



SELEZIONE RAPIDA PER TIPO DI FORO

04/2021

ANDORNO S.r.l.
UTENSILERIA MOLE ABRASIVE STRUMENTI

WWW.ANDORNO.IT

“Reliable screw threads” is
YAMAWA’s theme



 Think threads with
YAMAWA

La Selezione Rapida per tipo di foro è uno strumento portatile e sempre pronto all'uso.

Il catalogo generale è insostituibile per la completezza delle informazioni riportate. Ben consapevoli che fuori dal proprio ufficio è complicato disporre di un catalogo così voluminoso, abbiamo cercato di racchiudere in poche pagine le informazioni più importanti per la più corretta e professionale proposta della gamma Yamawa. In sole due fasi, la Selezione Rapida per tipo di foro fornisce: nome prodotto, una breve descrizione, pagina del catalogo, velocità di taglio, prezzo di listino e codice del maschio più adatto alla propria lavorazione.

PROCEDURA DI SELEZIONE

FASE 1. → Selezionare il tipo di foro:



Cieco



Passante

FASE 2. → Selezionare la "TAP SERIES" più adatta in base alle specifiche esigenze del cliente (fabbricazione di piccoli o grandi lotti, parco macchine più o meno moderno, focus sul costo o sulle performance dell'utensile).



Z-PRO Series

L'evoluzione della maschiatura ad alto rendimento. Soluzioni alto performanti per un'ampia gamma di materiali e applicazioni. La serie Z-Pro rappresenta l'eccezionale risultato di quasi 100 anni di esperienza nel combinare materiali di base di alta qualità e rivestimenti di ultima generazione con geometrie di taglio innovative.



GP GENERAL PURPOSE Series

La soluzione ideale per produzione di piccoli lotti. Applicabile su vari materiali.



MP MULTI PURPOSE Series

Soluzione ad alto rendimento per una vasta gamma di materiali. Per aziende che ricercano utensili performanti, affidabili e versatili.



MS MATERIAL SPECIFIC Series

Questa serie di prodotti è caratterizzata da utensili con geometrie di taglio studiate per ottenere le migliori performance (durata e affidabilità) su materiali specifici.



HS HIGH SPEED Series



Questa serie di prodotti è stata sviluppata con geometria di taglio, substrato e trattamento superficiale specifici per garantire lunga durata anche alle alte velocità. Per aziende che ricercano il cost-saving grazie alla riduzione del tempo-ciclo.

RISULTATO: - Nome del prodotto e breve descrizione
(materiale, rivestimento, tolleranza, imbocco) del maschio
- Pagina del catalogo
- Velocità di taglio
- Prezzo di listino e codice

La Selezione Rapida per tipo di foro rappresenta una raccolta delle tipologie e dimensioni (M3÷M30; MF 8x1÷MF 20x1.5; G1/8÷G1/2) più comunemente usate. Per la gamma completa fare sempre riferimento al catalogo generale European Catalogue YEU21.

INDICE








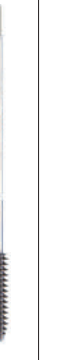






Scelta del maschio per foro cieco		4
Listino prezzi per foro cieco		6
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Scelta del maschio per foro passante		10
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MATERIALI	DUREZZE/Rm	W.-NR	DIN	AISI-ASTM OR TRADE MARK
P1 Acciai automatici e acciai strutturali	< 500 N/mm ²	1.0116 1.0401 1.0715	St 37-3 C 15 95Mn 28	AVP
P2 Acciai al carbonio e basso legati	500 ÷ 700 N/mm ²	1.0503 1.1221 1.7131 1.7147	C 45 Ck 60 16 MnCr 5 20 MnCr 5	1045 1064 5115 5120
P3 Acciai medio legati e acciai di bonifica	600 ÷ 800 N/mm ²	1.2330 1.7035 1.7218 1.7225	35 CrMo 4 41 Cr 4 25 CrMo 4 42 CrMo 4	4135 5140 4130 4142, 4140
P4 Acciai alto legati	800 ÷ 1000 N/mm ²	1.1231 1.1545 1.2510 1.3505	Ck 67 C 105 W1 100 MnCrW 4 100 Cr 6	1070 W1 O1 52100
P5 Acciai per utensili	900 ÷ 1200 N/mm ²	1.2311 1.2343 1.2344 1.2713	40 CrMnMo 7 X 38 CrMoV 5 1 X 40 CrMoV 5 1 55 NiCrMoV 6	ORVAR - W302
P6 Acciai ad alta resistenza	1200 ÷ 1480 N/mm ² 38 ÷ 45 HRC	1.6546	40 NiCrMo 2 2	HARDOX 400® TOOLOX 44®
P7 Acciai inossidabili ferritici e martensitici		1.4000 1.4016 1.4021	X 6 Cr 13 X 6 Cr 17 X 20 Cr 13	403 430 420
P8 Acciai inossidabili PH - indurenti per precipitazione		1.4540 1.4548	X 4 CrNiCuNb 16 4 X 5 CrNiCuNb 17 4	15-5-PH 17-4-PH
M1 Acciai inossidabili austenitici (buona lavorabilità)		1.4301 1.4305 1.4306	X 5 CrNi 18 10 X 10 CrNiS 18 9 X 2 CrNi 19 11	304 303 304 L
M2 Acciai inossidabili austenitici (media lavorabilità) e Duplex		1.4401 1.4435 1.4571	X 5 CrNiMo 17 12 2 X 2 CrNiMo 18 14 3 X10 CrNiMoTi 18 10	316 316 L 316 Ti
M3 Acciai inossidabili super austenitici e super Duplex		1.4410 1.4539 1.4943	X 2 CrNiMoN 25 7 4 X 2 NiCrMoCu 25 20 5 X 4 NiCrTi 25 15	F 53 904L 660
K1 Ghise grigie	150 ÷ 250 HB	0.6020 0.6025	GG-20 GG-25	A48 30 B A48 35 B
K2 Ghise sferoidali	150 ÷ 350 HB	0.7040 0.7050 0.7070	GGG 40 GGG 50 GGG 70	A536, 80-55-06 A536, 100-70-03
K3 Ghise austenitiche	120 ÷ 260 HB	0.6660 0.7660	GGL-NiCr 20 2 GGG-NiCr 20 2	A436 Type 2 A436 Type D-2
K4 Ghise ADI	250 ÷ 500 HB	-	GJS-800-8 GJS-1000-5	ADI 800 ADI 1000
N1 Leghe di alluminio ≤ 12% Si		3.0505 3.3206	AlMn0,5Mg0,5 AlMgSi0,5	Anticorodal 063 Ergal
N2 Leghe di alluminio > 12% Si e alluminio-magnesio		3.2382 3.5103	G-AlSi12 G-MgSe3Zn2Zr1	A413.2 AMS 4442
N3 Leghe di rame		2.0060 2.0321	E-Cu57 CuZn37	-
N4 Leghe di ottone e leghe di bronzo		2.0220 2.0401 2.1020	CuZn5 CuZn39Pb3 CuSn6	OT-58
S1 Leghe a base di nichel resistenti al calore (buona lavorabilità)	< 25 HRC	2.4856	NiCr17Mo17Few NiCr19Fe19NbMo	Hastelloy C (casting) Inconel 625 (casting)
S2 Leghe a base di nichel resistenti al calore (media lavorabilità)	25 ÷ 35 HRC	2.4856 2.4668	NiCr22Mo9Nb NiCr19Fe19NbMo	Inconel 625 (forged) Inconel 718 (casting)
S3 Leghe a base di nichel resistenti al calore (difficile lavorabilità)	35 ÷ 45 HRC	2.4654 2.4668	NiCr20Co14MoTi	Waspalloy (forged) Inconel 718 (forged)
S5 Leghe di titanio alto legate (media lavorabilità)		3.7164	TiAl6V4	Grade 5
H Acciai temprati generali	< 63 HRC	< 63 HRC	< 63 HRC	< 63 HRC

