød1 12-UN	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		NEW	CODE	
	7/8	12	22,225	125	25	18	14,5	4	20,1		E21-12UN7/8	E81-12UN7/8	E81-12UN7/8XP
	1"1/16	12	26,988	140	25	20	16	4	24,9		E21-12UN1"1/16	E81-12UN1"1/16	E81-12UN1"1/16XP
	1"3/16	12	30,163	150	28	22	18	4	28		E21-12UN1"3/16	E81-12UN1"3/16	E81-12UN1"3/16XP
	1"5/16	12	33,338	170	30	28	22	5	31,2		E21-12UN1"5/16	E81-12UN1"5/16	E81-12UN1"5/16XP
	1"5/8	12	41,275	170	30	32	24	6	39,2		E21-12UN1"5/8	E81-12UN1"5/8	E81-12UN1"5/8XP

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable									❍2.1 10-15	❍2.2 8-10		
K	Ghisa - Cast iron - Fonte	❍3.4 8-10								❍3.3 10-15	•3.4 15-20		
N	Leghe di Allumino – Al alloys - Alliage Al	❍4.2 15-20	❍4.3 20-15			•4.1 10-15	•4.2 15-20			•4.2 25-30	❍4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.1 10-15	❍5.3 15-20			❍5.1 8-12	❍5.2 10-15			•5.2 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍8.2 8-10											

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

Lo stile della riqualificazione

The style of redevelopment

Le più antiche officine ferroviarie italiane vennero realizzate a Torino intorno alla metà dell'Ottocento.
Con la crescita della città e la necessità di spazio dovuta all'aumento della produzione, il consiglio di amministrazione della Ferrovie Alta Italia decise di spostare gli impianti riunendo al tempo stesso le due officine in un'unica struttura individuata nell'allora periferia di Torino ma oggi totalmente immersa nella città. Nacquero così le OGR, le Officine Grandi Riparazioni, un'eccellenza al tempo; entrarono in funzione nel 1895.

Negli anni '90 gli impianti delle OGR sono stati dismessi e si pensava di abbattere tutto il complesso. Ma poi, per la salvaguardia dell'identità e della memoria, c'è stata la riqualificazione delle OGR; un'eccellenza, l'unico esempio di riconversione industriale in Europa con tre "anime".
Un'impresa complessa, per i vincoli architettonici e storico-artistici esistenti, il grado di ammaloramento della struttura, l'estensione e le peculiarità del sito caratterizzato da fattori di inquinamento ambientale e bellico, la molteplicità delle destinazioni d'uso e delle tipologie di utenti, e persino l'emergere in corso d'opera di alcuni elementi non prevedibili, che hanno comportato l'adozione di varianti supplettive e tecniche.
Nel 2014 iniziano i lavori di riqualificazione che hanno posto particolare attenzione all'integrare soluzioni ad alto contenuto tecnologico, sostenibilità ambientale, salvaguardia del valore storico e flessibilità degli spazi.
Le OGR quale hub di sperimentazione e produzione di contemporaneità in continua trasformazione e dialogo con soggetti protagonisti dell'arte e dell'innovazione a livello globale. Tre anime che si integrano tra loro come un ecosistema per lo sviluppo e la crescita del capitale culturale, sociale ed economico del territorio: la ricerca artistica in tutte le sue declinazioni (nelle Officine Nord), la ricerca scientifica, tecnologica e industriale (nelle Officine Sud), l'enogastronomia con attività di somministrazione di food & beverage volte a valorizzare, in particolare, le produzioni a filiera corta (nel Transetto che divide le due aree).
Per le arti contemporanee, gli spazi polifunzionali ospitano mostre, spettacoli, concerti, eventi di teatro, danza e persino esperienze di realtà virtuale immersiva, in una vera e propria digital gallery.
L'innovation hub internazionale, una lunga promenade di circa 200 metri che mantiene l'immagine storica della navata centrale nella propria integrità con la luce naturale che scende dal tetto. Nelle due campate laterali, gli ambienti vetrati per le sale riunioni e i blocchi di uffici open space su due piani testimoniano la rinnovata identità del luogo; un hub per la ricerca, acceleratore delle migliori start up innovative, polo per lo sviluppo progettuale nel settore delle industrie creative, laboratorio dedicato agli Smart Data e centro di sperimentazione funzionale.

The oldest Italian railway factories were built in Turin around the middle of the 19th century.
With the growth of the city and the need for space due to increasing production, the board of directors of Ferrrovie Alta Italia decided to move the facilities, combining the two sections in a single factory on what was then the edge of the city, but is today completely surrounded by it. This was the start of the OGRs (Officine Grandi Riparazioni); these excellent industrial sites came into operation in 1895.

In the 1990s the OGRs ceased production and the intention was to demolish the entire complex. But instead their identity and memory were rescued by the redevelopment of the OGRs: an excellent and unique example of European industrial refurbishment with three "strands".
It was a complicated venture due to existing architectural, historical and artistic constraints, the serious deterioration of the building, its size and the specific characteristics of the site, which was affected by environmental pollution and war damage, multiple uses and users, and even the emergence during the course of the work of unforeseen obstacles that required additional work and expertise.
2014 saw the start of the redevelopment work, which focused particularly on the inclusion of high-tech solutions, environmental sustainability and protection of the historical value of the site, as well as flexibility.

The OGR as a hub for experimentation and contemporary production, in constant transformation and dialogue with leading international figures in art and innovation. Three strands come together as an ecosystem for the development and growth of the area's cultural, social and economic assets: artistic research in all its forms (in the Officine Nord), science, technology and industry (in the Officine Sud), the promotion of food and wine, with a particular focus on local, short production chains (in the Transept between the two).
For the contemporary arts, the multi-purpose spaces host exhibitions, shows, concerts, theatre, dance and even immersive virtual reality experiences in a truly digital gallery.
The international innovation hub is a promenade some 200 metres long that retains the historical image of the central nave, with natural light entering from the ceiling. In the two side aisles, glazed meeting rooms and blocks of open plan offices on two levels attest to the site's new identity as a hub for research, an accelerator for innovative startups, a centre for project design in the creative industries, a laboratory for Smart Data and a place of functional experimentation.

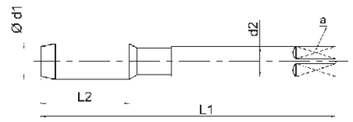
Social Table, Officine Grandi Riparazioni, Torino
Social Table, OGR, Turin

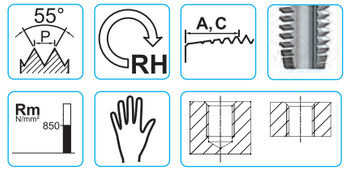
GAS

MASCHI A MANO - Per fori ciechi e passanti in serie di due pezzi
HAND TAPS - For blind and through holes in sets in sets of two pieces
TARAUDS À MAIN - Pour trous borgnes et débouchant en jeu de deux pièces

ISO 228 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5157





Profondità di filettatura - Thread depth - Prof. de filetage	**2xD**	**2xD**		
Materiale - Tool Material - Substrat	**HSS**	**HSS**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO 228**	**ISO 228**		
Trattamento superficiale - Surface treatment - Revêtement				

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	Finitore Bottoming - Finisseur	Serie Set - Jeu
1/8	**28**	9,73	63	18	7	5,5	3	8,8	03G1/8	00G1/8
1/4	**19**	13,16	70	20	11	9	4	11,8	03G1/4	00G1/4
3/8	**19**	16,66	70	20	12	9	4	15,25	03G3/8	00G3/8
1/2	**14**	20,96	80	22	16	12	4	19	03G1/2	00G1/2
5/8	**14**	22,91	80	22	18	14,5	4	21	03G5/8	00G5/8
3/4	**14**	26,44	90	22	20	16	4	24,5	03G3/4	00G3/4
7/8	**14**	30,20	90	22	22	18	4	28,25	03G7/8	00G7/8
1"	**11**	33,25	100	25	25	20	5	30,75	03G1"	00G1"
1"1/8	**11**	37,90	125	32	28	22	6	35,5	03G1"1/8	00G1"1/8
1"1/4	**11**	41,91	125	32	32	24	6	39,5	03G1"1/4	00G1"1/4
1"1/2	**11**	47,8	140	32	36	29	6	45,25	03G1"1/2	00G1"1/2
1"3/4	**11**	53,75	140	32	40	32	6	51,10	03G1"3/4	00G1"3/4
2"	**11**	59,61	160	36	45	35	6	57	03G2"	00G2"

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 •1.2 •1.3 •1.4
M	Acciaio INOX – Stainless steel - Acier inoxydable	◦2.1 ◦2.2 ◦2.3
K	Ghisa - Cast iron - Fonte	◦3.1 ◦3.4
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1 •4.2 •4.3 ◦4.4
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 •5.2 ◦5.3

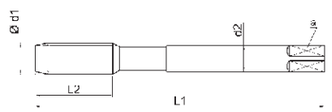
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

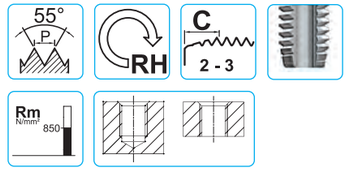
GAS

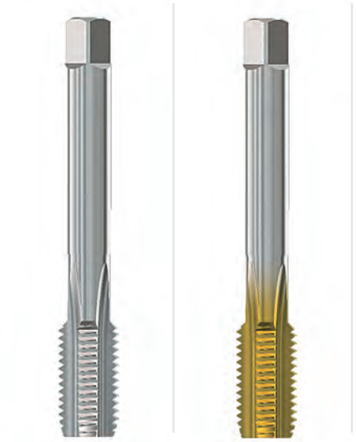
MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

ISO 228 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156







Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**		
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO 228**	**ISO 228**		
Trattamento superficiale - Surface treatment - Revêtement		**TiN**		

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE	
1/8	**28**	9,73	90	15	7	5,5	3	8,8	E21G1/8	E21G1/8T
1/4	**19**	13,16	100	22	11	9	3	11,8	E21G1/4	E21G1/4T
3/8	**19**	16,66	100	22	12	9	3	15,25	E21G3/8	E21G3/8T
1/2	**14**	20,96	125	25	16	12	4	19	E21G1/2	E21G1/2T
5/8	**14**	22,91	125	25	18	14,5	4	21	E21G5/8	E21G5/8T
3/4	**14**	26,44	140	25	20	16	4	24,5	E21G3/4	E21G3/4T
7/8	**14**	30,20	150	28	22	18	4	28,25	E21G7/8	E21G7/8T
1"	**11**	33,25	160	30	25	20	5	30,75	E21G1"	E21G1"T
1"1/8	**11**	37,90	170	30	28	22	6	35,5	E21G1"1/8	E21G1"1/8T
1"1/4	**11**	41,91	170	30	32	24	6	39,5	E21G1"1/4	E21G1"1/4T
■ **1"1/2**	**11**	47,8	190	32	36	29	6	45,25	E21G1"1/2	E21G1"1/2T
■ **1"3/4**	**11**	53,75	190	32	40	32	6	51,1	E21G1"3/4	E21G1"3/4T
■ **2"**	**11**	59,61	220	40	45	35	6	57	E21G2"	E21G2"T
■ **2"1/2**	**11**	75,18	250	50	45	35	8	72,6	E21G2"1/2	E21G2"1/2T

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◦1.1 10-15 •1.2 10-15 •1.3 10-12 ◦1.4 8-10 •1.1 20-30 •1.2 20-30 •1.3 20-25 •1.4 15-20
K	Ghisa - Cast iron - Fonte	◦3.4 8-10 ◦3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	◦4.2 15-20 ◦4.3 10-15 ◦4.2 25-30 ◦4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◦5.2 10-15 ◦5.3 15-20 ◦5.2 20-25 ◦5.3 25-30
N	Materiali termoindurenti Duroplastic - Thermodurcissables	◦8.2 8-10 ◦8.2 10-15

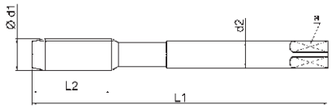
• Raccomandato - Optimal - Recommandé ◦ Adatto - Suitable - Adaptè

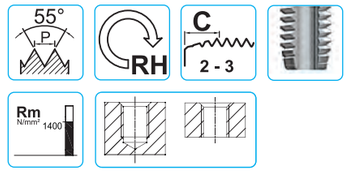
GAS

MASCHI A MACCHINA - Scanalature diritte per ghisa
MACHINE TAPS - Straight flutes for cast iron
TARAUDS MACHINE - Goujures droites pour fonte

ISO 228 | GG | GHISA - CAST IRON - FONTE

DIN 5156



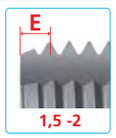


	LINE	LINE	TOP	TOP
Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	PM3	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	ISO228X	ISO228X	ISO228X	ISO228X
Trattamento superficiale - Surface treatment - Revêtement	NQ	TiCN	TiAlN	TiAlN

	Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE			
	1/8	28	9,73	90	15	7	5,5	4	8,8	E27G1/8NQ	E27G1/8CT	
	1/4	19	13,16	100	22	11	9	4	11,8	E27G1/4NQ	E27G1/4CT	
	3/8	19	16,66	100	22	12	9	4	15,25	E27G3/8NQ	E27G3/8CT	
	1/2	14	20,96	125	25	16	12	4	19	E27G1/2NQ	E27G1/2CT	
	3/4	14	26,44	140	25	20	16	4	24,5	E27G3/4NQ	E27G3/4CT	
	1"	11	33,25	160	30	25	20	5	30,75	E27G1"NQ	E27G1"CT	
	1"1/4	11	41,91	170	30	32	24	6	39,5	E27G1"1/4NQ	E27G1"1/4CT	
■	1"1/2	11	47,8	190	32	36	29	6	45,25	E27G1"1/2NQ	E27G1"1/2CT	
	1/8	28	9,73	90	15	7	5,5	4	8,8			* K27G1/8TX * K27G1/8FOR-TX
	1/4	19	13,16	100	22	11	9	4	11,8			* K27G1/4TX * K27G1/4FOR-TX
	3/8	19	16,66	100	22	12	9	4	15,25			* K27G3/8TX * K27G3/8FOR-TX
	1/2	14	20,96	125	25	16	12	5	19			* K27G1/2TX * K27G1/2FOR-TX

■ = HSS

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



ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
K	Ghisa - Cast iron - Fonte	•3.1 10-15 · •3.2 8-10 · ❍3.3 8-10 · ❍3.4 10-15 · •3.1 20-25 · •3.2 15-20 · ❍3.3 15-20 · ❍3.4 20-25 · •3.1 25-30 · •3.2 20-25 · ❍3.3 20-25 · ❍3.4 25-30 · •3.5 10-15
N	Leghe Al, Si > 10% Al alloys, Si > 10% - Alliage Al, Si > 10%	•4.4 10-15 · •4.4 25-30
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	•4.5 10-15 · •4.5 20-30
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 18-20 · •5.3 25-30
N	Materiali termoindurenti Duroplastic - Thermodurcissables	•8.2 8-10 · •8.2 10-15

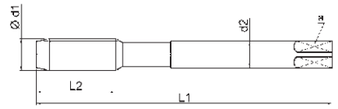
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

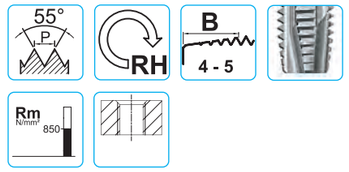
GAS

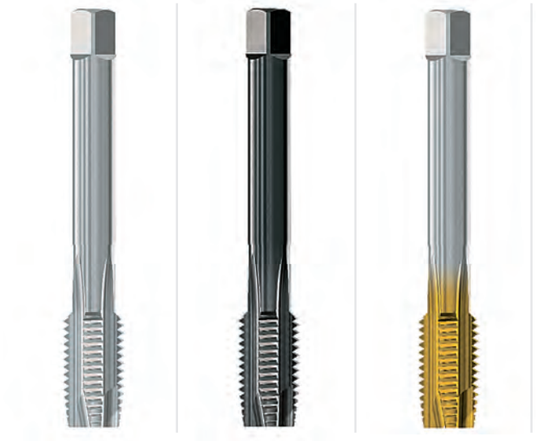
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

ISO 228 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156







Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228	ISO 228	ISO 228
Trattamento superficiale - Surface treatment - Revêtement		V	TiN

	Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE		
	1/8	28	9,73	90	15	7	5,5	3	8,8	E25G1/8	E25G1/8V	E25G1/8T
	1/4	19	13,16	100	22	11	9	3	11,8	E25G1/4	E25G1/4V	E25G1/4T
	3/8	19	16,66	100	22	12	9	4	15,25	E25G3/8	E25G3/8V	E25G3/8T
	1/2	14	20,96	125	25	16	12	4	19	E25G1/2	E25G1/2V	E25G1/2T
	5/8	14	22,91	125	25	18	14,5	4	21	E25G5/8	-	-
	3/4	14	26,44	140	25	20	16	4	24,5	E25G3/4	E25G3/4V	E25G3/4T
	7/8	14	30,20	150	28	22	18	4	28,25	E25G7/8	-	-
	1"	11	33,25	160	30	25	20	5	30,75	E25G1"	E25G1"V	E25G1"T
	1"1/8	11	37,90	170	30	28	22	6	35,5	E25G1"1/8	-	-
	1"1/4	11	41,91	170	30	32	24	6	39,5	E25G1"1/4	-	-
■	1"1/2	11	47,8	190	32	36	29	6	45,25	E25G1"1/2	-	-
■	2"	11	59,61	220	40	45	35	6	57	E25G2"	-	-

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15 · ❍1.2 10-15 · ❍1.3 10-12 · ❍1.4 8-10 · •1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ❍1.4 8-10 · •1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	
K	Ghisa - Cast iron - Fonte	❍3.3 10-15 · •3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.1 10-15 · ❍4.2 15-20 · •4.1 10-15 · •4.2 15-20 · ❍4.1 20-25 · •4.2 25-30 · ❍4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.1 8-12 · ❍5.2 10-15 · •5.1 8-12 · •5.2 10-15 · ❍5.1 15-20 · •5.2 20-25

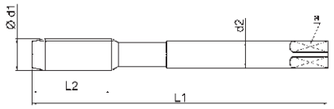
• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

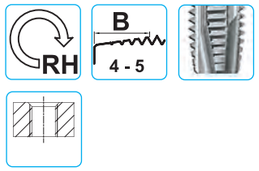
GAS

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

ISO 228 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 5156





s-plus
NEW

Profondità di filettatura - Thread depth - Prof. de filetage	3xD		3xD
Materiale - Tool Material - Substrat	PM3		HSSP
Tolleranza - Thread tolerance - Tolérance du filetage	ISO228X		ISO228
Trattamento superficiale - Surface treatment - Revêtement	XP		TiN-G

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE	
1/8	28	9,73	90	15	7	5,5	3	8,8	K25G1/8XP	P25G1/8TG
1/4	19	13,16	100	22	11	9	4	11,8	K25G1/4XP	P25G1/4TG
3/8	19	16,66	100	22	12	9	4	15,25	K25G3/8XP	P25G3/8TG
1/2	14	20,96	125	25	16	12	4	19	K25G1/2XP	P25G1/2TG
3/4	14	26,44	140	25	20	16	4	24,5	K25G3/4XP	P25G3/4TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	◑1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12		•1.2 20-30	•1.3 20-25	•1.4 15-20	◑1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8							
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20					•3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25					•4.3 20-25			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25						•5.2 20-25			

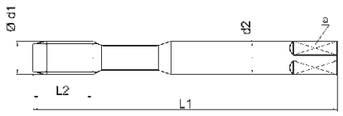
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

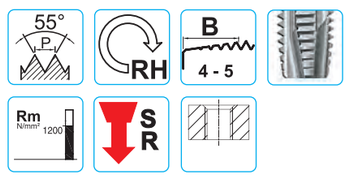
GAS

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

ISO 228 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

*UFS Norm





Profondità di filettatura - Thread depth - Prof. de filetage	3xD
Materiale - Tool Material - Substrat	PM3
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228X
Trattamento superficiale - Surface treatment - Revêtement	TXC

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h6	a h12	Z	CODE
1/8	28	9,73	90	10	10	8	3	8,8	S24G1/8TXC
1/4	19	13,16	100	13,5	12	9	3	11,8	S24G1/4TXC
3/8	19	16,66	100	13,5	16	12	4	15,25	S24G3/8TXC
1/2	14	20,96	125	18	20	16	4	19	S24G1/2TXC

* Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min					
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.1 40-45	•1.2 40-45	•1.3 35-40	•1.4 25-30	•1.5 10-15	
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 20-25	•2.2 15-20	•2.3 10-15	•2.3 10-12		
K	Ghisa - Cast iron - Fonte	•3.3 20-25	•3.4 25-30				
N	Leghe di Allumino – Al alloys - Alliage Al Si < 10%	•4.1 30-40	•4.2 45-50	•4.3 30-40			
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.1 20-25	•5.2 25-30				
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<900 N/mm²	•6.1 20-30	◑6.2 12-15				
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.1 20-30	◑7.2 8-12				

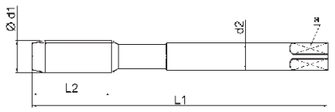
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

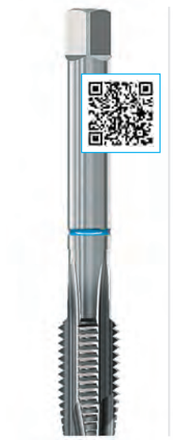
GAS

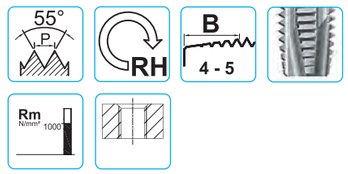
MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

ISO 228 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 5156







Profondità di filettatura - Thread depth - Prof. de filetage	3xD
Materiale - Tool Material - Substrat	HSSV3
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228X
Trattamento superficiale - Surface treatment - Revêtement	TXC

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE
1/8	28	9,73	90	15	7	5,5	3	8,8	V25G1/8TXC
1/4	19	13,16	100	22	11	9	4	11,8	V25G1/4TXC
3/8	19	16,66	100	22	12	9	4	15,25	V25G3/8TXC
1/2	14	20,96	125	25	16	12	4	19	V25G1/2TXC
3/4	14	26,44	140	25	20	16	4	24,5	V25G3/4TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min			
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.3 20-25	•1.4 15-20	◑1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8	◑2.4 3-6

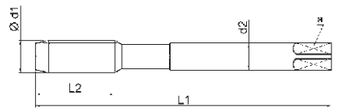
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

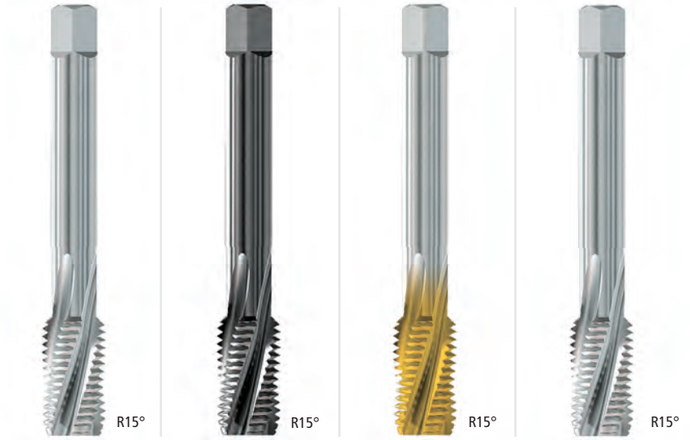
GAS

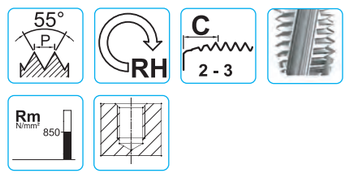
MASCHI A MACCHINA - Elica destra a 15° per fori ciechi
MACHINE TAPS - Spiral flutes 15° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 15° pour trous borgnes

ISO 228 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156







Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	1,5xD	1,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO228	ISO228	ISO228	ISO228+0,05
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	

	Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
	1/8	28	9,73	90	15	7	5,5	3	8,8	E41G1/8	E41G1/8V	E41G1/8T	E41G1/8+0,05
	1/4	19	13,16	100	22	11	9	3	11,8	E41G1/4	E41G1/4V	E41G1/4T	E41G1/4+0,05
	3/8	19	16,66	100	22	12	9	3	15,25	E41G3/8	E41G3/8V	E41G3/8T	E41G3/8+0,05
	1/2	14	20,96	125	25	16	12	4	19	E41G1/2	E41G1/2V	E41G1/2T	E41G1/2+0,05
	3/4	14	26,44	140	25	20	16	4	24,5	E41G3/4	E41G3/4V	E41G3/4T	E41G3/4+0,05
	1"	11	33,25	160	30	25	20	5	30,75	E41G1"	E41G1"V	E41G1"T	E41G1"+0,05
	1"1/8	11	37,90	170	30	28	22	6	35,5	E41G1"1/8	-	-	-
	1"1/4	11	41,91	170	30	32	24	6	39,5	E41G1"1/4	-	-	-
■	1"1/2	11	47,8	190	32	36	29	6	45,25	E41G1"1/2	-	-	-
■	2"	11	59,61	220	40	45	35	6	57,2	E41G2"	-	-	-
■	2"1/2	11	75,18	250	50	45	35	8	72,8	E41G2"1/2	-	-	-

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min														
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	◑1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10
K	Ghisa - Cast iron - Fonte									◑3.3 10-15	•3.4 15-20						
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			◑4.1 20-25	•4.2 25-30	◑4.3 20-25		◑4.1 10-15	•4.2 15-20		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.1 8-12	◑5.2 10-15			•5.1 8-12	•5.2 10-15			◑5.1 15-20	•5.2 20-25			◑5.1 8-12	◑5.2 10-15		

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

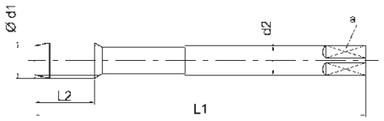
GAS

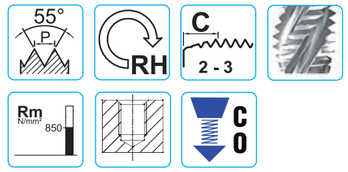
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

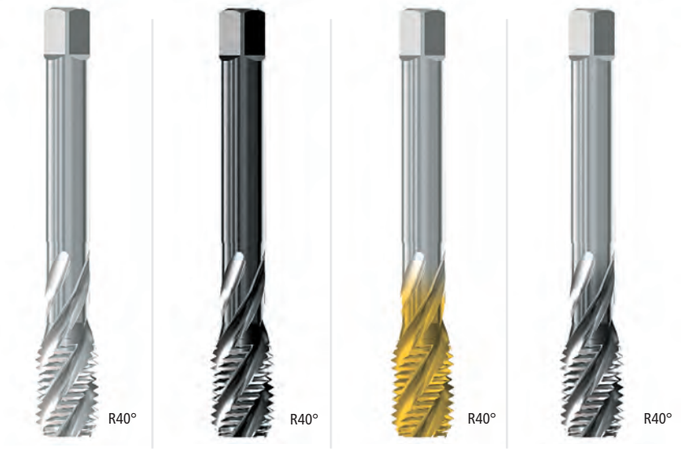
ISO 228

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228	ISO 228	ISO 228	ISO 228
Trattamento superficiale - Surface treatment - Revêtement		V	TiN	XP

	Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE			
	1/8	28	9,73	90	15	7	5,5	3	8,8	E61G1/8	E61G1/8V	E61G1/8T	E61G1/8XP
	1/4	19	13,16	100	15	11	9	3	11,8	E61G1/4	E61G1/4V	E61G1/4T	E61G1/4XP
	3/8	19	16,66	100	15	12	9	4	15,25	E61G3/8	E61G3/8V	E61G3/8T	E61G3/8XP
	1/2	14	20,96	125	18	16	12	4	19	E61G1/2	E61G1/2V	E61G1/2T	E61G1/2XP
	5/8	14	22,91	125	18	18	14,5	4	21	E61G5/8	E61G5/8V	E61G5/8T	E61G5/8XP
	3/4	14	26,44	140	20	20	16	4	24,5	E61G3/4	E61G3/4V	E61G3/4T	E61G3/4XP
	7/8	14	30,20	150	20	22	18	4	28,25	E61G7/8	E61G7/8V	E61G7/8T	E61G7/8XP
	1"	11	33,25	160	24	25	20	5	30,75	E61G1"	E61G1"V	E61G1"T	E61G1"XP
	1"1/4	11	41,91	170	24	32	24	6	39,5	E61G1"1/4	E61G1"1/4V	-	-
■	1"1/2	11	47,8	190	27	36	29	6	45,25	E61G1"1/2	E61G1"1/2V	-	-
■	2"	11	59,61	220	32	45	35	6	57,2	E61G2"	E61G2"V	-	-

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable													○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte									○3.3 10-15	•3.4 15-20			○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25		•4.2 25-30	○4.3 20-25		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			•5.1 8-12	•5.2 10-15			○5.1 15-20	•5.2 20-25			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

GAS

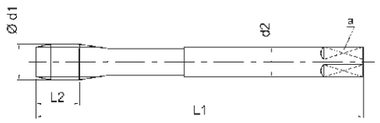
MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

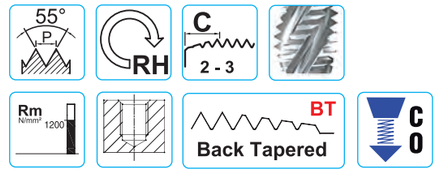
CSC CHIP SYSTEM CONTROL

ISO 228

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD	3xD
Materiale - Tool Material - Substrat	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228X	ISO 228X	ISO 228X	ISO 228X
Trattamento superficiale - Surface treatment - Revêtement		V	TiN-G	XP

	Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE			
	1/8	28	9,73	90	15	7	5,5	3	8,8	E93G1/8	E93G1/8V	E93G1/8TG	E93EG1/8XP
	1/4	19	13,16	100	15	11	9	3	11,8	E93G1/4	E93G1/4V	E93G1/4TG	E93EG1/4XP
	3/8	19	16,66	100	15	12	9	4	15,25	E93G3/8	E93G3/8V	E93G3/8TG	E93EG3/8XP
	1/2	14	20,96	125	18	16	12	4	19	E93G1/2	E93G1/2V	E93G1/2TG	E93EG1/2XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.5 5-12	•1.2 20-30	•1.3 20-25	•1.4 15-20	○1.5 5-12
M	Acciaio inox - Stainless steel - Acier inoxydable					•2.1 6-8	•2.2 5-7							•2.1 10-15	•2.2 8-10	•2.3 6-8	
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 15-20								•4.3 20-25							
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 8-12	•5.2 10-15							•5.2 20-25							

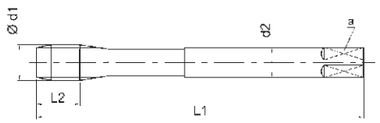
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

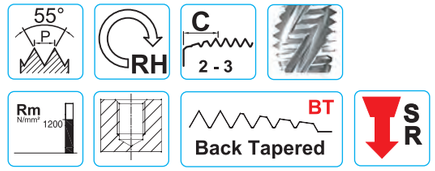
GAS

MASCHI A MACCHINA - Elicoidali 45° per fori ciechi
MACHINE TAPS - Spiral flutes 45° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 45° pour trous borgnes

ISO 228 | U | APPLICAZIONI UNIVERSALI - UNIVERSAL APPLICATIONS - USINAGE UNIVERSELS

DIN 5156





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3,5xD	
Materiale - Tool Material - Substrat	PM3	PM3	
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228X	ISO 228X	
Trattamento superficiale - Surface treatment - Revêtement	XP	XP	

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE	
1/8	28	9,73	90	15	7	5,5	3	K83G1/8XP	K83G1/8FOR-XP
1/4	19	13,16	100	15	11	9	3	K83G1/4XP	K83G1/4FOR-XP
3/8	19	16,66	100	15	12	9	4	K83G3/8XP	K83G3/8FOR-XP
1/2	14	20,96	125	18	16	12	4	K83G1/2XP	K83G1/2FOR-XP
3/4	14	26,44	140	20	20	16	4	K83G3/4XP	K83G3/4FOR-XP
1"	11	33,25	160	24	25	20	5	K83G1"XP	K83G1"FOR-XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	◑1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.5 5-12					
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8							
K	Ghisa - Cast iron - Fonte	•3.3 10-15	•3.4 15-20								
N	Leghe di Allumino - Al alloys - Alliage Al	•4.2 25-30	•4.3 20-25								
N	Leghe di rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.2 20-25									

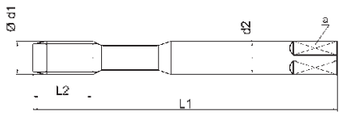
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

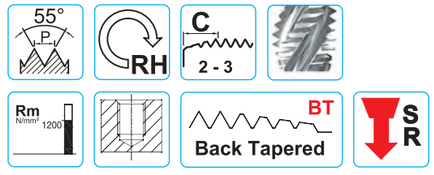
GAS

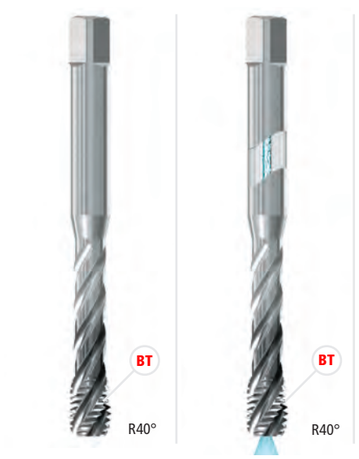
MASCHI A MACCHINA - Elicoidali 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

ISO 228 | SYNCHRO RIGID | MASCHIATURA RIGIDA SINCRONIZZATA - RIGID TAPPING SYNCHRO - TARAUDAGE RIGIDE SYNCHRONISÉ

*UFS Norm







Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228X	ISO 228X
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h6	a h12	Z	CODE	
1/8	28	9,73	90	10	10	8	3	S80G1/8TXC	S80G1/8FOR-TXC
1/4	19	13,16	100	13,5	12	9	3	S80G1/4TXC	S80G1/4FOR-TXC
3/8	19	16,66	100	13,5	16	12	4	S80G3/8TXC	S80G3/8FOR-TXC
1/2	14	20,96	125	18	20	16	4	S80G1/2TXC	S80G1/2FOR-TXC

* Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm<1200 N/mm²	•1.1 40-45	•1.2 40-45	•1.3 35-40	•1.4 25-30	•1.5 10-15					
M	Acciaio INOX – Stainless steel - Acier inoxydable	•2.1 20-25	•2.2 15-20	•2.3 10-15	•2.4 10-12						
K	Ghisa - Cast iron - Fonte	•3.3 20-25	•3.4 25-30								
N	Leghe di Allumino – Al alloys - Alliage Al Si < 10%	•4.1 30-40	•4.2 45-50	•4.3 30-40							
N	Leghe di Rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	•5.1 20-25	•5.2 25-30								
S	Leghe di titanio - Titanium alloys Alliage de titane Rm<900 N/mm²	•6.1 20-30	◑6.2 12-15								
S	Leghe di Nichel - Nickel alloys Alliages de nickel Rm<900 N/mm²	•7.1 20-30	◑7.2 8-12								

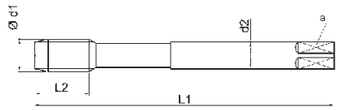
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

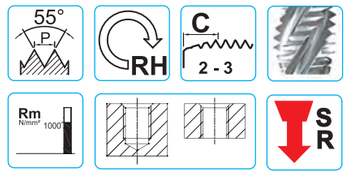
GAS

MASCHI A MACCHINA - Elicoidali 48° per fori ciechi
MACHINE TAPS - Spiral flutes 48° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 48° pour trous borgnes

ISO 228 | INOX | ACCIAIO INOSSIDABILE - STAINLESS STEEL - ACIER INOXYDABLE

DIN 5156





Profondità di filettatura - Thread depth - Prof. de filetage	3,5xD	3,5xD		
Materiale - Tool Material - Substrat	HSSV3	HSSV3		
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228X	ISO 228X		
Trattamento superficiale - Surface treatment - Revêtement	TXC	TXC		

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
1/8	28	9,73	90	15	7	5,5	3	8,8	V83G1/8TXC	V83G1/8FOR-TXC
1/4	19	13,16	100	15	11	9	3	11,8	V83G1/4TXC	V83G1/4FOR-TXC
3/8	19	16,66	100	15	12	9	4	15,25	V83G3/8TXC	V83G3/8FOR-TXC
1/2	14	20,96	125	18	16	12	4	19	V83G1/2TXC	V83G1/2FOR-TXC
3/4	14	26,44	140	20	20	16	4	24,5	V83G3/4TXC	V83G3/4FOR-TXC
1"	11	33,25	160	24	25	20	5	30,75	V83G1"TXC	V83G1"FOR-TXC

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 1000 N/mm²	•1.3 20-25	•1.4 15-20	◑1.5 5-12		•1.3 20-25	•1.4 15-20	◑1.5 5-12	
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 10-15	•2.2 8-10	•2.3 6-8	◑2.4 3-6	•2.1 10-15	•2.2 8-10	•2.3 6-8	◑2.4 3-6

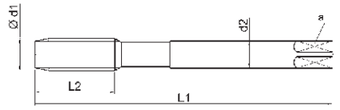
• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

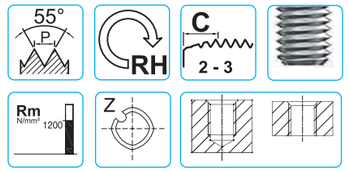
GAS

MASCHI A MACCHINA - Per fori ciechi e passanti con canalini di lubrificazione
MACHINE TAPS - For blind and through holes with oil grooves
TARAUDS MACHINE - Pour trous borgnes et débouchant avec rainures de lubrification

ISO 228 | MASCHI A RULLARE - ROLL FORM TAPS - TARAUDS À REFOULER

DIN 5156





Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD	3xD
Materiale - Tool Material - Substrat	PM8	PM8	PM8
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 228X	ISO 228X	ISO 228X
Trattamento superficiale - Surface treatment - Revêtement	TiN	TiN-G	TiN-G

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
1/8	28	9,73	90	15	7	5,5	5	9,25	P2CCG1/8T		
1/4	19	13,16	100	22	11	9	6	12,5	P2CCG1/4T		
3/8	19	16,66	100	22	12	9	6	16	P2CCG3/8T		
1/2	14	20,96	125	25	16	12	8	20	P2CCG1/2T		
3/4	14	26,44	140	25	20	16	8	25,5	P2CCG3/4T		

Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
1/8	28	9,73	90	10	7	5,5	8	9,25	K2CCG1/8TG	K2CCG1/8FOR-TG
1/4	19	13,16	100	13	11	9	8	12,5	K2CCG1/4TG	K2CCG1/4FOR-TG
3/8	19	16,66	100	13	12	9	8	16	K2CCG3/8TG	K2CCG3/8FOR-TG
1/2	14	20,96	125	18	16	12	8	20	K2CCG1/2TG	K2CCG1/2FOR-TG
5/8	14	22,91	125	18	18	14,5	8	22	K2CCG5/8TG	K2CCG5/8FOR-TG
3/4	14	26,44	140	18	20	16	8	25,5	K2CCG3/4TG	K2CCG3/4FOR-TG
7/8	14	30,20	150	18	22	18	8	29,25	K2CCG7/8TG	K2CCG7/8FOR-TG
1"	11	33,25	160	23	25	20	8	32	K2CCG1"TG	K2CCG1"FOR-TG

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min										
P	Acciaio - Steel - Acier - Rm ≤ 1200 N/mm²	•1.1 20-30	•1.2 20-30	•1.3 20-25	◑1.4 15-20	•1.3 30-35	•1.4 25-30	•1.5 15-20		•1.3 30-35	•1.4 25-30	•1.5 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	◑2.1 10-15	◑2.2 10-12	◑2.3 6-10		◑2.2 10-12	◑2.3 6-10	◑2.4 6-8		◑2.2 10-12	◑2.3 6-10	◑2.4 6-8
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.1 35-40	◑4.2 40-45	◑4.3 35-40								
N	Leghe di rame - Copper alloys - Alliages de cuivre	◑5.1 15-20	◑5.2 15-20									

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

GAS

Calibri a tampone filettati Passa / Non passa
Thread plug gauges Go / No-Go
Tampon de filetage Entre / N'entre pas

ISO 228

DIN EN ISO 228-2

55° P RH

Tolleranza - Thread tolerance - Tolérance du filetage	
Trattamento superficiale - Surface treatment - Revêtement	

Ød1 GAS	Ø mm	P TPI	CODE
1/8	9,73	28	P-NPG1/8
1/4	13,16	19	P-NPG1/4
3/8	16,66	19	P-NPG3/8
1/2	20,96	14	P-NPG1/2
5/8	22,91	14	P-NPG5/8
3/4	26,44	14	P-NPG3/4
7/8	30,2	14	P-NPG7/8
1"	33,25	11	P-NPG1"
1"1/8	37,9	11	P-NPG1"1/8
1"1/4	41,91	11	P-NPG1"1/4
1"1/2	47,8	11	P-NPG1"1/2
1"3/4	53,75	11	P-NPG1"3/4
2"	59,61	11	P-NPG2"
2"1/4	65,71	11	P-NPG2"1/4
2"1/2	75,18	11	P-NPG2"1/2
2"3/4	81,53	11	P-NPG2"3/4
3"	87,88	11	P-NPG3"

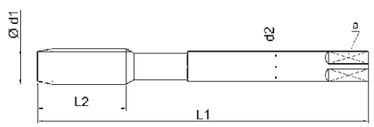
RP (BSPP)

MASCHI A MACCHINA - Scanalature diritte ed elicoidali a 40°
MACHINE TAPS - Straight flutes and spiral flutes 40°
TARAUDS MACHINE - Goujures droites et goujures hélicoïdales 40°

ISO 7-1

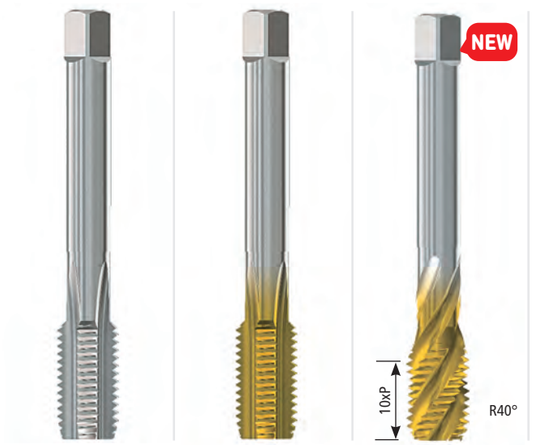
USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156



55° P RH C 2 - 3

Rm N/mm² 850



Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	ISO 5969	ISO 5969	ISO 5969
Trattamento superficiale - Surface treatment - Revêtement		TiN	TiN

Ød1 Rp	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE		
1/8	28	9,73	90	15	7	5,5	3	8,6	E21RP1/8	E21RP1/8T	-
1/4	19	13,16	100	22	11	9	3	11,5	E21RP1/4	E21RP1/4T	-
3/8	19	16,66	100	22	12	9	3	15	E21RP3/8	E21RP3/8T	-
1/2	14	20,96	125	25	16	12	4	18,5	E21RP1/2	E21RP1/2T	-
3/4	14	26,44	140	25	20	16	4	24	E21RP3/4	E21RP3/4T	-
1"	11	33,25	160	30	25	20	5	30,25	E21RP1"	E21RP1"T	-
1"1/4	11	41,91	170	30	32	24	6	39	E21RP1"1/4	E21RP1"1/4T	-
■ 1"1/2	11	47,8	190	32	36	29	6	45	E21RP1"1/2	E21RP1"1/2T	-
1/8	28	9,73	90	15	7	5,5	3	8,6	-	-	E61RP1/8T
1/4	19	13,16	100	22	11	9	3	11,5	-	-	E61RP1/4T
3/8	19	16,66	100	22	12	9	4	15	-	-	E61RP3/8T
1/2	14	20,96	125	25	16	12	4	18,5	-	-	E61RP1/2T
3/4	14	26,44	140	25	20	16	4	24	-	-	E61RP3/4T

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min											
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
K	Ghisa - Cast iron - Fonte	○3.4 8-10				○3.4 15-20				○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.2 15-20	○4.3 10-15			○4.2 25-30	○4.3 20-25			○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 10-15	○5.3 15-20			○5.2 20-25	○5.3 25-30			○5.1 15-20	•5.2 20-25		
N	Materiali termoindurenti Duroplastic - Thermodurcissables	○8.2 8-10				○8.2 10-15							

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

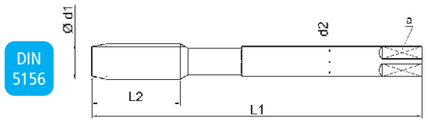
NPSM (NPSC)

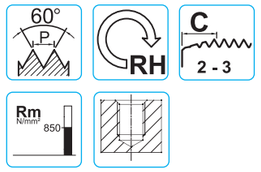
MASCHI A MACCHINA - Scanalature diritte ed elicoidali a 40°
MACHINE TAPS - Straight flutes and spiral flutes 40°
TARAUDS MACHINE - Goujures droites et goujures hélicoïdales 40°

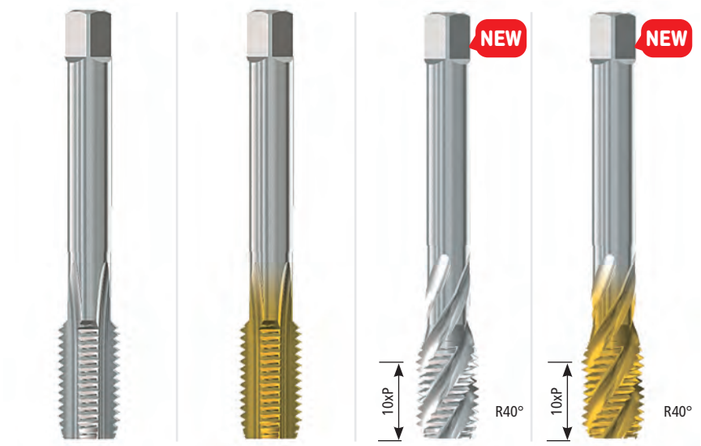
ANSI B1.20.1

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156







Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	-	-	-	-
Trattamento superficiale - Surface treatment - Revêtement		TiN		TiN

Ød1	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	F NPSM	F NPSC	CODE			
1/8	27	10,1	90	15	7	5,5	3	9,1	8,8	E21NPSM1/8X27	E21NPSM1/8X27T	-	-
1/4	18	13,404	100	22	11	9	4	12	11,4	E21NPSM1/4X18	E21NPSM1/4X18T	-	-
3/8	18	16,843	100	22	12	9	4	15,5	14,9	E21NPSM3/8X18	E21NPSM3/8X18T	-	-
1/2	14	20,949	125	25	16	12	4	19	18,5	E21NPSM1/2X14	E21NPSM1/2X14T	-	-
3/4	14	26,296	140	25	20	16	4	24,5	23,8	E21NPSM3/4X14	E21NPSM3/4X14T	-	-
1/8	27	10,1	90	15	7	5,5	3	9,1	8,8	-	-	E61NPSM1/8X27	E61NPSM1/8X27T
1/4	18	13,404	100	15	11	9	3	12	11,4	-	-	E61NPSM1/4X18	E61NPSM1/4X18T
3/8	18	16,843	100	15	12	9	4	15,5	14,9	-	-	E61NPSM3/8X18	E61NPSM3/8X18T
1/2	14	20,949	125	18	16	12	4	19	18,5	-	-	E61NPSM1/2X14	E61NPSM1/2X14T
3/4	14	26,296	140	20	20	16	4	24,5	23,8	-	-	E61NPSM3/4X14	E61NPSM3/4X14T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
K	Ghisa - Cast iron - Fonte	❍3.4 8-10				❍3.4 15-20								❍3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.2 15-20	❍4.3 10-15			❍4.2 25-30	❍4.3 20-25			❍4.1 10-15	•4.2 15-20			❍4.1 20-25	•4.2 25-30	❍4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.2 10-15	❍5.3 15-20			❍5.2 20-25	❍5.3 25-30			❍5.1 8-12	❍5.2 10-15			❍5.1 15-20	•5.2 20-25		
N	Materiali termoindurenti Duroplastic - Thermodurcissables	❍8.2 8-10				❍8.2 10-15											

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

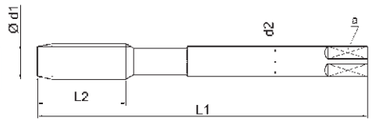
NPSF

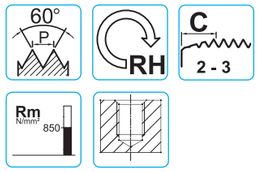
MASCHI A MACCHINA - Scanalature diritte ed elicoidali a 40°
MACHINE TAPS - Straight flutes and spiral flutes 40°
TARAUDS MACHINE - Goujures droites et goujures hélicoïdales 40°

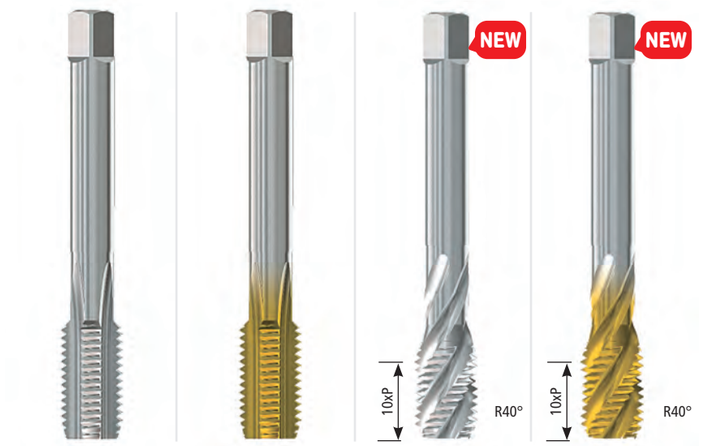
ANSI B1.20.3

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 5156







Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	-	-	-	-
Trattamento superficiale - Surface treatment - Revêtement		TiN		TiN

	Ød1	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z	CODE			
	1/8	27	9,929	90	15	7	5,5	3	E21NPSF1/8X27	E21NPSF1/8X27T	-	-
	1/4	18	13,236	100	22	11	9	4	E21NPSF1/4X18	E21NPSF1/4X18T	-	-
	3/8	18	16,673	100	22	12	9	4	E21NPSF3/8X18	E21NPSF3/8X18T	-	-
	1/2	14	20,819	125	25	16	12	4	E21NPSF1/2X14	E21NPSF1/2X14T	-	-
	3/4	14	26,166	140	25	20	16	4	E21NPSF3/4X14	E21NPSF3/4X14T	-	-
	1/8	27	9,929	90	15	7	5,5	3	-	-	E61NPSF1/8X27	E61NPSF1/8X27T
	1/4	18	13,236	100	15	11	9	3	-	-	E61NPSF1/4X18	E61NPSF1/4X18T
	3/8	18	16,673	100	15	12	9	4	-	-	E61NPSF3/8X18	E61NPSF3/8X18T
	1/2	14	20,819	125	18	16	12	4	-	-	E61NPSF1/2X14	E61NPSF1/2X14T
	3/4	14	26,166	140	20	20	16	4	-	-	E61NPSF3/4X14	E61NPSF3/4X14T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20	❍1.1 10-15	•1.2 10-15	•1.3 10-12	❍1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
K	Ghisa - Cast iron - Fonte	❍3.4 8-10				❍3.4 15-20								❍3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	❍4.2 15-20	❍4.3 10-15			❍4.2 25-30	❍4.3 20-25			❍4.1 10-15	•4.2 15-20			❍4.1 20-25	•4.2 25-30	❍4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	❍5.2 10-15	❍5.3 15-20			❍5.2 20-25	❍5.3 25-30			❍5.1 8-12	❍5.2 10-15			❍5.1 15-20	•5.2 20-25		
N	Materiali termoindurenti Duroplastic - Thermodurcissables	❍8.2 8-10				❍8.2 10-15											

• Raccomandato - Optimal - Recommandé ❍ Adatto - Suitable - Adaptè

Il Lingotto: un concept di innovazione

Lingotto: a concept of innovation

Negli anni '20, lo stabilimento del Lingotto della Fiat divenne uno degli esempi di architettura industriale più importanti d'Europa. Per la prima volta in una grande fabbrica italiana il ciclo della produzione era in progressione. L'operaio rimaneva al suo posto ed erano i materiali a cui doveva lavorare che gli passavano davanti, così da permettere che la realizzazione del prodotto fosse progressiva e, dunque, più rapida.
Nasce nella periferia sud della città, al confine tra Torino e Moncalieri. E' proprio dalla città moncalierese che arrivava la famiglia Lingotto, proprietari della cascina che ha dato il nome al quartiere. Unica nel suo genere, la pista asfaltata di collaudo della autovetture costruita direttamente sul tetto della fabbrica con la nota forma ad anello e le due curve paraboliche studiate in modo da poter essere affrontate con velocità fino a 90 km/h.

Lo stabilimento produsse alcune delle prime vetture entrate nell'immaginario italiano: la Torpedo, la Balilla e la mitica Topolino. Vide uscire dalle proprie officine più di 80 modelli di auto. Poi, nel 1982, la Fiat annunciò la sua chiusura perchè nel frattempo la casa automobilistica torinese aveva aperto altri stabilimenti, più moderni e funzionali, per sfidare il futuro e la globalizzazione.
L'anno successivo venne indetto un concorso internazionale per stabilire cosa fare dello stabilimento. Parteciparono i nomi più prestigiosi dell'architettura internazionale; vinse il genovese Renzo Piano.
La proposta di Piano per il Lingotto è affascinante, coerente con il ruolo che il Lingotto aveva avuto sin dalla sua inaugurazione. Come negli anni '20 lo stabilimento aveva indicato la direzione della città verso lo sviluppo industriale, così negli anni '90 diventa simbolo del terziario avanzato, della sfida verso il futuro.
Nei grandi spazi industriali vengono ricavati un centro congressi, un centro esposizioni, un auditorium, un grande hotel, un centro servizi, molti uffici direzionali e un'area per lo shopping. Piano dice di aver voluto ricreare nel Lingotto "un genuino pezzo di città", pulsante, vitale, poliedrica, complessa.

Il Centro Esposizioni è diventato in pochi anni uno dei più importanti d'Italia. In uno dei cortili c'è una delle sorprese pensate dall'architetto genovese: il magnifico giardino tropicale, rigoglioso ed esuberante. Sul giardino tropicale si affaccia la lunga via dedicata allo shopping, che termina con la multisala cinematografica.
Sulla mitica pista di collaudo, c'è l'altra sorpresa diventata il simbolo del nuovo Lingotto. E' la bolla, un'esclusiva sala riunioni costruita in cristallo e acciaio, da cui si gode di un panorama privilegiato e sontuoso: la corona delle Alpi e la collina di Torino tutt'intorno. Renzo Piano ha detto di aver voluto che "il segno di cambiamento, dell'innovazione del Lingotto fosse un segno di gioia". Accanto alla bolla c'è la Pinacoteca Agnelli, la cui forma architettonica ricorda vagamente un'astronave.

In the 1920s, Fiat's Lingotto factory became one of Europe's most important examples of industrial architecture. For the very first time, mass production was happening in a major Italian factory.
The worker remained at his station and the materials he had to work on moved past him, allowing the manufacturing process to happen progressively and therefore more quickly. The factory was located on the southern edge of the city, on the border between Turin and Moncalieri. And Moncalieri was home to the Lingotto family, owners of the farmstead that gave the district its name. The unique factory building had a car test track on the roof, in the shape of a ring with two parabolic curves, designed to allow speeds of up to 90 km/h.

The factory produced some of the well-known early Italian cars: the Torpedo, the Balilla and the legendary Topolino. More than 80 models rolled out of the factory. But in 1982 Fiat announced its closure, because in the meantime the Turin-based company had opened other, more modern and efficient factories to face the challenges of the globalised future. The following year an international competition was launched to determine what should be done with the building. Many leading international architects took part, and the winner was Genoa-born Renzo Piano.
Piano's design for the Lingotto building is fascinating, and consistent with the site's role ever since its construction. Just as in the 1920s the factory led the city's way towards industrial development, now in the 90s, it became a symbol of the advanced tertiary sector, a challenge to the future.
The huge industrial spaces were converted into a conference centre, an exhibition venue, an auditorium, a large hotel, a service centre, numerous executive offices and a shopping area. Piano says he wanted to create a "genuine piece of city" in the Lingotto: vibrant, dynamic, eclectic and complex.

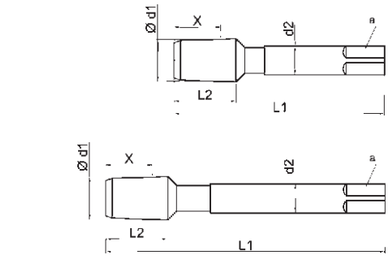
The Exhibition Centre very quickly became one of Italy's most important. A courtyards contains one of the surprises dreamed up by the architect: a magnificent tropical garden. So exuberant, lush and inconceivably green.
The tropical garden flanks the long shopping street, ending with a multi-screen cinema.
On the famous test track is the second surprise, and the symbol of the new Lingotto. This is the bubble, an exclusive meeting room built in steel and glass and offering extraordinary privileged views: the arc of the Alps and the Turin hills all around. Renzo Piano said he wanted "the mark of change, of innovation in the Lingotto to be a sign of joy". Near the bubble is the Pinacoteca Agnelli, whose architecture is reminiscent of a spaceship.

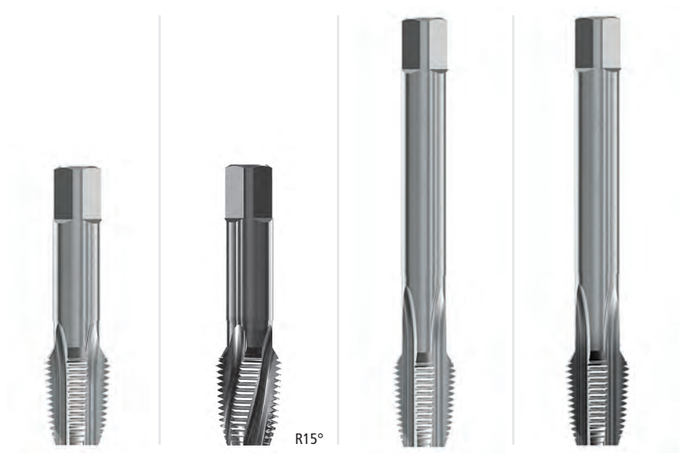
Lingotto, Torino
Lingotto, Turin

Rc

MASCHI A MACCHINA CONICI - Scanalature diritte ed elicoidali a 15°
MACHINE TAPS - Straight flutes and spiral flutes 15°
TARAUDS MACHINE - Goujures droites et goujures hélicoïdales 15°

(BSPT) UNI EN 10226-2 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL





Profondità di filettatura - Thread depth - Prof. de filetage	-	-	-	-
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**	**HSSE**	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	-	-	-	-
Trattamento superficiale - Surface treatment - Revêtement		**V**		**TXC**

	Ød1 Rc	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE		
	1/8	**28**	9,728	63	13	7	5,5	10,1	8,20	E21CRC1/8	E41CRC1/8V	
	1/4	**19**	13,157	63	20	11	9	15,0	11	E21CRC1/4	E41CRC1/4V	
	3/8	**19**	16,662	70	20	12	9	15,4	14,5	E21CRC3/8	E41CRC3/8V	
	1/2	**14**	20,955	80	26	16	12	20,4	18	E21CRC1/2	E41CRC1/2V	
	3/4	**14**	26,441	100	28	20	16	21,7	23,5	E21CRC3/4	E41CRC3/4V	
	1"	**11**	33,249	110	34	25	20	26	29,5	E21CRC1"	E41CRC1"V	
■	**1"1/4**	**11**	41,910	125	36	32	24	28,3	38	E21CRC1"1/4	-	
■	**1"1/2**	**11**	47,803	140	36	36	29	28,3	44	E21CRC1"1/2	-	
■	**2"**	**11**	59,614	160	40	45	35	32,6	55,5	E21CRC2"	-	

	Ød1 Rc	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE	
	1/8	**28**	9,728	90	13	7	5,5	10,1	8,20	E21LRC1/8	E21LRC1/8TXC
	1/4	**19**	13,157	100	20	11	9	15,0	11	E21LRC1/4	E21LRC1/4TXC
	3/8	**19**	16,662	110	20	12	9	15,4	14,5	E21LRC3/8	E21LRC3/8TXC
	1/2	**14**	20,955	125	26	16	12	20,4	18	E21LRC1/2	E21LRC1/2TXC
	3/4	**14**	26,441	140	28	20	16	21,7	23,5	E21LRC3/4	E21LRC3/4TXC
	1"	**11**	33,249	160	34	25	20	26	29,5	E21LRC1"	E21LRC1"TXC

■ = HSS

* = Diametri di foratura cilindrici.
Per alesatura conica vedi tabella pag. 272

* = Cylindrical hole.
For conic hole see on page 272

* = Diamètres de perçage cylindrique.
Pour alésage conique voir tableau page 272

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8	•1.1 12-15	•1.2 10-12	○1.3 8-10	○1.4 6-8	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8
M	Acciaio inox - Stainless steel - Acier inoxydable					•2.1 3-5	○2.2 2-4	○2.3 2-3						○2.1 3-5	○2.2 2-4	•2.3 2-3	
K	Ghisa - Cast iron - Fonte	○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12					○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12	○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12
N	Leghe di Allumino - Al alloys - Alliage Al	○4.3 10-12	•4.4 8-10			•4.2 12-15	○4.3 10-12			○4.3 10-12	•4.4 8-10			○4.3 10-12	•4.4 8-10		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 6-8	•5.3 10-12			•5.2 6-8	○5.3 10-12			○5.2 6-8	•5.3 10-12			○5.2 6-8	•5.3 10-12		

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

Rc-Rp

Calibri filettati di controllo per filettatura conica Rc e filettatura cilindrica Rp
Thread gauges for Rc taper thread and Rp straight thread
Tampons filetés pour vérification taraudage conique Rc et taraudage cylindrique Rp

ISO7-1, EN 10226-1, EN 10226-2

Sistema di controllo sec. EN 10226-3
Gauge system according EN 10226-3
Système de contrôle selon la norme EN 10226-3

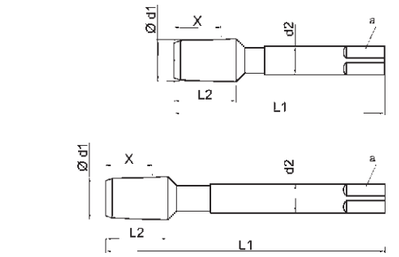
Tolleranza - Thread tolerance - Tolérance du filetage	-
Trattamento superficiale - Surface treatment - Revêtement	**BR**

Ød1 Rc-Rp	Ø mm	P TPI	CODE
1/8	**9,73**	**28**	P-NPRC1/8
1/4	**13,16**	**19**	P-NPRC1/4
3/8	**16,66**	**19**	P-NPRC3/8
1/2	**20,96**	**14**	P-NPRC1/2
3/4	**26,44**	**14**	P-NPRC3/4
1"	**32,25**	**11**	P-NPRC1"
1"1/4	**41,91**	**11**	P-NPRC1"1/4
1"1/2	**47,8**	**11**	P-NPRC1"1/2
2"	**59,61**	**11**	P-NPRC2"

NPT

MASCHI A MACCHINA CONICI - Scanalature diritte ed elicoidali a 15°
MACHINE TAPS - Straight flutes and spiral flutes 15°
TARAUDS MACHINE - Goujures droites et goujures hélicoïdales 15°

ASME B1.20.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL



Profondità di filettatura - Thread depth - Prof. de filetage	-	-	-	-
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	-	-	-	-
Trattamento superficiale - Surface treatment - Revêtement		V		TXC

	Ød1 NPT	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE		
	1/16	27	7,938	63	13	6	4,9	9,3	6,2	E21CNPT1/16	-	
	1/8	27	10,287	63	13	7	5,5	9,3	8,5	E21CNPT1/8	E41CNPT1/8V	
	1/4	18	13,716	63	20	11	9	13,5	11	E21CNPT1/4	E41CNPT1/4V	
	3/8	18	17,145	70	20	12	9	13,9	14,5	E21CNPT3/8	E41CNPT3/8V	
	1/2	14	21,336	80	26	16	12	18,1	17,9	E21CNPT1/2	E41CNPT1/2V	
	3/4	14	26,670	100	26	20	16	18,6	23,2	E21CNPT3/4	E41CNPT3/4V	
	1"	11,5	33,401	110	32	25	20	22,3	29	E21CNPT1"	E41CNPT1"V	
■	1"1/4	11,5	42,164	125	32	32	24	22,8	37,8	E21CNPT1"1/4	-	
■	1"1/2	11,5	48,260	140	32	36	29	22,8	44	E21CNPT1"1/2	-	
■	2"	11,5	60,325	160	36	45	35	23,2	56	E21CNPT2"	-	

	Ød1 NPT	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE	
	1/16	27	7,938	90	13	6	4,9	9,3	6,2	E21LNPT1/16	E21LNPT1/16TXC
	1/8	27	10,287	90	13	7	5,5	9,3	8,5	E21LNPT1/8	E21LNPT1/8TXC
	1/4	18	13,716	100	20	11	9	13,5	11	E21LNPT1/4	E21LNPT1/4TXC
	3/8	18	17,145	110	20	12	9	13,9	14,5	E21LNPT3/8	E21LNPT3/8TXC
	1/2	14	21,336	125	26	16	12	18,1	17,9	E21LNPT1/2	E21LNPT1/2TXC
	3/4	14	26,670	140	26	20	16	18,6	23,2	E21LNPT3/4	E21LNPT3/4TXC
	1"	11,5	33,401	160	32	25	20	22,3	29	E21LNPT1"	E21LNPT1"TXC
■	1"1/4	11,5	42,164	160	32	32	24	22,8	37,8	E21LNPT1"1/4	-
■	1"1/2	11,5	48,260	190	32	36	29	22,8	44	E21LNPT1"1/2	-
■	2"	11,5	60,325	200	36	45	35	23,2	56	E21LNPT2"	-

■ = HSS

* = Diametri di foratura cilindrici.
Per alesatura conica vedi tabella pag. 272

* = Cylindrical hole.
For conic hole see on page 272

* = Diamètres de perçage cylindrique.
Pour alésage conique voir tableau page 272

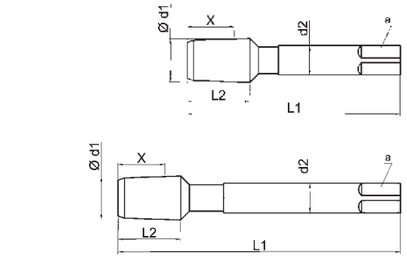
ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8	•1.1 12-15	•1.2 10-12	○1.3 8-10	○1.4 6-8	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8
M	Acciaio inox - Stainless steel - Acier inoxydable					•2.1 3-5	○2.2 2-4	○2.3 2-3						○2.1 3-5	○2.2 2-4	•2.3 2-3	
K	Ghisa - Cast iron - Fonte	○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12					○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12	○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12
N	Leghe di Allumino - Al alloys - Alliage Al	○4.3 10-12	•4.4 8-10			•4.2 12-15	○4.3 10-12			○4.3 10-12	•4.4 8-10			○4.3 10-12	•4.4 8-10		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 6-8	•5.3 10-12			•5.2 6-8	○5.3 10-12			○5.2 6-8	•5.3 10-12			○5.2 6-8	•5.3 10-12		

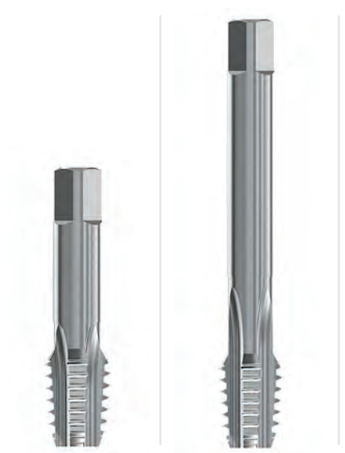
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

NPT

MASCHI A MACCHINA CONICI - Scanalature diritte filetti alternati
MACHINE TAPS - Straight flutes interrupted threads
TARAUDS MACHINE - Goujures droites filets alternés

ASME B1.20.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL





Profondità di filettatura - Thread depth - Prof. de filetage	-	-		
Materiale - Tool Material - Substrat	HSSE	HSSE		
Tolleranza - Thread tolerance - Tolérance du filetage	-	-		
Trattamento superficiale - Surface treatment - Revêtement				

	Ød1 NPT	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE
	1/8	27	10,287	63	13	7	5,5	9,3	8,5	E21CNPT1/8AZ
	1/4	18	13,716	63	20	11	9	13,5	11	E21CNPT1/4AZ
	3/8	18	17,145	70	20	12	9	13,9	14,5	E21CNPT3/8AZ
	1/2	14	21,336	80	26	16	12	18,1	17,9	E21CNPT1/2AZ

