

HR



... follow me!



ALTA RESISTENZA

High Resistance - Haute Résistance



Filettature – Thread – Filetage

| | | |
|-----------|-----|---------|
| M | pag | 5 - 9 |
| MF | pag | 10 - 12 |

Materiale – Material – Matériau

| | |
|------------|--|
| PM3 | Acciaio sinterizzato ad alta % di Co & V – Powdered metallurgy high %Co and V – Acier fritté avec haute % Co et V |
| PM1 | Acciaio sinterizzato a maggior % di Co & V – Powdered metallurgy with higher % Co and V – Acier fritté avec plus haute % Co et V |

Rivestimento – Coating – Revêtement

| | |
|------------|--|
| TXC | Resistenza all'usura, all'ossidazione e migliora lo scorrimento del truciolo – Oxidation and wear resistance, better chip evacuation – Résistance à l'usure, à l'oxydation et facilite le glissement des copeaux |
|------------|--|

| | |
|--------------|--|
| TiAlN | Resistenza all'usura e all'ossidazione – Oxidation and wear resistance – Résistance à l'usure et à l'oxydation |
|--------------|--|

Campo applicativo – Application field – Champs d'applications

| | |
|---------------------|---|
| 1.4 1.5 1.6 1.7 | Acciaio – Steel – Acier |
| 3.1 3.2 3.3 3.4 3.5 | Ghisa – Cast iron – Fonte |
| 4.3 4.4 | Leghe alluminio Si $\leq 10\%$ ed Si $\geq 10\%$ – Aluminium alloys Si $\leq 10\%$ and Si $\geq 10\%$ – Alliages aluminium Si $\leq 10\%$ ed Si $\geq 10\%$ |
| 4.5 4.6 | Leghe di magnesio – Magnesium alloys – Alliages de magnésium |
| 5.3 5.4 | Leghe di rame, ottone, bronzo - Truciolo corto – Cooper alloys, brass, bronze - Short chipping – Alliages de cuivre, laiton, bronze - Coupeaux courts |
| 8.2 8.3 | Mat. plastiche termoindurenti e con fibre di rinforzo – Thermosetting plastics and reinforced plastic materials Matières plastiques thermdurcissables et avec des fibres de renforcement |
| 9.1 9.3 | Materiali metallo-ceramici (Cermets) – TIC Hard materials – Matériaux métal-céramique (Cermets) |
| 10.1 | Grafite – Graphite |



≤ 52HRC

Per fori ciechi e passanti – For blind and through holes – Pour trous débouchants et borgnes

| | |
|----------------|---|
| K22 K23 | Tagli diritti per medio alta resistenza – Straight flutes for medium - high resistance – Goujures droites pour moyenne-haute résistance |
| K20 K21 | Tagli diritti ≤ 45 HRC – Straight flutes ≤ 45 HRC – Goujures droites < 45 HRC |
| XT20 | Tagli diritti ≤ 52 HRC – Straight flutes ≤ 52 HRC – Goujures droites < 52 HRC |

Per fori passanti – For through holes – Pour trous débouchants

| | |
|----------------|--|
| K24 K25 | Imbocco corretto – Spiral pointed – Goujures Droites avec entrée Gun |
|----------------|--|

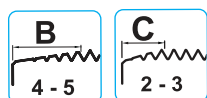
Per fori ciechi – For blind holes – Pour trous borgnes

| | |
|----------------|---|
| K40 K41 | Elica 15° dx – Spiral flutes 15° rh – Hélice 15° dx |
| K80 K81 | Elica 40° dx rastremazione posteriore – Spiral flutes 40° rh, back tapered thread – Hélice 40° dx détalonnage arrière |

Legenda icone – Icon description – Légende icônes

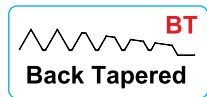


Filettatura destra – Right thread – Filetage à droite



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

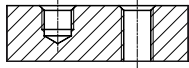
Synchro Rigid, maschiatura rigida sincronizzata
Rigid tapping Synchro
Synchro Rigid, taraudage rigide et synchronisée



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
- 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

