GÜHRING

Dr. Jörg Gühring

Presidente

Oliver Gühring

Direttore commerciale
e Marketing

7000

Dipendenti
nel mondo

3500

Dipendenti
in Germania

Programmi di formazione
interni

Trasferimento internazionale di
conoscenze attraverso
programmi di scambio in tutto
il mondo per i dipendenti

Dietmar Pfränger

Direttore R&S, Logistica,
Technologia e Produzione

Bernd Schatz

Direttore della Finanza
e Amministrazione

Utensili come prodotti di punta

50000

Utensili Standard

2000

Tipi di utensili

Tutto da un unico fornitore - completo e globale

Con una rete globale di siti produttivi, Gühring sviluppa e produce utensili di precisione per tutti i mercati più importanti. Gli utenti del settore automobilistico, l'industria aerospaziale o della macchina utensile e l'industria in generale, si basano su utensili di tendenza realizzati in tutto il mondo ai più alti livelli uniformi di standard qualitativi.

28
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46
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SWITZERLAND 11
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Gühring (Schweiz) AG
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www.guehring.ch

SWITZERLAND 12
ALTDORF
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mario.jung@guehring.de
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ALBSTADT 13
HEADQUARTER
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info@guehring.de
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ALBSTADT 14
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Con tecnologie innovative, Gühring soddisfa le esigenze del cliente, dal progetto alla produzione di dutensili di precisione - flessibile, tempestiva, a livello globale.
Produzione, servizio e referenti sono disponibili in un unico fornitore a livello mondiale.

Own carbide production

Own machine construction

Own coating plants

Highest quality standards world-wide

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RUMANIA 37
Gühring s.r.l.-Romania
romania@guehring.de

VIETNAM 43
Gühring Vietnam LLC
info@guhring.vn

AUSTRALIA 49
Guhring Pty. Ltd.
guhring@guhring.com.au
www.guhring.com.au

KULMBACH 26
Gühring KG
service@german-carbide.com

ZORBAU 32
Hoffelder Gühring GmbH
info@hoffelder-guehring.de

HUNGARY 38
Tritan-Gühring KFT.
info@tritan.hu
www.tritan.hu

THAILAND 44
Guehring (Thailand) Co., Ltd.
info.thailand@guehring.de
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INDONESIA 50
PT. Guhring Indonesia
sales@guhring.co.id
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MARKT-ERLBACH 27
Gühring KG
info@guehring.de
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SPAIN 33
Guhring S.A.S.
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AUSTRIA 39
Gühring Ges.m.b.H.
verkauf@guehring.at
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INDIA 45
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info@guhring.in
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TREUEN 28
FACTORY 1
Dr. Gühring KG
info@guehring.de
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ITALY 34
UBIEMME
Ubiemme Gühring Italia
info@ubiemme.it
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POLAND 40
Gühring Sp. z.o.o.
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CHINA 46
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JAPAN 52
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TREUEN 29
FACTORY 2
Dr. Gühring KG
info@guehring.de
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MISSAGLIA
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KOREA 53
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TREUEN 30
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info@guehring.de
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FRANCE 36
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info@guhring-france.com

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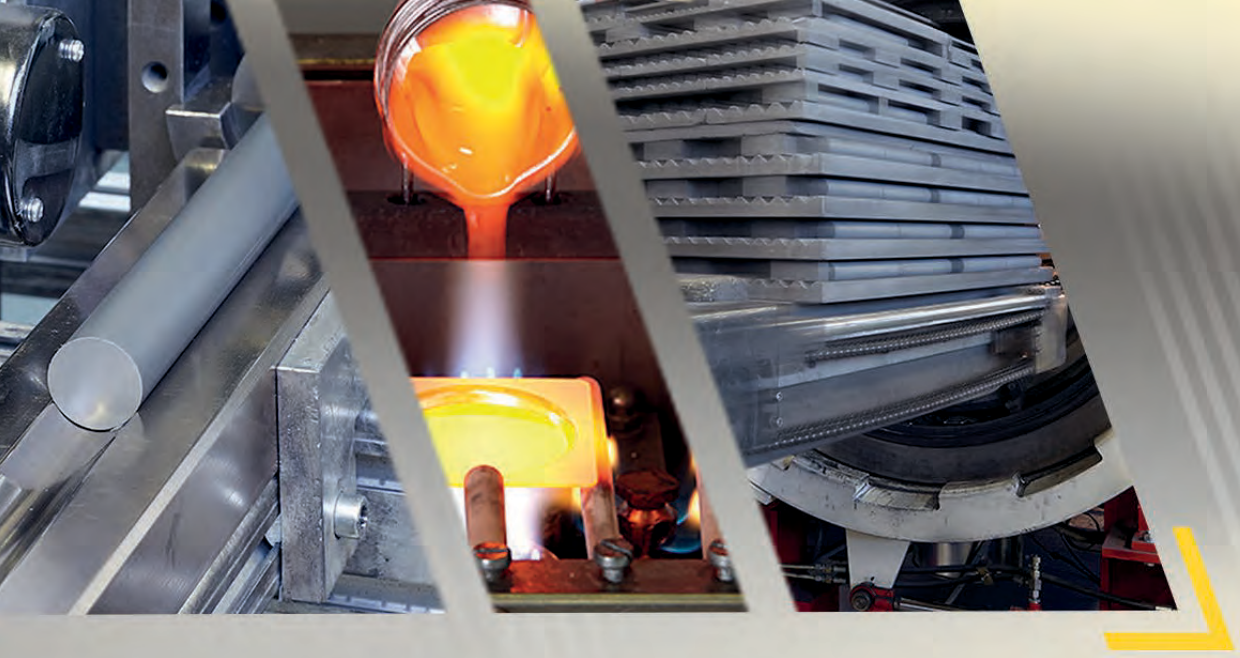


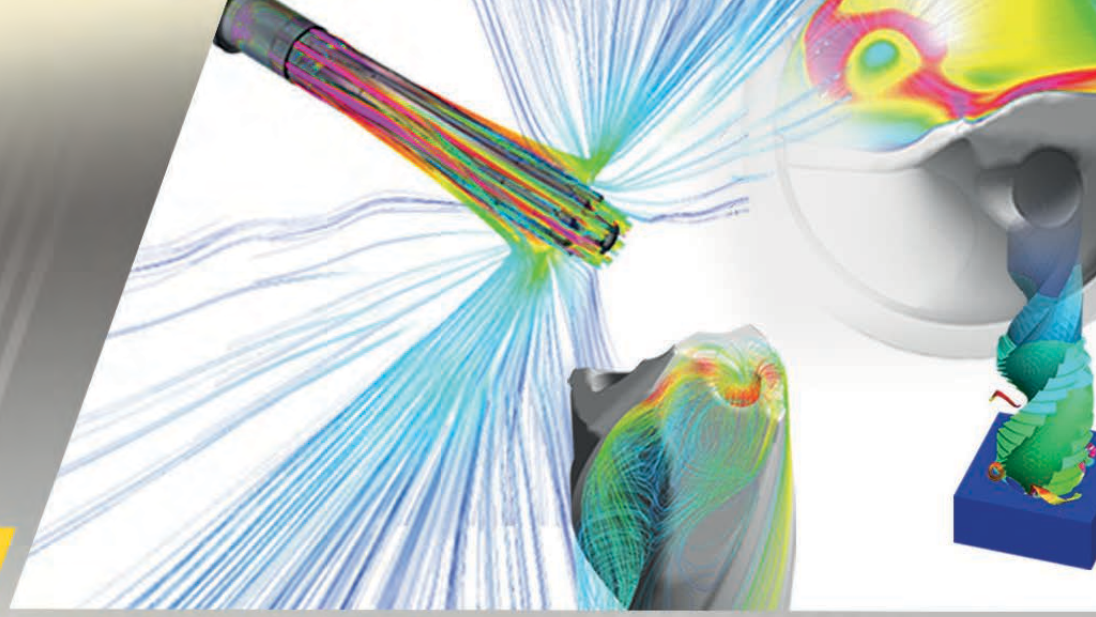
MATERIALI UTENSILI

Propria produzione di Metallo Duro

Coordinamento ottimale di tutti i parametri degli utensili grazie al proprio settore di R & S

IMPIANTI E MACCHINARI

Ingegneria privata e proprio sviluppo degli investimenti

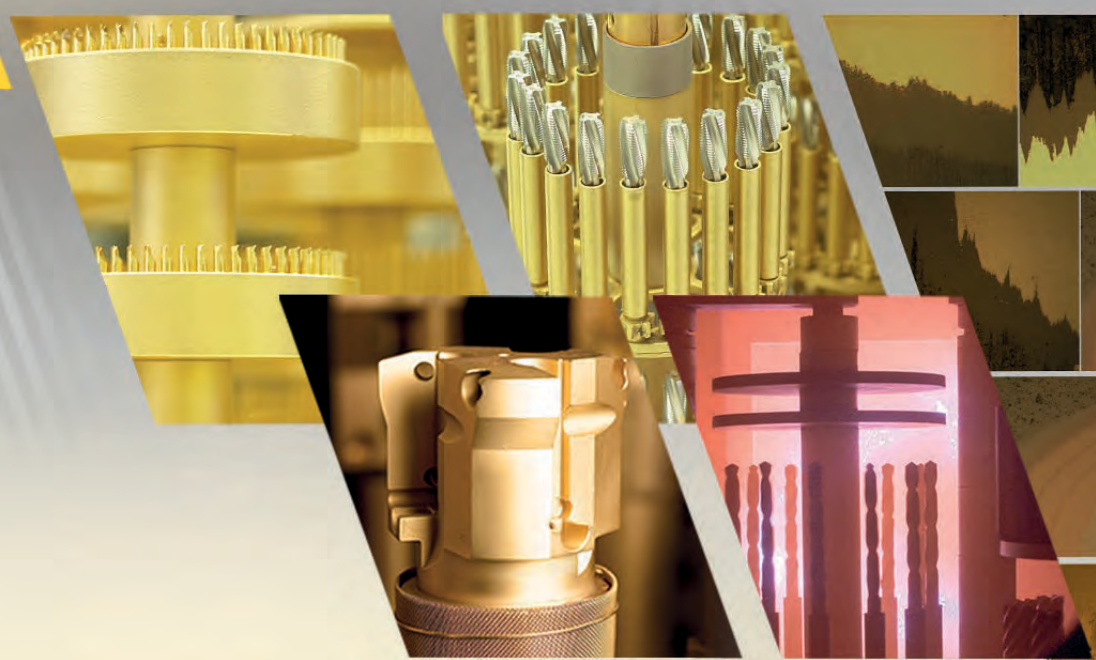


GEOMETRIE

Dipartimento di R&S interno

RIVESTIMENTI

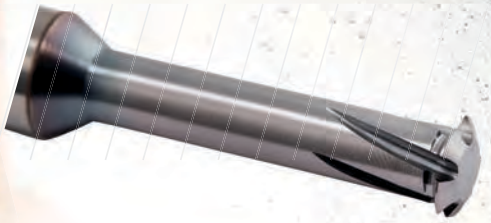
Creati e sviluppati da Gühring
all'interno dei propri stabilimenti



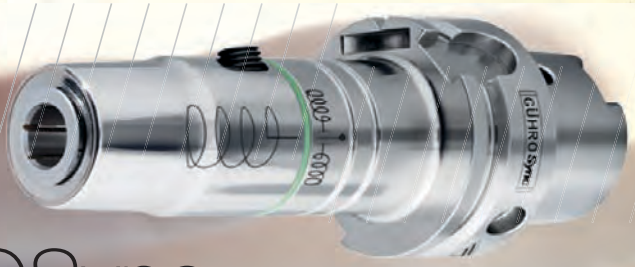
TUTTO DA UN UNICO FORNITORE

Più varietà per la vostra produzione con un programma ampliato

- Frese a filettare



- Micro frese a filettare



- GÜHROSync

- Maschi
- Maschi a rullare
- Micro maschi a rullare

SIRIUS®

NEW

lavorazioni più lunghe

IDEALE PER ACCIAI INOSSIDABILI, LA SOLUZIONE CON ELEVATA RESISTENZA ALL'USURA

Maggiori informazioni sul rivestimento Sirius sotto il QR code o direttamente al link www.guehring.de/download

Guhring art. 4218 a pagina 38

Nuovi maschi VA

NEW *Elica resistente per un'elevata affidabilità di processo, rivestimento combinato per una maggiore durata dell'utensile*

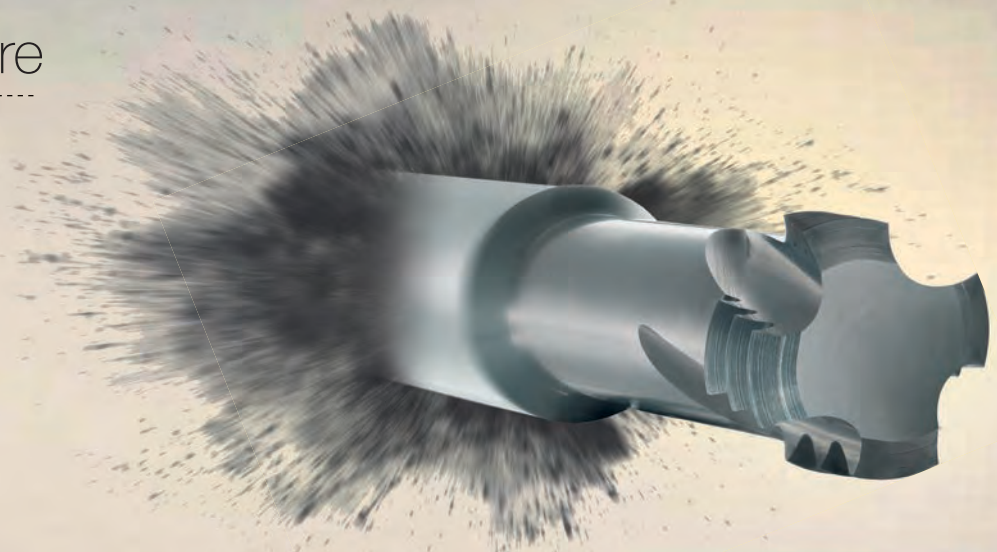
Guhring art. 393 a pagina 244

Frese a filettare

NEW

Speciale metallo duro, geometria innovativa e rivestimento ideale per l'utensile perfetto

Guhring art. 4227 a pagina 703



Lavorazioni difficili> 45 HRC

Frese a filettare con attacco Weldon

NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW

Ora con codolo HB per un serraggio sicuro

Guhring art. 3556 a pagina 209

Costruzioni economiche e processi affidabili con utensili a filettare Guhring

NEW Micro frese a filettare

Perfezione nei dettagli con le micro frese a filettare

Guhring art.4226 M1.6 a pagina 215
Guhring art. 4225 M1.8 a pagina 217

Scala 1:1

STABILIMENTO

LAIZ

STABILIMENTO

TREUEN

GUHRING

STABILIMENTI
PRODUZIONE
UTENSILI A
FILETTARE

PITTOGRAMMI

Codice ISO

P	acciaio, acciaio legato in alta percentuale
M	acciaio inossidabile
K	ghisa grigia, ghisa sferoidale e ghisa malleabile
N	alluminio ed altri metalli non ferrosi
S	leghe speciali, superleghe e leghe di titanio
H	acciaio temprato e ghisa temprata

Nelle pagine seguenti potrete trovare per ogni utensile raccomandazioni riguardanti l'idoneità per i gruppi di applicazioni e dettagli per la max. resistenza alla trazione e durezza:

● Idoneità ottima
○ Idoneità limitata

Pittogrammi

Materiale tagliente

HSS | HSS-E | HSS-E-PM

Acciai super rapidi

VHM

Integrale in MD a grana ultrafine (HM-UF)

Profondità filettatura

1,5xD | 2xD | 2,5xD | 3xD

Tolleranza del Ø

2B | 2BX | 3B | 3BX | 4HX | 6H | 6HX | 6GX | 2a | 6g

ISO1/4H | ISO2/6H | ISO3/6G | ....

Filettatura

Fori passanti

Fori ciechi

Fori passanti e fori ciechi

Direzione di taglio

destra

sinistra

Refrigerazione interna

con RI

senza RI

Forma

A | B | C | C(K) | D | E

Descrizione

V — Sbozzatore | M — Intermedio | F — Finitore

Norma

DIN 352 | DIN 371 | DIN 376 | DIN 374 | DIN 371/376 | DIN 2189 | DIN 5156 | ....

secondo DIN

WN

secondo norma Gühring

Type

N | N R40 | H | H R15 | VA | Al | GG | Ti Ni | ....

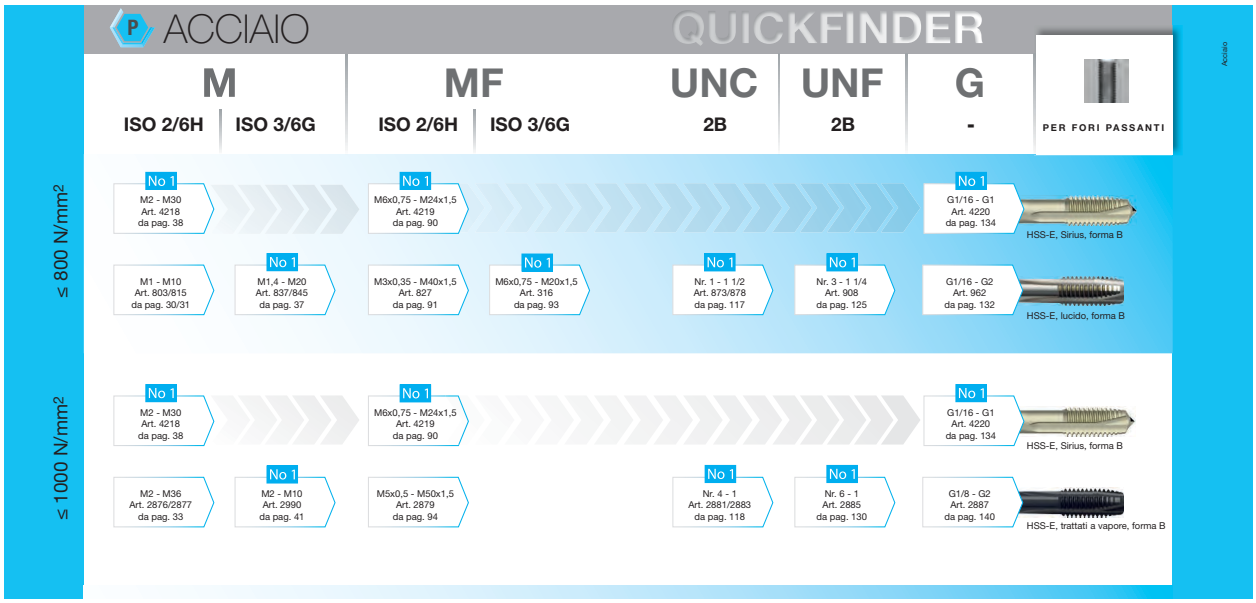
Rivestimenti

- lucido
- trattati a vapore
- nitrurato
- A TiAlN
- C TiCN
- Cb Carbo
- P AlCrN
- S TiN
- M MolyGlide
- S Sirius

Selezione facilitata dell'utensile corretto

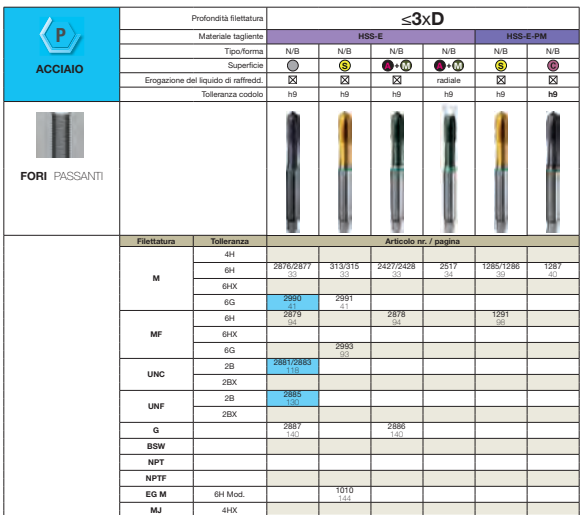
QUICKFINDER

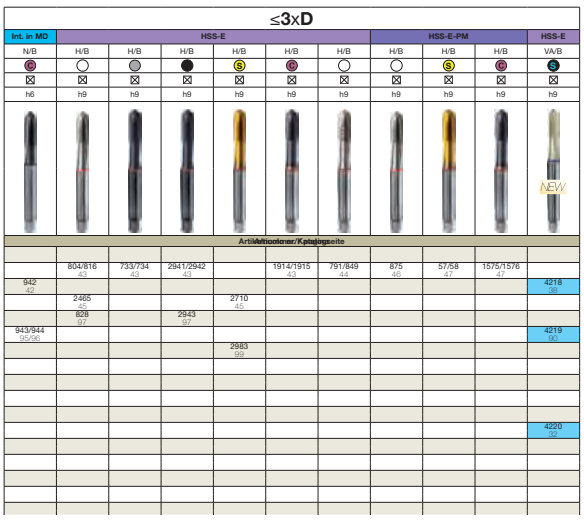
Dall'applicazione di lavorazione all'utensile ideale!



BUSSOLA

Il programma completo in una chiara sintesi - include le applicazioni raccomandate e i dati di taglio!





Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min					
P acciao da costruzione, automatici, da bonifica e da cementazione non legati	≤800 N/mm²	S235JR	1.0037	12	15	15	15	20	20
		C15	1.0401						
		11SMnPb30	1.0718						
acciai automatici, acciai da cementazione legati, acciai nitrurati	800 - 1000 N/mm²	S355J2	1.0577	10	12	12	12	15	15
		C60	1.0601						
		31CrMo12	1.8515						
acciai da bonifica legati, acciai utensili ed acciai super rapidi	800 - 1200 N/mm²	42CrMo4	1.7225	6	8	8	8	10	10
		36CrNiMo4	1.6511						
		X36CrMo17	1.2316						
		HS 6-5-2	1.3343						

Velocità di taglio consigliata vc m / min										
40	-	-	-	-	-	-	-	-	-	25
30	6	6	6	6	6	6	8	10	10	20
25	10	10	10	12	12	10	12	15	15	15

Selezionare e ordinare

PAGINA PRODOTTO

Tutti i dati in una pagina!

Maschi a macchina per filettatura metrica ISO

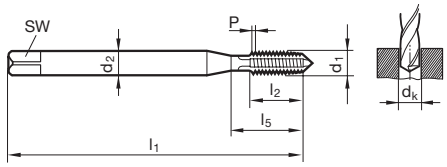
Materiale tagliente	HSS-E
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	☒

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 21

Applicazioni raccomandate:
- ● Idoneità ottima
- ○ Idoneità limitata



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **4218**

1 Articolo nr.

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

2 dimensioni nominali

quando ordinate, per favore, inserite sempre **Articolo e Codice**, es:
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Gühring KG
Postfach 10 02 47 · D-72423 Albstadt
Herderstraße 50-54 · D-72458 Albstadt

Tel.: +49 74 31 17-0
Fax: +49 74 31 17-21 279

Internet: www.guehring.de
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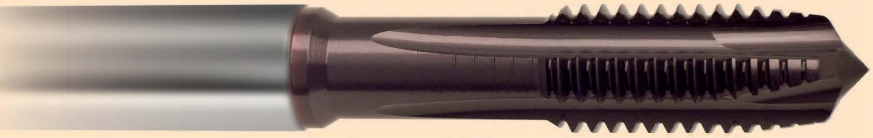

GUHRING

Acciaio

ACCIAIO

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Maschi ..... da pagina 18
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Frese a filettare ..... da pagina 28

Acciai inossidabili

INOSSIDABILI

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Ghisa grigia, malleabile e ghisa sferoidale

GHISA

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Alluminio, metalli non ferrosi e plastica

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Leghe speciali, superleghe e leghe di titanio

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Mandrini per maschiatura sincrona ..... da pagina 735

Parte tecnica ..... da pagina 773

Indice per gamma ..... da pagina 824

Indice Numero articoli ..... da pagina 854

ACCIAIO

P

Acciai generali con resistenze alla trazione da 500 a 1200 N / mm^2
Acciai per utensili, acciai da bonifica, acciai super rapidi

P ACCIAIO

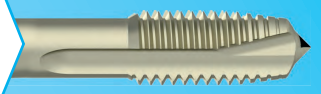
	M		MF	
	ISO 2/6H	ISO 3/6G	ISO 2/6H	ISO 3/6G
≤ 800 N/mm²	No 1 M2 - M30 Art. 4218 da pag. 38		No 1 M6x0,75 - M24x1,5 Art. 4219 da pag. 90	
	M1 - M10 Art. 803/815 da pag. 30/31	No 1 M1,4 - M20 Art. 837/845 da pag. 37	M3x0,35 - M40x1,5 Art. 827 da pag. 91	No 1 M6x0,75 - M20x1,5 Art. 316 da pag. 93
≤ 1000 N/mm²	No 1 M2 - M30 Art. 4218 da pag. 38		No 1 M6x0,75 - M24x1,5 Art. 4219 da pag. 90	
	M2 - M36 Art. 2876/2877 da pag. 33	No 1 M2 - M10 Art. 2990 da pag. 41	M5x0,5 - M50x1,5 Art. 2879 da pag. 94	
≤ 1200 N/mm²	No 1 M2 - M30 Art. 4218 da pag. 38		No 1 M6x0,75 - M24x1,5 Art. 4219 da pag. 90	
	M2 - M24 Art. 2941/2942 da pag. 43		M3x0,35 - M24x1,5 Art. 2943 da pag. 97	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G	PER FORI PASSANTI
2B	2B	-	

No 1
G1/16 - G1
Art. 4220
da pag. 134



HSS-E, Sirius, forma B

No 1
Nr. 1 - 1 1/2
Art. 873/878
da pag. 117

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Nr. 3 - 1 1/4
Art. 908
da pag. 125

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G1/16 - G2
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da pag. 132

HSS-E, lucido, forma B

No 1
G1/16 - G1
Art. 4220
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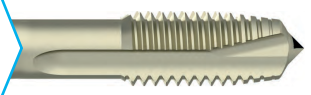

HSS-E, Sirius, forma B

No 1
Nr. 4 - 1
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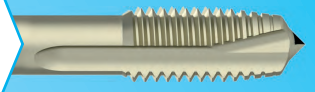
da pag. 118

No 1
Nr. 6 - 1
Art. 2885
da pag. 130

No 1
G1/8 - G2
Art. 2887
da pag. 140

HSS-E, trattati a vapore, forma B

No 1
G1/16 - G1
Art. 4220
da pag. 134



HSS-E, Sirius, forma B

HSS-E, nitrurato, forma B

P ACCIAIO

M

ISO 2/6H

≤ 800 N/mm²

No 1
M2 - M30
Art. 393
da pag. 71

M2 - M30
Art. 810/822
da pag. 60

≤ 1000 N/mm²

No 1
M2 - M30
Art. 393
da pag. 71

M2 - M36
Art. 836/826
da pag. 66

≤ 1200 N/mm²

No 1
M2 - M30
Art. 393
da pag. 71

M2 - M30
Art. 2850/2851
da pag. 81

ISO 3/6G

≤ 800 N/mm²

No 1
M3 - M24
Art. 844/848
da pag. 61

≤ 1000 N/mm²

No 1
M2 - M20
Art. 2994
da pag. 73

≤ 1200 N/mm²

No 1
M2 - M10
Art. 2985
da pag. 84

MF

ISO 2/6H

≤ 800 N/mm²

No 1
M6x0,75 - M24x1,5
Art. 394
da pag. 115

M3x0,35 - M30x2
Art. 834
da pag. 105

≤ 1000 N/mm²

No 1
M6x0,75 - M24x1,5
Art. 394
da pag. 115

M5x0,5 - M30x2
Art. 2853
da pag. 107

≤ 1200 N/mm²

No 1
M6x0,75 - M24x1,5
Art. 394
da pag. 115

M6x0,75 - M24x1,5
Art. 2852
da pag. 114

ISO 3/6G

≤ 1000 N/mm²

No 1
M8x1 - M20x1,5
Art. 2999
da pag. 108

≤ 1200 N/mm²

No 1
M8x1 - M20x1,5
Art. 2988
da pag. 116

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G	FORI CIECHI
2B	2B	-	

No 1
G1/16 - G1
Art. 395
da pag. 139

HSS-E, TiAlN, forma C

No 1
Nr. 2 - 1
Art. 876/881
da pag. 122

No 1
Nr. 3 - 1
Art. 911
da pag. 128

G1/16 - G1 1/2
Art. 965
da pag. 136

HSS-E, lucido, forma C

No 1
G1/16 - G1
Art. 395
da pag. 139

HSS-E, TiAlN, forma C

No 1
Nr.2 - 1
Art. 2855/2857
da pag. 123

No 1
Nr.10 - 7/8
Art. 2859
da pag. 129

G1/8 - G2
Art. 2861
da pag. 137

HSS-E, trattati a vapore, forma C

No 1
G1/16 - G1
Art. 395
da pag. 139

HSS-E, TiAlN, forma C

HSS-E, trattati a vapore, forma C

P ACCIAIO

without lubrication

M		MF	
6HX	**6GX**	**6HX**	**6GX**
No 1 M1 - M20 Art. 921/925 da pag. 149	No 1 M2 - M10 Art. 920 da pag. 150	No 1 M8x1 - M20x1,5 Art. 929 da pag. 165	No 1 M8x1 - M18x1,5 Art. 928 da pag. 168

with lubrication

M3 - M39 Art. 919/923 da pag. 152	No 1 M3 - M20 Art. 918/922 da pag. 153	M6x0,75 - M24x1,5 Art. 1275/927 da pag. 169	No 1 M8x1 - M20x1,5 Art. 1277/926 da pag. 172
No 1 M3 - M39 Art. 2012/2013 da pag. 152		No 1 M6x0,75 - M20x1,5 Art. 2008 da pag. 170	

with internal cooling

No 1 M3 - M20 Art. 1270/1271 da pag. 159	No 1 M5 - M10 Art. 1713 da pag. 160	No 1 M8x1 - M24x1,5 Art. 1272/1273 da pag. 178	No 1 M8x1 - M24x1,5 Art. 1715/1716 da pag. 179
No 1 M3 - M20 Art. 1725/1727 da pag. 159	No 1 M3 - M20 Art. 1726/1728 da pag. 161	No 1 M8x1 - M24x1,5 Art. 1729/1731 da pag. 178	No 1 M8x1 - M24x1,5 Art. 1730/1732 da pag. 179
No 1 M3 - M20 Art. 1972/1931 da pag. 163		No 1 M10x1 - M24x1,5 Art. 1581 da pag. 181	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2BX	2BX	-

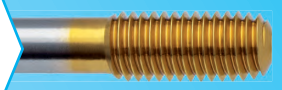
FORI PASSANTI
FORI CIECHI

FORI PASSANTI

No 1
Nr. 4 - 7/8
Art. 2273/2274
da pag. 182

No 1
Nr. 4 - 1
Art. 1283/2275
da pag. 183

No 1
G1/16 - G1 1/4
Art. 966
da pag. 184



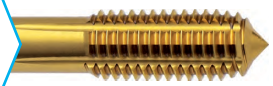
HSS-E, TiN, forma C

FORI CIECHI

No 1
Nr. 4 - 7/8
Art. 1582/1583
da pag. 182

No 1
Nr. 4 - 1
Art. 1584/1585
da pag. 183

No 1
G1/16 - G1 1/4
Art. 1586
da pag. 184



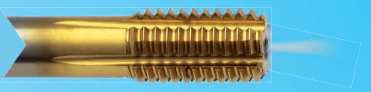
HSS-E, TiN, forma C

HSS-E, TiCN, forma C

FORMA C

HSS-E-PM, TiCN, forma C

FORMA E



HSS-E-PM, TiN, forma E

METALLO DURO

Metallo duro, TiCN, forma C

P ACCIAIO

	M UNIVERSAL	MF UNIVERSAL
1,5xD	No 1 M3 - M20 Art. 3525 da pag. 188	No 1 M4x0,5 - M16x1,5 Art. 3527 da pag. 191
2xD	No 1 M3 - M20 Art. 3526 da pag. 189	No 1 M4x0,5 - M16x1,5 Art. 3528 da pag. 192
2,5xD	No 1 M3 - M20 Art. 3759 da pag. 190	No 1 M4x0,5 - M16x1,5 Art. 3762 da pag. 193
3xD	No 1 M1,6 - M16 Art. 4226 da pag. 215	
universal	No 1 Ø8x0,5 - Ø20xP3,5 Art. 3541 da pag. 209	No 1 Ø8x0,5 - Ø20xP3,5 Art. 3541 da pag. 209

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G	
UNIVERSAL	UNIVERSAL	-	**FORI** PASSANTI **FORI** CIECHI

No 1
1/4 - 1/2
Art. 3516
da pag. 195

No 1
1/4 - 1/2
Art. 3518
da pag. 198

No 1
1/8 - 3/8
Art. 3514
da pag. 202

Metallo duro, TiCN

No 1
1/4 - 1/2
Art. 3517
da pag. 196

No 1
1/4 - 1/2
Art. 3519
da pag. 199

No 1
1/8 - 3/8
Art. 3515
da pag. 203

Metallo duro, TiCN

Metallo duro, TiCN

Metallo duro, TiCN

No 1
Ø10xUN24 - Ø20xUN7
Art. 3595
da pag. 211

No 1
Ø10xUN24 - Ø20xUN7
Art. 3595
da pag. 211

No 1
Ø10xG19 - Ø20xG11
Art. 3542
da pag. 212

Metallo duro, TiCN

ACCIAIO

FORI PASSANTI

Profondità filettatura		≤1,5xD						
Materiale tagliente		HSS-E						
Tipo/forma		N/C	N/C	N/C	N/D	NR28/D	N/-	
Superficie		◯	◯	◯	◯	◯	◯	
Erogazione del liquido di raffredd.		☒	☒	☒	☒	☒	☒	
Tolleranza codolo		h9	h9	h9	h9	h9	h9	
						Utensili combinati	Maschi a macchina per per dadi	
Filettatura	**Tolleranza**	**Articolo nr. / pagina**						
M	4H							
	6H	995 53		806/818 50/51	801/813 49	1839 87	851 85	
	6HX							
	6G			795 52				
MF	6H			830 100				
	6HX							
	6G			829 100				
UNC	2B			1977 121				
	2BX							
UNF	2B			1987 126				
	2BX							
G				963 133				
BSW								
NPT			973 146					
NPTF								
EG M	6H Mod.							
MJ	4HX							
MJF	4HX							
UNJC	3BX							
UNJF	3BX							
PG			979 147					
lubrificante adatto		●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	

= No 1

◯ = Aria
● = olio intero
● = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min					
P	acciao da costruzione, automatici, da bonifica e da cementazione non legati	≤800 N/mm²	S235JR C15 11SMnPb30	1.0037 1.0401 1.0718	**6**	**6**	**6**	**6**	**6**	**6**
	acciai automatici, acciai da cementazione legati, acciai nitrurati	800 - 1000 N/mm²	S355J2 C60 31CrMo12	1.0577 1.0601 1.8515	-	4	-	-	-	-
	acciai da bonifica legati, acciai utensili ed acciai super rapidi	800 - 1200 N/mm²	42CrMo4 36CrNiMo4 X36CrMo17 HS 6-5-2	1.7225 1.6511 1.2316 1.3343	-	-	-	-	-	-