	Ød1 NPT	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE
	1/8	27	10,287	90	13	7	5,5	9,3	8,5	E21LNPT1/8AZ
	1/4	18	13,716	100	20	11	9	13,5	11	E21LNPT1/4AZ
	3/8	18	17,145	110	20	12	9	13,9	14,5	E21LNPT3/8AZ
	1/2	14	21,336	125	26	16	12	18,1	17,9	E21LNPT1/2AZ

* = Diametri di foratura cilindrici.
Per alesatura conica vedi tabella pag. 272

* = Cylindrical hole.
For conic hole see on page 272

* = Diamètres de perçage cylindrique.
Pour alésage conique voir tableau page 272

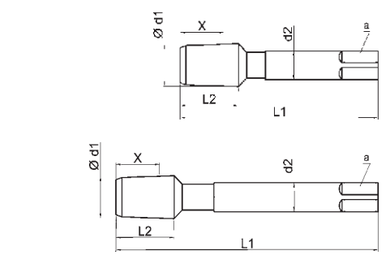
ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min						
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 12-15	○1.2 10-12		•1.1 12-15	○1.2 10-12		
M	Acciaio inox - Stainless steel - Acier inoxydable	•2.1 3-5	•2.2 2-4	○2.3 2-3	•2.1 3-5	•2.2 2-4	○2.3 2-3	
N	Leghe di Allumino - Al alloys - Alliage Al	•4.1 12-15	•4.2 10-12		•4.1 12-15	•4.2 10-12		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1 10-12	•5.2 6-8		•5.1 10-12	•5.2 6-8		

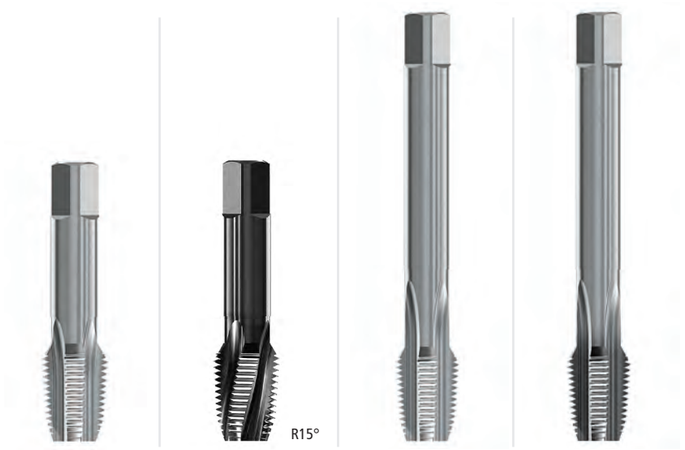
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

NPTF

MASCHI A MACCHINA CONICI - Scanalature diritte ed elicoidali a 15°
MACHINE TAPS - Straight flutes and spiral flutes 15°
TARAUDS MACHINE - Goujures droites et goujures hélicoïdales 15°

ASME B1.20.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL





Profondità di filettatura - Thread depth - Prof. de filetage	-	-	-	-
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	-	-	-	-
Trattamento superficiale - Surface treatment - Revêtement		V		TXC

Ød1 NPTF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE			
1/8	27	10,287	63	13	7	5,5	9,3	8,45	E21CNPTF1/8	E41CNPTF1/8V		
1/4	18	13,716	63	20	11	9	13,5	10,9	E21CNPTF1/4	E41CNPTF1/4V		
3/8	18	17,145	70	20	12	9	13,9	14,3	E21CNPTF3/8	E41CNPTF3/8V		
1/2	14	21,336	80	26	16	12	18,1	17,6	E21CNPTF1/2	E41CNPTF1/2V		
3/4	14	26,670	100	26	20	16	18,6	23,0	E21CNPTF3/4	E41CNPTF3/4V		
1"	11,5	33,401	110	32	25	20	22,3	28,75	E21CNPTF1"	E41CNPTF1"V		

Ød1 NPTF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	X	*	CODE		
1/8	27	10,287	90	13	7	5,5	9,3	8,45	E21LNPTF1/8	E21LNPTF1/8TXC	
1/4	18	13,716	100	20	11	9	13,5	10,9	E21LNPTF1/4	E21LNPTF1/4TXC	
3/8	18	17,145	110	20	12	9	13,9	14,3	E21LNPTF3/8	E21LNPTF3/8TXC	
1/2	14	21,336	125	26	16	12	18,1	17,6	E21LNPTF1/2	E21LNPTF1/2TXC	
3/4	14	26,670	140	26	20	16	18,6	23,0	E21LNPTF3/4	-	
1"	11,5	33,401	160	32	25	20	22,3	28,75	E21LNPTF1"	-	

* = Diametri di foratura cilindrici.
Per alesatura conica vedi tabella pag. 272

* = Cylindrical hole.
For conic hole see on page 272

* = Diamètres de perçage cylindrique.
Pour alésage conique voir tableau page 272

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8	•1.1 12-15	•1.2 10-12	○1.3 8-10	○1.4 6-8	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8	○1.1 12-15	○1.2 10-12	•1.3 8-10	•1.4 6-8
M	Acciaio inox - Stainless steel - Acier inoxydable					•2.1 3-5	○2.2 2-4	○2.3 2-3						○2.1 3-5	○2.2 2-4	•2.3 2-3	
K	Ghisa - Cast iron - Fonte	○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12					○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12	○3.1 8-10	○3.2 6-8	•3.3 8-10	•3.4 10-12
N	Leghe di Allumino - Al alloys - Alliage Al	○4.3 10-12	•4.4 8-10			•4.2 12-15	○4.3 10-12			○4.3 10-12	•4.4 8-10			○4.3 10-12	•4.4 8-10		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 6-8	•5.3 10-12			•5.2 6-8	○5.3 10-12			○5.2 6-8	•5.3 10-12			○5.2 6-8	•5.3 10-12		

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

NPT NPTF

Calibri filettati per controllo filettature coniche americane - 3 gradini di misurazione
Thread gauges for American tapered threads – 3 measuring stages
Tampons filetés pour vérification taraudage américain conique - 3 étages de mesure

NPT: ANSI/ASME B1.20.1 – NPTF: ANSI/ASME B1.20.3

Tolleranza - Thread tolerance - Tolérance du filetage	-
Trattamento superficiale - Surface treatment - Revêtement	

NPT
Gauge system sim. ANSI/ASME B1.20.1

Ød1 NPT	P TPI	CODE
1/8	27	P-NPNPT1/8-27
1/4	18	P-NPNPT1/4-18
3/8	18	P-NPNPT3/8-18
1/2	14	P-NPNPT1/2-14
3/4	14	P-NPNPT3/4-14
1"	11,5	P-NPNPT1"-11,5
1"1/4	11,5	P-NPNPT1"1/4-11,5
1"1/2	11,5	P-NPNPT1"1/2X11,5
2"	11,5	P-NPNPT2"-11,5

NPTF
Gauge system NPTF-1 acc. ANSI/ASME B1.20.5

Ød1 NPTF	P TPI	CODE
1/8	27	P-NPNPTF1/8-27
1/4	18	P-NPNPTF1/4-18
3/8	18	P-NPNPTF3/8-18
1/2	14	P-NPNPTF1/2-14
3/4	14	P-NPNPTF3/4-14
1"	11,5	P-NPNPTF1"-11,5
1"1/4	11,5	P-NPNPTF1"1/4-11,5
1"1/2	11,5	P-NPNPTF1"1/2X11,5
2"	11,5	P-NPNPTF2"-11,5

La Mole Antonelliana

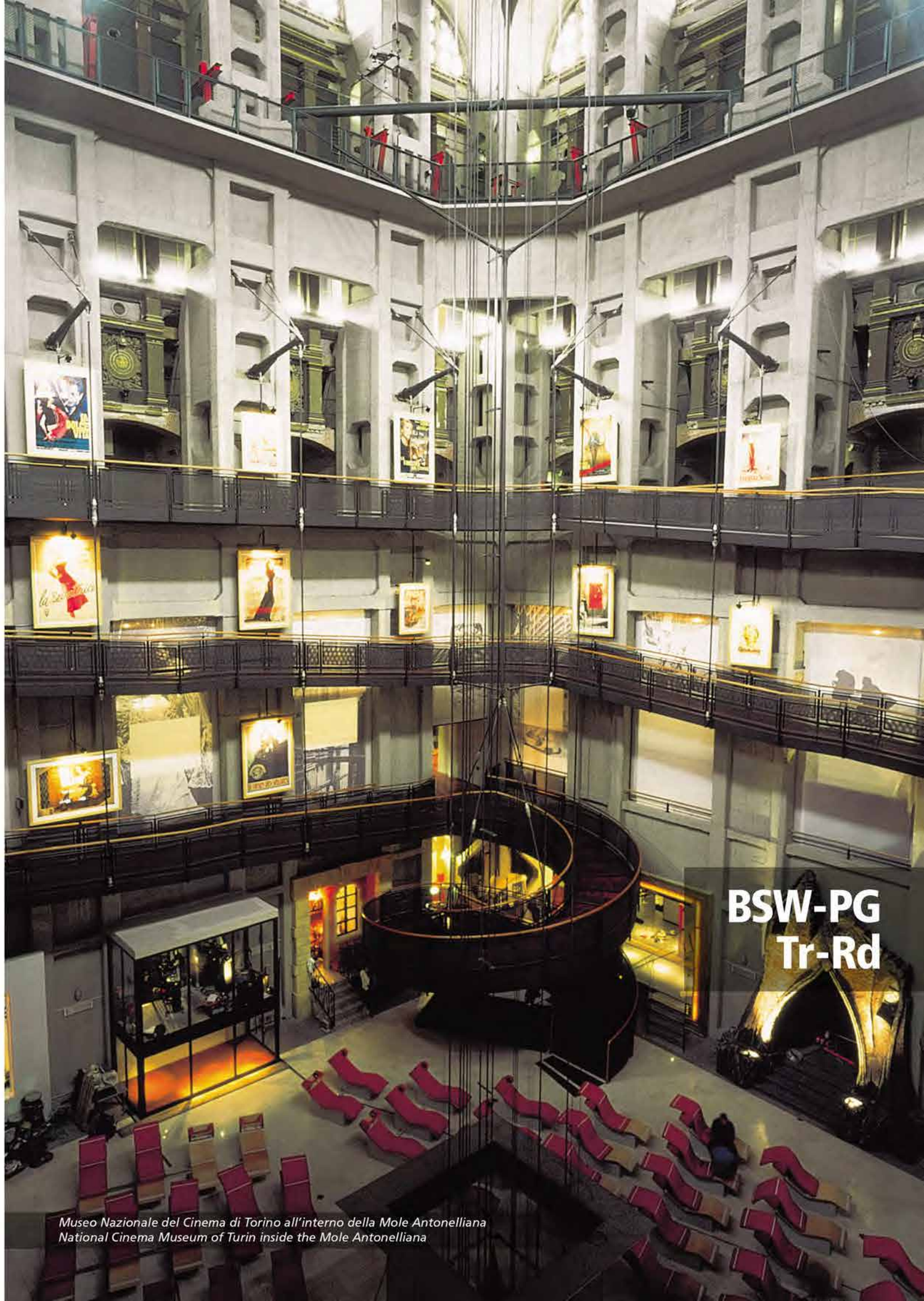
The Mole Antonelliana

La Mole Antonelliana è l'edificio monumentale per eccellenza, a Torino. Divenuto simbolo della città, inizialmente fu concepita come Sinagoga.
Il nome deriva dal fatto che, con un'altezza di 167 metri, fu l'edificio in muratura più alto del mondo dal 1889 al 1908; il suo aggettivo deriva dal nome dell'architetto che la concepì, Alessandro Antonelli.
Dal 2000 al suo interno ha sede il Museo Nazionale del Cinema che si sviluppa a spirale verso l'alto, su più livelli espositivi, dando vita a una presentazione ricca di collezioni che ripercorre la storia del cinema dalle origini ai giorni nostri.
In una cornice di scenografie, proiezioni e giochi di luce, arricchita dall'esposizione di fotografie, bozzetti, manifesti e oggetti d'epoca, i percorsi di visita danno vita a una presentazione che consente di scoprire in prima persona i segreti nascosti dietro la macchina da presa e le fasi che precedono la proiezione del film.

Il Museo racchiude e illustra tutta la storia del cinema in un itinerario interattivo: dal teatro d'ombre e le prime affascinanti lanterne magiche che hanno costituito la preistoria della "settima arte", ai più spettacolari effetti speciali dei nostri giorni.
Il primo progetto di costituire un museo italiano del cinema risale al giugno 1941, quando la studiosa piemontese di storia e di cinema Maria Adriana Prolo cominciò a lavorare per realizzare l'idea.
Con il sostegno artistico di alcuni pionieri del cinema, tra cui il regista astigiano Giovanni Pastrone che nel 1914 diresse "Cabiria" (il più grande kolossal del cinema muto italiano), con quello mediatico di alcuni giornalisti e con il l'attività di alcuni imprenditori arrivarono i primi contributi finanziari per l'acquisto di cimeli e documenti della storia del cinema italiano.
L'idea iniziale di insediare il museo all'interno della Mole sfumò nel 1953 a causa di una tromba d'aria che danneggiò gravemente l'edificio. Il materiale fu allora trasferito in altre sedi.
Nel 1995, in occasione del centenario della nascita del cinema, l'allestimento del museo ritornò all'interno della Mole Antonelliana con una scenografia suggestiva. In breve tempo il museo divenne tra i più visitati, con oltre due milioni di visitatori nei primi cinque anni. In occasione dei XX Giochi Olimpici Invernali di Torino 2006, l'allestimento fu rinnovato con nuove postazioni multimediali e interattive, tre nuovi ambienti dedicati al western, al musical e alla fantascienza.

The Mole Antonelliana is Turin's quintessential monument. Today it is the symbol of the city, but it was originally designed as a synagogue.
The name mole (bulk) refers to the fact that, at 167 metres, this was the world's tallest masonry tower from 1889 to 1908; and the adjective is the name of the architect who designed the building, Alessandro Antonelli.
Since 2000 the building has been home to the National Museum of Cinema, with several levels of exhibits spiralling upwards, a magnificent presentation of collections that span the history of film from its origins to the present day. In a spectacular setting with projections and light effects, displays of photographs, sketches, posters and period details create an evocative museum where visitors can discover the secrets behind the lens and the stages of making a movie.

The museum illustrates the entire history of film in an interactive visit: from shadow theatre and the fascinating magic lanterns that were the prehistory of the seventh art, to the most spectacular special effects of our times.
The first attempt to establish an Italian museum of cinema dates back to June 1941, when the Piedmontese film historian Maria Adriana Prolo began work on the idea.
With artistic backing from some film pioneers, including the Asti-born director Giovanni Pastrone (who in 1914 directed Cabiria, Italy's greatest epic silent film), help from several journalists and action by certain businessmen, the first financial contributions began to arrive, allowing the museum to acquire documents and mementoes from Italian cinema history.
The initial idea of locating the museum in the Mole Antonelliana was dropped in 1953, when a winter storm seriously damaged the building. The material was moved to other locations.
On the centenary of the birth of cinema in 1995, the museum returned to the Mole Antonelliana, with a stunning new layout. The museum soon became one of the most popular in town, with over two million visitors in the first five years. To coincide with the 20th Winter Olympics in Turin in 2006, the museum was refurbished with nine interactive multimedia stations and three new spaces devoted to westerns, musicals and science fiction.



Museo Nazionale del Cinema di Torino all'interno della Mole Antonelliana
National Cinema Museum of Turin inside the Mole Antonelliana

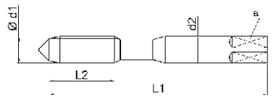
BSW

MASCHI A MANO - Per fori ciechi e passanti in serie di tre pezzi
HAND TAPS - For blind and through holes in sets of three pieces
TARAUDS À MAIN - Pour trous borgnes et débouchant en jeux de trois pièces

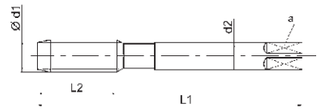
UFS LINE

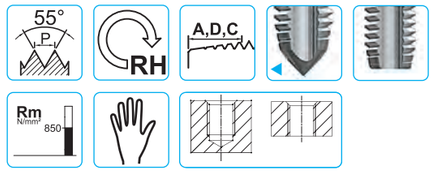
BS 84 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-2 d1 ≤ 1/4



DIN 2184-2 d1 ≥ 3/8





Profondità di filettatura - Thread depth - Prof. de filetage	**2xD**	**2xD**	
Materiale - Tool Material - Substrat	**HSS**	**HSS**	
Tolleranza - Thread tolerance - Tolérance du filetage	**med.**	**med.**	
Trattamento superficiale - Surface treatment - Revêtement			

	Ød1 GAS	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		Finitore Bottoming - Finisseur	Serie Set - Jeu
◀	**3/16**	**24**	4,762	50	13	6	4,9	3	3,6	03W3/16	00W3/16
◀	**1/4**	**20**	6,350	56	15	6	4,9	3	5	03W1/4	00W1/4
	3/8	**16**	9,525	70	22	7	5,5	3	7,9	03W3/8	00W3/8
	1/2	**12**	12,700	75	28	9	7	3	10,5	03W1/2	00W1/2

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min						
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1	•1.2	•1.3	•1.4			
M	Acciaio INOX – Stainless steel - Acier inoxydable	○2.1	○2.2	○2.3				
K	Ghisa - Cast iron - Fonte	○3.1	○3.4					
N	Leghe di Allumino – Al alloys - Alliage Al	•4.1	•4.2	•4.3	○4.4			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.1	•5.2	○5.3				

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

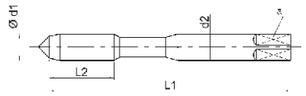
BSW

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

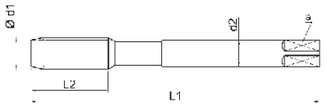
UFS LINE

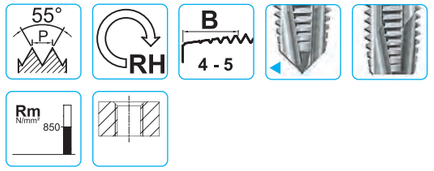
BS 84 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 3/8



DIN 2184-1 d1 ≥ 7/16





Profondità di filettatura - Thread depth - Prof. de filetage	**3xD**	**3xD**	
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**	
Tolleranza - Thread tolerance - Tolérance du filetage	**med.**	**med.**	
Trattamento superficiale - Surface treatment - Revêtement		**TiN**	

	Ød1 BSW	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**1/8**	**40**	3,175	56	10	3,5	2,7	3	2,5	E24W1/8	E24W1/8T
◀	**3/16**	**24**	4,762	70	13	6	4,9	3	3,6	E24W3/16	E24W3/16T
◀	**1/4**	**20**	6,350	80	16	7	5,5	3	5	E24W1/4	E24W1/4T
◀	**5/16**	**18**	7,938	90	18	8	6,2	3	6,5	E24W5/16	E24W5/16T
◀	**3/8**	**16**	9,525	100	20	10	8	3	7,9	E24W3/8	E24W3/8T

	Ød1 BSW	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	7/16	**14**	11,113	100	20	8	6,2	3	9,2	E25W7/16	E25W7/16T
	1/2	**12**	12,700	110	25	9	7	3	10,5	E25W1/2	E25W1/2T
	5/8	**11**	15,876	110	28	12	9	3	13,4	E25W5/8	E25W5/8T
	3/4	**10**	19,051	125	32	14	11	4	16,4	E25W3/4	E25W3/4T
	1"	**8**	25,401	160	36	18	14,5	4	22	E25W1"	E25W1"T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable								
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			○4.1 20-25	•4.2 25-30	○4.3 20-25	
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12	○5.2 10-15			○5.1 15-20	•5.2 20-25		

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

BSW

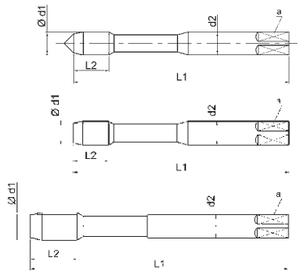
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

BS 84 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 1/4

DIN 2184-1 d1 ≤ 3/8

DIN 2184-1 d1 ≥ 5/16



Profondità di filettatura - Thread depth - Prof. de filetage	**2,5xD**	**2,5xD**	
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**	
Tolleranza - Thread tolerance - Tolérance du filetage	**med.**	**med.**	
Trattamento superficiale - Surface treatment - Revêtement		**TiN**	

	Ød1 BSW	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	**1/8**	**40**	3,175	56	5	3,5	2,7	3	2,5	E60W1/8	E60W1/8T
◀	**3/16**	**24**	4,762	70	8	6	4,9	3	3,6	E60W3/16	E60W3/16T
◀	**1/4**	**20**	6,350	80	10	7	5,5	3	5	E60W1/4	E60W1/4T
*	**5/16**	**18**	7,938	90	13	8	6,2	3	6,5	E60W5/16	E60W5/16T
*	**3/8**	**16**	9,525	100	15	10	8	3	7,9	E60W3/8	E60W3/8T

Ød1 BSW	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
7/16	**14**	11,113	100	15	8	6,2	3	9,2	E61W7/16	E61W7/16T
1/2	**12**	12,700	110	18	9	7	3	10,5	E61W1/2	E61W1/2T
5/8	**11**	15,876	110	20	12	9	4	13,4	E61W5/8	E61W5/8T
3/4	**10**	19,051	125	25	14	11	4	16,4	E61W3/4	E61W3/4T
1"	**8**	25,401	160	30	18	14,5	4	22	E61W1"	E61W1"T

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ○1.4 8-10 · •1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20
K	Ghisa - Cast iron - Fonte	○3.3 10-15 · •3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15 · •4.2 15-20 · ○4.1 20-25 · •4.2 25-30 · ○4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12 · ○5.2 10-15 · ○5.1 15-20 · •5.2 20-25

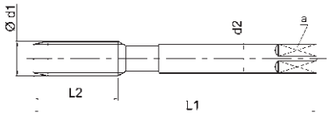
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

PG

MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

DIN 40430 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 40432



Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**	
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**	
Tolleranza - Thread tolerance - Tolérance du filetage	**-**	**-**	
Trattamento superficiale - Surface treatment - Revêtement		**TiN**	

	Ød1 PG	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	7	**20**	12,5	70	20	9	7	3	11,4	E21PG7	E21PG7T
	9	**18**	15,20	70	20	12	9	4	14	E21PG9	E21PG9T
	11	**18**	18,60	80	22	14	11	4	17,25	E21PG11	E21PG11T
	13,5	**18**	20,40	80	22	16	12	4	19	E21PG13,5	E21PG13,5T
	16	**18**	22,50	80	22	18	14,5	4	21,25	E21PG16	E21PG16T
	21	**16**	28,30	90	22	22	18	4	27	E21PG21	E21PG21T
	29	**16**	37	100	25	28	22	6	35,5	E21PG29	E21PG29T
■	**36**	**16**	47	140	25	36	29	6	45,5	E21PG36	E21PG36T

■ = HSS

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ○1.4 8-10 · •1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20
K	Ghisa - Cast iron - Fonte	○3.4 8-10 · ○3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	○4.2 15-20 · ○4.3 10-15 · ○4.2 25-30 · ○4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.2 10-15 · ○5.3 15-20 · ○5.2 20-25 · ○5.3 25-30
N	Materiali termoindurenti Duroplastic - Thermodurcissables	○8.2 8-10 · ○8.2 10-15

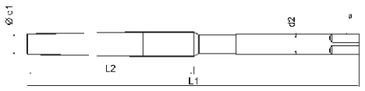
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

Tr

MASCHI A MACCHINA TRAPEZOIDALI - Scanalature diritte per fori passanti
TRAPEZOIDAL MACHINE TAPS - Straight flutes for through holes
TARAUDS MACHINES TRAPEZOÏDAUX- Goujures droites pour trous débouchant

DIN103 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

UFS Norm



30° P

24 x P

Rm N/mm² 850

Profondità di filettatura - Thread depth - Prof. de filetage	2xD	2xD	2xD	2xD
Materiale - Tool Material - Substrat	HSSE	HSSE	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	7H	7H	7H	7H
Trattamento superficiale - Surface treatment - Revêtement		V		V

Ød1 Tr	P mm	L_1	L_2	d_2 h9	a h12	Z		CODE			
10	2	130	70	7	5,5	3	8,2	E21TPN10X2	E21TPN10X2V	E21TPN10X2LH	E21TPN10X2LH-V
10	3	155	95	7	5,5	3	7,25	E21TPN10X3	E21TPN10X3V	E21TPN10X3LH	E21TPN10X3LH-V
12	2	160	95	8	6,2	3	10,2	E21TPN12X2	E21TPN12X2V	E21TPN12X2LH	E21TPN12X2LH-V
12	3	160	95	8	6,2	3	9,25	E21TPN12X3	E21TPN12X3V	E21TPN12X3LH	E21TPN12X3LH-V
14	3	170	100	10	8	4	11,25	E21TPN14X3	E21TPN14X3V	E21TPN14X3LH	E21TPN14X3LH-V
14	4	210	130	10	8	4	10,25	E21TPN14X4	E21TPN14X4V	E21TPN14X4LH	E21TPN14X4LH-V
16	4	225	130	11	9	4	12,25	E21TPN16X4	E21TPN16X4V	E21TPN16X4LH	E21TPN16X4LH-V
18	4	225	130	12	9	4	14,25	E21TPN18X4	E21TPN18X4V	E21TPN18X4LH	E21TPN18X4LH-V
20	4	230	130	14	11	4	16,25	E21TPN20X4	E21TPN20X4V	E21TPN20X4LH	E21TPN20X4LH-V
22	5	270	160	16	12	4	17,25	E21TPN22X5	E21TPN22X5V	E21TPN22X5LH	E21TPN22X5LH-V
24	5	280	160	18	14,5	4	19,25	E21TPN24X5	E21TPN24X5V	E21TPN24X5LH	E21TPN24X5LH-V
26	5	280	160	20	16	4	21,25	E21TPN26X5	E21TPN26X5V	E21TPN26X5LH	E21TPN26X5LH-V
28	5	290	160	22	18	4	23,25	E21TPN28X5	E21TPN28X5V	E21TPN28X5LH	E21TPN28X5LH-V
30	6	330	190	22	18	4	24,25	E21TPN30X6	E21TPN30X6V	E21TPN30X6LH	E21TPN30X6LH-V
32	6	330	190	25	20	4	26,25	★E21TPN32X6	★E21TPN32X6V	★E21TPN32X6LH	★E21TPN32X6LH-V
36	6	350	200	28	22	4	30,25	★E21TPN36X6	★E21TPN36X6V	★E21TPN36X6LH	★E21TPN36X6LH-V

★ Solo a richiesta / Only on request / Sur demande

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min															
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 6-8	○1.2 4-6	○1.3 2-4	○1.4 2-4	○1.1 6-8	○1.2 4-6	○1.3 2-4	○1.4 2-4	○1.1 6-8	○1.2 4-6	○1.3 2-4	○1.4 2-4	○1.1 6-8	○1.2 4-6	○1.3 2-4	○1.4 2-4
K	Ghisa - Cast iron - Fonte	•3.1 6-8	•3.2 3-5	○3.3 3-5	○3.4 6-8	•3.1 6-8	•3.2 3-5	○3.3 3-5	○3.4 6-8	•3.1 6-8	•3.2 3-5	○3.3 3-5	○3.4 6-8	•3.1 6-8	•3.2 3-5	○3.3 3-5	○3.4 6-8
N	Leghe di Allumino - Al alloys - Alliage Al	•4.4 6-8				•4.4 6-8				•4.4 6-8				•4.4 6-8			
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.3 3-5				•5.3 3-5				•5.3 3-5				•5.3 3-5			

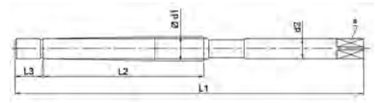
• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

Tr

MASCHI A MACCHINA TRAPEZOIDALI - Scanalature elicoidali 5° per fori passanti
TRAPEZOIDAL MACHINE TAPS - Spiral flutes 5° for through holes
TARAUDS MACHINES TRAPEZOÏDAUX- Goujures hélicoïdales 5° pour trous débouchant

DIN103 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

UFS Norm



30° P

24 x P

Rm N/mm² 850

Profondità di filettatura - Thread depth - Prof. de filetage	2xD	2xD
Materiale - Tool Material - Substrat	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	7H	7H
Trattamento superficiale - Surface treatment - Revêtement		

Ød1 Tr	P mm	L_1	L_2	L_3	d_2 h9	a h12	Z		CODE	
10	2	135	60	10	7	5,5	3	8,2	★E51TPN10x2	★E51TPN10X2LH
10	3	165	90	12	7	5,5	3	7,25	★E51TPN10x3	★E51TPN10X3LH
12	2	140	60	10	8	6,2	3	10,2	E51TPN12X2	E51TPN12X2LH
12	3	175	90	12	8	6,2	3	9,25	E51TPN12X3	E51TPN12X3LH
14	3	180	90	12	10	8	3	11,25	E51TPN14X3	E51TPN14X3LH
14	4	215	120	15	10	8	3	10,25	★E51TPN14x4	★E51TPN14x4LH
16	4	220	120	15	11	9	3	12,25	E51TPN16X4	E51TPN16X4LH
18	4	225	120	15	12	9	4	14,25	E51TPN18X4	E51TPN18X4LH
20	4	230	120	15	14	11	4	16,25	E51TPN20X4	E51TPN20X4LH
22	5	270	150	18	16	12	4	17,25	★E51TPN22X5	★E51TPN22X5LH
24	5	275	150	18	18	14,5	4	19,25	E51TPN24X5	E51TPN24X5LH

★ Solo a richiesta / Only on request / Sur demande

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min								
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 6-8	•1.2 4-6	•1.3 2-4	•1.4 2-4	•1.1 6-8	•1.2 4-6	•1.3 2-4	•1.4 2-4	
K	Ghisa - Cast iron - Fonte	•3.3 3-5	•3.4 3-5			•3.3 3-5	•3.4 3-5			
N	Leghe di Allumino - Al alloys - Alliage Al	•4.4 8-10				•4.4 8-10				
N	Leghe di Rame - Copper alloys - Alliages de cuivre	•5.2 6-8	○5.3 3-5			•5.2 6-8	○5.3 3-5			

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

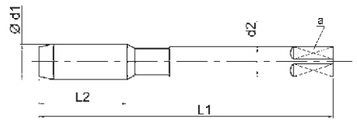
Rd

MASCHI A MACCHINA - Scanalature diritte per fori ciechi e passanti
MACHINE TAPS - Straight flutes for blind and through holes
TARAUDS MACHINE - Goujures droites pour trous borgnes et débouchant

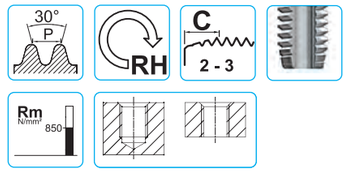
DIN 405

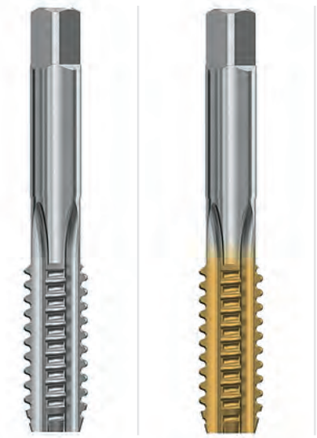
USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

UFS Norm



Filettatura tonda
Round thread
Filetage rond





Profondità di filettatura - Thread depth - Prof. de filetage	1,5xD	1,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	7H	7H
Trattamento superficiale - Surface treatment - Revêtement		TiN

Ød1 Rd	P TPI	L_1	L_2	d_2 h9	a h12	Z	
8	10	70	22	8	6,2	3	6
9	10	70	22	8	6,2	3	7
10	10	70	22	8	6,2	3	8
11	10	70	22	8	6,2	3	9
12	10	75	25	9	7	3	10
14	8	80	26	11	9	3	11,5
16	8	80	27	12	9	3	13,5
18	8	95	32	14	11	4	15,5
20	8	95	32	16	12	4	17,5
22	8	100	32	18	14,5	4	19,5
24	8	110	36	18	14,5	4	21,5
26	8	110	36	20	16	4	23,5
28	8	125	34	22	18	4	25,5
30	8	125	34	22	18	4	27,5

CODE	
★E21RD8	★E21RD8T
★E21RD9	★E21RD9T
★E21RD10	★E21RD10T
★E21RD11	★E21RD11T
★E21RD12	★E21RD12T
★E21RD14	★E21RD14T
★E21RD16	★E21RD16T
★E21RD18	★E21RD18T
★E21RD20	★E21RD20T
★E21RD22	★E21RD22T
★E21RD24	★E21RD24T
★E21RD26	★E21RD26T
★E21RD28	★E21RD28T
★E21RD30	★E21RD30T

Dimensioni a norma di fabbrica
Dimensions according to standard factory
Dimensions selon la norme d'usine

★ Solo a richiesta / Only on request / Sur demande

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	◑1.1 4-6	•1.2 4-6	•1.3 6-8	◑1.4 4-6	◑1.1 6-8	•1.2 6-8	•1.3 8-10	•1.4 6-8
K	Ghisa - Cast iron - Fonte					◑3.1 7-9	◑3.2 3-5	◑3.3 3-5	•3.4 6-8
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.2 8-10				◑4.3 12-15	◑4.4 8-10		
N	Leghe di Rame - Copper alloys - Alliages de cuivre	◑5.2 5-7	◑5.3 8-12			◑5.2 8-10	◑5.3 12-15		

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

Prodotti d'eccellenza piemontesi

Piedmont Excellence

Il Piemonte è anche una terra agricola; intensamente praticata, l'agricoltura sta affrontando un profondo rinnovamento. In molti settori si osservano cambiamenti nei processi e negli orientamenti produttivi.
Nelle zone di pianura si ricavano forti quantitativi di frumento, granoturco e riso di cui Vercelli e Novara sono i mercati più importanti; imponenti piantagioni di frutta laddove le colline lasciano pian piano il posto ai terreni più pianeggianti. In montagna crescono segala, patate e castagne, tra cui rinomati i marroni di Cuneo; sulle pendici collinari maturano uve da vino molto apprezzate accompagnate dalla produzione di ortaggi e di molti tipi di frutta.