Indicazione numero di pagina
Page number
Numéro de page

| | | | Note: HRC = HRC depth 10mm | |
|--|--|---|--|----------------|
| | | | 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 |
| | 1.3 Acciaio al carbonio | Plain carbon steel | Acier au carbone | < 250 |
| | 1.4 Acciaio legato - Bonificato, fusioni d'acciaio | Alloyed steel - Tempered steel, steel castings | Acier allié, trempé et revenu, moulages d'acier | < 250 |
| | 1.5 Acciaio legato - Bonificato | Alloyed steel - Tempered steel | Acier allié, trempé et revenu | 250÷350 |
| | 1.6 Acciaio legato - Alta resistenza | Alloyed steel - High strength steel | Acier allié, haute résistance | 38÷45 HRC |
| | 1.7 Acciaio legato - Alta resistenza | Alloyed steel - High strength steel | Acier allié, haute résistance | 45÷49 HRC |
| | 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 |
| | 2.2 Austenitico | Austenitic | Austénitique | < 250 |
| | 2.3 Ferritico, Ferritico + Austenitico, Martensitico | Ferritic, Ferritic + Austenitic, Martensitic | Ferritique, austénitique + ferritiques, martensitiques | < 320 |
| | 2.4 Leghe Cr-Ni resistenti alle alte temperature | Cr-Ni alloys high temperatures resistant | Alliage Cr-Ni résistant à des températures élevées | 330÷410 |
| 3. Ghisa Cast iron Fonte | 3.1 Ghisa grigia lamellare | Lamellar grey cast iron | Fonte grise lamellaire | < 180 |
| | 3.2 Ghisa grigia lamellare | Lamellar grey cast iron | Fonte grise lamellaire | 180÷300 |
| | 3.3 Ghisa sferoidale | Nodular cast iron | Fonte ductile | < 300 |
| | 3.4 Ghisa malleabile | Malleable cast iron | Fonte malléable | < 210 |
| | 3.5 Ghisa vermicolare a grafite compatta | Compacted cast iron with vermicular graphite | Fonte vermiculaire à graphite compacté | 200÷300 |
| | 4.1 Alluminio / Magnesio non legato | Aluminium / Magnesium unalloyed | Aluminium / Magnésium non allié | < 100 |
| | 4.2 Leghe di Al, Si < 0,5% - Truciolo lungo | Al alloys, Si < 0,5% - Long chipping | Alliage Al, Si <0,5% copeaux longs | < 150 |
| | 4.3 Leghe di Al, Si < 10% - Truciolo medio | Al alloys, Si < 10% - Medium chipping | Alliage Al, Si <10% copeaux moyens | < 150 |
| 4. Alluminio, Magnesio Al, Mg | 4.4 Leghe Al, Si > 10% - Truciolo corto | Al alloys, Si > 10% - Short chipping | Alliage Al, Si >10% copeaux courts | < 180 |
| | 4.5 Leghe standard di magnesio | Magnesium standard alloys | Alliages de magnésium standards | 120÷300 |
| | 4.6 Leghe di magnesio ad alta resistenza | High strength magnesium alloys | Alliages de magnésium de haute résistance | 70÷120 |
| | 5.1 Rame puro, Rame elettrolitico - Truciolo lungo | Cooper unalloyed - Long chipping | Cuivre pur, cuivre électrolytique, copeaux longs | < 100 |
| 5. Rame Cooper Cuivre | 5.2 Leghe di rame, α-ottone - Truciolo lungo | Cooper alloys, soft brass - Long chipping | Alliages de cuivre, α-laiton copeaux longs | < 200 |
| | 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 |
| | 5.4 Bronzo ad alta resistenza | High strength bronze | Bronze haute résistance | < 440 |
| | 6.1 Titanio non legato | Titanium unalloyed | Titane non allié | < 200 |
| 6. Titanio Titanium Titane | 6.2 Leghe di titanio | Titanium alloys | Alliages de titane | < 270 |
| | 6.3 Leghe di titanio | Titanium alloys | Alliages de titane | < 410 |
| | 7.1 Nichel non legato | Nickel unalloyed | Nickel non allié | < 150 |
| | 7.2 Leghe di Nichel | Nickel alloys | Alliages de nickel | < 270 |
| 7. Nichel Nickel | 7.3 Leghe di Nichel | Nickel alloys | Alliages de nickel | < 470 |
| | 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 |
| | 8.3 Materie plastiche con fibre di rinforzo | Reinforced plastic materials | Plastiques avec fibres de renfort | 240÷440 |
| 8. Materie plastiche Synthetic Material Matériaux Plastiques | 9.1 Materiali metallo – Ceramic (Cermets) | TiC - Hard materials | Matériaux métalliques, céramiques (Cermet) | < 51 HRC |
| | 9.2 Leghe a base cobalto | Alloys on cobalt base | Alliages à base de cobalt | < 350 |
| | 9.3 Leghe di tungsteno | Tungsten alloys | Alliages de tungstène | < 52 HRC |
| | 10.1 Grafite | Graphite | Graphite | < 100 |
| 10. Grafite / Graphite | | | | |