≤1,5xD			≤3xD							
HSS-E										
N/B	N/B	N/B	NL15/D	N/B	N/B	N/B	N/B	N/B	N/B	N/B
○	○	○	○	○	○	○	●	S	C	○
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9
per lamiere	per lamiere				maschi a macchina					filettatura sinistra
Articolo nr. / pagina										
						794 36				
839/847 54	838/846 54	802 55	808/820 89	991 35	998 86	803/815 30/31	945/948 30/31	912/915 30/31	1246/1249 30/31	789/790 32
796 56	869 56	797 56				837/845 37				
						827 91	2888 91	832 91		
						316 93				
						873/878 117	2889/2890 117			
						908 125	2891 125			
						962 132	2894 132			
							2892/2893 142			
				980 147						
●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△

Velocità di taglio consigliata vc m / min										
10	**10**	**10**	**10**	**10**	**6**	**10**	**10**	**12**	**12**	**10**
-	-	-	-	6	-	6	6	8	8	6
-	-	-	-	-	-	-	-	-	-	-

ACCIAIO

FORI PASSANTI

Profondità filettatura		≤3xD						
Materiale tagliente		HSS-E				HSS-E-PM		
Tipo/forma		N/B	N/B	N/B	N/B	N/B	N/B	
Superficie		○	S	A+M	A+M	S	C	
Erogazione del liquido di raffredd.		☒	☒	☒	radiale	☒	☒	
Tolleranza codolo		h9	h9	h9	h9	h9	h9	
Filettatura	**Tolleranza**	**Articolo nr. / pagina**						
M	4H							
	6H	2876/2877 33	313/315 33	2427/2428 33	2517 34	1285/1286 39	1287 40	
	6HX							
	6G	2990 41	2991 41					
MF	6H	2879 94		2878 94		1291 98		
	6HX							
	6G		2993 93					
UNC	2B	2881/2883 118						
	2BX							
UNF	2B	2885 130						
	2BX							
G		2887 140		2886 140				
BSW								
NPT								
NPTF								
EG M	6H Mod.		1010 144					
MJ	4HX							
MJF	4HX							
UNJC	3BX							
UNJF	3BX							
PG								
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min					
P	acciao da costruzione, automatici, da bonifica e da cementazione non legati	≤800 N/mm²	S235JR C15 11SMnPb30	1.0037 1.0401 1.0718	**12**	**15**	**15**	**15**	**20**	**20**
	acciai automatici, acciai da cementazione legati, acciai nitrurati	800 - 1000 N/mm²	S355J2 C60 31CrMo12	1.0577 1.0601 1.8515	**10**	**12**	**12**	**12**	**15**	**15**
	acciai da bonifica legati, acciai utensili ed acciai super rapidi	800 - 1200 N/mm²	42CrMo4 36CrNiMo4 X36CrMo17 HS 6-5-2	1.7225 1.6511 1.2316 1.3343	6	8	8	8	**10**	**10**

≤3xD

Int. in MD	HSS-E						HSS-E-PM			HSS-E
N/B	H/B	H/B	H/B	H/B	H/B	H/B	H/B	H/B	H/B	VA/B
C	○	●	●	S	C	○	○	S	C	S
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
h6	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9
										NEW
Articolo nr. / pagina										
	804/816 43	733/734 43	2941/2942 43		1914/1915 43	791/849 44	875 46	57/58 47	1575/1576 47	
942 42										4218 38
	2465 45			2710 45						
	828 97		2943 97							
943/944 95/96										4219 90
				2983 99						
										4220 32
				980 147						
●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△

Velocità di taglio consigliata vc m / min										
40	-	-	-	-	-	-	-	-	-	**25**
30	6	6	6	6	6	6	8	10	10	**20**
25	**10**	**10**	**10**	**12**	**12**	**10**	**12**	**15**	**15**	**15**

ACCIAIO

FORI CIECHI

Profondità filettatura		≤1,5xD							
Materiale tagliente		HSS-E							
Tipo/forma		N/C	N/C	N/C	NR15/C	NR15/C	NR15/C	NR15/C	NR15/C
Superficie		○	○	○	○	○	●	Ⓢ	○
Erogazione del liquido di raffredd.		☒	☒	☒	☒	☒	☒	☒	assiale
Tolleranza codolo		h9	h9	h9	h9	h9	h9	h9	h9
Filettatura	**Tolleranza**	**Articolo nr. / pagina**							
M	4H								
	6H	995 53		806/818 50/51	992 58	809/821 57	946/949 57	913/916 57	1891/1898 59
	6HX								
	6G			795 52		799 52			
MF	6H			830 100		833 102	2838 102	1971 102	1905 104
	6HX								
	6G			829 100					
UNC	2B			1977 121		1978 119	2839/2840 120		
	2BX								
UNF	2B			1987 126		1988 127	2841 127		
	2BX								
G				963 133		964 135	2842 135		
BSW									
NPT			973 146						
NPTF									
EG M	6H Mod.								
MJ	4HX								
MJF	4HX								
UNJC	3BX								
UNJF	3BX								
PG			979 147						
lubrificante adatto		●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△

= No 1

○ = Aria
● = olio intero
● = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min							
P	acciao da costruzione, automatici, da bonifica e da cementazione non legati	≤800 N/mm²	S235JR	1.0037	6	6	6	8	8	8	10	8
			C15	1.0401								
			11SMnPb30	1.0718								
	acciai automatici, acciai da cementazione legati, acciai nitrurati	800 - 1000 N/mm²	S355J2	1.0577	-	-	-	-	-	-	-	-
			C60	1.0601								
			31CrMo12	1.8515								
	acciai da bonifica legati, acciai utensili ed acciai super rapidi	800 - 1200 N/mm²	42CrMo4	1.7225	-	-	-	-	-	-	-	-
			36CrNiMo4	1.6511								
			X36CrMo17	1.2316								
			HS 6-5-2	1.3343								

≤1,5xD					≤2xD					≤3xD				
HSS-E			HSS-E-PM		HSS-E		HSS-E-PM			HSS-E				
NR15/C	NR15/C	NR15/E	HR15/C	HR15/C	H/C	H/C	H/C	H/E	HR15/C	NR40/C	NR40/C	NR40/C	NR40/C	NR40/C
S	C	C	○	A	C	C	C	C	C	○	○	○	●	S
assiale	☒	☒	☒	☒	assiale	assiale	assiale	assiale	assiale	☒	☒	☒	☒	☒
h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9
					truciolo corto	truciolo corto, extra lunghe	truciolo corto	truciolo corto	truciolo corto, taglienti lucidi		extra lunghe			
Articolo nr. / pagina														
2436/2437 59	4154 48	4155 48	872/935 76	1577/1578 76						993 65	888 88	810/822 60	783/784 60	914/917 60
					778 79	779 80	302/297 78	1091/4165 78	1188/1194 77					
												844/848 61		
	4156 103	4157 103	874 112							1970 106		834 105	2843 105	852 105
							1090 113	1007 113	1200 112					
												876/881 122	2844/2845 122	
												911 128	2846 128	
		4158 135										965 136	2849 136	
													2847/2848 143	
○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△/□	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

Velocità di taglio consigliata vc m / min														
10	15	15	-	-	-	-	-	-	-	8	8	8	8	12
-	10	10	-	-	15	15	15	15	12	-	-	-	-	-
-	8	8	4	6	12	12	12	12	10	-	-		-	-

ACCIAIO

FORI CIECHI

Profondità filettatura		≤3xD							
Materiale tagliente		HSS-E							
Tipo/forma		NR40/C	NL40/C	NR40/C	NR40/C	NR40/C	NR40/E	NR40/C	NR40/C
Superficie		C	○	○	S	○	○	●	S
Erogazione del liquido di raffredd.		☒	☒	assiale	assiale	☒	☒	☒	☒
Tolleranza codolo		h9	h9	h9	h9	h9	h9	h9	h9
			filettatura sinistra						
Filettatura	**Tolleranza**	**Articolo nr. / pagina**							
M	4H								
	6H	1252/1254 60	786/787 62	1893 63	2438/2439 64	889/890 66	2790/2791 69	836/826 66	2440/2441 66
	6HX								
	6G							2994 73	2995 73
MF	6H					2424 107	2792 107	2853 107	
	6HX								
	6G					2998 108		2999 108	1049 108
UNC	2B					2854/2856 123		2855/2857 123	
	2BX								
UNF	2B							2859 129	
	2BX								
G						2860 137		2861 137	
BSW									
NPT									
NPTF									
EG M	6H Mod.								1011 145
MJ	4HX								
MJF	4HX								
UNJC	3BX								
UNJF	3BX								
PG									
lubrificante adatto		●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△	●/●/△

= No 1

○ = Aria
● = olio intero
● = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min							
P	acciao da costruzione, automatici, da bonifica e da cementazione non legati	≤800 N/mm²	S235JR C15 11SMnPb30	1.0037 1.0401 1.0718	**12**	**8**	**8**	**12**	**10**	**10**	**10**	**15**
	acciai automatici, acciai da cementazione legati, acciai nitrurati	800 - 1000 N/mm²	S355J2 C60 31CrMo12	1.0577 1.0601 1.8515	-	-	-	-	**8**	**8**	**8**	**10**
	acciai da bonifica legati, acciai utensili ed acciai super rapidi	800 - 1200 N/mm²	42CrMo4 36CrNiMo4 X36CrMo17 HS 6-5-2	1.7225 1.6511 1.2316 1.3343	-	-	-	-	4	4	6	8

≤3xD

HSS-E		HSS-E-PM				HSS-E						HSS-E-PM		HSS-E
NR40/C	NR40/C	NR40/C	NR40/C	NR50/C	NR50/C	HR40/C	HR40/C	HR40/C	HR40/C	HR40/C	HR40/C	VAR50/C	VAR50/C	VAR45/C
S	S	S	C	S	C	○	●	●	S	C	○	S	C	A
☒	☒	☒	☒	☒	assiale	☒	☒	☒	☒	☒	assiale	☒	assiale	☒
h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h6	h6	h9
utensili con correzione	extra lunghe											maschi syncro	maschi syncro	
Articolo nr. / pagina														
174/196 70		1288/1289 72	1290 73	767/1098 74	1152/1293 74	811/823 81	947/950 81	2850/2851 81	361/362 82	1916/1917 82	1894/1901 83			
	4153 67											761/763 75	1139/1142 75	393 71
								2985 84	2986 84					
273 109		1292 109		1100 110	1294 110	835 114	2940 114	2852 114						
												764 111	1144 111	394 115
								2988 116	2989 116					
1837 124														
1838 131														
937 141												4159 138		395 139
○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△/□	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△/□	○/●/△

Velocità di taglio consigliata vc m / min														
15	15	15	15	15	20	-	-	-	-	-	-	15	20	20
10	10	10	10	12	15	-	-	-	-	-	-	12	15	15
8	8	8	8	8	10	6	6	6	8	10	6	8	10	10

ACCIAIO

FORI PASSANTI E
FORI CIECHI

Profondità filettatura		≤1,5xD			≤3xD		
Materiale tagliente		HSS-E	HSS-E-PM	Int. in MD	HSS-E		
Tipo/forma		N/C	N/C	N/C	N/C	N/C	N/C
Superficie		S	S	S	S	C	P
Erogazione del liquido di raffredd.		☒	☒	assiale	☒	☒	☒
Tolleranza codolo		h9	h9	h6	h9	h9	h9
Filettatura	**Tolleranza**	**Articolo nr. / pagina**					
M	4H						
	6HX	921/925 149	1255/1256 149	2518 151	919/923 152	2012/2013 152	1587/1589 152
	6G						
	6GX	920 150	903/952 149		918/922 153		1588/1590 153
MF	6HX	929 165	1257/1258 166		1275/927 169	2008 170	1591/1593 169
	6G						
	6GX	928 168	1740 167		1277/926 172		1592 171
UNC	2B						
	2BX	2273/2274 182			1582/1583 182		
UNF	2B						
	2BX	1283/2275 183			1584/1585 183		
G		966 184			1586 184		
BSW							
NPT							
NPTF							
EG M	6H Mod.						
MJ	4HX						
MJF	4HX						
UNJC	3BX						
UNJF	3BX						
PG							
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min					
P	acciao da costruzione, automatici, da bonifica e da cementazione non legati	≤800 N/mm²	S235JR C15 11SMnPb30	1.0037 1.0401 1.0718	12	15	35	15	15	15
	acciai automatici, acciai da cementazione legati, acciai nitrurati	800 - 1000 N/mm²	S355J2 C60 31CrMo12	1.0577 1.0601 1.8515	12	15	35	15	15	15
	acciai da bonifica legati, acciai utensili ed acciai super rapidi	800 - 1200 N/mm²	42CrMo4 36CrNiMo4 X36CrMo17 HS 6-5-2	1.7225 1.6511 1.2316 1.3343	10	12	25	12	12	12

≤3xD

HSS-E		HSS-E-PM								Int. in MD	
N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/E	N/C	N/E
S	C	S	S	P	S	S	C	A	S	C	C
assiale	radiale	☒	☒	☒	radiale	assiale	radiale	radiale	assiale	radiale	radiale
h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h6	h6
Articolo nr. / pagina											
2442/2444 156	2446/2448 156	322/339 154	1266/1267 155	1599/1707 155	323/342 158	4143 162	1270/1271 159	1717/1719 159	1725/1727 159	1972/1931 163	1927 164
2443/2445 156	2447 157			1705/1708 153			1713 160	1718/1720 161	1726/1728 161		
		333 173	1268/1269 174	1711 175	338 177	4145 180	1272/1273 178	1721/1723 178	1729/1731 178	1581 181	
				1710/1712 176			1715/1716 179		1730/1732 179		
○/●/△	○/●/△/□	○/●/△	○/●/△	●/△	○/●/△/□	○/●/△	○/●/△/□	○/●/△/□	○/●/△	○/●/△/□	○/●/△/□

Velocità di taglio consigliata vc m / min											
15	15	20	20	20	20	20	20	20	20	35	35
15	15	20	20	20	20	20	20	20	20	35	35
12	12	15	15	15	15	15	15	15	15	25	25

ACCIAIO

FORI PASSANTI E
FORI CIECHI

	Profondità filettatura	≤2xD				≤2,5xD		≤1,5xD	
	Materiale tagliente		Int. in MD						
	Tipo	TM SP	TM SP	TM SP	TM SP	TM SP	TM SP	TMC SP	TMC SP
	Superficie	C	C	C	C	C	C	C	C
	Erogazione del liquido di raffredd.	☒	☒	assiale	assiale	assiale	assiale	assiale	assiale
	Forma del gambo	HA	HB	HA	HB	HA	HB	HA	HA
	Torsione	27°	27°	27°	27°	27°	27°	10°	10°
	Filettatura		**Articolo nr. / pagina**						
	M	4132 186	4133 186	3737 186	3743 186	3735 187	3740 187	3525 188	3543 188
	MF			3737 186	3743 186			3527 191	3545 191
	UNC			4134 194	4135 194			3516 195	3534 195
	UNF			4136 197	4137 197			3518 198	3536 198
	G			3745 200	3748 200	3746 201	3750 201	3514 202	3529 202
	BSW								
	NPT			3753 205	3754 205			3520 206	3538 206
	NPTF			3756 207	3757 207			3521 208	3539 208
	EG M	Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare							
	MJ								
	MJF								
	UNJC								
	UNJF								
	PG								
	lubrificante adatto	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
□ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	consigli di applicazione							
P	acciao da costruzione, automatici, da bonifica e da cementazione non legati	≤800 N/mm²	S235JR C15 11SMnPb30	1.0037 1.0401 1.0718	++	++	++	++	++	++	++	++
	acciai automatici, acciai da cementazione legati, acciai nitrurati	800 - 1000 N/mm²	S355J2 C60 31CrMo12	1.0577 1.0601 1.8515	++	++	++	++	++	++	++	++
	acciai da bonifica legati, acciai utensili ed acciai super rapidi	800 - 1200 N/mm²	42CrMo4 36CrNiMo4 X36CrMo17 HS 6-5-2	1.7225 1.6511 1.2316 1.3343	+	+	+	+	+	+	++	++

≤2xD		≤2,5xD		universal				≤3xD	
Int. in MD									
TMC SP	TMC SP	TMC SP	TMC SP	TMU SP	TMU SP	TMU SP	TMU SP	MTM 3 SP	MTM 1 SP
C	C	C	C	C	C	C	C	C	C
assiale	assiale	assiale	assiale	assiale	assiale	assiale	assiale	☒	☒
HA	HB	HA	HB	HA	HB	HA	HB	HA	HA
10°	10°	27°	27°	15°	15°	15°	15°	15°	15°
Articolo nr. / pagina									
3526 189	3544 189	3759 190	3760 190	3541 209	3556 209	4162 210	4163 210	4226 215	4225 217
3528 192	3546 192	3762 193	3763 193	3541 209	3556 209	4162 210	4163 210		4225 217
3517 196	3535 196			3595 211	3596 211				
3519 199	3537 199			3595 211	3596 211				
3515 203	3533 203	3765 204	3766 204	3542 212	3557 212	3542 212	3557 212	4228 212	
				3768 213	3769 213				
				3772 214	3773 214				
Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare									
○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

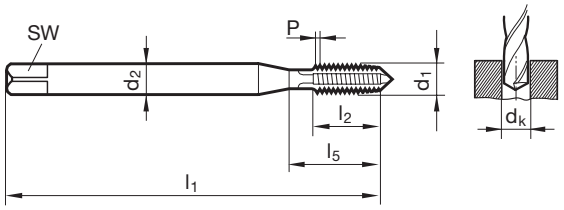
consigli di applicazione									
++	++	++	++	++	++	++	++	++	++
++	++	++	++	++	++	++	++	++	++
++	++	++	++	++	++	++	++	++	++

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E			
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	S	●	C
Tipo	N	N	N	N
Forma	B	B	B	B
Refrigerazione interna	✕	✕	✕	✕

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19



DIN 2184-1 DIN 371 — Articolo nr. **803** **912** **945** **1246**

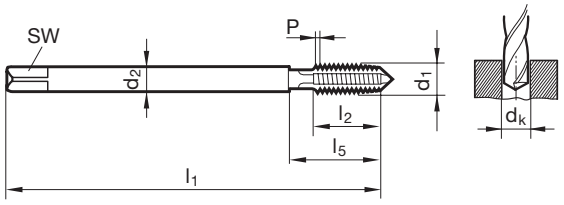
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,75	40,000	5,500	
M1,2	0,250	2,500	2,100	0,95	40,000	5,500	
M1,4	0,300	2,500	2,100	1,10	40,000	7,000	
M1,6	0,350	2,500	2,100	1,25	40,000	8,000	
M1,7	0,350	2,500	2,100	1,35	40,000	8,000	
M1,8	0,350	2,500	2,100	1,45	40,000	8,000	
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M7	1,000	7,000	5,500	6,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

Maschi a macchina per filettatura metrica ISO

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

Materiale tagliente	HSS-E			
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	S	●	C
Tipo	N	N	N	N
Forma	B	B	B	B
Refrigerazione interna	✕	✕	✕	✕



DIN 2184-1 DIN 376

Articolo nr.	815	915	948	1249

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1,6	0,350	1,200		1,25	40,000	8,000	
M1,8	0,350	1,200		1,45	40,000	8,000	
M2	0,400	1,400		1,60	45,000	8,000	13,500
M2,2	0,450	1,600		1,75	45,000	9,000	14,500
M2,3	0,400	1,600		1,90	45,000	9,000	14,500
M2,5	0,450	1,800		2,05	50,000	9,000	14,500
M2,6	0,450	1,800		2,15	50,000	9,000	14,500
M3	0,500	2,200		2,50	56,000	10,000	18,000
M3,5	0,600	2,500	2,100	2,90	56,000	12,000	20,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M7	1,000	5,500	4,300	6,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	29,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	32,00	200,000	50,000	102,000
M39	4,000	32,000	24,000	35,00	200,000	50,000	107,000
M42	4,500	32,000	24,000	37,50	200,000	56,000	112,000
M45	4,500	36,000	29,000	40,50	220,000	58,000	117,000
M48	5,000	36,000	29,000	43,00	250,000	65,000	127,000
M52	5,000	40,000	32,000	47,00	250,000	65,000	128,000

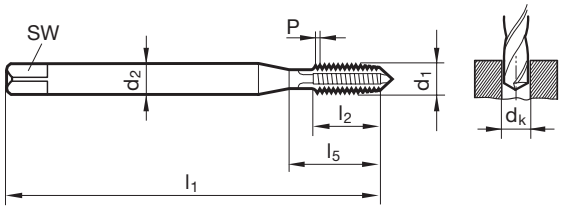
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N-LH
Forma	B
Refrigerazione interna	

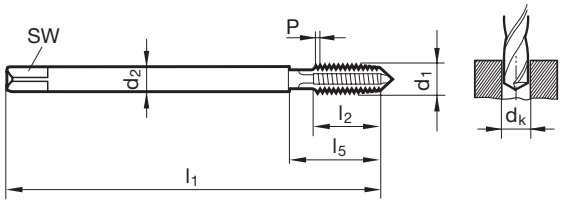
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **789**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **790**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

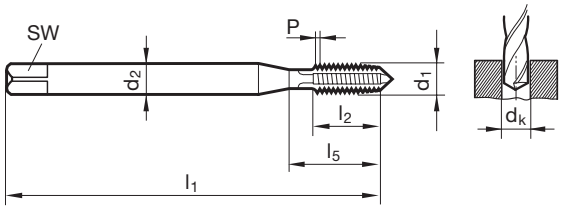
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	S	A+M	
Tipo	N	N	N
Forma	B	B	B
Refrigerazione interna			

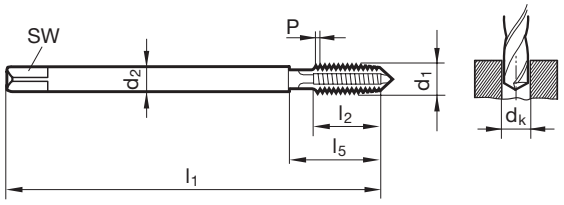
P	≤ 1000
M	○
K	
N	
S	
H	

Dati di taglio a pag. 20

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **313** **2427** **2876**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **315** **2428** **2877**

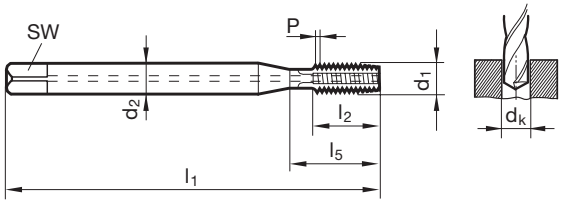
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000
M36	4,000	28,000	22,000	32,00	200,000	50,000	102,000

Maschi a macchina forati per fil. metr. ISO

P	≤ 1000
M	○
K	
N	
S	
H	

Dati di taglio a pag. 20

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	A+M
Tipo	N
Forma	B
Refrigerazione interna	



DIN 2184-1 DIN 371 Articolo nr. **2517**

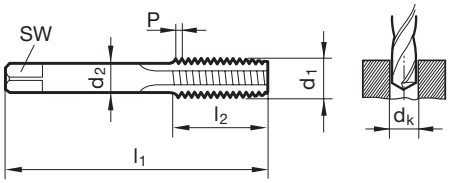
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

Maschi a macchina per filettatura metrica ISO

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	



DIN 2184-2 DIN 352 Articolo nr. **991**

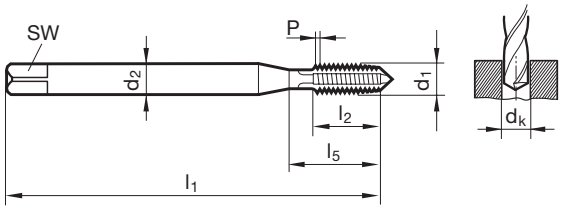
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	36,000	8,000	
M2,2	0,450	2,800	2,100	1,75	36,000	9,000	
M2,3	0,400	2,800	2,100	1,90	36,000	9,000	
M2,5	0,450	2,800	2,100	2,05	40,000	9,000	
M2,6	0,450	2,800	2,100	2,15	40,000	9,000	
M3	0,500	3,500	2,700	2,50	40,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	45,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	45,000	12,000	21,000
M4,5	0,750	6,000	4,900	3,70	50,000	14,000	24,000
M5	0,800	6,000	4,900	4,20	50,000	14,000	24,000
M6	1,000	6,000	4,900	5,00	56,000	16,000	27,000
M7	1,000	6,000	4,900	6,00	56,000	16,000	32,000
M8	1,250	6,000	4,900	6,80	63,000	17,000	32,000
M9	1,250	7,000	5,500	7,80	63,000	17,000	32,000
M10	1,500	7,000	5,500	8,50	70,000	20,000	36,000
M11	1,500	8,000	6,200	9,50	70,000	20,000	36,000
M12	1,750	9,000	7,000	10,20	75,000	24,000	40,000
M14	2,000	11,000	9,000	12,00	80,000	26,000	42,000
M16	2,000	12,000	9,000	14,00	80,000	26,000	45,000
M18	2,500	14,000	11,000	15,50	95,000	30,000	50,000
M20	2,500	16,000	12,000	17,50	95,000	32,000	50,000
M22	2,500	18,000	14,500	19,50	100,000	32,000	50,000
M24	3,000	18,000	14,500	21,00	110,000	36,000	60,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO1/4H
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19



DIN 2184-1 DIN 371 Articolo nr. **794**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M7	1,000	7,000	5,500	6,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

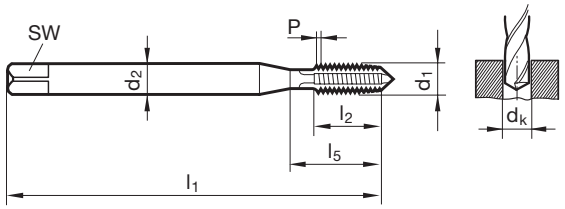
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO3/6G
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	

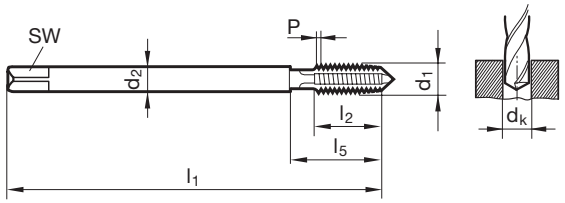
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **837**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1,4	0,300	2,500	2,100	1,10	40,000	7,000	
M1,6	0,350	2,500	2,100	1,25	40,000	8,000	
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **845**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	1,400	1,250	1,60	45,000	8,000	13,500
M3	0,500	2,200	1,800	2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

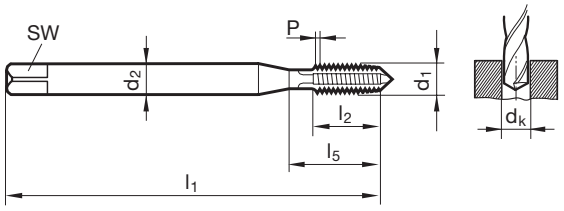
Maschi a macchina per filettatura metrica ISO

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 21

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

NEW



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **4218**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

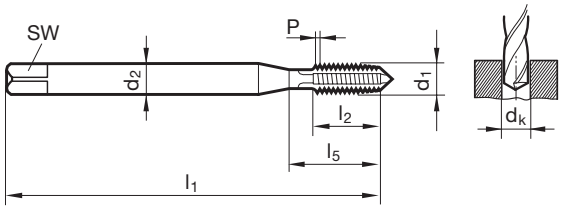
Maschi a macchina per filettatura metrica ISO

P	≤ 1000
M	○
K	
N	
S	
H	

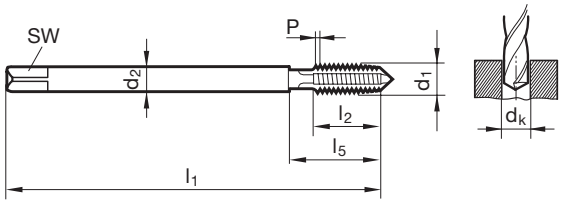
Dati di taglio a pag. 20

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	ISO2/6H
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **1285**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **1286**

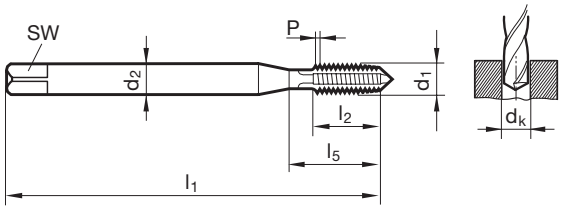
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000
M	○
K	
N	
S	
H	

Dati di taglio a pag. 20

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	ISO2/6H
Superficie	C
Tipo	N
Forma	B
Refrigerazione interna	



DIN 2184-1 DIN 371 Articolo nr. **1287**

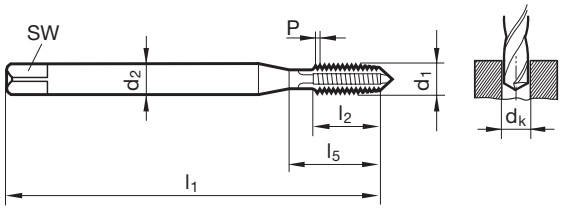
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000	
M	○	
K		
N		
S		
H		

Dati di taglio a pag. 20

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO3/6G	ISO3/6G
Superficie		S
Tipo	N	N
Forma	B	B
Refrigerazione interna		



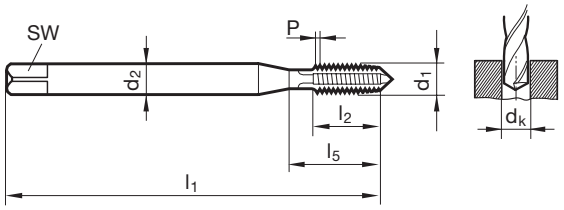
DIN 2184-1 DIN 371 Articolo nr. **2990** **2991**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000	Dati di taglio a pag. 21
M		
K		
N		
S		
H		

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	B
Refrigerazione interna	



DIN 2184-1 ~DIN 371 Articolo nr. **942**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	12,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	15,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	19,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	22,500	39,000
M12	1,750	12,000	9,000	10,20	110,000	26,500	49,000

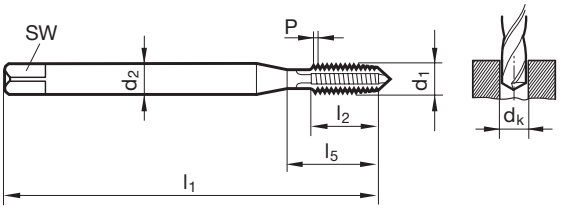
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E			
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Superficie			C	
Tipo	H	H	H	H
Forma	B	B	B	B
Refrigerazione interna				

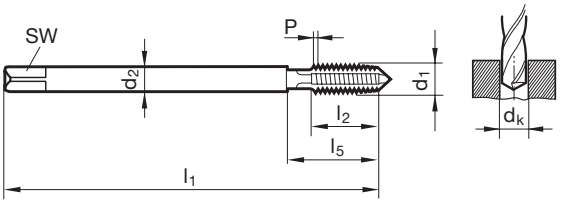
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 21

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **733** **804** **1914** **2941**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **734** **816** **1915** **2942**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200	1,800	2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000

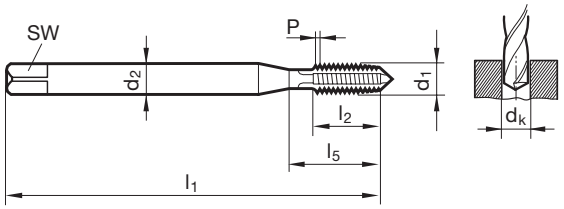
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	H AZ
Forma	B
Refrigerazione interna	

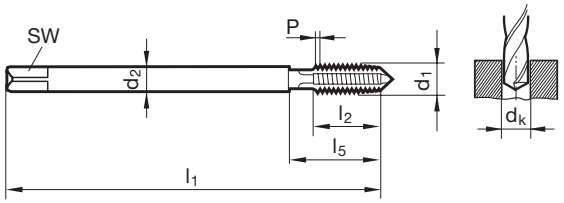
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 21

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **791**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

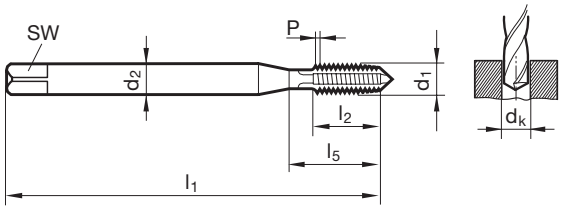
DIN 2184-1 DIN 376 Articolo nr. **849**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1200	Dati di taglio a pag. 21
M		
K		
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO3/6G	ISO3/6G
Superficie	◯	Ⓢ
Tipo	H	H
Forma	B	B
Refrigerazione interna		



DIN 2184-1 DIN 371 — Articolo nr. **2465** **2710**

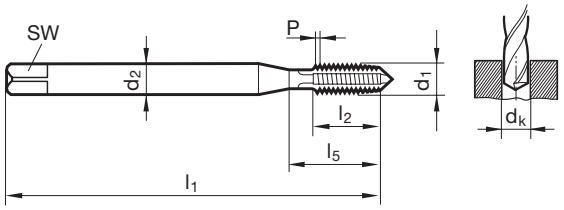
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	H
Forma	B
Refrigerazione interna	

P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 21



DIN 2184-1 DIN 371 Articolo nr. **875**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

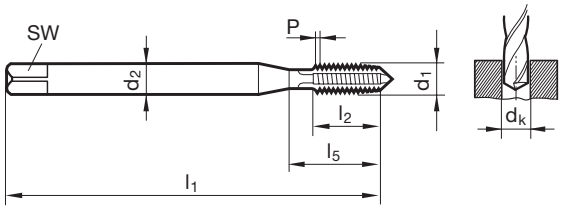
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	A
Tipo	H	H
Forma	B	B
Refrigerazione interna		

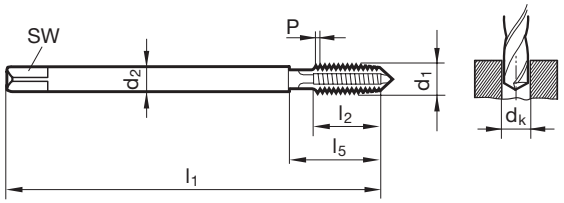
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 21

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **57** **1575**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **58** **1576**

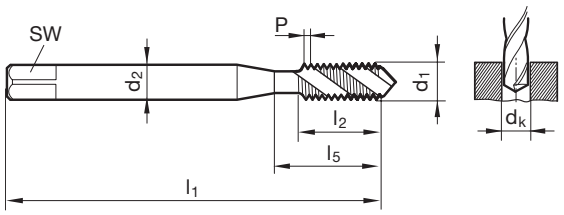
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 23

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	C	C
Tipo	N R15	N R15
Forma	C	E
Refrigerazione interna		



DIN 2184-1 DIN 371/DIN 376 — Articolo nr. **4154** **4155**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

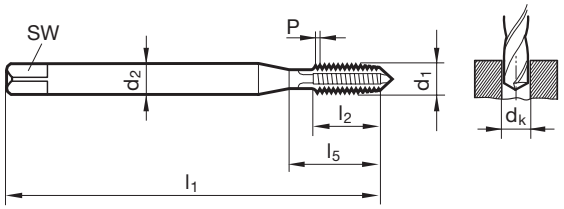
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	D
Refrigerazione interna	