Ben sviluppato è l'allevamento, soprattutto quello dei bovini con la razza piemontese autocnona, la Fassona; molte mandrie lasciano la pianura nei mesi estivi e salgono agli alti pascoli alpini. Dalla lavorazione del latte nascono formaggi tipici tra i quali i DOP come Castelmagno, Murazzano, Raschera, Bra. Molte tome e robiole e alcune produzioni particolari come il Bruss, il Seirass e il Frachet.
Il Piemonte è anche la patria del cioccolato. Il gianduiotto, il cioccolatino conseguito amalgamando zucchero, cacao e la celebre nocciola "Tonda Gentile" delle Langhe, oppure la crema al gianduia, con nocciole e cioccolato; il Bicerin, infuso caldo a base di cacao, caffè e latte, l'alpino, composto dal cioccolatino gianduia riempito di crema alcolica; sono tutte produzioni nate dalla grande bravura dei artigiani piemontesi.
Il Piemonte dà i natali a tanti liquori e distillati, che spesso e volentieri concludono i pasti, sia a casa che al ristorante. Il Vermut, l'Arquebuse, il Genepì sono i più conosciuti tra tanti altri.

Ma sono i prodotti spontanei ad essere delle vere e proprie eccellenze. I funghi, in particolare i porcini nella provincia di Cuneo al confine con la Liguria e nel Canavese. Si trovano dai 600 ai 2000 mt sul livello del mare e nascono nei boschi di castagni, di querce e di faggi. Pioggia e successivo caldo sono la condizione fondamentale per la nascita spontanea di queste prelibatezze.
Il tartufo bianco pregiato è considerato il tartufo per antonomasia. Il tartufo bianco d'Alba ne è una varietà tipica piemontese. La qualità migliore si raccoglie in autunno nei boschi delle Langhe sotto querce, tigli, pioppi e salici. La ricerca viene effettuata con l'ausilio di cani addestrati, soprattutto nelle ore notturne perché il loro olfatto è più sensibile, e deve essere raccolto con cura e con uno strumento simile ad una piccolissima zappa.
Rispetto al tartufo nero ha un gusto più prelibato e un profumo più intenso. L'aroma che sprigiona quando raggiunge la maturazione è forte, pregnante, appagante ed eccitante per le narici di chi lo aspira con intensità, unico nel suo genere.

Piedmont is also an agricultural land; The agriculture is practised intensively, and is currently undergoing substantial change. In many sectors are adapting their processes and their crop choices.
The flat areas of Piedmont produce large amounts of wheat, maize and rice, Vercelli and Novara being the largest producers of the latter; impressive fruit farms appear where the hills gradually rise from the plains. In the mountains there's rye, potatoes and chestnuts, including the famous marroni di Cuneo; on the hillsides, grapes for wine production grow side by side with vegetables and fruit.

Livestock farming is well-structured, especially cattle, with the native Piedmont Fassona breed; many herds leave the valley in the summer months to graze in the mountain pastures. From their milk come traditional cheeses such as the DOPs Castelmagno, Murazzano, Raschera and Bra. Numerous toma and robiola-style cheeses, and specialities like Bruss, Seirass and Frachet.
Piedmont is also the land of chocolate. The Gianduiotto, the little chocolate made with sugar, cocoa and the famous Tondo Gentile hazelnut, or Gianduia cream with hazelnut and chocolate; the Bicerin, a hot drink with cocoa, coffee and milk; the Alpino, a gianduia chocolate filled with liqueur cream: all born of wonderful Piedmontese artisan skill.
Piedmont is also the birthplace of numerous liqueurs and spirits, which often end a meal, at home or in the restaurant. Vermouth, Arquebuse and Genepì are the most familiar of many.

But it's the wild produce that constitute the region's true excellence. Mushrooms, and porcini in particular in the province of Cuneo where Piedmont meets Liguria and the Canavese. They grow at an altitude of 600 to 2,000 metres in forests of chestnuts, oaks and beech. Rain followed by warmth are the essential conditions for the appearance of these wild delicacies.
The valuable white truffle is considered the quintessential variety. And the Alba white truffle is a typical Piedmont variety. The best ones are collected in autumn in the woods of the Langhe under oaks, limes, poplars and willows. Their hunt is assisted by trained dogs, and usually happens at night, because this is when their sense of smell is keenest; the truffles must be carefully dug up using a tool like a very small hoe.
The white truffle has a more intense aroma and delicate flavour than the black variety. When ripe, it gives off a strong, rich, heady smell that's like nothing else.

Il tartufo bianco
The white truffle

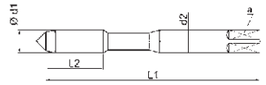
EG M

MASCHI A MACCHINA - Imbocco corretto per fori passanti
MACHINE TAPS - Straight flutes with spiral point for through holes
TARAUDS MACHINE - Goujures droites, entrée gun, pour trous débouchant

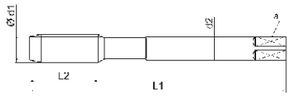
DIN 8140-2

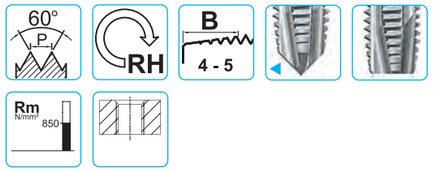
USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 40435 d1 ≤ 8



DIN 40435 d1 ≥ 10





Filetti riportati
Wire thread inserts (STI)
Filets rapportés

Profondità di filettatura - Thread depth - Prof. de filetage	3xD	3xD
Materiale - Tool Material - Substrat	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	6H mod	6H mod
Trattamento superficiale - Surface treatment - Revêtement		XP

	EG M	P mm	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	3	0,5	3,65	63	13	4,5	3,4	3	3,15	E24EGM3	E24EGM3XP
◀	4	0,7	4,91	70	13	6	4,9	3	4,20	E24EGM4	E24EGM4XP
◀	5	0,8	6,04	80	16	6	4,9	3	5,25	E24EGM5	E24EGM5XP
◀	6	1	7,3	90	18	8	6,2	3	6,30	E24EGM6	E24EGM6XP
◀	8	1,25	9,624	100	20	10	8	3	8,40	E24EGM8	E24EGM8XP

	EG M	P mm	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	10	1,5	11,948	100	22	9	7	3	10,5	E25EGM10	E25EGM10XP
	12	1,75	14,274	110	28	11	9	3	12,5	E25EGM12	E25EGM12XP
	16	2	18,598	125	33	14	11	4	16,5	E25EGM16	E25EGM16XP
	20	2,5	23,248	160	39	18	14,5	4	20,75	E25EGM20	E25EGM20XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ○1.4 8-10 · •1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	○2.1 10-15 · ○2.2 8-10
K	Ghisa - Cast iron - Fonte	○3.3 10-15 · •3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15 · •4.2 15-20 · •4.2 25-30 · ○4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12 · ○5.2 10-15 · •5.2 20-25

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

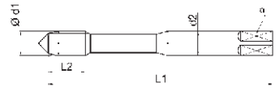
EG M

MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

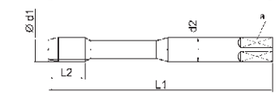
DIN 8140-2

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

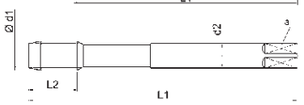
DIN 40435 d1 ≤ 5

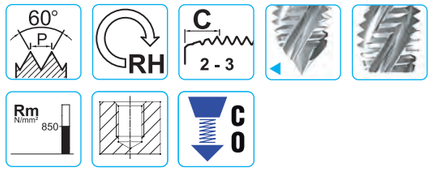


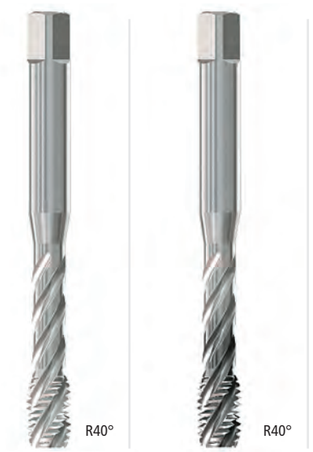
DIN 40435 d1 =6, 8



DIN 40435 d1 ≥ 10







Filetti riportati
Wire thread inserts (STI)
Filets rapportés

Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD
Materiale - Tool Material - Substrat	HSSE	HSSE
Tolleranza - Thread tolerance - Tolérance du filetage	6H mod	6H mod
Trattamento superficiale - Surface treatment - Revêtement		XP

	EG M	P mm	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	3	0,5	3,65	63	7	4,5	3,4	3	3,15	E60EGM3	E60EGM3XP
◀	4	0,7	4,91	70	8	6	4,9	3	4,20	E60EGM4	E60EGM4XP
◀	5	0,8	6,04	80	10	6	4,9	3	5,25	E60EGM5	E60EGM5XP
*	6	1	7,3	90	13	8	6,2	3	6,30	E60EGM6	E60EGM6XP
*	8	1,25	9,624	100	15	10	8	3	8,40	E60EGM8	E60EGM8XP

	EG M	P mm	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	10	1,5	11,948	100	13	9	7	3	10,5	E61EGM10	E61EGM10XP
	12	1,75	14,274	110	20	11	9	3	12,5	E61EGM12	E61EGM12XP
	16	2	18,598	125	25	14	11	4	16,5	E61EGM16	E61EGM16XP
	20	2,5	23,248	160	30	18	14,5	4	20,75	E61EGM20	E61EGM20XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15 · •1.2 10-15 · •1.3 10-12 · ○1.4 8-10 · •1.1 20-30 · •1.2 20-30 · •1.3 20-25 · •1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable	○2.1 10-15 · ○2.2 8-10
K	Ghisa - Cast iron - Fonte	○3.3 10-15 · •3.4 15-20
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15 · •4.2 15-20 · •4.2 25-30 · ○4.3 20-25
N	Leghe di Rame - Copper alloys - Alliages de cuivre	○5.1 8-12 · ○5.2 10-15 · •5.2 20-25

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

EG UNC

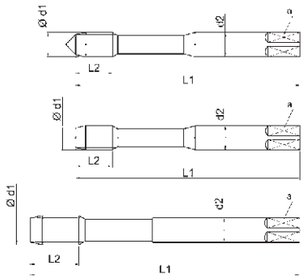
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

ASME B18.29.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 10

DIN 2184-1 d1= 1/4, 5/16

DIN 2184-1 d1 ≥ 3/8



Filetti riportati
Wire thread inserts (STI)
Filets rapportés

Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD		
Materiale - Tool Material - Substrat	HSSE	HSSE		
Tolleranza - Thread tolerance - Tolérance du filetage	3B	3B		
Trattamento superficiale - Surface treatment - Revêtement		XP		

	EG UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	4	40	3,67	63	7	4,5	3,4	3	3,1	E60EGUNC4-40	E60EGUNC4-40XP
◀	6	32	4,536	70	8	6	4,9	3	3,8	E60EGUNC6-32	E60EGUNC6-32XP
◀	8	32	5,197	80	10	6	4,9	3	4,4	E60EGUNC8-32	E60EGUNC8-32XP
◀	10	24	6,201	80	10	7	5,5	3	5,2	E60EGUNC10-24	E60EGUNC10-24XP
*	1/4	20	8,000	90	13	8	6,2	3	6,7	E60EGUNC1/4	E60EGUNC1/4XP
*	5/16	18	9,771	100	15	10	8	3	8,4	E60EGUNC5/16	E60EGUNC5/16XP

	EG UNC	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	3/8	16	11,587	100	13	9	7	3	10	E61EGUNC3/8	E61EGUNC3/8XP
	1/2	13	15,238	110	20	12	9	4	13,3	E61EGUNC1/2	E61EGUNC1/2XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable					○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.2 25-30	○4.3 20-25		
N	Leghe di rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	○5.1 8-12	○5.2 10-15			•5.2 20-25			

• Raccomandato - Optimal - Recommandé ○ Adatto - Suitable - Adaptè

EG UNF

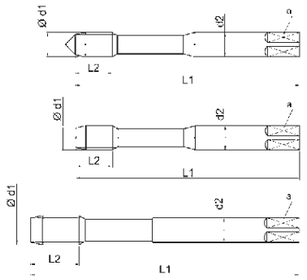
MASCHI A MACCHINA - Elica destra a 40° per fori ciechi
MACHINE TAPS - Spiral flutes 40° for blind holes
TARAUDS MACHINE - Goujures hélicoïdales 40° pour trous borgnes

ASME B18.29.1 | USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

DIN 2184-1 d1 ≤ 10

DIN 2184-1 d1= 1/4, 5/16

DIN 2184-1 d1 ≥ 3/8



Filetti riportati
Wire thread inserts (STI)
Filets rapportés

Profondità di filettatura - Thread depth - Prof. de filetage	2,5xD	2,5xD		
Materiale - Tool Material - Substrat	HSSE	HSSE		
Tolleranza - Thread tolerance - Tolérance du filetage	3B	3B		
Trattamento superficiale - Surface treatment - Revêtement		XP		

	EG UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
◀	6	40	4,33	63	7	4,5	3,4	3	3,70	E60EGUNF6-40	E60EGUNF6-40XP
◀	8	36	5,083	70	8	6	4,9	3	4,40	E60EGUNF8-36	E60EGUNF8-36XP
◀	10	32	5,857	80	10	6	4,9	3	5,10	E60EGUNF10-32	E60EGUNF10-32XP
*	1/4	28	7,528	90	13	8	6,2	3	6,6	E60EGUNF1/4	E60EGUNF1/4XP
*	5/16	24	9,313	90	15	10	8	3	8,25	E60EGUNF5/16	E60EGUNF5/16XP

	EG UNF	P TPI	Ø mm	L_1	L_2	d_2 h9	a h12	Z		CODE	
	3/8	24	10,90	90	15	8	6,2	3	9,8	E61EGUNF3/8	E61EGUNF3/8XP
	1/2	20	14,35	100	15	11	9	4	13,10	E61EGUNF1/2	E61EGUNF1/2XP

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min							
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	○1.1 10-15	•1.2 10-15	•1.3 10-12	○1.4 8-10	•1.1 20-30	•1.2 20-30	•1.3 20-25	•1.4 15-20
M	Acciaio inox - Stainless steel - Acier inoxydable					○2.1 10-15	○2.2 8-10		
K	Ghisa - Cast iron - Fonte					○3.3 10-15	•3.4 15-20		
N	Leghe di Allumino - Al alloys - Alliage Al	○4.1 10-15	•4.2 15-20			•4.2 25-30	○4.3 20-25		
N	Leghe di rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	○5.1 8-12	○5.2 10-15			•5.2 20-25			

• Raccomandato - Optimal - Recommandé **○ Adatto - Suitable - Adaptè**

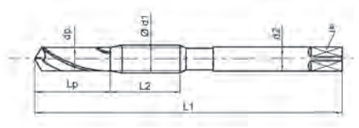
M-MF

MASCHI A MACCHINA FORA e FILETTA
MACHINE DRILL TAPS
FORETS TARAUDEURS

DIN 13

USO GENERALE - GENERAL PURPOSE - USAGE GÉNÉRAL

UFS Norm



Profondità di filettatura - Thread depth - Prof. de filetage	**1,5xD**	**1,5xD**	**1,5xD**
Materiale - Tool Material - Substrat	**HSSE**	**HSSE**	**HSSE**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO2/6H**	**ISO2/6H**	**ISO2/6H**
Trattamento superficiale - Surface treatment - Revêtement		**VS**	

	M	P mm	L_1	L_2	D_2 h9	a h12	Lp	Dp	Z	CODE		
◀	**3**	**0,5**	66	10	3,5	2,7	10	2,5	2	EPFM3	EPFM3VS	
◀	**4**	**0,7**	69	11	4,5	3,4	11	3,3	2	EPFM4	EPFM4VS	
◀	**5**	**0,8**	81,5	11	6	4,9	12	4,2	2	EPFM5	EPFM5VS	
◀	**6**	**1**	82,5	13	6	4,9	13	5	2	EPFM6	EPFM6VS	
◀	**8**	**1,25**	101	14	6	4,9	18	6,8	4	EPFM8	EPFM8VS	
◀	**10**	**1,5**	107	15	7	5,5	24	8,5	4	EPFM10	EPFM10VS	
◀	**12**	**1,75**	120	17	9	7	25	10,3	4	EPFM12	EPFM12VS	

	M	P mm	L_1	L_2	D_2 h9	a h12	Lp	Dp	Z	CODE		
◀	**3**	**0,5**	66	10	3,5	2,7	10	2,5	2	-	-	EPFALUM3
◀	**4**	**0,7**	69	11	4,5	3,4	11	3,3	2	-	-	EPFALUM4
◀	**5**	**0,8**	81,5	11	6	4,9	12	4,2	2	-	-	EPFALUM5
◀	**6**	**1**	82,5	13	6	4,9	13	5	2	-	-	EPFALUM6
◀	**8**	**1,25**	101	14	6	4,9	18	6,8	2	-	-	EPFALUM8
◀	**10**	**1,5**	107	15	7	5,5	24	8,5	2	-	-	EPFALUM10
◀	**12**	**1,75**	120	17	9	7	25	10,3	2	-	-	EPFALUM12

	MF	P mm	L_1	L_2	D_2 h9	a h12	Lp	Dp	Z	CODE		
◀	**8**	**1**	101	14	6	4,9	18	7	4	EPFMF8X1		
◀	**10**	**1**	107	15	7	5,5	24	9	4	EPFMF10X1		
◀	**12**	**1,5**	120	17	9	7	25	10,5	4	EPFMF12X1,5		

ISO	Campo di impiego Application range Gamme d'application	Gruppo di materiali - Velocità di taglio m/min Material groups - Cutting speed m/min Groupes de matières - Vitesse de coupe m/min									
P	Acciaio - Steel - Acier - Rm ≤ 850 N/mm²	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10	•1.1 10-15	•1.2 10-15	•1.3 10-12	◑1.4 8-10		
K	Ghisa - Cast iron - Fonte					◑3.3 10-15	◑3.4 15-20				
N	Leghe di Allumino - Al alloys - Alliage Al	◑4.2 15-20	•4.3 10-15			•4.2 15-20	•4.3 10-15			•4.1 10-15	•4.2 15-20
N	Leghe di rame - Copper alloys - Alliages de cuivre Truciolo lungo - Long chipping - Copeaux longs	◑5.2 10-15	◑5.3 10-15			◑5.2 10-15	◑5.3 10-15			◑5.1 8-12	◑5.2 10-15
N	Materiali termoindurenti Duroplastic - Thermodurcissables									◑8.1 8-10	

• Raccomandato - Optimal - Recommandé ◑ Adatto - Suitable - Adaptè

KOMBI

La Torino magica

Magical Turin

Si parla spesso della città di Torino in termini magici e anche esoterici. Con l'espansione dell'Impero Romano a nord della penisola, per volere di Augusto venne fondata nel 28 A.C. Augusta Taurinorum. Città eretta a presidio di confine dell'impero, all'epoca era divisa in una zona est, quella dove sorge il sole e che indicava il lato benigno del territorio, ed una zona ovest, quella dove tramonta il sole e nascono le tenebre. Nella zona ovest venivano sepolti i morti e crocifissi i condannati.
Queste tradizioni si sono tramandate e moltiplicate nel corso dei secoli e ad esse se ne sono aggiunte tante altre. Tutto questo ha contribuito alla fama della cosiddetta "Torino Magica", una città dove si concentrano le forze del bene e del male.

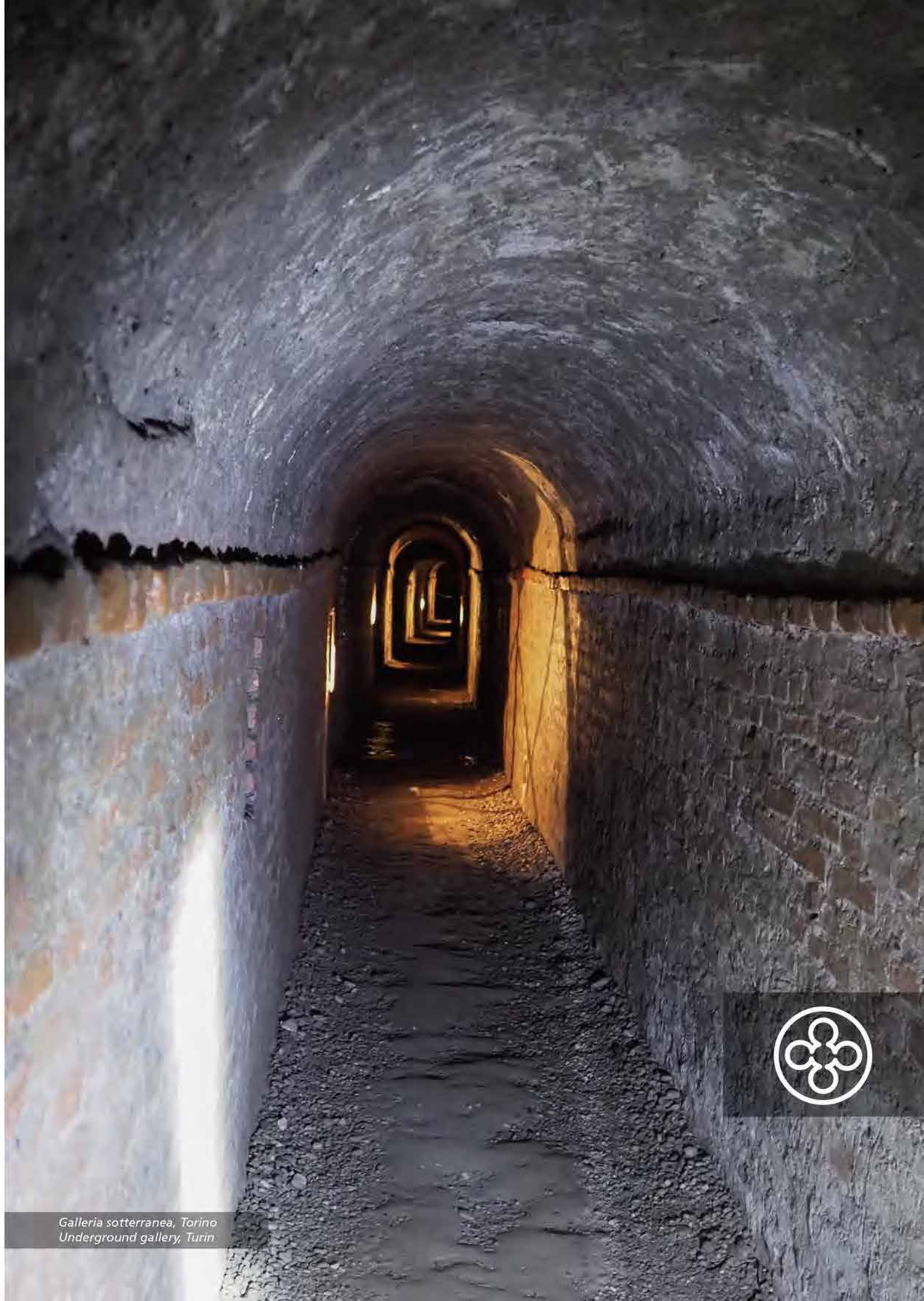
L'aspetto elegante, simmetrico e uniforme della città di sopra si perde nei cunicoli e negli ambienti nascosti della città sotterranea che è molto variegata e ci sono luoghi interessanti da visitare.
Le cripte di alcune chiese barocche, che inglobano le antiche mura romane e che per tanti secoli hanno protetto le salme di defunti di ogni ceto sociale; i mosaici di domus romane, le fondamenta di chiese paleocristiane, le opere militari. La magia di Torino si manifesta nelle innumerevoli gallerie sotterranee, vere e proprie eccellenze progettuali; cunicoli scavati su più livelli e utilizzati nel tempo per diversi motivi.
Come ghiacciaie per il cibo durante l'estate o come passaggi segreti tra i palazzi nobiliari. Sono gli "Infernotti", delle cantine sotto alle cantine, scavate in profondità. Una rete di cunicoli collegava gli Infernotti di altri palazzi. Erano vere e proprie vie di fuga o cammini nascosti per esplorare il ventre di Torino. Oppure utilizzati come strategia offensiva contro gli eserciti nemici durante le battaglie o difensiva in caso di assedi alla cittadella.

L'esempio probabilmente più famoso è quello legato a Pietro Micca. Le sale del Museo a lui intitolato "raccontano" la storia dell'assedio del 1706 da parte dei francesi.
Durante questo lungo assedio Torino resistette e, grazie alle fortificazioni e all'uso delle gallerie, riuscì a tenere testa al nemico francese fino alla battaglia finale che segnò la vittoria degli eserciti piemontese e austriaco. Nella notte tra il 29 e il 30 agosto 1706 alcuni francesi, approfittando del buio, si calarono nel fossato davanti allo sbocco della "capitale alta". Entrati in galleria, cercarono di scendere le scale che portavano alla "capitale bassa" e alla cittadella. A guardia della scala c'era il soldato esperto in mine Pietro Micca, con un compagno. Fu proprio Micca a provocare l'esplosione della scala, fermando sì i Francesi, ma perdendo la vita a causa dello scoppio.

Turin is often spoken of in magical, even esoteric terms. With the expansion of the Roman Empire to the north of the Italian peninsula, the city was founded by Augustus in 28 BC as Augusta Taurinorum. It was built to guard the borders of the empire; at the time the city was divided into the eastern section, where the sun rose and the benign side of the territory, and the western section, where the sun set and the shadows came from. The dead were buried and the condemned crucified in the west.
Such traditions have been handed down and multiplied over the centuries, and many others have been added.
All this has contributed to the reputation of "magical Turin", a place where the forces of good and evil are strong.

The elegant, symmetrical and uniform appearance of the city above ground is lost in the hidden warren of the underground city, which is enormously varied and offers fascinating places to visit.
The crypts of several Baroque churches, which incorporate the ancient Roman walls and which have preserved the dead of all social levels for centuries; the mosaics of Roman homes, the foundations of early Christian churches, military fortifications. Turin's magic is evident in its countless underground tunnels; and here is real excellence in design, a network carved out at different depths and used for different purposes over time.
Such as ice-houses, making it possible to preserve food during the summer, such as secret tunnels between wealthy residences, which hide many secret places. These are known as the infernotti, cellars dug under cellars. Deep in the ground, they were connected by a network of tunnels. The tunnels were escape routes or hidden passages for exploring the belly of the city. They could be used as a means of attack against enemies during a battle, or defensively in the event of siege.

The most famous example is probably the story of Pietro Micca. The museum dedicated to him tells the story of the siege of 1706 by the French army.
During this long siege, Turin stood firm and, thanks to its fortifications and the use of tunnels, it held off the French until the final battle, won by the Piedmontese and Austrian armies.
During the night of 29-30 August 1706, a party of French soldiers, concealed by the dark, sneaked into a trench near the access to the upper citadel. Entering the tunnel, they tried to go down the stairs to the lower entrance and the citadel itself.
Guarding the staircase was soldier and explosives expert Pietro Micca and a companion. Micca himself triggered the explosion of the staircase, stopping the French but losing his own life in the process.



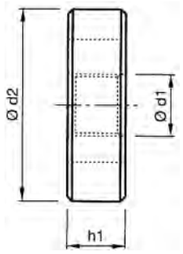
Galleria sotterranea, Torino
Underground gallery, Turin

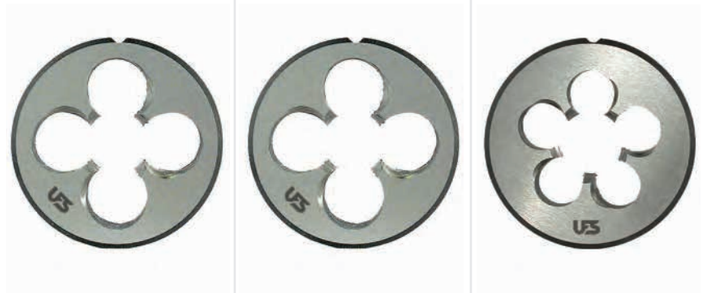
M

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

DIN 13

DIN EN 22568





60°

Filettatura sinistra - LH
Left hand
Filetage Gauche - LH

INOX
ACCIAIO INOSSIDABILE
STAINLESS STEEL
ACIER INOXYDABLE

Materiale - Tool Material - Substrat	HSS	HSS	HSSE
Imbocco - Chamfer - Entrée	1,75xP	1,75xP	1,75xP
Tolleranza - Thread tolerance - Tolérance du filetage	ISO / 6g	ISO / 6g	ISO / 6g
Trattamento superficiale - Surface treatment - Revêtement			

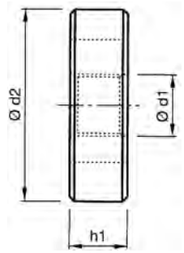
Ød1 M	P mm	Ød2 mm	h_1 mm	CODE		
2	0,4	16	5	100-99M2	100S99M2	100E99XM2
2,2	0,45	16	5	100-99M2,2	100S99M2,2	100E99XM2,2
2,3	0,4	16	5	100-99M2,3	100S99M2,3	100E99XM2,3
2,5	0,45	16	5	100-99M2,5	100S99M2,5	100E99XM2,5
2,6	0,45	16	5	100-99M2,6	100S99M2,6	100E99XM2,6
3	0,5	20	5	100-99M3	100S99M3	100E99XM3
3,5	0,6	20	5	100-99M3,5	100S99M3,5	100E99XM3,5
4	0,7	20	5	100-99M4	100S99M4	100E99XM4
4,5	0,75	20	7	100-99M4,5	100S99M4,5	100E99XM4,5
5	0,8	20	7	100-99M5	100S99M5	100E99XM5
6	1	20	7	100-99M6	100S99M6	100E99XM6
7	1	25	9	100-99M7	100S99M7	100E99XM7
8	1,25	25	9	100-99M8	100S99M8	100E99XM8
9	1,25	25	9	100-99M9	100S99M9	100E99XM9
10	1,5	30	11	100-99M10	100S99M10	100E99XM10
11	1,5	30	11	100-99M11	100S99M11	100E99XM11
12	1,75	38	14	100-99M12	100S99M12	100E99XM12
14	2	38	14	100-99M14	100S99M14	100E99XM14
16	2	45	18	100-99M16	100S99M16	100E99XM16
18	2,5	45	18	100-99M18	100S99M18	100E99XM18
20	2,5	45	18	100-99M20	100S99M20	100E99XM20
22	2,5	55	22	100-99M22	100S99M22	100E99XM22
24	3	55	22	100-99M24	100S99M24	100E99XM24
27	3	65	25	100-99M27	100S99M27	100E99XM27
30	3,5	65	25	100-99M30	100S99M30	100E99XM30
33	3,5	65	25	100-99M33	100S99M33	100E99XM33
36	4	65	25	100-99M36	100S99M36	100E99XM36
39	4	75	30	100-99M39	100S99M39	100E99XM39
42	4,5	75	30	100-99M42	100S99M42	100E99XM42
45	4,5	90	36	100-99M45	100S99M45	100E99XM45
48	5	90	36	100-99M48	100S99M48	100E99XM48
52	5	90	36	100-99M52	100S99M52	100E99XM52

MF

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

DIN 13

DIN EN 22568



60°

Filettatura sinistra - LH
Left hand
Filetage Gauche - LH

INOX
ACCIAIO INOSSIDABILE
STAINLESS STEEL
ACIER INOXYDABLE

Materiale - Tool Material - Substrat	HSS	HSS	HSSE
Imbocco - Chamfer - Entrée	1,75xP	1,75xP	1,75xP
Tolleranza - Thread tolerance - Tolérance du filetage	ISO / 6g	ISO / 6g	ISO / 6g
Trattamento superficiale - Surface treatment - Revêtement			

Ød1 MF	P mm	Ød2 mm	h_1 mm	CODE		
2	0,25	16	5	110-99M2X0,25	-	-
2,2	0,25	16	5	110-99M2,2X0,25	-	-
2,5	0,35	16	5	110-99M2,5X0,35	-	-
3	0,35	20	5	110-99M3X0,35	110S99M3X0,35	110E99XM3X0,35
4	0,5	20	5	110-99M4X0,5	110S99M4X0,5	110E99XM4X0,5
5	0,5	20	5	110-99M5X0,5	110S99M5X0,5	110E99XM5X0,5
6	0,75	20	7	110-99M6X0,75	110S99M6X0,75	110E99XM6X0,75
7	0,75	25	9	110-99M7X0,75	110S99M7X0,75	110E99XM7X0,75
8	0,75	25	9	110-99M8X0,75	110S99M8X0,75	110E99XM8X0,75
8	1	25	9	110-99M8X1	110S99M8X1	110E99XM8X1
9	0,75	25	9	110-99M9X0,75	110S99M9X0,75	110E99XM9X0,75
9	1	25	9	110-99M9X1	110S99M9X1	110E99XM9X1
10	0,75	30	11	110-99M10X0,75	110S99M10X0,75	110E99XM10X0,75
10	1	30	11	110-99M10X1	110S99M10X1	110E99XM10X1
10	1,25	30	11	110-99M10X1,25	110S99M10X1,25	110E99XM10X1,25
11	1	30	10	110-99M11X1	110S99M11X1	110E99XM11X1
12	1	38	10	110-99M12X1	110S99M12X1	110E99XM12X1
12	1,25	38	10	110-99M12X1,25	110S99M12X1,25	110E99XM12X1,25
12	1,5	38	10	110-99M12X1,5	110S99M12X1,5	110E99XM12X1,5
13	1	38	10	110-99M13X1	110S99M13X1	110E99XM13X1
13	1,5	38	10	110-99M13X1,5	110S99M13X1,5	110E99XM13X1,5
14	1	38	10	110-99M14X1	110S99M14X1	110E99XM14X1
14	1,25	38	10	110-99M14X1,25	110S99M14X1,25	110E99XM14X1,25
14	1,5	38	10	110-99M14X1,5	110S99M14X1,5	110E99XM14X1,5
15	1	38	10	110-99M15X1	110S99M15X1	110E99XM15X1
15	1,5	38	10	110-99M15X1,5	110S99M15X1,5	110E99XM15X1,5
16	1	45	14	110-99M16X1	110S99M16X1	110E99XM16X1
16	1,25	45	14	110-99M16X1,25	110S99M16X1,25	110E99XM16X1,25
16	1,5	45	14	110-99M16X1,5	110S99M16X1,5	110E99XM16X1,5
18	1	45	14	110-99M18X1	110S99M18X1	110E99XM18X1
18	1,5	45	14	110-99M18X1,5	110S99M18X1,5	110E99XM18X1,5
18	2	45	14	110-99M18X2	110S99M18X2	110E99XM18X2

