

**SYNCHRO
RIGID**



... follow me!



MASCHIATURA RIGIDA SINCRONIZZATA
Rigid Tapping Synchro - Taraudage rigide synchronisé

Gambo h6
anche per mandrini
a calettamento termico

Shank h6 also for application
with shrink fit chucks

Tige H6 aussi avec serrage
d'outil par frettage



Tolleranza del gambo

Shank tolerance - Tige tolérance

Tolleranza del gambo h6 per garantire la massima precisione ad alte velocità di taglio; anche per applicazione con mandrino a calettamento termico.

Shank tolerance h6 to ensure precision at high cutting speed. Also for applications with heat shrink fit chuck.

Tige tolérance h6 pour assurer la plus haute précision à grande vitesse de coupe; aussi avec serrage d'outil par frettage.

A richiesta - On request - Sur demande
Weldon DIN 1835B

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.

Geometria di taglio

Cutting geometry - Géométrie de coupe

Scanalature diritte progettate per lavorare materiali ad alta resistenza fino a 1400 N/mm², ghise e leghe di alluminio Si>10%.

Straight flutes designed for working high strength steel up to 1400, cast iron and aluminium alloys Si>10%.

Goujournes droites pour haute résistance jusqu'à 1400 N/mm², fonte, alliage Al Si >10%.

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.

Lunghezza filetto ridotta

Thread length reduced

Comporta una riduzione degli sforzi torsionali dovuta alla riduzione dell'attrito.

Short thread for reduced friction and low torque.

Filet court pour une friction réduite et un couple faible.



FOR

Lubrificazione interna con uscita assiale.

Through coolant, axial flow.

Lubrification interne à sortie axiale.



FOR Y

Lubrificazione interna con uscita radiale.

Through coolant, radial flow.

Lubrification interne à sortie radiale.



Filettature – Thread – Filetage

M	pag	5 - 7
MF	pag	8 - 10
GAS	pag	11 - 12

Materiale – Material – Matériau

PM3 Acciaio sinterizzato ad alta % di Co & V – Powdered metallurgy with high % Co and V – Acier fritté avec 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, l'oxydation et facilite le glissement des copeaux

Campo applicativo – Application field – Champs d'applications

1.1 1.2 1.3 1.4 1.5	Acciaio – Steel – Acier
2.1 2.2 2.3 2.4	Acciai INOX – Stainless Steel – Acier inoxydable
3.1 3.2 3.3 3.4 3.5	Ghisa – Cast iron – Fonte
4.1 4.2 4.3 4.4 4.5 4.6	Alluminio, Magnesio – Aluminium, Magnesium – Aluminium, Magnésium
5.1 5.2 5.3 5.4	Rame – Copper – Cuivre
6.1 6.2	Titanio – Titanium – Titane
7.1 7.2	Nichel – Nickel
8.2 8.3	Materie plastiche – Synthetic materials – Matières plastiques
10.1	Grafite – Graphite



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

S20 Tagli dritti – Straight flutes – Goujures droites

Per fori passanti – For through holes – Pour trous débouchants

S24 Imbocco corretto – Spiral pointed – Goujures Droites avec entrée Gun

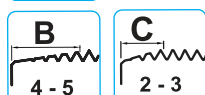
Fori ciechi – For blind holes – Trous borgnes

S80 Elica 40° dx rastremazione posteriore – Spiral flutes 40° rh, back tapered thread – Hélice 40° droite détalonnage arrière

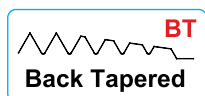
Legenda icone – Icon description – Légende icônes



Filettatura destra – Right thread – Filetage à droite



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



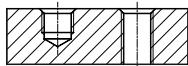
Rastremazione posteriore a botte del filetto – Back tapered thread – Détalonnage arrière