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Series K22/K23

Per la filettatura di materiali a medio – alta resistenza

For threading medium - high resistance materials

Pour le filetage de matériaux de haute résistance

HR

ALTA RESISTENZA

High Resistance - Haute Résistance

FOR

Lubrificazione interna con uscita assiale.

Through coolant, axial flow.

Lubrification interne à sortie axiale.

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.

Scanalature diritte

Straight Flutes

Goujures droites

La particolare geometria di taglio, in abbinamento alla lubrificazione interna, favoriscono l'evacuazione e la regolarità del truciolo. Per profondità fino a 3,5xD.

The special cutting geometry, combined with the internal coolant, facilitate the evacuation and the regularity of the chip. For thread depth up to 3,5xD.

La géométrie de coupe spéciale, en combinaison avec la lubrification interne, favorisent l'évacuation et la régularité des copeaux. Pour des profondeurs allant jusqu'à 3,5xD.

Rivestimento

Coating - Revêtement

TXC Doppio rivestimento, conferisce resistenza all'usura e favorisce lo scorrimento del truciolo.

TXC Double coating with good properties of wear resistance and chip evacuation.

Double revêtement TXC qui garantit la résistance à l'usure et facilite le glissement des copeaux.

FOR Y

Lubrificazione interna con uscita radiale

Through coolant, radial flow

Lubrification interne à sortie radiale



HR

ALTA RESISTENZA

High Resistance - Haute Résistance

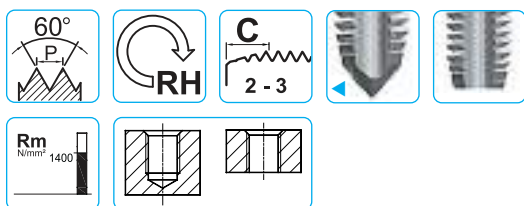
MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN 371

DIN 371

DIN 376



≤ 45HRC

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

Materiale - Material - Matériau

Tolleranza - Tolerance - Tolérance

Trattamento superficiale - Surface treatment - Revêtement

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

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

1,5XD

PM3

6HX

TXC

1.5 1.6

4.3 4.4 4.5 4.6 5.3 5.4

8.2 8.3 10.1

top

top



3,5xD

3,5xD

PM3

PM3

ISO2/6H

ISO2/6H

TXC

TXC

1.3 1.4 1.5 1.6

3.1 3.2 3.3 3.4 3.5

4.3 4.4 4.5 4.6 5.3 5.4

8.2 8.3 10.1

1.3 1.4 1.5 1.6

3.1 3.2 3.3 3.4 3.5

4.3 4.4 4.5 4.6 5.3 5.4

8.2 8.3 10.1

| 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 | |
| 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 | |

| 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 | |
| 14 | 2 | 110 | 28 | 11 | 9 | 4 | 12 | |
| 16 | 2 | 110 | 28 | 12 | 9 | 4 | 14 | |
| 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 - CODE

K20M...TXC

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K22M...FOR-TXC

K22M...FOR-TXC

○

○

○

CODE - CODE

K21M...TXC

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○

○

K23M...FOR-TXC

K23M...FOR-TXC

○

○

○

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★

★

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

€ Pag. listino - Price list - Liste des prix

9

9

9

● Standard

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

★ Solo a richiesta
Only on request / Sur demande

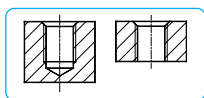
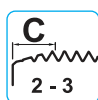
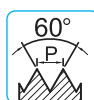
HR