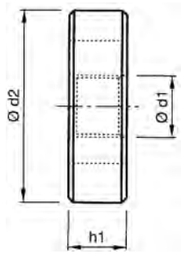
Segue diametri alla pagina successiva/Diameters follow on the next page/ Diamètres continuent à la page suivante

MF

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

DIN 13

DIN EN 22568



60°

Filettatura sinistra - LH
Left hand
Filetage Gauche - LH

INOX
ACCIAIO INOSSIDABILE
STAINLESS STEEL
ACIER INOXYDABLE

Materiale - Tool Material - Substrat	**HSS**	**HSS**	**HSSE**
Imbocco - Chamfer - Entrée	**1,75xP**	**1,75xP**	**1,75xP**
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO / 6g**	**ISO / 6g**	**ISO / 6g**
Trattamento superficiale - Surface treatment - Revêtement			

Ød1 MF	P mm	Ød2 mm	h_1 mm	CODE		
20	1	45	14	110-99M20X1	110S99M20X1	110E99XM20X1
20	1,5	45	14	110-99M20X1,5	110S99M20X1,5	110E99XM20X1,5
20	2	45	14	110-99M20X2	110S99M20X2	110E99XM20X2
22	1	55	16	110-99M22X1	-	-
22	1,5	55	16	110-99M22X1,5	-	-
22	2	55	16	110-99M22X2	-	-
24	1	55	16	110-99M24X1	-	-
24	1,5	55	16	110-99M24X1,5	-	-
24	2	55	16	110-99M24X2	-	-
25	1	55	16	110-99M25X1	-	-
25	1,5	55	16	110-99M25X1,5	-	-
25	2	55	16	110-99M25X2	-	-
26	1	55	16	110-99M26X1	-	-
26	1,5	55	16	110-99M26X1,5	-	-
26	2	55	16	110-99M26X2	-	-
27	1	65	18	110-99M27X1	-	-
27	1,5	65	18	110-99M27X1,5	-	-
27	2	65	18	110-99M27X2	-	-
28	1	65	18	110-99M28X1	-	-
28	1,5	65	18	110-99M28X1,5	-	-
28	2	65	18	110-99M28X2	-	-
30	1	65	18	110-99M30X1	-	-
30	1,5	65	18	110-99M30X1,5	-	-
30	2	65	18	110-99M30X2	-	-
32	1	65	18	110-99M32X1	-	-
32	1,5	65	18	110-99M32X1,5	-	-
32	2	65	18	110-99M32X2	-	-
33	1	65	18	110-99M33X1	-	-
33	1,5	65	18	110-99M33X1,5	-	-
33	2	65	18	110-99M33X2	-	-

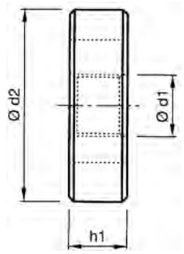
Segue diametri alla pagina successiva/Diameters follow on the next page/ Diamètres continuent à la page suivante

MF

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

DIN 13

DIN EN 22568



60°

Materiale - Tool Material - Substrat	**HSS**		
Imbocco - Chamfer - Entrée	**1,75xP**		
Tolleranza - Thread tolerance - Tolérance du filetage	**ISO / 6g**		
Trattamento superficiale - Surface treatment - Revêtement			

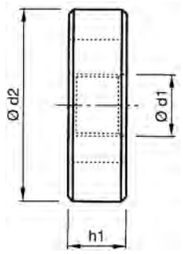
Ød1 MF	P mm	Ød2 mm	h_1 mm	CODE
34	1	65	18	110-99M34X1
34	1,5	65	18	110-99M34X1,5
35	1	65	18	110-99M35X1
35	1,5	65	18	110-99M35X1,5
35	2	65	18	110-99M35X2
36	1,5	65	18	110-99M36X1,5
36	2	65	18	110-99M36X2
36	3	65	25	110-99M36X3
38	1	75	20	110-99M38X1
38	1,5	75	20	110-99M38X1,5
38	2	75	20	110-99M38X2
39	1,5	75	20	110-99M39X1,5
39	2	75	20	110-99M39X2
39	3	75	30	110-99M39X3
40	1,5	75	20	110-99M40X1,5
40	2	75	20	110-99M40X2
40	3	75	30	110-99M40X3
42	1,5	75	20	110-99M42X1,5
42	2	75	20	110-99M42X2
42	3	75	30	110-99M42X3
45	1,5	90	22	110-99M45X1,5
45	2	90	22	110-99M45X2
45	3	90	36	110-99M45X3
48	1,5	90	22	110-99M48X1,5
48	2	90	22	110-99M48X2
48	3	90	36	110-99M48X3
50	1,5	90	22	110-99M50X1,5
50	2	90	22	110-99M50X2
50	3	90	36	110-99M50X3
52	1,5	90	22	110-99M52X1,5
52	2	90	22	110-99M52X2
52	3	90	36	110-99M52X3

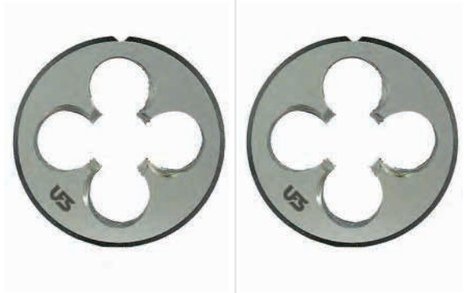
UNC

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

ASME B1.1

DIN EN 22568





60°

Filettatura sinistra - LH
Left hand
Filetage Gauche - LH

Materiale - Tool Material - Substrat	HSS	HSS	
Imbocco - Chamfer - Entrée	1,75xP	1,75xP	
Tolleranza - Thread tolerance - Tolérance du filetage	2A	2A	
Trattamento superficiale - Surface treatment - Revêtement			

Ød1 UNC	P TPI	$Ød_1$ mm	$Ød_2$ mm	h_1 mm	CODE		
2	56	2,184	16	5	300-99U2-56	-	
4	40	2,845	20	5	300-99U4-40	300S99U4-40	
5	40	3,175	20	5	300-99U5-40	300S99U5-40	
6	32	3,505	20	7	300-99U6-32	300S99U6-32	
8	32	4,166	20	7	300-99U8-32	300S99U8-32	
10	24	4,826	20	7	300-99U10-24	300S99U10-24	
12	24	5,486	20	7	300-99U12-24	300S99U12-24	
***1/4**	20	6,35	25	9	300-99U1/4	300S99U1/4	
1/4	20	6,35	20	7	★	★	
5/16	18	7,938	25	9	300-99U5/16	300S99U5/16	
3/8	16	9,525	30	11	300-99U3/8	300S99U3/8	
7/16	14	11,113	30	11	300-99U7/16	300S99U7/16	
1/2	13	12,7	38	14	300-99U1/2	300S99U1/2	
9/16	12	14,288	38	14	300-99U9/16	-	
5/8	11	15,875	45	18	300-99U5/8	-	
3/4	10	19,05	45	18	300-99U3/4	-	
7/8	9	22,225	55	22	300-99U7/8	-	
1"	8	25,4	55	22	300-99U1"	-	
1" 1/8	7	28,575	65	25	300-99U1"1/8	-	
1" 1/4	7	31,75	65	25	300-99U1"1/4	-	
1" 1/2	6	38,100	75	30	300-99U1"1/2	-	
1"3/4	5	44,45	90	36	300-99U1"3/4	-	
2"	4,5	50,80	90	36	300-99U2"	-	

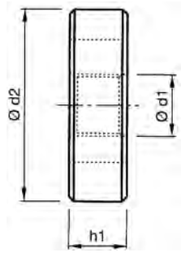
* Dimensioni speciali / Special size / Dimensions spéciales
★ Solo a richiesta / Only on request / Sur demande

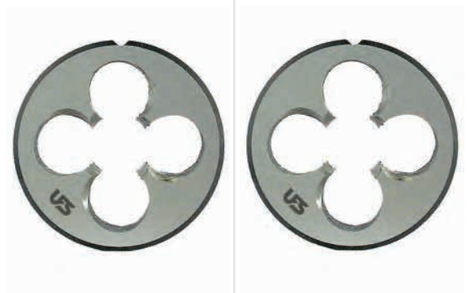
UNF

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

ASME B1.1

DIN EN 22568





60°

Filettatura sinistra - LH
Left hand
Filetage Gauche - LH

Materiale - Tool Material - Substrat	HSS	HSS	
Imbocco - Chamfer - Entrée	1,75xP	1,75xP	
Tolleranza - Thread tolerance - Tolérance du filetage	2A	2A	
Trattamento superficiale - Surface treatment - Revêtement			

Ød1 UNF	P TPI	$Ød_1$ mm	$Ød_2$ mm	h_1 mm	CODE		
3	56	2,515	16	5	310-99U3-56	★	
4	48	2,845	20	5	310-99U4-48	310S99U4-48	
5	44	3,175	20	5	310-99U5-44	310S99U5-44	
6	40	3,505	20	5	310-99U6-40	310S99U6-40	
8	36	4,166	20	7	310-99U8-36	310S99U8-36	
10	32	4,826	20	7	310-99U10-32	310S99U10-32	
12	28	5,486	20	7	310-99U12-28	310S99U12-28	
***1/4**	28	6,35	25	9	310-99U1/4	310S99U1/4	
1/4	28	6,35	20	7	★	★	
5/16	24	7,938	25	9	310-99U5/16	310S99U5/16	
3/8	24	9,525	30	11	310-99U3/8	310S99U3/8	
7/16	20	11,113	30	11	310-99U7/16	310S99U7/16	
1/2	20	12,7	38	10	310-99U1/2	310S99U1/2	
9/16	18	14,288	38	10	310-99U9/16	310S99U9/16	
5/8	18	15,875	45	14	310-99U5/8	310S99U5/8	
3/4	16	19,05	45	14	310-99U3/4	310S99U3/4	
7/8	14	22,225	55	16	310-99U7/8	★	
1"	12	25,4	55	16	310-99U1"	★	
1" 1/8	12	28,575	65	18	310-99U1"1/8	★	
1" 1/4	12	31,75	65	18	310-99U1"1/4	★	
1" 1/2	12	38,100	75	20	310-99U1"3/8	★	

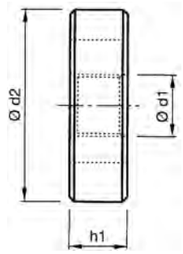
* Dimensioni speciali / Special size / Dimensions spéciales
★ Solo a richiesta / Only on request / Sur demande

GAS

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

ISO 228

DIN EN 24231



Filettatura sinistra - LH
Left hand
Filetage Gauche - LH

INOX
ACCIAIO INOSSIDABILE
STAINLESS STEEL
ACIER INOXYDABLE

Materiale - Tool Material - Substrat	HSS	HSS	HSSE
Imbocco - Chamfer - Entrée	1,75xP	1,75xP	1,75xP
Tolleranza - Thread tolerance - Tolérance du filetage	A	A	A
Trattamento superficiale - Surface treatment - Revêtement			

Ød1 GAS	P TPI	Ød$_1$ mm	Ød$_2$ mm	h$_1$ mm	CODE		
1/8	28	9,73	30	11	400-99G1/8	400S99G1/8	400E99XG1/8
1/4	19	13,16	38	10	400-99G1/4	400S99G1/4	400E99XG1/4
3/8	19	16,66	45	14	400-99G3/8	400S99G3/8	400E99XG3/8
1/2	14	20,96	45	14	400-99G1/2	400S99G1/2	400E99XG1/2
5/8	14	22,91	55	16	400-99G5/8	400S99G5/8	★
3/4	14	26,44	55	16	400-99G3/4	400S99G3/4	400E99XG3/4
7/8	14	30,2	65	18	400-99G7/8	400S99G7/8	★
1"	11	33,25	65	18	400-99G1"	400S99G1"	400E99XG1"
1" 1/8	11	37,9	75	20	400-99G1"1/8	★	★
1" 1/4	11	41,91	75	20	400-99G1"1/4	★	★
1" 3/8	11	44,32	90	22	400-99G1"3/8	★	★
1" 1/2	11	47,8	90	22	400-99G1"1/2	★	★
* 1" 3/4	11	53,75	105	22	400-99G1"3/4	★	★
1" 3/4	11	53,75	90	22	★	★	★
2"	11	59,61	105	22	400-99G2"	★	★

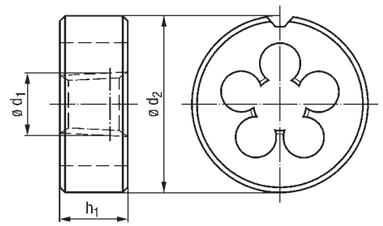
* Dimensioni speciali / Special size / Dimensions spéciales
★ Solo a richiesta / Only on request / Sur demande

R

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

(BSPT) ISO 7-1

≈ DIN EN 24230



Materiale - Tool Material - Substrat	HSS		
Imbocco - Chamfer - Entrée	1,75xP		
Tolleranza - Thread tolerance - Tolérance du filetage	-		
Trattamento superficiale - Surface treatment - Revêtement			

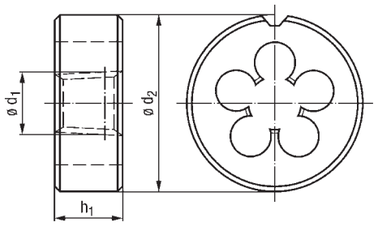
Ød1 GAS	P TPI	Ød$_1$ mm	Ød$_2$ mm	h$_1$ mm	CODE
1/8	28	9,728	38	11,5	410-99RC1/8
1/4	19	13,157	38	13	410-99RC1/4
3/8	19	16,662	45	15	410-99RC3/8
1/2	14	20,955	45	19	410-99RC1/2
3/4	14	26,441	65	22	410-99RC3/4
1"	11	33,249	65	25,5	410-99RC1"
1" 1/4	11	41,91	75	28,5	410-99RC1"1/4
1" 1/2	11	47,803	90	28,5	410-99RC1"1/2
2"	11	59,614	105	31,5	410-99RC2"

NPT

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

NPTF

≈ DIN EN 22568



60° P

1:16

Materiale - Tool Material - Substrat	**HSS**		
Imbocco - Chamfer - Entrée	**1,75xP**		
Tolleranza - Thread tolerance - Tolérance du filetage	**-**		
Trattamento superficiale - Surface treatment - Revêtement			

Ød1 *NPT	P TPI	Ød$_2$ mm	h$_1$ mm	CODE
1/16	27	10	11	420-99NPT1/16
1/8	27	10	10	420-99NPT1/8
1/8	27	10	14	★
1/4	18	15	14	420-99NPT1/4
3/8	18	15,3	16	420-99NPT3/8
1/2	14	20	16	420-99NPT1/2
3/4	14	20,2	18	420-99NPT3/4
3/4	14	20,2	18	★
1"	11,5	25	20	420-99NPT1"
1" 1/4	11,5	25,6	20	420-99NPT1"1/4
1" 1/2	11,5	26	22	420-99NPT1"1/2
2"	11,5	26,9	22	420-99NPT2"

* ANSI/ASME B1.20.1

Ød1 *NPTF	P TPI	Ød$_2$ mm	h$_1$ mm	CODE
1/16	27	25	11	430-99NPTF1/16
1/8	27	38	10	430-99NPTF1/8
1/4	18	38	15	430-99NPTF1/4
3/8	18	45	15	430-99NPTF3/8
1/2	14	45	20	430-99NPTF1/2
3/4	14	65	20,2	430-99NPTF3/4
3/4	14	55	20,2	★
1"	11,5	65	25	430-99NPTF1"

* ANSI/ASME B1.20.3

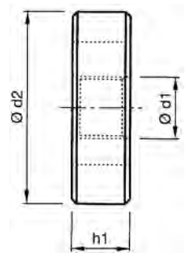
★ Solo a richiesta / Only on request / Sur demande

BSW

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

BS 84

DIN EN 22568



55° P

Materiale - Tool Material - Substrat	**HSS**		
Imbocco - Chamfer - Entrée	**1,75xP**		
Tolleranza - Thread tolerance - Tolérance du filetage	**Medium class**		
Trattamento superficiale - Surface treatment - Revêtement			

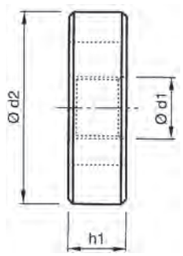
Ød1 BSW	P TPI	Ød$_1$ mm	Ød$_2$ mm	h$_1$ mm	CODE
1/8	40	3,175	20	5	200-99W1/8
5/32	32	3,969	20	5	200-99W5/32
3/16	24	4,762	20	7	200-99W3/16
7/32	24	5,556	20	7	200-99W7/32
1/4	20	6,35	25	9	200-99W1/4
5/16	18	7,938	25	9	200-99W5/16
3/8	16	9,525	30	11	200-99W3/8
7/16	14	11,113	30	11	200-99W7/16
1/2	12	12,7	38	14	200-99W1/2
9/16	12	14,288	38	14	200-99W9/16
5/8	11	15,876	45	18	200-99W5/8
3/4	10	19,051	45	18	200-99W3/4
7/8	9	22,226	55	22	200-99W7/8
1"	8	25,4	55	22	200-99W1"
1" 1/8	7	28,576	65	25	200-99W1"1/8
1" 1/4	7	31,751	65	25	200-99W1"1/4
1" 1/2	6	38,101	75	30	200-99W1"1/2

PG

Filiere tonde imbocco corretto
Round dies with spiral pointed
Filières rondes, entrée gun

DIN 40430

DIN EN 22568



Materiale - Tool Material - Substrat	**HSS**			
Imbocco - Chamfer - Entrée	**1,75xP**			
Tolleranza - Thread tolerance - Tolérance du filetage	**-**			
Trattamento superficiale - Surface treatment - Revêtement				

Ød1 PG	P TPI	$Ød_1$ mm	$Ød_2$ mm	h_1 mm	CODE
7	20	12,5	38	14	700-99PG7
9	18	15,20	38	14	700-99PG9
11	18	18,60	45	14	700-99PG11
13,5	18	20,40	45	14	700-99PG13,5
16	18	22,50	55	16	700-99PG16
21	16	28,30	65	18	700-99PG21
29	16	37	65	18	700-99PG29
36	16	47	90	22	700-99PG36
42	16	54	105	22	★
48	16	59,3	105	22	★

★ Solo a richiesta / Only on request / Sur demande

La Bagna Cauda

The "Bagna Cauda"

La bagna cauda è una ricetta tipica piemontese e per gli abitanti della regione è sacra! Una vera eccellenza.
Si tratta di uno di quei classici piatti conviviali che sono perfetti per riunire attorno a un tavolo amici e famigliari.
Il significato di bagna cauda è "salsa calda". E va appunto mangiata assolutamente calda. Composta da tre soli ingredienti, acciughe, aglio e olio, viene preparata in grandi quantità e poi servita in dei fujot, dei piccoli recipienti monoporzione in terracotta con sotto una piccola fiammella che mantiene sempre caldo l'intingolo.
Essendo molto ricca e sostanziosa, oltrechè gustosa, è nata come piatto unico per la cena. Un tempo, nelle tavole più povere, si intingevano le verdure stagionali che l'orto forniva, cotte o crude. Solitamente il cavolo, la verza, i cardi, i topinambur, le patate e le rape bollite. I benestanti aggiungevano altri ingredienti come le barbabietole, la carne cruda, i peperoni, il pane abbrustolito, il mais, i rapanelli e le cipolle al forno.

Acciughe e olio non sono però degli ingredienti prettamente piemontesi.
Il motivo della loro presenza è da ricercare nella storia; durante il commercio dei beni, tra il mare e le pianure a nord al di là dei monti e viceversa, attraverso le" Vie del sale"; antichi percorsi, continui saliscendi, che un tempo remoto erano i passaggi di comunicazione e di trasporto fondamentali.
Il nome è al plurale perché sono molte; dall'estremo ponente ligure sino alla Toscana. Fanno riferimento al sale perché il sale fu per lungo tempo, sin da epoca romana, uno dei principali sistemi di conservazione del cibo. La parola "salario" deriva appunto dalla paga dei soldati romani che era sotto forma di quantità di sale e costituiva quindi una merce fondamentale e richiestissima.
Si istituzionalizzano dopo l'800 quando il Sacro Romano Impero, con uno sforzo unitario e amministrativo importante, riuscì a rendere sicuro il proprio territorio affidandolo alla cura dei feudatari.
È un momento epocale per l'Europa che rivede una prospettiva di crescita dopo secoli di paura, attraversata da tribù barbare nella maggior parte dei casi interessata a depredare.

Per diversi secoli manterrà intatto il suo significato simbolico fatto allo stesso tempo di ricchezza, avventura, mistero e paura. La leggenda narra che fossero i discendenti dei temutissimi saraceni a iniziare a portare quel prodotto, povero ma squisito, verso l'interno. Sotto diversi strati di acciughe salate si nascondeva il sale che pagava una gabella obbligatoria. Fu in questi viaggi faticosi e tribolati, con il freddo e minacciati da mille insidie che questi uomini produssero uno dei piatti più squisiti della cucina piemontese.

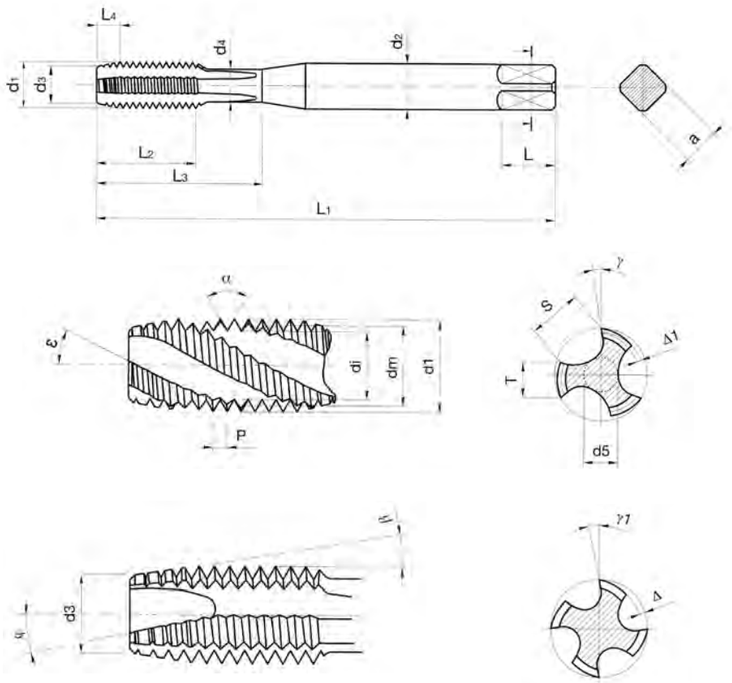
Bagna Cauda is a traditional Piedmont recipe, and for the inhabitants of the region, it's sacred! True excellence.
It's a classic convivial dish, perfect for a gathering of family and friends around the table.
The term bagna cauda means "hot sauce". And it should be eaten nice and hot. The sauce has just three ingredients: anchovies, garlic and olive oil; it is prepared in large quantities and served in fujot, small single-portion sized terracotta pots with a tea light underneath to keep the sauce warm.
As this is an extremely rich and substantial dish, as well as delicious, it is served as a single course for dinner. Originally, in the poorest households, seasonal vegetables from the garden were dipped into the sauce, either raw or cooked. These were usually white and savoy cabbage, cardoons, Jerusalem artichokes, potatoes and turnips. Better-off homes added other ingredients such as beetroot, raw meat, sweet peppers, toasted bread, sweetcorn, radishes and roasted onions.

However, anchovies and olive oil are not exactly Piedmontese ingredients.
The reason for their inclusion lies in the region's history: in the age of goods trade between the sea and the northern plains beyond the mountains, the "salt roads", ancient and often precipitous routes, were essential for communication and transport.
There were many such routes, from the far west of Liguria all the way to Tuscany. The reference to salt is because for a long time, since the Roman era, salt was one of the main methods of preserving food. The word "salary" actually derives from the wages of Roman soldiers, which were paid in salt, an essential and much sought-after commodity.
The routes were formalised after the 9th century, when the Holy Roman Empire used its administrative might to secure its territories by entrusting them to feudal rulers.
This was a momentous time for a Europe glimpsing the chance of growth after centuries of fear, marauded by barbarian tribes intent on plunder.

For several centuries salt retained its symbolic significance and its connotations of wealth, adventure, mystery and fear. The story goes that it was the descendants of the feared Saracens who began transporting salt - so humble yet so valuable - to the interior. Under several layers of salted anchovies they hid the salt, which was subject to an obligatory tax. It was during these exhausting and difficult journeys, suffering from the cold and threatened by multiple enemies, that one of the most exquisite dishes of Piedmont cuisine was invented.

Il Fujot della Bagna Càuda
Service terrine for Bagna Càuda

TERMINOLOGIA DEI MASCHI
TAPS TERMINOLOGY - TERMINOLOGIE DES TARAUDS

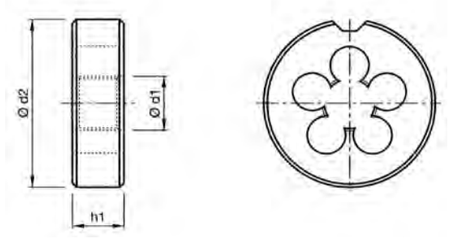


LEGENDA
LEGEND - LÉGENDE

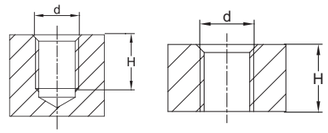
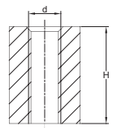
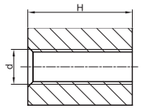
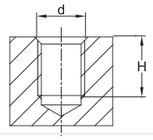
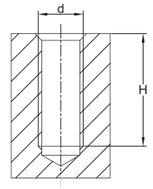
L1: Lunghezza totale - Total lenght - Longueur totale
L2: Lunghezza filetto - Thread lenght - Longueur du filet
L4: Lunghezza imbocco - Chamfer length - Longueur de l'entrée
L3: Lunghezza utile - Useful lenght - Longueur utile
L: Lunghezza quadro - Lenght of square - Longueur du cadre
P: Passo - Pitch - 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
α: Angolo del profilo - Included angle of thread - Angle du profil
γ1: Angolo di taglio frontale - Rake angle - Angle de coupe avant
γ: Angolo di taglio sull'imbocco corretto - Rake angle of spiral point
Angle de coupe sur l'entrée
β: Angolo di imbocco - Chamfer angle - Angle de l'entrée
ε: Inclinazione dell'elica - Spiral flute angle - Angle d'hélice
Δ: Spoglia sull'imbocco - Chamfer relief - Dépouille de l'entrée
Δ1: Spoglia sul filetto - Pitch diameter relief - Dépouille sur le filet
a: Quadro - Square - Carré
ϕ: Angolo inclinzazione 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

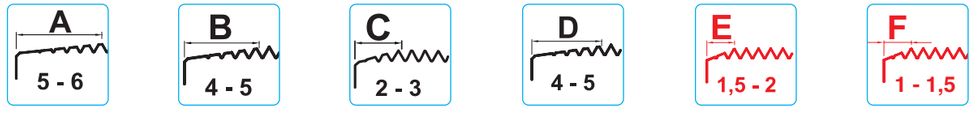


TIPI DI FORO E RELATIVI MASCHI CONSIGLIATI
HOLE TYPES AND RECOMMENDED TAPS - TYPES DE TROU ET TARAUDS RECOMMANDÉS

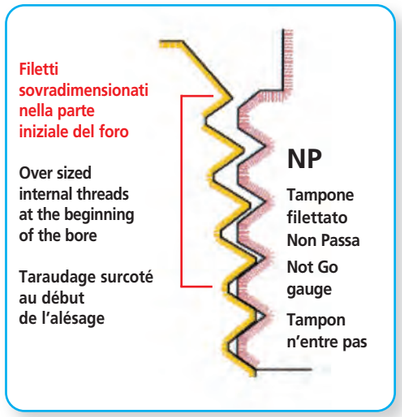
Tipo di foro Hole type Type de trou	Profondità x d Depth x d Profondeur x d	Nr. di serie cat. Cat. serial number Nr. série cat.	Tipi di scanalature Flute geometries Type de goujure
Fori ciechi e passanti - Blind and through holes - Trous borgnes et débouchant			
	H <1,5 d	**20-21**	
Fori passanti - Through holes - Trous débouchant			
	H < 3 d	**24-25**	
	H < 3 d	**50-51** **52-53**	
Fori ciechi - Blind holes - Trous borgnes			
	H <1,5 d	**40-41** **42-43**	
	H < 2,5 d	**60-61**	
	H 2,5÷3 d	**80-81** **82-83** **92-93** **94-95**	 BT= Back Tapered Rastremazione posteriore del filetto - Détalonnage arrière
	H > 3 d	**V82-V83**	

TIPI DI IMBOCCO
CHAMFER TYPE - TYPES D'ENTRÉES

Lunghezza
Length
Longueur
n° x P



A richiesta
On request
Sur demande



Problemi di oversize?
Oversize problems?
Problèmes de surcote?

Nessun problema di oversize?
No oversize problems?
Pas des problèmes de surcote?

MASCHIATURA CONVENZIONALE
STANDARD TAPPING
TARAUDAGE NORMAL

Si consiglia l'uso dei prodotti contrassegnati CO.
We recommend the use of CO products.
Nous recommandons l'utilisation de produits CO.

MASCHIATURA RIGIDA
RIGID TAPPING
TARAUDAGE RIGIDE

Si consiglia l'uso dei prodotti contrassegnati SR per l'ottimizzazione della resa utensile.
We reccomend the use of SR products for yield optimization.
Nous recommandons l'utilisation de produits SR pour l'optimisation du rendement.

MASCHIATURA CONVENZIONALE
STANDARD TAPPING - TARAUDAGE NORMAL

A differenza della maschiatura rigida, il maschio viene montato su porta utensili che lasciano un certo grado di libertà (comunemente detta compensazione). In questa condizione, con l'utilizzo dei maschi elicoidali a forte tersione, possono insorgere dei problemi in merito alla filettatura ottenuta. È probabile, specie negli acciai a medio-bassa resistenza, ottenere un filettatura sovradimensionata "oversize". In questo caso il controllo del tampone filettato Non Passa risulta non conforme: oltre 2 giri o, nella peggiore delle ipotesi, anche l'avvitamento completo.
Grazie alla continua ricerca e sviluppo, recentemente, la UFS ha sviluppato dei prodotti specifici per la risoluzione di questa problematica contraddistinguendoli nel catalogo con un logo specifico CO. La seguente tabella è un aiuto alla individuazione dei prodotti.

Unlike the rigid tapping, the tap is mounted on tool holders that leave a certain degree of freedom (compensation).
In this condition, high grade spiral flutes, may arise problems regarding threading obtained. Especially in low to medium strength steels, you can get a thread oversized. In this case the test with the control gauges NO GO might be non-compliant: more than 2 laps or even more.
Thanks to the continuous research and development, recently UFS has developed specific products for the resolution of this issue: in the Catalog with a specific logo CO. The following table is an aid to identification of the products.

Contrairement au taraudage rigide, le taraud est monté sur porte-outils qui laissent une certaine liberté (compensation).
Dans cette condition, hélices très fortes, peuvent poser problèmes concernant le filetage obtenu. Surtout avec aciers de bas et moyenne résistance, vous pouvez obtenir un filetage surcoté. Dans ce cas le test avec le tampon NP peux être non conforme: plus de 2 tours ou même plus.
Grâce à la recherche continue et le développement, UFS a récemment développé des produits spécifiques pour la résolution de ce problème: dans le catalogue avec un logo spécifique CO. Le tableau suivant est une aide à l'identification des produits.

MASCHIATURA RIGIDA
RIGID TAPPING - TARAUDAGE RIGIDE

Nella maschiatura rigida la velocità d'avanzamento ed il passo del maschio sono sincronizzati direttamente dalla macchina.
In questo caso si usano, generalmente, portautensili rigidi o con micro compensazione.

In rigid tapping the speed and the feed of the taps are synchronized directly from the machine.
In this case we use generally rigid tool holders or with micro compensation.

Dans taraudage rigide, la vitesse et l'avance des tarauds sont synchronisésdirectement à partir de la machine.
Dans ce cas, nous utilisons généralement rigideporte-outils ou avec micro-compensation.