Z-PRO		GP General Purpose		MP Multi Purpose		MS Material Specific	HS High Speed	
MASCHI PER ASPORTAZIONE	MASCHI A RULLARE	MASCHI PER ASPORTAZIONE	MASCHI A RULLARE	MASCHI PER ASPORTAZIONE	MASCHI A RULLARE	MASCHI PER ASPORTAZIONE	MASCHI PER ASPORTAZIONE	
VUSP (10÷25) ★ AUSP (5÷10) ★ HVSP (≤8) ★		SP (5÷10) ☆ SP-BLF V (10÷20) ★	R-D V (10÷20) ★	AU+SP (10÷20) ★	HP RZ (15÷30) ★		HFIHS (20÷50) ★ HFISP (20÷50) ★	P1
VUSP (10÷25) ★ MHSP (10÷30) ★ AUSP (5÷10) ★ HVSP (≤8) ★	MHRZ (10÷30) ★	SP (5÷10) ★ SP-BLF V (10÷20) ★	R-D V (10÷20) ★	AU+SP (10÷20) ★	HP RZ (15÷30) ★	SP-VA (≤10) ★ SP+VA (≤10) ★	HFIHS (20÷50) ★ HFISP (20÷50) ★	P2
VUSP (10÷25) ★ MHSP (10÷25) ★ AUSP (5÷10) ★ HVSP (≤8) ★	MHRZ (10÷30) ★	SP (5÷10) ☆ SP-BLF V (10÷20) ★		AU+SP (10÷20) ★	HP RZ (15÷25) ★	SP-VA (≤10) ★ SP+VA (≤10) ★ ZEN-B (5÷15) ★ PH-SP (5÷10) ☆ PM-SP (2÷10) ☆	HFIHS (20÷30) ★ HFISP (20÷30) ★	P3
VUSP (10÷20) ★ MHSP (10÷20) ★ AUSP (5÷10) ☆ HVSP (≤8) ☆	MHRZ (10÷30) ★	SP (5÷8) ☆ SP-BLF V (10÷15) ★		AU+SP (10÷20) ★	HP RZ (15÷25) ★	PH-SP (2÷7) ★ PM-SP (2÷7) ★ ZEN-B (5÷15) ★ ZET-B (5÷10) ☆ SP-VA (≤10) ☆ SP+VA (≤10) ☆	HFIHS (20÷30) ★ HFISP (20÷30) ★	P4
MHSP (10÷15) ☆						PH-SP (≤5) ★ PM-SP (2÷7) ★ ZEN-B (5÷10) ☆ ZET-B (5÷8) ☆	HFIHS (15÷25) ★ HFISP (15÷25) ★	P5
						PM-SP (2÷5) ★ ZET-B (3÷6) ☆		P6
VUSP (5÷15) ★ AUSP (≤5) ★ HVSP (≤8) ★		SP-BLF V (6÷12) ☆	R-D V (8÷12) ☆	AU+SP (5÷12) ★	HP RZ (10÷25) ★	SP-VA (≤10) ★ SP+VA (≤10) ★ ZEN-B (5÷15) ★	HFIHS (15÷30) ☆ HFISP (15÷30) ☆	P7
						ZEN-B (4÷8) ★ ZET-B (3÷6) ☆		P8
VUSP (5÷15) ★ AUSP (≤5) ★ HVSP (≤8) ★		SP-BLF V (6÷12) ☆	R-D V (8÷12) ☆	AU+SP (5÷12) ★	HP RZ (10÷25) ★	SP-VA (≤10) ★ SP+VA (≤10) ★ ZEN-B (5÷15) ★ SU2-SP (5÷15) ☆	HFIHS (15÷30) ☆ HFISP (15÷30) ☆	M1
VUSP (5÷10) ☆ AUSP (≤5) ★ HVSP (≤8) ★				AU+SP (5÷10) ★	HP RZ (10÷25) ★	SU2-SP (5÷15) ★ ZEN-B (5÷15) ★	HFIHS (15÷25) ☆ HFISP (15÷25) ☆	M2
						SU2-SP (5÷12) ★ ZEN-B (4÷8) ★ ZET-B (3÷6) ☆		M3
						GGST (5÷20) ★ GGST CH (10÷30) ★ GG-HT (5÷10) ★	HFISP (20÷40) ★ HFIHS (20÷40) ☆	K1
VUSP (10÷20) ☆ AUSP (≤5) ☆				AU+SP (5÷15) ☆		GGST (5÷20) ★ GGST CH (10÷30) ★ GG-HT (5÷10) ★ ZET-B (5÷10) ☆	HFISP (20÷40) ★ HFIHS (20÷40) ☆	K2
						GGST (≤10) ★ GGST CH (≤15) ★ GG-HT (≤5) ★ ZET-B (5÷10) ☆		K3
						GGST (≤10) ★ GGST CH (≤10) ★ GG-HT (≤5) ★		K4
VUSP (10÷30) ★ AUSP (5÷15) ★	MHRZ (10÷30) ☆	SP (5÷10) ☆ SP-BLF V (10÷20) ☆	R-D V (10÷20) ☆	AU+SP (20÷30) ★	HP RZ (10÷45) ☆	AL SP (10÷25) ★	HFAHS (30÷100) ★ HFASP (30÷100) ★	N1
VUSP (10÷30) ★ AUSP (5÷15) ★	MHRZ (10÷30) ☆	SP (5÷10) ☆ SP-BLF V (10÷20) ☆	R-D V (10÷20) ☆	AU+SP (20÷30) ★	HP RZ (10÷45) ☆	AL SP (10÷25) ★ GG-HT (5÷10) ☆ GGST (10÷20) ☆ GGST CH (10÷30) ☆	HFAHS (30÷100) ★ HFASP (30÷100) ★	N2
VUSP (10÷25) ☆ AUSP (5÷15) ☆		SP (5÷10) ☆ SP-BLF V (10÷20) ☆	R-D V (10÷20) ☆	AU+SP (10÷20) ☆		AL SP (10÷25) ★		N3
VUSP (10÷20) ☆ AUSP (≤5) ☆		SP (5÷10) ☆ SP-BLF V (10÷20) ☆		AU+SP (10÷20) ☆		AL SP (10÷25) ★ GGST (10÷20) ★ GGST CH (10÷30) ★ GG-HT (5÷10) ★	HFAHS (30÷100) ★ HFASP (30÷100) ★	N4
						ZEN-B (5÷10) ★ SU2-SP (3÷7) ★ ZET-B (5÷10) ☆		S1
						ZEN-B (5÷10) ★ ZET-B (5÷10) ☆		S2
						ZET-B (3÷6) ★		S3
						ZET-B (5÷10) ★		S5
						UH-CT (≤5) ★		H













★ 1a scelta ☆ adatto

	Z-PRO									GP General Purpose			
	VUSP	VUSP E(1.5P)	AUSP	HVSP	MHSP	GGST*	GGST CH*	GGST CH E(1.5P)	MHRZ(B)	SP	SP-BLF V	R-D V	
	HSS-P COATING	HSS-P COATING	HSS-E COATING	HSS-E OX	HSS-Co COATING	HSS-E COATING	HSS-E COATING	HSS-E COATING	HSS-Co COATING	HSS-E	HSS-E COATING	HSS-E COATING	
													