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

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

TOP



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

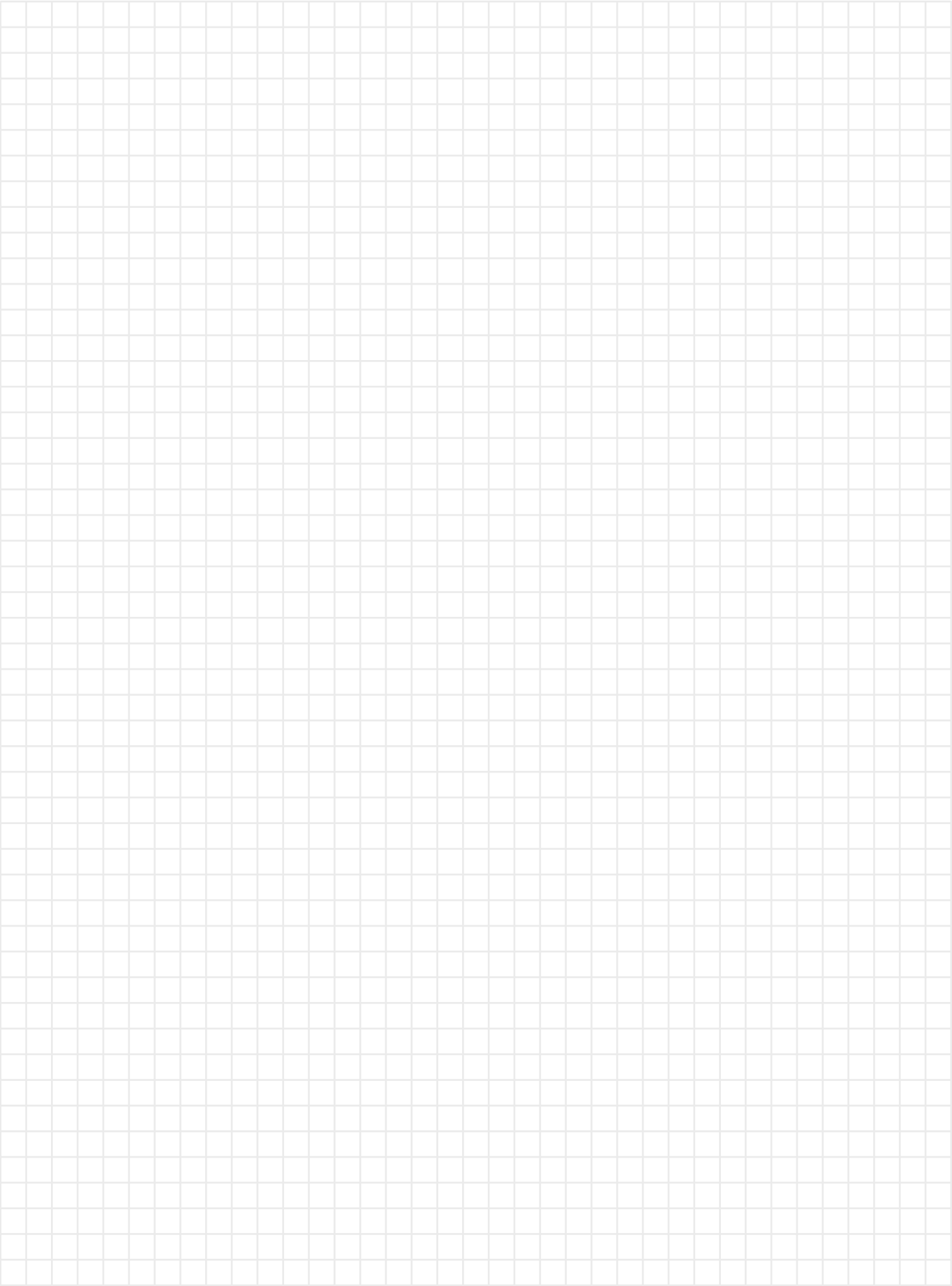
- Utilizzo accettabile - velocità di taglio m/min
- Acceptable Use - cutting speed m/min
- Utilisation acceptable - vitesse de coupe m/min

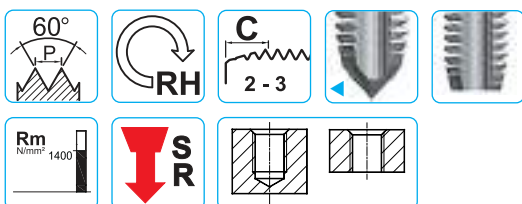
Indicazione numero di pagina
Page number
Numéro de page

