

Ni



...follow me!



NICHEL

Nickel - Nickel



Ni	NICHEL <i>Nickel - Nickel</i>
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Campo di applicazione

Application field - Champ d'application



A richiesta

On request - Sur demande



Anello colorato
Colored ring - Bague de couleur

Identifica in maniera molto pratica il campo di applicazione del maschio.
The colored ring allows to identify the practical destination of the tap.

Sert à identifier de façon rapide le champ d'application du taraud.



Materiale
Material - Matériau

PM3 Acciaio super rapido sinterizzato ad alto contenuto di vanadio e cobalto.
PM3 Powdered metallurgy high speed steel with high contents of vanadium and cobalt.

Acier super rapide fritté PM3 à haute teneur en vanadium et cobalt.

Struttura
Body - Structure

Corpo rinforzato per applicazioni fino a R<1600 N/mm².
Reinforced body for application up to R<1600 N/mm².

Tige renforcée pour applications jusqu'à R<1600 N/mm².

Elica
Flutes - Hélice

Elica a 10° destra, geometria di taglio specifica per lavorare le leghe Nichel.
Spiral flutes 10°, specific cutting geometry to work Nickel alloys.

Goujures 10° avec géométrie spécifique pour Nickel.

Rompitruciolo
Chip breaker - Brise coupeau

K42...NI-CT

Elica a 10° destra, rivestimento superficiale TiCN.
Spiral flutes 10°, TiCN coating.

Goujures 10°, revêtement TiCN.



K28/29...V

Elica a 25° destra, rastremazione posteriore del filetto.
Spiral flutes 25°, back tapered thread.

Goujures 25°, détalonnage arrière.



Filettature – Thread – Filetage

M	pag	4 - 5
MF	pag	6 - 7

Materiale – Material – Matériau

PM3 Acciaio sinterizzato ad alta % Co & V – Powdered metallurgy with high % Co and V – Acier fritté avec haute % Co et V

Rivestimento – Coating – Revêtement

TiCN

Resistenza all'usura – Wear resistance – Résistance à l'usure

Campo applicativo – Application field – Champs d'applications

7.1 7.2 7.3	Leghe di Nichel – Nickel alloys – Alliages Nickel
5.4	Bronzo ad alta resistenza – High strength bronze – Bronze haute résistance.



Per fori passanti – For through holes – Pour trous débouchants

K52 Elica 10° sinistra per Ni – Spiral flutes 10° left for Ni – Hélice 10° gauche pour Ni

Per fori ciechi – For blind holes – Pour trous borgnes

K42 Elica 10° destra con rompitruciolo – Spiral flutes 10° right with chip breaker – Goujures 10° a droite avec brise coupeau

K28 K29 Elica 25° dx rastremazione posteriore – Spiral flutes 25° rh, back tapered tread – Hélice 25° dx détalonnage arrière

Legenda icone – Icon description – Légende icônes



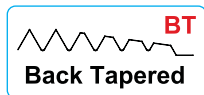
Filettatura destra – Right thread – Filetage à droite



Tipi di imbocco – Chamfer type – Nombre de filets d'entrée



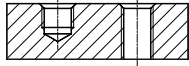
Per applicazioni aeronautiche – For aeronautical applications – Pour les applications aéronautiques



Rastremazione posteriore a botte del filetto – Back tapered thread – Détalonnage arrière

TABELLA D'IMPIEGO

APPLICATION TABLE TABLE D'OPÉRATION



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
- M58** 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 nickel alloys - Application spécifique pour le nickel et ses alliages

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

Indicazione numero di pagina
Page number
Numéro de page

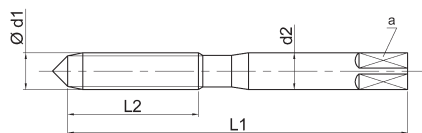
Descrizione Description - Description		
Tipi di foro Hole Types - Type de trous		
CODICE - CODE - CODE		
Linea - Product line - Ligne		
Elica / NOTE Flute Type / Notes - Hélice / Notes		
M	ISO2/6H	
	ISO1/4H	
MJ	ISO3/6G	
	7G	6H+0,1
MF	ISO2/6H	
	ISO1/4H	
MJF	ISO3/6G	
	7G	6H+0,1
UNC	2B	3BX
UNF	2B	3BX
UNEF	2B	
UNS	2B	
8-12-16 UN	2B	
20-28-32 UN	2B	
G, (Rp)		
NPSM		
NPSF		
Rc		
NPT		
NPTF		
BSW		
PG, Tr, Rd		
EG-M		
Imbocco / Chamfer / Entrée		
Materiale / Steel tap / Matériel		
Rivestimenti / Coating / Revêtements		
Classe appl. / Appl. Class. / Classe d'appl.		
Prof. filetto / Thread depth / Profondeur fil		