TCTR (tolleranza)	ISO2X(6HX)	ISO2X(6HX)	-	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2(6H)	ISO2(6H)	ISO2X(6HX)	
THCHT (Imbocco)	C(2.5P)	E(1.5P)	2.5P	C(2.5P)	C(2.5P)	C(2.5P)	C(2.5P)	E(1.5P)	2P	C(2.5P)	C(2.5P)	2P	
	80	82	84	88	92	264	266	268	350	94	112	354	
M	DIN371	DIN371		DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	
3x0.5	€ 41,50 3101101035	€ 41,50 3103101035				€ 28,57 3104101035				€ 18,78 SD3.0GANEB	€ 28,13 96473.0TI	€ 37,68 93533.0BTI	
4x0.7	€ 43,27 3101101042	€ 43,27 3103101042				€ 29,05 3104101042				€ 18,78 SD4.0IANEB	€ 28,65 96474.0TI	€ 38,20 93534.0BTI	
5x0.8	€ 43,56 3101101049	€ 43,56 3103101049				€ 29,91 3104101049				€ 19,32 SD5.0KANEB	€ 29,36 96475.0TI	€ 39,49 93535.0BTI	
6x1	€ 43,56 3101101055	€ 43,56 3103101055				€ 29,91 3104101055	€ 42,75 3205101055	€ 42,75 3206101055	€ 67,61 RD6.0MBOCTB	€ 19,32 SD6.0MANEB	€ 29,36 96476.0TI	€ 39,49 93536.0BTI	
8x1.25	€ 45,45 3101101064	€ 45,45 3103101064			€ 53,30 SD8.0NBOCLJ	€ 36,59 3104101064	€ 51,68 3205101064	€ 51,68 3206101064	€ 77,90 RD8.0NBOCTB	€ 22,72 SD8.0NANEB	€ 34,87 96478.0TI	€ 45,85 93538.0BTI	
10x1.5	€ 59,50 3101101078	€ 59,50 3103101078			€ 58,60 SD0100BOCLJ	€ 42,24 3104101078	€ 60,24 3205101078	€ 60,24 3206101078	€ 93,45 RD0100BOCTB	€ 27,34 SD0100ANEB	€ 42,50 96470.10TI	€ 50,90 93530.10BTI	
M	DIN376	DIN376		DIN376	DIN376	DIN376	DIN376	DIN376		DIN376	DIN376	DIN376	
12x1.75	€ 77,55 3101101088	€ 77,55 3103101088		€ 39,00 SG012PSEEXJ	€ 81,75 SG012PBOCLJ	€ 56,44 3104101088	€ 76,58 3205101088	€ 79,55 3206101088	€ 122,08 RG012PBOCTB	€ 36,22 SG012PANEB	€ 53,07 97470.12TI	€ 68,94 93530.12BTI	
14x2	€ 93,62 3101101100	€ 93,62 3103101100		€ 53,50 SG014QSEEXJ	€ 112,01 SG014QBOCLJ	€ 70,32 3104101100	€ 95,94 3205101100	€ 95,94 3206101100		€ 43,63 SG014QANEB	€ 65,91 97470.14TI	€ 79,40 93530.14BTI	
16x2	€ 131,01 3101101114	€ 131,01 3103101114		€ 67,93 SG016QSEEXJ	€ 143,83 SG016QBOCLJ	€ 84,69 3104101114	€ 115,51 3205101114	€ 115,51 3206101114		€ 55,29 SG016QANEB	€ 79,73 97470.16TI	€ 100,40 93530.16BTI	
18x2.5				€ 88,73 SG018RTEEXJ		€ 105,63 3104101128	€ 150,02 3205101128			€ 72,55 SG018RANEB	€ 103,70 97470.18TI		
20x2.5				€ 116,03 SG020RTEEXJ		€ 122,19 3104101141	€ 178,71 3205101141			€ 81,94 SG020RANEB	€ 119,74 97470.20TI		
22x2.5				€ 148,33 SG022RTEEXJ		€ 149,64 3104101156				€ 104,46 SG022RANEB	€ 148,02 97470.22TI		
24x3				€ 185,64 SG024STEEXJ		€ 183,95 3104101167				€ 112,39 SG024SANEB	€ 172,75 97470.24TI		
27x3				€ 268,45 SG027STEEXJ						€ 149,48 SG027SANEB			
30x3.5				€ 292,02 SG030TBEEEXJ						€ 183,95 SG030TANEB			
	Vc (m/min)												
ISO P	5 ÷ 25	5 ÷ 25	5 ÷ 10	3 ÷ 8	10 ÷ 30					10 ÷ 30	5 ÷ 10	6 ÷ 20	10 ÷ 20
ISO M	5 ÷ 15	5 ÷ 15	≤5	3 ÷ 8								6 ÷ 12	8 ÷ 12
ISO K			≤5			5 ÷ 20	10 ÷ 30	10 ÷ 30					
ISO N	10 ÷ 30	10 ÷ 30	5 ÷ 15			10 ÷ 20	10 ÷ 30	10 ÷ 30	10 ÷ 30	10 ÷ 30	5 ÷ 10	10 ÷ 20	10 ÷ 20
ISO S													
ISO H													















*Disponibilità GGST e GGST CH legata all'esaurimento stock di GG-HT Coating e GG-HT-OH Coating

MP Multi Purpose		MS Material Specific									HS High Speed			
AU+SP	HP+RZ HP-RZ	PM-SP	PH-SP	SP-VA	SP+VA	SU2-SP	AL-SP	ZEN-B	ZET-B	UH-CT	HFISP	HFHHS	HFAHS	
HSS-E COATING	HSS-P COATING	HSS-P	HSS-E OX	HSS-E OX	HSS-E OX	HSS-E OX	HSS-E NI	HSS-P OX	HSS-P NI	HF CARBIDE COATING	HSS-Co COATING	HSS-Co COATING	HSS-Co COATING	
														
Version Up		≤45 HRC	≤35 HRC		Version Up			HRSA (Ni)	HRSA (Ti)	45÷63 HRC				
ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2(6H)	ISO2(6H)	ISO2(6H)	ISO2(6H)	ISO2(6H)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	
C(2.5P)	2P	2.75P	3P	C(2.5P)	C(2.5P)	C(2.5P)	C(2.5P)	3P	3P	5P	C(2.5P)	C(2.5P)	C(2.5P)	
120	358	126	124	132	130	138	140	142	144	400	148	147	149	
DIN371	DIN371	DIN371	DIN371	DIN371	YMW	DIN371	DIN371	DIN371	DIN371	YMW	YMW	YMW	YMW	
€ 43,84	€ 56,05	€ 27,81	€ 26,15	€ 20,21	€ 22,32	€ 24,24	€ 22,43	€ 40,15	€ 42,11	€ 191,32				
SE3.0GANEV	RE3.0GBFPTB	SD3.0GBDPB	SD3.0GAEX	SD3.0GAGEX	SE3.0GAGEX	SD3.0GAGEXJ	SE3.0GALEN	SD3.0GBJPX	SD3.0GBIPN	TD3.0GBBWA5				
€ 45,72	€ 60,28	€ 27,81	€ 26,15	€ 20,21	€ 22,58	€ 24,24	€ 22,43	€ 40,15	€ 40,15	€ 202,04				
SE4.0IANEV	RE4.0IBFPTB	SD4.0IBDPB	SD4.0IAEX	SD4.0IAGEX	SE4.0IAGEX	SD4.0IAGEXJ	SE4.0IALEN	SD4.0IBJPX	SD4.0IBIPN	TD4.0IBBWA5				
€ 46,01	€ 64,67	€ 28,27	€ 26,92	€ 20,84	€ 22,95	€ 25,20	€ 23,12	€ 41,52	€ 41,52	€ 212,94				
SE5.0KANEV	RE5.0KBFPB	SD5.0KBDBP	SD5.0KAEX	SD5.0KAGEX	SE5.0KAGEX	SD5.0KAGEXJ	SE5.0KALEN	SD5.0KBJPX	SD5.0KBIPN	TD5.0KBBWA5				
€ 46,01	€ 64,67	€ 28,48	€ 26,92	€ 20,84	€ 23,12	€ 25,20	€ 23,12	€ 41,52	€ 41,52	€ 230,45	€ 55,10	€ 55,10	€ 55,10	
SE6.0MANEV	RE6.0MBFPTB	SD6.0MBDBP	SD6.0MAEX	SD6.0MAGEX	SZ6.0MAGEX	SD6.0MAGEXJ	SE6.0MALEN	SD6.0MBJPX	SD6.0MBIPN	TD6.0MBBWA5	SY6.0MBEDTHZ	SY6.0MBEDTZ	SY6.0MBLDTZ	
€ 48,37	€ 80,31	€ 33,27	€ 32,76	€ 24,96	€ 27,59	€ 30,53	€ 27,23	€ 50,88	€ 50,88	€ 257,20	€ 71,66	€ 71,66	€ 71,66	
SE8.0NANEV	RD8.0NBFPB	SD8.0NBDBP	SD8.0NAEX	SD8.0NAGEX	SZ8.0NAGEX	SD8.0NAGEXJ	SD8.0NALEN	SD8.0NBJPX	SD8.0NBIPN	TD8.0NBBWA5	SY8.0NBEDTHZ	SY8.0NBEDTZ	SY8.0NBLDTZ	
€ 58,79	€ 91,57	€ 39,71	€ 39,34	€ 29,86	€ 32,95	€ 36,48	€ 32,88	€ 61,18	€ 61,18	€ 305,30	€ 90,66	€ 90,66	€ 90,66	
SE0100ANEV	RD0100BFPB	SD0100BDBP	SD0100AEX	SD0100AGEX	SZ0100AGEX	SD0100AGEXJ	SD0100ALEN	SD0100BJPX	SD0100BIPN	TD0100BBWA5	SY0100BEDTHZ	SY0100BEDTZ	SY0100BLDTZ	
DIN376	DIN376	DIN376	DIN376	DIN376	YMW	DIN376	DIN376	DIN376	DIN376	YMW	YMW	YMW	YMW	
€ 76,66	€ 117,29	€ 46,35	€ 50,75	€ 38,44	€ 44,03	€ 45,21	€ 46,46	€ 79,42	€ 79,42	€ 381,90	€ 125,80	€ 125,80	€ 110,90	
SH012PANEV	RG012PBFPB	SG012PDBP	SG012PAEX	SG012PAGEX	SZ012PAGEX	SG012PAGEXJ	SG012PALEN	SG012PBJPX	SG012PBIPN	TG012PBBWA5	SY012PBEDTHZ	SY012PBEDTZ	SY012PBLDTZ	
€ 97,38	€ 163,30	€ 55,72	€ 60,93	€ 46,19		€ 56,94	€ 56,05	€ 100,27	€ 95,74	€ 577,70	€ 188,14	€ 188,14		
SH014QANEV	RG014QBFPB	SG014QDBP	SG014QAEEX	SG014QAGEX		SG014QAGEXJ	SG014QALEN	SG014QBJPX	SG014QBIPN	TG014QBBWA5	OHFBZ006	OHFBZ010		
€ 136,31	€ 154,15	€ 70,35	€ 77,00	€ 58,38		€ 68,50	€ 70,88	€ 121,18	€ 121,18	€ 702,81	€ 244,71	€ 244,71		
SH016QANEV	RG016QBFPB	SG016QDBP	SG016QAEEX	SG016QAGEX		SG016QAGEXJ	SG016QALEN	SG016QBJPX	SG016QBIPN	TG016QBBWA5	OFFBZ004	OFFBZ011		
€ 169,59		€ 88,07	€ 104,42	€ 73,02		€ 93,50		€ 159,09						
SH018RANEV		SG018RDBP	SG018RAEX	SG018RAGEX		SG018RAGEXJ		SG018RBJPX						
€ 219,60		€ 103,82	€ 118,07	€ 86,14		€ 105,35		€ 188,25	€ 179,69	€ 1.115,06				
SH020RANEV		SG020RDBP	SG020RAEX	SG020RAGEX		SG020RAGEXJ		SG020RBJPX	SG020RBIPN	TG020RBBWA5				
		€ 126,28	€ 150,40	€ 104,75										
		SG022RDBP	SG022RAEX	SG022RAGEX										
		€ 143,07	€ 161,75	€ 118,69		€ 145,19		€ 246,32	€ 246,32					
		SG024SDBP	SG024SAEX	SG024SAGEX		SG024SAGEXJ		SG024SBJPX	SG024SBIPN					
		€ 180,71	€ 214,80	€ 149,89										
		SG027SDBP	SG027SAEX	SG027SAGEX										
		€ 232,83	€ 264,25	€ 193,17										
		SG030TDBP	SG030TAEX	SG030TAGEX										
Vc (m/min)														
10 ÷ 20	10 ÷ 30	2 ÷ 10	2 ÷ 10	≤10	≤10	5 ÷ 20		5 ÷ 15	5 ÷ 10		20 ÷ 50	20 ÷ 50		
5 ÷ 12	10 ÷ 25			≤10	≤10	5 ÷ 15		5 ÷ 15	3 ÷ 6		15 ÷ 30	15 ÷ 30		
5 ÷ 15									5 ÷ 10		20 ÷ 40	20 ÷ 40		
10 ÷ 30	10 ÷ 45						10 ÷ 25						30 ÷ 100	
						(Ni)3 ÷ 7		5 ÷ 10	5 ÷ 10					
										1 ÷ 5				