RPM		Vc m/min																	
		2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60
Ød$_1$ mm	1	637	1273	1910	2546	3183	3820	4456	5093	5730	6366	7958	9549	11141	12732	14324	15915	17507	19099
	2	318	637	955	1273	1592	1910	2228	2546	2865	3183	3979	4775	5570	6366	7162	7958	8754	9549
	3	212	424	637	849	1061	1273	1485	1698	1910	2122	2653	3183	3714	4244	4775	5305	5836	6366
	4	159	318	477	637	796	955	1114	1273	1432	1592	1989	2387	2785	3183	3581	3979	4377	4775
	5	127	255	382	509	637	764	891	1019	1146	1273	1592	1910	2228	2546	2865	3183	3501	3820
	6	106	212	318	424	531	637	743	849	955	1061	1326	1592	1857	2122	2387	2653	2918	3183
	7	91	182	273	364	455	546	637	728	819	909	1137	1364	1592	1819	2046	2274	2501	2728
	8	80	159	239	318	398	477	557	637	716	796	995	1194	1393	1592	1790	1989	2188	2387
	9	71	141	212	283	354	424	495	566	637	707	884	1061	1238	1415	1592	1768	1945	2122
	10	64	127	191	255	318	382	446	509	573	637	796	955	1114	1273	1432	1592	1751	1910
	11	53	106	159	212	265	318	371	424	477	531	663	796	928	1061	1194	1326	1459	1592
	12	45	91	136	182	227	273	318	364	409	455	568	682	796	909	1023	1137	1251	1364
	16	40	80	119	159	199	239	279	318	358	398	497	597	696	796	895	995	1094	1194
	18	35	71	106	141	177	212	248	283	318	354	442	531	619	707	796	884	973	1061
	20	32	64	95	127	159	191	223	255	286	318	398	477	557	637	716	796	875	955
	22	29	58	87	116	145	174	203	231	260	289	362	434	506	579	651	723	796	868
	24	27	53	80	106	133	159	186	212	239	265	332	398	464	531	597	663	729	796
	27	24	47	71	94	118	141	165	189	212	236	295	354	413	472	531	589	648	707
	30	21	42	64	85	106	127	149	170	191	212	265	318	371	424	477	531	584	637
	33	19	39	58	77	96	116	135	154	174	193	241	289	338	386	434	482	531	579
	36	18	35	53	71	88	106	124	141	159	177	221	265	309	354	398	442	486	531
	39	16	33	49	65	82	98	114	131	147	163	204	245	286	326	367	408	449	490
	42	15	30	45	61	76	91	106	121	136	152	189	227	265	303	341	379	417	455
	45	14	28	42	57	71	85	99	113	127	141	177	212	248	283	318	354	389	424
	48	13	27	40	53	66	80	93	106	119	133	166	199	232	265	298	332	365	398
	52	12	24	37	49	61	73	86	98	110	122	153	184	214	245	275	306	337	367
	54	12	24	35	47	59	71	83	94	106	118	147	177	206	236	265	295	324	354
	56	11	23	34	45	57	68	80	91	102	114	142	171	199	227	256	284	313	341
	60	11	21	32	42	53	64	74	85	95	106	133	159	186	212	239	265	292	318
	64	10	20	30	40	50	60	70	80	90	99	124	149	174	199	224	249	274	298

Numero di giri
Number of Revolutions (RPM)
Vitesse de rotation

$$n = \frac{Vc \times 1000}{\pi \times d_1}$$

Velocità di taglio
Cutting speed
Vitesse de coupe

$$Vc = \frac{n \times \pi \times d1}{1000}$$

TABELLA COMPARATIVA POLLICI / MM
COMPARISON TABLE INCHES / MM - TABLEAU DE COMPARAISON POUCES / MM

Dn Inch/Nr.	D mm	UNC	UNF	UNEF	UN								BSW	BSF	G, RP	
					4	6	8	12	16	20	28	32			TPI	D mm
Nr. 0	1,52		80													
1/16	1,59														28	7,72
Nr. 1	1,85	64	72													
Nr. 2	2,18	56	64													
3/32	2,38															
Nr. 3	2,51	48	56													
Nr. 4	2,84	40	48													
Nr. 5	3,17	40	44													
1/8	3,17												40		28	9,72
Nr. 6	3,50	32	40													
5/32	3,96															
Nr. 8	4,16	32	36													
3/16	4,76												24	32		
Nr. 10	4,82	24	32													
Nr. 12	5,48	24	28	32												
7/32	5,55													28		
1/4	6,35	20	28	32									20	26	19	13,15
9/32	7,14													26		
5/16	7,93	18	24	32						20	28		18	22		
3/8	9,52	16	24	32						20	28		16	20	19	16,66
7/16	11,11	14	20	28					16			32	14	18		
1/2	12,70	13	20	28					16			32	12	16	14	20,95
9/16	14,28	12	18	24					16	20	28	32	12	16		
5/8	15,87	11	18	24				12	16	20	28	32	11	14	14	22,91
11/16	17,46			24				12	16	22	28	32	11	14		
3/4	19,05	10	16	20				12			28	32	10	12	14	26,44
13/16	20,64			20				12	16		28	32				
7/8	22,22	9	14	20				12	16		28	32	9	11	14	30,20
15/16	23,81			20				12	16		28	32				
1	25,40	8	12	20					16		28	32	8	10	11	33,24
1 1/16	26,99			18			8	12	16	20	28					
1 1/8	28,57	7	12	18			8		16	20	28		7	9	11	37,89
1 3/16	30,16			18			8	12	16	20	28					
1 1/4	31,75			18			8		16	20	28		7	9	11	41,91
1 5/16	33,34			18			8	12	16	20	28					
1 3/8	34,92	6		18			8		16	20	28			8	11	44,32
1 7/16	36,51			18		6	8	12	16	20	28					
1 1/2	38,10	6		18			8		16	20	28		6	8	11	47,80
1 9/16	39,69			18		6	8	12	16	20						
1 5/8	41,28			18		6	8	12	16	20				8		
1 11/16	42,86			18		6	8	12	16	20						
1 3/4	44,45	5				6	8	12	16	20			5	7	11	53,74
1 13/16	46,04					6	8	12	16	20						
1 7/8	47,63					6	8	12	16	20						
1 15/16	49,21					6	8	12	16	20						
2	50,80	4 1/2				6	8	12	16	20			4 1/2	7	11	59,61
2 1/8	53,97					6	8	12	16	20						
2 1/4	57,15	4 1/2				6	8	12	16	20			4	6	11	65,71
2 3/8	60,32					6	8	12	16	20						
2 1/2	63,50	4				6	8	12	16	20			4	6	11	75,18
2 5/8	66,67				4	6	8	12	16	20						
2 3/4	69,85	4				6	8	12	16	20			3 1/2	6	11	81,53
2 7/8	73,02				4	6	8	12	16	20						
3	76,20	4				6	8	12	16	20			3 1/2	5	11	87,88
3 1/8	79,37				4	6	8	12	16							
3 1/4	82,55	4				6	8	12	16				3 1/4	5	11	93,98
3 3/8	85,72				4	6	8	12	16							
3 1/2	88,90	4				6	8	12	16				3 1/4	4 1/2	11	100,33
3 5/8	92,07				4	6	8	12	16							
3 3/4	95,25	4				6	8	12	16				3	4 1/2	11	106,68
3 7/8	98,42				4	6	8	12	16							
4	101,60	4				6	8	12	16				3	4 1/2	11	113,03

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

* Tolleranza - Tolerance - Tolérance: 5H

Filettatura MJ, MJ thread
DIN ISO 5855 - Filetage MJ

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

* Tolleranza - Tolerance - Tolérance: 6H

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	max
M 4	0,5	**3,50**	3,459	3,599
M 4,5	0,5	**4,00**	3,959	4,099
M 5	0,5	**4,50**	4,459	4,599
M 6	0,5	**5,50**	5,459	5,599
M 6	0,75	**5,25**	5,188	5,378
M 7	0,75	**6,25**	6,188	6,378
M 8	0,5	**7,50**	7,459	7,599
M 8	0,75	**7,25**	7,188	7,378
M 8	1	**7,00**	6,917	7,153
M 9	0,75	**8,25**	8,188	8,378
M 9	1	**8,00**	7,917	8,153
M 10	0,5	**9,50**	9,459	9,599
M 10	0,75	**9,25**	9,188	9,378
M 10	1	**9**	8,917	9,153
M 10	1,25	**8,75**	8,647	8,912
M 11	1	**10**	9,917	10,153
M 12	0,5	**11,5**	11,459	11,599
M 12	0,75	**11,25**	11,188	11,378
M 12	1	**11**	10,917	11,153
M 12	1,25	**10,75**	10,647	10,912
M 12	1,5	**10,5**	10,376	10,676
M 13	1	**12**	11,917	12,153
M 14	1	**13**	12,917	13,153
M 14	1,25	**12,75**	12,647	12,912
M 14	1,5	**12,5**	12,376	12,676
M 15	1	**14**	13,917	14,153
M 15	1,5	**13,5**	13,376	13,676
M 16	1	**15**	14,917	15,153
M 16	1,25	**14,8**	14,647	14,912
M 16	1,5	**14,5**	14,376	14,676
M 17	1	**16**	15,917	16,153
M 17	1,5	**15,5**	15,376	15,676
M 18	1	**17**	16,917	17,153
M 18	1,5	**16,5**	16,376	16,676
M 18	2	**16**	15,835	16,210
M 20	1	**19**	18,917	19,153
M 20	1,5	**18,5**	18,376	18,676
M 20	2	**18**	17,835	18,210
M 22	1	**21**	20,917	21,153
M 22	1,5	**20,5**	20,376	20,676
M 22	2	**20**	19,835	20,210
M 24	1	**23**	22,917	23,153
M 24	1,5	**22,5**	22,376	22,676
M 24	2	**22**	21,835	22,210
M 25	1	**24**	23,917	24,153
M 25	1,5	**23,5**	23,376	23,676
M 25	2	**23**	22,835	23,210
M 26	1,5	**24,5**	24,376	24,676
M 27	1	**26**	25,917	26,153
M 27	1,5	**25,5**	25,376	25,676
M 27	2	**25**	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	max
M 28	1	**27**	26,917	27,153
M 28	1,5	**26,5**	26,376	26,676
M 28	2	**26**	25,835	26,210
M 30	1	**29**	28,917	29,153
M 30	1,5	**28,5**	28,376	28,676
M 30	2	**28**	27,835	28,210
M 30	3	**27**	26,752	27,252
M 32	1,5	**30,5**	30,376	30,676
M 32	2	**30**	29,835	30,210
M 33	1,5	**31,5**	31,376	31,676
M 33	2	**31**	30,835	31,210
M 33	3	**30**	29,752	30,252
M 34	1,5	**32,5**	32,376	32,676
M 35	1,5	**33,5**	33,376	33,676
M 36	1,5	**34,5**	34,376	34,676
M 36	2	**34**	33,835	34,210
M 36	3	**33**	32,752	33,252
M 38	1,5	**36,5**	36,376	36,676
M 39	1,5	**37,5**	37,376	37,676
M 39	2	**37**	36,835	37,210
M 39	3	**36**	35,752	36,252
M 40	1,5	**38,5**	38,376	38,676
M 40	2	**38**	37,835	38,210
M 40	3	**37**	36,752	37,252
M 42	1,5	**40,5**	40,376	40,676
M 42	2	**40**	39,835	40,210
M 42	3	**39**	38,752	39,252
M 42	4	**38**	37,670	38,270
M 45	1,5	**43,5**	43,376	43,676
M 45	2	**43**	42,835	43,210
M 45	3	**42**	41,752	42,252
M 45	4	**41**	40,670	41,270
M 48	1,5	**46,5**	46,376	46,676
M 48	2	**46**	45,835	46,210
M 48	3	**45**	44,752	45,252
M 48	4	**44**	43,670	44,270
M 50	1,5	**48,5**	48,376	48,676
M 50	2	**48**	47,835	48,210
M 50	3	**47**	46,752	47,252
M 52	1,5	**50,5**	50,376	50,676
M 52	2	**50**	49,835	50,210
M 52	3	**47**	46,587	47,087
M 52	4	**48**	47,670	48,270
M 55	1,5	**53,5**	53,376	53,676
M 55	2	**53**	52,835	53,210
M 55	3	**52**	51,752	52,252
M 55	4	**51**	50,670	51,270
M 56	1,5	**54,5**	54,376	54,676
M 56	2	**54**	53,835	54,210
M 56	3	**53**	52,752	53,252
M 56	4	**52**	51,670	52,270

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	max
M 58	1,5	**56,5**	56,376	56,676
M 58	2	**56**	55,835	56,210
M 58	3	**55**	54,752	55,252
M 58	4	**54**	53,670	54,270
M 60	1,5	**58,5**	58,376	58,676
M 60	2	**58**	57,835	58,210
M 60	3	**57**	56,752	57,252
M 60	4	**56**	55,670	56,270
M 62	1,5	**60,5**	60,376	60,676
M 62	2	**60**	59,835	60,210
M 62	3	**59**	58,752	59,252
M 62	4	**58**	57,670	58,270
M 64	1,5	**62,5**	62,376	62,676
M 64	2	**62**	61,835	62,210
M 64	3	**61**	60,752	61,252
M 64	4	**60**	59,670	60,270
M 65	1,5	**63,5**	63,376	63,676
M 65	2	**63**	62,835	63,210
M 65	3	**62**	61,752	62,252
M 65	4	**61**	60,670	61,270
M 68	1,5	**66,5**	66,376	66,676
M 68	2	**66**	65,835	66,210
M 68	3	**65**	64,752	65,252
M 68	4	**64**	63,670	64,270
M 70	1,5	**68,5**	68,376	68,676
M 70	2	**68**	67,835	68,210
M 70	3	**67**	66,752	67,252
M 70	4	**66**	65,670	66,270
M 70	6	**64**	63,505	64,305
M 72	1,5	**70,5**	70,376	70,676
M 72	2	**70**	69,835	70,210
M 72	3	**69**	68,752	69,252
M 72	4	**68**	67,670	68,270
M 72	6	**66**	65,505	66,305
M 75	1,5	**73,5**	73,376	73,676
M 75	2	**73**	72,835	73,210
M 75	3	**72**	71,752	72,252
M 75	4	**71**	70,670	71,270
M 76	1,5	**74,5**	74,376	74,676
M 76	2	**74**	73,835	74,210
M 76	3	**73**	72,752	73,252
M 76	4	**72**	71,670	72,270
M 76	6	**70**	69,505	70,305
M 80	1,5	**78,5**	78,376	78,676
M 80	2	**78**	77,835	78,210
M 80	3	**77**	76,752	77,252
M 80	4	**76**	75,670	76,270
M 80	6	**74**	73,505	74,305
M 85	2	**83**	82,835	83,210
M 85	3	**82**	81,752	82,252
M 85	4	**81**	80,670	81,270
M 85	6	**79**	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 - perçage min	max
Nr. 6	32	**2,85**	2,642	2,896
Nr. 8	32	**3,50**	3,302	3,531
Nr. 10	24	**3,90**	3,683	3,937
Nr. 12	24	**4,50**	4,343	4,597
1/4	20	**5,10**	4,978	5,258
5/16	18	**6,60**	6,401	6,731
3/8	16	**8,00**	7,798	8,153
7/16	14	**9,40**	9,144	9,550
1/2	13	**10,80**	10,592	11,024
9/16	12	**12,20**	11,989	12,446
5/8	11	**13,50**	13,386	13,868
3/4	10	**16,50**	16,307	16,840
7/8	9	**19,50**	19,177	19,761
1''	8	**22,25**	21,971	22,606
1''-1/8	7	**25,00**	24,638	25,349
1''-1/4	7	**28,00**	27,813	28,524
1''-3/8	6	**30,75**	30,353	31,155
1''-1/2	6	**34,00**	33,528	34,290
1''-3/4	5	**39,50**	38,938	39,802
2''	4,5	**45,00**	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* -perçage min	max
Nr. 6	32	**2,80**	2,733	2,939
Nr. 8	32	**3,50**	3,393	3,599
Nr. 10	24	**3,90**	3,795	4,064
Nr. 12	24	**4,60**	4,455	4,704
1/4	20	**5,20**	5,113	5,387
5/16	18	**6,70**	6,563	6,833
3/8	16	**8,10**	7,978	8,255
7/16	14	**9,50**	9,347	9,639
1/2	13	**10,90**	10,798	11,095
9/16	12	**12,35**	12,228	12,482
5/8	11	**13,80**	13,627	13,904
3/4	10	**16,70**	16,576	16,881

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	max
Nr. 6	40	**2,95**	2,819	3,023
Nr. 8	36	**3,50**	3,404	3,607
Nr. 10	32	**4,10**	3,962	4,166
Nr. 12	28	**4,60**	4,469	4,724
1/4	28	**5,50**	5,359	5,588
5/16	24	**6,90**	6,782	7,036
3/8	24	**8,50**	8,382	8,636
7/16	20	**9,90**	9,728	10,033
1/2	20	**11,50**	11,328	11,608
9/16	18	**12,90**	12,751	13,081
5/8	18	**14,50**	14,351	14,681
3/4	16	**17,50**	17,323	17,678
7/8	14	**20,40**	20,269	20,676
1''	12	**23,25**	23,114	23,571
1''-1/8	12	**26,50**	26,289	26,746
1''-1/4	12	**29,50**	29,464	29,921
1''-3/8	12	**32,75**	32,639	33,096
1 -1/2	12	**36,00**	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	max
1/4	32	**5,55**	5,487	5,690
5/16	32	**7,15**	7,087	7,264
3/8	32	**8,7**	8,662	8,865
7/16	28	**10,2**	10,135	10,338
1/2	28	**11,8**	11,710	11,938
9/16	24	**13,2**	13,132	13,386
5/8	24	**14,8**	14,732	14,986
11/16	24	**16,4**	16,307	16,561
3/4	20	**17,8**	17,679	17,958
13/16	20	**19,4**	19,254	19,558
7/8	20	**20,95**	20,854	21,133
15/16	20	**22,50**	22,429	22,733
1"	20	**24,15**	24,029	24,308
1"-1/16	18	**25,6**	25,451	25,781
1"-1/8	18	**27,15**	27,051	27,381
1"-3/16	18	**28,75**	28,626	28,956
1"-1/4	18	**30,3**	30,226	30,556
1"-3/8	18	**33,5**	33,401	33,731
1"-7/16	18	**35,1**	34,976	35,306
1"-1/2	18	**36,7**	36,576	36,881

Filettatura UNJF ASME B1.15,
UNJF thread ASME B1.15 - Filetage UNJF ASME B1.15

UNJF	P TPI		Ø di foratura 3B - drill sizes - perçage min	max
Nr. 6	40	**2,95**	2,888	3,053
Nr. 8	36	**3,6**	3,480	3,663
Nr. 10	32	**4,15**	4,054	4,255
Nr. 12	28	**4,7**	4,602	4,816
1/4	28	**5,6**	5,466	5,662
5/16	24	**7**	6,906	7,109
3/8	24	**8,6**	8,494	8,679
7/16	20	**10**	9,876	10,084
1/2	20	**11,55**	11,463	11,661
9/16	18	**13**	12,913	13,122
5/8	18	**14,6**	14,501	14,702
3/4	16	**17,6**	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	max
1"-1/8	8	**25,4**	25,146	25,781
1"-1/4	8	**28,6**	28,321	28,956
1"-3/8	8	**31,75**	31,496	32,131
1"-1/2	8	**34,9**	34,671	35,306
1"-5/8	8	**38,1**	37,846	38,481
1"-3/4	8	**41,3**	41,021	41,656
1"-7/8	8	**44,45**	44,196	44,831
2"	8	**47,6**	47,371	48,006
2''-1/4	8	**54**	53,721	54,356
2''-1/2	8	**60,30**	60,071	60,706

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	max
1/8	28	**8,8**	8,566	8,848
1/4	19	**11,8**	11,445	11,890
3/8	19	**15,25**	14,950	15,395
1/2	14	**19**	18,631	19,172
5/8	14	**21**	20,587	21,128
3/4	14	**24,5**	24,117	24,658
7/8	14	**28,25**	27,877	28,418
1"	11	**30,75**	30,291	30,931
1"1/8	11	**35,5**	34,939	35,579
1"1/4	11	**39,5**	38,952	39,592
1"1/2	11	**45,25**	44,845	45,485
1"3/4	11	**51,10**	50,788	51,428
2"	11	**57**	56,656	57,296
2"1/4	11	**63,10**	62,752	63,392
2"1/2	11	**72,6**	72,226	72,866
2"3/4	11	**79**	78,576	79,216
3"	11	**85,3**	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	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	**8,7**	8,651	
1/4	18	**11,30**	11,232	
3/8	18	**14,7**	14,671	
1/2	14	**18,2**	18,118	
3/4	14	**23,50**	23,465	
1"	11,5	**29,50**	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	max
1/8	28	**8,6**	8,495	8,637
1/4	19	**11,5**	11,341	11,549
3/8	19	**15**	14,846	15,054
1/2	14	**18,5**	18,489	18,773
3/4	14	**24**	23,975	24,259
1"	11	**30,25**	30,111	30,471
1"1/4	11	**39**	38,772	39,132
1"1/2	11	**45**	44,665	45,025
2"	11	**56,5**	56,476	56,836

Filettatura Whitworth a passo grosso BS 84
Whitworth coarse thread BS 84
Filetage Whitworth à pas gros BS 84

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

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	max
PG 7	20	**11,4**	11,28	11,43
PG 9	18	**14**	13,86	14,01
PG 11	18	**17,25**	17,26	17,41
PG 13,5	18	**19**	19,06	19,21
PG 16	18	**21,25**	21,16	21,31
PG 21	16	**27**	26,78	27,03
PG 29	16	**35,5**	35,48	35,73
PG 36	16	**45,5**	45,48	45,73
PG 42	16	**52,5**	52,48	52,73
PG 48	16	**58**	57,78	58,03

Filettatura tonda DIN 405
Round thread DIN 405
Filetage rond DIN 405

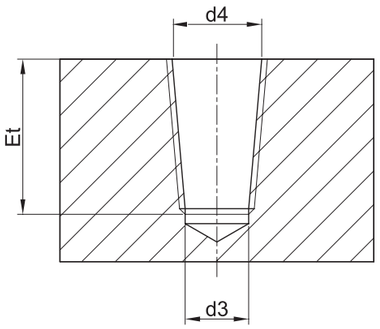
Rd	P TPI		Ø di foratura - drill sizes min	max
8	10	**6**	5,714	6,274
9	10	**7**	6,714	7,274
10	10	**8**	7,714	8,274
11	10	**9**	8,714	9,274
12	10	**10**	9,714	10,274
14	8	**11,5**	11,142	11,812
16	8	**13,5**	13,142	13,812
18	8	**15,5**	15,142	15,812
20	8	**17,5**	17,142	17,812
22	8	**19,5**	19,142	19,812
24	8	**21,5**	21,142	21,812
26	8	**23,5**	23,142	23,812
28	8	**25,5**	25,142	25,812
30	8	**27,5**	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	max
10	2	**8,2**	8,000	8,236
10	3	**7,5**	-	-
12	2	**10,2**	10,000	10,236
12	3	**9,25**	9,000	9,315
14	3	**11,25**	11,000	11,315
14	4	**10,5**	-	-
16	4	**12,25**	12,000	12,375
18	4	**14,25**	14,000	14,375
20	4	**16,25**	16,000	16,375
22	5	**17,25**	17,000	17,450
24	5	**19,25**	19,000	19,450
26	5	**21,25**	21,000	21,450
28	5	**23,25**	23,000	23,450
30	6	**24,25**	24,000	24,500
32	6	**26,25**	26,000	26,500
36	6	**30,25**	30,000	30,500

Filettatura ISO metrica DIN 8140-2 per filetti riportati
ISO Metric coarse thread DIN 8140-2 for wire thread inserts (STI)
Filetage métrique ISO DIN8140-2 pour HELICOIL (filet-rapporté)

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



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

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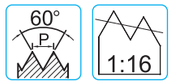
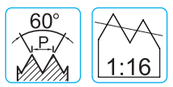


Ød1	P TPI	d3 cil./cyl. mm	d4 con./taper mm	Et = X
1/16	27	6,20	6,39	9,30
1/8	27	8,50	8,74	9,30
1/4	18	11	11,36	13,50
3/8	18	14,50	14,80	13,90
1/2	14	17,9	18,32	18,10
3/4	14	23,2	23,67	18,60
1''	11,5	29,00	29,69	22,30
1''1/4	11,5	37,8	38,45	22,80
1''1/2	11,5	44	44,52	22,80
2''	11,5	56	56,56	23,20

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
1/16	27	6,10	6,41	9,30
1/8	27	8,45	8,76	9,30
1/4	18	10,9	11,4	13,50
3/8	18	14,3	14,84	13,90
1/2	14	17,6	18,33	18,10
3/4	14	23,0	23,68	18,60
1''	11,5	28,75	29,72	22,30
1''1/4	11,5	37,5	38,48	22,80
1''1/2	11,5	43,75	44,55	22,80
2''	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
1/8	28	8,20	8,57	10,1
1/4	19	11	11,45	15,0
3/8	19	14,5	14,95	15,4
1/2	14	18	18,63	20,4
3/4	14	23,5	24,12	21,7
1''	11	29,5	30,29	26
1''1/4	11	38	38,95	28,3
1''1/2	11	44	44,85	28,3
2''	11	55,5	56,66	32,6

Filettatura metrica ISO DIN 13
ISO metric coarse thread DIN 13 - Filetage métrique ISO DIN13

M	P mm		Toll.
2	0,4	**1,82**	± 0,02
2,2	0,45	**2,00**	± 0,02
2,3	0,4	**2,1**	± 0,02
2,5	0,45	**2,30**	± 0,02
2,6	0,45	**2,40**	± 0,02
3	0,5	**2,8**	± 0,03
3,5	0,6	**3,25**	± 0,03
4	0,7	**3,70**	± 0,03
5	0,8	**4,65**	± 0,03
6	1	**5,55**	± 0,05
8	1,25	**7,40**	± 0,05
10	1,5	**9,30**	± 0,05
12	1,75	**11,20**	± 0,05
14	2	**13,10**	± 0,05
16	2	**15,10**	± 0,05
18	2,5	**16,90**	± 0,05
20	2,5	**18,90**	± 0,05
22	2,5	**20,90**	± 0,05
24	3	**22,70**	± 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	**3,80**	±0,03
5	0,5	**4,80**	±0,03
6	0,5	**5,80**	±0,03
6	0,75	**5,65**	±0,03
8	1	**7,55**	±0,05
10	1	**9,55**	±0,05
10	1,25	**9,40**	±0,05
12	1	**11,55**	±0,05
12	1,25	**11,40**	±0,05
12	1,5	**11,30**	±0,05
14	1	**13,55**	±0,05
14	1,25	**13,40**	±0,05
14	1,5	**13,30**	±0,05
16	1	**15,55**	±0,05
16	1,25	**15,40**	±0,05
16	1,5	**15,30**	±0,05
18	1	**17,55**	±0,05
18	1,25	**17,40**	±0,05
18	1,5	**17,30**	±0,05
20	1	**19,55**	±0,05
20	1,25	**19,40**	±0,05
20	1,5	**19,30**	±0,05
20	2	**19,10**	±0,05
22	1	**21,55**	±0,05
22	1,25	**21,40**	±0,05
22	1,5	**21,30**	±0,05
22	2	**21,10**	±0,05
24	1	**23,55**	±0,05
24	1,25	**23,40**	±0,05
24	1,5	**23,30**	±0,05
24	2	**23,10**	±0,05
26	1,5	**25,30**	±0,05
26	2	**25,10**	±0,05
27	1,5	**26,30**	±0,05
27	2	**26,10**	±0,05
28	1,5	**27,30**	±0,05
28	2	**27,10**	±0,05
30	1,5	**29,30**	±0,05
30	2	**29,10**	±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	**3,15**	±0,03
8	32	**3,80**	±0,03
10	24	**4,30**	±0,05
12	24	**5,00**	±0,05
1/4	20	**5,75**	±0,05
5/16	18	**7,25**	±0,05
3/8	16	**8,75**	±0,05
7/16	14	**10,30**	±0,05
1/2	13	**11,80**	±0,05
9/16	12	**13,30**	±0,05
5/8	11	**14,80**	±0,05
3/4	10	**17,9**	±0,05
7/8	9	**21**	±0,05
1’	8	**24**	±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	**3,20**	±0,03
8	36	**3,85**	±0,03
10	32	**4,45**	±0,03
12	28	**5,05**	±0,05
1/4	28	**5,90**	±0,05
5/16	24	**7,45**	±0,05
3/8	24	**9,00**	±0,05
7/16	20	**10,50**	±0,05
1/2	20	**12,10**	±0,05
9/16	18	**13,70**	±0,05
5/8	18	**15,25**	±0,05
3/4	16	**18,40**	±0,05
7/8	14	**21,40**	±0,05
1’	12	**24,45**	±0,05
1’-1/8	12	**27,60**	±0,05
1’-1/4	12	**30,80**	±0,05
1’-3/8	12	**34,00**	±0,05
1’-1/2	12	**37,15**	±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	**7,25**	±0,05
1/8	28	**9,25**	±0,05
1/4	19	**12,5**	±0,05
3/8	19	**16**	±0,05
1/2	14	**20**	±0,05
5/8	14	**22**	±0,05
3/4	14	**25,5**	±0,05
7/8	14	**29,25**	±0,05
1’	11	**32**	±0,05
1’-1/8	11	**36,70**	±0,05
1’-1/4	11	**40,70**	±0,05

CLASSI DI TOLLERANZA DEI MASCHI - EN22857
TOLERANCE CLASSES OF TAPS - EN 22857 - CLASSES DE TOLÉRANCE DES TARAUDS - EN 22857

Maschio - Tap -Taraud ISO	DIN	ANSI/ASME	Madrevite Internal thread, nut - Vis-Mère					Accoppiamento Fit - Accouplement
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

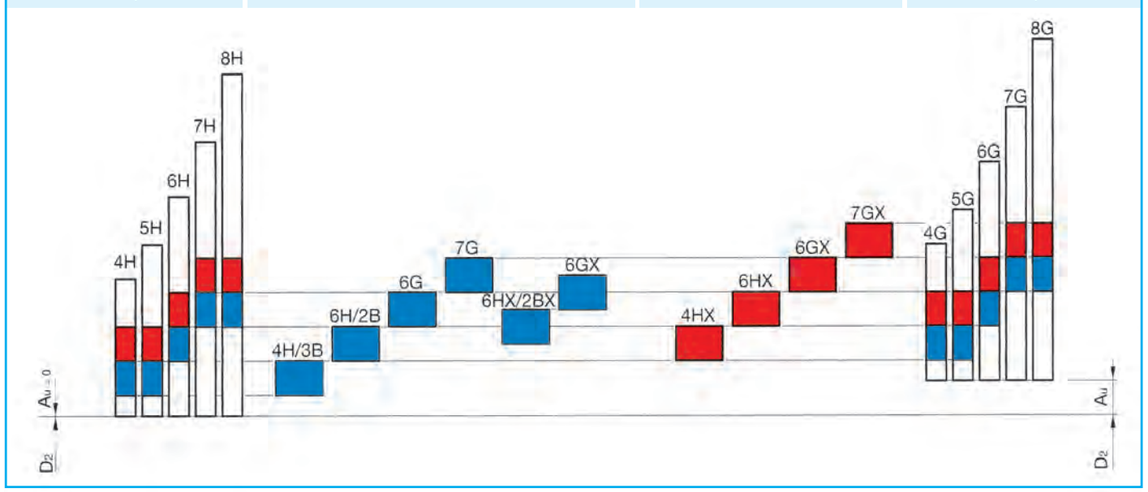
Posizione della tolleranza
Tolerance classes - Emplacement de la tolérance

Madrevite pos. H
Internal thread Tolerance class H
Vis mère pos. H

Tolleranza maschi ad asportazione
Tolerance ranger for cutting taps
Tolérance tarauds à refouler

Tolleranza maschi a rullare
Tolerance ranger for forming taps
Tolérance tarauds

Madrevite pos. G
Internal thread Tolerance class G
Vis mère pos. G



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

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

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

TABELLA TOLLERANZE MASCHI
TAPS TOLERANCE TABLE - TABLEAU DE TOLERANCE DES TARAUDS

Scostamenti sul diametro medio – Limits on pitch diameter – Tolérances sur flancs pour tarauds

Diametro nominale Nominal diameter Diamètre nominal		P mm	Classi – Classes						7G	
			ISO1/4H		ISO2/6H		ISO3/6G			
> mm	< mm		min	max	min	max	min	max	min	max
0,99	1,4	**0,2**	+0,005	+0,015	-	-	-	-	-	-
		0,25	+0,006	+0,017	-	-	-	-	-	-
		0,3	+0,006	+0,018	+0,018	+0,03	-	-	-	-
1,4	2,8	**0,2**	+0,005	+0,016	-	-	-	-	-	-
		0,25	+0,006	+0,018	-	-	-	-	-	-
		0,35	+0,007	+0,02	+0,02	+0,034	-	-	-	-
		0,4	+0,007	+0,021	+0,021	+0,036	-	-	-	-
		0,45	+0,008	+0,023	+0,023	+0,038	-	-	-	-
2,8	5,6	**0,35**	+0,007	+0,021	+0,021	+0,036	-	-	-	-
		0,5	+0,008	+0,024	+0,024	+0,04	+0,04	+0,056	+0,056	+0,072
		0,6	+0,009	+0,027	+0,027	+0,045	+0,045	+0,063	+0,063	+0,081
		0,7	+0,01	+0,029	+0,029	+0,048	+0,048	+0,067	+0,067	+0,086
		0,75	+0,01	+0,029	+0,029	+0,048	+0,048	+0,067	+0,067	+0,086
		0,8	+0,01	+0,03	+0,03	+0,05	+0,05	+0,07	+0,07	+0,09
5,6	11,2	**0,75**	+0,011	+0,032	+0,032	+0,053	+0,053	+0,074	+0,074	+0,095
		1	+0,012	+0,035	+0,035	+0,059	+0,059	+0,083	+0,083	+0,107
		1,25	+0,013	+0,038	+0,038	+0,063	+0,063	+0,088	+0,088	+0,113
		1,5	+0,014	+0,042	+0,042	+0,07	+0,07	+0,098	+0,098	+0,126
11,2	22,4	**1**	+0,013	+0,038	+0,038	+0,063	+0,063	+0,088	+0,088	+0,113
		1,25	+0,014	+0,042	+0,042	+0,07	+0,07	+0,098	+0,098	+0,126
		1,5	+0,015	+0,045	+0,045	+0,075	+0,075	+0,105	+0,105	+0,135
		1,75	+0,016	+0,048	+0,048	+0,08	+0,08	+0,112	+0,112	+0,144
		2	+0,017	+0,051	+0,051	0,085	+0,085	+0,119	+0,119	+0,153
		2,5	+0,018	+0,054	+0,054	+0,09	+0,09	+0,126	+0,126	+0,162
22,4	45	**1**	+0,013	+0,040	+0,04	+0,066	+0,066	+0,092	+0,092	+0,118
		1,5	+0,016	+0,048	+0,048	+0,08	+0,08	+0,112	+0,112	+0,144
		2	+0,018	+0,054	+0,054	+0,09	+0,09	0,126	+0,126	+0,162
		3	+0,021	+0,064	+0,064	+0,106	+0,106	+0,148	+0,148	+0,19
		3,5	+0,022	+0,067	+0,067	+0,112	+0,112	+0,157	+0,157	+0,202
		4	+0,024	+0,071	+0,071	+0,118	+0,118	+0,165	+0,165	+0,212
		4,5	+0,025	+0,075	+0,075	+0,125	+0,125	+0,175	+0,175	+0,225
45	90	**1,5**	+0,017	+0,051	+0,051	+0,085	+0,085	+0,119	+0,119	+0,153
		2	+0,019	+0,057	+0,057	+0,095	+0,095	+0,133	+0,133	+0,171
		3	+0,022	+0,067	+0,067	+0,112	+0,112	+0,157	+0,157	+0,202
		4	+0,025	+0,075	+0,075	+0,125	+0,125	+0,175	+0,175	+0,225
		5	+0,027	+0,08	+0,08	+0,133	+0,133	+0,186	+0,186	+0,239
		5,5	+0,028	+0,084	+0,084	+0,140	+0,140	+0,196	+0,196	+0,252
		6	+0,03	+0,09	+0,09	+0,15	+0,150	+0,210	+0,21	+0,27

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

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

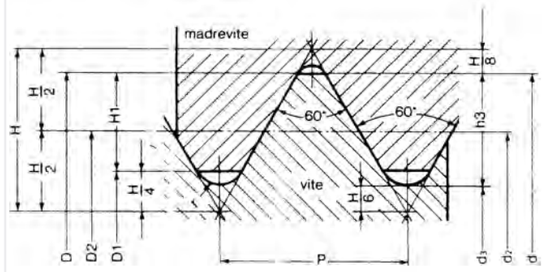
$H_1 = \frac{5}{8} H = 0{,}541\,27\ P$

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

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

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

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



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
14	1,5	13,071	13,101
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

Ød1	P mm	Diametri medi 6H Pitch diameter 6H - Diamètres moyens 6H Min	Max
33	2	31,755	31,791
33	3	31,115	31,157
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	50,188	50,163
52	4	49,477	49,527
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

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	2,448	2,463
Nr. 5	40	2,778	2,793
Nr.	32	3,014	3,029
Nr. 8	32	3,675	3,690
Nr. 10	24	4,164	4,179
Nr. 12	24	4,824	4,839
1/4	20	5,565	5,585
5/16	18	7,061	7,081
3/8	16	8,534	8,554
7/16	14	9,975	9,995
1/2	13	11,481	11,501
9/16	12	12,963	12,983
5/8	11	14,425	14,445
3/4	10	17,465	17,485
7/8	9	20,457	20,477
1	8	23,403	23,423
1-1/8	7	26,293	26,318
1-1/4	7	29,468	29,493
1-3/8	6	32,250	32,275
1-1/2	6	35,425	35,450
1-3/4	5	41,240	41,260
2	4,5	47,224	47,244
2-1/4	4,5	53,584	53,614
2-1/2	4	59,476	59,506
2-3/4	4	65,836	65,866
3	4	72,186	72,216

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

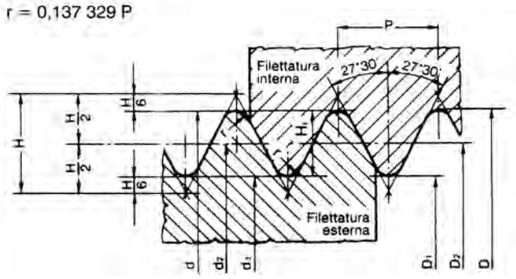
Dimensioni in mm
Dimensions in mm

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

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

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

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



Filettatura GAS Cilindrica
Whitworth pipe Thread - Filetage GAZ cylindrique

Ød1	P TPI	Diametri medi UNI ISO 5969 Pitch diameter - Diamètres moyens Min	Max
1/16	28	7,164	7,185
1/8	28	9,169	9,190
1/4	19	12,326	12,351
3/8	19	15,831	15,856
1/2	14	19,822	19,850
5/8	14	21,777	21,806
3/4	14	25,308	25,336
7/8	14	29,067	29,096
1	11	31,806	31,842
1-1/8	11	36,454	36,490
1-1/4	11	40,467	40,503
1-1/2	11	46,360	46,396
1-3/4	11	52,303	52,339
2	11	58,171	58,207
2-1/4	11	64,274	64,318
2-1/2	11	73,749	73,792
2-3/4	11	80,098	80,142
3	11	86,449	86,492
3-1/2	11	98,894	98,938
4	11	111,595	111,638
4-1/2	11	124,294	124,338
5	11	136,995	137,038
5-1/2	11	149,694	149,738
6	11	162,395	162,438

TIN

Rivestimento superficiale per impiego generale, acciai non legati e basso legati.
Grazie alla minore rugosità della superficie ed elevata durezza, 2300 HV, migliora lo scorrimento ed aumenta la resistenza all'usura.
Questo trattamento permette di aumentare la velocità di taglio nonché la durata del maschio.