ALTA RESISTENZA

High Resistance - Haute Résistance

MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

~DIN
371~DIN
371UFS
norm

top



≤ 52HRC

top



≤ 52HRC

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

2xD

1,5xD

PM1

PM1

6HX

6HX

TiAlN

TiAlN

1.6 1.7

1.6 1.7

5.4

5.4

9.1 9.3

9.1 9.3

| ~DIN 371 | Ød1 M | P mm | L ₁ | L ₂ | d ₂ h9 | a h12 | Z | |
|-------------|----------|---------|----------------|----------------|----------------------|----------|---|-----|
| ◀ | 4 | 0,7 | 63 | 13 | 4,5 | 3,4 | 4 | 3,3 |
| ◀ | 5 | 0,8 | 70 | 13 | 6 | 4,9 | 4 | 4,2 |
| ◀ | 6 | 1 | 80 | 16 | 6 | 4,9 | 4 | 5 |
| | 8 | 1,25 | 90 | 18 | 8 | 6,2 | 5 | 6,8 |
| | 10 | 1,5 | 100 | 20 | 10 | 8 | 5 | 8,5 |
| | 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 |

| UFS norm | Ød1 M | P mm | L ₁ | L ₂ | d ₂ h9 | a h12 | Z | |
|-------------|----------|---------|----------------|----------------|----------------------|----------|---|------|
| | 12 | 1,75 | 110 | 25 | 9 | 7 | 5 | 10,3 |
| | 12 | 1,75 | 110 | 30 | 12 | 9 | 5 | 10,3 |

CODE - CODE

XT20M...

○

○

○

○

○

XT20M...TX

-

-

-

CODE - CODE

XT21M...

○

XT20M...TX

-

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

€ Pag. listino - Price list - Liste des prix

10

10

● Standard

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

★ Solo a richiesta
Only on request / Sur demande

HR

ALTA RESISTENZA

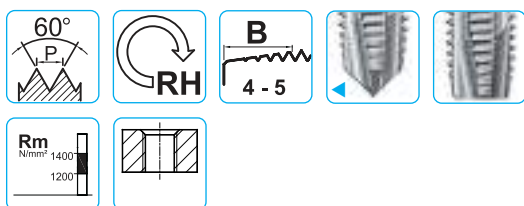
High Resistance - Haute Résistance

MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN 371

DIN 376



top



top



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

3,5xD

PM3

PM3

6HX

6HX

TXC

TXC

1.5 1.6

1.5 1.6

3.3 3.4

3.3 3.4

4.4 5.3

4.4 5.3

| 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 - CODE | | | |
|-------------|-----------------|--|--|
| K24M...TXC | K24M...FORX-TXC | | |
| • | - | | |
| • | - | | |
| • | - | | |
| • | ○ | | |
| • | ○ | | |
| • | ○ | | |

| 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 | |
| 14 | 2 | 110 | 28 | 11 | 9 | 4 | 12 | |
| 16 | 2 | 110 | 28 | 12 | 9 | 4 | 14 | |

| CODE - CODE | | | |
|-------------|-----------------|--|--|
| K25M...TXC | K25M...FORX-TXC | | |
| • | ○ | | |
| • | ○ | | |
| • | ○ | | |

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

€ Pag. listino - Price list - Liste des prix

17

18

• Standard

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

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HR

ALTA RESISTENZA

High Resistance - Haute Résistance

MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN
371DIN
371DIN
376

TOP



R15°

TOP



R15°

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

1,5xD

2,5xD

PM3

PM3

6HX

6HX

TXC

TXC

1.5 1.6

1.5 1.6

3.3 3.4

3.3 3.4

4.4 4.5 4.6

4.4 4.5 4.6

5.3

5.3

| DIN 371 | Ød1 M | P mm | L ₁ | L ₂ 10xP | 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 - CODE | | | |
|-------------|----------------|--|--|
| K40M...TXC | K40M...FOR-TXC | | |
| • | - | | |
| • | - | | |
| • | - | | |
| • | ○ | | |
| • | ○ | | |
| • | ○ | | |

| DIN 376 | Ød1 M | P mm | L ₁ | L ₂ 10xP | 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 - CODE | | | |
|-------------|----------------|--|--|
| K41M...TXC | K41M...FOR-TXC | | |
| • | ○ | | |
| ○ | ○ | | |
| ○ | ○ | | |

Conditionnement / Box:
M3 – M10: 10 pièces / pcs
M12 – M16: 5 pièces / pcs

€ Pag. listino - Price list - Liste des prix

25

25

• Norme
• Standard

○ Disponibilità sur demande, liste des prix
○ Lead time on enquiry, standard price-list