				HB < 120	Rm N/mm² < 400
1. Acciaio Steel Acier	1.1 Acciaio dolce magnetico	Magnetic soft steel	Acier doux magnétique		
	1.2 Acciaio da costruzione, cementazione, automatico	Structural, case carburizing and free cutting steel	Acier de construction, trempé et automatique	< 200	< 700
	1.3 Acciaio al carbonio	Plain carbon steel	Acier au carbone	< 250	< 850
	1.4 Acciaio legato - Bonificato, fusioni d'acciaio	Alloyed steel - Tempered steel, steel castings	Acier allié, trempé et revenu, moulages d'acier	< 250	< 850
	1.5 Acciaio legato - Bonificato	Alloyed steel - Tempered steel	Acier allié, trempé et revenu	250÷350	850÷1200
	1.6 Acciaio legato - Alta resistenza	Alloyed steel - High strength steel	Acier allié, haute résistance	38÷45 HRC	1200÷1400
	1.7 Acciaio legato - Alta resistenza	Alloyed steel - High strength steel	Acier allié, haute résistance	45÷49 HRC	1400÷1600
	1.8 Acciaio legato - Temprato	Hardened steel	Acier trempé	49÷62 HRC	
2. Acciaio INOX Stainless Steel Acier inoxydable	2.1 Acciaio inox automatico	Free machining stainless steel	Acier inoxydable, automatique	< 250	< 850
	2.2 Austenitico	Austenitic	Austénitique	< 250	< 850
	2.3 Ferritico, Ferritico + Austenitico, Martensitico	Ferritic, Ferritic + Austenitic, Martensitic	Ferritique, austénitique + ferritiques, martensitiques	< 320	< 1100
	2.4 Leghe Cr-Ni resistenti alle alte temperature	Cr-Ni alloys high temperatures resistant	Alliège Cr-Ni résistant à des températures élevées	330÷410	1100÷1400
3. Ghisa Cast iron Fonte	3.1 Ghisa grigia lamellare	Lamellar grey cast iron	Fonte grise lamellaire	< 180	< 600
	3.2 Ghisa grigia lamellare	Lamellar grey cast iron	Fonte grise lamellaire	180÷300	600÷1000
	3.3 Ghisa sferoidale	Nodular cast iron	Fonte ductile	< 300	< 1000
	3.4 Ghisa malleabile	Malleable cast iron	Fonte malleable	< 210	< 700
	3.5 Ghisa vermicolare a grafite compatta	Compacted cast iron with vermicular graphite	Fonte vermiculaire à graphite compacté	200÷300	700÷1000
4. Alluminio, Magnesio Al, Mg	4.1 Alluminio / Magnesio non legato	Aluminium / Magnesium unalloyed	Aluminium / Magnésium non allié	< 100	< 350
	4.2 Leghe di Al, Si < 0,5% - Truciolo lungo	Al alloys, Si < 0.5% - Long chipping	Alliège Al, Si < 0.5% copeaux longs	< 150	< 500
	4.3 Leghe di Al, Si < 10% - Truciolo medio	Al alloys, Si < 10% - Medium chipping	Alliège Al, Si < 10% copeaux moyens	< 150	< 500
	4.4 Leghe Al, Si > 10% - Truciolo corto	Al alloys, Si > 10% - Short chipping	Alliège Al, Si > 10% copeaux courts	< 180	< 600
	4.5 Leghe standard di magnesio	Magnesium standard alloys	Alliages de magnésium standards		120÷300
5. Rame Cooper Cuivre	4.6 Leghe di magnesio ad alta resistenza	High strength magnesium alloys	Alliages de magnésium de haute résistance	70÷120	240÷400
	5.1 Rame puro, Rame elettrolitico - Truciolo lungo	Cooper unalloyed - Long chipping	Cuivre pur, cuivre électrolytique, copeaux longs	< 100	< 350
	5.2 Leghe di rame, α-ottone - Truciolo lungo	Cooper alloys, soft brass - Long chipping	Alliages de cuivre, α-laiton copeaux longs	< 200	< 700
	5.3 Leghe di rame, β-ottone, Bronzo - Truciolo corto	Cooper alloys, hard brass, bronze - Short chipping	Alliages de cuivre, β-laiton, bronze copeaux courts	< 200	< 700
6. Titanio Titanium Titane	5.4 Bronzo ad alta resistenza	High strength bronze	Bronze haute résistance	< 440	< 1500
	6.1 Titanio non legato	Titanium unalloyed	Titane non allié	< 200	< 700
	6.2 Leghe di titanio	Titanium alloys	Alliages de titane	< 270	< 900
7. Nichel Nickel	6.3 Leghe di titanio	Titanium alloys	Alliages de titane	< 410	< 1400
	7.1 Nichel non legato	Nickel unalloyed	Nickel non allié	< 150	< 500
	7.2 Leghe di Nichel	Nickel alloys	Alliages de nickel	< 270	< 900
8. Materie plastiche Synthetic Material Matériaux Plastiques	7.3 Leghe di Nichel	Nickel alloys	Alliages de nickel	< 470	< 1600
	8.1 Materiali termoplastici - Truciolo extralungo	Thermoplastics - Extra long chipping	Matériaux thermoplastique copeaux extra-longues		< 80
	8.2 Materiali termoindurenti - Truciolo corto	Thermosetting plastics - Short chipping	Matériaux thermodurcissables copeaux courts		< 110
9. Materiali speciali Special materials Matériaux spéciaux	8.3 Materie plastiche con fibre di rinforzo	Reinforced plastic materials	Plastiques avec fibres de renfort	240÷440	800÷1500
	9.1 Materiali metallo - Ceramic (Cermets)	TIC - Hard materials	Matériaux métalliques, céramiques (Cermet)	< 51 HRC	< 1700
	9.2 Leghe a base cobalto	Alloys on cobalt base	Alliages à base de cobalt	< 350	< 1200
10. Grafite / Graphite	9.3 Leghe di tungsteno	Tungsten alloys	Alliages de tungstène	< 52 HRC	< 1800
	10.1 Grafite	Graphite	Graphite		< 100