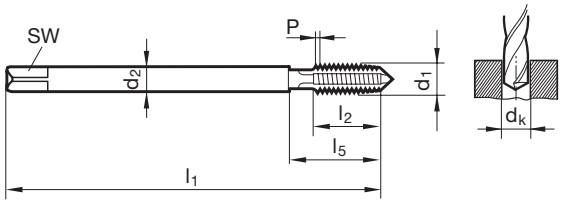
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **801**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **813**

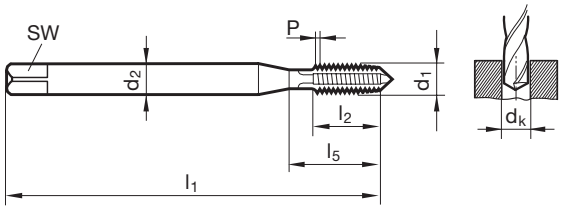
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	1,400		1,60	45,000	8,000	13,500
M2,3	0,400	1,600	1,250	1,90	45,000	9,000	14,500
M2,5	0,450	1,800		2,05	50,000	9,000	14,500
M2,6	0,450	1,800	1,400	2,15	50,000	9,000	14,500
M3	0,500	2,200		2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	32,000	62,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



DIN 2184-1 DIN 371 Articolo nr. **806**

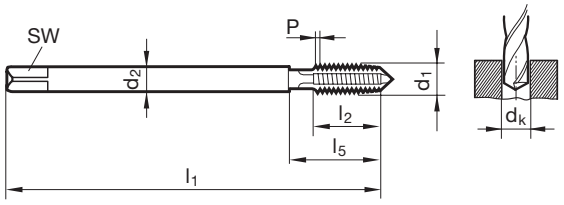
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,75	40,000	5,500	
M1,2	0,250	2,500	2,100	0,95	40,000	5,500	
M1,4	0,300	2,500	2,100	1,10	40,000	7,000	
M1,6	0,350	2,500	2,100	1,25	40,000	4,500	
M1,7	0,350	2,500	2,100	1,35	40,000	4,500	
M1,8	0,350	2,500	2,100	1,45	40,000	4,500	
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,3	0,400	2,800	2,100	1,90	45,000	4,500	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



DIN 2184-1 DIN 376 Articolo nr. **818**

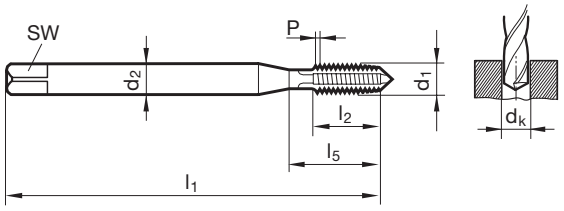
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1,6	0,350	1,200		1,25	40,000	4,500	
M1,7	0,350	1,200		1,35	40,000	4,500	
M2	0,400	1,400		1,60	45,000	4,500	13,500
M2,5	0,450	1,800		2,05	50,000	5,000	14,500
M2,6	0,450	1,800		2,15	50,000	5,000	14,500
M3	0,500	2,200		2,50	56,000	6,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000
M36	4,000	28,000	22,000	32,00	200,000	40,000	102,000
M42	4,500	32,000	24,000	37,50	200,000	45,000	112,000
M48	5,000	36,000	29,000	43,00	250,000	50,000	127,000

Maschi a macchina per filettatura metrica ISO

P	≤ 800	
M		
K		
N		
S		
H		

Dati di taglio a pag. 18/22

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO3/6G	ISO3/6G
Superficie	◯	◯
Tipo	N	N R15
Forma	C	C
Refrigerazione interna	⊠	⊠



DIN 2184-1 DIN 371 Articolo nr. **795** **799**

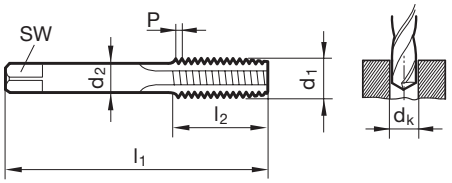
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	5,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



DIN 2184-2 DIN 352 Articolo nr. **995**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2,2	0,450	2,800	2,100	1,75	36,000	9,000	
M2,3	0,400	2,800	2,100	1,90	36,000	9,000	
M2,5	0,450	2,800	2,100	2,05	40,000	9,000	
M3	0,500	3,500	2,700	2,50	40,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	45,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	45,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	50,000	8,500	24,000
M6	1,000	6,000	4,900	5,00	56,000	11,000	27,000
M8	1,250	6,000	4,900	6,80	63,000	14,000	32,000
M10	1,500	7,000	5,500	8,50	70,000	16,000	36,000
M12	1,750	9,000	7,000	10,20	75,000	18,500	40,000
M16	2,000	12,000	9,000	14,00	80,000	20,000	45,000

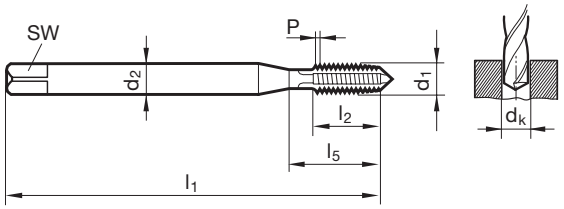
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	◯	◯
Tipo	N	N
Forma	B	B
Refrigerazione interna	✕	✕

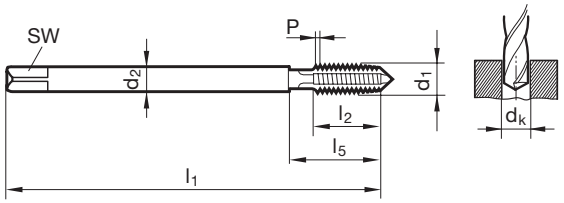
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **838** **839**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1,2	0,250	2,500	2,100	0,95	40,000	5,500	
M1,4	0,300	2,500	2,100	1,10	40,000	7,000	
M1,6	0,350	2,500	2,100	1,25	40,000	8,000	
M1,7	0,350	2,500	2,100	1,35	40,000	8,000	
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M7	1,000	7,000	5,500	6,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **846** **847**

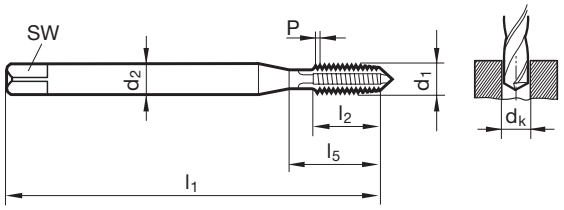
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200	1,800	2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19



DIN 2184-1 DIN 371 Articolo nr. **802**

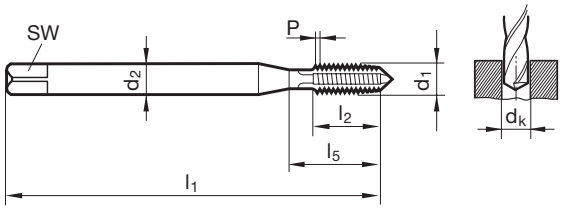
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO3/6G	ISO3/6G	ISO3/6G
Superficie	○	○	○
Tipo	N	N	N
Forma	B	B	B
Refrigerazione interna	⊠	⊠	⊠

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19



DIN 2184-1 DIN 371 — Articolo nr. **869** **796** **797**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M7	1,000	7,000	5,500	6,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

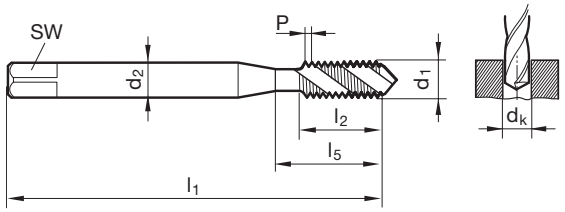
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	(S)	●
Tipo	N R15	N R15	N R15
Forma	C	C	C
Refrigerazione interna	✗	✗	✗

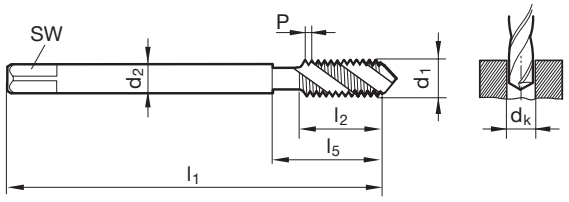
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **809** **913** **946**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	5,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	4,500	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **821** **916** **949**

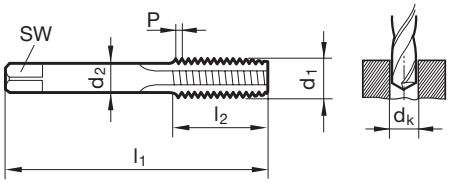
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	6,000	18,000
M3,5	0,600	2,500	2,100	2,90	56,000	7,000	20,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

Maschi a macchina per filettatura metrica ISO

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N R15
Forma	C
Refrigerazione interna	



DIN 2184-2 DIN 352 Articolo nr. **992**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	40,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	45,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	50,000	8,500	24,000
M6	1,000	6,000	4,900	5,00	56,000	11,000	27,000
M7	1,000	6,000	4,900	6,00	56,000	11,000	32,000
M8	1,250	6,000	4,900	6,80	63,000	14,000	32,000
M10	1,500	7,000	5,500	8,50	70,000	16,000	36,000
M12	1,750	9,000	7,000	10,20	75,000	18,500	40,000
M14	2,000	11,000	9,000	12,00	80,000	20,000	42,000
M16	2,000	12,000	9,000	14,00	80,000	20,000	45,000
M20	2,500	16,000	12,000	17,50	95,000	25,000	50,000

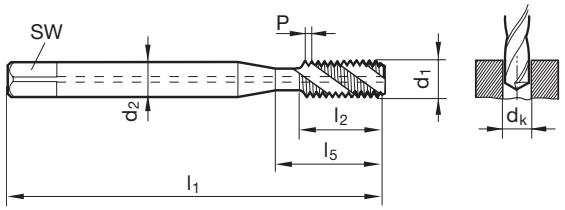
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	○	S
Tipo	N R15	N R15
Forma	C	C
Refrigerazione interna		

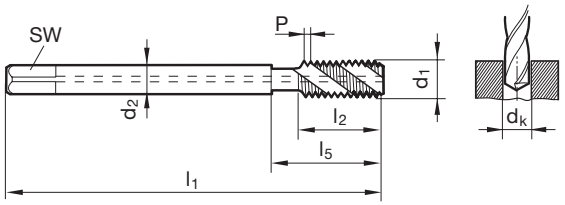
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22/23

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **1891** **2436**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1898** **2437**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

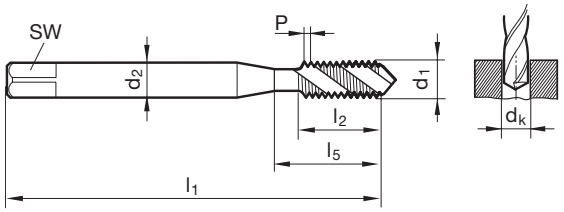
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E			
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Superficie			S	C
Tipo	N R40	N R40	N R40	N R40
Forma	C	C	C	C
Refrigerazione interna				

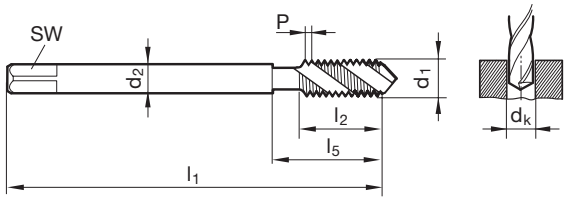
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23/24

DIN 371



DIN 376



DIN 2184-1 DIN 371	Articolo nr.	783	810	914	1252

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	5,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	4,500	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376	Articolo nr.	784	822	917	1254

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	6,000	18,000
M3,5	0,600	2,500	2,100	2,90	56,000	7,000	20,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M7	1,000	5,500	4,300	6,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

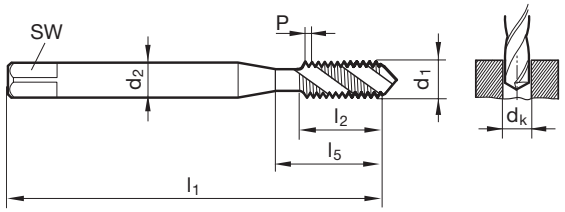
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO3/6G
Superficie	◯
Tipo	N R40
Forma	C
Refrigerazione interna	

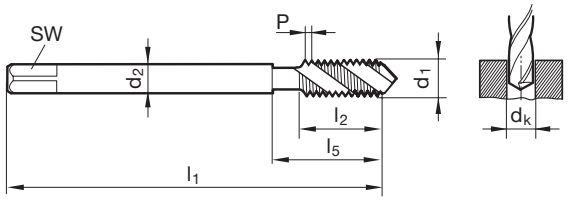
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **844**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **848**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200	1,800	2,50	56,000	6,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M7	1,000	5,500	4,300	6,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000

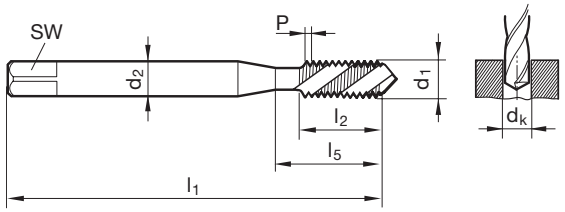
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N L40-LH
Forma	C
Refrigerazione interna	

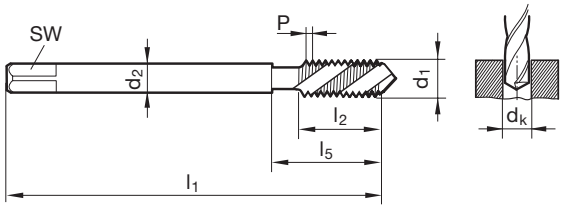
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 24

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **786**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **787**

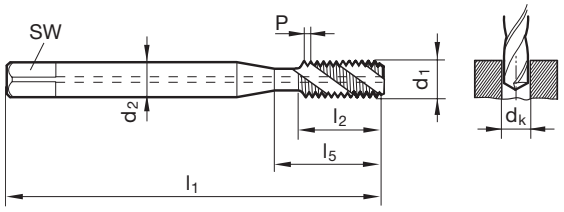
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N R40
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 24



DIN 2184-1 DIN 371 Articolo nr. **1893**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

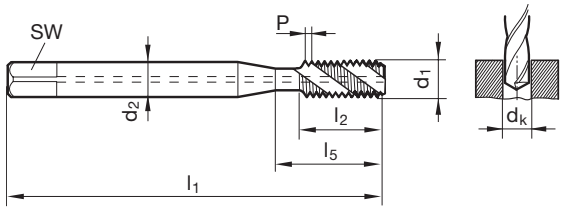
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	

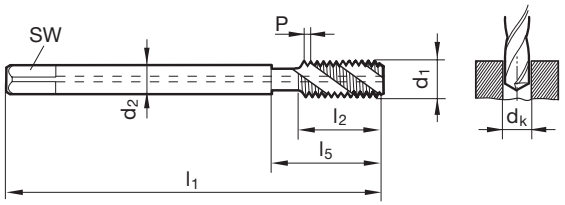
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 24

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **2438**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **2439**

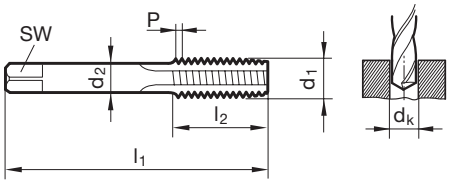
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

Maschi a macchina per filettatura metrica ISO

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 2184-2 DIN 352 Articolo nr. **993**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	36,000	8,000	
M2,5	0,450	2,800	2,100	2,05	40,000	9,000	
M3	0,500	3,500	2,700	2,50	40,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	45,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	45,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	50,000	8,500	24,000
M6	1,000	6,000	4,900	5,00	56,000	11,000	27,000
M8	1,250	6,000	4,900	6,80	63,000	14,000	32,000
M10	1,500	7,000	5,500	8,50	70,000	16,000	36,000
M12	1,750	9,000	7,000	10,20	75,000	18,500	40,000
M16	2,000	12,000	9,000	14,00	80,000	20,000	45,000
M18	2,500	14,000	11,000	15,50	95,000	25,000	50,000
M20	2,500	16,000	12,000	17,50	95,000	25,000	50,000
M22	2,500	18,000	14,500	19,50	100,000	27,000	50,000

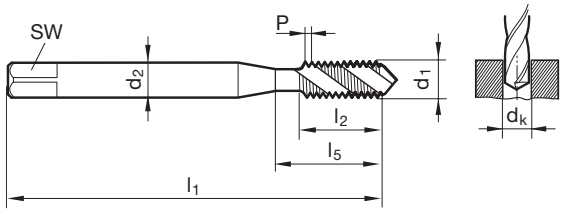
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E			
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Superficie			A+M	S
Tipo	N R40	N R40	N R40	N R40
Forma	C	C	C	C
Refrigerazione interna				

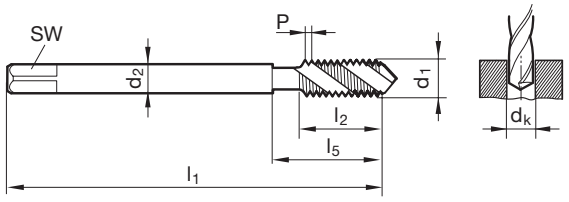
P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 24

DIN 371



DIN 376



DIN 2184-1 DIN 371	Articolo nr.	836	889	2425	2440

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	5,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	4,500	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376	Articolo nr.	826	890	2426	2441

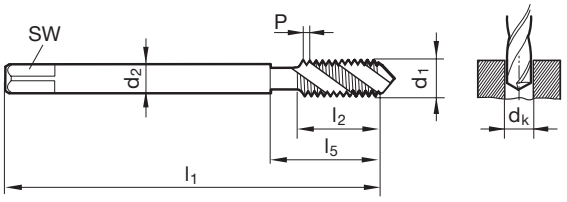
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	6,000	18,000
M3,5	0,600	2,500	2,100	2,90	56,000	7,000	20,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M7	1,000	5,500	4,300	6,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000
M36	4,000	28,000	22,000	32,00	200,000	40,000	102,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 25

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	



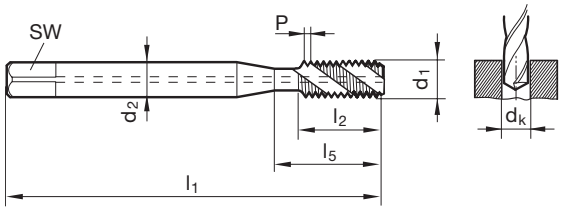
Norma di fab. Norma di fab. Articolo nr. **4153**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	112,000	6,000	18,000
M4	0,700	2,800	2,100	3,30	112,000	7,500	77,000
M5	0,800	3,500	2,700	4,20	125,000	8,500	90,000
M6	1,000	4,500	3,400	5,00	125,000	11,000	90,000
M8	1,250	6,000	4,900	6,80	140,000	14,000	97,000
M10	1,500	7,000	5,500	8,50	160,000	16,000	117,000
M12	1,750	9,000	7,000	10,20	180,000	18,500	133,000
M16	2,000	12,000	9,000	14,00	220,000	20,000	168,000
M20	2,500	16,000	12,000	17,50	280,000	25,000	225,000

Maschi a macchina forati per fil. metr. ISO

P	≤ 1000
M	○
K	○
N	
S	
H	

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	A+M
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 2184-1 DIN 371 Articolo nr. **2514**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

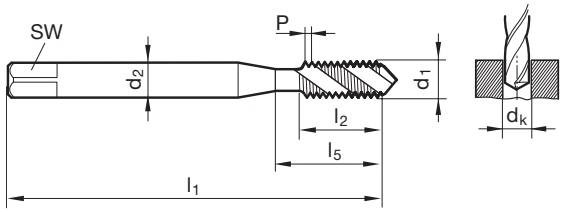
Maschi a macchina per filettatura metrica ISO

P	≤ 1000
M	○
K	○
N	○
S	
H	

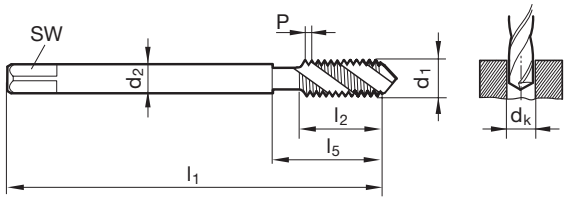
Dati di taglio a pag. 24

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	○
Tipo	N R40
Forma	E
Refrigerazione interna	

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **2790**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **2791**

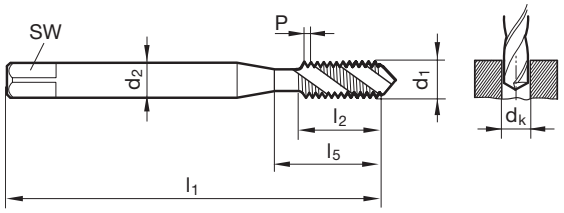
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 25

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 2184-1 DIN 371 Articolo nr. **174**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **196**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

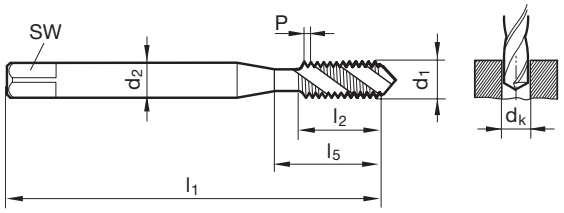
Maschi a macchina per filettatura metrica ISO

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 25

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	A
Tipo	VA R45
Forma	C
Refrigerazione interna	

NEW



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **393**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

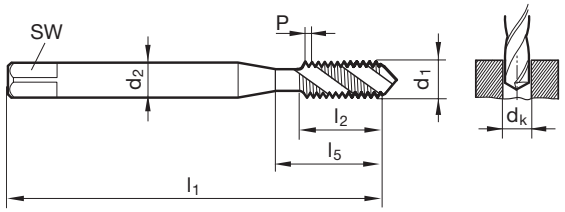
Maschi a macchina per filettatura metrica ISO

P	≤ 1000
M	○
K	○
N	
S	
H	

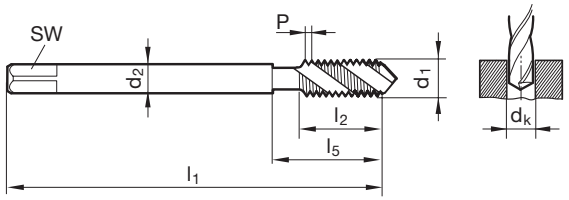
Dati di taglio a pag. 25

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	ISO2/6H
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **1288**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **1289**

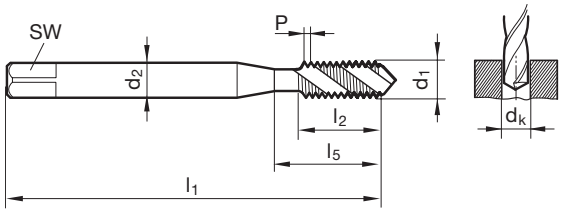
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000	
M	○	
K	○	
N		
S		
H		

Dati di taglio a pag. 24/25

Materiale tagliente	HSS-E-PM	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO3/6G	ISO3/6G
Superficie	C		S
Tipo	N R40	N R40	N R40
Forma	C	C	C
Refrigerazione interna			



DIN 2184-1 DIN 371 — Articolo nr. **1290** **2994** **2995**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

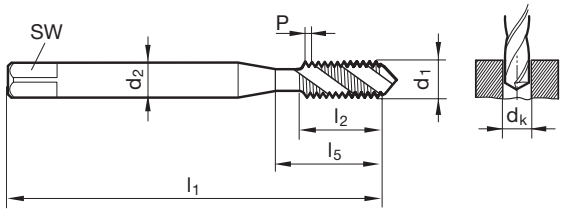
Maschi a macchina per filettatura metrica ISO

P	•
M	•
K	○
N	•
S	○
H	

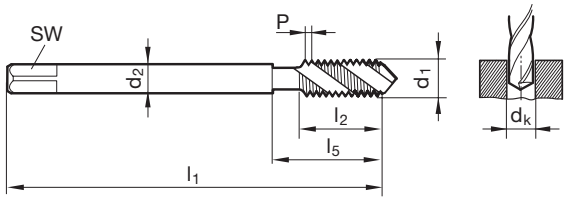
Dati di taglio a pag. 25

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	C
Tipo	N R50	N R50
Forma	C	C
Refrigerazione interna		

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **767** **1152**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1098** **1293**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

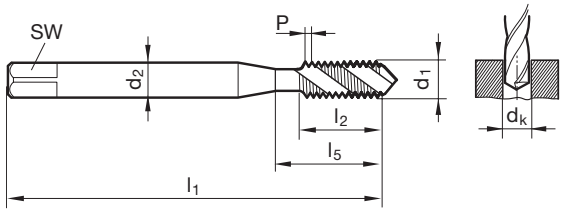
Maschi a macchina per filettatura metrica ISO

P	•
M	•
K	○
N	•
S	○
H	

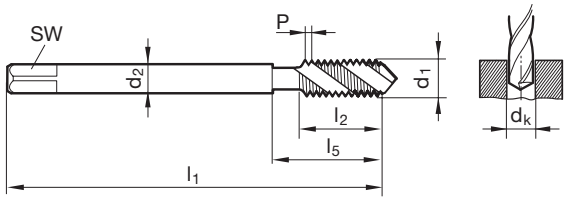
Dati di taglio a pag. 25

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	S	C
Tipo	VA R50	VA R50
Forma	C	C
Refrigerazione interna		

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **761** **1139**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	2,500	18,000
M4	0,700	4,500	3,400	3,30	63,000	3,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	4,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	5,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	6,300	35,000
M10	1,500	10,000	8,000	8,50	100,000	7,500	39,000

DIN 2184-1 DIN 376 — Articolo nr. **763** **1142**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	8,800	63,000
M14	2,000	11,000	9,000	12,00	110,000	10,000	58,000
M16	2,000	12,000	9,000	14,00	110,000	10,000	58,000
M20	2,500	16,000	12,000	17,50	140,000	12,500	85,000

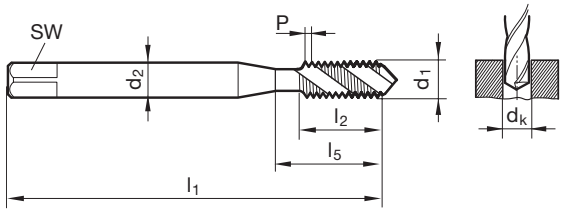
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	○	A
Tipo	H R15	H R15
Forma	C	C
Refrigerazione interna	✕	✕

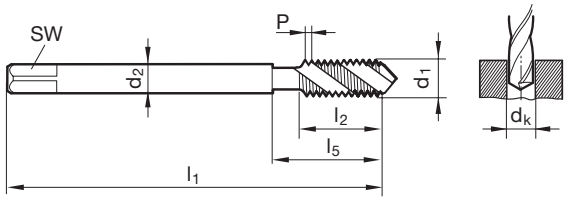
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 23

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **872** **1577**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **935** **1578**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

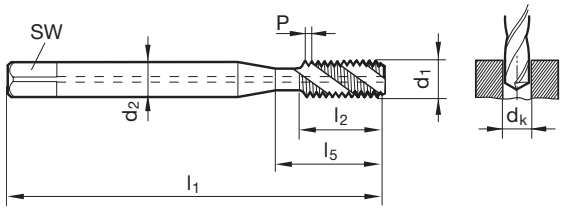
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H R15
Forma	C
Refrigerazione interna	

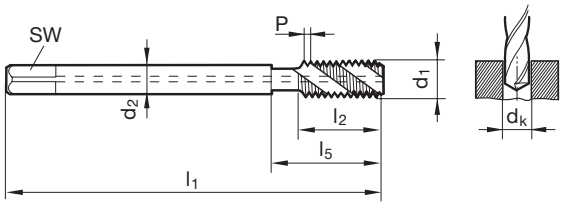
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 23

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **1188**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **1194**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000

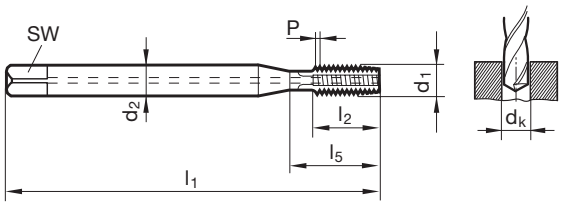
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	C
Tipo	H	H
Forma	C	E
Refrigerazione interna		

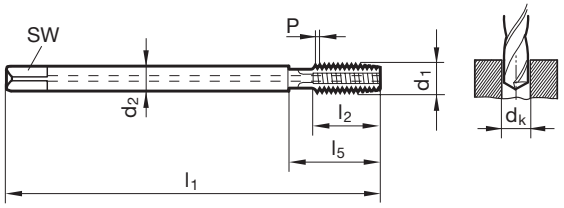
P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 23

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **302** **1091**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **297** **4165**

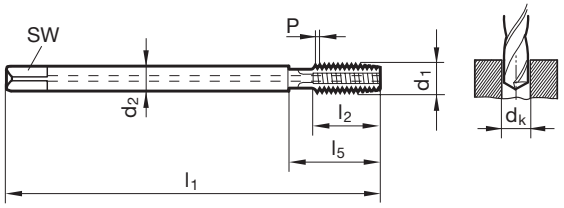
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	C
Refrigerazione interna	

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 23



DIN 2184-1 DIN 376 Articolo nr. **778**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	29,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	32,00	200,000	50,000	102,000
M39	4,000	32,000	24,000	35,00	200,000	50,000	107,000

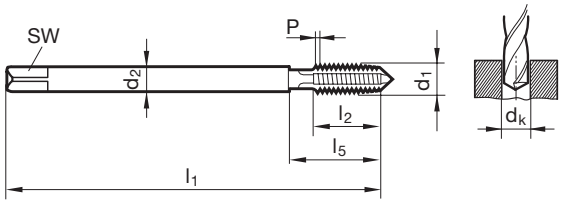
Maschi a macchina forati per fil. metr. ISO

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 23

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	C
Refrigerazione interna	

NEW



Norma di fab. ~DIN 376 Articolo nr. **779**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M16	2,000	12,000	9,000	14,00	160,000	26,000	100,000
M20	2,500	16,000	12,000	17,50	180,000	32,000	120,000
M24	3,000	18,000	14,500	21,00	200,000	36,000	120,000
M27	3,000	20,000	16,000	24,00	225,000	36,000	145,000
M30	3,500	22,000	18,000	26,50	250,000	40,000	160,000
M33	3,500	25,000	20,000	29,50	275,000	40,000	170,000
M36	4,000	28,000	22,000	32,00	300,000	50,000	180,000
M39	4,000	32,000	24,000	35,00	325,000	50,000	210,000

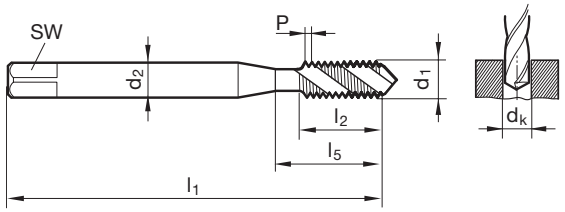
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	●	◍
Tipo	H R40	H R40	H R40
Forma	C	C	C
Refrigerazione interna	⊠	⊠	⊠

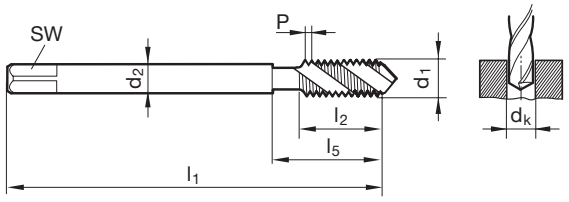
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 25

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **811** **947** **2850**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,3	0,400	2,800	2,100	1,90	45,000	4,500	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M7	1,000	7,000	5,500	6,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **823** **950** **2851**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	6,000	18,000
M3,5	0,600	2,500	2,100	2,90	56,000	7,000	20,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

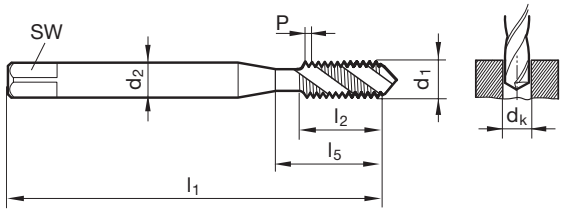
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	C
Tipo	H R40	H R40
Forma	C	C
Refrigerazione interna		

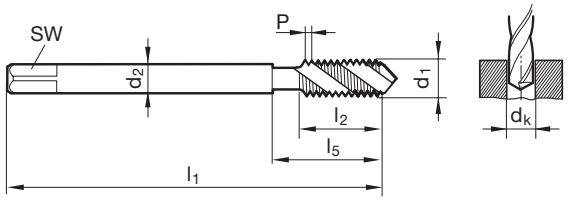
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 25

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **361** **1916**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M7	1,000	7,000	5,500	6,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **362** **1917**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	6,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

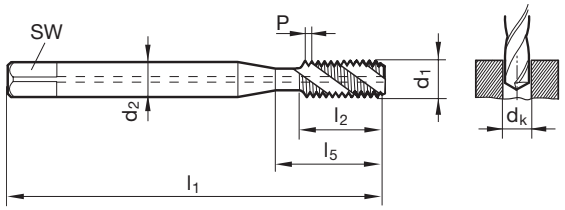
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	H R40
Forma	C
Refrigerazione interna	

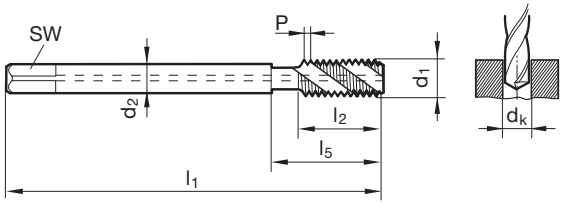
P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 25

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **1894**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **1901**

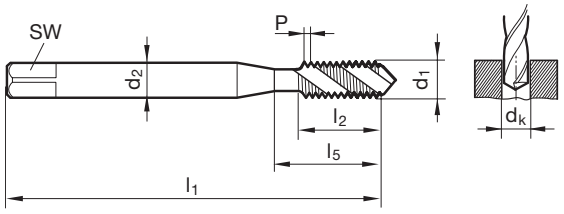
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO3/6G	ISO3/6G
Superficie		S
Tipo	H R40	H R40
Forma	C	C
Refrigerazione interna		

P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 25



DIN 2184-1 DIN 371 — Articolo nr. **2985** **2986**

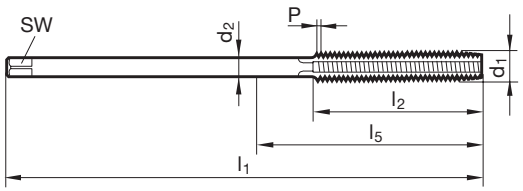
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

Maschi a macchina per dadi per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18