Listino prezzi per foro cieco

	Z-PRO									GP General Purpose		
	VUSP	VUSP E(1.5P)	AUSP	HVSP	MHSP	GGST*	GGST CH*	GGST CH E(1.5P)	MHRZ(B)	SP	SP-BLF V	R-D V
	HSS-P COATING	HSS-P COATING	HSS-E COATING	HSS-E OX	HSS-Co COATING	HSS-E COATING	HSS-E COATING	HSS-E COATING	HSS-Co COATING	HSS-E	HSS-E COATING	HSS-E COATING
												
TCTR (tolleranza)	ISO2X(6HX)	ISO2X(6HX)	-	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2(6H)	ISO2(6H)	ISO2X(6HX)
THCHT (Imbocco)	C(2.5P)	E(1.5P)	2.5P	C(2.5P)	C(2.5P)	C(2.5P)	C(2.5P)	E(1.5P)	2P	C(2.5P)	C(2.5P)	2P
	80	82	84	88	92	264	266	268	350	94	112	354
MF	DIN374	DIN374		DIN374	DIN374	DIN374	DIN374	DIN374	DIN374	DIN374	SP V DIN374	
8x1	€ 50,97 3101101065	€ 50,97 3103101065		€ 58,60 SM010NB0CLJ	€ 42,72 3104101065	€ 69,16 3205101065,00				€ 27,18 SM8.0MANEB	€ 33,53 98408.0MTI	
10x1.25	€ 59,50 3101101079	€ 59,50 3103101079		€ 58,60 SM010MB0CLJ	€ 52,27 3104101079	€ 79,77 3205101079,00	€ 79,77 3206101079	€ 94,75 RM010NB0CTB	€ 32,70 SM010NANEB	€ 43,36 9840010NTI		
10x1	€ 67,83 3101101080	€ 67,83 3103101080		€ 81,75 SM0120B0CLJ	€ 52,27 3104101080	€ 73,85 3205101080,00	€ 73,85 3206101080		€ 32,70 SM010MANEB	€ 43,36 9840010MTI		
12x1.5	€ 77,55 3101101089	€ 77,55 3103101089		€ 81,75 SM012NB0CLJ	€ 58,10 3104101089	€ 90,33 3205101089,00	€ 90,33 3206101089	€ 118,51 RM0120B0CTB	€ 42,38 SM012OANEB	€ 54,08 98400120TI		
12x1.25	€ 77,55 3101101090	€ 77,55 3103101090		€ 112,01 SM0140B0CLJ	€ 58,10 3104101090	€ 82,50 3205101090,00	€ 88,11 3206101090	€ 118,51 RM012NB0CTB	€ 42,38 SM012NANEB	€ 54,08 9840012NTI		
14x1.5	€ 93,62 3101101102	€ 93,62 3103101102		€ 143,83 SM0160B0CLJ	€ 74,20 3104101102	€ 103,52 3205101102,00	€ 103,52 3206101102	€ 157,61 RM0140B0CTB	€ 51,06 SM014OANEB	€ 64,93 98400140TI		
16x1.5	€ 131,01 3101101116	€ 131,01 3103101116			€ 87,36 3104101116	€ 124,63 3205101116,00	€ 124,63 3206101116	€ 191,74 RM0160B0CTB	€ 64,71 SM016OANEB	€ 81,48 98400160TI		
18x1.5					€ 111,66 3104101130	€ 165,68 3205101130,00		€ 266,49 RM0180B0CTB	€ 84,88 SM018OANEB	€ 105,79 98400180TI		
20x1.5					€ 139,73 3104101144	€ 192,76 3205101144,00		€ 319,77 RM0200B0CTB	€ 95,92 SM020OANEB	€ 116,39 98400200TI		
G (BSP)			DIN LENGTH		DIN5156				DIN5156	SP V DIN5156	DIN5156	
1/8			€ 60,00 SJG0020FET		€ 48,88 3104130004				€ 36,45 SVG0020NEB	€ 46,64 9940R02TI	€ 77,81 9953R02TI	
1/4			€ 90,00 SJG0040FET		€ 67,72 3104130006				€ 48,76 SVG0040NEB	€ 65,70 9940R04TI	€ 103,00 9953R04TI	
3/8			€ 138,27 SJG0060FET		€ 98,93 3104130008				€ 67,54 SVG0060NEB	€ 92,80 9940R06TI	€ 150,18 9953R06TI	
1/2			€ 214,35 SJG0080FET		€ 142,11 3104130009				€ 97,98 SVG0080NEB	€ 133,84 9940R08TI		
	Vc (m/min)											
ISO P	5 ÷ 25	5 ÷ 25	5 ÷ 10	3 ÷ 8	10 ÷ 30				10 ÷ 30	5 ÷ 10	6 ÷ 20	10 ÷ 20
ISO M	5 ÷ 15	5 ÷ 15	≤5	3 ÷ 8							6 ÷ 12	8 ÷ 12
ISO K			≤5			5 ÷ 20	10 ÷ 30	10 ÷ 30				
ISO N	10 ÷ 30	10 ÷ 30	5 ÷ 15			10 ÷ 20	10 ÷ 30	10 ÷ 30	10 ÷ 30	5 ÷ 10	10 ÷ 20	10 ÷ 20
ISO S												
ISO H												
ALTRE TIPOLOGIE DISPONIBILI												
maggiorato										95		
LH filettatura sinistra										104		
Iserie lunga										432	441	
UNC, UNF				90						97,98		
8UN, 12UN				90						159		
UNEF										159		
Rp, Rc			85, 86									
NPT, NPTF										340,341(HT)		
BSW										159		
EG (STI) M, MF										510(AL-5P)		
EG(STI) UNC, UNF										520		
Pg										536(HT)		

*Disponibilità GGST e GGST CH legata all'esaurimento stock di GG-HT Coating e GG-HT-OH Coating

MP Multi Purpose		MS Material Specific									HS High Speed		
AU+SP	HP+RZ HP-RZ	PM-SP	PH-SP	SP-VA	SP+VA	SU2-SP	AL-SP	ZEN-B	ZET-B	UH-CT	HFISP	HFHS	HFAHS
HSS-E COATING	HSS-P COATING	HSS-P	HSS-E OX	HSS-E OX	HSS-E OX	HSS-E OX	HSS-E NI	HSS-P OX	HSS-P NI	HF CARBIDE COATING	HSS-Co COATING	HSS-Co COATING	HSS-Co COATING
													