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Note



**SYNCHRO
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MASCHIATURA RIGIDA SINCRONIZZATA
Rigid Tapping Synchro - Taraudage rigide synchronisé
MASCHI A MACCHINA
MACHINE TAPS - TARAUDS MACHINE
**DIN
371**
**DIN
371**
**UFS
norm**

top

top

top

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

Ghisa / Cast iron / Fonte

Acciaio alta resistenza

Hight resistance Steel

Haute Résistance

Al Si>10%

Numero gruppi materiali

Material's groups number

Nombre de groupes du matériau

3xD
PM3
6HX
TXC

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

3,5xD
PM3
6HX
TXC

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

3,5xD
PM3
6HX
TXC

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 10xP	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	

CODICE - CODE			
S20M...TXC	S20M...FOR-TXC	S20M...FORY-TXC	
○	○	○	
○	○	○	
○	○	○	

UFS norm	Ød1 M	P mm	L ₁	L ₂ 10xP	d ₂ h6	a h12	Z	
12	1,75	110	18	12	9	4	10,3	
14	2	110	20	12	9	4	12	
16	2	110	20	16	12	4	14	

CODICE - CODE			
S20M...TXC	S20M...FOR-TXC	S20M...FORY-TXC	
○	○	○	
○	○	○	
○	○	○	

 A richiesta:
On request:
Sur demande:

 Con **Weldon** DIN1835 B

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

€ Pagina listino - Price list page

● Standard

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

 ★ Solo a richiesta
Only on request / Sur demande

SYNCHRO RIGID

MASCHIATURA RIGIDA SINCRONIZZATA

Rigid Tapping Synchro - Taraudage rigide synchronisé

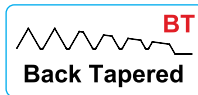
MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE

DIN 371

DIN 371

UFS norm



top



BT

R40°

top



BT

R40°

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

1.1 1.2 1.3 1.4 1.5

1.1 1.2 1.3 1.4 1.5

2.1 2.2 2.3 2.4 3.3 3.4

2.1 2.2 2.3 2.4 3.3 3.4

4.2 4.3 5.2

4.2 4.3 5.2

DIN 371	Ød1 M	P mm	L ₁	L ₂ 10xP	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	

CODICE - CODE			
S80M...TXC	S80M...FOR-TXC		
○	○		
○	○		
○	○		

UFS norm	Ød1 M	P mm	L ₁	L ₂ 10xP	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	

CODICE - CODE			
S80M...TXC	S80M...FOR-TXC		
○	○		
○	○		
○	○		

A richiesta:
On request:
Sur demande:



Con Weldon DIN1835 B

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

€ Pagina listino - Price list page

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● Standard

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

★ Solo a richiesta
Only on request / Sur demande

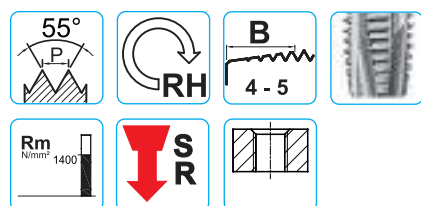
**SYNCHRO
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MASCHIATURA RIGIDA SINCRONIZZATA

Rigid Tapping Synchro - Taraudage rigide synchronisé

MASCHI A MACCHINA

MACHINE TAPS - TARAUDS MACHINE



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

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3xD

PM3

ISO 228X

TXC

1.1 1.2 1.3 1.4 1.5

2.1 2.2 2.3 2.4 3.3 3.4

4.1 4.2 4.3 4.5 4.6 5.1

5.2 5.3 6.1 6.2 7.1 7.2

top



3.5xD

PM3

ISO 228X

TXC

1.1 1.2 1.3 1.4 1.5

2.1 2.2 2.3 2.4 3.3 3.4

4.1 4.2 4.3 4.5 4.6 5.1

5.2 5.3 6.1 6.2 7.1 7.2

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A richiesta:
On request:
Sur demande:

Con **Weldon** DIN1835 B



Confezione: Singola
Box: Single
Colis: unique

€ Pagina listino - Price list page

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94

- Standard

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

★ Solo a richiesta
Only on request / Sur demande

1		Acciaio - <i>Steel</i> - <i>Acier</i>		
1.1		Acciaio dolce magnetico Rm < 400 N/mm², < 120 HB		
		Magnetic soft steel - <i>Acier doux magnétique</i>		
		W-Nr.	DIN - Germany	UNI - Italy
		1.1013	RFe100	-
		1.1014	Rfe80	-
		1.1015	Rfe60	-
1.2		Acciaio da costruzione, da cementazione, automatico Rm < 700 N/mm², < 200 HB		
		Structural steel, case carburizing steel, free cutting steel - <i>Acier de construction, en acier trempé</i>		
		W-Nr.	DIN - Germany	UNI - Italy
Acciaio da costruzione <i>Structural steel</i> <i>Acier de construction</i>		1.0037	St37-2	Fe360B
		1.0044	St44-2	Fe430B
		1.0050	St50-2	Fe490
		1.0060	St60-2	Fe590
		1.0070	St70-2	Fe690
		1.0570	St52-3	Fe510B, C, D
		1.0301	C10	C10
Acciaio da cementazione Case carburizing steel <i>Acier trempé</i>		1.0401	C15	C15
		1.0402	C22	C20, C21
		1.0406	C25	C25
		1.7131	16MnCr5	16MnCr5
		1.7147	20MnCr5	20MnCr5
		1.5919	15CrNi6	16CrNi4
		1.6523	21NiCrMo2	20NiCrMo2
		1.6587	17CrNiMo6	18NiCrMo7
Acciaio automatico (AVP) <i>Free cutting steel</i> <i>Acier automatique</i>		1.0711	9S20	CF10S20
		1.0715	9SMn28	CF9SMn28
		1.0718	9SMnPb28	CF9SMnPb28
		1.0726	35S20	CF35SMn10
		1.0736	9SMn36	CF9SMn36
		1.0737	9SMnPb36	CF9SMnPb36
1.3		Acciaio al carbonio Rm < 850 N/mm², < 250 HB		
		Plain carbon steel - <i>Acier au carbone</i>		
		W-Nr.	DIN - Germany	UNI - Italy
Da bonifica <i>Heat-treatable steel</i> <i>De revenu</i>		1.0528	C30	-
		1.0501	C35	C35
		1.0511	C40	C40
		1.0503	C45	C45
		1.0540	C50	-
		1.0535	C55	C55
		1.0601	C60	C60
		1.1178	Ck30	-
		1.1181	Ck35	C35
		1.1191	Ck45	C46

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

	W-Nr.	DIN - Germany	UNI - Italy
Per molle <i>Spring steel</i> <i>Pour les ressorts</i>	1.1231	Ck67	C70
	1.1248	Ck75	C75
	1.1269	Ck85	C85
	1.1274	Ck101	C100
Da tempra superficiale <i>Surface hardening</i> <i>De durcissement de surface</i>	1.1183	Cf35	C36, C38
	1.1193	Cf45	C43
	1.1213	Cf53	C53
Acciaio legato <i>Alloyed steel</i> <i>Acier allié</i>	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>	
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
Da nitrurazione <i>Nitriding steel</i> <i>De nitruration</i>	1.6565	40NiCrMo6	-
	1.8515	31CrMo12	31CrMo12
	1.8519	31CrMoV9	-
	1.8507	34CrAlMo7	34CrAlMo7
Da cuscinetti <i>Ball bearing steel</i> <i>Roulements</i>	1.8509	41CrAlMo7	41CrAlMo7
	1.3505	100Cr6	100Cr6
Per molle <i>Spring steel</i> <i>Ressorts</i>	1.3537	100CrMo7	100CrMo7
	1.5025	51Si7	48Si7
	1.5026	56Si7	55Si7
	1.5027	60Si7	
	1.7108	60SiCr7	60SiCr8
	1.8159	50CrV4	50CrV4
	1.7176	55Cr3	55Cr3
Fusioni d'acciaio (ghisa acciaiosa) <i>Steel castings</i> <i>Acier coulé</i>	1.7701	51CrMoV4	-
	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	-