DIN 357 DIN 357 Articolo nr. **851**

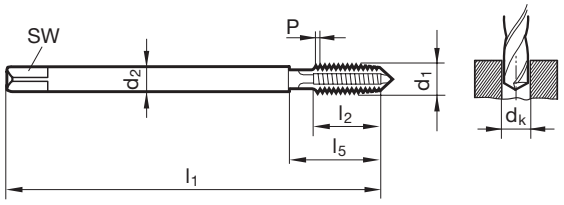
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	70,000	22,000	30,000
M4	0,700	2,800	2,100	3,30	90,000	25,000	33,000
M5	0,800	3,500	2,700	4,20	100,000	28,000	38,000
M6	1,000	4,500	3,400	5,00	110,000	32,000	44,000
M8	1,250	6,000	4,900	6,80	125,000	40,000	61,000
M10	1,500	7,000	5,500	8,50	140,000	45,000	85,000
M12	1,750	9,000	7,000	10,20	180,000	50,000	120,000
M16	2,000	12,000	9,000	14,00	200,000	63,000	145,000
M20	2,500	16,000	12,000	17,50	250,000	70,000	170,000
M30	3,500	22,000	18,000	26,50	315,000	100,000	230,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19



Norma di fab. Norma di fab. Articolo nr. **998**

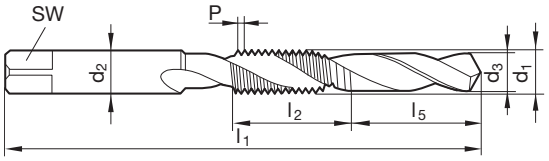
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	70,000	18,000	35,000
M4	0,700	2,800	2,100	3,30	90,000	22,000	55,000
M5	0,800	3,500	2,700	4,20	100,000	24,000	65,000
M6	1,000	4,500	3,400	5,00	110,000	25,000	75,000
M8	1,250	6,000	4,900	6,80	125,000	28,000	68,000
M10	1,500	7,000	5,500	8,50	140,000	30,000	80,000
M12	1,750	9,000	7,000	10,20	180,000	35,000	115,000
M14	2,000	11,000	9,000	12,00	200,000	35,000	125,000
M16	2,000	12,000	9,000	14,00	200,000	40,000	130,000
M20	2,500	16,000	12,000	17,50	250,000	45,000	165,000

Utensili combinati per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	D
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18



Norma di fab. Norma di fab. Articolo nr. **1839**

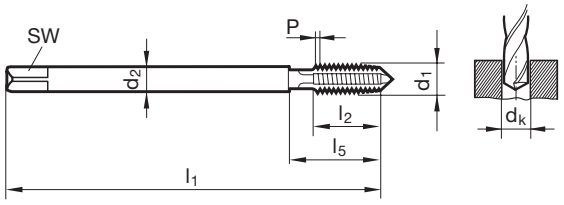
d1	P	d2	d3	SW	l1	l5	l2	Codice
	mm	mm	mm	mm	mm	mm	mm	
M3	0,500	3,500	2,500	2,700	62,000	11,000	12,000	3,000
M4	0,700	4,500	3,300	3,400	66,000	10,000	16,000	4,000
M5	0,800	6,000	4,200	4,900	75,000	12,000	18,000	5,000
M6	1,000	6,000	5,000	4,900	81,000	14,000	20,000	6,000
M8	1,250	6,000	6,800	4,900	93,000	20,000	12,000	8,000
M10	1,500	7,000	8,500	5,500	99,000	22,000	14,000	10,000
M12	1,750	9,000	10,200	7,000	106,000	25,000	16,000	12,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N R40
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23



Norma di fab. Norma di fab. Articolo nr. **888**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	90,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	125,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	140,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	160,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	180,000	14,000	
M10	1,500	7,000	5,500	8,50	200,000	16,000	140,000
M12	1,750	9,000	7,000	10,20	220,000	18,500	160,000
M14	2,000	11,000	9,000	12,00	220,000	20,000	160,000
M16	2,000	12,000	9,000	14,00	220,000	20,000	16,000
M20	2,500	16,000	12,000	17,50	280,000	25,000	220,000

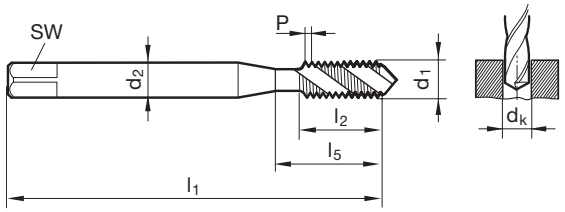
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N L15
Forma	D
Refrigerazione interna	

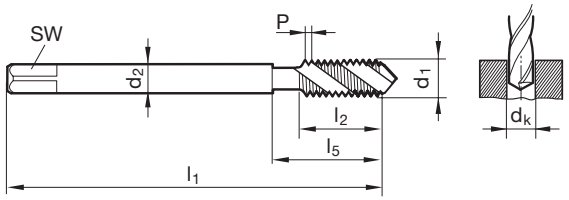
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **808**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **820**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200	1,800	2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

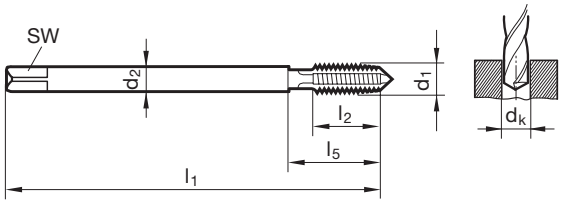
Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 21



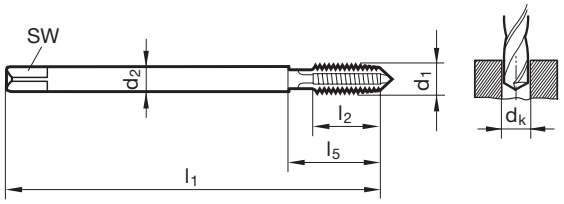
DIN 2184-1 DIN 374 Articolo nr. **4219**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 800	Dati di taglio a pag. 19
M		
K		
N		
S		
H		

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	S	●
Tipo	N	N	N
Forma	B	B	B
Refrigerazione interna	✕	✕	✕



DIN 2184-1 DIN 374 — Articolo nr. **827** **832** **2888**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	2,200		2,65	56,000	7,000	18,000	3,002
M3,5 x 0,35	2,500	2,100	3,15	56,000	8,000	20,000	3,502
M4 x 0,5	2,800	2,100	3,50	63,000	8,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	13,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M6 x 0,75	4,500	3,400	5,20	100,000	13,000	30,000	6,004
M7 x 0,75	5,500	4,300	6,20	80,000	13,000	30,000	7,004
M8 x 0,5	6,000	4,900	7,50	80,000	14,000	30,000	8,003
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M9 x 1	7,000	5,500	8,00	90,000	16,000	35,000	9,005
M10 x 0,75	7,000	5,500	9,20	90,000	16,000	35,000	10,004
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1	7,000	5,500	9,00	90,000	17,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M11 x 1	8,000	6,200	10,00	90,000	20,000	33,000	11,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M15 x 1	12,000	9,000	14,00	100,000	20,000	40,000	15,005
M15 x 1,5	12,000	9,000	13,50	100,000	20,000	44,000	15,007
M16 x 1	12,000	9,000	15,00	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,00	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M18 x 2	14,000	11,000	16,00	125,000	30,000	58,000	18,008
M20 x 1	16,000	12,000	19,00	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M20 x 2	16,000	12,000	18,00	140,000	32,000	60,000	20,008
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M22 x 2	18,000	14,500	20,00	140,000	32,000	62,000	22,008
M24 x 1	18,000	14,500	23,00	140,000	28,000	48,000	24,005

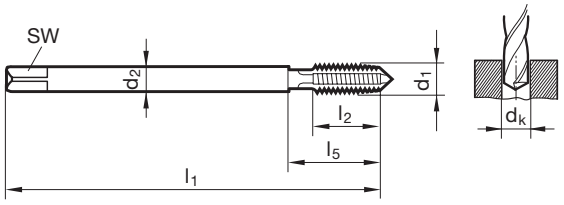
DIN 2184-1 DIN 374 Articolo nr. **827** **832** **2888**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	28,000	48,000	24,008
M26 x 1,5	18,000	14,500	24,50	140,000	28,000	50,000	26,007
M27 x 1,5	20,000	16,000	25,50	140,000	28,000	53,000	27,007
M27 x 2	20,000	16,000	25,00	140,000	28,000	53,000	27,008
M28 x 1,5	20,000	16,000	26,50	140,000	28,000	53,000	28,007
M30 x 1,5	22,000	18,000	28,50	150,000	28,000	53,000	30,007
M30 x 2	22,000	18,000	28,00	150,000	28,000	53,000	30,008
M32 x 1,5	22,000	18,000	30,50	150,000	28,000	53,000	32,007
M33 x 1,5	25,000	20,000	31,50	160,000	30,000	56,000	33,007
M35 x 1,5	28,000	22,000	33,50	170,000	30,000	56,000	35,007
M36 x 1,5	28,000	22,000	34,50	170,000	30,000	56,000	36,007
M38 x 1,5	28,000	22,000	36,50	170,000	30,000	56,000	38,007
M40 x 1,5	32,000	24,000	38,50	170,000	30,000	57,000	40,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000	Dati di taglio a pag. 19/20
M	○	
K		
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO3/6G	ISO3/6G
Superficie	(S)	○
Tipo	N	N
Forma	B	B
Refrigerazione interna	⊠	⊠



DIN 2184-1 DIN 374 — Articolo nr. **2993** **316**

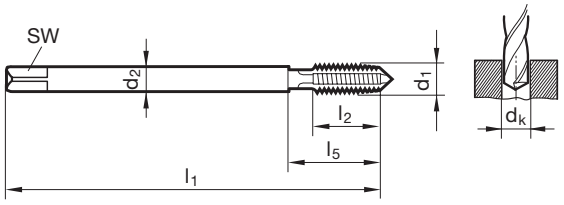
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	A+M	
Tipo	N	N
Forma	B	B
Refrigerazione interna		

P	≤ 1000
M	○
K	
N	
S	
H	

Dati di taglio a pag. 20



DIN 2184-1 DIN 374 — Articolo nr. **2878** **2879**

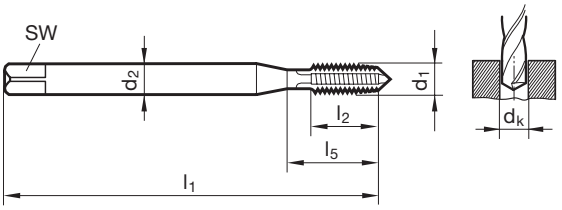
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	28,000	48,000	24,008
M26 x 1,5	18,000	14,500	24,50	140,000	28,000	50,000	26,007
M27 x 1,5	20,000	16,000	25,50	140,000	28,000	53,000	27,007
M27 x 2	20,000	16,000	25,00	140,000	28,000	53,000	27,008
M28 x 1,5	20,000	16,000	26,50	140,000	28,000	53,000	28,007
M30 x 1,5	22,000	18,000	28,50	150,000	28,000	53,000	30,007
M30 x 2	22,000	18,000	28,00	150,000	28,000	53,000	30,008
M32 x 1,5	22,000	18,000	30,50	150,000	28,000	53,000	32,007
M36 x 1,5	28,000	22,000	34,50	170,000	30,000	56,000	36,007
M40 x 1,5	32,000	24,000	38,50	170,000	30,000	57,000	40,007
M42 x 1,5	32,000	24,000	40,50	170,000	30,000	57,000	42,007
M45 x 1,5	36,000	29,000	43,50	180,000	32,000	60,000	45,007
M48 x 1,5	36,000	29,000	46,50	190,000	32,000	60,000	48,007
M50 x 1,5	36,000	29,000	48,50	190,000	32,000	60,000	50,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000
M	
K	
N	
S	
H	

Dati di taglio a pag. 21

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	B
Refrigerazione interna	



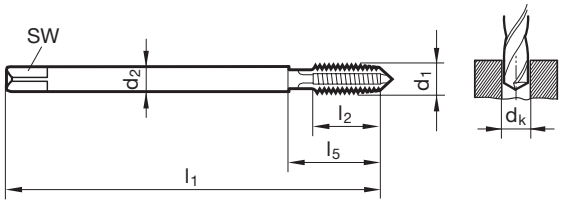
DIN 2184-1 ~DIN 371 Articolo nr. **943**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	6,000	4,900	4,50	70,000	7,500	25,000	5,003
M6 x 0,5	6,000	4,900	5,50	80,000	7,500	30,000	6,003
M6 x 0,75	6,000	4,900	5,20	80,000	11,500	30,000	6,004
M8 x 1	8,000	6,200	7,00	90,000	15,000	35,000	8,005
M10 x 1	10,000	8,000	9,00	90,000	15,000	35,000	10,005
M10 x 1,25	10,000	8,000	8,80	100,000	19,000	39,000	10,006
M12 x 1	12,000	9,000	11,00	100,000	15,000	40,000	12,005
M12 x 1,25	12,000	9,000	10,80	100,000	19,000	40,000	12,006
M12 x 1,5	12,000	9,000	10,50	100,000	22,500	40,000	12,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000	Dati di taglio a pag. 21
M		
K		
N		
S		
H		

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	B
Refrigerazione interna	



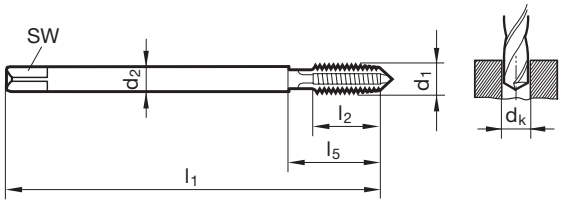
DIN 2184-1 DIN 374 Articolo nr. **944**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M14 x 1,25	11,000	9,000	12,80	100,000	19,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	22,500	40,000	14,007
M16 x 1	12,000	9,000	15,00	100,000	15,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	22,500	44,000	16,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1200	Dati di taglio a pag. 21
M		
K		
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	○	●
Tipo	H	H
Forma	B	B
Refrigerazione interna		



DIN 2184-1 DIN 374 Articolo nr. **828** **2943**

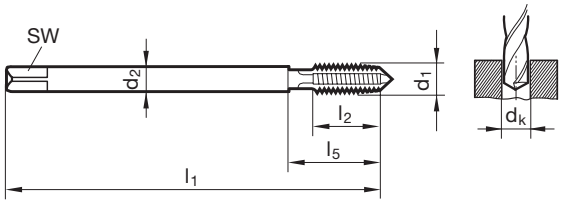
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	2,200		2,65	56,000	7,000	18,000	3,002
M4 x 0,5	2,800	2,100	3,50	63,000	8,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	13,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	ISO2/6H
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

P	≤ 1000
M	•
K	
N	
S	
H	

Dati di taglio a pag. 20



DIN 2184-1 DIN 374 Articolo nr. **1291**

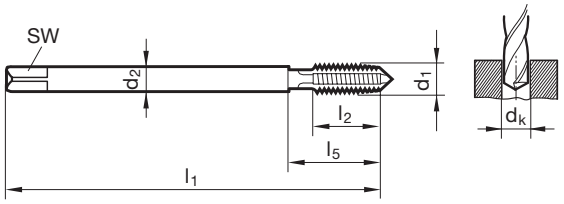
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,25	11,000	9,000	12,80	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	28,000	48,000	24,008

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO3/6G
Superficie	S
Tipo	H
Forma	B
Refrigerazione interna	

P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 21



DIN 2184-1 DIN 374 Articolo nr. **2983**

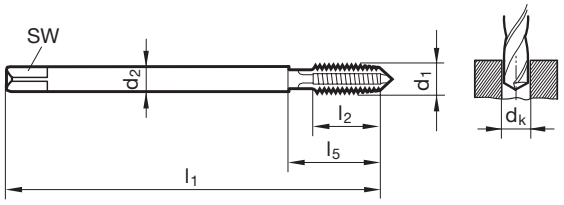
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO3/6G
Superficie	◯	◯
Tipo	N	N
Forma	C	C
Refrigerazione interna	⊠	⊠

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



DIN 2184-1 DIN 374 — Articolo nr. **830** **829**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	2,200		2,65	56,000	4,000	18,000	3,002
M3,5 x 0,35	2,500	2,100	3,15	56,000	4,000	20,000	3,502
M4 x 0,5	2,800	2,100	3,50	63,000	5,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	5,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	5,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M7 x 0,75	5,500	4,300	6,20	80,000	8,000	30,000	7,004
M8 x 0,5	6,000	4,900	7,50	80,000	8,000	30,000	8,003
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M9 x 1	7,000	5,500	8,00	90,000	11,000	35,000	9,005
M10 x 0,75	7,000	5,500	9,20	90,000	11,000	35,000	10,004
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M11 x 1	8,000	6,200	10,00	90,000	11,000	33,000	11,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	11,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M15 x 1	12,000	9,000	14,00	100,000	11,000	40,000	15,005
M16 x 1	12,000	9,000	15,00	100,000	11,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1	14,000	11,000	17,00	110,000	12,000	44,000	18,005
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M18 x 2	14,000	11,000	16,00	125,000	20,000	58,000	18,008
M20 x 1	16,000	12,000	19,00	125,000	12,000	44,000	20,005
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M20 x 2	16,000	12,000	18,00	140,000	20,000	60,000	20,008
M22 x 1	18,000	14,500	21,00	125,000	12,000	44,000	22,005
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M22 x 2	18,000	14,500	20,00	140,000	22,000	62,000	22,008
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	22,000	48,000	24,008
M25 x 1,5	18,000	14,500	23,50	140,000	20,000	50,000	25,007

DIN 2184-1 DIN 374 Articolo nr. **830** **829**

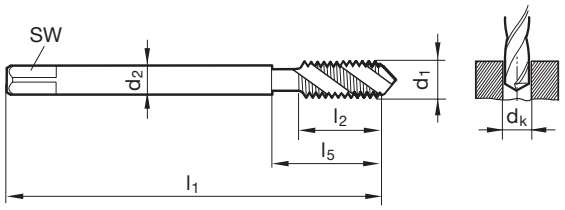
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M26 x 1,5	18,000	14,500	24,50	140,000	20,000	50,000	26,007
M27 x 2	20,000	16,000	25,00	140,000	20,000	53,000	27,008
M28 x 1,5	20,000	16,000	26,50	140,000	20,000	53,000	28,007
M30 x 1,5	22,000	18,000	28,50	150,000	20,000	53,000	30,007
M30 x 2	22,000	18,000	28,00	150,000	20,000	53,000	30,008
M32 x 1,5	22,000	18,000	30,50	150,000	25,000	53,000	32,007
M35 x 1,5	28,000	22,000	33,50	170,000	25,000	56,000	35,007
M36 x 1,5	28,000	22,000	34,50	170,000	25,000	56,000	36,007
M38 x 1,5	28,000	22,000	36,50	170,000	25,000	56,000	38,007
M40 x 1,5	32,000	24,000	38,50	170,000	25,000	57,000	40,007
M50 x 1,5	36,000	29,000	48,50	190,000	27,000	60,000	50,007
M63 x 1,5	50,000	39,000	61,50	275,000	25,000	62,000	63,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	S	●
Tipo	N R15	N R15	N R15
Forma	C	C	C
Refrigerazione interna	⊠	⊠	⊠

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22



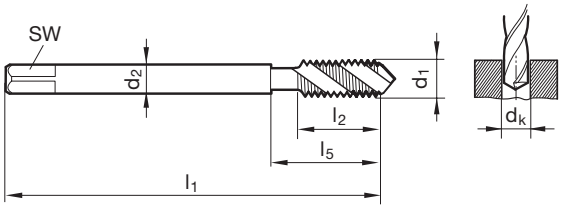
DIN 2184-1 DIN 374 — Articolo nr. **833** **1971** **2838**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M4 x 0,5	2,800	2,100	3,50	63,000	5,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	5,000	25,000	5,003
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	11,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1	12,000	9,000	15,00	100,000	11,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1	16,000	12,000	19,00	125,000	12,000	44,000	20,005
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	22,000	48,000	24,008
M27 x 1,5	20,000	16,000	25,50	140,000	20,000	53,000	27,007
M27 x 2	20,000	16,000	25,00	140,000	20,000	53,000	27,008
M30 x 1,5	22,000	18,000	28,50	150,000	20,000	53,000	30,007
M30 x 2	22,000	18,000	28,00	150,000	20,000	53,000	30,008

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000	Dati di taglio a pag. 23
M	○	
K	○	
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	C	C
Tipo	N R15	N R15
Forma	C	E
Refrigerazione interna		



DIN 2184-1 DIN 374 — Articolo nr. **4156** **4157**

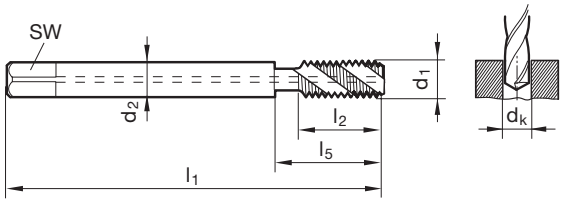
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007

Maschi a macchina forati per fil. metr. ISO passo fine

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N R15
Forma	C
Refrigerazione interna	



DIN 2184-1 DIN 374 Articolo nr. **1905**

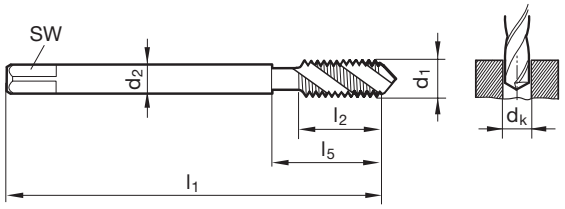
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	5,000	25,000	5,003
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	11,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	15,000	40,000	14,006
M16 x 1	12,000	9,000	15,00	100,000	11,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1	14,000	11,000	17,00	110,000	12,000	44,000	18,005
M20 x 1	16,000	12,000	19,00	125,000	12,000	44,000	20,005
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	S	●
Tipo	N R40	N R40	N R40
Forma	C	C	C
Refrigerazione interna	✗	✗	✗

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23



DIN 2184-1 DIN 374 — Articolo nr. **834** **852** **2843**

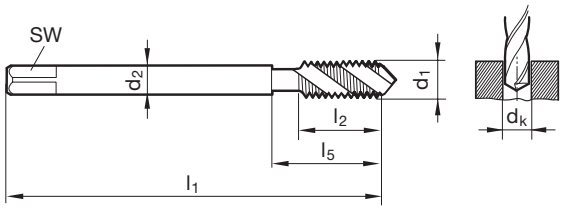
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	2,200		2,65	56,000	4,000	18,000	3,002
M3,5 x 0,35	2,500	2,100	3,15	56,000	4,000	20,000	3,502
M4 x 0,5	2,800	2,100	3,50	63,000	5,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	5,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	5,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,5	6,000	4,900	7,50	80,000	8,000	30,000	8,003
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 0,75	7,000	5,500	9,20	90,000	11,000	35,000	10,004
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	11,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1	12,000	9,000	15,00	100,000	11,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1	14,000	11,000	17,00	110,000	12,000	44,000	18,005
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1	16,000	12,000	19,00	125,000	12,000	44,000	20,005
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	22,000	48,000	24,008
M26 x 1,5	18,000	14,500	24,50	140,000	20,000	50,000	26,007
M27 x 1,5	20,000	16,000	25,50	140,000	20,000	53,000	27,007
M27 x 2	20,000	16,000	25,00	140,000	20,000	53,000	27,008
M28 x 1,5	20,000	16,000	26,50	140,000	20,000	53,000	28,007
M30 x 1,5	22,000	18,000	28,50	150,000	20,000	53,000	30,007
M30 x 2	22,000	18,000	28,00	150,000	20,000	53,000	30,008

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 2184-2 DIN 2181 Articolo nr. **1970**

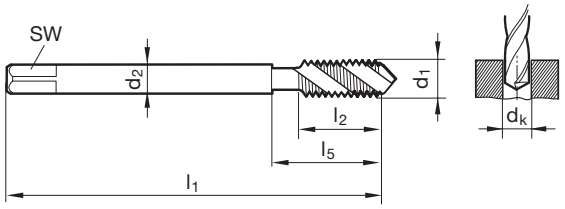
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	6,000	4,900	5,20	56,000	8,000	27,000	6,004
M8 x 0,5	6,000	4,900	7,50	56,000	8,000	30,000	8,003
M8 x 0,75	6,000	4,900	7,20	56,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	63,000	11,000	30,000	8,005
M10 x 0,75	7,000	5,500	9,20	63,000	11,000	32,000	10,004
M10 x 1	7,000	5,500	9,00	63,000	11,000	32,000	10,005
M11 x 1	8,000	6,200	10,00	63,000	11,000	33,000	11,005
M12 x 1	9,000	7,000	11,00	70,000	11,000	35,000	12,005
M12 x 1,5	9,000	7,000	10,50	70,000	16,000	35,000	12,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	●	○
Tipo	N R40	N R40	N R40
Forma	C	C	E
Refrigerazione interna	⊠	⊠	⊠

P	≤ 1000
M	○
K	○
N	○
S	
H	

Dati di taglio a pag. 24



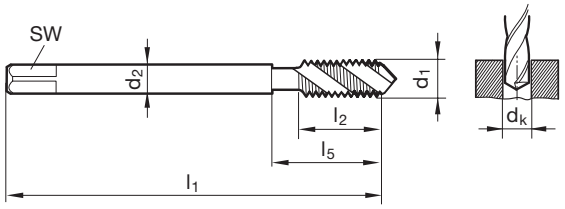
DIN 2184-1 DIN 374 — Articolo nr. **2424** **2853** **2792**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	5,000	25,000	5,003
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	11,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1	12,000	9,000	15,00	100,000	11,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1	14,000	11,000	17,00	110,000	12,000	44,000	18,005
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	22,000	48,000	24,008
M26 x 1,5	18,000	14,500	24,50	140,000	20,000	50,000	26,007
M27 x 1,5	20,000	16,000	25,50	140,000	20,000	53,000	27,007
M27 x 2	20,000	16,000	25,00	140,000	20,000	53,000	27,008
M28 x 1,5	20,000	16,000	26,50	140,000	20,000	53,000	28,007
M30 x 1,5	22,000	18,000	28,50	150,000	20,000	53,000	30,007
M30 x 2	22,000	18,000	28,00	150,000	20,000	53,000	30,008

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000	Dati di taglio a pag. 24
M	○	
K	○	
N		
S		
H		

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO3/6G	ISO3/6G	ISO3/6G
Superficie	S	○	●
Tipo	N R40	N R40	N R40
Forma	C	C	C
Refrigerazione interna	✕	✕	✕



DIN 2184-1 DIN 374 — Articolo nr. **1049** **2998** **2999**

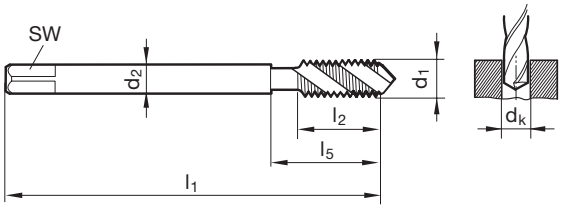
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 25

Materiale tagliente	HSS-E	HSS-E-PM
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	S
Tipo	N R40	N R40
Forma	C	C
Refrigerazione interna		



DIN 2184-1 DIN 374 — Articolo nr. **273** **1292**

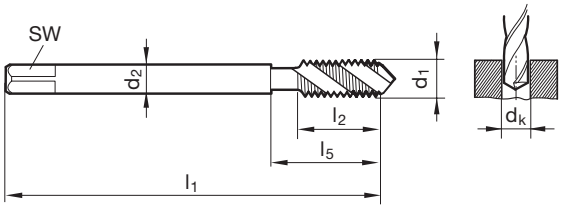
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,25	11,000	9,000	12,80	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	22,000	48,000	24,008

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	C
Tipo	N R50	N R50
Forma	C	C
Refrigerazione interna		

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 25



DIN 2184-1 DIN 374 — Articolo nr. **1100** **1294**

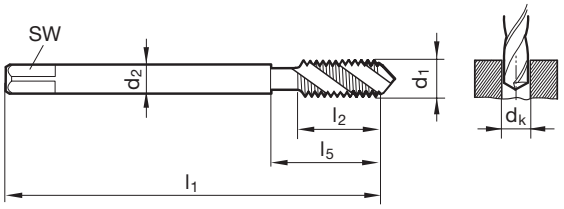
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

P	•	
M	•	
K	○	
N	•	
S	○	
H		

Dati di taglio a pag. 25

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	S	C
Tipo	VA R50	VA R50
Forma	C	C
Refrigerazione interna		



DIN 2184-1 DIN 374 — Articolo nr. **764** **1144**

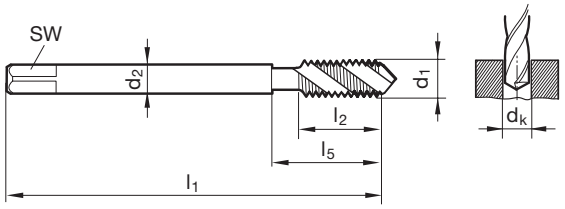
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	5,000	44,000	8,005
M8 x 1	6,000	4,900	7,00	90,000	5,000	47,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	5,000	47,000	10,005
M10 x 1	7,000	5,500	9,00	90,000	5,000	44,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	5,000	53,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	7,500	53,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	7,500	48,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	7,500	48,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	7,500	58,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	7,500	70,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	6HX
Superficie	○	C
Tipo	H R15	H R15
Forma	C	C
Refrigerazione interna		

P	≤ 1200
M	
K	
N	
S	
H	

Dati di taglio a pag. 23



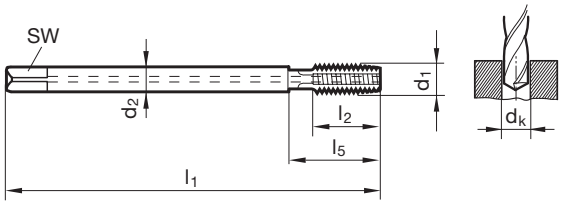
DIN 2184-1 DIN 374 — Articolo nr. **874** **1200**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M9 x 1	7,000	5,500	8,00	90,000	11,000	35,000	9,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007

Maschi a macchina forati per fil. metr. ISO passo fine

P	≤ 1200	Dati di taglio a pag. 23
M		
K	•	
N	≥ 7	
S		
H		

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	C
Tipo	H	H
Forma	E	C
Refrigerazione interna		



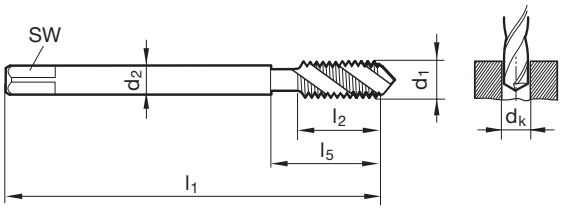
DIN 2184-1 DIN 374 — Articolo nr. **1007** **1090**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	13,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M9 x 1	7,000	5,500	8,00	90,000	16,000	35,000	9,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,00	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1200	Dati di taglio a pag. 25
M		
K		
N		
S		
H		

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	●	●
Tipo	H R40	H R40	H R40
Forma	C	C	C
Refrigerazione interna			



DIN 2184-1 DIN 374 — Articolo nr. **835** **2852** **2940**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007

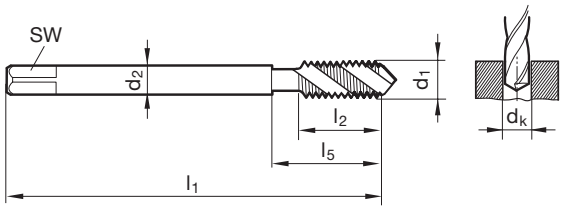
Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E
Tolleranza sul Ø	6HX
Superficie	A
Tipo	VA R45
Forma	C
Refrigerazione interna	

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 25



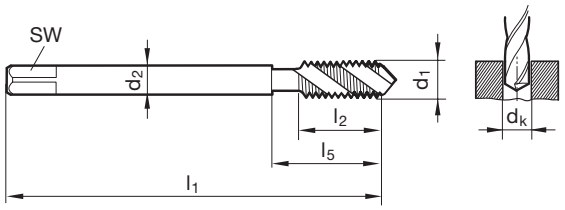
DIN 2184-1 DIN 374 Articolo nr. **394**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1200	Dati di taglio a pag. 25
M		
K		
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO3/6G	ISO3/6G
Superficie	S	
Tipo	H R40	H R40
Forma	C	C
Refrigerazione interna		



DIN 2184-1 DIN 374 — Articolo nr. **2989** **2988**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

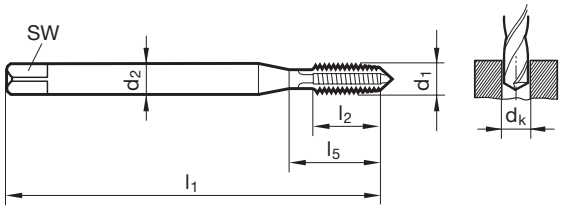
Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N	N
Forma	B	B
Refrigerazione interna	✕	✕

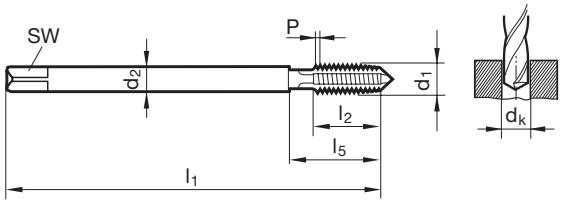
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **873** **2889**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
1 - 64	2,800	2,100	1,55	45,000	8,000		1,854
2 - 56	2,800	2,100	1,85	45,000	9,000	14,500	2,184
3 - 48	2,800	2,100	2,10	50,000	9,000	14,500	2,515
4 - 40	3,500	2,700	2,35	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **878** **2890**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	35,000	62,000	22,225
1 - 8	18,000	14,500	22,25	160,000	38,000	73,000	25,400
1 1/8 - 7	22,000	18,000	25,00	180,000	44,000	85,000	28,575
1 1/4 - 7	22,000	18,000	28,00	180,000	44,000	85,000	31,750
1 1/2 - 6	28,000	22,000	34,00	200,000	50,000	102,000	38,100

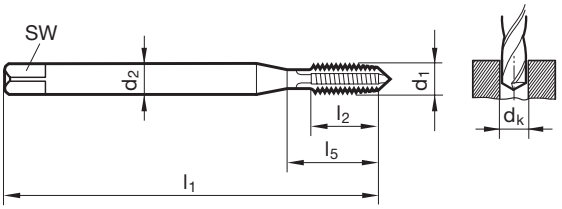
Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E
Tolleranza sul Ø	2B
Superficie	
Tipo	N
Forma	B
Refrigerazione interna	

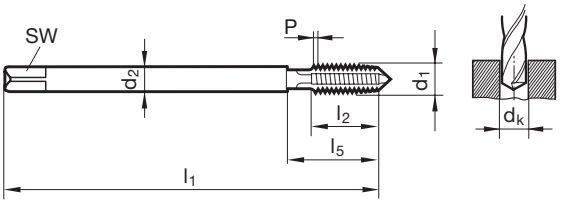
P	≤ 1000
M	○
K	
N	
S	
H	

Dati di taglio a pag. 20

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **2881**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,35	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **2883**

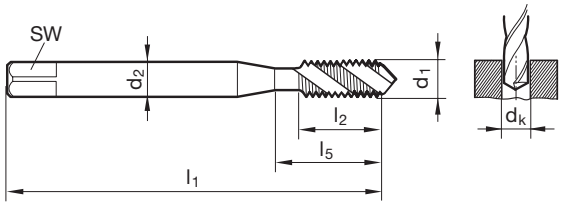
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	35,000	62,000	22,225
1 - 8	18,000	14,500	22,25	160,000	38,000	73,000	25,400

Maschi a macchina per filettatura UNC

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	◯
Tipo	N R15
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22