★ Uniquement sur demande
★ Only on request

HR

ALTA RESISTENZA

High Resistance - Haute Résistance

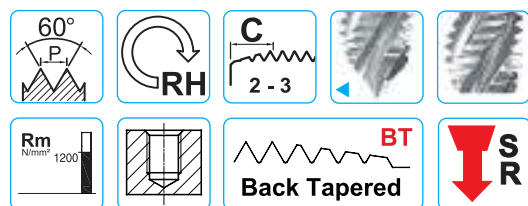
MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN 371

DIN 371

DIN 376



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

2,5xD

3xD

PM3

PM3

6HX

6HX

TXC

TXC

1.4 1.5

1.4 1.5

3.3 3.4

3.3 3.4

| DIN 371 | Ød1 M | P mm | L ₁ | L ₂ 10xP | 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 - CODE | | | |
|-------------|----------------|--|--|
| K80M...TXC | K80M...FOR-TXC | | |
| • | - | | |
| • | - | | |
| • | - | | |
| • | ○ | | |
| • | ○ | | |
| • | ○ | | |

| DIN 376 | Ød1 M | P mm | L ₁ | L ₂ 10xP | 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 - CODE | | | |
|-------------|----------------|--|--|
| K81M...TXC | K81M...FOR-TXC | | |
| • | ○ | | |
| • | ○ | | |
| • | ○ | | |

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



Conditionnement / Box:
M3 – M10: 10 pièces / pcs
M12 – M16: 5 pièces / pcs

€ Pag. listino - Price list - Liste des prix

36

36

● Norme
● Standard

○ Disponibilità sur demande, liste des prix
○ Lead time on enquiry, standard price-list

★ Uniquement sur demande
★ Only on request

| 1 | | Acciaio - Steel - Acier | | |
|--|-----|---|----------------|----------------|
| Acciaio legato Alloyed steel Acier allié | 1.4 | Acciaio legato - bonificato, fusioni d'acciaio Rm < 850 N/mm², < 250 HB <i>Alloyed steel, tempered steel, steel castings - Acier allié, trempé et revenu, fusion d'acier</i> | | |
| | 1.5 | Acciaio legato - bonificato Rm 850 ÷ 1200 N/mm², 250 ÷ 350 HB <i>Alloyed steel, tempered steel - Acier allié, trempé et revenu</i> | | |
| | 1.6 | Acciaio legato - alta resistenza Rm 1200 ÷ 1400 N/mm², 38 ÷ 45 HRC <i>Alloyed steel, high strength steel - Acier allié - haute résistance</i> | | |
| | 1.7 | Acciaio legato - alta resistenza Rm 1400 ÷ 1600 N/mm², 45 ÷ 49 HRC <i>Alloyed steel, high strength steel - Acier allié - haute résistance</i> | | |
| | | W-Nr. | DIN - Germany | UNI - Italy |
| Da bonifica <i>Heat-treatable steel</i> <i>De revenu</i> | | 1.7035 | 41Cr4 | 41Cr4 |
| | | 1.8159 | 50CrV4, 51CrV4 | 51CrV4 |
| | | 1.7218 | 25CrMo4 | 25CrMo4 |
| | | 1.7220 | 34CrMo4 | 35CrMo4 |
| | | 1.7225 | 42CrMo4 | 42CrMo4 |
| | | 1.7228 | 50CrMo4 | - |
| | | 1.7242 | 16CrMo4 | 18CrMo4 |
| | | 1.6580 | 30CrNiMo8 | 30NiCrMo8 |
| | | 1.6582 | 34CrNiMo6 | 35NiCrMo6 (KW) |
| | | 1.6511 | 36CrNiMo4 | 38NiCrMo4 (KB) |
| | | 1.6773 | 36NiCrMo16 | 34NiCrMo16 |
| | | 1.6565 | 40NiCrMo6 | - |
| Da nitrurazione <i>Nitriding steel</i> <i>De nitruration</i> | | 1.8515 | 31CrMo12 | 31CrMo12 |
| | | 1.8519 | 31CrMoV9 | - |
| | | 1.8507 | 34CrAlMo7 | 34CrAlMo7 |
| | | 1.8509 | 41CrAlMo7 | 41CrAlMo7 |
| Da cuscinetti <i>Ball bearing steel - Roulements</i> | | 1.3505 | 100Cr6 | 100Cr6 |
| | | 1.3537 | 100CrMo7 | 100CrMo7 |
| Per molle <i>Spring steel</i> <i>Ressorts</i> | | 1.5025 | 51Si7 | 48Si7 |
| | | 1.5026 | 56Si7 | 55Si7 |
| | | 1.5027 | 60Si7 | - |
| | | 1.7108 | 60SiCr7 | 60SiCr8 |
| | | 1.8159 | 50CrV4 | 50CrV4 |
| | | 1.7176 | 55Cr3 | 55Cr3 |
| | | 1.7701 | 51CrMoV4 | - |
| Fusioni d'acciaio (ghisa acciaiata) <i>Steel castings</i> <i>Acier coulé</i> | | 1.0446 | GS-45 | - |
| | | 1.0552 | GS-52 | - |
| | | 1.5919 | GS-15CrNi6 | - |
| | | 1.7218 | GS-25CrMo4 | - |
| | | 1.7220 | GS-34CrMo4 | - |
| | | 1.7379 | GS-18CrMo9-10 | - |
| Per tempra superficiale <i>Surface hardening</i> <i>De durcissement de surface</i> | | 1.7005 | 45Cr2 | - |
| | | 1.7006 | 46Cr2 | 46Cr2 |
| | | 1.7043 | 38Cr4 | - |
| | | 1.7034 | 37Cr4 | 36CrMn4 |
| | | 1.7223 | 41CrMo4 | 41CrMo4 |