Version Up		≤45 HRC	≤35 HRC		Version Up			HRSA (Ni)	HRSA (Ti)	45÷63 HRC			
ISO2X(6HX) C(2,5P)	ISO2X(6HX) 2P	ISO2X(6HX) 2.75P	ISO2(6H) 3P	ISO2(6H) C(2.5P)	ISO2(6H) C(2.5P)	ISO2(6H) C(2.5P)	ISO2(6H) C(2.5P)	ISO2X(6HX) 3P	ISO2X(6HX) 3P	ISO2X(6HX) 5P	ISO2X(6HX) C(2.5P)	ISO2X(6HX) C(2.5P)	ISO2X(6HX) C(2.5P)
120	358	126	124	132	130	138	140	142	144	400	148	147	149
DIN374	DIN374	DIN374	DIN374	DIN374				DIN374	DIN374		YMW	YMW	
€ 54,86 SN8.0MANEV		€ 41,32 SM8.0MBDPB	€ 36,05 SM8.0MAEEX	€ 29,22 SM8.0MAGEX									
€ 64,67 SN010ANAEV	€ 94,33 RM010NBFPB	€ 39,55 SM010NBDPB	€ 43,25 SM010NAEEX	€ 34,93 SM010NAGEX				€ 66,46 SM010NBJPX	€ 66,46 SM010NBIPN		€ 90,66 SY010NBEDTHZ	€ 90,66 SY010NBEDTZ	
€ 64,67 SN010MANEV		€ 49,16 SM010MBDPB	€ 43,25 SM010MAEEX	€ 34,93 SM010MAGEX									
€ 83,97 SN012OANAEV	€ 103,25 RM0120BFPB	€ 50,93 SM0120BDPB	€ 55,84 SM0120AEEX	€ 44,98 SM0120AGEX				€ 86,18 SM0120BJPX	€ 86,18 SM0120BIPN		€ 125,80 SY0120BEDTHZ	€ 125,80 SY0120BEDTZ	
€ 83,97 SN012NANAEV	€ 116,15 RM012NBFPB	€ 50,93 SM012NBDPB	€ 55,84 SM012NAEEX	€ 44,98 SM012NAGEX				€ 86,18 SM012NBJPX	€ 86,18 SM012NBIPN		€ 125,80 SY012NBEDTHZ	€ 125,80 SY012NBEDTZ	
€ 107,14 SN014OANAEV	€ 163,30 RM0140BFPB	€ 61,34 SM0140BDPB	€ 67,01 SM0140AEEX	€ 54,10 SM0140AGEX				€ 108,86 SM0140BJPX	€ 103,88 SM0140BIPN		€ 188,14 OHFBZ005	€ 188,14 OHFBZ008	
€ 149,96 SN016OANAEV	€ 169,60 RM0160BFPB	€ 77,40 SM0160BDPB	€ 84,69 SM0160AEEX	€ 68,31 SM0160AGEX				€ 131,49 SM0160BJPX	€ 131,49 SM0160BIPN		€ 244,71 OHFBZ007	€ 244,71 OHFBZ009	
€ 185,23 SN018OANAEV		€ 91,57 SM0180BDPB	€ 114,85 SM0180AEEX	€ 80,85 SM0180AGEX									
€ 241,57 SN020OANAEV		€ 111,19 SM0200BDPB	€ 129,86 SM0200AEEX	€ 98,16 SM0200AGEX									
		DIN5156	DIN5156	DIN5156		DIN5156							
			€ 48,43 SVG0020EEX	€ 40,92 SVG0020GEX		€ 59,23 SVG0020GEXJ							
			€ 64,75 SVG0040EEX	€ 54,74 SVG0040GEX		€ 75,62 SVG0040GEXJ							
			€ 89,76 SVG0060EEX	€ 75,88 SVG0060GEX		€ 92,38 SVG0060GEXJ							
			€ 130,15 SVG0080EEX	€ 110,19 SVG0080GEX		€ 134,02 SVG0080GEXJ							
Vc (m/min)													
10 ÷ 20	10 ÷ 30	2 ÷ 10	2 ÷ 10	≤10	≤10	5 ÷ 20		5 ÷ 15	5 ÷ 10		20 ÷ 50	20 ÷ 50	
5 ÷ 12	10 ÷ 25			≤10	≤10	5 ÷ 15		5 ÷ 15	3 ÷ 6		15 ÷ 30	15 ÷ 30	
5 ÷ 15									5 ÷ 10		20 ÷ 40	20 ÷ 40	
10 ÷ 30	10 ÷ 45												30 ÷ 100
						(Ni)3 ÷ 7		5 ÷ 10	5 ÷ 10				
										1 ÷ 5			
	359			133									
		444		446									
	380, 389			134, 135			182	143, 184	145, 188				
				135									
				180, 181									
				167									
						510							
								522					

MATERIALI	DUREZZE/Rm	W.-NR	DIN	AISI-ASTM OR TRADE MARK
P1 Acciai automatici e acciai strutturali	< 500 N/mm ²	1.0116 1.0401 1.0715	St 37-3 C 15 95Mn 28	AVP
P2 Acciai al carbonio e basso legati	500 ÷ 700 N/mm ²	1.0503 1.1221 1.7131 1.7147	C 45 Ck 60 16 MnCr 5 20 MnCr 5	1045 1064 5115 5120
P3 Acciai medio legati e acciai di bonifica	600 ÷ 800 N/mm ²	1.2330 1.7035 1.7218 1.7225	35 CrMo 4 41 Cr 4 25 CrMo 4 42 CrMo 4	4135 5140 4130 4142, 4140
P4 Acciai alto legati	800 ÷ 1000 N/mm ²	1.1231 1.1545 1.2510 1.3505	Ck 67 C 105 W1 100 MnCrW 4 100 Cr 6	1070 W1 O1 52100
P5 Acciai per utensili	900 ÷ 1200 N/mm ²	1.2311 1.2343 1.2344 1.2713	40 CrMnMo 7 X 38 CrMoV 5 1 X 40 CrMoV 5 1 55 NiCrMoV 6	ORVAR - W302
P6 Acciai ad alta resistenza	1200 ÷ 1480 N/mm ² 38 ÷ 45 HRC	1.6546	40 NiCrMo 2 2	HARDOX 400® TOOLOX 44®
P7 Acciai inossidabili ferritici e martensitici		1.4000 1.4016 1.4021	X 6 Cr 13 X 6 Cr 17 X 20 Cr 13	403 430 420
P8 Acciai inossidabili PH - indurenti per precipitazione		1.4540 1.4548	X 4 CrNiCuNb 16 4 X 5 CrNiCuNb 17 4	15-5-PH 17-4-PH
M1 Acciai inossidabili austenitici (buona lavorabilità)		1.4301 1.4305 1.4306	X 5 CrNi 18 10 X 10 CrNiS 18 9 X 2 CrNi 19 11	304 303 304 L
M2 Acciai inossidabili austenitici (media lavorabilità) e Duplex		1.4401 1.4435 1.4571	X 5 CrNiMo 17 12 2 X 2 CrNiMo 18 14 3 X10 CrNiMoTi 18 10	316 316 L 316 Ti
M3 Acciai inossidabili super austenitici e super Duplex		1.4410 1.4539	X 2 CrNiMoN 25 7 4 X 2 NiCrMoCu 25 20 5	F 53 904L
K1 Ghise grigie	150 ÷ 250 HB	0.6020 0.6025	GG-20 GG-25	A48 30 B A48 35 B
K2 Ghise sferoidali	150 ÷ 350 HB	0.7040 0.7050	GGG 40 GGG 50	A536, 80-55-06 A536, 100-70-03
K3 Ghise austenitiche	120 ÷ 260 HB	0.6660 0.7660	GGL-NiCr 20 2 GGG-NiCr 20 2	A436 Type 2 A436 Type D-2
K4 Ghise ADI	250 ÷ 500 HB	-	GJS-800-8 GJS-1000-5	ADI 800 ADI 1000
N1 Leghe di alluminio ≤ 12% Si		3.0505 3.3206	AlMn0,5Mg0,5 AlMgSi0,5	Anticorodal 063 Ergal
N2 Leghe di alluminio > 12% Si e alluminio-magnesio		3.2382 3.5103	G-AlSi12 G-MgSe3Zn2Zr1	A413.2 AMS 4442
N3 Leghe di rame		2.0060 2.0321	E-Cu57 CuZn37	-
N4 Leghe di ottone e leghe di bronzo		2.0220 2.0401	CuZn5 CuZn39Pb3	OT-58
S1 Leghe a base di nichel resistenti al calore (buona lavorabilità)	< 25 HRC	2.4856	NiCr17Mo17FeW NiCr19Fe19NbMo	Hastelloy C (casting) Inconel 625 (casting)
S2 Leghe a base di nichel resistenti al calore (media lavorabilità)	25 ÷ 35 HRC	2.4856 2.4668	NiCr22Mo9Nb NiCr19Fe19NbMo	Inconel 625 (forged) Inconel 718 (casting)
S3 Leghe a base di nichel resistenti al calore (difficile lavorabilità)	35 ÷ 45 HRC	2.4654 2.4668	NiCr20Co14MoTi	Waspalloy (forged) Inconel 718 (forged)
S5 Leghe di titanio alto legate (media lavorabilità)		3.7164	TiAl6V4	Grade 5
H Acciai temprati generali	< 63 HRC	< 63 HRC	< 63 HRC	< 63 HRC