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

	W-Nr.	DIN - Germany	UNI - Italy
Per tempra superficiale <i>Surface hardening</i> <i>De durcissement de surface</i>	1.7005	45Cr2	-
	1.7006	46Cr2	46Cr2
	1.7043	38Cr4	-
	1.7034	37Cr4	36CrMn4
	1.7223	41CrMo4	41CrMo4
Per lavorazioni a caldo <i>Hot work tool steel</i> <i>Travail à chaud</i>	1.2767	45NiCrMo16	42NiCrMo 15 7
	1.2713	55NiCrMoV6	-
	1.2714	55NiCrMoV7	55NiCrMoV7KU
	1.2311	40CrMnMo7	35CrMo8KU
	1.2365	X32CrMoV3-3	30CrMoV12-27KU
	1.2343	X38CrMoV5-1	X37CrMoV5-1KU
	1.2344	X40CrMoV5-1	X40CrMoV5-1-1KU
	1.2567	X30WCrV5-3	X30WCrV5-3KU
Per lavorazioni a freddo <i>Cold work tool steel</i> <i>Travail à froid</i>	1.2581	X30WCrV9-3	X30WCrV9-3KU
	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)
2	Acciaio INOX - <i>Stainless Steel</i> - <i>Acier inoxydable</i>		
2.1	Acciaio INOX automatico Rm < 850 N/mm², < 250 HB		
	<i>Free machining stainless steel - Automatique acier inoxydable</i>		
	W-Nr.	DIN - Germany	UNI - Italy
	1.4104	X14CrMoS17	X10CrS17 (AISI 430F)
	1.4305	X8CrNiS18-9	X10CrNiS18-9 (AISI 303)

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

2.2	Austenitico Rm < 850 N/mm², < 250 HB		
	Austenitic stainless steel - 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	X2CrNiMo17-13-2	X2CrNiMo17-12 (AISI 316L)
	1.4406	X2CrNiMoN17-12-2	X2CrNiMoN17-12 (AISI 316LN)
	1.4435	X2CrNiMo18-14-3	X2CrNiMo17-13
	1.4438	X2CrNiMo18-16-4	X2CrNiMo18-15 (AISI 317L)
	1.4541	X6CrNiTi18-10	X6CrNiTi18-11 (AISI 321)
	1.4550	X6CrNiNb18-10	X8CrNiNb18-11 (AISI 347)
	1.4828	X15CrNiSi20-12	X16CrNi23-14
	1.4841	X15CrNiSi25-20	X16CrNiSi25-20 (AISI 314)
	1.4845	X12CrNi25-21	X6CrNi25-20 (AISI 310S)
2.3	Ferritico, Ferritico + Austenitico, Martensitico Rm < 1100 N/mm², < 320 HB		
	Ferritic, ferritic + austenitic, martensitic - Ferritique, ferritique + austénitique, martensitique		
	W-Nr.	DIN - Germany	UNI - Italy
Ferritico <i>Ferritic</i> <i>Ferritique</i>	1.4002	X6CrAl13	X6CrAl13 (AISI 405)
	1.4003	X2Cr11	X2CrNi12
	1.4016	X6Cr17	X8Cr17 (AISI 430)
	1.4510	X6CrTi17	X6CrTi17 (AISI 430Ti)
	1.4509	X2CrTiNb18	X2CrTiNb18
	1.4512	X5CrTi12	X6CrTi12 (AISI 409)
Ferritico + austenitico (Bifasico) <i>Ferritic + austenitic (Duplex)</i> <i>Ferritique+austénitique, (biphasique)</i>	1.4462	X2CrNiMoN22-5-3	X2CrNiMoN22-5-3
	1.4501	X2CrNiMoCuWN25-7-4	X2CrNiMoCuWN25-7-4
Martensitico <i>Martensitic</i> <i>Martensitique</i>	1.4006	X10Cr13	X12Cr13 (AISI 410)
	1.4005	X12Cr513	X12Cr513 (AISI 416)
	1.4021	X20Cr13	X20Cr13 (AISI 420)
	1.4028	X30Cr13	X30Cr13
	1.4057	X17CrNi16-2	X16CrNi16 (AISI 431)
	1.4125	X105CrMo17	(AISI 440C)
2.4	Leghe Cr-Ni resistenti alle alte temperature Rm 1100 ÷ 1400 N/mm², 330 ÷ 410 HB		
	Cr-Ni alloys high temperatures resistant - Alliages Cr-Ni résistant à des températures élevées		
	W-Nr.	DIN - Germany	UNI - Italy
Indurente per precipitazione <i>Precipitation hardening</i> <i>Durcissement par précipitation</i>	1.4542	X5CrNiCuNb16-4	(AISI 630, 17-4 PH)
	1.4545	X4CrNiCu16-6	(15-5 PH)
	1.4568	X7CrNiAl17-7	(17-7 PH)
	1.4922	X20CrMoV11-1	-
	1.4939	X12CrNiMo12	-
	1.4944	-	(AISI 660)
	1.4980	X6NiCrTiMoVB25-15-2	