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

| | W-Nr. | DIN - Germany | UNI - Italy |
|---|---|---------------|--------------------|
| Per lavorazioni a caldo <i>Hot work tool steel</i> <i>Travail à chaud</i> | 1.2767 | 45NiCrMo16 | 42NiCrMo 15 7 |
| | 1.2713 | 55NiCrMoV6 | - |
| | 1.2714 | 55NiCrMoV7 | 55NiCrMoV7KU |
| | 1.2311 | 40CrMnMo7 | 35CrMo8KU |
| | 1.2365 | X32CrMoV3-3 | 30CrMoV12-27KU |
| | 1.2343 | X38CrMoV5-1 | X37CrMoV5-1KU |
| | 1.2344 | X40CrMoV5-1 | X40CrMoV5-1-1KU |
| | 1.2567 | X30WCrV5-3 | X30WCrV5-3KU |
| | 1.2581 | X30WCrV9-3 | X30WCrV9-3KU |
| Per lavorazioni a freddo <i>Cold work tool steel</i> <i>Travail à froid</i> | 1.2080 | X210Cr12 | X205Cr12KU |
| | 1.2083 | X42Cr13 | - |
| | 1.2363 | X100CrMoV5-1 | X100CrMoV5-1KU |
| | 1.2379 | X155CrVMo12-1 | X155CrVMo12-1KU |
| | 1.2510 | 100MnCrW4 | 95MnWCr5KU |
| | 1.2550 | 60WCrV7 | 55WCrV8KU |
| | 1.2842 | 90MnCrV8 | 90MnVCr8KU |
| Acciaio rapido HSS, HSS-E <i>High speed steel</i> <i>Acier rapide</i> | 1.3202 | S 12-1-4-5 | (T15) |
| | 1.3207 | S 10-4-3-10 | HS 10-4-3-10 (T42) |
| | 1.3243 | S 6-5-2-5 | HS 6-5-2-5 (M35) |
| | 1.3247 | S 2-10-1-8 | HS 2-9-1-8 (M42) |
| | 1.3343 | S 6-5-2 | HS 6-5-2 (M2) |
| | 1.3344 | S 6-5-3 | (M3/2) |
| | 1.3348 | S 2-9-2 | HS 2-9-2 (M7) |
| Acciaio rapido sinterizzato HSS-PM <i>Sintered high speed steel</i> <i>Acier fritté</i> | - | HS 6-5-3-8 | (ASP2030, ASP30) |
| | - | HS 10-2-5-8 | (ASP2052, ASP52) |
| | - | HS 6-7-6-10 | (ASP2060, ASP60) |
| 1.7 Acciaio speciale Rm<1600 N/mm² <i>Special steel</i> <i>Acier spécial</i> | | | HARDOX 400 |
| | | | HARDOX 450 |
| 3 | Ghisa - Cast Iron - Fonte | | |
| 3.1 | Ghisa grigia lamellare Rm < 600 N/mm², < 180 HB | | |
| | <i>Lamellar grey cast iron - Fonte grise lamellaire</i> | | |
| | W-Nr. | DIN - Germany | UNI - Italy |
| | 0.6010 | GG-10 | G 10 |
| | 0.6015 | GG-15 | G 15 |
| 3.2 | 0.6020 | GG-20 | G 20 |
| | Ghisa grigia lamellare Rm 600 ÷ 1000 N/mm², 180 ÷ 300 HB | | |
| | <i>Lamellar grey cast iron - Fonte grise lamellaire</i> | | |
| | W-Nr. | DIN - Germany | UNI - Italy |
| | 0.6025 | GG-25 | G 25 |
| | 0.6030 | GG-30 | G 30 |
| | 0.6035 | GG-35 | G 35 |
| | 0.6040 | GG-40 | G 40 |