DIN 2184-1 ~DIN 371 Articolo nr. **1978**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,35	56,000	7,000	18,000	2,845
6 - 32	4,000	3,000	2,85	56,000	8,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	8,000	21,000	4,166
12 - 24	6,000	4,900	4,50	80,000	11,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	13,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	14,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	16,000	39,000	9,525

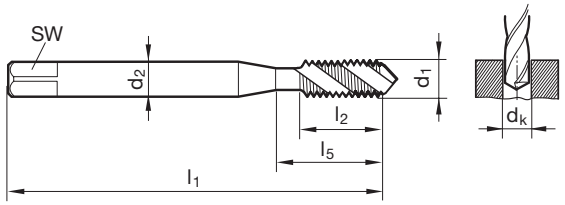
Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E
Tolleranza sul Ø	2B
Superficie	
Tipo	N R15
Forma	C
Refrigerazione interna	

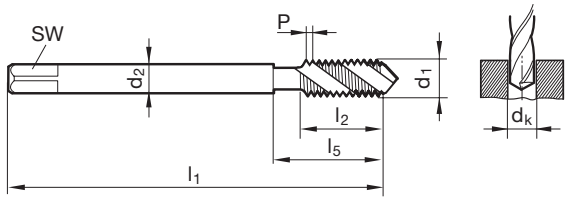
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **2839**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,35	56,000	7,000	18,000	2,845
6 - 32	4,000	3,000	2,85	56,000	8,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	8,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	11,000	25,000	4,826

DIN 2184-1 ~DIN 376 Articolo nr. **2840**

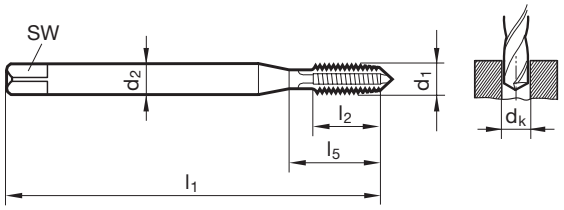
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
1/2 - 13	9,000	7,000	10,80	110,000	20,000	49,000	12,700
7/8 - 9	18,000	14,500	19,50	140,000	28,000	62,000	22,225
1 - 8	18,000	14,500	22,25	160,000	32,000	73,000	25,400

Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E
Tolleranza sul Ø	2B
Superficie	◯
Tipo	N
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



DIN 2184-1 ~DIN 371 Articolo nr. **1977**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
3 - 48	2,800	2,100	2,10	50,000	6,000	14,500	2,515
4 - 40	3,500	2,700	2,35	56,000	7,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	7,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	8,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	8,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	11,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	11,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	13,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	14,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	16,000	39,000	9,525

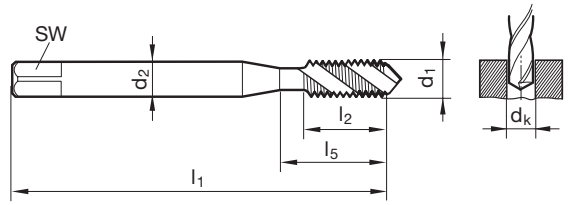
Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N R40	N R40
Forma	C	C
Refrigerazione interna	✕	✕

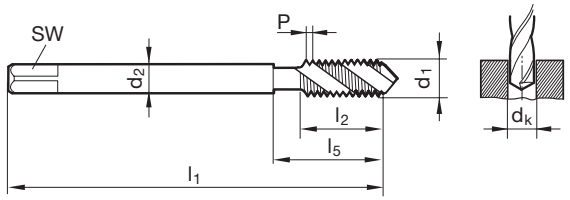
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **876** **2844**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
2 - 56	2,800	2,100	1,85	45,000	5,000	14,500	2,184
3 - 48	2,800	2,100	2,10	50,000	6,000	14,500	2,515
4 - 40	3,500	2,700	2,35	56,000	7,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	7,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	8,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	8,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	11,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	11,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	13,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	14,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	16,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **881** **2845**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	18,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	20,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	21,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	24,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	25,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	28,000	62,000	22,225
1 - 8	18,000	14,500	22,25	160,000	32,000	73,000	25,400

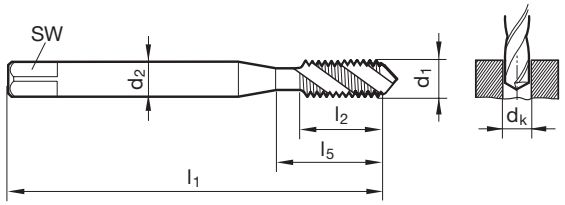
Maschi a macchina per filettatura UNC

P	≤ 1000
M	○
K	○
N	○
S	
H	

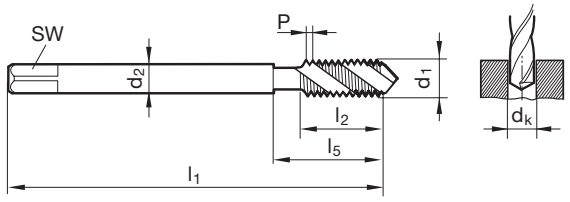
Dati di taglio a pag. 24

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N R40	N R40
Forma	C	C
Refrigerazione interna	⊠	⊠

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 — Articolo nr. **2854** **2855**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
2 - 56	2,800	2,100	1,85	45,000	5,000	14,500	2,184
4 - 40	3,500	2,700	2,35	56,000	7,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	7,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	8,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	8,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	11,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	11,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	13,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	14,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	16,000	39,000	9,525

DIN 2184-1 ~DIN 376 — Articolo nr. **2856** **2857**

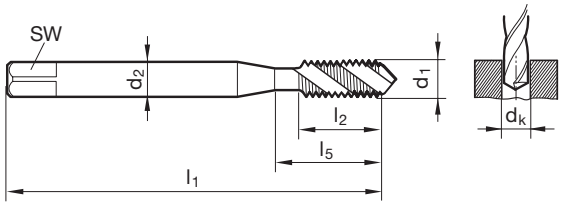
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	18,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	20,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	21,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	24,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	25,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	28,000	62,000	22,225
1 - 8	18,000	14,500	22,25	160,000	32,000	73,000	25,400

Maschi a macchina per filettatura UNC

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 25

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 2184-1 ~DIN 371 Articolo nr. **1837**

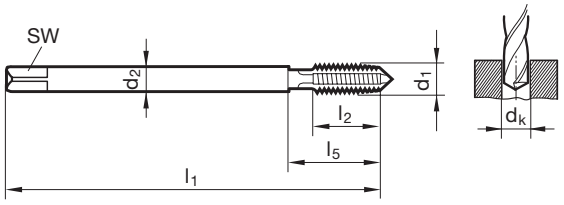
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 24	6,000	4,900	3,90	70,000	11,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	11,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	13,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	14,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	16,000	39,000	9,525

Maschi a macchina per filettatura UNF

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N	N
Forma	B	B
Refrigerazione interna	⊠	⊠



DIN 2184-1 ~DIN 374 — Articolo nr. **908** **2891**

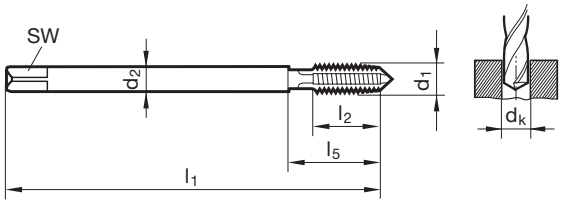
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
3 - 56	1,800		2,15	50,000	9,000	14,500	2,515
4 - 48	2,200		2,40	56,000	10,000	18,000	2,845
5 - 44	2,500	2,100	2,70	56,000	10,000	18,000	3,175
6 - 40	2,500	2,100	2,95	56,000	11,000	20,000	3,505
8 - 36	2,800	2,100	3,50	63,000	12,000	21,000	4,166
10 - 32	3,500	2,700	4,10	70,000	14,000	25,000	4,826
12 - 28	4,000	3,000	4,60	80,000	16,000	30,000	5,486
1/4 - 28	4,500	3,400	5,50	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	20,000	40,000	12,700
9/16 - 18	11,000	9,000	12,90	100,000	22,000	40,000	14,288
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875
3/4 - 16	14,000	11,000	17,50	110,000	25,000	44,000	19,050
7/8 - 14	18,000	14,500	20,40	125,000	25,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	28,000	50,000	25,400
1 1/8 - 12	22,000	18,000	26,50	150,000	28,000	53,000	28,575
1 1/4 - 12	22,000	18,000	29,50	150,000	28,000	53,000	31,750

Maschi a macchina per filettatura UNF

Materiale tagliente	HSS-E
Tolleranza sul Ø	2B
Superficie	◯
Tipo	N
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



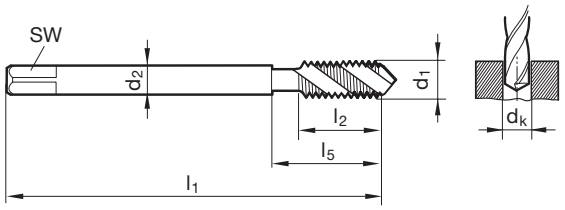
DIN 2184-1 ~DIN 374 Articolo nr. **1987**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
3 - 56	1,800	1,400	2,15	50,000	5,000	14,500	2,515
4 - 48	2,200	1,800	2,40	56,000	6,000	18,000	2,845
5 - 44	2,500	2,100	2,70	56,000	6,000	18,000	3,175
6 - 40	2,500	2,100	2,95	56,000	6,500	20,000	3,505
8 - 36	2,800	2,100	3,50	63,000	7,000	21,000	4,166
10 - 32	3,500	2,700	4,10	70,000	8,500	25,000	4,826
12 - 28	4,000	3,000	4,60	80,000	9,000	30,000	5,486
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	13,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
9/16 - 18	11,000	9,000	12,90	100,000	14,000	40,000	14,288
5/8 - 18	12,000	9,000	14,50	100,000	15,000	44,000	15,875
3/4 - 16	14,000	11,000	17,50	110,000	16,000	44,000	19,050
7/8 - 14	18,000	14,500	20,40	125,000	19,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	22,000	50,000	25,400

Maschi a macchina per filettatura UNF

P	≤ 800	Dati di taglio a pag. 22
M		
K		
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N R15	N R15
Forma	C	C
Refrigerazione interna	✕	✕



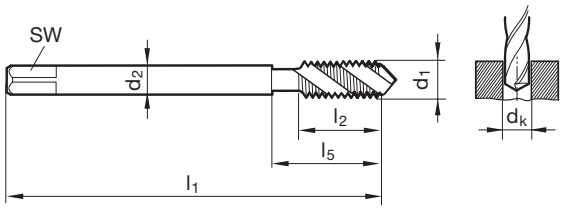
DIN 2184-1 ~DIN 374 — Articolo nr. **1988** **2841**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
3 - 56	1,800	1,400	2,15	50,000	5,000	14,500	2,515
6 - 40	2,500	2,100	2,95	56,000	6,500	20,000	3,505
8 - 36	2,800	2,100	3,50	63,000	7,000	21,000	4,166
10 - 32	3,500	2,700	4,10	70,000	8,500	25,000	4,826
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	13,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
9/16 - 18	11,000	9,000	12,90	100,000	14,000	40,000	14,288
5/8 - 18	12,000	9,000	14,50	100,000	15,000	44,000	15,875
3/4 - 16	14,000	11,000	17,50	110,000	16,000	44,000	19,050
1 - 12	18,000	14,500	23,25	140,000	22,000	50,000	25,400

Maschi a macchina per filettatura UNF

P	≤ 800	Dati di taglio a pag. 23
M		
K		
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N R40	N R40
Forma	C	C
Refrigerazione interna	⊠	⊠



DIN 2184-1 ~DIN 374 — Articolo nr. **911** **2846**

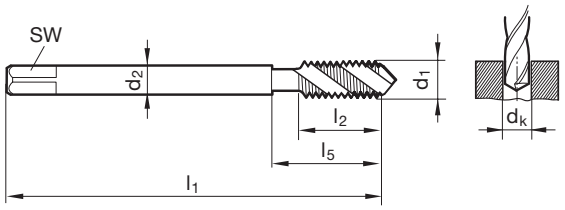
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
3 - 56	1,800	1,400	2,15	50,000	5,000	14,500	2,515
4 - 48	2,200	1,800	2,40	56,000	6,000	18,000	2,845
5 - 44	2,500	2,100	2,70	56,000	6,000	18,000	3,175
6 - 40	2,500	2,100	2,95	56,000	6,500	20,000	3,505
8 - 36	2,800	2,100	3,50	63,000	7,000	21,000	4,166
10 - 32	3,500	2,700	4,10	70,000	8,500	25,000	4,826
12 - 28	4,000	3,000	4,60	80,000	9,000	30,000	5,486
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	13,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
9/16 - 18	11,000	9,000	12,90	100,000	14,000	40,000	14,288
5/8 - 18	12,000	9,000	14,50	100,000	15,000	44,000	15,875
3/4 - 16	14,000	11,000	17,50	110,000	16,000	44,000	19,050
7/8 - 14	18,000	14,500	20,40	125,000	19,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	22,000	50,000	25,400

Maschi a macchina per filettatura UNF

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 24

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 2184-1 ~DIN 374 Articolo nr. **2859**

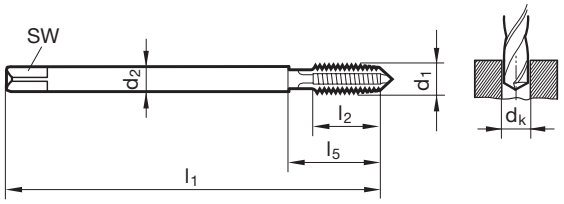
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,10	70,000	8,500	25,000	4,826
12 - 28	4,000	3,000	4,60	80,000	9,000	30,000	5,486
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	13,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	15,000	44,000	15,875
7/8 - 14	18,000	14,500	20,40	125,000	19,000	44,000	22,225

Maschi a macchina per filettatura UNF

P	≤ 1000
M	○
K	
N	
S	
H	

Dati di taglio a pag. 20

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	
Tipo	N
Forma	B
Refrigerazione interna	



DIN 2184-1 ~DIN 374 Articolo nr. **2885**

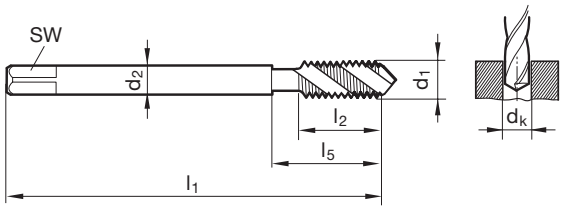
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
6 - 40	2,500	2,100	2,95	56,000	11,000	20,000	3,505
10 - 32	3,500	2,700	4,10	70,000	14,000	25,000	4,826
1/4 - 28	4,500	3,400	5,50	80,000	16,000	30,000	6,350
3/8 - 24	7,000	5,500	8,50	90,000	18,000	35,000	9,525
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875
7/8 - 14	18,000	14,500	20,40	125,000	25,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	28,000	50,000	25,400

Maschi a macchina per filettatura UNF

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 25

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 2184-1 ~DIN 374 Articolo nr. **1838**

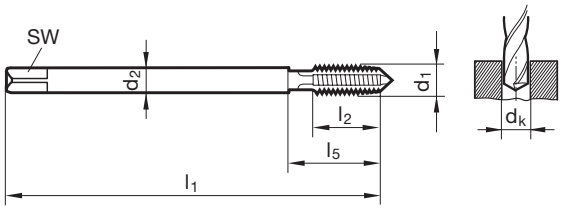
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,10	70,000	8,500	25,000	4,826
12 - 28	4,000	3,000	4,60	80,000	9,000	30,000	5,486
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	13,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	15,000	44,000	15,875
7/8 - 14	18,000	14,500	20,40	125,000	19,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	22,000	50,000	25,400

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E	
Tolleranza sul Ø		
Superficie	○	●
Tipo	N	N
Forma	B	B
Refrigerazione interna		

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19



DIN 2184-1 DIN 5156 — Articolo nr. **962** **2894**

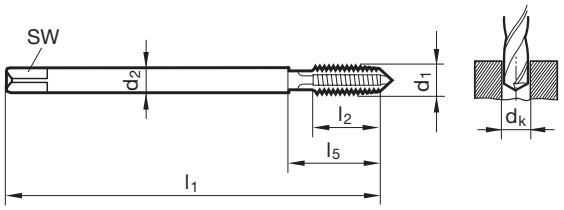
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	25,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	25,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	28,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	28,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	30,000	56,000	33,249
G1 1/4	11,000	32,000	24,000	39,50	170,000	30,000	57,000	41,910
G1 3/8	11,000	36,000	29,000	41,75	180,000	32,000	60,000	44,323
G1 1/2	11,000	36,000	29,000	45,25	190,000	32,000	60,000	47,803
G2	11,000	45,000	35,000	57,00	220,000	40,000	95,000	59,614

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	
Superficie	◯
Tipo	N
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



DIN 2184-1 DIN 5156 Articolo nr. **963**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	11,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	18,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	22,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249
G1 1/8	11,000	28,000	22,000	35,50	170,000	24,000	56,000	37,897
G1 1/4	11,000	32,000	24,000	39,50	170,000	25,000	57,000	41,910
G1 3/8	11,000	36,000	29,000	41,75	180,000	27,000	60,000	44,323
G1 1/2	11,000	36,000	29,000	45,25	190,000	27,000	60,000	47,803
G1 3/4	11,000	40,000	32,000	51,00	190,000	27,000	93,000	53,746
G2	11,000	45,000	35,000	57,00	220,000	32,000	95,000	59,614

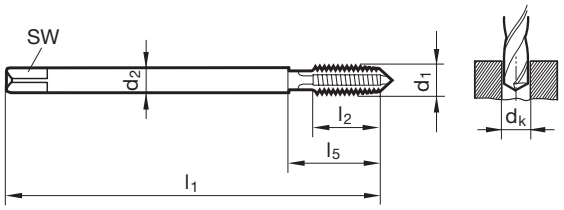
Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	X
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 21



DIN 2184-1 DIN 5156 Articolo nr. **4220**

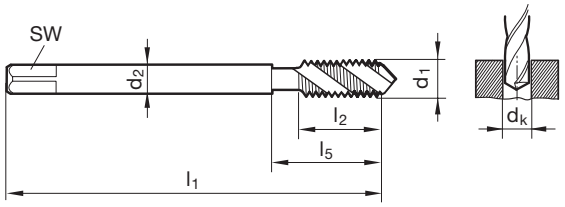
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	25,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	25,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	28,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	28,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	30,000	56,000	33,249

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E		
Tolleranza sul Ø			
Superficie	○	●	C
Tipo	N R15	N R15	N R15
Forma	C	C	E
Refrigerazione interna	✕	✕	✕

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 22/23



DIN 2184-1 DIN 5156	Articolo nr.	964	2842	4158

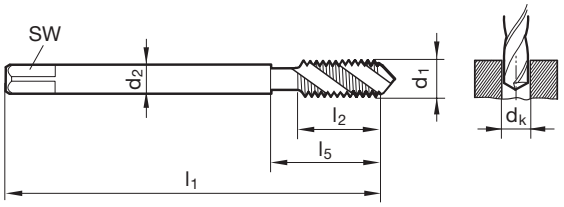
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	11,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	18,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	22,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E	
Tolleranza sul Ø		
Superficie	○	●
Tipo	N R40	N R40
Forma	C	C
Refrigerazione interna	⊠	⊠

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23



DIN 2184-1 DIN 5156 — Articolo nr. **965** **2849**

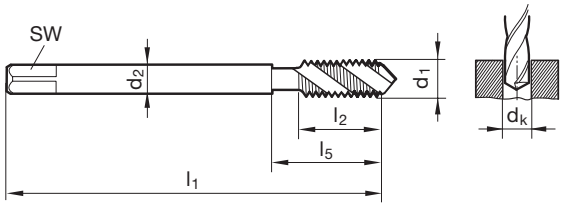
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	11,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	18,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249
G1 1/4	11,000	32,000	24,000	39,50	170,000	25,000	57,000	41,910
G1 1/2	11,000	36,000	29,000	45,25	190,000	27,000	60,000	47,803

Maschi a macchina per filettatura Whitworth BSP

P	≤ 1000
M	○
K	○
N	○
S	
H	

Dati di taglio a pag. 24

Materiale tagliente	HSS-E	
Tolleranza sul Ø		
Superficie	○	●
Tipo	N R40	N R40
Forma	C	C
Refrigerazione interna		



DIN 2184-1 DIN 5156 — Articolo nr. **2860** **2861**

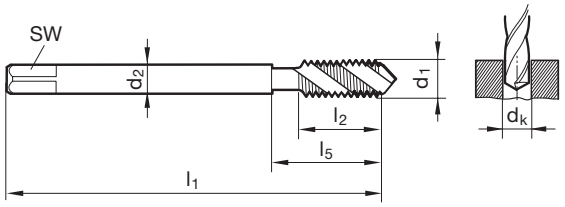
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	18,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	22,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249
G1 1/8	11,000	28,000	22,000	35,50	170,000	24,000	56,000	37,897
G1 1/4	11,000	32,000	24,000	39,50	170,000	25,000	57,000	41,910
G1 1/2	11,000	36,000	29,000	45,25	190,000	27,000	60,000	47,803
G2	11,000	45,000	35,000	57,00	220,000	32,000	95,000	59,614

Maschi a macchina per filettatura Whitworth BSP

P	•
M	•
K	○
N	•
S	○
H	

Dati di taglio a pag. 25

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	
Superficie	S
Tipo	VA R50
Forma	C
Refrigerazione interna	



DIN 2184-1 DIN 5156 Articolo nr. **4159**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	4,500	47,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	4,500	47,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	6,700	48,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	6,700	48,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	9,100	70,000	20,955

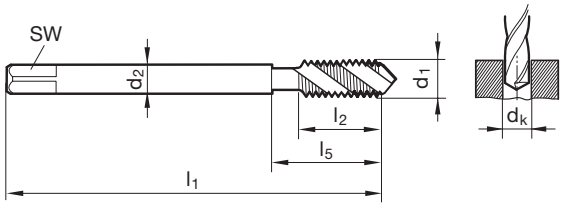
Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	X
Superficie	A
Tipo	VA R45
Forma	C
Refrigerazione interna	

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 25



DIN 2184-1 DIN 5156 Articolo nr. **395**

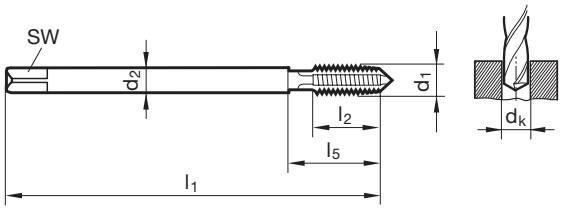
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	11,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	18,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	22,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249

Maschi a macchina per filettatura Whitworth BSP

P	≤ 1000	
M	○	
K		
N		
S		
H		

Dati di taglio a pag. 20

Materiale tagliente	HSS-E	
Tolleranza sul Ø		
Superficie	A+M	
Tipo	N	N
Forma	B	B
Refrigerazione interna		



DIN 2184-1 DIN 5156 — Articolo nr. **2886** **2887**

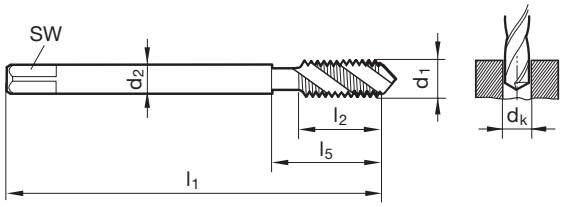
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/8	28,000	7,000	5,500	8,80	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	24,50	140,000	28,000	53,000	26,441
G1	11,000	25,000	20,000	30,75	160,000	30,000	56,000	33,249
G1 1/4	11,000	32,000	24,000	39,50	170,000	30,000	57,000	41,910
G1 1/2	11,000	36,000	29,000	45,25	190,000	32,000	60,000	47,803
G2	11,000	45,000	35,000	57,00	220,000	40,000	95,000	59,614

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 25



DIN 2184-1 DIN 5156 — Articolo nr. **937**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	22,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249

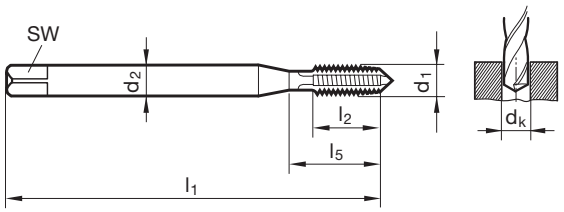
Maschi a macchina per filettatura BSW

Materiale tagliente	HSS-E
Tolleranza sul Ø	
Superficie	
Tipo	N
Forma	B
Refrigerazione interna	

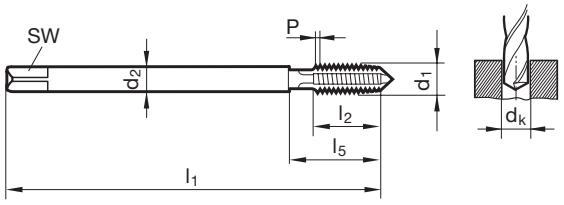
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 19

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **2892**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
W1/8	40,000	3,500	2,700	2,50	56,000	11,000	18,000	3,175
W5/32	32,000	4,500	3,400	3,20	63,000	12,000	21,000	3,969
W3/16	24,000	6,000	4,900	3,60	70,000	14,000	25,000	4,762
W1/4	20,000	7,000	5,500	5,10	80,000	16,000	30,000	6,350
W5/16	18,000	8,000	6,200	6,50	90,000	18,000	35,000	7,938
W3/8	16,000	10,000	8,000	7,90	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **2893**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
W7/16	14,000	8,000	6,200	9,20	100,000	22,000	42,000	11,113
W1/2	12,000	9,000	7,000	10,50	110,000	25,000	49,000	12,700
W9/16	12,000	11,000	9,000	12,00	110,000	28,000	53,000	14,287
W5/8	11,000	12,000	9,000	13,50	110,000	30,000	53,000	15,876
W3/4	10,000	14,000	11,000	16,25	125,000	33,000	62,000	19,051
W7/8	9,000	18,000	14,500	19,25	140,000	35,000	62,000	22,226
W1	8,000	18,000	14,500	22,00	160,000	38,000	73,000	25,401

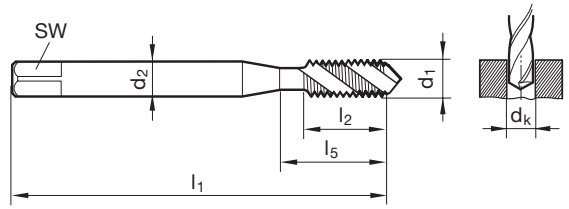
Maschi a macchina per filettatura BSW

Materiale tagliente	HSS-E
Tolleranza sul Ø	
Superficie	
Tipo	N R40
Forma	C
Refrigerazione interna	

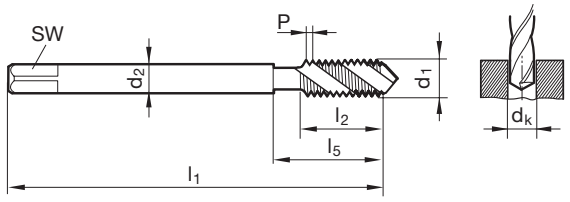
P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 23

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **2847**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
W1/8	40,000	3,500	2,700	2,50	56,000	7,000	18,000	3,175
W3/16	24,000	6,000	4,900	3,60	70,000	11,000	25,000	4,762
W1/4	20,000	7,000	5,500	5,10	80,000	13,000	30,000	6,350
W5/16	18,000	8,000	6,200	6,50	90,000	14,000	35,000	7,938
W3/8	16,000	10,000	8,000	7,90	100,000	16,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **2848**

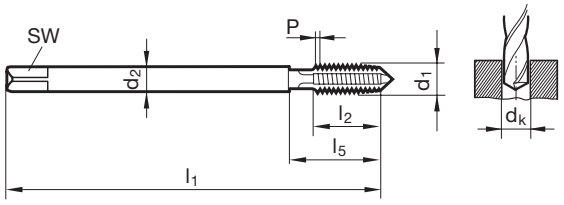
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
W3/8	16,000	7,000	5,500	7,90	100,000	16,000	39,000	9,525
W7/16	14,000	8,000	6,200	9,20	100,000	18,000	42,000	11,113
W1/2	12,000	9,000	7,000	10,50	110,000	20,000	49,000	12,700
W5/8	11,000	12,000	9,000	13,50	110,000	24,000	53,000	15,876
W3/4	10,000	14,000	11,000	16,25	125,000	25,000	62,000	19,051
W7/8	9,000	18,000	14,500	19,25	140,000	28,000	62,000	22,226
W1	8,000	18,000	14,500	22,00	160,000	32,000	73,000	25,401

Maschi per filettatura EG

P	≤ 1000
M	○
K	
N	
S	
H	

Dati di taglio a pag. 20

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6H mod
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	



DIN 40435 DIN 40435 Articolo nr. **1010**

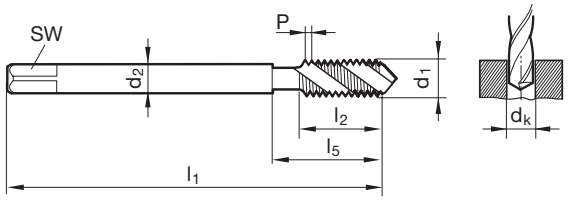
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
EG M4	0,700	6,000	4,900	4,20	70,000	12,000	25,000
EG M5	0,800	6,000	4,900	5,25	80,000	14,000	30,000
EG M6	1,000	8,000	6,200	6,30	90,000	17,000	35,000
EG M8	1,250	10,000	8,000	8,40	100,000	20,000	39,000
EG M10	1,500	9,000	7,000	10,50	100,000	20,000	40,000
EG M12	1,750	11,000	9,000	12,50	110,000	28,000	53,000
EG M14	2,000	12,000	9,000	14,50	110,000	26,000	54,000
EG M16	2,000	14,000	11,000	16,50	125,000	33,000	62,000

Maschi per filettatura EG

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 24

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6H mod
Superficie	S
Tipo	N R40
Forma	C
Refrigerazione interna	



DIN 40435 DIN 40435 Articolo nr. **1011**

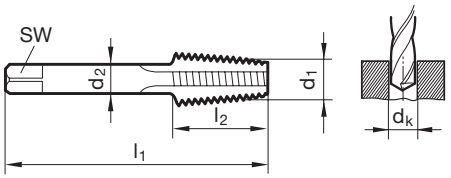
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
EG M4	0,700	6,000	4,900	4,20	70,000	7,500	25,000
EG M5	0,800	6,000	4,900	5,25	80,000	8,500	30,000
EG M6	1,000	8,000	6,200	6,30	90,000	11,000	35,000
EG M8	1,250	10,000	8,000	8,40	100,000	14,000	39,000
EG M10	1,500	9,000	7,000	10,50	100,000	16,000	40,000
EG M12	1,750	11,000	9,000	12,50	110,000	18,500	53,000
EG M14	2,000	12,000	9,000	14,50	110,000	20,000	54,000
EG M16	2,000	14,000	11,000	16,50	125,000	20,000	62,000

Maschi a macchina per filettatura NPT

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	
Superficie	◯
Tipo	N
Forma	C
Refrigerazione interna	

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18/22



Norma di fab. Norma di fab. Articolo nr. **973**

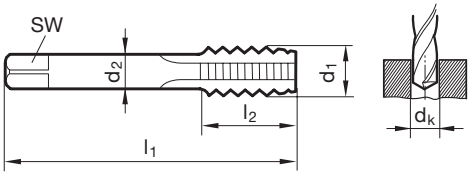
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
1/16	27,000	6,000	4,900	6,15	56,000	14,000	27,000	8,190
1/8	27,000	7,000	5,500	8,40	63,000	15,000	29,000	10,620
1/4	18,000	11,000	9,000	11,10	63,000	21,000	33,000	14,140
3/8	18,000	12,000	9,000	14,30	70,000	21,000	35,000	17,570
1/2	14,000	16,000	12,000	17,90	80,000	27,000	41,000	21,900
3/4	14,000	20,000	16,000	23,30	100,000	27,000	42,000	27,230
1	11,500	25,000	20,000	29,00	110,000	32,000	53,000	34,180
1 1/4	11,500	32,000	24,000	37,70	125,000	33,000	54,500	42,900
1 1/2	11,500	36,000	29,000	43,70	140,000	33,000	56,000	48,940
2	11,500	36,000	29,000	55,60	160,000	33,000	63,000	61,000

Maschi a macchina per filettatura Pg

Materiale tagliente	HSS-E	
Tolleranza sul Ø		
Superficie	◯	◯
Tipo	N	N
Forma	B	C
Refrigerazione interna	⊠	⊠

P	≤ 800
M	
K	
N	
S	
H	

Dati di taglio a pag. 18-22



DIN 2184-2 DIN 40432 — Articolo nr. **980** **979**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
PG7	20,000	9,000	7,000	11,40	70,000	22,000	35,000	12,500
PG9	18,000	12,000	9,000	14,00	70,000	22,000	35,000	15,200
PG11	18,000	14,000	11,000	17,30	80,000	22,000	40,000	18,600
PG13,5	18,000	16,000	12,000	19,00	80,000	22,000	40,000	20,400
PG16	18,000	18,000	14,500	21,30	80,000	22,000	40,000	22,500
PG21	16,000	22,000	18,000	26,90	90,000	22,000	42,000	28,300
PG29	16,000	28,000	22,000	35,50	100,000	25,000	45,000	37,000

MASCHI A RULLARE

P

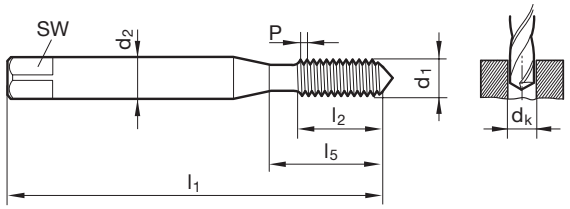
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM	HSS-E	HSS-E-PM
Tolleranza sul Ø	6GX	6HX	6HX
Superficie	S	S	S
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

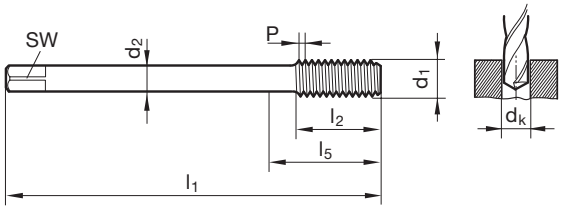
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	903	921	1255

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,90	40,000	4,000	
M1,2	0,250	2,500	2,100	1,10	40,000	4,800	
M1,4	0,300	2,500	2,100	1,25	40,000	5,600	
M1,6	0,350	2,500	2,100	1,45	40,000	6,400	
M1,7	0,350	2,500	2,100	1,55	40,000	6,800	
M1,8	0,350	2,500	2,100	1,65	40,000	7,300	
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	952	925	1256

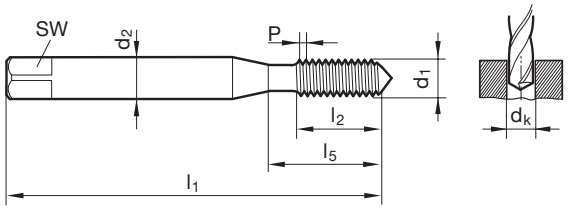
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 371 Articolo nr. **920**