3	Ghisa - Cast Iron - Fonte		
3.1	Ghisa grigia lamellare Rm < 600 N/mm², < 180 HB		
	<i>Lamellar grey cast iron - Fonte grise lamellaire</i>		
	W-Nr.	DIN - Germany	UNI - Italy
	0.6010	GG-10	G 10
3.2	0.6015	GG-15	G 15
	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>		
3.3	W-Nr.	DIN - Germany	UNI - Italy
	0.6025	GG-25	G 25
	0.6030	GG-30	G 30
	0.6035	GG-35	G 35
3.4	0.6040	GG-40	G 40
	Ghisa sferoidale Rm < 1000 N/mm², < 300 HB		
	<i>Nodular cast iron - Fonte ductile</i>		
	W-Nr.	DIN - Germany	UNI - Italy
3.5	0.7033	GGG-35.3	-
	0.7040	GGG-40	GS400-12
	0.7043	GGG-40.3	GSO 42/17
	0.7050	GGG-50	GS500-7
	0.7060	GGG-60	GS600-3
	0.7070	GGG-70	GS700-2
	0.7080	GGG-80	GS800-2
	0.7670	GGG-Ni22	-
	0.7683	GGG-Ni35	-
	0.7660	GGG-NiCr20-2	-
	0.7677	GGG-NiCr30-1	-
	0.7685	GGG-NiCr35-3	-
	Ghisa malleabile Rm < 700 N/mm², < 210 HB		
	<i>Malleable cast iron - Fonte malléable</i>		
3.6	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	-
3.7	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)
3.8			(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
	3.0205	Al99	3567 (9001/1)
	3.0255	Al99.5	4507 (9001/2)
	3.0285	Al99.8	4509 (9001/4)
	3.0305	Al99.9	-
	3.3208	Al99.9MgSi	-
	3.3308	Al99.9Mg0.5	-
	3.3318	Al99.9Mg1	-
4.2	Leghe di Al, Si < 0,5% - truciolo lungo Rm < 500 N/mm², < 150 HB <i>Al alloys, long chipping - Alliage, coupeaux longs</i>		
	W-Nr.	DIN - Germany	UNI - Italy
Si < 0,5% Leghe da deformazione plastica <i>Al wrought alloys</i> <i>Alliages par déformation plastique</i>	3.0505	AlMn0.5Mg0.5	(AISI 3105)
	3.0915	AlFeSi	(AISI 8011A)
	3.3315	AlMg1	5764 (5005, Peraluman100)
	3.3525	AlMg2Mn0.3	(AISI 5251)
	3.3527	AlMg2Mn0.8	(AISI 5049)
	3.3545	AlMg4Mn	(AISI 5086)
	3.3555	AlMg5	(AISI 5056A)
	3.0615	AlMgSiPb	(AISI 6012)
	3.1255	AlCuSiMn	3581 (AISI2014)
	3.1325	AlCuMg1	3579 (AISI 2017A, Avional 100)
	3.1355	AlCuMg2	3583 (AISI 2024, Avional 150)
	3.3547	AlMg4.5Mn	7790 (AISI 5083, Peraluman 460)
	3.3206	AlMgSi0.5	3569 (AISI 6060, Anticorodal 050)
	3.2315	AlMgSi1	3571 (AISI 6082, Anticorodal 110)
	3.4365	AlZnMgCu1.5	3735 (AISI 7075, Ergal 55)
Si < 0,5% Leghe da getti <i>Al casting alloys</i> <i>Tarauds pour alliages coulée</i>	3.1371	G-AlCu4TiMg	-
	3.3241	G-AlMg3Si	-
	3.3261	G-AlMg5Si	-
	3.3541	G-AlMg3	-
4.3	Leghe di Al, Si < 10% - truciolo medio Rm < 500 N/mm², < 150 HB <i>Al alloys, medium chipping - Alliage Al - coupeaux moyens</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	MgAl6Zn3	(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		
5.1	Rame puro, rame elettrolitico - truciolo lungo Rm < 350 N/mm², < 100 HB		
	<i>Cooper unalloyed, long chipping - Cuivre pur, cuivre électrolytique, coupeaux longs</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
	2.0040	OF-Cu	-
	2.0060	E-Cu57	-
	2.0065	E-Cu58	-
	2.0070	Se-Cu	-
	2.0076	SW-Cu	-
	2.0090	SF-Cu	-
5.2	Leghe di rame, α ottone - truciolo lungo Rm < 700 N/mm², < 200 HB		
	<i>Cooper alloys, soft brass, long chipping - Alliages de cuivre, αlaiton, coupeaux longs</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
Ottone / Brass / Laiton	2.0240		CuZn15, Ms85 -
	2.0250	CuZn20, Ms80	-
	2.0265	CuZn30, Ms70	-
	2.0280	CuZn33, Ms67	-
	2.0321	CuZn37, Ms63	-
	2.0335	CuZn36, Ms64	-
Bronzo / Bronze	2.1016	CuSn4	-
	2.1020	CuSn6	-
	2.1030	CuSn8	-
	2.1080	CuSn6Zn6	-
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, βlaiton, 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)
Bronzo / Bronze	2.1086	G-CuSn10Zn	-
	2.1093	G-CuSn6ZnNi	-
	2.1096	G-CuSn5ZnPb	-