Z-PRO		GP General Purpose		MP Multi Purpose		MS Material Specific	HS High Speed	
MASCHI PER ASPORTAZIONE	MASCHI A RULLARE	MASCHI PER ASPORTAZIONE	MASCHI A RULLARE	MASCHI PER ASPORTAZIONE	MASCHI A RULLARE	MASCHI PER ASPORTAZIONE	MASCHI PER ASPORTAZIONE	
VUPO (10÷30) ★		PO (5÷10) ☆ PO V (10÷20) ★	R-D V (10÷20) ★	AU+SL (10÷20) ★	HP RZ (15÷30) ★	PO-VA (≤10) ★ SL+VA (10÷15) ★	HDISL (20÷50) ★	P1
VUPO (10÷30) ★ MHSL (10÷30) ★	MHRZ (10÷30) ★	PO (5÷10) ★ PO V (10÷20) ★	R-D V (10÷20) ★	AU+SL (10÷20) ★	HP RZ (15÷30) ★	PO-VA (≤10) ★ SL+VA (10÷15) ★	HDISL (20÷50) ★	P2
VUPO (10÷30) ★ MHSL (10÷25) ★	MHRZ (10÷30) ★	PO (5÷10) ☆ PO V (10÷20) ★		AU+SL (10÷20) ★	HP RZ (15÷25) ★	PM-PO (2÷10) ★ PO-VA (≤10) ★ SL+VA (≤10) ★ ZEN-P (5÷15) ★	HDISL (20÷30) ★	P3
VUPO (10÷25) ★ MHSL (10÷20) ★	MHRZ (10÷30) ★	PO (5÷8) ☆ PO V (10÷15) ★		AU+SL (10÷20) ★	HP RZ (15÷25) ★	PM-PO (2÷7) ★ ZEN-P (5÷15) ★ ZET-P (5÷10) ☆ PO-VA (≤10) ☆ SL+VA (≤10) ☆	HDISL (20÷30) ★	P4
MHSL (10÷15) ☆						PM-PO (2÷7) ★ EH-PO (≤5) ★ ZEN-P (5÷10) ☆ ZET-P (5÷8) ☆	HDISL (15÷25) ★	P5
						PM-PO (2÷5) ★ EH-PO (≤5) ★ ZET-P (3÷6) ☆		P6
VUPO (5÷15) ★ MHSL (10÷20) ☆		PO V (6÷12) ☆	R-D V (8÷12) ☆	AU+SL (5÷12) ★	HP RZ (10÷25) ★	PO-VA (≤10) ★ SL+VA (5÷15) ★ ZEN-P (5÷15) ★	HDISL (15÷30) ☆	P7
						ZEN-P (4÷8) ★ ZET-P (3÷6) ☆		P8
VUPO (5÷15) ★ MHSL (10÷20) ☆		PO V (6÷12) ☆	R-D V (8÷12) ☆	AU+SL (5÷12) ★	HP RZ (10÷25) ★	PO-VA (≤10) ★ SL+VA (5÷15) ★ ZEN-P (5÷15) ★	HDISL (15÷30) ☆	M1
VUPO (5÷10) ☆				AU+SL (5÷10) ★	HP RZ (10÷25) ★	ZEN-P (5÷15) ★ PO-VA (≤10) ☆ SL+VA (5÷10) ☆	HDISL (15÷25) ☆	M2
						ZEN-P (4÷8) ★ ZET-P (3÷6) ☆		M3
VUPO (10÷20) ☆				AU+SL (10÷15) ☆		GGST (5÷20) ★ GG-HT (5÷10) ★	HDISL (20÷40) ★	K1
VUPO (10÷20) ☆						GGST (5÷20) ★ GG-HT (5÷10) ★ ZET-P (5÷10) ☆	HDISL (20÷40) ★	K2
						GGST (≤10) ★ GG-HT (≤5) ★ ZET-P (5÷10) ☆		K3
						GGST (≤10) ★ GG-HT (≤5) ☆		K4
VUPO (10÷40) ★	MHRZ (10÷30) ☆	PO (5÷10) ☆ PO V (10÷20) ☆	R-D V (10÷20) ☆	AU+SL (20÷30) ★	HP RZ (10÷45) ☆	LA HT (5÷15) ★	HDISL (30÷100) ★	N1
VUPO (10÷40) ★	MHRZ (10÷30) ☆	PO (5÷10) ☆ PO V (10÷20) ☆	R-D V (10÷20) ☆	AU+SL (20÷30) ★	HP RZ (10÷45) ☆	LA HT (5÷15) ★ GGST (10÷20) ☆ GG-HT (5÷15) ☆	HDISL (30÷100) ★	N2
VUPO (10÷25) ☆		PO (5÷10) ☆ PO V (10÷20) ☆	R-D V (10÷20) ☆	AU+SL (10÷25) ☆		LA-HT (5÷10) ★		N3
VUPO (10÷20) ☆		PO (5÷10) ☆ PO V (10÷20) ☆		AU+SL (10÷25) ☆		LA-HT (5÷10) ★ GGST (10÷20) ★ GG-HT (5÷15) ★	HDISL (30÷100) ★	N4
						ZEN-P (5÷10) ★ ZET-P (5÷10) ☆		S1
						ZEN-P (5÷10) ★ ZET-P (5÷10) ☆		S2
						ZET-P (3÷6) ★ ZEN-P (3÷6) ☆		S3
						ZET-P (5÷10) ★		S5
						UH-CT (≤5) ★		H