Surface coating for general use, for unalloyed and low-alloy steels.
Due to the reduced surface roughness and the extreme hardness, 2300 HV, very good "slip" properties and a high wear resistance are achieved.
This treatment allows to increase the cutting speed as well as the duration of the tap.

Revêtement de surface pour usage général, aciers non alliés et faiblement alliés.
La rugosité de l'état de surface est diminuée et la dureté améliorée: on obtient de très bonnes qualités de glissement et une résistance à l'usure importante.
Permet d'augmenter les vitesses de coupe ainsi que la durée de vie du taraud.

TiCN

Rivestimento superficiale per materiali abrasivi come la ghisa, fusioni d'alluminio, bronzo, leghe di titanio e leghe di nichel.
L' elevata durezza, 3000 HV, abbinata alle buone caratteristiche di tenacità lo rendono adatto per questo tipo di materiali.

Surface coating for abrasive materials such as cast iron, cast aluminium, bronze, titanium alloys and nickel alloys. The high hardness, 3000 HV, combined with the good toughness characteristics make it suitable for this type of material.

Revêtement de surface pour matériaux abrasifs tels que fonte, fonte d'aluminium, bronze, alliages de titane et alliages de nickel.
La dureté élevée, 3000 HV, associée aux bonnes caractéristiques de ténacité, le rend adapté à ce type de matériau.

TiAlN

Rivestimento superficiale con una durezza molto elevata, 3300 HV, e resistenza alle alte temperature. Adatto lavorazioni di materiali abrasivi come la ghisa, anche a secco. Elevata resistenza all'usura.

Surface coating with a very high hardness, 3300 HV, and resistance to high temperatures.
Suitable for dry processing in cast iron, high resistance against abrasive wear.

Revêtement de surface à très haute dureté, 3300 HV, et résistance aux hautes températures.
Adapté pour usinage à sec des fontes, bonne résistance à l'abrasion.

VS

Rivestimento a basso coefficiente di attrito, evoluzione della classica vaporizzazione.
Migliora lo scorrimento del maschio ed evita l'incollaggio.
Adatto alla maschiatura di materiali come leghe leggere di alluminio, acciai < 700 N/mm², materiali dolci con basso contenuto di carbonio, ed acciai INOX a basse velocità di taglio.

Low friction coating, evolution of the classic vaporization.
Reduced cutting friction; reduced welding tendency; increased finishing.
Suitable for tapping materials such as light aluminium alloys, steels < 700 N/mm², soft materials with low carbon content, and stainless steels at low cutting speeds.

Revêtement à faible frottement, évolution de la vaporisation classique.
Améliore le glissement du mâle et évite le coincement.
Convient pour le taraudage de matériaux tels que les alliages légers d'aluminium, les aciers < 700 N/mm², les matériaux tendres à faible teneur en carbone et les aciers inoxydables à faible vitesse de coupe.

XP

Rivestimento duro di base abbinato ad uno strato autolubrificante; questa combinazione porta ad un miglioramento della durata dell'utensile e dell'evacuazione del truciolo.
Di colore nero, riduce l'attrito, evita l'incollaggio, migliore finitura del filetto ottenuto.
Consigliato per la maschiatura compensata (CO)

Hard base coating combined with a self-lubricating layer; this combination leads to an improvement in tool life and chip evacuation.
Black in colour, reduces friction, prevents sticking, improves the finish of the thread obtained.
Recommended for compensated tapping (CO)

Revêtement de base dur combiné à une couche autolubrifiante ; cette combinaison conduit à une amélioration de la durée de vie de l'outil et de l'évacuation des copeaux.
De couleur noire, réduit les frottements, évite le collage, améliore la finition du fil obtenu.
Recommandé pour le taraudage compensé (CO)

TXC

Combinazione di un rivestimento duro, 3300 HV, ed uno strato autolubrificante.
Miglioramento dell'evacuazione truciolo. Consigliato per maschiatura di fori ciechi profondi.
Applicazione su INOX ed Alluminio con alto contenuto di Si.

Combination of a hard coating, 3300 HV, and a self-lubricating layer.
Improved chip evacuation. Recommended for tapping deep blind holes. Application on stainless steel and aluminium with high Si content.

Combinaison d'un revêtement dur, 3300 HV, et d'une couche autolubrifiante.
Meilleure évacuation des copeaux. Recommandé pour le taraudage de trous borgnes profonds.
Application sur acier inoxydable et aluminium à haute teneur en Si.

TiN-G

Nuovo rivestimento TiN-G multilayer testato e sviluppato in abbinamento a processi di finitura di ultima generazione.
Rivestimento con ottime caratteristiche di scorrimento molto resistente all'usura.
Particolarmente indicato per la maschiatura a rullare ad alte performance, serie **K-ROLL**, ed anche la nuova serie ad asportazione **s-plus**.

New TiN-G multilayer coating tested and developed in combination with the latest generation finishing processes.
Coating with very good sliding characteristics very resistant to wear.
Particularly suitable for high performance forming taps, **K-ROLL** series, and also the new **s-plus** series.

Nouveau revêtement multicouche TiN-G testé et développé en combinaison avec des procédés de finition de dernière génération.
Revêtement avec de très bonnes caractéristiques de glissement très résistant à l'usure.
Particulièrement adapté au taraudage de formage haute performance, série **K-ROLL**, ainsi qu'à la nouvelle série **s-plus**.

AHI

NEW

Nuovo rivestimento realizzato con tecnologia HIPMS.
Superficie del rivestimento molto liscia, elevata densità e durezza del rivestimento.
Resistenza all'usura ed ossidazione; per acciai ad alta resistenza e materiali abrasivi.

New surface coating made with HIPMS technology.
Very smooth coating surface, high coating density and hardness.
Resistance to wear and oxidation. For high strength steels and abrasive materials.

Nouveau revêtement de surface réalisé avec la technologie HIPMS.
Surface de revêtement très lisse, densité et dureté de revêtement élevées.
Résistance à l'usure et à l'oxydation; pour les aciers à haute résistance et les matériaux abrasifs.

V

Il trattamento superficiale di vaporizzazione migliora lo scorrimento del maschio. Lo strato di ossido di ferro conferisce all'olio da taglio una maggiore aderenza; previene la formazione di saldature fredde. Indicato per acciai Rm < 700 N/mm², materiali dolci e tenaci con basso contenuto di carbonio.

The vaporized surface treatment improves the sliding of the tap. The iron oxide layer gives the cutting oil better adhesion; prevents the formation of cold welds.
Suitable for steel Rm < 700 N/mm², soft and tough materials with low carbon content.

Le traitement de surface vaporisé améliore le coulissement du taraud.
La couche d'oxyde de fer donne à l'huile de coupe une meilleure adhérence ; empêche la formation de soudures à froid.
Convient aux aciers Rm < 700 N/mm², matériaux tendres et durs à faible teneur en carbone.

NQ

Il trattamento di nitrurazione e vaporizzazione (NIT+VAP) porta ad un aumento della durezza superficiale ed anche un miglioramento delle proprietà di scorrimento. Consigliati per materiale abrasivi come ghisa grigia, alluminio fuso ad alto contenuto di Si.

The nitriding and vaporization treatment (NIT+VAP) leads to an increase in the surface hardness and also an improvement in the sliding properties. Recommended for abrasive materials such as grey cast iron, cast aluminium with high Si content.

Le traitement de nitruration et vaporisation (NIT+VAP) conduit à une augmentation de la dureté de surface ainsi qu'à une amélioration des propriétés de glissement.
Recommandé pour les matériaux abrasifs tels que la fonte grise, la fonte d'aluminium à haute teneur en Si.

COMPARAZIONE DUREZZE
HARDNESS COMPARISON TABLE - COMPARAISON DE DURETÉ

HV Vickers Durezza Hardness - Dureté	HRC Rockwell Durezza Hardness - Dureté	HB Brinell Durezza Hardness - Dureté	Resistenza Tensile Strength - Résistance N/mm²	 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 Hardness - Dureté	HRC Rockwell Durezza Hardness - Dureté	HB Brinell Durezza Hardness - Dureté	Resistenza Tensile Strength - Résistance N/mm²	 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 DI MATERIALE
MATERIAL GROUPS - GROUPES DE MATIERES

P	Acciaio Steel - Aciers	282 ÷ 284 >
H	Acciaio temprato Hardened steel - Acier trempé	283 ÷ 284 >
M	Acciaio INOX Stainless steel - Acier inoxydable	285 >
K	Ghisa Cast iron - Fonte	286 >
N	Alluminio, leghe di alluminio Aluminium and aluminium alloys - Aluminium et alliages d'aluminium	287 >
N	Leghe di magnesio Magnesium alloys - Alliages de magnésium	288 >
N	Rame, leghe di rame, ottone e bronzo Copper, copper alloys, brass and bronze - Cuivre, alliages de cuivre, laiton et bronze	288 ÷ 289 >
S	Titanio Titanium - Titane	289 >
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P	Acciaio – Steel - Acier		
1.1	**Acciaio dolce magnetico Rm < 400 N/mm²** **Magnetic soft steel - Acier doux magnétique**		
	W-Nr.	DIN - Germany	UNI - Italy
	1.1013	RFe100	-
	1.1014	RFe80	-
	1.1015	RFe60	-
1.2	**Acciaio da costruzione, da cementazione Rm < 700 N/mm²** **Construction steel, case hardening steel - Acier de construction et de cémentation**		
	W-Nr.	DIN - Germany	UNI - Italy
Acciaio da costruzione Construction 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	Fe510D
Acciaio da cementazione Case hardening steel Acier de cémentation	1.0301	C10	C10
	1.0401	C15	C15
	1.7131	16MnCr5	16MnCr5
	1.7243	18CrMo4	18CrMo4
	1.7147	20MnCr5	20MnCr5
	1.5919	15CrNi6	16CrNi4
	1.6523	21NiCrMo2	20NiCrMo2
	1.6587	17CrNiMo6	18CrNiMo7
Acciaio automatico (AVP) Free cutting steel Aciers de décolletage	1.0711	9S20	CF 9 S 22
	1.0715	9SMn28	CF 9 SMn 28
	1.0718	9SMnPb28	CF 9 SMnPb 28
	1.0726	35S20	-
	1.0736	9SMn36	CF 9 SMn 36
	1.0737	9SMnPb36	CF 9 SMnPb 36
1.3	**Acciaio al carbonio Rm < 850 N/mm²** **Carbon steel - Acier au carbone**		
	W-Nr.	DIN - Germany	UNI - Italy
Da bonifica Heat treatable steel Trempe et revenu	1.0402	C22	C20, C21
	1.0406	C25	C25
	1.0528	C30	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	C45

Continua Acciaio al carbonio / Continue carbon steel / Acier au carbone continuer >

		W-Nr.	DIN - Germany	UNI - Italy
Per molle Spring Pour les ressorts		1.1231	Ck67	C70
		1.1248	Ck75	C75
		1.1269	Ck85	C85
		1.1274	Ck101	C100
Da tempra superficiale Surface hardening Du durcissement superficiel		1.1183	Cf35	C36
		1.1193	Cf45	C43
		1.1213	Cf53	C53
P	1.4	**Acciaio legato - bonificato Rm < 850 N/mm²** **Alloyed steel - Heat treatable steel / Acier allié - trempé et revenu**		
	1.5	**Acciaio legato - bonificato Rm 850 ÷ 1200 N/mm²** **Alloyed steel - Heat treatable steel / Acier allié - trempé et revenu**		
	1.6	**Acciaio alta resistenza Rm 1200 ÷ 1400 N/mm², 38 - 45 HRC** **High strength steel - Acier haute résistance**		
H	1.7	**Acciaio temprato Rm 1400 ÷ 1800 N/mm², 45 - 52 HRC** **Hardened steel - Acier trempé**		
	1.8	**Temprato < 63 HRC** **Hardened steel - Acier trempé**		
		W-Nr.	DIN - Germany	UNI - Italy
Da bonifica Heat treatable steels Trempe et revenu		1.7035	41Cr4	41Cr4
		1.8159	50CrV4	51CrV4
		1.7218	25CrMo4	25CrMo4
		1.7220	34CrMo4	35CrMo4
		1.7225	42CrMo4	42CrMo4
		1.7228	50CrMo4	-
		1.7242	16CrMo4	-
		1.7243	18CrMo4	18CrMo4
		1.6580	30CrNiMo8	30NiCrMo8
		1.6582	34CrNiMo6	-
		1.6511	36CrNiMo4	39NiCrMo3
		1.6773	36NiCrMo16	-
		1.6565	40NiCrMo6	-
Da nitrurazione Nitriding steels Aciers de nitruration		1.8515	31CrMo12	31CrMo12
		1.8519	31CrMoV9	-
		1.8507	34CrAlMo5	34CrAlMo7
		1.8509	41CrAlMo7	41CrAlMo7
Da cuscinetti Ball bearing steel Roulements		1.3505	100Cr6	100Cr6
		1.3537	100CrMo7	-
Per molle Spring steels Aciers à roulement		1.5025	51Si7	50Si7
		1.5026	55Si7	55Si7
		1.5027	60Si7	-
		1.7108	61SiCr7	60SiCr8
		1.8159	51CrV4	50CrV4
		1.7176	55Cr3	55Cr3
		1.7701	51CrMoV4	-
Fusioni d'acciaio - ghisa acciaiosa Cast irons and steels - Cast steels Fontes et aciers - Aciers moulés		1.0446	GS-45, GE240	-
		1.0552	GS-52, GE260	-
		1.7379	G17CrMo9-10	-

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

P	1.4 – 1.5 – 1.6		
H	**1.7 – 1.8**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
Per tempra superficiale Surface hardening De durcissement de surface	1.7005	45Cr2	-
	1.7006	46Cr2	45Cr2
	1.7043	38Cr4	-
	1.7034	37Cr4	36CrMn4, 36CrMn5
	1.7223	42CrMo4	41CrMo4
Per lavorazioni a caldo Hot work steel Pour travail à chaud	1.2767	X45NiCrMo4	42NiCrMo157
	1.2713	55NiCrMoV6	-
	1.2714	55NiCrMoV7	-
	1.2311	40CrMnMo7	-
	1.2365	32CrMoV12-28	30CrMoV1227KU
	1.2343	X37CrMoV5-1	X37CrMoV5-1KU
	1.2344	X40CrMoV5-1	X40CrMoV511KU
	1.2567	X30WCrV5-3	X30WCrV53KU
	1.2581	X30WCrV9-3	X30WCrV93KU
Per lavorazioni a freddo Cold work steel Acier pour travail à froid	1.2080	X210Cr12	X205Cr12KU
	1.2083	X42Cr13	-
	1.2363	X100CrMoV5-1	X100CrMoV51KU
	1.2379	X155CrVMo12-1	X155CrVMo121KU
	1.2510	100MnCrW4	95MnWCr5KU
	1.2550	60WCrV7	55WCrV8KU
	1.2842	90MnCrV8	90MnVCr8KU
Acciaio rapido HSS, HSS-E High speed steel Acier rapide	1.3202	HS 12-1-4-5	AISI/SAE: T15
	1.3207	HS 10-4-3-10	HS 10-4-3-10
	1.3243	HS 6-5-2-5	HS 6-5-2-5 (AISI/SAE: M35)
	1.3247	HS 2-10-1-8	HS 2-9-1-8 (AISI/SAE: M42)
	1.3343	HS 6-5-2	HS 6-5-2 (AISI/SAE: M2)
	1.3344	HS 6-5-3	AISI/SAE: M3/2
	1.3348	HS 2-9-2	HS 2-9-2 (AISI/SAE: M7)
Acciaio rapido sinterizzato HSS-PM Sintered high speed steel Acier rapide fritté	1.3294	HS 6-5-3-8	ASP 2030
	1.3253	HS 10-2-5-8	ASP 2052
	1.3292	PMHS 7-7-7-11	ASP 2060
Acciaio speciale Rm<1600 N/mm² Special steel Acier spécial			HARDOX 400
			HARDOX 450
Acciaio speciale < 63 HRC Special steel Acier spécial			HARDOX 500
			HARDOX 600

M	Acciaio INOX - Stainless Steel – Acier inoxydable		
2.1	**Acciaio inox automatico Rm < 850 N/mm²** **Free machining stainless steel - Acier inoxydable de décolletage**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	1.4104	X14CrMoS17	X10CrS17 (AISI 430F)
	1.4305	X8CrNiS18-9	X10CrNiS18-9 (AISI 303)
2.2	**Acciaio inox austenitico Rm < 850 N/mm²** **Austenitic stainless steel - Acier inoxydable austénitique**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	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	X2CrNiMo17-12-2	X2CrNiMo17-12 (AISI 316L)
	1.4406	X2CrNiMoN17-11-2	X2CrNiMoN17-12 (AISI 316LN)
	1.4435	X2CrNiMo18-14-3	X2CrNiMo17-13 (AISI 316L)
	1.4438	X2CrNiMo18-15-4	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 (AISI 309)
	1.4841	X15CrNiSi25-20	X16CrNiSi25-20 (AISI 314)
	1.4845	X12CrNi25-21	X6CrNi25-20 (AISI 310S)
2.3	**Ferritico, Ferritico + Austenitico, Martensitico Rm < 1100 N/mm²** **Ferritic, Ferritic + Austenitic and Martensitic – Ferritique, Ferritique + Austénitique, Martensitiques**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
Ferritico Ferritic Ferritique	1.4002	X6CrAl13	X6CrAl13 (AISI 405)
	1.4003	X2CrNi12	-
	1.4016	X6Cr17	X8Cr17 (AISI 430)
	1.4510	X3CrTi17	X6CrTi17 (AISI 430Ti)
	1.4509	X2CrTiNb18	X2CrTiNb18
	1.4512	X2CrTi12	X6CrTi12 (AISI 409)
Ferritico + Austenitico (Bifasico) Austenitic - Ferritic (Duplex) Biphasée austéno-ferritique (Duplex)	1.4462	X2CrNiMoN22-5-3	ASTM: A182 F51
	1.4501	X2CrNiMoCuWN25-7-4	ASTM : A182 F55
Martensitico Martensitic Martensitique	1.4006	X10Cr13	X12Cr13 (AISI 410)
	1.4005	X12CrS13	X12CrS13 (AISI 416)
	1.4021	X20Cr13	X20Cr13 (AISI 420)
	1.4028	X30Cr13	X30Cr13 (AISO 420)
	1.4057	X17CrNi16-2	X16CrNi16 (AISI 431)
	1.4125	X105CrMo17	(AISI 440C)
2.4	**Acciai termostabili, leghe Cr-Ni - Rm < 1400 N/mm²** **High temperatures resistant and Cr-Ni alloy - Aciers résistants aux hautes températures et Cr-Ni alliage**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
Indurente per precipitazione Precipitation hardening Durcissant par précipitation	1.4542	X5CrNiCuNb16-4	AISI 630, 17-4 PH
	1.4545	X5CrNiCu15-5	15-5 PH
	1.4568	X7CrNiAl17-7	17-7 PH
	1.4922	X20CrMoV11-1	X20CrMoV12-1
	1.4939	X12CrNiMoN12	AISI XM-32
	1.4944	X5NiCrTi26-15	AISI 660, A286
	1.4980	X6NiCrTiMoVB25-15-2	A286

K	Ghisa - Cast Iron - Fonte		
3.1	**Ghisa grigia lamellare < 180 HB** **Lamellar grey cast iron – Fonte grise lamellaire**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	0.6010	EN-GJL-100 (GG-10)	G10
	0.6015	EN-GJL-150 (GG-15)	G15
	0.6020	EN-GJL-200 (GG-20)	G20
3.2	**Ghisa grigia lamellare < 250 HB** **Lamellar grey cast iron – Fonte grise lamellaire**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	0.6025	EN-GJL-250 (GG-25)	G25
	0.6030	EN-GJL-300 (GG-30)	G30
	0.6035	EN-GJL-350 (GG-35)	G35
	0.6040	EN-GJL-400 (GG-40)	G40
3.3	**Ghisa sferoidale < 350 HB** **Nodular cast iron - Fonte à graphite sphéroïdale**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	0.7033	EN-GJS-350-22-LT (GGG-35.3)	-
	0.7040	EN-GJS-400-15 (GGG-40)	GS400-12
	0.7050	EN-GJS-500-7 (GGG-50)	GS500-7
	0.7060	EN-GJS-600-3 (GGG-60)	GS600-3
	0.7070	EN-GJS-700-2 (GGG-70)	GS700-2
	0.7080	EN-GJS-800-2 (GGG-80)	GS800-2
	0.7670	EN-GJSA-XNi22 (GGG-Ni22)	-
	0.7683	EN-GJSA-XNi35 (GGG-Ni35)	-
	0.7660	EN-GJSA-XNiCr20-2 (GGG-NiCr20-2)	-
	0.7677	GGG-NiCr30-1	-
	0.7685	EN-GJSA-XNiCr35-3 (GGG-NiCr35-3)	-
3.4	**Ghisa malleabile < 260 HB** **Malleable cast iron - Fonte malléable**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	0.8035	GTW-35-04, EN-GJMW-350-4	-
	0.8045	GTW-45-07, EN-GJMW-450-7	-
	0.8145	GTS-45-06, EN-GJMB-450-6	-
	0.8165	GTS-65-02, EN-GJMB-650-2	-
	0.8170	GTS-70-02, EN-GJMB700-2	-
3.5	**Ghisa austemperata ADI - Rm < 1400 N/mm²** **Austempered Ductile Iron - Fonte ductile trempée**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	5.3400	EN-GJS-800-10	ADI 800
	5.3402	EN-GJS-900-8	ADI 900
	5.3403	EN-GJS-1050-6	ADI 1050
	5.3404	EN-GJS-1200-2	ADI 1200
	5.3405	EN-GJS-1400-1	ADI 1400

N	Alluminio – Aluminium		
4.1	**Alluminio non legato Rm < 250 N/mm²** **Aluminium unalloyed - Aluminium non allié**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
	3.0205, EN AW-1200	Al99	3567, 9001/1
	3.0255, EN AW-1050A	Al99.5	4507, 9001/2
	3.0285, EN AW-1080A	Al99.8	4509 (9001/4)
	3.0305, EN AW-1090	Al99.9	-
	3.3208, EN AW-6401	Al99.9MgSi	-
	3.3308, EN AW-5210	Al99.9Mg0.5	-
	3.3318, EN AW-5505	Al99.9Mg1	-
4.2	**Leghe di Al, Si < 0,5% - truciolo lungo Rm < 500 N/mm²** **Al alloys Si < 0,5% long chipping - Alliage Al, Si < 0,5% copeaux longs**		
	W-Nr.	**DIN - Germany**	**-**
	3.0505, EN AW-3105	AlMn0.5Mg0.5	3105
	3.0915, EN AW-8011A	AlFeSi	8011A
	3.3315, EN AW-5005A	AlMg1	5005A, Peraluman100
	3.3525, EN AW-5251	AlMg2Mn0.3	5251
	3.3527, EN AW-5049	AlMg2Mn0.8	5049
	3.3545, EN AW-5086	AlMg4	5086
	3.3555, EN AW-5056A	AlMg5	5056A
	3.0615, EN AW-6012	AlMgSiPb	6012
	3.1255, EN AW-2014	AlCu4SiMg	2014, 9002/3
	3.1325, EN AW-2017A	AlCu4MgSi(A)	2017A, 9002/2, Avional 100
	3.1355, EN AW-2024	AlCu4Mg1	2024, 9002/4, Avional 150
	3.3547, EN AW-5083	AlMg4.5Mn	5083, 9005/5, Peraluman 460
	3.3206, EN AW-6060	AlMgSi0.5	6060, 9006/1, Anticorodal 050
	3.2315, EN AW-6082	AlMgSi1	6082, 9006/4, Anticorodal 110
	3.4365, EN AW-7075	AlZnMgCu1.5	7075, 9007/2, Ergal 55
Si < 0,5% Leghe da deformazione plastica Al wrought alloys Alliages corroyés d'aluminium			
Si < 0,5% Leghe da getti Aluminium casting alloys Fusion des alliages d'aluminium	3.1371, EN AC-21000	G-AlCu4TiMg	-
	3.3241	G-AlMg3Si	-
	3.3261, EN AC-51400	G-AlMg5Si	-
	3.3541, EN AC-51100	G-AlMg3	-
4.3	**Leghe di Al, Si < 10% - Truciolo medio Rm < 500 N/mm²** **Al alloys, Si < 10% medium chipping - Alliage Al, Si < 10% copeaux moyen**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
Si < 10% Leghe da getti Aluminium casting alloys Fusion des alliages d'aluminium	3.2134, EN AB 45300	G-AlSi5Cu1Mg	3600
	3.2161, EN AB 46000	G-AlSi8Cu3	5075
	3.2162	GD-AlSi8Cu3	-
	3.2371, EN AC-42100	G-AlSi7Mg	7257
	3.2373, EN AC-43300	G-AlSi9Mg	3051
4.4	**Leghe Al, Si > 10% - Truciolo corto Rm < 600 N/mm²** **Al alloys, Si > 10% short chipping - Alliage Al, Si > 10% copeaux courts**		
	W-Nr.	**DIN - Germany**	**UNI - Italy**
Si > 10% Leghe da getti Aluminium casting alloys Fusion des alliages d'aluminium	3.2381, EN AC-43000	G-AlSi10Mg	3051
	3.2383, EN AC-43200	G-AlSi10MgCu	-
	3.2581, EN AC-44200	G-AlSi12	4514
	3.2583, EN AC-47000	G-AlSi12(Cu)	5079

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

N — Magnesio - Magnesium - Magnésium

4.5 — Leghe di magnesio Rm < 500 N/mm² / Magnesium alloys - Alliages de magnésium

W-Nr.	DIN - Germany	-
3.5200	MgMn2	ISO-WD43150
3.5312	MgAl3Zn	AZ31
3.5632	G-MgAl6Zn3	EN-MC21150, AZ63
3.5812	G-MgAl8Zn1	EN-MC21110, AZ81 hp
3.5912	GD-MgAl9Zn1	EN-MC21120, AZ91 hp
3.5161	MgZn6Zr F29	ZK40
3.5612	MgAl6Zn	AZ61

N — Rame - Copper - Cuivre

5.1 — Rame puro, rame elettrolitico - Truciolo lungo Rm < 350 N/mm² / Copper unalloyed - Long chipping – Cuivre pur / électrolytique - Copeaux longs

W-Nr.	DIN - Germany	-
2.0040	OF-Cu	CW008A
2.0060	E-Cu57	CW004A
2.0065	Cu-ETP	CW005A
2.0070	Cu-HPC	CW021A
2.0076	Cu-DLP	CW023A
2.0090	Cu-DHP	CW024A

5.2 — Leghe di rame, ottone - Truciolo lungo Rm < 700 N/mm² / Copper alloys, soft brass - Long chipping – Alliages de cuivre, laiton - Copeaux longs

	W-Nr.	DIN - Germany	UNI - Italy
Ottone / Brass / Laiton	2.0240	CuZn15, Ms85	CW502L
	2.0250	CuZn20, Ms80	CW503L
	2.0265	CuZn30, Ms70	CW505L
	2.0280	CuZn33, Ms67	CW506L
	2.0321	CuZn37, Ms63	CW508L
	2.0335	CuZn36, Ms64	CW507L
Bronzo / Bronze	2.1016	CuSn4	CW450K
	2.1020	CuSn6	CW452K
	2.1030	CuSn8	CW453K
	2.1080	CuSn6Zn6	-

5.3 — Leghe di rame, ottone, bronzo - Truciolo corto Rm < 700 N/mm² / Copper alloys, brass, bronze - Short chipping – Alliages de cuivre, laiton - Coupeaux courts

	W-Nr.	DIN - Germany	UNI - Italy
Ottone / Brass / Laiton	2.0360	CuZn40 (Ms60)	CW509L
	2.0401	CuZn39Pb2 (Ms58)	CW614N
	2.0410	CuZn43Pb2 (Ms56)	CW623N
	2.0510	CuZn38Mn1Al	CW716R
	2.0550	CuZn37Mn3Al2PbSi	CW713R
	2.0561	CuZn39Mn1AlPbSi	CW718R
	2.0580	CuZn40Mn1Pb1	CW720R
Leghe di zinco / Zinc Alloys	2.2140	G-ZnAl4, ZP3	ZAMAK 3
Bronzo / Bronze	2.1086	G-CuSn10	-
	2.1093	CuSn7Zn2Pb3-C	CC492K
	2.1096	CuSn5Zn5Pb5-C	CC491K

Continua Bronzo / Continue Bronze / Bronze à suivre >

5.4 — Bronzo ad alta resistenza Rm < 1500 N/mm² / High strength bronze - Bronze haute résistance

W-Nr.	DIN - Germany	-
2.0932	CuAl8Fe3	Ampco12, CW303G
2.0936	CuAl10Fe3Mn2	Ampco16, Ampco 15, CW306G
2.0940	CuAl10Fe	CB331G
2.0966	CuAl10Ni5Fe4	CW307G
2.0978	CuAl11Fe6Ni6	CW308G
-	CuAl11Fe4	UNI 5274
2.0882	CuNi30MnFe	CW354H

S — Titanio - Titanium - Titane

6.1 — Titanio puro non legato Rm < 700 N/mm² / Pure titanium unalloyed - Titane pur non allié

W-Nr.	DIN - Germany	-
3.7025	Ti 99.8	Ti-Grade 1
3.7035	Ti 99.7	Ti-Grade 2
3.7055	Ti 99.6	Ti-Grade 3
3.7065	Ti 99.5	Ti-Grade 4

6.2 — Leghe di titanio Rm < 900 N/mm² / Titanium alloys - Alliage de titane

6.3 — Leghe di titanio Rm < 1400 N/mm² / Titanium alloys - Alliage de titane

W-Nr.	DIN - Germany	-
3.7124	TiCu2	T-U2
3.7154	TiAl6Zr5	T-A6ZD
3.7164, 3.7165	TiAl6V4	Titan Grade 5
3.7174	TiAl6V6Sn2	-
3.7184	TiAl4Mo4Sn2	-

S — Nichel - Nickel

7.1 — Nichel non legato Rm < 500 N/mm² / Pure nickel - Nickel pure

W-Nr.	DIN - Germany	-
1.3911	Rni 24	
1.3912	Ni 36	Invar 36
1.3926	Rni 12	
1.3927	Rni 8	
2.4060	Ni 99,6	Nickel 200, N02200
2.4061	LC-Ni 99,6	Nickel 201, N02201
2.4066	Ni 99,6	Nickel 200, N02200
2.4068	LC-Ni99,6	Nickel 201, N02201

7.2 — Leghe di Nichel Rm < 900 N/mm² / Nickel alloys - Alliages de nickel

7.3 — Leghe di Nichel Rm < 1600 N/mm² / Nickel alloys - Alliages de nickel

W-Nr.	DIN - Germany	Denom. comm. / Trade name
2.4360	NiCu30Fe	Monel 400
2.4375	NiCu30Al	Monel K500