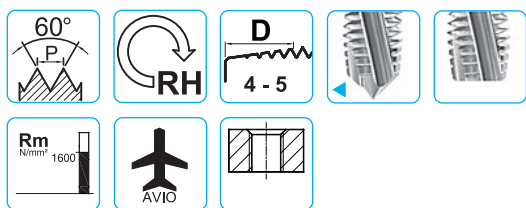
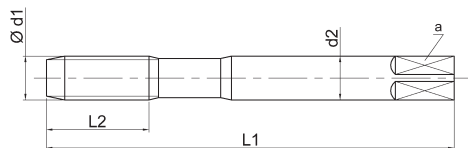
MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

UFS norm



UFS norm



TOP



L10°

TOP



L10°

TOP



L10°

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

Materiale - Material - Matériau

Tolleranza - Tolerance - Tolérance

Trattamento superficiale - Surface treatment - Revêtement

Numero gruppi materiali

Material's groups number

Nombre de groupes du matériau

3xD	3xD	3xD
PM3	PM3	PM3
6HX	6HX	4HX
BR	TiCN	BR
7.3 9.3	1.6 5.4	7.3 9.3
	7.2 9.1	

UFS norm	Ød1 M	P mm	L1	L2	d2 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	15	6	4,9	3	*4,2	
6	1	80	18	6	4,9	3	*5	
8	1,25	90	25	8	6,2	3	*6,8	
10	1,5	100	30	10	8	3	*8,5	

CODICE - CODE		
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<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