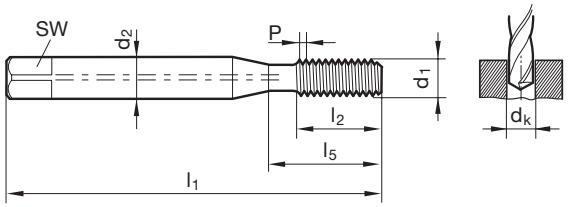
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **2518**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

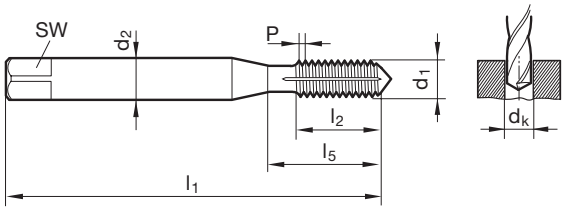
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	S	P	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

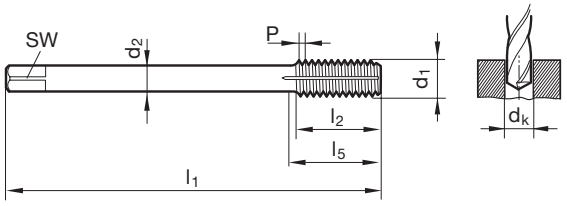
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 26

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **919** **1587** **2012**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **923** **1589** **2013**

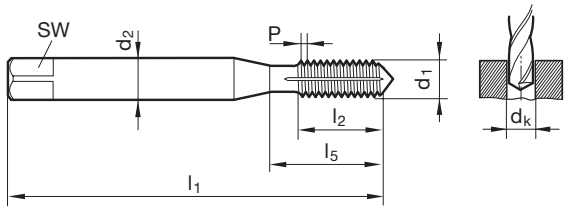
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M6	1,000	4,500	3,400	5,55	80,000	16,000	30,000
M8	1,250	6,000	4,900	7,40	90,000	17,000	35,000
M10	1,500	7,000	5,500	9,30	100,000	20,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000
M22	2,500	18,000	14,500	20,90	140,000	32,000	62,000
M24	3,000	18,000	14,500	22,70	160,000	36,000	73,000
M27	3,000	20,000	16,000	25,70	160,000	36,000	73,000
M30	3,500	22,000	18,000	28,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	31,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	34,30	200,000	50,000	102,000
M39	4,000	32,000	24,000	37,30	200,000	50,000	107,000

Maschi a macchina a rullare per fil. metrica ISO

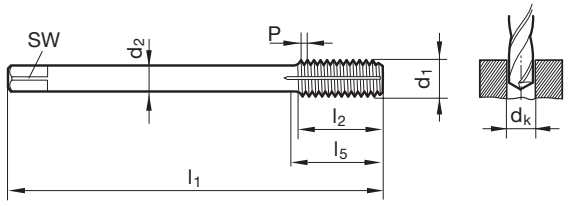
P	•	Dati di taglio a pag. 26/27
M	•	
K		
N	○	
S	○	
H		

Materiale tagliente	HSS-E		HSS-E-PM
Tolleranza sul Ø	6GX	6GX	6GX
Superficie	S	P	P
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **918** **1588** **1705**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **922** **1590** **1708**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M6	1,000	4,500	3,400	5,55	80,000	16,000	30,000
M8	1,250	6,000	4,900	7,40	90,000	17,000	35,000
M10	1,500	7,000	5,500	9,30	100,000	20,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

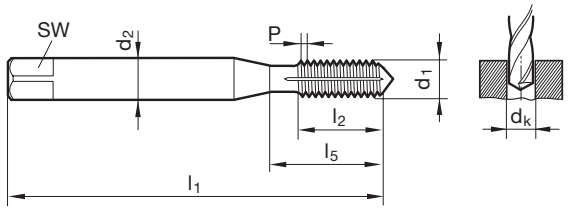
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

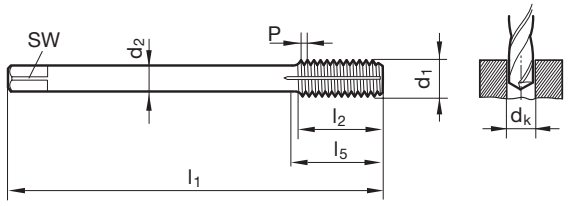
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 27

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **322**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **339**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

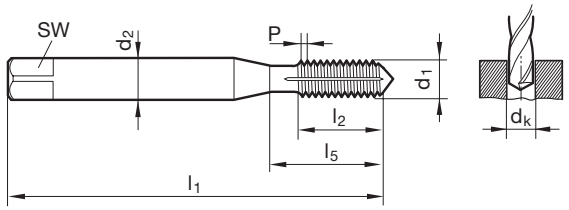
Maschi a macchina a rullare per fil. metrica ISO

P	•
M	•
K	
N	○
S	○
H	

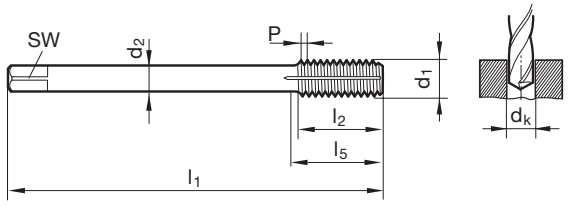
Dati di taglio a pag. 27

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	S	P
Tipo	N	N
Forma	C	C
Refrigerazione interna		

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1266** **1599**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1267** **1707**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

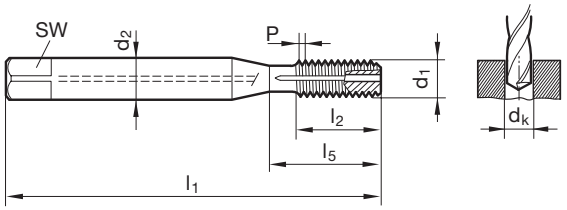
Maschi a rullare forati per fil. metrica ISO

P	•
M	•
K	
N	○
S	○
H	

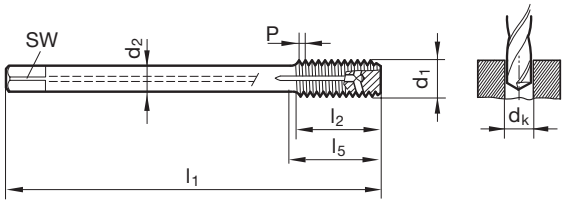
Dati di taglio a pag. 27

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6HX	6GX	6HX
Superficie	S	S	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	2442	2443	2446

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	2444	2445	2448

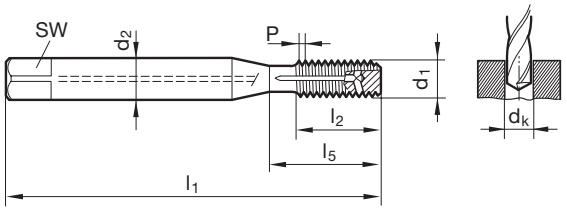
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 27



DIN 2174 ~DIN 371 Articolo nr. **2447**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

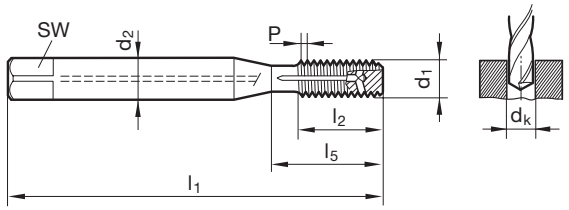
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

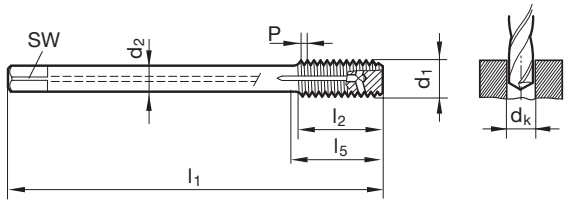
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 27

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **323**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **342**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

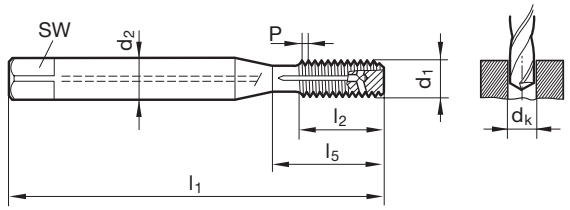
Maschi a rullare forati per fil. metrica ISO

P	•
M	•
K	
N	≥ 7
S	•
H	

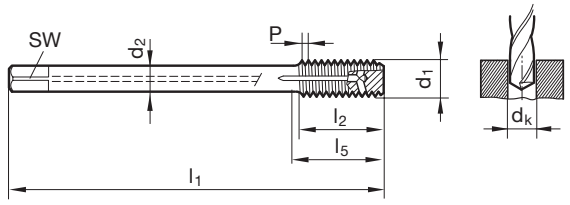
Dati di taglio a pag. 27

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	1270	1717	1725

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	1271	1719	1727

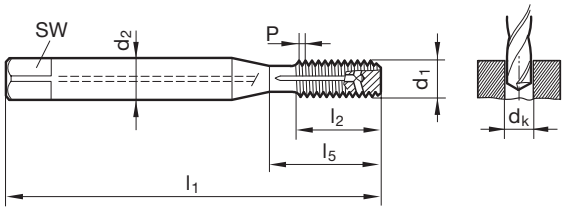
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 27



DIN 2174 ~DIN 371 Articolo nr. **1713**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

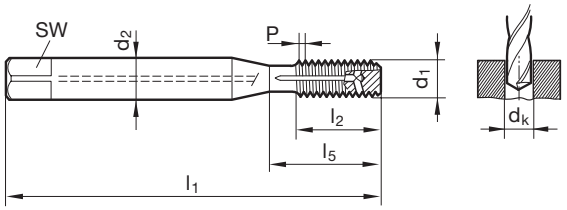
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	A	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

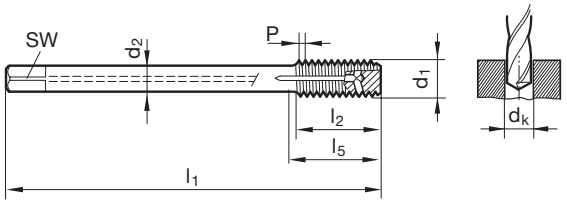
P	•
M	•
K	
N	
S	•
H	

Dati di taglio a pag. 27

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1718** **1726**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1720** **1728**

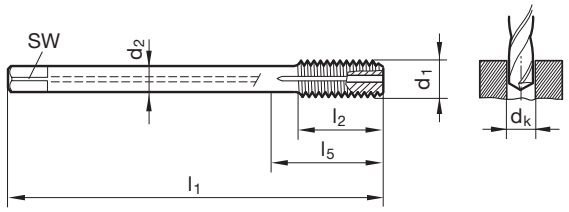
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 27



Norma di fab. Norma di fab. Articolo nr. **4143**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	112,000	6,000	18,000
M4	0,700	2,800	2,100	3,70	112,000	7,500	77,000
M5	0,800	3,500	2,700	4,65	125,000	8,500	90,000
M6	1,000	4,500	3,400	5,55	125,000	11,000	90,000
M8	1,250	6,000	4,900	7,40	140,000	14,000	97,000
M10	1,500	7,000	5,500	9,30	160,000	16,000	117,000
M12	1,750	9,000	7,000	11,20	180,000	18,500	133,000
M16	2,000	12,000	9,000	15,10	220,000	20,000	168,000
M20	2,500	16,000	12,000	18,90	280,000	25,000	225,000

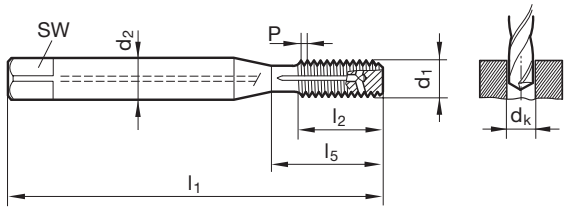
Maschi a rullare forati per fil. metrica ISO

P	•
M	•
K	
N	≥ 7
S	•
H	

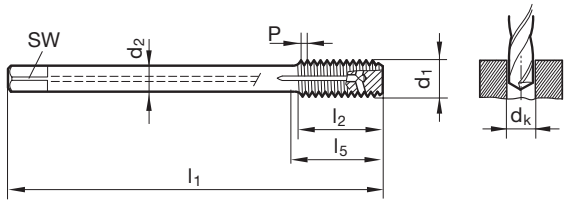
Dati di taglio a pag. 27

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1972**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1931**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	25,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

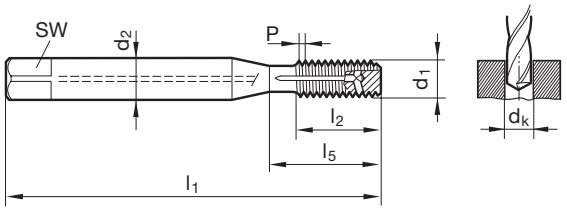
Maschi a rullare forati per fil. metrica ISO

h6

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 27

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	E
Refrigerazione interna	



DIN 2174 ~DIN 371 Articolo nr. **1927**

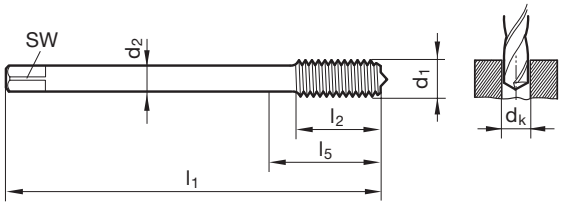
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 374 Articolo nr. **929**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

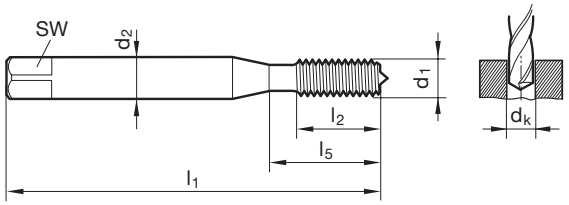
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

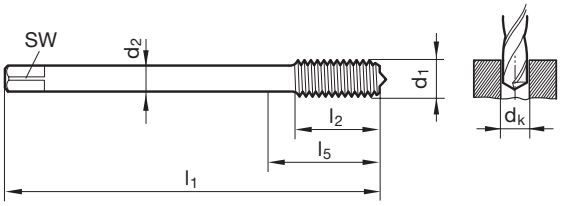
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1257**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1258**

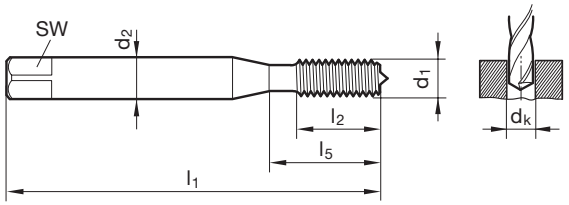
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 371 Articolo nr. **1740**

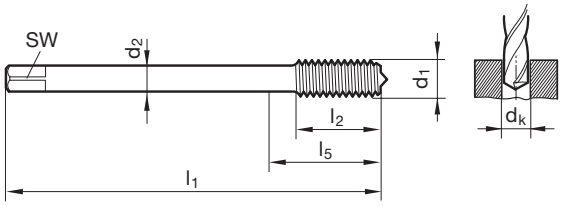
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 374 Articolo nr. **928**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007

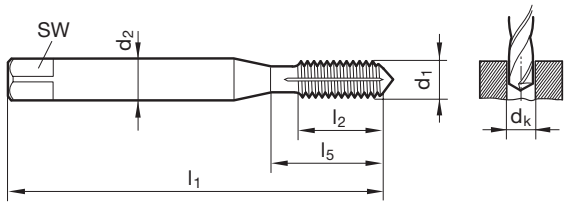
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E	
Tolleranza sul Ø	6HX	6HX
Superficie	S	P
Tipo	N	N
Forma	C	C
Refrigerazione interna		

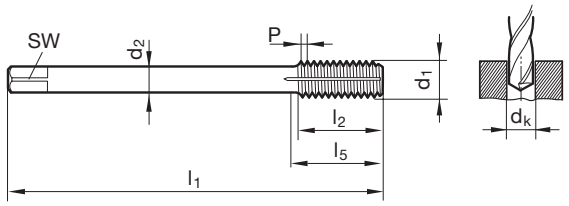
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 26

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1275** **1591**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	6,000	4,900	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	8,000	6,200	7,65	80,000	14,000	30,000	8,004
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 Articolo nr. **927** **1593**

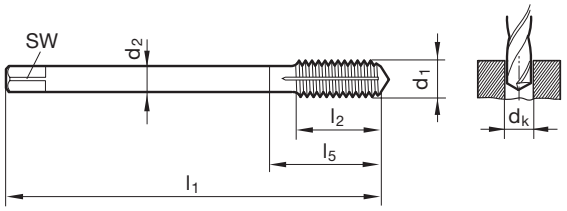
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 374 Articolo nr. **2008**

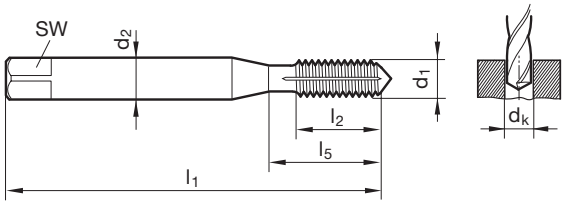
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	P
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	
K	
N	
S	
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 371 Articolo nr. **1592**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

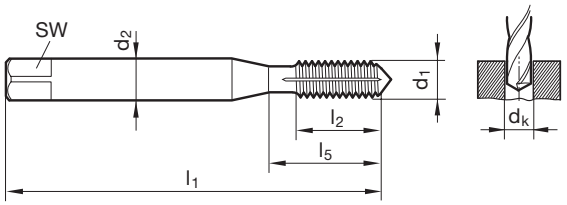
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

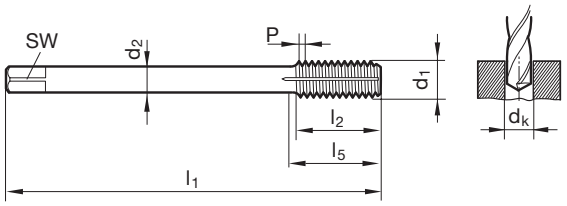
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 26

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1277**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **926**

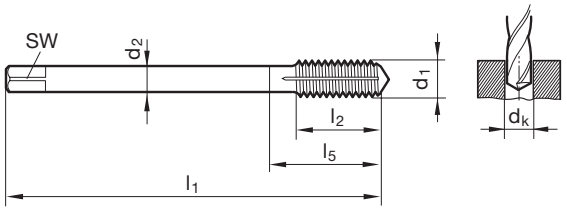
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 26



DIN 2174 ~DIN 374 Articolo nr. **333**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	16,000	44,000	20,007

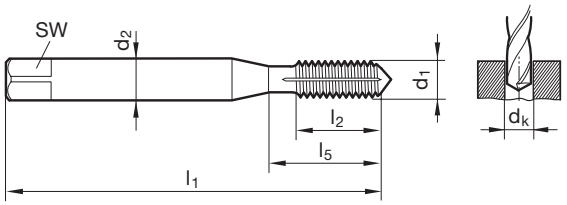
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

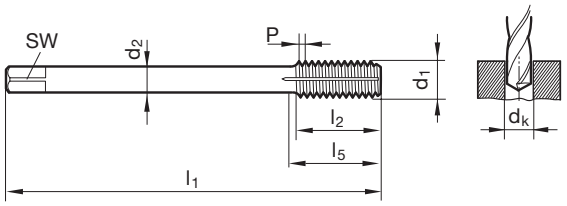
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 27

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1268**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1269**

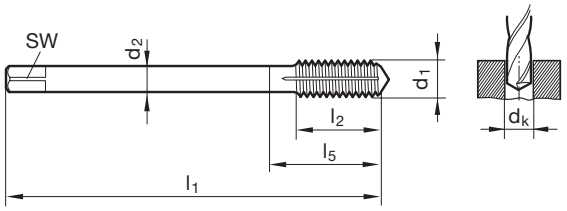
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	P
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	
K	
N	
S	
H	

Dati di taglio a pag. 27



DIN 2174 ~DIN 374 Articolo nr. **1711**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

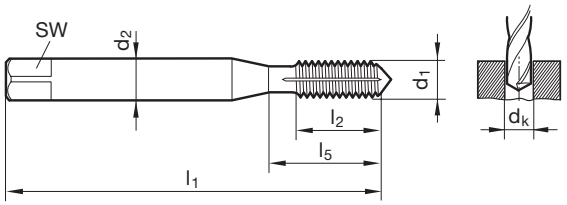
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	P
Tipo	N
Forma	C
Refrigerazione interna	

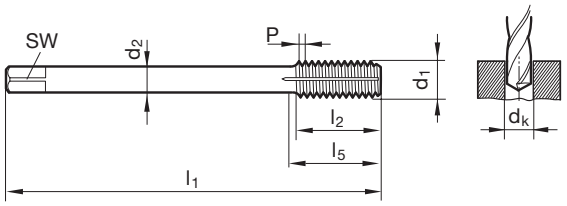
P	•
M	
K	
N	
S	
H	

Dati di taglio a pag. 27

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1710**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1712**

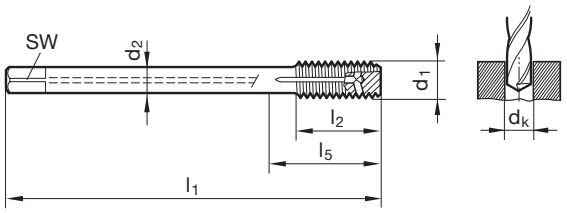
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 27

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	



DIN 2174 ~DIN 374 Articolo nr. **338**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007

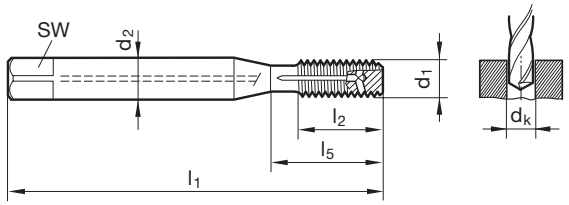
Maschi a rullare forati per fil. metrica ISO passo fine

P	•
M	•
K	
N	≥ 7
S	•
H	

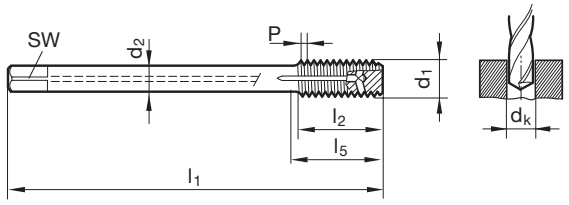
Dati di taglio a pag. 27

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1272** **1721** **1729**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1273** **1723** **1731**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

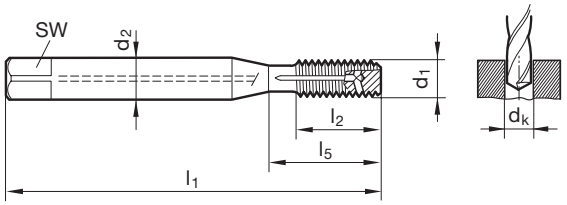
Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	C	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

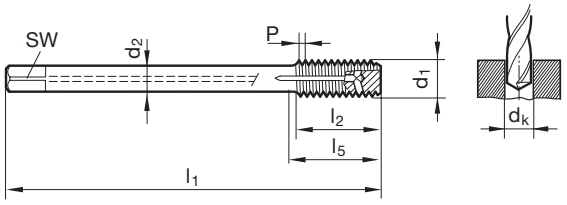
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 27

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1715** **1730**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1716** **1732**

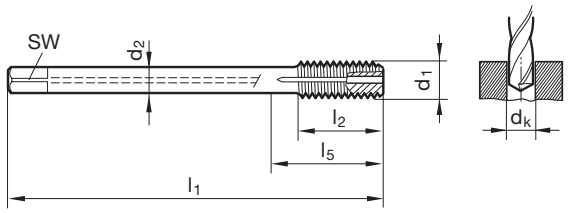
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 27



Norma di fab. Norma di fab. Articolo nr. **4145**

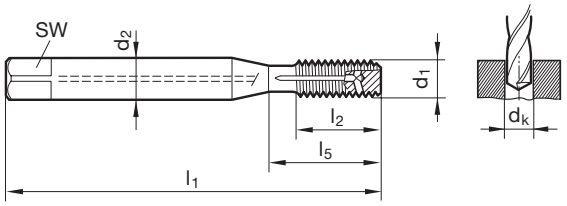
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	140,000	14,000	97,000	8,005
M10 x 1	7,000	5,500	9,55	160,000	16,000	117,000	10,005
M10 x 1,25	7,000	5,500	9,40	160,000	16,000	117,000	10,006
M12 x 1	9,000	7,000	11,55	180,000	18,500	133,000	12,005
M12 x 1,5	9,000	7,000	11,30	180,000	18,500	133,000	12,007
M14 x 1,5	11,000	9,000	13,30	220,000	20,000	168,000	14,007
M16 x 1,5	12,000	9,000	15,30	220,000	20,000	168,000	16,007

Maschi a rullare forati per fil. metrica ISO passo fine

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 27

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **1581**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M10 x 1	10,000	8,000	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	15,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	15,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	15,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	15,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	15,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	15,000	48,000	24,007

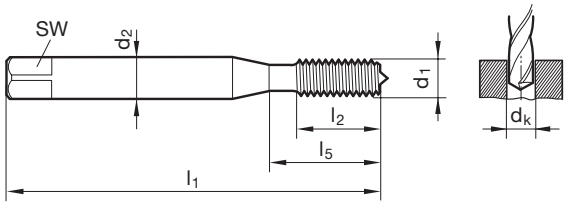
Maschi a macchina a rullare per filettatura UNC

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		

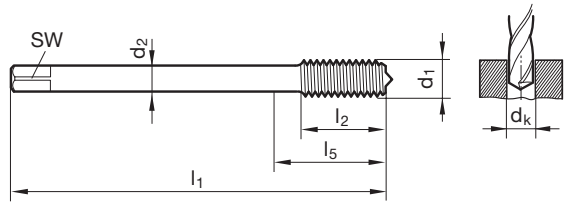
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **2273** **1582**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,55	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,90	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	3,15	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,80	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	4,35	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	5,00	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,75	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	7,30	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,80	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **2274** **1583**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	10,30	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	11,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	13,30	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	14,80	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	17,90	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	21,00	140,000	35,000	62,000	22,225

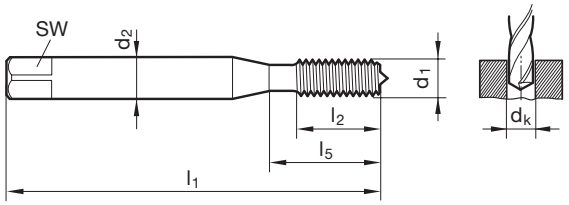
Maschi a macchina a rullare per filettatura UNF

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		

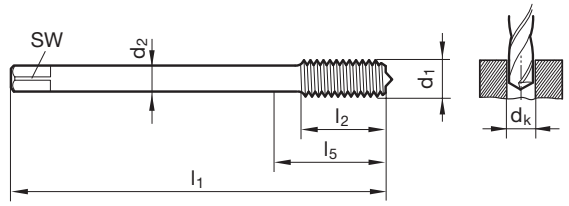
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 26

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **1283** **1584**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	3,500	2,700	2,60	56,000	10,000	18,000	2,845
5 - 44	3,500	2,700	2,90	56,000	10,000	18,000	3,175
6 - 40	4,000	3,000	3,20	56,000	11,000	20,000	3,505
8 - 36	4,500	3,400	3,85	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,45	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	5,10	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,95	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	7,45	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	9,05	90,000	18,000	35,000	9,525

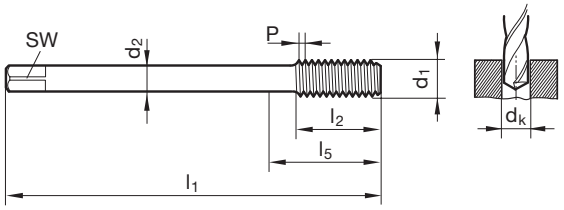
DIN 2184-1 ~DIN 374 Articolo nr. **2275** **1585**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,45	70,000	14,000	25,000	4,826
12 - 28	4,000	3,000	5,10	80,000	16,000	30,000	5,486
1/4 - 28	4,500	3,400	5,95	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	7,45	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	9,05	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	10,55	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	12,10	100,000	20,000	40,000	12,700
9/16 - 18	11,000	9,000	13,65	100,000	22,000	40,000	14,288
5/8 - 18	12,000	9,000	15,25	100,000	22,000	44,000	15,875
3/4 - 16	14,000	11,000	18,35	110,000	25,000	44,000	19,050
7/8 - 14	18,000	14,500	21,40	125,000	25,000	44,000	22,225
1 - 12	18,000	14,500	24,45	140,000	28,000	50,000	25,400

Maschi a macc. a rullare per fil. Whitworth BSP

P	•	Dati di taglio a pag. 26
M	•	
K		
N	○	
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	X	X
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		



DIN 2184-1 DIN 2189 — Articolo nr. **966** **1586**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	7,30	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	9,30	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	12,50	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	16,00	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	20,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	25,50	140,000	28,000	53,000	26,441
G1	11,000	25,000	20,000	32,00	160,000	30,000	56,000	33,249
G1 1/4	11,000	32,000	24,000	40,75	170,000	30,000	57,000	41,910

FRESE A FILETTARE

P

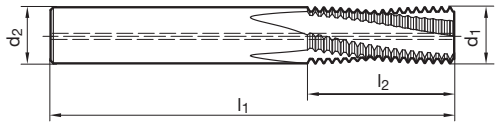
Frese a filettare senza fase di svasatura per filettatura metrica ISO

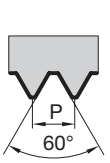
2xD

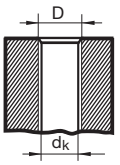
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD			
Superficie	C	C	C	C
Tipo	TM SP	TM SP	TM SP	TM SP
Refrigerazione interna				
Forma del gambo	HA	HB	HA	HB
		NEW		NEW







Norma di fab.	Articolo nr.	3737	3743	4132	4133

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M8 x 1	1,000	6,400	8,000	7,00	62,000	17,500	3	8,005
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M10 x 1	1,000	7,950	10,000	9,00	74,000	21,500	3	10,005
M10 x 1,25	1,250	7,950	10,000	8,80	74,000	21,900	3	10,006
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M12 x 1,5	1,500	9,950	10,000	10,50	74,000	26,300	4	12,007
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M14 x 1,5	1,500	11,200	12,000	12,50	90,000	30,800	4	14,007
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M16 x 1,5	1,500	12,800	14,000	14,50	90,000	33,800	4	16,007
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000
M20 x 1,5	1,500	14,950	16,000	18,50	102,000	42,800	4	20,007

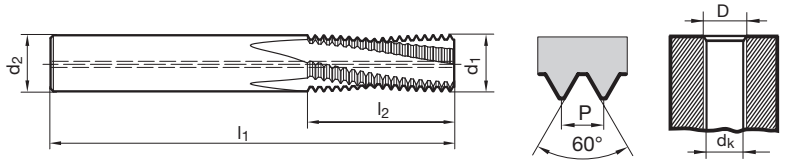
Frese a filettare senza fase di svasatura per filettatura metrica ISO

2,5xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3735	3740

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	16,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	21,900	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	26,300	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	32,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	37,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	43,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	48,800	4	20,000

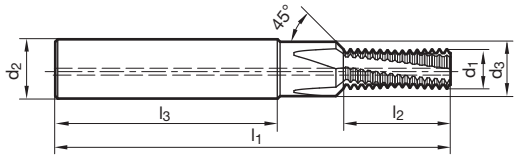
Frese a filettare con fase di svasatura per filettatura metrica ISO

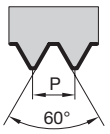
1,5xD

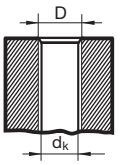
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3525** **3543**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	5,300	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	7,400	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	9,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	10,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	13,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	17,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	20,100	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	25,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	27,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	33,800	4	20,000

Frese a filettare con fase di svasatura per filettatura metrica ISO

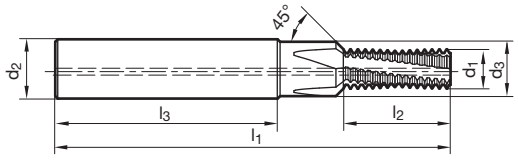
2xD

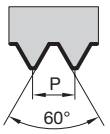
P	•
M	•
K	•
N	•
S	•
H	≤55

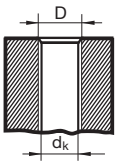
Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3526	3544

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	6,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	8,800	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	10,800	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	13,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	18,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	21,800	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	25,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	31,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	35,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	41,300	4	20,000

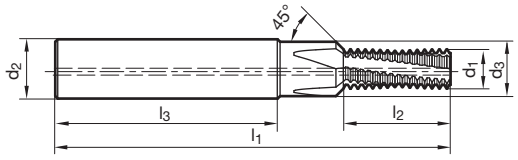
Frese a filettare con fase di svasatura per filettatura metrica ISO

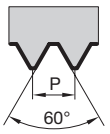
2,5xD

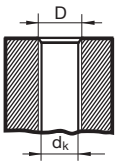
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3759** **3760**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	7,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	35,600	10,900	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	13,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	16,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	21,900	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	26,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	32,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	37,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	43,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	48,800	4	20,000

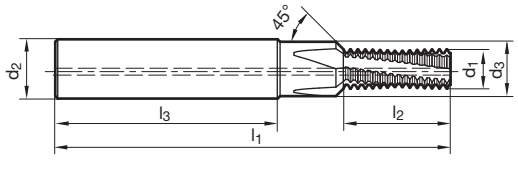
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

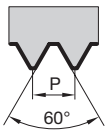
1,5xD

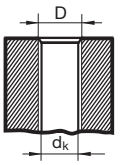
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3527	3545

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	7,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	8,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	9,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	10,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	13,100	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	13,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	16,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	16,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	19,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	20,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	23,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	26,300	4	16,007

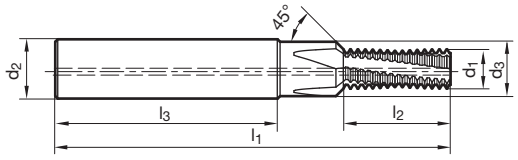
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

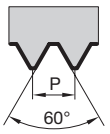
2xD

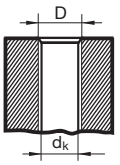
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3528** **3546**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	8,800	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	10,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	12,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	13,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	16,900	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	17,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	21,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	21,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	25,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	26,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	30,800	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	33,800	4	16,007

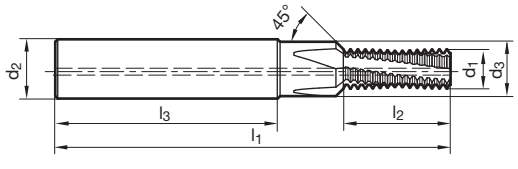
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

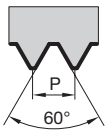
2,5xD

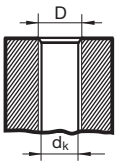
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3762	3763

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	10,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	12,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	15,300	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	15,400	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	20,600	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	20,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	25,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	25,600	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	30,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	30,800	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	38,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	41,300	4	16,007