Continua Ghisa / Continue Cast Iron / Continuer Fonte ➤

| | | | |
|---|--|----------------------|--|
| 3.3 | Ghisa sferoidale Rm < 1000 N/mm², < 300 HB | | |
| | <i>Nodular cast iron - Fonte ductile</i> | | |
| | W-Nr. | DIN - Germany | UNI - Italy |
| | 0.7033 | GGG-35.3 | - |
| | 0.7040 | GGG-40 | GS400-12 |
| | 0.7043 | GGG-40.3 | GSO 42/17 |
| | 0.7050 | GGG-50 | GS500-7 |
| | 0.7060 | GGG-60 | GS600-3 |
| | 0.7070 | GGG-70 | GS700-2 |
| | 0.7080 | GGG-80 | GS800-2 |
| | 0.7670 | GGG-Ni22 | - |
| | 0.7683 | GGG-Ni35 | - |
| | 0.7660 | GGG-NiCr20-2 | - |
| | 0.7677 | GGG-NiCr30-1 | - |
| | 0.7685 | GGG-NiCr35-3 | - |
| 3.4 | Ghisa malleabile Rm < 700 N/mm², < 210 HB | | |
| | <i>Malleable cast iron - Fonte malléable</i> | | |
| | W-Nr. | DIN - Germany | UNI - Italy |
| | 0.8035 | GTW-35-04 | - |
| | 0.8045 | GTW-45-07 | - |
| | 0.8145 | GTS-45-06 | - |
| | 0.8165 | GTS-65-02 | - |
| | 0.8170 | GTS-70-02 | - |
| 3.5 | Ghisa vermicolare a grafite compatta Rm 700 ÷ 1000 N/mm², 200 ÷ 300 HB | | |
| | <i>Compacted cast iron with vermicular graphite - Fonte vermiculaire à graphite compacté</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| | | | (CGI) |
| | | | (GGV) |
| | | | (GJV) |
| 4 | Alluminio, Magnesio - Aluminium, Magnesium - Alliage, Magnésium | | |
| 4.1 | Alluminio / Magnesio non legato Rm < 350 N/mm², < 100 HB | | |
| | <i>Aluminium / Magnesium unalloyed - Aluminium / Magnésium non allié</i> | | |
| | W-Nr. | DIN - Germany | UNI - Italy |
| Si < 10% Leghe da getti <i>Al casting alloys</i> <i>Tarauds pour alliages coulée</i> | 3.2134 | G-ALSi5Cu1Mg | 3600 |
| | 3.2161 | G-ALSi8Cu3 | 5075 |
| | 3.2162.05 | GD-ALSi8Cu3 | - |
| | 3.2371 | G-ALSi7Mg | 7257 |
| | 3.2373 | G-ALSi9Mg | 3051 |
| 4.4 | Leghe Al, Si > 10% - truciolo corto Rm < 600 N/mm², < 180HB | | |
| | <i>Al alloys, short chipping - Alliage Al - coupeaux courts</i> | | |
| | W-Nr. | DIN - Germany | UNI - Italy |
| Si > 10% Leghe da getti <i>Al casting alloys</i> <i>Tarauds pour alliages coulée</i> | 3.2381 | G-ALSi10Mg | 3049 |
| | 3.2383 | G-ALSi10Mg(Cu) | - |
| | 3.2581 | G-ALSi12 | 5079 |
| | 3.2583 | G-ALSi12(Cu) | 3048 |