UFS norm	Ød1 M	P mm	L1	L2	d2 h9	a h12	Z	
12	1,75	110	30	12	9	3	*10,3	

CODICE - CODE		
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* Per MJ vedi tabella di foratura pag. 8
 * Drills' diameters for MJ: table page 8
 * Pour MJ voir le tableau de perçage page 8

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

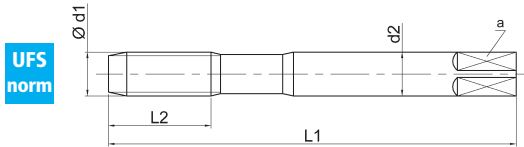
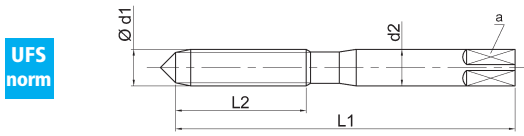
€ Pag. listino - Price list - Liste des prix
 • Standard

20
 ○ Disponibilità da richiedere, prezzo a listino
 On enquiry, standard price-list / Stock à vérifier

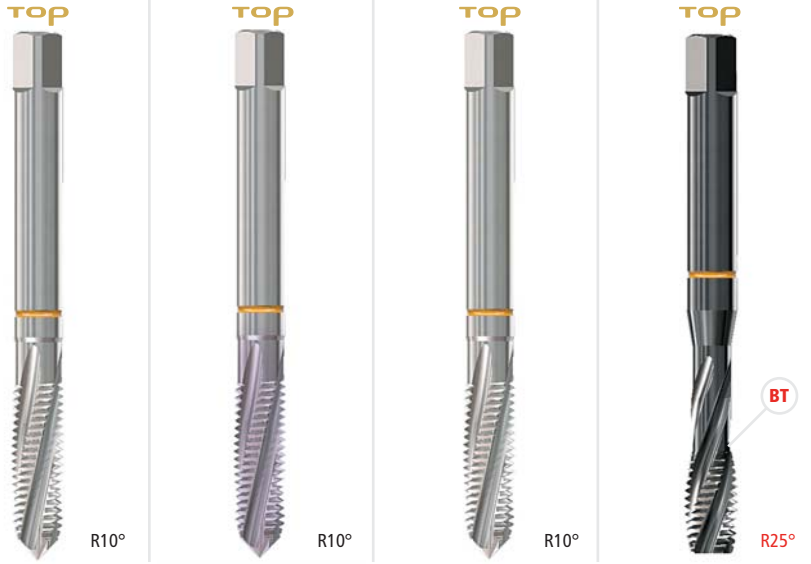
20
 ★ Solo a richiesta
 Only on request / Sur demande

Ni **NICHEL**
 Nickel - Nickel

MASCHI A MACCHINA
 MACHINE TAPS - TARAUDS MACHINE



60° P_v
 RH
 C
 2 - 3
 Rm
 N_{mm2} 1400
 AVIO
 Back Tapered
 BT



Profond. di filettatura - Thread depth - Profond. de filetage	1,5xD	1,5xD	1,5xD	2,5xD
Materiale - Material - Matériau	PM3	PM3	PM3	PM3
Tolleranza - Tolerance - Tolérance	6HX	6HX	4HX	6HX
Treatmento superficiale - Surface treatment - Revêtement	BR	TiCN	BR	V
Numero gruppi materiali Material's groups number Nombre de groupes du matériau	7.3 9.3	1.6 5.4 7.2 9.1	7.3 9.3	7.1 7.2

UFS norm	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	15	6	4,9	3	*4,2
◀	6	1	80	18	6	4,9	3	*5
◀	8	1,25	90	25	8	6,2	3	*6,8
◀	10	1,5	100	30	10	8	3	*8,5
◀	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

CODICE - CODE			
K42M...NI	K42M...NI-CT	K42M...NI-4HX	
○	○	○	
○	○	○	
○	○	○	
○	○	○	
○	○	○	
○	○	○	
-	-	-	K28M...V ○
-	-	-	○
-	-	-	○
-	-	-	○
-	-	-	○
-	-	-	○

UFS norm	Ød1 M	P mm	L ₁	L ₂	d ₂ h9	a h12	Z	
	12	1,75	110	30	12	9	4	*10,3
	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