Frese a filettare senza fase di svasatura per filettatura UNC

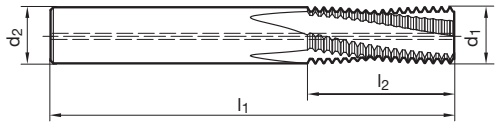
2xD

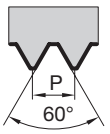
P	•
M	○
K	•
N	•
S	○
H	≤55

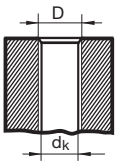
Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	4134	4135

D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 24	3,400	6,000	3,90	54,000	11,100	3	4,826
12 - 24	4,100	6,000	4,50	54,000	12,200	3	5,486
1/4 - 20	4,700	6,000	5,10	54,000	14,600	3	6,350
5/16 - 18	6,100	8,000	6,60	64,000	17,600	3	7,938
3/8 - 16	7,600	8,000	8,00	64,000	21,400	3	9,525
7/16 - 14	9,000	10,000	9,40	74,000	24,500	3	11,113
1/2 - 13	9,950	10,000	10,80	74,000	28,300	4	12,700
9/16 - 12	11,400	12,000	12,20	90,000	30,700	4	14,288
5/8 - 11	12,700	14,000	13,50	90,000	35,800	4	15,875

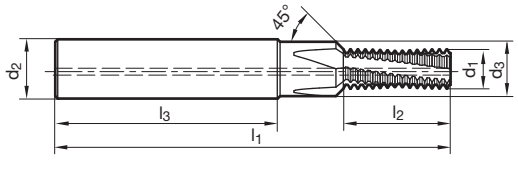
Frese a filettare con fase di svasatura per filettatura UNC

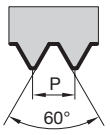
1,5xD

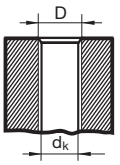
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3516** **3534**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	12,100	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	14,800	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	16,700	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	19,000	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	22,500	4	12,700

Frese a filettare con fase di svasatura per filettatura UNC

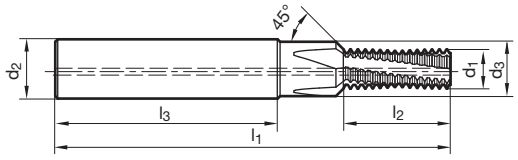
2xD

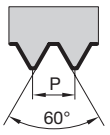
P	•
M	•
K	•
N	•
S	•
H	≤55

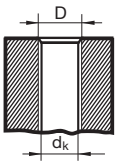
Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3517	3535

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	14,600	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	17,600	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	21,400	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	24,500	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	28,300	4	12,700

Frese a filettare senza fase di svasatura per filettatura UNF

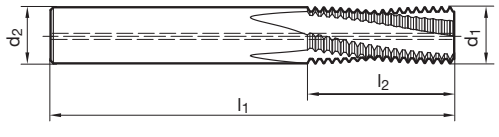
2xD

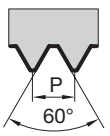
P	•
M	○
K	•
N	•
S	○
H	≤55

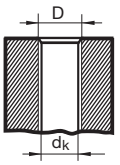
Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **4136** **4137**

D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 32	3,800	6,000	4,10	54,000	11,500	3	4,826
12 - 28	4,300	6,000	4,60	54,000	12,200	3	5,486
1/4 - 28	5,100	6,000	5,50	54,000	14,100	3	6,350
5/16 - 24	6,300	8,000	6,90	64,000	17,500	3	7,938
3/8 - 24	7,800	8,000	8,50	64,000	20,600	3	9,525
7/16 - 20	9,400	10,000	9,90	74,000	24,800	3	11,113
1/2 - 20	9,950	10,000	11,50	74,000	27,300	4	12,700
9/16 - 18	11,400	12,000	12,90	90,000	30,300	4	14,288
5/8 - 18	12,700	14,000	14,50	90,000	33,200	4	15,875

Frese a filettare con fase di svasatura per filettatura UNF

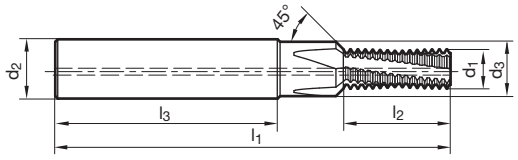
1,5xD

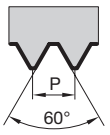
P	•
M	•
K	•
N	•
S	•
H	≤55

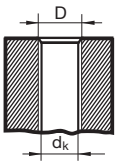
Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3518** **3536**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	11,300	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	13,200	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	16,400	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	18,400	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	21,000	4	12,700

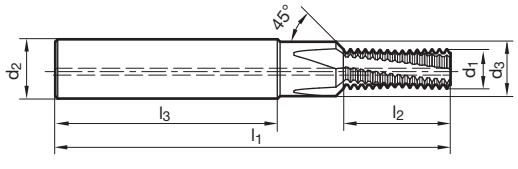
Frese a filettare con fase di svasatura per filettatura UNF

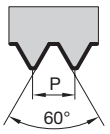
2xD

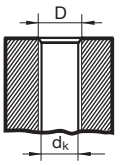
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3519	3537

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	14,100	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	17,500	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	20,600	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	24,800	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	27,300	4	12,700

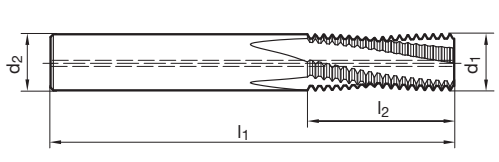
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

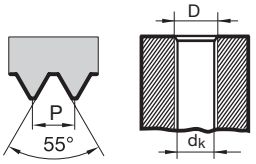
2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW





Norma di fab.	Articolo nr.	3745	3748

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	21,300	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	28,700	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	35,400	4	16,662

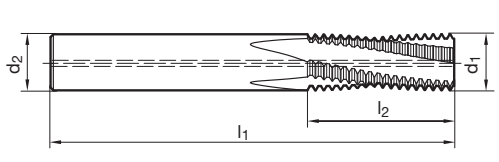
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

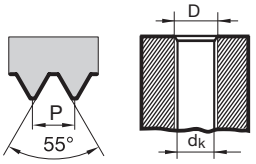
2,5xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW





Norma di fab.	Articolo nr.	3746	3750

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	24,900	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	35,400	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	43,500	4	16,662

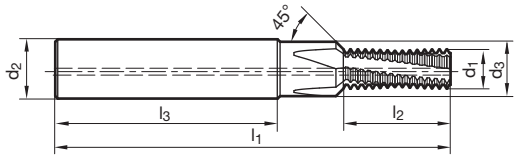
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

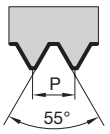
1,5xD

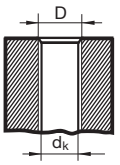
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3514** **3529**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	15,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	22,100	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	27,400	4	16,662

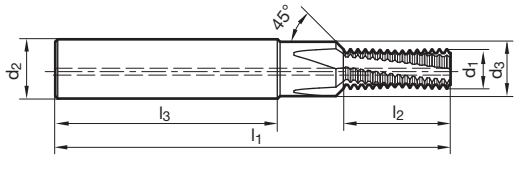
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

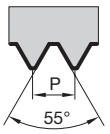
2xD

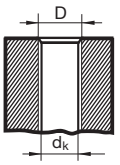
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3515	3533

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	21,300	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	28,700	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	35,400	4	16,662

Frese a filettare con fase di svasatura per filettatura Whitworth BSP

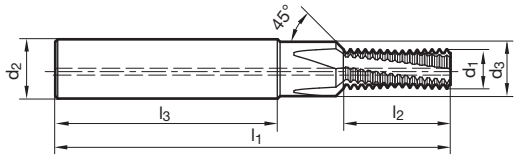
2,5xD

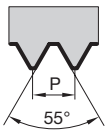
P	•
M	•
K	•
N	•
S	•
H	≤55

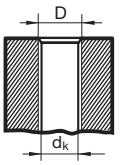
Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3765	3766

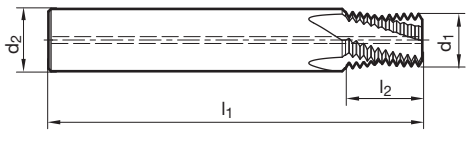
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	24,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	35,400	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	43,500	4	16,662

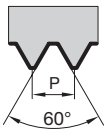
Frese a filettare senza fase di svasatura per filettatura NPT

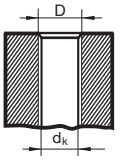
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3753	3754

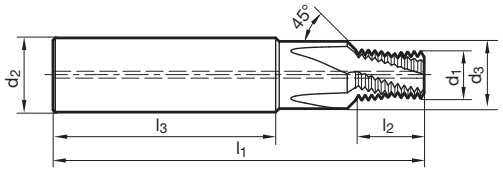
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

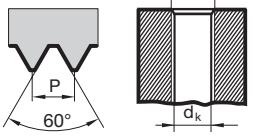
Frese a filettare con fase di svasatura per filettatura NPT

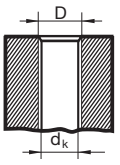
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3520	3538

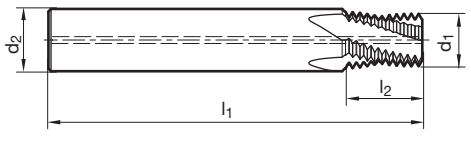
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

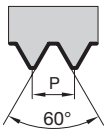
Frese a filettare senza fase di svasatura per filettatura NPTF

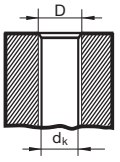
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3756	3757

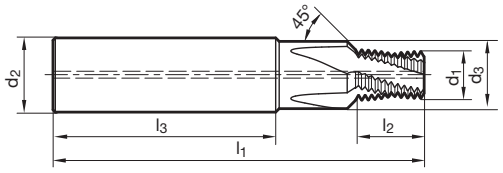
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

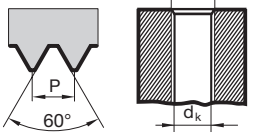
Frese a filettare con fase di svasatura per filettatura NPTF

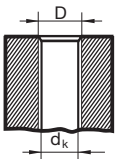
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 28

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3521	3539

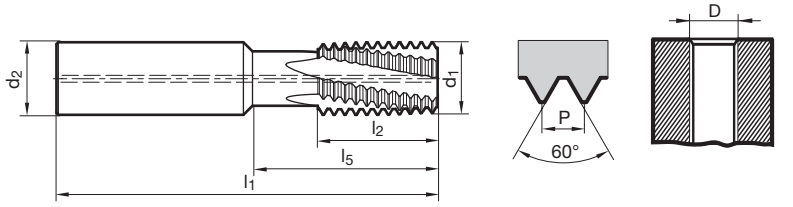
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

Fresa a filettare per impieghi multipli per filettatura metrica ISO

P	•	Dati di taglio a pag. 29
M	•	
K	•	
N	•	
S	•	
H	≤55	

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW



Norma di fab. Articolo nr. **3541** **3556**

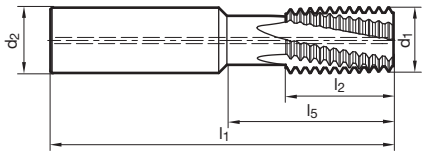
P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 10	7,950	8,000	64,000		20,000	4	8,050
1,000	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,100
1,250	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,125
1,500	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,150
1,000	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,150
1,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,100
1,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,200
3,000	≥ 24	17,950	18,000	102,000	50,000	33,000	5	18,300
1,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,100
1,500	≥ 26	19,950	20,000	105,000	50,000	33,000	5	20,150
2,000	≥ 27	19,950	20,000	105,000	50,000	33,000	5	20,200
2,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,250
3,000	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,300
3,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,350

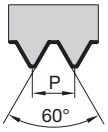
Fresa esterne a filettare

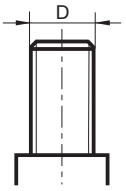
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **4162** **4163**

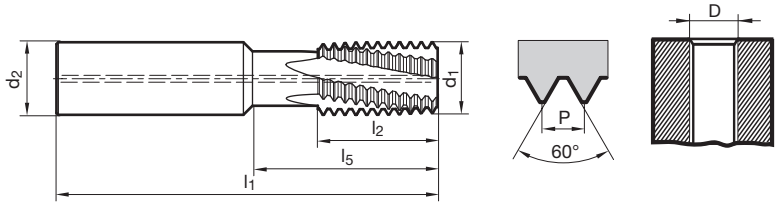
P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 3	9,950	10,000	70,000	25,000	16,000	4	10,050
0,750	≥ 5	9,950	10,000	70,000	25,000	16,000	4	10,075
1,000	≥ 6	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 8	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 10	11,950	12,000	80,000	31,000	20,000	4	12,150
1,500	≥ 10	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 14	15,950	16,000	90,000	40,000	25,000	5	16,200
2,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,250
3,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,300

Fresa a filettare per impieghi multipli per filettatura UN

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU UN	TMU UN
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3595	3596

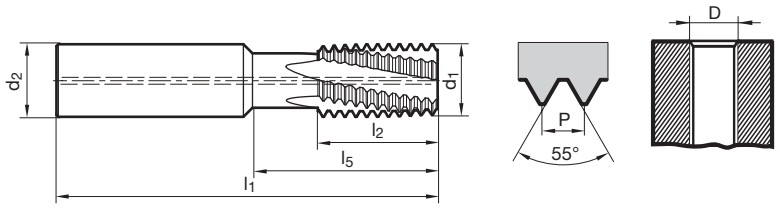
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
10,000	≥ 3/4	11,950	12,000	80,000	31,000	20,000	4	12,100
16,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,160
18,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,180
20,000	≥ 11/16	11,950	12,000	80,000	31,000	20,000	4	12,200
24,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,240
12,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,120
14,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,140
16,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,160
18,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,180
20,000	≥ 13/16	15,950	16,000	90,000	40,000	25,000	5	16,200
7,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,070
8,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,080
12,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,120
14,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,140
16,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,160

Fresa a filettare per impieghi multipli per filettatura Whitworth BSP

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29



Norma di fab. Articolo nr. **3542** **3557**

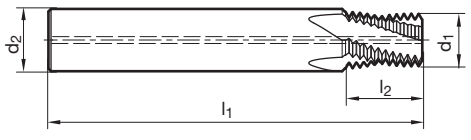
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
19,000	≥ 1/4	9,950	10,000	70,000	25,000	16,000	4	10,190
14,000	≥ 1/2	15,950	16,000	90,000	40,000	25,000	5	16,140
11,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,110

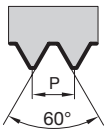
Fresa a filettare per impieghi multipli per filettatura NPT

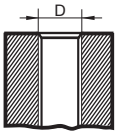
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3768	3769

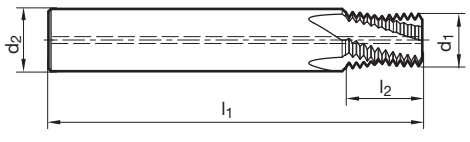
P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

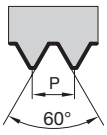
Fresa a filettare per impieghi multipli per filettatura NPTF

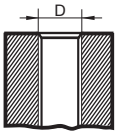
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 29







Norma di fab.	Articolo nr.	3772	3773

P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

Micro frese a filettare

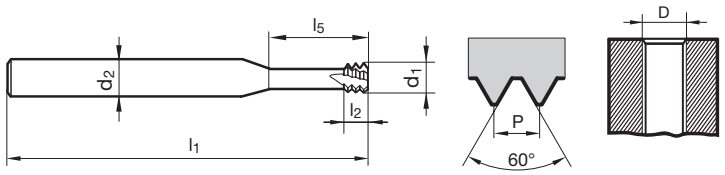
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 29

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4226**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,6	0,350	1,200	3,000	39,000	1,100	4,800	3	1,600
M1,8	0,350	1,400	3,000	39,000	1,100	5,400	3	1,800
M2	0,400	1,550	3,000	39,000	1,200	6,000	4	2,000
M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4	2,500
M3	0,500	2,400	6,000	58,000	1,500	9,500	4	3,000
M3,5	0,600	2,800	6,000	58,000	1,800	11,000	4	3,500
M4	0,700	3,200	6,000	58,000	2,100	12,500	4	4,000
M5	0,800	4,000	6,000	58,000	2,400	16,000	4	5,000
M6	1,000	4,800	6,000	58,000	3,000	20,000	4	6,000
M8	1,250	5,950	6,000	58,000	3,800	24,000	4	8,000
M10	1,500	7,800	8,000	73,000	4,500	33,000	4	10,000
M12	1,750	9,000	10,000	84,000	5,300	38,000	4	12,000
M16	2,000	11,800	10,000	84,000	6,000	35,000	5	16,000

Micro frese a filettare

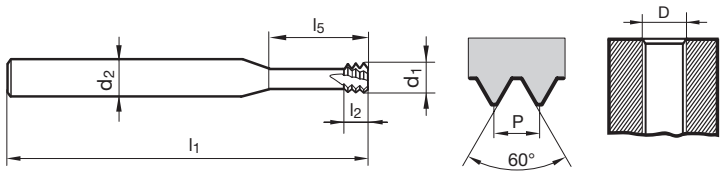
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 29

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP G
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4228**

D	P	d1	d2	l1	l2	l5	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	6,200	8,000	64,000	2,700	19,500	4	9,728
G3/8	19,000	9,950	10,000	73,000	4,000	25,000	4	16,662
G7/8	14,000	11,950	12,000	84,000	5,400	37,000	4	30,201
G2	11,000	15,950	16,000	105,000	6,900	44,000	5	59,614

Micro frese a filettare

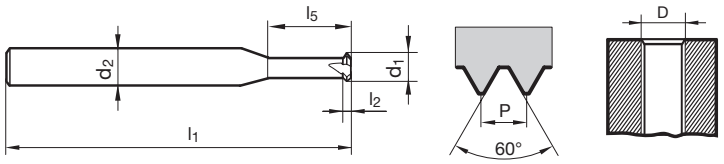
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 29

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M/MF
filetti	1,0
Forma del gambo	HA

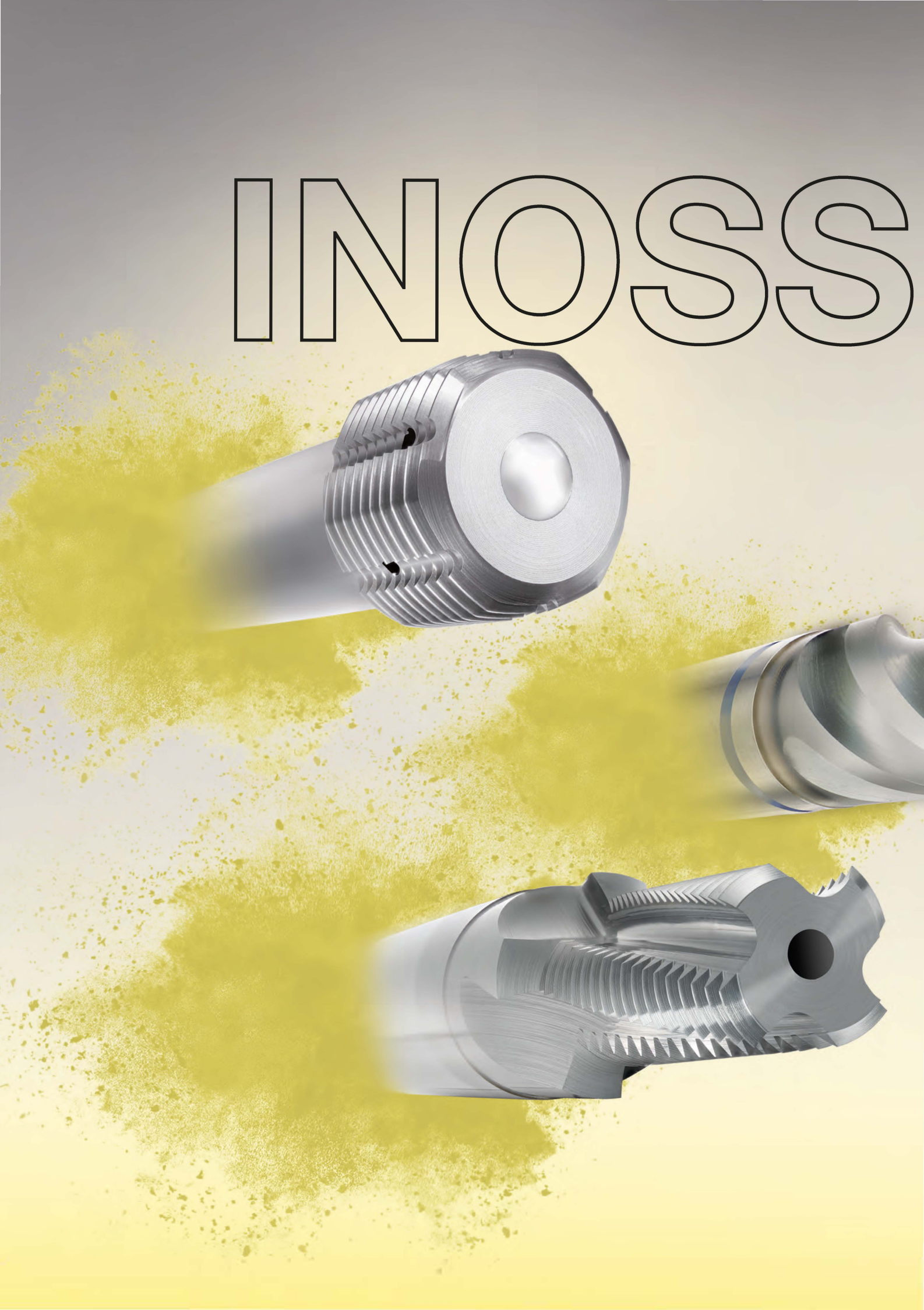
NEW



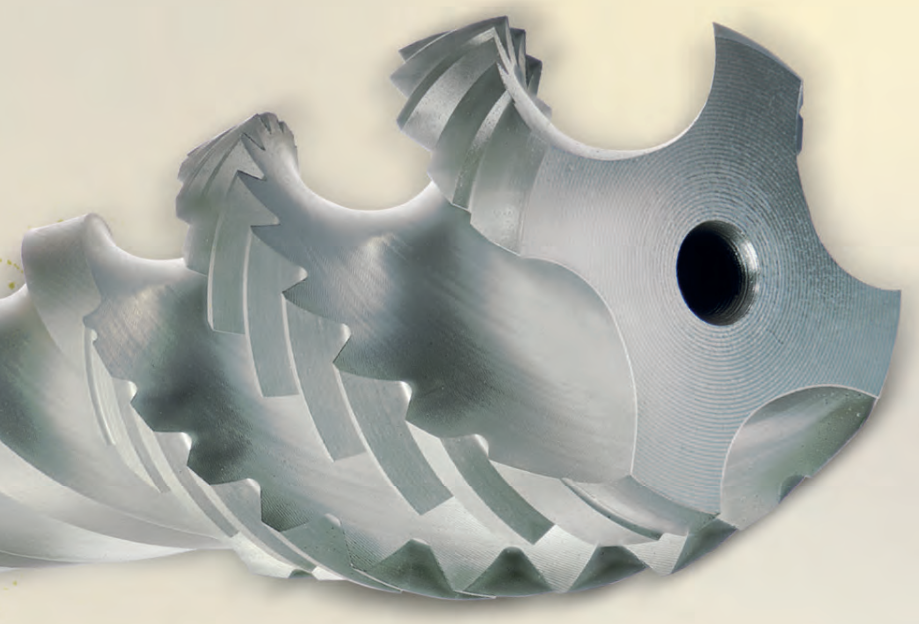
Norma di fab. Articolo nr. **4225**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,4 - M1,8	0,350	1,050	3,000	39,000	0,400	3,800	3	1,800
M2 - M2,4	0,400	1,500	3,000	39,000	0,400	7,000	3	2,400
M2,5 - M3	0,500	2,000	3,000	39,000	0,500	9,000	4	3,000
M3,5 - M4,5	0,750	2,800	6,000	58,000	0,800	14,000	4	4,500
M5 - M7	1,000	4,000	6,000	58,000	1,000	19,000	4	7,000
M8 - M10	1,500	6,400	8,000	64,000	1,500	24,000	5	10,000

INOSS



ACCIAI INOSSIDABILI



M

Acciaio e acciai resistenti agli acidi solforati, acciai austenitici e martensitici

ACCIAI INOSSIDABILI

M

ISO 2/6H

No 1

M2 - M30
Art. 4218
da pag. 239

M2 - M30
Art. 2869/2870
da pag. 236

ISO 3/6G

MF

ISO 2/6H

No 1

M6x0,75 - M24x2
Art. 4219
da pag. 248

M3x0,35 - M24x1,5
Art. 2871
da pag. 257

ISO 3/6G

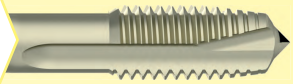
No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2B	2B	-

FORI PASSANTI

No 1
G1/16 - G1
Art. 4220
da pag. 264



HSS-E, Sirius, Forma B

No 1
No. 4 - 1
Art. 2872/2873
da pag. 258

No 1
No. 4 - 1
Art. 2874
da pag. 260

G1/16 - G1
Art. 2875
da pag. 263

HSS-E, trattati a vapore, Forma B

ACCIAI INOSSIDABILI

M		MF	
ISO 2/6H	ISO 3/6G	ISO 2/6H	ISO 3/6G
No 1 M2 - M30 Art. 393 da pag. 244		No 1 M6x0,75 - M24x1,5 Art. 394 da pag. 252	
M3 - M30 Art. 2862/2863 da pag. 243		M3x0,35 - M24x1,5 Art. 2864 da pag. 251	
No 1 M3 - M20 Art. 761/763 da pag. 247		No 1 M8x1 - M20x1,5 Art. 764 da pag. 255	
No 1 M3 - M20 Art. 1139/1142 da pag. 247		No 1 M8x1 - M20x1,5 Art. 1144 da pag. 255	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2B	2B	-

FORI CIECHI

No 1
G1/16 - G1
Art. 395
da pag. 267

HSS-E, TiAlN, Forma C

No 1
No. 2 - 7/8
Art. 2865/2866
da pag. 259

No 1
No. 10 - 1
Art. 2868
da pag. 262

G1/16 - G1 1/2
Art. 968
da pag. 265

HSS-E, trattati a vapore, Forma C

PER LAVORAZIONE
SYNCRO CODOLO CON
TOLLERANZA CODOLO h6

No 1
G1/16 - G1/2
Art. 4159
da pag. 266

HSS-E-PM, TiN, Forma C

HSS-E-PM, TiCN, Forma C

ACCIAI INOSSIDABILI

senza canalini di lub.

con canalini di lubr.

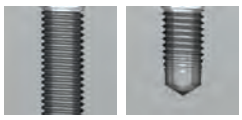
con refrigerazione interna

M		MF	
6HX	**6GX**	**6HX**	**6GX**
No 1 M1 - M20 Art. 921/925 da pag. 271	No 1 M2 - M10 Art. 920 da pag. 272	No 1 M8x1 - M20x1,5 Art. 929 da pag. 286	No 1 M8x1 - M18x1,5 Art. 928 da pag. 290
M3 - M39 Art. 919/923 da pag. 274	No 1 M3 - M39 Art. 918/922 da pag. 274	M6x0,75 - M24x1,5 Art. 1275/927 da pag. 288	No 1 M8x1 - M20x1,5 Art. 1277/926 da pag. 292
No 1 M3 - M39 Art. 2012/2013 da pag. 274		No 1 M6x0,75 - M20x1,5 Art. 2008 da pag. 291	
No 1 M3 - M20 Art. 1270/1271 da pag. 280	No 1 M5 - M10 Art. 1713 da pag. 281	No 1 M8x1 - M24x1,5 Art. 1272/1273 da pag. 296	No 1 M8x1 - M24x1,5 Art. 1715/1716 da pag. 297
No 1 M3 - M20 Art. 1725/1727 da pag. 280	No 1 M3 - M20 Art. 1726/1728 da pag. 282	No 1 M8x1 - M24x1,5 Art. 1729/1731 da pag. 296	No 1 M8x1 - M24x1,5 Art. 1730/1732 da pag. 297
No 1 M3 - M20 Art. 1972/1931 da pag. 284		No 1 M10x1 - M24x1,5 Art. 1581 da pag. 299	

No 1 utensile ideale

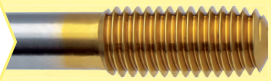
QUICKFINDER

UNC	UNF	G
2BX	2BX	-



FORI PASSANTI
FORI CIECHI

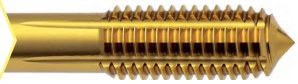
FORI PASSANTI



HSS-E, TiN, Forma C

No 1	No 1	No 1
Nr. 4 - 7/8 Art. 2273/2274 da pag. 300	Nr. 4 - 1 Art. 1283/2275 da pag. 301	G1/16 - G1 1/4 Art. 966 da pag. 302

FORI CIECHI



HSS-E, TiN, Forma C

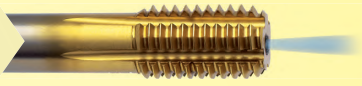
No 1	No 1	No 1
Nr. 4 - 7/8 Art. 1582/1583 da pag. 300	Nr. 4 - 1 Art. 1584/1585 da pag. 301	G1/16 - G1 1/4 Art. 1586 da pag. 302

HSS-E, TiCN, Forma C

FORMA C

HSS-E-PM, TiCN, Forma C

FORMA E



HSS-E-PM, TiN, Forma E

METALLO DURO

Metallo duro, TiCN, Forma C

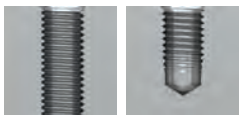
ACCIAI INOSSIDABILI

	M UNIVERSALE	MF UNIVERSALE
1,5xD	No 1 M3 - M20 Art. 3525 da pag. 306	No 1 M4x0,5 - M16x1,5 Art. 3527 da pag. 309
2xD	No 1 M3 - M20 Art. 3526 da pag. 307	No 1 M4x0,5 - M16x1,5 Art. 3528 da pag. 310
2,5xD	No 1 M3 - M20 Art. 3759 da pag. 308	No 1 M4x0,5 - M16x1,5 Art. 3762 da pag. 311
3xD	No 1 M1,6 - M16 Art. 4226 da pag. 333	
universale	No 1 Ø8x0,5 - Ø30xP3,5 Art. 3541 da pag. 327	No 1 Ø8x0,5 - Ø30xP3,5 Art. 3541 da pag. 327

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
UNIVERSALE	UNIVERSALE	-



FORI PASSANTI
FORI CIECHI

No 1	No 1	No 1	
1/4 - 1/2 Art. 3516 da pag. 313	1/4 - 1/2 Art. 3518 da pag. 316	1/8 - 3/8 Art. 3514 da pag. 320	Metallo duro, TiCN

No 1	No 1	No 1	
1/4 - 1/2 Art. 3517 da pag. 314	1/4 - 1/2 Art. 3519 da pag. 317	1/8 - 3/8 Art. 3515 da pag. 321	Metallo duro, TiCN

Metallo duro, TiCN

Metallo duro, TiCN

No 1	No 1	No 1	
Ø10xUN24 - Ø20xUN7 Art. 3595 da pag. 329	Ø10xUN24 - Ø20xUN7 Art. 3595 da pag. 329	Ø10xG19 - Ø20xG11 Art. 3542 da pag. 330	Metallo duro, TiCN

BUSSOLA

M

ACCIAI INOSSIDABILI

FORI PASSANTI

Profondità filettatura		≤1,5xD						
Materiale tagliente		HSS-E					HSS-E-PM	
Tipo/forma		VA/B	VA/B	VA/B	VA AZ/B	VA/B	VA/B	VA/B
Superficie		○	●	Ⓢ	○	Ⓢ	○	Ⓢ
Erogazione del liquido di raffredd.		☒	☒	☒	☒	☒	☒	☒
Tolleranza codolo		h9	h9	h9	h9	h9	h9	h9
						NEW		
Filettatura	**Tolleranza**	**Articolo nr. / pagina**						
M	4H							
	6H	1870/1872 236	2869/2870 236	2086/2087 236	1871/792 240		877/879 237	1002 238
	6HX					4218 239		
	6G							
MF	6H	1873 256	2871 257	1001 257			887 256	1291 248
	6HX					4219 248		
	6G							
UNC	2B	1980/1985 258	2872/2873 258					
	2BX							
UNF	2B	1990 260	2874 260					
	2BX							
G		967 263	2875 263			4220 264		
BSW								
NPT								
NPTF								
EG M	6H Mod.							
MJ	4HX							
MJF	4HX							
UNJC	3BX							
UNJF	3BX							
PG								
olio solubile		○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min						
M	acciai inossidabili solforati, austenitici	≤1000 N/mm²	X5CrNi18-10 X6CrNiTi18-10 X8CrNiS18-9	1.4301 1.4571 1.4305	**8**	**8**	**10**	**8**	**10**	**8**	**10**
	acciai inossidabili e acciai resistenti agli acidi, martensitici	≤1000 N/mm²	X17CrNi16-2 X90CrMoV18 X2CrTi12	1.4057 1.4112 1.4512	**6**	**6**	**8**	**6**	**12**	**6**	**8**
	Duplex e Super Duplex	≤1300 N/mm²	X2CrNiMoN22-5-3 X2CrNiMoN25-7-4 X2CrNiMoCuWN25-7-4	1.4462 1.4410 1.4501	-	-	-	-	**10**	-	-

M

ACCIAI INOSSIDABILI

FORI CIECHI

Profondità filettatura		≤1,5xD					
Materiale tagliente		HSS-E					
Tipo/forma		VA R15 / C	VA R15 / C	VA R25 / C	VA R25 / C	NR15 / C	NR15 / C
Materiale tagliente		●	(S)	●	(S)	(C)	(C)
Erogazione del liquido di raffredd.		☒	☒	☒	☒	☒	☒
Tolleranza codolo		h9	h9	h9	h9	h9	h9
Filettatura	**Tolleranza**	**Articolo nr. / pagina**					
M	4H						
	6H	843/785 241	2896/2895 241			4154 242	4155 242
	6HX						
	6G						
MF	6H	1874 249	2897 249			4156 250	4157 250
	6HX						
	6G						
UNC	2B						
	2BX						
UNF	2B	1991 261	2898 261				
	2BX						
G							
BSW							
NPT				1087 268	1088 268		
NPTF					4127 269		
EG M	6H Mod.						
MJ	4HX						
MJF	4HX						
UNJC	3BX						
UNJF	3BX						
PG							
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

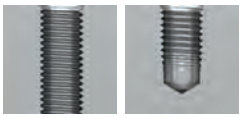
	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min					
M	acciai inossidabili solforati, austenitici	≤1000 N/mm²	X5CrNi18-10 X6CrNiTi18-10 X8CrNiS18-9	1.4301 1.4571 1.4305	**6**	**8**	**6**	**8**	**8**	**8**
	acciai inossidabili e acciai resistenti agli acidi, martensitici	≤1000 N/mm²	X17CrNi16-2 X90CrMoV18 X2CrTi12	1.4057 1.4112 1.4512	4	6	4	6	6	6
	Duplex e Super Duplex	≤1300 N/mm²	X2CrNiMoN22-5-3 X2CrNiMoN25-7-4 X2CrNiMoCuWN25-7-4	1.4462 1.4410 1.4501	-	-	-	-	-	-