★ 1a scelta ☆ adatto









	Z-PRO				GP General Purpose			MP Multi Purpose		MS Material Specific		
	VOUO	MHSL	GGST*	MHRZ(P)	PO	PO V	R-D V	AU+SL	HP+RZ	PM-PO	EH-HT	EH-PO
	HSS-P COATING	HSS-Co COATING	HSS-E COATING	HSS-Co COATING	HSS-E	HSS-E COATING	HSS-E COATING	HSS-E COATING	HSS-P COATING	HSS-P	HSS-Co	HSS-Co
TCTR (tolleranza)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2(6H)	ISO2(6H)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)
THCHT (Imbocco)	B(5P)	5P÷7P	C(2.5P)	4P	B(5P)	B(5P)	2P	5P	2P	5.5P	C(2.5P)	4.5P
	210	194	264	350	212	220	354	196	358	222	274	224
M	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371	DIN371
3x0.5	€ 40,23 3102101035		€ 28,57 3104101035		€ 18,23 PD3.0GANEB	€ 25,42 96303.0TI	€ 37,68 93533.0BTI	€ 43,84 LE3.0GBNEV	€ 56,05 RE3.0GBFPTB	€ 24,26 PD3.0GBDPB	€ 28,23 TD3.0GBDCBC	€ 26,92 PD3.0GBDCB
4x0.7	€ 41,94 3102101042		€ 29,05 3104101042		€ 18,23 PD4.0IANEB	€ 25,94 96304.0TI	€ 38,20 93534.0BTI	€ 45,72 LE4.0IBNEV	€ 60,28 RE4.0IBFPTB	€ 24,26 PD4.0IBDPB	€ 28,23 TD4.0IBDCBC	€ 26,92 PD4.0IBDCB
5x0.8	€ 42,23 3102101049		€ 29,91 3104101049		€ 18,84 PD5.0KANEB	€ 26,65 96305.0TI	€ 39,49 93535.0BTI	€ 46,01 LE5.0KBNEV	€ 64,67 RE5.0KBFPFB	€ 25,24 PD5.0KBDPB	€ 29,13 TD5.0KBDCCB	€ 27,76 PD5.0KBDCCB
6x1	€ 42,23 3102101055	€ 40,88 LD6.0MBFCL5	€ 29,91 3104101055	€ 67,61 RD6.0MBOCTP	€ 18,84 PD6.0MANEB	€ 26,65 96306.0TI	€ 39,49 93536.0BTI	€ 46,01 LE6.0MBNEV	€ 64,67 RE6.0MBFPFB	€ 25,24 PD6.0MBDPB	€ 27,76 TD6.0MBDCBC	€ 27,76 PD6.0MBDCB
8x1.25	€ 44,48 3102101064	€ 50,56 LD8.0NBFCCL5	€ 36,59 3104101064	€ 77,90 RD8.0NBOCTP	€ 22,15 PD8.0NANEB	€ 31,83 96308.0TI	€ 45,85 93538.0BTI	€ 48,35 LE8.0NBNEV	€ 80,31 RE8.0NBFPFB	€ 29,30 PD8.0NBDPB	€ 34,13 TD8.0NBDCBC	€ 34,13 PD8.0NBDCB
10x1.5	€ 58,23 3102101078	€ 59,08 LD0100BFCL5	€ 42,24 3104101078	€ 93,45 RD0100BOCTP	€ 26,60 PD0100ANEB	€ 38,72 9630010TI	€ 50,90 9353010BTI	€ 58,79 LE0100BNEV	€ 91,57 RE0100BFPFB	€ 40,02 PD0100BDPB	€ 41,07 TD0100BDCBC	€ 41,07 PD0100BDCB
M	DIN376	DIN376	DIN376	DIN376	DIN376	DIN376	DIN376	DIN376	DIN376	DIN376	DIN376	DIN376
12x1.75	€ 75,88 3102101088	€ 82,40 LG012PBFCL5	€ 56,44 3104101088	€ 122,08 RG012PBOCTP	€ 35,34 PG012PANEB	€ 49,50 9730012TI	€ 68,94 9353012BTI	€ 76,66 LH012PBNEV	€ 117,29 RE012PBFPFB	€ 45,27 PG012PBDPB	€ 53,17 TG012PBDCCB	€ 53,17 PG012PBDCCB
14x2	€ 93,62 3102101100		€ 70,32 3104101100		€ 42,69 PG014QANEB	€ 59,50 9730014TI	€ 79,40 9353014BTI	€ 97,38 LH014QBNEV	€ 163,30 RE014QBFPFB	€ 54,49 PG014QBDPB	€ 67,26 TG014QBDCBC	€ 67,26 PG014QBDCB
16x2	€ 131,01 3102101114		€ 84,69 3104101114		€ 53,89 PG016QANEB	€ 74,40 9730016TI	€ 100,40 9353016BTI	€ 136,31 LH016QBNEV	€ 154,15 RE016QBFPFB	€ 68,65 PG016QBDPB	€ 81,16 TG016QBDCBC	€ 81,16 PG016QBDCB
18x2.5			€ 105,63 3104101128		€ 67,54 PG018RANEB	€ 93,28 9730018TI		€ 169,59 LH018RBNEV		€ 85,85 PG018RBDPB		€ 106,66 PG018RBDCCB
20x2.5			€ 122,19 3104101141		€ 80,08 PG020RANEB	€ 112,04 9730020TI		€ 219,60 LH020RBNEV		€ 101,35 PG020RBDPB	€ 120,37 TG020RBDCCB	€ 126,14 PG020RBDCCB
22x2.5			€ 149,64 3104101156		€ 97,28 PG022RANEB	€ 133,13 9730022TI				€ 123,19 PG022RBDPB		
24x3			€ 183,95 3104101167		€ 109,71 PG024SANEB	€ 162,19 9730024TI				€ 139,51 PG024SBDPB	€ 172,92 TG024SBDCCB	€ 172,92 PG024SBDCCB
27x3					€ 145,93 PG027SANEB					€ 184,58 PG027SBDPB		
30x3.5					€ 179,52 PG030TANEB					€ 227,22 PG030TBDPB		
	Vc (m/min)											
ISO P	10 ÷ 30	10 ÷ 30		10 ÷ 30	5 ÷ 10	6 ÷ 20	10 ÷ 20	10 ÷ 20	10 ÷ 30	2 ÷ 10	≤5	≤5
ISO M	5 ÷ 15	10 ÷ 20				6 ÷ 12	8 ÷ 12	5 ÷ 12	10 ÷ 25			
ISO K	10 ÷ 20		5 ÷ 20					5 ÷ 15				
ISO N	10 ÷ 40		10 ÷ 20	10 ÷ 30	5 ÷ 10	10 ÷ 20	10 ÷ 20	15 ÷ 30	10 ÷ 45			
ISO S												
ISO H												

*Disponibilità GGST legata all'esaurimento stock di GG-HT Coating

MS Materil Specific							HS High Speed
PO-VA	SL+VA	GG-HT	LA-HT	ZEN-P	ZET-P	UH-CT	HDISL
HSS-E OX	HSS-E OX	HSS-E NI	HSS-E NI	HSS-P OX	HSS-P NI	HF CARBIDE COATING	HSS-Co COATING
	 Version Up			 HRSA (Ni)	 HRSA (Ti)	 45÷63 HRC	
ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)
B(5P)	5P	C(2.5P)	B(5P)	4.5P	5P	5P	5P
226	199	278	284	230	200	400	203
DIN371	YMW	DIN371	DIN371	DIN371	DIN371	YMW	YMW
€ 19,69	€ 22,32	€ 19,69	€ 21,92	€ 40,36	€ 42,11	€ 191,32	
PD3.0GBGEX	LE3.0GBGEX	TD3.0GBAENC	TD3.0GBLENS	PD3.0GBJPW	LD3.0GBIPN	TD3.0GBBWA5	
€ 19,69	€ 22,58	€ 19,69	€ 21,92	€ 40,36	€ 42,11	€ 202,04	
PD4.0IBGEX	LE4.0IBGEX	TD4.0IBAENC	TD4.0IBLENS	PD4.0IBJPW	LD4.0IBIPN	TD4.0IBBWA5	
€ 20,49	€ 22,95	€ 20,49	€ 22,60	€ 41,52	€ 43,48	€ 212,94	
PD5.0KBGEX	LE5.0KBGEX	TD5.0KBAENC	TD5.0KBLENS	PD5.0KBJPW	LD5.0KBIPN	TD5.0KBBWA5	
€ 20,49	€ 23,12	€ 20,49	€ 22,60	€ 41,52	€ 41,52	€ 230,45	€ 55,10
PD6.0MBGEX	LZ6.0MBGEX	TD6.0MBAENC	TD6.0MBLENS	PD6.0MBJPW	LD6.0MBIPN	TD6.0MBBWA5	LY6.0MBEDTLZ
€ 24,32	€ 27,59	€ 24,32	€ 28,40	€ 50,88	€ 50,88	€ 257,20	€ 71,66
PD8.0NBGEX	LZ8.0NBGEX	TD8.0NBAENC	TD8.0NBLENS	PD8.0NBJPW	LD8.0NBIPN	TD8.0NBBWA5	LY8.0NBEDTLZ
€ 29,10	€ 32,95	€ 29,10	€ 34,29	€ 60,36	€ 64,22	€ 305,30	€ 90,66
PD010OBGEX	LZ010OBGEX	TD010OBAENC	TD010OBLENS	PD010OBBJPW	LD010OBBIPN	TD010OBBWA5	LY010OBBEDTLZ
DIN376	YMW	DIN376	DIN376	DIN376	DIN376	YMW	YMW
€ 37,56	€ 44,03	€ 37,56	€ 45,39	€ 79,42	€ 79,42	€ 381,90	€ 125,80
PG012PBGEX	LZ012PBGEX	TG012PBAENC	TG012PBLENS	PG012PBJPW	LG012PBIPN	TG012PBBWA5	LY012PBEDTLZ
€ 45,20		€ 47,30		€ 100,27	€ 100,27	€ 577,70	€ 188,14
PG014QBGEX		TG014QBAENC		PG014QBJPW	LG014QBIPN	TG014QBBWA5	TCYLZ004
€ 56,92		€ 56,92		€ 126,88	€ 126,88	€ 702,81	€ 244,71
PG016QBGEX		TG016QBAENC		PG016QBJPW	LG016QBIPN	TG016QBBWA5	SFYLZ005
€ 71,21		€ 74,65					
PG018RBGEX		TG018RBAENC					
€ 84,10		€ 84,10		€ 188,25		€ 1.115,06	
PG020RBGEX		TG020RBAENC		PG020RBJPW		TG020RBBWA5	
€ 102,18		€ 107,02					
PG022RBGEX		TG022RBAENC					
€ 115,77		€ 121,25		€ 258,11			
PG024SBGEX		TG024SBAENC		PG024SBJPW			
€ 153,16							
PG027SBGEX							
€ 188,50							
PG030TBGEX							
Vc (m/min)							
≤10	5 ÷ 15			5 ÷ 15	5 ÷ 10		15 ÷ 50
≤10	5 ÷ 15			5 ÷ 15	3 ÷ 6		15 ÷ 30
		5 ÷ 10			5 ÷ 10		20 ÷ 40
		5 ÷ 15	5 ÷ 15				30 ÷ 100
				5 ÷ 10	5 ÷ 10		
						1 ÷ 5	