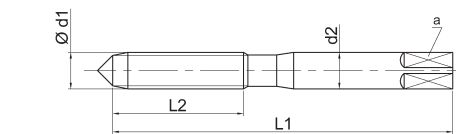
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○	○	○	
-	-	-	K29M...V ○
-	-	-	*
-	-	-	○

Confezione / Box / Colis: M3 - M10: 10 pezzi / pcs M12 - M16: 5 pezzi / pcs	€ Pag. listino - Price list - Liste des prix ● Standard	26 ○ Disponibilità da richiedere, prezzo a listino On enquiry, standard price-list / Stock à vérifier	26 ● Solo a richiesta Only on request / Sur demande	26 26
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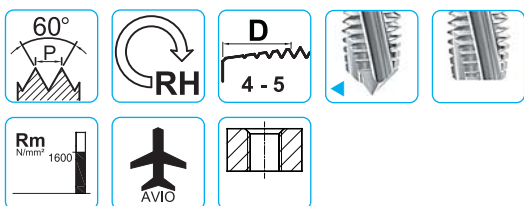
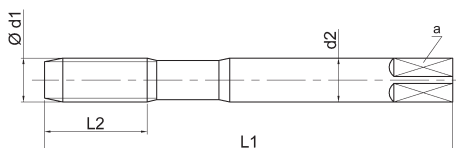
MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

UFS norm



UFS norm



TOP



L10°

TOP



L10°

TOP



L10°

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

Materiale - Material - Matériau

Tolleranza - Tolerance - Tolérance

Trattamento superficiale - Surface treatment - Revêtement

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

3xD	3xD	3xD
PM3	PM3	PM3
6HX	6HX	4HX
BR	TiCN	BR
7.3 9.3	1.6 5.4	7.3 9.3
	7.2 9.1	

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

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

* Per MJ vedi tabella di foratura pag. 8
 * Drills' diameters for MJ: table page 8
 * Pour MJ voir le tableau de perçage page 8

Confezione / Box / Colis: M3 – M10: 10 pezzi / pcs M12 – M16: 5 pezzi / pcs	€ Pag. listino - Price list - Liste des prix	56	56	56
● Standard	○ Disponibilità da richiedere, prezzo a listino On enquiry, standard price-list / Stock à vérifier	○	○	★ Solo a richiesta Only on request / Sur demande

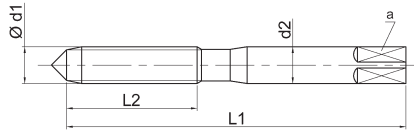
Ni
NICHEL

Nickel - Nickel

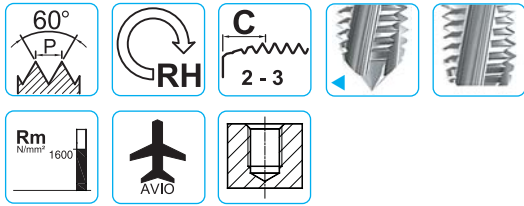
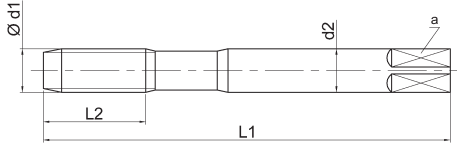
MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

UFS norm



UFS norm


top


R10°

top


R10°

top


R10°

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

1,5xD
1,5xD
1,5xD

Materiale - Material - Matériau

PM3
PM3
PM3

Tolleranza - Tolerance - Tolérance

6HX
6HX
4HX

Trattamento superficiale - Surface treatment - Revêtement

BR
TiCN
BR

Numero gruppi materiali

Material's groups number

Nombre de groupes du matériau

7.3 9.3

1.6 5.4

7.3 9.3

7.2 9.1

UFS norm	Ød1 MF	P mm	L ₁	L ₂	d ₂ h9	a h12	Z	
◀	8	1	90	25	8	6,2	3	*7
◀	10	1	100	30	10	8	3	*9
◀	10	1,25	100	30	10	8	3	*8,75
	12	1,25	110	30	12	9	4	*10,75
	12	1,5	110	30	12	9	4	*10,5
	14	1,5	110	30	12	9	4	*12,5
	16	1,5	110	30	16	12	4	*12,5