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

S	7.2 – 7.3		
	W-Nr.	**DIN - Germany**	**Denom. comm. / Trade name**
	2.4602	NiCr21Mo14W	Hastelloy C-22, Alloy 22
	2.4630	NiCr20Ti	Nimonic 75, Alloy 75
	2.4631	NiCr20TiAl	Nimonic 80A, Alloy 80A
	2.4634	NiCo20Cr15MoAlTi	Nimonic 105
	2.4636	NiCo15Cr15MoAlTi	Udimet 700
	2.4654	NiCr20Co13Mo4Ti3AL	Waspaloy
	2.4662	NiCr13Mo6Ti3	Nimonic 901
	2.4665	NiCr22Fe18Mo	Hastelloy X, Inconel HX
	2.4668	NiCr19Nb5Mo3	Inconel 718, Alloy 718
	2.4670	G-NiCr13Al6MoNb	Nimocast 713
	2.4674	NiCo15Cr10MoAlTi	Nimocast PK24
	2.4816	NiCr15Fe8	Inconel 600, Alloy 600
	2.4856	NiCr22Mo9Nb	Inconel 625, alloy 625
N	**Materie plastiche - Synthetic materials - Matériaux synthétiques**		
8.1	**Materiali termoplastici - truciolo lungo Rm < 80 N/mm²** **Thermoplastics, long chipping - Thermoplastiques, copeaux longue**		
ABS	Acrylonitrile Butadiene Styrene	Lustran, Novodur, Polyman, Ronfalin, Terluran	
PE	Polyethylene	Lupolen	
PP	Polypropylene	Hostalen PP	
PVC	Polyvinyl chloride	Hostalit, Vestolit, Vinoflex	
PS	Polystyrene	PS (Polystyrol) - Hostyron, Trolitul, Vestyron	
PMMA	Polymethyle acryle	Plexiglas	
PTFE	Polytetrafluorethylene	Teflon, Hostaflon	
PA	Polyamide	Nylon, Ultramid, Capron, Technyl	
PC	Polycarbonate	Lexan, Makralon	
PI	Thermoplastic polyamide	Kinel, Kapton, Vespel	
POM	Polyoxymethylen, polyacetal	Tenac, Delrin, Hostaform	
8.2	**Materiali termoindurenti - truciolo corto Rm < 110 N/mm²** **Duroplastic, short chipping - Matières thermodurcissables, copeaux courts**		
PF	Phenol formaldehyde	Bakelit, Pertinax	
MF	Melamine formaldehyde	Albanit, Duropal, Formica	
UF	Urea formaldehyde	Kaurit, Pollopas, Resamin, Resopal, Urecoll	
8.3	**Materie plastiche con fibre di rinforzo Rm < 1500 N/mm²** **Reinforced plastic materials - Matiéres synthétiques renforcés par fibres**		
AFK	Aramid Kevlar Fiber		
BFK	Boron Fibre reinforced plastics		
CFK	Carbon-fiber reinforced plastics		
GFK	Glass fibre reinforced, fiberglass		

QUESTIONARIO TECNICO

Maschiatura ad asportazione e rullatura

Compilatore: Data:

Prot:

❑ Campionatura / Quantità:_ _ _ _ _ ❑ Ordine / Quantità:_ _ _ _ _ _ _ _ ❑ Reclamo

Cliente: Tel: Fax:

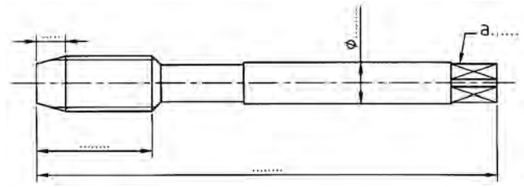
Persona di rif: e-mail:

1. Filettatura

Ø x Passo

Toll. Norma:

Descrizione



2. Particolare da lavorare:

Materiale: Sigla:

resistenza N/mm² Durezza: ❑ HB ❑ HRC

Caratteristiche particolari del materiale:

Truciolo: ❑ corto ❑ medio ❑ lungo

Ø preforo

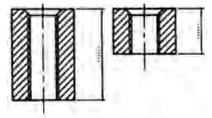
ottenuto per…

❑ Foratura ❑ Prefuso

❑ Prestampato ❑ Tornitura

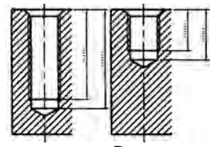
Alesatura: SI NO

Foro passante



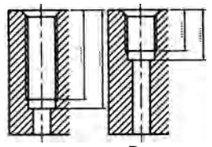
….x D

Foro cieco



….x D

Foro cieco/passante



….x D

3. Macchina marca e tipo:

❑ Verticale ❑ *Obliqua*

❑ Orizzontale ❑ *Altro*

Avanzamento ❑ Patrona ❑ Manuale ❑ Idraulico ❑ Meccanico

❑ CNC Andata Ritorno

%Prog. avanzamento assiale

Parametri di taglio Andata Ritorno

Vc (m/min)

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:

UFS srl via Giotto 20, 10080 Sparone (TO) Italy • ufssrl@ufs.it - Tel 0039-0124-818001 - Fax 0039-0124-818003

TECHNICAL FORM

Thread cutting and thread forming

Writer: | Date:

N° Prot:

❑ Sampling / Quantity:_ _ _ _ _ ❑ Order / Quantity:_ _ _ _ _ _ _ _ ❑ Complaint

Customer: | Phone: | Fax:

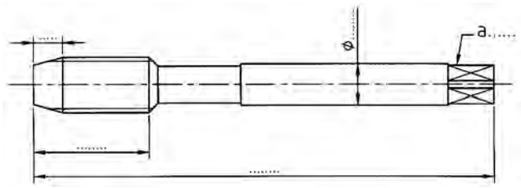
Reference person: | e-mail:

1. Thread size

Ø x Pitch

Tolerance | Norm:

Description tap



2. Work-Piece:

Material: | Code:

Tensile strength N/mm² | Hardness: ❑ HB ❑ HRC

Chip type: ❑ short ❑ medium ❑ lOng

Particular characteristic of material:

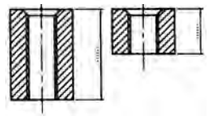
Ø Core hole

Obtained from…

❑ Drilling ❑ Prefuse
❑ Molding ❑ Turning

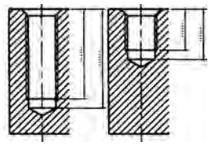
Boring: YES NOT

Through hole



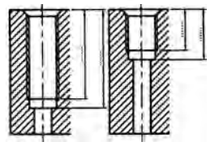
….x D

Blind hole



….x D

Blind/through hole



….x D

3. Machine brand and type:

❑ Vertical ❑ *Obliquely*
❑ Horizontal ❑ *Other*

Feed ❑ Leadscrew ❑ Manual ❑ Hydraulic ❑ Mechanic

❑ CNC Advance Reverse

%Prog. axial feed

Cutting speed

Vc (m/min) Advance Reverse

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 (MMS) ❑ To dry

5. Problems:

6. Competitor's characteristics:

Surface treatment: Tool's life:

UFS srl via Giotto 20, 10080 Sparone (TO) Italy • ufssrl@ufs.it - Tel 0039-0124-818001 - Fax 0039-0124-818003

QUESTIONNAIRE TECHNIQUE

Taraudage normal ou par déformation

Compilateur : | Date:

Protocole:

❑ Échantillonnage/quantité:_ _ _ _ _ ❑ Commande/ Quantité: _ _ _ _ _ _ _ _ _ _ _ _ ❑ Reclamation

Client: | Tel: | Fax:

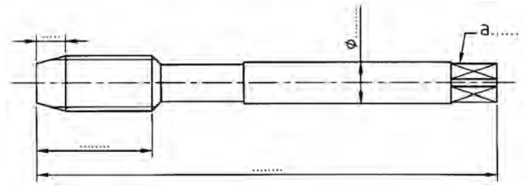
référence client: | e-mail:

1. Filetage

Ø x Pass

Tolérance | Norme:

Description



2. Pièce à usiner:

Matériau: | Norme:

Résistance N/mm² | Dureté: ❑ HB ❑ HRC

Copeau: ❑ court ❑ moyen ❑ long

Particularités de la matière:

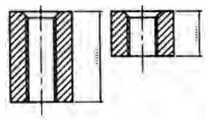
Ø preforo

obtenue par…

❑ Perçage ❑ Fusion
❑ Moulage ❑ Tournage

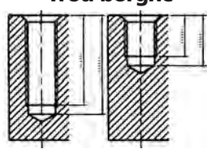
Alésage: OUI NON

Trou débouchant



….x D

Trou borgne



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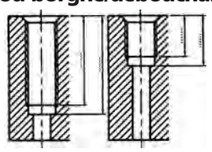
Trou borgne/débouchant



….x D

3. Machine marque et type:

❑ Vertical ❑ *Oblique*
❑ Horizontal ❑ *Autres*

Avance ❑ Patronne ❑ Manuelle ❑ Hydraulique ❑ Mécanique

❑ CNC Aller Retour

% Prog. avance axiale

Paramètres de coupe

Vc (m/min) Aller Retour

N ° tours (1/min)

3.1. Broche (marque):

Type de Mandrin _ _ _ _ ❑ lubrification axiale

Taraudage rigide :

❑ Par pinces ❑ Bridage -Fixation
❑ Micro-compensation ❑ Weldon
❑ Autres:

Taraudage compensé :

❑ Compensation axiale en compression et en extension
❑ Seulement en extension
❑ Autres:

4. Lubrifiant:

❑ Émulsion % _ _ _ _ _ _ _ ❑ Huile Entiere ❑ Lubrification Minimale (MMS) ❑ Air

5. Problématique :

6. Données de la concurrence:

Revêtement : Resa:

UFS srl via Giotto 20, 10080 Sparone (TO) Italy • ufssrl@ufs.it - Tel 0039-0124-818001 - Fax 0039-0124-818003

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-traçabilité 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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Le informazioni e le caratteristiche tecniche possono essere soggette a variazioni senza preavviso.
I dati tecnici ivi contenuti sono da considerarsi salvo errori e/o omissioni.
Immagini e testi possono quindi subire variazioni rispetto a quanto riportato sul presente catalogo.
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It is advisable to consult the website as main reference for the updating of data.

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.
Images et textes peuvent alors varier de celles indiquées sur le présent catalogue.
UFS srl rendra compte des changements via le site web www.ufs.it, qui est la principale référence de mise à jour des données.

M		
CODE	Pag. cat.	Series
00M…	46	LINE
00M…LH	46	LINE
00M…X-VS	47	LINE
03M…	46	LINE
03M…LH	46	LINE
03M…X-VS	47	LINE
10FCM…	48	LINE
10FPM…	48	LINE
E20M..LH-SP	52	LINE
E20M…	50	LINE
E20M…AZ	53	LINE
E20M…AZ-SP	53	LINE
E20M…AZ-SP-V	53	LINE
E20M…AZ-V	53	LINE
E20M…LH	52	LINE
E20M…-OT	49	LINE
E20M…SP	50	LINE
E20M…SP-T	50	LINE
E20M…T	50	LINE
E21M…	51	LINE
E21M…AZ	53	LINE
E21M…AZ-V	53	LINE
E21M…LH	52	LINE
E21M…SP	51	LINE
E21M…SP-T	51	LINE
E21M…T	51	LINE
E24M…	60	LINE
E24M…+0,1	64	LINE
E24M…4H	63	LINE
E24M…-6G	63	LINE
E24M…-7G	64	LINE
E24M…AL	66	LINE
E24M…AL-TXC	66	TOP
E24M…AZ	67	LINE
E24M…AZ-TXC	67	TOP
E24M…LH	62	LINE
E24M…LH-T	62	LINE
E24M…LH-V	62	LINE
E24M…T	60	LINE
E24M…T+0,1	64	LINE
E24M…T-4H	63	LINE
E24M…T-6G	63	LINE
E24M…T-7G	64	LINE
E24M…V	60	LINE
E24M…XP	60	LINE

M		
CODE	Pag. cat.	Series
E25M…	61	LINE
E25M…+0,1	64	LINE
E25M…4H	63	LINE
E25M…-6G	63	LINE
E25M…-7G	64	LINE
E25M…AL	66	LINE
E25M…AL-TXC	66	TOP
E25M…AZ	67	LINE
E25M…AZ-TXC	67	TOP
E25M…LH	62	LINE
E25M…LH-T	62	LINE
E25M…LH-V	62	LINE
E25M…T	61	LINE
E25M…T+0,1	64	LINE
E25M…T-4H	63	LINE
E25M…T-6G	63	LINE
E25M…T-7G	64	LINE
E25M…V	61	LINE
E25M…XP	61	LINE
E26M…CT	54	LINE
E26M…FOR-CT	54	LINE
E26M…NQ	54	LINE
E26M…SP-CT	54	LINE
E26M…SP-NQ	54	LINE
E27M…CT	54	LINE
E27M…FOR-CT	54	LINE
E27M…NQ	54	LINE
E27M…SP-CT	54	LINE
E27M…SP-NQ	54	LINE
E40M…	76	LINE
E40M…+0,1	78	LINE
E40M…-6G	78	LINE
E40M…AZ	79	LINE
E40M…FOR-T	76	LINE
E40M…T	76	LINE
E40M…T+0,1	78	LINE
E40M…T-6G	78	LINE
E40M…V	76	LINE

M		
CODE	Pag. cat.	Series
E41M…	77	LINE
E41M…+0,1	78	LINE
E41M…AZ	79	LINE
E41M…FOR-T	77	LINE
E41M…SP	77	LINE
E41M…SP-T	77	LINE
E41M…SP-V	77	LINE
E41M…T	77	LINE
E41M…T+0,1	78	LINE
E41M…V	77	LINE
E60M…	84	LINE
E60M…+0,1	88	LINE
E60M…-4H	87	LINE
E60M…-6G	87	LINE
E60M…-7G	88	LINE
E60M…LH	86	LINE
E60M…LH-V	86	LINE
E60M…LH-XP	86	LINE
E60M…T	84	LINE
E60M…V	84	LINE
E60M…XP	84	LINE
E60M…XP+0,1	88	LINE
E60M…XP-4H	87	LINE
E60M…XP-6G	87	LINE
E60M…XP-7G	88	LINE
E61M…	85	LINE
E61M…+0,1	88	LINE
E61M…-4H	87	LINE
E61M…-6G	87	LINE
E61M…-7G	88	LINE
E61M…LH	86	LINE
E61M…LH-V	86	LINE
E61M…LH-XP	86	LINE
E61M…T	85	LINE
E61M…V	85	LINE
E61M…XP	85	LINE
E61M…XP+0,1	88	LINE
E61M…XP-4H	87	LINE
E61M…XP-6G	87	LINE
E61M…XP-7G	88	LINE
E70M…	90	LINE
E70M…TXC	90	TOP
E71M…	90	LINE
E71M…TXC	90	TOP

M		
CODE	Pag. cat.	Series
E92M…	92	LINE
E92M…TG	92	*S-PLUS*
E92M…V	92	LINE
E92M…VS	98	LINE
E93M…	92	LINE
E93M…TG	92	*S-PLUS*
E93M…V	92	LINE
E93M…VS	98	LINE
E94EM…FOR-TXC	94	LINE
E94EM…TXC	94	LINE
E94M…FOR-TXC	93	LINE
E94M…TXC	93	LINE
E95EM…FOR-TXC	94	LINE
E95EM…TXC	94	LINE
E95M…FOR-TXC	93	LINE
E95M…TXC	93	LINE
K20M…TXC	59	TOP
K21M…TXC	59	TOP
K22M…FOR-TXC	58	TOP
K23M…FOR-TXC	58	TOP
K24M…FORY-XP	69	TOP
K24M…X-TXC	72	TOP
K24M…TXC	71	TOP
K24M…XP	69	TOP
K25M…FORY-XP	69	TOP
K25M…TXC	71	TOP
K25M…XP	69	TOP
K26EM…AHI	56	TOP
K26EM…FOR-AHI	56	TOP
K26EM…FORY-AHI	56	TOP
K26M…FOR-TX	55	TOP
K26M…FORY-TX	55	TOP
K26M…SP-TX	55	TOP
K26M…TX	55	TOP
K27EM…AHI	56	TOP
K27EM…FOR-AHI	56	TOP
K27EM…FORY-AHI	56	TOP
K27M…FOR-TX	55	TOP
K27M…FORY-TX	55	TOP
K27M…TX	55	TOP

M		
CODE	Pag. cat.	Series
K2CCEM…AHI	104	K-ROLL
K2CCEM…TG	104	K-ROLL
K2CCM…AHI	102	K-ROLL
K2CCM…FOR-AHI	103	K-ROLL
K2CCM…FOR-TG	103	K-ROLL
K2CCM…FORY-TG	103	K-ROLL
K2CCM…TG	102	K-ROLL
K3CCEM…FOR-TG	104	K-ROLL
K3CCM…TG	102	K-ROLL
K40M…FOR-TXC	81	TOP
K40M…FOR-XP	80	TOP
K40M…TXC	81	TOP
K40M…XP	80	TOP
K41M…FOR-TXC	81	TOP
K41M…FOR-XP	80	TOP
K41M…TXC	81	TOP
K41M…XP	80	TOP
K42M…CT	82	TOP
K42M…NI-CT	83	TOP
K42M…V	82	TOP
K42MJ…CT	82	TOP
K42MJ…NI-CT	83	TOP
K43M…CT	82	TOP
K43M…V	82	TOP
K44M…FOR-XP	80	TOP
K45M…FOR-XP	80	TOP
K52M…CT	74	TOP
K52M…NI-CT	75	TOP
K52MJ…CT	74	TOP
K52MJ…NI-CT	75	TOP
K53M…CT	74	TOP
K80M…FOR-TXC	97	TOP
K80M…TXC	97	TOP
K81M…FOR-TXC	97	TOP
K81M…TXC	97	TOP
K82M…FOR-XP	95	TOP
K82M…XP	95	TOP
K82M…X-TXC	98	TOP
K83M…FOR-XP	95	TOP
K83M…XP	95	TOP
K83M…X-TXC	98	TOP

M		
CODE	Pag. cat.	Series
L24M…	65	LINE
L24M…CT	65	LINE
L25M…	65	LINE
L25M…CT	65	LINE
L60M…	89	LINE
L60M…CT	89	LINE
L61M…	89	LINE
L61M…CT	89	LINE
LANCIAM…	49	LINE
P24M…	68	*PLUS*
P24M…TG	68	*S-PLUS*
P24M…V	68	*PLUS*
P25M…	68	*PLUS*
P25M…TG	68	*S-PLUS*
P25M…V	68	*PLUS*
P2CCM…AHI	101	P-ROLL
P2CCM…LH-T	101	P-ROLL
P2CCM…T	101	P-ROLL
P2SCM…T	100	P-ROLL
P3CCM…T	101	P-ROLL
P3SCM…T	100	P-ROLL
P60M…	91	*PLUS*
P60M…V	91	*PLUS*
P60M…XP	91	*PLUS*
P61M…	91	*PLUS*
P61M…V	91	*PLUS*
P61M…XP	91	*PLUS*
P-NPM…	105	GO/NO-GO
S20M…FOR-TXC	57	TOP
S20M…SP-TXC	57	TOP
S20M…TXC	57	TOP
S24M…TXC	70	TOP
S80M…FOR-TXC	96	TOP
S80M…TXC	96	TOP
V24M…TXC	72	TOP
V24M…VS	72	LINE
V25M…TXC	72	TOP
V25M…VS	72	LINE
V82M…FOR-TXC	98	TOP
V82M…TXC	98	TOP
V83M…FOR-TXC	98	TOP
V83M…TXC	98	TOP
XT20M…AHI	59	TOP

MF		
CODE	Pag. cat.	Series
00MF…	108	LINE
03MF…	108	LINE
E20MF…	109	LINE
E20MF…SP	109	LINE
E21MF…	110,111,112	LINE
E21MF…LH	113	LINE
E21MF…LH-SP	113	LINE
E21MF…SP	110	LINE
E24MF…	120	LINE
E24MF…T	120	LINE
E24MF…V	120	LINE
E24MF…XP	120	LINE
E25MF…	121,122	LINE
E25MF…+0,1	124	LINE
E25MF…4H	124	LINE
E25MF…-6G	124	LINE
E25MF…-7G	124	LINE
E25MF…AL	125	LINE
E25MF…LH	123	LINE
E25MF…LH-T	123	LINE
E25MF…T	121,122	LINE
E25MF…V	121,122	LINE
E25MF…XP	121,122	LINE
E27MF…CT	114	LINE
E27MF…FOR-CT	114	LINE
E27MF…NQ	114	LINE
E27MF…SP-CT	114	LINE
E27MF…SP-NQ	114	LINE
E41MF…	132,133	LINE
E41MF…FOR-T	132,133	LINE
E41MF…SP	132,133	LINE
E41MF…SP-T	132,133	LINE
E41MF…SP-V	132,133	LINE
E41MF…T	132,133	LINE
E41MF…V	132,133	LINE
E60MF…	138	LINE
E60MF…T	138	LINE
E60MF…V	138	LINE
E60MF…XP	138	LINE
E61MF…	139,140,141	LINE
E61MF…+0,1	143	LINE
E61MF…-6G	143	LINE
E61MF…LH	142	LINE
E61MF…LH-V	142	LINE
E61MF…LH-XP	142	LINE

MF		
CODE	Pag. cat.	Series
E61MF…T	139,140,141	LINE
E61MF…V	139,140,141	LINE
E61MF…XP	139,140,141	LINE
E61MF…XP+0,1	143	LINE
E61MF…XP-6G	143	LINE
E71MF…	144	LINE
E71MF…SP	144	LINE
E93MF…	145	LINE
E93MF…TG	145	*S-PLUS*
E93MF…V	145	LINE
E93MF…VS	149	LINE
K21MF…TXC	119	TOP
K22MF…FOR-TXC	118	TOP
K23MF…FOR-TXC	118	TOP
K25MF..X-TXC	129	TOP
K25MF..FORY-XP	126	TOP
K25MF…TXC	128	TOP
K25MF…XP	126	TOP
K27EMF…AHI	116	TOP
K27EMF…FOR-AHI	116	TOP
K27EMF…FORY-AHI	116	TOP
K27MF…FOR-TX	115	TOP
K27MF…FORY-TX	115	TOP
K27MF…TX	115	TOP
K2CCEMF…TG	153	K-ROLL
K2CCMF…AHI	151	K-ROLL
K2CCMF…FOR-AHI	152	K-ROLL
K2CCMF…FOR-TG	152	K-ROLL
K2CCMF…FORY-TG	152	K-ROLL
K2CCMF…TG	151	K-ROLL
K3CCEMF…FOR-TG	153	K-ROLL
K3CCMF…TG	151	K-ROLL
K41MF…FOR-XP	134	TOP
K41MF…XP	134	TOP
K42MF…CT	136	TOP
K42MF…NI-CT	137	TOP
K42MJF…CT	136	TOP
K42MJF…NI-CT	137	TOP
K43MF…CT	136	TOP
K45MF…FOR-XP	134	TOP
K52MF…CT	130	TOP
K52MF…NI-CT	131	TOP
K52MJF…CT	130	TOP
K52MJF…NI-CT	131	TOP
K53MF…CT	130	TOP

MF		
CODE	Pag. cat.	Series
K81MF…FOR-TXC	148	TOP
K81MF…TXC	148	TOP
K83MF…FOR-XP	146	TOP
K83MF…XP	146	TOP
P25MF…TG	126	*S-PLUS*
P2CCMF…LH-T	150	P-ROLL
P2CCMF…T	150	P-ROLL
P3CCMF…T	150	P-ROLL
P-NPMF…	154-155	GO/NO-GO
S20MF…FOR-TXC	117	TOP
S20MF…TXC	117	TOP
S24MF…TXC	127	TOP
S80MF…FOR-TXC	147	TOP
S80MF…TXC	147	TOP
V25MF…TXC	129	TOP
V25MF…VS	129	LINE
V83MF…FOR-TXC	149	TOP
V83MF…TXC	149	TOP

UNC

CODE	Pag. cat.	Series
00UNC...	160	LINE
03UNC...	160	LINE
E20UNC...	161	LINE
E21UNC...	161	LINE
E21UNC...SP	161	LINE
E24UNC...	163	LINE
E24UNC...T	163	LINE
E24UNC...V	163	LINE
E25UNC...	163	LINE
E25UNC...T	163	LINE
E25UNC...V	163	LINE
E26UNC...CT	162	LINE
E26UNC...FOR-CT	162	LINE
E26UNC...SP-CT	162	LINE
E27UNC...CT	162	LINE
E27UNC...FOR-CT	162	LINE
E27UNC...SP-CT	162	LINE
E40UNC...	167	LINE
E40UNC...T	167	LINE
E41UNC...	167	LINE
E41UNC...SP	167	LINE
E41UNC...SP-T	167	LINE
E41UNC...T	167	LINE
E60UNC...	169	LINE
E60UNC...T	169	LINE
E60UNC...V	169	LINE
E60UNC...XP	169	LINE
E61UNC...	169	LINE
E61UNC...T	169	LINE
E61UNC...V	169	LINE
E61UNC...XP	169	LINE
E92UNC...	170	LINE
E92UNC...TG	170	*S-PLUS*
E92UNC...V	170	LINE
E93UNC...	170	LINE
E93UNC...TG	170	*S-PLUS*
E93UNC...V	170	LINE
K24UNC...FORY-XP	164	TOP
K24UNC...XP	164	TOP
K25UNC...FORY-XP	164	TOP
K25UNC...XP	164	TOP
K2CCUNC...FORY-TG	173	K-ROLL
K2CCUNC...TG	173	K-ROLL
K42UNC...CT	168	TOP
K42UNJC...CT	168	TOP
K43UNC...CT	168	TOP

UNC

CODE	Pag. cat.	Series
K52UNC...CT	166	TOP
K52UNJC...CT	166	TOP
K53UNC...CT	166	TOP
K82UNC...FOR-XP	171	TOP
K82UNC...XP	171	TOP
K83UNC...FOR-XP	171	TOP
K83UNC...XP	171	TOP
P24UNC...TG	164	*S-PLUS*
P25UNC...TG	164	*S-PLUS*
P2CCUNC...T	173	P-ROLL
P-NPUNC...	174	GO/NO-GO
V24UNC...TXC	165	TOP
V25UNC...TXC	165	TOP
V82UNC...FOR-TXC	172	TOP
V82UNC...TXC	172	TOP
V83UNC...FOR-TXC	172	TOP
V83UNC...TXC	172	TOP

UNF

CODE	Pag. cat.	Series
00UNF...	178	LINE
03UNF...	178	LINE
E20UNF...	179	LINE
E21UNF...	179	LINE
E21UNF...SP	179	LINE
E24UNF...	181	LINE
E24UNF...T	181	LINE
E24UNF...V	181	LINE
E25UNF...	181	LINE
E25UNF...T	181	LINE
E25UNF...V	181	LINE
E26UNF...CT	180	LINE
E26UNF...FOR-CT	180	LINE
E27UNF...CT	180	LINE
E27UNF...FOR-CT	180	LINE
E27UNF...SP-CT	180	LINE
E40UNF...	185	LINE
E40UNF...T	185	LINE
E41UNF...	185	LINE
E41UNF...SP	185	LINE
E41UNF...SP-T	185	LINE
E41UNF...T	185	LINE
E60UNF...	187	LINE
E60UNF...T	187	LINE
E60UNF...V	187	LINE
E60UNF...XP	187	LINE

UNF

CODE	Pag. cat.	Series
E61UNF...	187	LINE
E61UNF...T	187	LINE
E61UNF...V	187	LINE
E61UNF...XP	187	LINE
E92UNF...	188	LINE
E92UNF...TG	188	*S-PLUS*
E92UNF...V	188	LINE
E93UNF...	188	LINE
E93UNF...TG	188	*S-PLUS*
E93UNF...V	188	LINE
K24UNF...FORY-XP	182	TOP
K24UNF...XP	182	TOP
K25UNF...FORY-XP	182	TOP
K25UNF...XP	182	TOP
K2CCUNF...FORY-TG	191	K-ROLL
K2CCUNF...TG	191	K-ROLL
K42UNF...CT	186	TOP
K42UNJF...CT	186	TOP
K43UNF...CT	186	TOP
K52UNF...CT	184	TOP
K52UNJF...CT	184	TOP
K53UNF...CT	184	TOP
K82UNF...FOR-XP	189	TOP
K82UNF...XP	189	TOP
K83UNF...FOR-XP	189	TOP
K83UNF...XP	189	TOP
P24UNF...TG	182	*S-PLUS*
P25UNF...TG	182	*S-PLUS*
P2CCUNF...T	191	P-ROLL
P-NPUNF...	192	GO/NO-GO
V24UNF...TXC	183	TOP
V25UNF...TXC	183	TOP
V82UNF...FOR-TXC	190	TOP
V82UNF...TXC	190	TOP
V83UNF...FOR-TXC	190	TOP
V83UNF...TXC	190	TOP

UNEF

CODE	Pag. cat.	Series
E21UNEF...	196	LINE
E21UNEF...SP	196	LINE
E25UNEF...	197	LINE
E61UNFE...	198	LINE
P-NPUNEF...	192	GO/NO-GO

UNS

CODE	Pag. cat.	Series
E20-24UNS...	200	LINE
E20-36UNS..	200	LINE
E20-40UNS...	200	LINE
E20-48UNS...	200	LINE
E21-14UNS...	200	LINE
E21-24UNS...	200	LINE
E21-40UNS...SP	200	LINE

8UN

CODE	Pag. cat.	Series
E21-8UN	201	LINE
E81-8UN	201	LINE
E81-8UN...XP	201	LINE

12UN

CODE	Pag. cat.	Series
E21-12UN	201	LINE
E81-12UN	201	LINE
E81-12UN...XP	201	LINE

GAS

CODE	Pag. cat.	Series
00G...	204	LINE
03G...	204	LINE
E21G...	205	LINE
E21G...T	205	LINE
E25G...	207	LINE
E25G...T	207	LINE
E25G...V	207	LINE
E27G...CT	206	LINE
E27G...NQ	206	LINE
E41G...	211	LINE
E41G...+0,05	211	LINE
E41G...T	211	LINE
E41G...V	211	LINE
E61G...	212	LINE
E61G...T	212	LINE
E61G...V	212	LINE
E61G...XP	212	LINE

GAS

CODE	Pag. cat.	Series
E93EG...XP	213	LINE
E93G...	213	LINE
E93G...TG	213	*S-PLUS*
E93G...V	213	LINE
K25G...XP	208	TOP
K27G...FOR-TX	206	TOP
K27G...TX	206	TOP
K2CCG...FOR-TG	217	K-ROLL
K2CCG...TG	217	K-ROLL
K83G...FOR-XP	214	TOP
K83G...XP	214	TOP
P25G...TG	208	*S-PLUS*
P2CCG...T	217	P-ROLL
P-NPG...	218	GO/NO-GO
S24G...TXC	209	TOP
S80G...FOR-TXC	215	TOP
S80G...TXC	215	TOP
V25G...TXC	210	TOP
V83G...FOR-TXC	216	TOP
V83G...TXC	216	TOP

RP

CODE	Pag. cat.	Series
E21RP...	219	LINE
E21RP...T	219	LINE
E61RP...T	219	LINE

NPSM

CODE	Pag. cat.	Series
E21NPSM...	220	LINE
E21NPSM...T	220	LINE
E61NPSM...	220	LINE
E61NPSM...T	220	LINE

NPSF

CODE	Pag. cat.	Series
E21NPSF...	221	LINE
E21NPSF...T	221	LINE
E61NPSF...	221	LINE
E61NPSF...T	221	LINE

RC

CODE	Pag. cat.	Series
E21CRC...	224	LINE
E21LRC...	224	LINE
E21LRC...TXC	224	LINE
E41CRC...V	224	LINE
P-NPRC...	225	GO/NO-GO

NPT

CODE	Pag. cat.	Series
E21CNPT...	226	LINE
E21CNPT...AZ	227	LINE
E21LNPT...	226	LINE
E21LNPT...AZ	227	LINE
E21LNPT...TXC	226	LINE
E41CNPT...V	226	LINE
P-NPNPT...	229	GO/NO-GO

NPTF

CODE	Pag. cat.	Series
E21CNPF...	228	LINE
E21LNPF...	228	LINE
E21LNPF...TXC	228	LINE
E41CNPF...V	228	LINE
P-NPNPTF...	229	GO/NO-GO

BSW

CODE	Pag. cat.	Series
00W...	232	LINE
03W...	232	LINE
E24W...	233	LINE
E24W...T	233	LINE
E25W...	233	LINE
E25W...T	233	LINE
E60W...	234	LINE
E60W...T	234	LINE
E61W...	234	LINE
E61W...T	234	LINE

PG

CODE	Pag. cat.	Series
E21PG...	235	LINE
E21PG...T	235	LINE

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CODE	Pag. cat.	Series
E21TPN...	236	LINE
E21TPN...LH	236	LINE
E21TPN...LH-V	236	LINE
E21TPN...V	236	LINE
E51TPN...	237	LINE
E51TPN...LH	237	LINE

Rd

CODE	Pag. cat.	Series
E21RD...	238	LINE
E21RD...T	238	LINE

EG M

CODE	Pag. cat.	Series
E24EGM...	242	LINE
E24EGM...XP	242	LINE
E25EGM...	242	LINE
E25EGM...XP	242	LINE
E60EGM...	243	LINE
E60EGM...XP	243	LINE
E61EGM...	243	LINE
E61EGM...XP	243	LINE

EG UNC

CODE	Pag. cat.	Series
E60EGUNC	244	LINE
E60EGUNC...XP	244	LINE
E61EGUNC	244	LINE
E61EGUNC...XP	244	LINE

EG UNF

CODE	Pag. cat.	Series
E60EGUNF	245	LINE
E60EGUNF...XP	245	LINE
E61EGUNF	245	LINE
E61EGUNF...XP	245	LINE

FORA FILETTA
DRILL TAPS - FORETS TARAUDERS

CODE	Pag. cat.	Series
EPFALUM...	246	LINE - M
EPFM	246	LINE - M
EPFM...VS	246	LINE - M
EPFMF...	246	LINE - MF

FILIERE - DIES - FILIÈRES

CODE	Pag. cat.	Series
100-99M...	250	M
100E99XM...	250	M-INOX
100S99M...	250	M-LH
110-99M...	251-252-253	MF
110E99M...	251-252-253	MF-INOX
110S99M...	251-252-253	MF-LH
200-99W...	259	BSW
300-99U...	254	UNC
300S99U...	254	UNC-LH
310-99U...	255	UNF
310S99U...	255	UNF-LH
400-99G...	256	GAS
400E99XG...	256	GAS-INOX
400S99G...	256	GAS-LH
410-99RC...	257	R
420-99NPT...	258	NPT
430-99NPTF...	258	NPTF
700-99PG...	260	PG

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