Continua Bronzo / Continue Bronze / Bronze à suivre ➤

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	-
6	-	CuAl11Fe4	(Ampco 20)
	2.0882	CuNi30MnFe	-
	Titanio - <i>Titanium</i> - <i>Titane</i>		
	Titanio non legato Rm < 700 N/mm², < 200 HB		
	<i>Titanium unalloyed - Titane non allié</i>		
	W-Nr.	DIN - Germany	Altro / Other / Autres
	3.7024	Ti99.8	T35, Grade 1
	3.7034	Ti99.7	T40, Grade 2
6.1	3.7055	Ti99.6	T50, Grade 3
	3.7064	Ti99.5	T60, Grade 4
	Leghe di titanio Rm < 900 N/mm², < 270 HB		
	<i>Titanium alloys - Alliages de titane</i>		
	W-Nr.	DIN - Germany	Altro / Other / Autres
	3.7124	TiCu2	-
	3.7154	TiAl6Zr5	-
	3.7164, 3.7165	TiAl6V4	Grade 5
6.2	3.7174	TiAl6V6Sn2	-
	3.7184	TiAl4Mo4Sn2	-
	7		
	Nichel - <i>Nickel</i> - <i>Nickel</i>		
	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	-
7.1	1.3926	Rni12	-
	1.3927	Rni8	-
	2.4061	Ni99,6	Nickel 205
	2.4066	Ni99,2	Nickel 200
	2.4068	LC-Ni99	Nickel 201
	Leghe di Nichel Rm < 900 N/mm², < 270 HB		
	<i>Nickel alloys - Alliages de Nickel</i>		
	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
7.2	1.3912	X2Ni36	Invar
	2.4360	NiCu30Fe	Monel 400
	2.4375	NiCu30Al	Monel K500

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

7.2	W-Nr.	DIN - Germany	Denom. comm./Trade name/Nom comm.
	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
8	Materie plastiche - <i>Synthetic materials</i> - <i>Matériaux de plastique</i>		
8.1	Materiali termoplastici - truciolo extralungo Rm < 80 N/mm²		
	<i>Thermoplastics, extra long chipping - Matériaux thermoplastique, coupeaux extra-longue</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	Resine + Fibra di carbonio
	GFK	Glass fibre	Resine + fibre di vetro
	SFK	Synthetic fibre	Resine + fibre sintetiche
10	Grafite - <i>Graphite</i>		
10.1	Grafite 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



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UFS S.r.l. - via Giotto, 20 - 10080 Sparone (TO) - Italy - Tel. 0039 0124 818001 - Fax 0039 0124 818003 - www.ufs.it