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	CODICE - CODE		
	K42MF...NI	K42MF...NI-CT	K42MF...NI-4HX
○	○	○	★
○	○	○	★
○	○	○	★
○	○	○	★
○	○	○	★
○	○	○	★

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

€ Pag. listino - Price list - Liste des prix

59
59
59

● Standard

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

 ★ Solo a richiesta
 Only on request / Sur demande


PREFORI DI MASCHIATURA PER MASCHI AD ASPORTAZIONE PER FILETTATURA "J"

TAPPING DRILL SIZES FOR CUTTING TAPS FOR "J" THREAD

PERÇAGE POUR TARAUDAGE "J"


Filettatura MJ DIN ISO 5855

MJ thread - 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


Filettatura UNJC ASME B1.15

UNJC thread - Filetage UNJC

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 UNJF ASME B1.15

UNJF thread - Filetage UNJF

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

* Tolleranza, tolerance, tolérance: 6H



Importante: fate attenzione al diametro di foratura

Important: pay attention to the drills diameter

Important: faites attention au diamètre de perçage

7	Nichel - Nickel - Nickel		
7.1	Nichel non legato Rm < 500 N/mm², < 150 HB <i>Nickel unalloyed - Nickel non allié</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
	1.3911	Rni24	-
	1.3926	Rni12	-
	1.3927	Rni8	-
	2.4061	Ni99,6	Nickel 205
	2.4066	Ni99,2	Nickel 200
	2.4068	LC-Ni99	Nickel 201
7.2	Leghe di Nichel Rm < 900 N/mm², < 270 HB <i>Nickel alloys - Alliages de Nickel</i>		
7.3	Leghe di Nichel Rm < 1600 N/mm², < 470 HB <i>Nickel alloys - Alliages de Nickel</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
	1.3912	X2Ni36	Invar
	2.4360	NiCu30Fe	Monel 400
	2.4375	NiCu30Al	Monel K500
	2.4602	NiCr17Mo17FeW	Hastelloy C
	2.4630	Ni-Cr20Ti	Nimonic 75
	2.4631	NiCr20TiAl	Nimonic 80A
	2.4634	NiCo20Cr15MoAlTi	Nimonic 105
	2.4636	NiCo15Cr15MoAlTi	Udimet 700
	2.4654	NiCr20Co14MoTi	Waspaloy
	2.4662	NiCr13Mo6Ti3	Nimonic 901
	2.4665	NiCr22Fe18Mo	Hastelloy X
	2.4668	NiCr19Fe19NbMo	Inconel 718
	2.4670	G-NiCr13Al6MoNb	Nimocast 713
	2.4674	NiCo15Cr10MoAlTi	Nimocast PK24
	2.4816	NiCr15Fe	Inconel 600
	2.4856	NiCr22Mo9Nb	Inconel 625
5.4	Bronzo ad alta resistenza Rm < 1500 N/mm², < 440 HB <i>High strength bronze - Bronze haute résistance</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
	2.0932	CuAl8Fe3	(Ampco12)
	2.0936	CuAl10Fe3Mn2	(Ampco16, Ampco 15)
	2.0940	CuAl10Fe	-
	2.0966	CuAl10Ni5Fe4	(Ampco)
	2.0978	CuAl11Ni6Fe5	-
	-	CuAl11Fe4	(Ampco 20)
	2.0882	CuNi30MnFe	-



La linea di utensili, definita “**TOP**” è stata creata come risposta alle esigenze evolutive del mercato e rappresenta la più alta espressione qualitativa dei prodotti UFS. Ottima per applicazioni in tutte le lavorazioni di materiali difficili e per alte produzioni automatizzate. Le caratteristiche e gli impieghi sono sviluppati nelle brochure specifiche.

The “TOP” line was created as a specific answer to the market evolution needs, and represents the highest quality expression of the UFS products. Excellent for application on difficult materials and on high automatized productions. See all the technical information and practical use on the specific brochures.

La ligne d’outils “TOP” a été créée pour répondre aux exigences d’évolution du marché et représente la meilleure qualité des produits UFS. Une ligne d’excellence pour les applications sur matériaux difficiles et production automatisée. Voir caractéristiques techniques et utilisations sur les brochures spécifiques.