	Z-PRO				GP General Purpose			MP Multi Purpose		MS Material Specific		
	UVOU	MHSL	GGST*	MHRZ(P)	PO	PO V	R-D V	AU+SL	HP+RZ	PM-PO	EH-HT	EH-PO
	HSS-P COATING	HSS-Co COATING	HSS-E COATING	HSS-Co COATING	HSS-E	HSS-E COATING	HSS-E COATING	HSS-E COATING	HSS-P COATING	HSS-P	HSS-Co	HSS-Co
TCTR (tolleranza)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2(6H)	ISO2(6H)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)
THCHT (Imbocco)	B(5P)	5P÷7P	C(2.5P)	4P	B(5P)	B(5P)	2P	5P	2P	5.5P	C(2.5P)	4.5P
	210	194	264	350	212	220	354	196	358	222	274	224
MF	DIN374	DIN374	DIN374	DIN374	DIN374	DIN374		DIN374	DIN374	DIN374	DIN374	DIN374
8x1	€ 50,97 3102101065		€ 42,72 3104101065		€ 26,49 PM8.0MANEB	€ 33,21 98308.0MTI		€ 54,86 LN8.0MBNEV			€ 37,05 TM8.0MBDCBC	€ 31,75 PM8.0MBDCB
10x1.25	€ 59,50 3102101079	€ 59,08 LM010NBFL5	€ 52,27 3104101079	€ 94,75 RM010NBOCTP	€ 31,83 PM010NANEB	€ 45,28 9830010NTI		€ 64,67 LN010NBNEV	€ 94,33 RM010NBFPB	€ 38,57 PM010NBDBP	€ 44,57 TM010NBDCBC	€ 38,20 PM010NBDCB
10x1	€ 67,83 3102101080		€ 52,27 3104101080		€ 31,83 PM010MANEB	€ 45,28 9830010MTI		€ 64,68 LN010MBNEV			€ 44,57 TM010MBDCBC	€ 38,20 PM010MBDCB
12x1.5	€ 77,55 3102101089	€ 81,75 LM0120BFL5	€ 58,10 3104101089	€ 118,51 RM0120BOCTP	€ 41,38 PM0120ANEB	€ 50,62 98300120TI		€ 83,97 LN0120BNEV	€ 103,25 RM0120BFPB	€ 49,75 PM0120BDPB	€ 49,50 TM0120BDCBC	€ 49,50 PM0120BDCB
12x1.25	€ 77,55 3102101090	€ 81,75 LM012NBFL7	€ 58,10 3104101090	€ 118,51 RM012NBOCTP	€ 41,38 PM012NANEB	€ 50,62 9830012NTI		€ 83,97 LN012NBNEV	€ 116,15 RM012NBFPB	€ 49,75 PM012NBDBP	€ 49,50 TM012NBDCBC	€ 49,50 PM012NBDCB
14x1.5	€ 93,62 3102101102	€ 110,96 LM0140BFL7	€ 74,20 3104101102	€ 157,61 RM0140BOCTP	€ 49,95 PM0140ANEB	€ 60,84 98300140TI		€ 107,14 LN0140BNEV	€ 163,30 RM0140BFPB	€ 60,00 PM0140BDPB	€ 62,60 TM0140BDCBC	€ 62,60 PM0140BDCB
16x1.5	€ 131,01 3102101116	€ 142,60 LM0160BFL7	€ 87,36 3104101116	€ 191,74 RM0160BOCTP	€ 63,04 PM0160ANEB	€ 76,07 98300160TI		€ 149,96 LN0160BNEV	€ 169,60 RM0160BFPB	€ 75,50 PM0160BDPB	€ 75,55 TM0160BDCBC	€ 75,55 PM0160BDCB
18x1.5			€ 111,66 3104101130	€ 266,49 RM0180BOCTP	€ 79,05 PM0180ANEB	€ 95,41 98300180TI		€ 185,23 LN0180BNEV		€ 94,40 PM0180BDPB		€ 99,30 PM0180BDCB
20x1.5			€ 139,73 3104101144	€ 319,77 RM0200BOCTP	€ 93,69 PM0200ANEB	€ 114,49 98300200TI		€ 241,57 LN0200BNEV		€ 111,50 PM0200BDPB		€ 117,40 PM0200BDCB
G	DIN5156		DIN5156		DIN5156	DIN5156	DIN5156	DIN5156		DIN5156	DIN5156	DIN5156
1/8			€ 48,88 3104130004		€ 36,45 PVG0020NEB	€ 46,64 9930R02TI	€ 77,81 9953R02TI				€ 56,71 TVG0020DCBC	
1/4			€ 67,72 3104130006		€ 48,76 PVG0040NEB	€ 65,70 9930R04TI	€ 103,00 9953R04TI				€ 75,82 TVG0040DCBC	
3/8			€ 98,93 3104130008		€ 67,54 PVG0060NEB	€ 92,80 9930R06TI	€ 150,18 9953R06TI				€ 93,25 TVG0060DCBC	
1/2			€ 142,11 3104130009		€ 97,98 PVG0080NEB	€ 133,84 9930R08TI					€ 135,30 TVG0080DCBC	
	Vc (m/min)											
ISO P	10 ÷ 30	10 ÷ 30		10 ÷ 30	5 ÷ 10	6 ÷ 20	10 ÷ 20	10 ÷ 20	10 ÷ 30	10 ÷ 30	2 ÷ 10	≤5
ISO M	5 ÷ 15	10 ÷ 20				6 ÷ 12	8 ÷ 12		5 ÷ 12	10 ÷ 25		
ISO K	10 ÷ 20		5 ÷ 20						5 ÷ 15			
ISO N	10 ÷ 40		10 ÷ 20	10 ÷ 30	5 ÷ 10	10 ÷ 20	10 ÷ 20		15 ÷ 30	10 ÷ 45		
ISO S												
ISO H												
ALTRE TIPOLOGIE DISPONIBILI												
maggiorato					213					359		
LH filettatura sinistra					240							
Iserie lunga					448	455				458		
UNC, UNF					215, 216					380, 388		
8UN, 12UN												
UNEF					238							
Rp, Rc												
NPT, NPTF					340, 341(HT)							
BSW					239							
EG (STI) M, MF					514(AL-HT)							
EG (STI) UNC, UNF					524							
Pg					536(HT)							

*Disponibilità GGST legata all'esaurimento stock di GG-HT Coating

MS Materil Specific							HS High Speed
PO-VA	SL+VA	GG-HT	LA-HT	ZEN-P	ZET-P	UH-CT	HDISL
HSS-E OX	HSS-E OX	HSS-E NI	HSS-E NI	HSS-P OX	HSS-P NI	HF CARBIDE COATING	HSS-Co COATING
							
	Version Up			HRSA (Ni)	HRSA (Ti)	45÷63 HRC	
ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)	ISO2X(6HX)
B(5P)	5P	C(2.5P)	B(5P)	4.5P	5P	5P	5P
226	199	278	284	230	200	400	203
DIN374		DIN374		DIN374	DIN374		YMW
€ 28,48		€ 27,34					
PM8.0MBGEX		TM8.0MBAENC					
€ 34,06		€ 32,70		€ 69,70	€ 69,75		€ 90,66
PM010NBGEX		TM010NBAENC		PM010NBJPW	LM010NBIPN		LY010NBEDTLZ
€ 34,06		€ 32,70					
PM010MBGEX		TM010MBAENC					
€ 43,93		€ 42,23		€ 86,18	€ 86,18		€ 125,80
PM012OBGEX		TM012OBAENC		PM012OBJPW	LM012OBIPN		LY012OBEDTLZ
€ 43,93		€ 42,23		€ 82,11	€ 86,18		€ 125,80
PM012NBGEX		TM012NBAENC		PM012NBJPW	LM012NBIPN		LY012NBEDTLZ
€ 52,93		€ 53,19		€ 108,86	€ 108,86		€ 188,14
PM014OBGEX		TM014OBAENC		PM014OBJPW	LM014OBIPN		SFYLZ006
€ 66,64		€ 63,97		€ 137,75	€ 137,75		€ 244,71
PM016OBGEX		TM016OBAENC		PM016OBJPW	LM016OBIPN		UJYLZ003
€ 83,33		€ 83,87					
PM018OBGEX		TM018OBAENC					
€ 98,41		€ 94,47					
PM020OBGEX		TM020OBAENC					
		DIN5156					
€ 40,41		€ 37,04					
UDYCZ001		TVG0020AENC					
€ 54,08		€ 49,28					
UDYCZ002		TVG0040AENC					
€ 74,99		€ 68,18					
UDYCZ003		TVG0060AENC					
€ 108,90		€ 98,68					
UDYCZ004		TVG0080AENC					
Vc (m/min)							
≤10	5 ÷ 15			5 ÷ 15	5 ÷ 10		15 ÷ 50
≤10	5 ÷ 15			5 ÷ 15	3 ÷ 6		15 ÷ 30
		5 ÷ 10			5 ÷ 10		20 ÷ 40
		5 ÷ 15	5 ÷ 15				30 ÷ 100
				5 ÷ 10	5 ÷ 10		
						1 ÷ 5	
460							
227, 228				231, 256	204		
245							
			514(AL-HT)				
			516, 528	526			