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

| | | | |
|-------------------------|---|----------------------|--|
| 4.5 | Leghe standard di magnesio Rm 120 ÷ 300 N/mm² | | |
| | <i>Magnesium standard alloys - Alliages de magnésium standards</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| | 3.5200 | MgMn2 | (MAGNUMINIUM 133) |
| | 3.5312 | MgAl3Zn | (AZ31) |
| | 3.5632 | MgAl6Zu3 | (AZ63) |
| | 3.5812 | MgAl8Zn1 | (AZ81 hp) |
| | 3.5912 | MgAl9Zn1 | (AZ91 hp) |
| 4.6 | Leghe di magnesio ad alta resistenza Rm 240 ÷ 400 N/mm², 70 ÷ 120 HB | | |
| | <i>High strength magnesium alloys - Alliages de magnésium de haute résistance</i> | | |
| | 3.5161 | MgZn6Zr | (ZK60) |
| | 3.5612 | MgAl6Zn1 | (AZ61) |
| 5 | RAME - Cooper - Cuivre | | |
| 5.3 | Leghe di rame, β ottone, bronzo - truciolo corto Rm < 700 N/mm², < 200 HB | | |
| | <i>Cooper alloys, hard brass, bronze, short chipping - Alliages de cuivre, αlaiton, bronze, coupeaux courts</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| Ottone / Brass / Laiton | 2.0360 | CuZn40 (Ms60) | - |
| | 2.0380 | CuZn39Pb2 (Ms58) | - |
| | 2.0410 | CuZn44Pb2 (Ms56) | - |
| | 2.0510 | CuZn37Al1 | - |
| | 2.0550 | CuZn40Al2 | - |
| | 2.0561 | CuZn40Al1 | - |
| | 2.0580 | CuZn40Mn1Pb | - |
| | 2.2140 | G-ZnAl4 | (ZAMAK) |
| Bronze / Bronze | 2.1086 | G-CuSn10Zn | - |
| | 2.1093 | G-CuSn6ZnNi | - |
| | 2.1096 | G-CuSn5ZnPb | - |
| 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 | - |

| | | | |
|-------------|---|-----------------------|--|
| 8 | Materie plastiche - <i>Synthetic materials - Matériaux de plastique</i> | | |
| 8.2 | Materiali termoindurenti - truciolo corto Rm < 110 N/mm² <i>Thermosetting plastics, short chipping - Matériaux thermodurcissables, coupeaux courts</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| | PF | Phenol formaldehyde | Pertinax |
| | MF | Melamine formaldehyde | Albanit, Resopal |
| | UF | Urea formaldehyde | Bakelite |
| 8.3 | Materie plastiche con fibre di rinforzo Rm 800 ÷ 1500 N/mm², 240 ÷ 440 HB <i>Reinforced plastic materials - Plastiques avec fibres de renfort</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| | AFK | Aramid | Kevlar |
| | BFK | Boron | Boro |
| | CFK | Carbon fibre | Résines + Fibres de carbone |
| | GFK | Glass fibre | Résines + Fibres de verre |
| | SFK | Synthetic fibre | Résines + Fibres synthétiques |
| 9 | Materiali Speciali - <i>Special Materials - Matériaux spéciaux</i> | | |
| 9.1 | Materiali metallo – ceramici (Cermets) Rm < 1700 N/mm², < 51 HRC <i>TIC - Hard materials - Matériaux métalliques, céramiques (Cermet)</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| | | | Ferritan |
| | | | Ferro Titanit |
| | | | Ferrotic |
| 9.3 | Leghe di tungsteno Rm < 1800 N/mm², < 52 HRC <i>Tungsten alloys - Alliages de tungstène</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| | | | Anviloy |
| | | | Denal |
| | | | Densimet |
| | | | Mallory |
| 10 | Graphite - <i>Graphite</i> | | |
| 10.1 | Graphite Rm < 100 N/mm² <i>Graphite</i> | | |
| | W-Nr. | DIN - Germany | Denom. comm./Trade name/Nom comm. |
| | | | Graphit R8340 |
| | | | Technograph 15 |
| | | | Technograph 30 |
| | | | R8510 |
| | | | R8650 |
| | | | Union Poco EDM1 |
| | | | Union Poco EDM3 |



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.

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