≤3xD

HSS-E				HSS-E-PM					
NR40 / C	NR40 / C	NR40 / C	VA R45/C	NR40 / C	NR40 / C	NR50 / C	NR50 / C	VA R50/C	VA R50/C
○	●	○	A	○	S	S	C	S	C
☒	☒	assiale	☒	☒	☒	☒	assiale	☒	assiale
h9	h9	h9	h9	h9	h9	h9	h9	h6	h6
Articolo nr. / pagina									
814/825 243	2862/2863 243	1892/1899 243		909/910 246	59/60 246	767/1098 245	1152/1293 245		
			393 244					761/763 247	1139/1142 247
	2864 251			936 253	1004 253	1100 254	1294 254		
			394 252					764 255	1144 255
1981/1986 259	2865/2866 259								
2867 262	2868 262								
	968 265		395 267	939 265				4159 266	
○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

Velocità di taglio consigliata vc m / min									
6	**6**	**6**	**15**	**8**	**10**	**10**	**10**	**12**	**12**
4	4	**4**	**10**	**6**	**6**	6	6	**8**	**8**
-	-	-	**6**	-	-	-	-	-	-

ACCIAI INOSSIDABILI



FORI PASSANTI E **FORI** CIECHI

Profondità filettatura		1,5xD		
Materiale tagliente		HSS-E	HSS-E-PM	Int. in MD
Tipo/forma		N / C	N / C	N / C
Materiale tagliente		(S)	(S)	(S)
Erogazione del liquido di raffredd.		☒	☒	assiale
Tolleranza codolo		h9	h9	h6
Filettatura	**Tolleranza**	**Articolo nr. / pagina**		
M	4H			
	6H			
	6HX	921/925 271	1255/1256 271	2518 273
	6GX	920 272	903/952 271	
MF	6H			
	6HX	929 286	1257/1258 287	
	6GX	928 290	1740 289	
UNC	2BX	2273/2274 300		
	3BX			
UNF	2BX	1283/2275 301		
	3BX			
G		966 302		
BSW				
NPT				
NPTF				
EG M	6H Mod.			
MJ	4HX			
MJF	4HX			
UNJC	3BX			
UNJF	3BX			
PG				
lubrificante adatto		●/●/△	●/●/△	●/●/△

= No 1

○ = Aria
● = olio intero
● = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

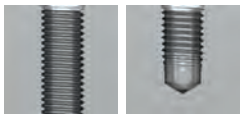
	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min		
M	acciai inossidabili solforati, austenitici	≤1000 N/mm²	X5CrNi18-10 X6CrNiTi18-10 X8CrNiS18-9	1.4301 1.4571 1.4305	4	4	15
	acciai inossidabili e acciai resistenti agli acidi, martensitici	≤1000 N/mm²	X17CrNi16-2 X90CrMoV18 X2CrTi12	1.4057 1.4112 1.4512	4	4	12
	Duplex e Super Duplex	≤1300 N/mm²	X2CrNiMoN22-5-3 X2CrNiMoN25-7-4 X2CrNiMoCuWN25-7-4	1.4462 1.4410 1.4501	-	-	-

≤3xD

HSS-E				HSS-E-PM							Int. in MD	
N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / E	N / C	N / E
S	C	S+	C	S	S	S	S	C	A	S	C	C
☒	☒	assiale	radiale	☒	☒	radiale	assiale	radiale	radiale	assiale	radiale	radiale
h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h6	h6
Articolo nr. / pagina												
919/923 274	2012/2013 274	2442/2444 277	2446/2448 277	322/339 275	1266/1267 276	323/342 279	4143 283	1270/1271 280	1717/1719 280	1725/1727 280	1972/1931 284	1927 285
918/922 274		2443/2445 277	2447 278					1713 281	1718/1720 282	1726/1728 282		
1275/927 288	2008 291			333 294	1268/1269 293	338 295	4145 298	1272/1273 296	1721/1723 296	1729/1731 296	1581 299	
1277/926 292								1715/1716 297		1730/1732 297		
1582/1583 300												
1584/1585 301												
1586 302												
○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

Velocità di taglio consigliata vc m / min												
6	**8**	6	**8**	**8**	**8**	**8**	**8**	**10**	**10**	**8**	**15**	**15**
4	**6**	4	*6*	*6*	*6*	*6*	*6*	*8*	**8**	**6**	**12**	**12**
-	**-**	**-**	**8**	**8**	**8**	**8**	**8**	**10**	**10**	**8**	**15**	**15**

ACCIAI INOSSIDABILI



FORI PASSANTI E **FORI** CIECHI

	Profondità filettatura	≤2xD				≤2,5xD		≤1,5xD	
	Materiale tagliente		Int. in MD						
	Tipo	TM SP	TM SP	TM SP	TM SP	TM SP	TM SP	TMC SP	TMC SP
	Superficie	C	C	C	C	C	C	C	C
	Erogazione del liquido di raffredd.	☒	☒	assiale	assiale	assiale	assiale	assiale	assiale
	Forma del gambo	HA	HB	HA	HB	HA	HB	HA	HA
	Torsione	27°	27°	27°	27°	27°	27°	10°	10°
	Filettatura		**Articolo nr. / pagina**						
	M	4132 304	4133 304	3737 304	3743 304	3735 305	3740 305	3525 306	3543 306
	MF			3737 304	3743 304			3527 309	3545 309
	UNC			4134 312	4135 312			3516 313	3534 313
	UNF			4136 315	4137 315			3518 316	3536 316
	G			3745 318	3748 318	3746 319	3750 319	3514 320	3529 320
	BSW								
	NPT			3753 323	3754 323			3520 324	3538 324
	NPTF			3756 325	3757 325			3521 326	3539 326
	EG M	Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare							
	MJ								
	MJF								
	UNJC								
	UNJF								
	PG								
	lubrificante adatto	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●

= No 1

◯ = Aria
● = olio intero
◯ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	consigli di applicazione							
M	acciai inossidabili solforati, austenitici	≤1000 N/mm²	X5CrNi18-10 X6CrNiTi18-10 X8CrNiS18-9	1.4301 1.4571 1.4305	+	+	+	+	+	+	++	++
M	acciai inossidabili e acciai resistenti agli acidi, martensitici	≤1000 N/mm²	X17CrNi16-2 X90CrMoV18 X2CrTi12	1.4057 1.4112 1.4512	+	+	+	+	+	+	++	++
M	Duplex e Super Duplex	≤1300 N/mm²	X2CrNiMoN22-5-3 X2CrNiMoN25-7-4 X2CrNiMoCuWN25-7-4	1.4462 1.4410 1.4501	+	+	+	+	+	+	++	++

≤2xD		≤2,5xD		universale				≤3xD	
Int. in MD									
TMC SP	TMC SP	TMC SP	TMC SP	TMU SP	TMU SP	TMU SP	TMU SP	MTM 3 SP	MTM 1 SP
C	C	C	C	C	C	C	C	C	C
assiale	assiale	assiale	assiale	assiale	assiale	assiale	assiale	☒	☒
HA	HB	HA	HB	HA	HB	HA	HB	HA	HA
10°	10°	27°	27°	15°	15°	15°	15°	15°	15°
Articolo nr. / pagina									
3526 307	3544 307	3759 308	3760 308	3541 327	3556 327	4162 328	4163 328	4226 333	4225 335
3528 310	3546 310	3762 311	3763 311	3541 327	3556 327	4162 328	4163 328		4225 335
3517 314	3535 314			3595 329	3596 329				
3519 317	3537 317			3595 329	3596 329				
3515 321	3533 321	3765 322	3766 322	3542 330	3557 330			4228 334	
				3768 331	3769 331				
				3772 332	3773 332				
Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare									
○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

consigli di applicazione									
++	++	++	++	++	++	++	++	++	++
++	++	++	++	++	++	++	++	++	++
++	++	++	++	++	++	++	++	++	++

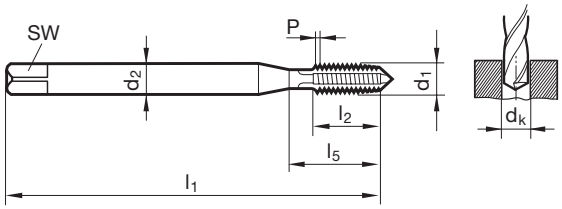
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	S	●
Tipo	N	N	VA
Forma	B	B	B
Refrigerazione interna	✕	✕	✕

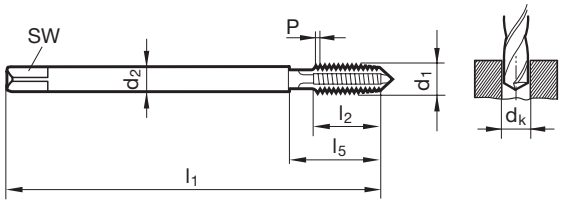
P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 229

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **1870** **2086** **2869**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1872** **2087** **2870**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

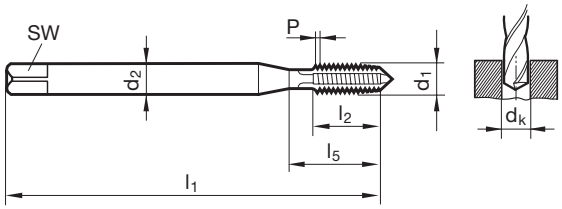
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	⊠

P	≤ 1000
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 229

DIN 371



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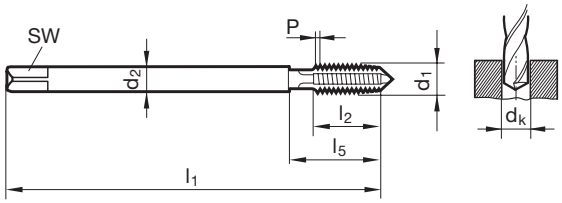


DIN 2184-1 DIN 371 Articolo nr. **877**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **879**

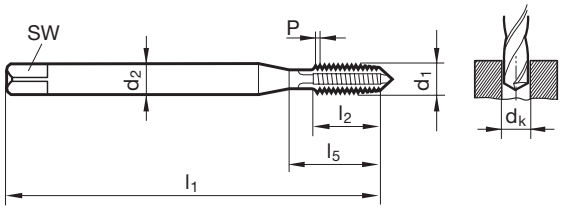
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	ISO2/6H
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

P	≤ 1000
M	•
K	
N	
S	
H	

Dati di taglio a pag. 229



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **1002**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000

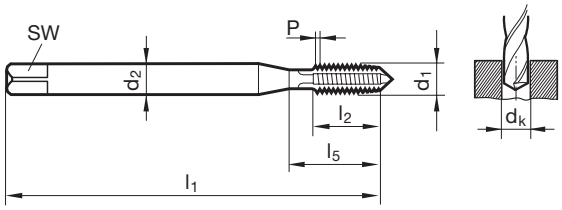
Maschi a macchina per filettatura metrica ISO

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 229

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

NEW



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **4218**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

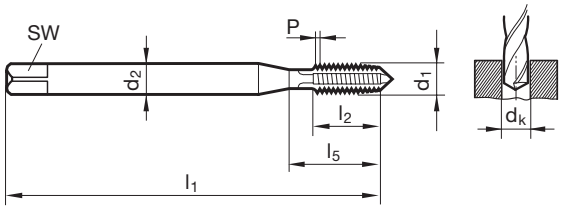
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	VA AZ
Forma	B
Refrigerazione interna	⊠

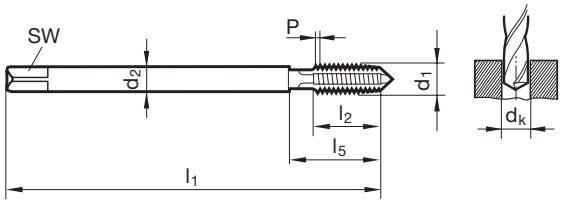
P	≤ 1000
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 229

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **1871**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **792**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

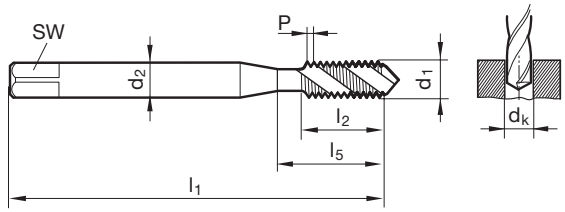
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie		S
Tipo	VA R15	VA R15
Forma	C	C
Refrigerazione interna		

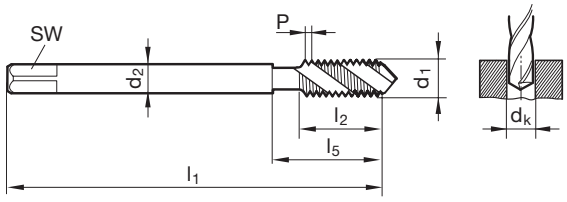
P	
M	•
K	
N	
S	
H	

Dati di taglio a pag. 230

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **843** **2896**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

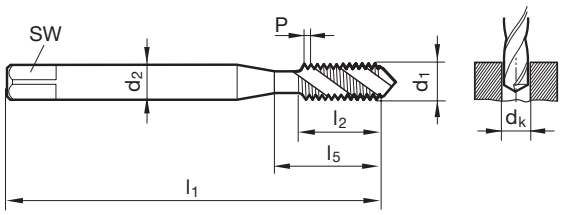
DIN 2184-1 DIN 376 — Articolo nr. **785** **2895**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000

Maschi a macchina per filettatura metrica ISO

P	≤ 1000	Dati di taglio a pag. 230
M	○	
K	○	
N		
S		
H		

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	C	C
Tipo	N R15	N R15
Forma	C	E
Refrigerazione interna		



DIN 2184-1 DIN 371/DIN 376 — Articolo nr. **4154** **4155**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

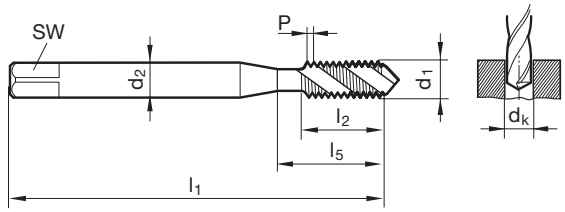
Maschi a macchina per filettatura metrica ISO

P		
M	•	
K		
N	•	
S		
H		

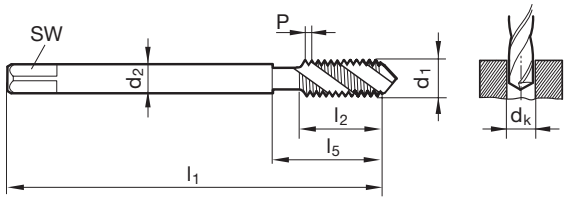
Dati di taglio a pag. 231

Materiale tagliente	HSS-E		
Tolleranza sul Ø	ISO2/6H	ISO2/6H	ISO2/6H
Superficie	○	○	●
Tipo	VA R40	VA R40	VA R40
Forma	C	C	C
Refrigerazione interna	✕	—	✕

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **814** **1892** **2862**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **825** **1899** **2863**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

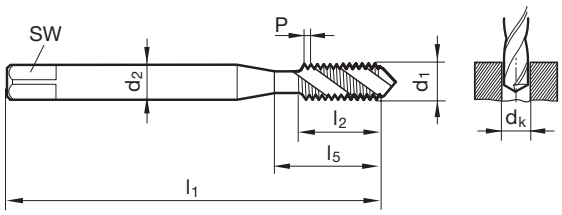
Maschi a macchina per filettatura metrica ISO

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 231

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	A
Tipo	VA R45
Forma	C
Refrigerazione interna	

NEW



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **393**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

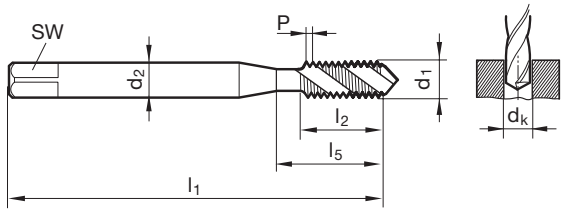
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	C
Tipo	N R50	N R50
Forma	C	C
Refrigerazione interna		

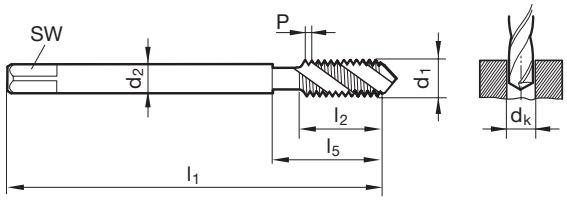
P	•
M	•
K	○
N	•
S	○
H	

Dati di taglio a pag. 231

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **767** **1152**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1098** **1293**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

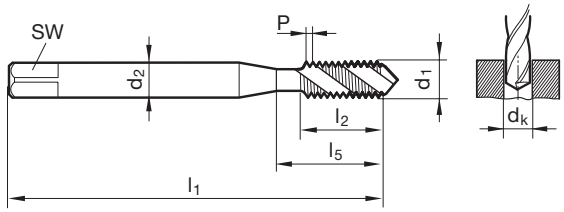
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	
Tipo	VA R40	VA R40
Forma	C	C
Refrigerazione interna		

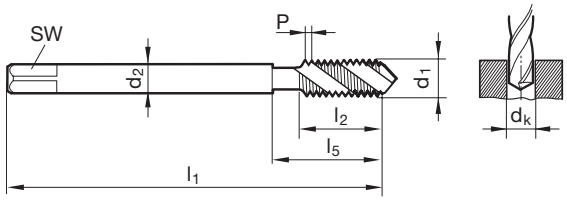
P	
M	•
K	
N	
S	
H	

Dati di taglio a pag. 231

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **59** **909**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **60** **910**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000

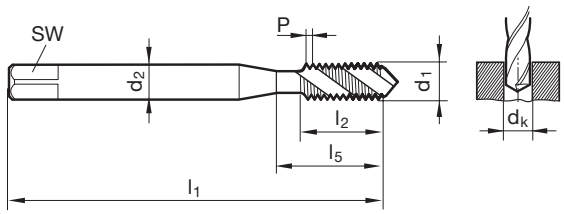
Maschi a macchina per filettatura metrica ISO

P	•	
M	•	
K	○	
N	•	
S	○	
H		

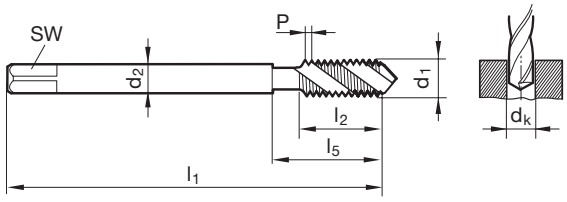
Dati di taglio a pag. 231

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	S	C
Tipo	VA R50	VA R50
Forma	C	C
Refrigerazione interna		

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **761** **1139**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	2,500	18,000
M4	0,700	4,500	3,400	3,30	63,000	3,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	4,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	5,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	6,300	35,000
M10	1,500	10,000	8,000	8,50	100,000	7,500	39,000

DIN 2184-1 DIN 376 — Articolo nr. **763** **1142**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	8,800	63,000
M14	2,000	11,000	9,000	12,00	110,000	10,000	58,000
M16	2,000	12,000	9,000	14,00	110,000	10,000	58,000
M20	2,500	16,000	12,000	17,50	140,000	12,500	85,000

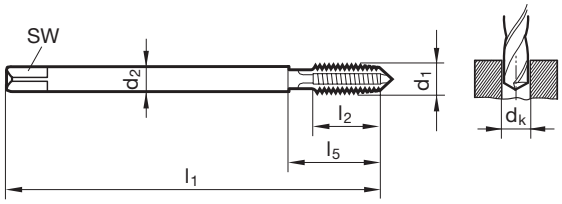
Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000
M	•
K	
N	
S	
H	

Dati di taglio a pag. 229

Materiale tagliente	HSS-E-PM	HSS-E
Tolleranza sul Ø	ISO2/6H	6HX
Superficie	S	S
Tipo	N	N
Forma	B	B
Refrigerazione interna		

NEW



DIN 2184-1 DIN 374 Articolo nr. **1291** **4219**

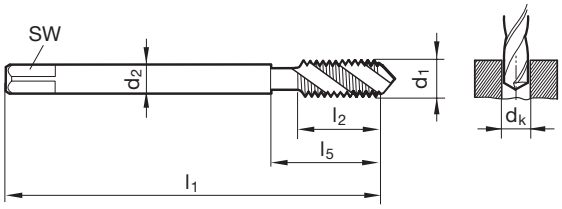
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,25	11,000	9,000	12,80	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	28,000	48,000	24,008

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie		S
Tipo	VA R15	VA R15
Forma	C	C
Refrigerazione interna		

P	
M	•
K	
N	
S	
H	

Dati di taglio a pag. 230



DIN 2184-1 DIN 374 — Articolo nr. **1874** **2897**

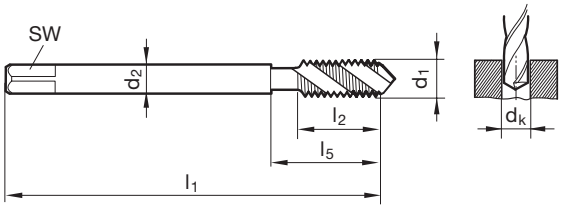
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M4 x 0,5	2,800	2,100	3,50	63,000	5,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	5,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	5,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M20 x 2	16,000	12,000	18,00	140,000	20,000	60,000	20,008
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000
M	○
K	○
N	
S	
H	

Dati di taglio a pag. 230

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	C	C
Tipo	N R15	N R15
Forma	C	E
Refrigerazione interna		



DIN 2184-1 DIN 374 — Articolo nr. **4156** **4157**

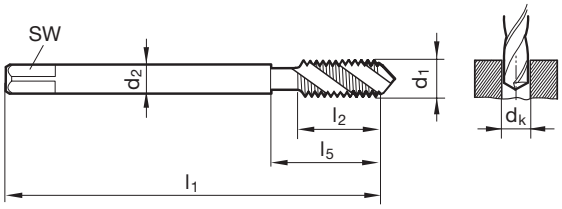
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	
Tipo	VA R40
Forma	C
Refrigerazione interna	

P	
M	•
K	
N	
S	
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 374 Articolo nr. **2864**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	2,200		2,65	56,000	4,000	18,000	3,002
M4 x 0,5	2,800	2,100	3,50	63,000	5,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	5,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	5,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,5	6,000	4,900	7,50	80,000	8,000	30,000	8,003
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	16,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007

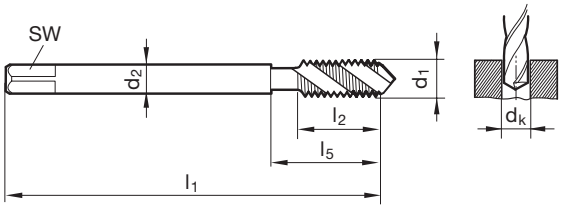
Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E
Tolleranza sul Ø	6HX
Superficie	A
Tipo	VA R45
Forma	C
Refrigerazione interna	

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 374 Articolo nr. **394**

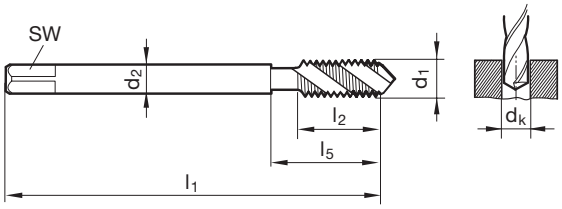
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,20	80,000	8,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	8,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	16,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007
M24 x 1,5	18,000	14,500	22,50	140,000	16,000	48,000	24,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	○	(S)
Tipo	VA R40	VA R40
Forma	C	C
Refrigerazione interna	⊠	⊠

P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 374 — Articolo nr. **936** **1004**

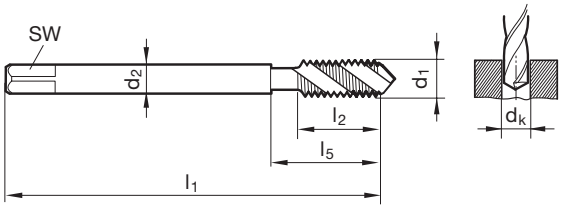
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	C
Tipo	N R50	N R50
Forma	C	C
Refrigerazione interna		

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 374 — Articolo nr. **1100** **1294**

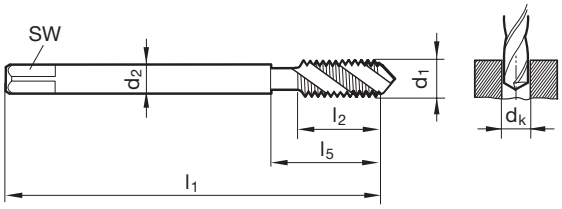
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	S	C
Tipo	VA R50	VA R50
Forma	C	C
Refrigerazione interna		

P	•
M	•
K	○
N	•
S	○
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 374 — Articolo nr. **764** **1144**

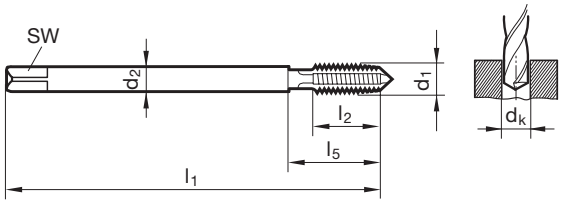
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	5,000	44,000	8,005
M8 x 1	6,000	4,900	7,00	90,000	5,000	47,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	5,000	47,000	10,005
M10 x 1	7,000	5,500	9,00	90,000	5,000	44,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	5,000	53,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	7,500	53,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	7,500	48,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	7,500	48,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	7,500	58,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	7,500	70,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 229

Materiale tagliente	HSS-E-PM	HSS-E
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	◯	◯
Tipo	N	N
Forma	B	B
Refrigerazione interna	⊠	⊠



DIN 2184-1 DIN 374 — Articolo nr. **887** **1873**

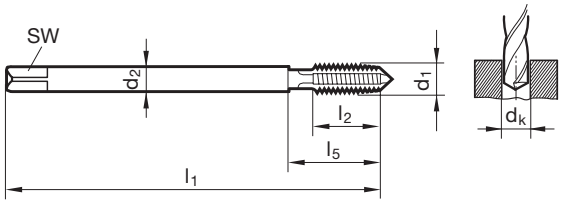
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M7 x 0,75	5,500	4,300	6,20	80,000	13,000	30,000	7,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	28,000	48,000	24,008

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	
Tipo	N	N
Forma	B	B
Refrigerazione interna		

P	≤ 1000
M	•
K	
N	
S	
H	

Dati di taglio a pag. 229



DIN 2184-1 DIN 374 — Articolo nr. **1001** **2871**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	2,200		2,65	56,000	7,000	18,000	3,002
M4 x 0,5	2,800	2,100	3,50	63,000	8,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007

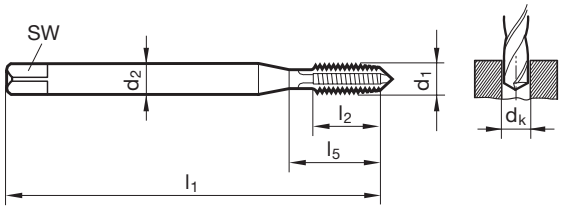
Maschi a macchina per filettatura UNC

P	≤ 1000
M	•
K	
N	•
S	
H	

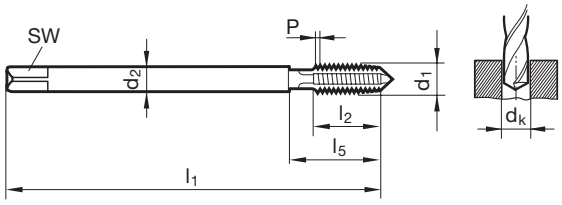
Dati di taglio a pag. 229

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N	VA
Forma	B	B
Refrigerazione interna	⊠	⊠

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 — Articolo nr. **1980** **2872**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,35	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 — Articolo nr. **1985** **2873**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	35,000	62,000	22,225
1 - 8	18,000	14,500	22,25	160,000	38,000	73,000	25,400

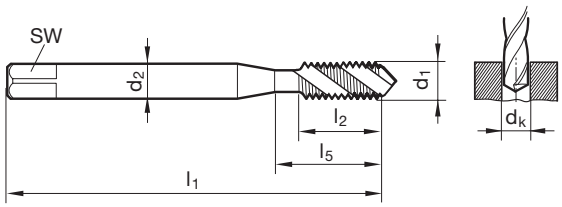
Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	VA R40	VA R40
Forma	C	C
Refrigerazione interna	⊠	⊠

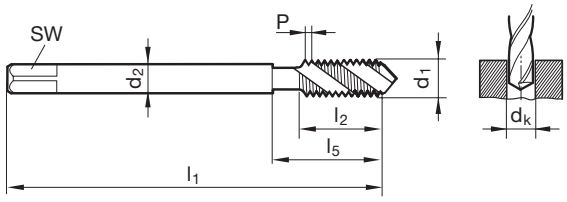
P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 231

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 — Articolo nr. **1981** **2865**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
2 - 56	2,800	2,100	1,85	45,000	5,000	14,500	2,184
4 - 40	3,500	2,700	2,35	56,000	7,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	7,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	8,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	8,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	11,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	11,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	13,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	14,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	16,000	39,000	9,525

DIN 2184-1 ~DIN 376 — Articolo nr. **1986** **2866**

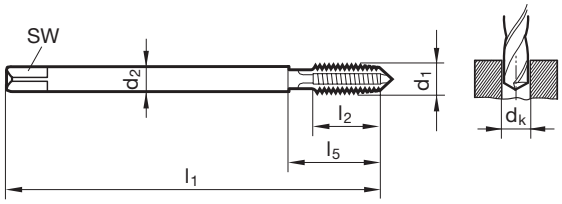
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	18,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	20,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	21,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	24,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	25,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	28,000	62,000	22,225

Maschi a macchina per filettatura UNF

P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 229

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	N	VA
Forma	B	B
Refrigerazione interna	⊠	⊠



DIN 2184-1 ~DIN 374 — Articolo nr. **1990** **2874**

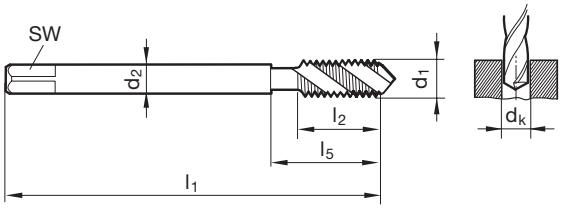
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	2,200		2,40	56,000	10,000	18,000	2,845
6 - 40	2,500	2,100	2,95	56,000	11,000	20,000	3,505
10 - 32	3,500	2,700	4,10	70,000	14,000	25,000	4,826
12 - 28	4,000	3,000	4,60	80,000	16,000	30,000	5,486
1/4 - 28	4,500	3,400	5,50	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	18,000	35,000	9,525
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875
7/8 - 14	18,000	14,500	20,40	125,000	25,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	28,000	50,000	25,400

Maschi a macchina per filettatura UNF

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	●	Ⓢ
Tipo	VA R15	VA R15
Forma	C	C
Refrigerazione interna	⊠	⊠

P	
M	•
K	
N	
S	
H	

Dati di taglio a pag. 230



DIN 2184-1 ~DIN 374 — Articolo nr. **1991** **2898**

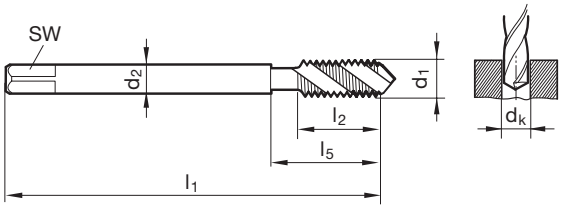
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
5 - 44	2,500	2,100	2,70	56,000	6,000	18,000	3,175
6 - 40	2,500	2,100	2,95	56,000	6,500	20,000	3,505
10 - 32	3,500	2,700	4,10	70,000	8,500	25,000	4,826
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	13,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	15,000	44,000	15,875
7/8 - 14	18,000	14,500	20,40	125,000	19,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	22,000	50,000	25,400

Maschi a macchina per filettatura UNF

P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 231

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2B	2B
Superficie	○	●
Tipo	VA R40	VA R40
Forma	C	C
Refrigerazione interna	⊠	⊠



DIN 2184-1 ~DIN 374 — Articolo nr. **2867** **2868**

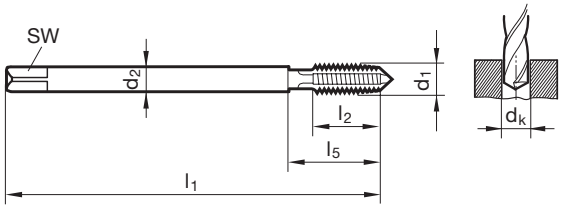
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,10	70,000	8,500	25,000	4,826
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	13,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	15,000	44,000	15,875
7/8 - 14	18,000	14,500	20,40	125,000	19,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	22,000	50,000	25,400

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E	
Tolleranza sul Ø		
Superficie	○	●
Tipo	N	VA
Forma	B	B
Refrigerazione interna	⊠	⊠

P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 229



DIN 2184-1 DIN 5156 — Articolo nr. **967** **2875**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	24,50	140,000	28,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	28,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	30,000	56,000	33,249

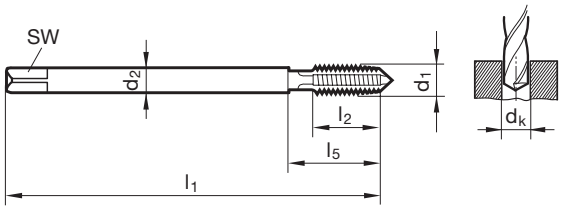
Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	X
Superficie	S
Tipo	N
Forma	B
Refrigerazione interna	

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 229



DIN 2184-1 DIN 5156 Articolo nr. **4220**

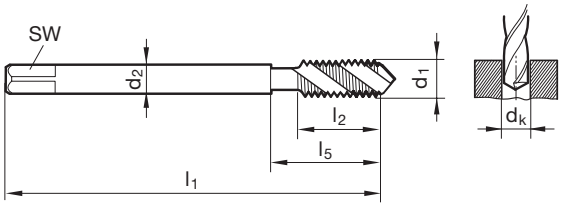
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	25,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	25,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	28,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	28,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	30,000	56,000	33,249

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E-PM	HSS-E
Tolleranza sul Ø		
Superficie	○	●
Tipo	VA R40	VA R40
Forma	C	C
Refrigerazione interna	⊠	⊠

P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 5156 — Articolo nr. **939** **968**

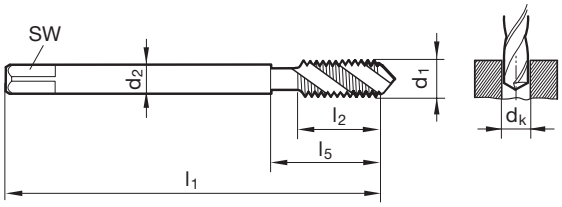
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	11,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	18,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	22,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249
G1 1/8	11,000	28,000	22,000	35,50	170,000	24,000	56,000	37,897
G1 1/4	11,000	32,000	24,000	39,50	170,000	25,000	57,000	41,910
G1 3/8	11,000	36,000	29,000	41,75	180,000	27,000	60,000	44,323
G1 1/2	11,000	36,000	29,000	45,25	190,000	27,000	60,000	47,803

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	
Superficie	S
Tipo	VA R50
Forma	C
Refrigerazione interna	

P	•
M	•
K	○
N	•
S	○
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 5156 Articolo nr. **4159**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	4,500	47,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	4,500	47,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	6,700	48,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	6,700	48,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	9,100	70,000	20,955

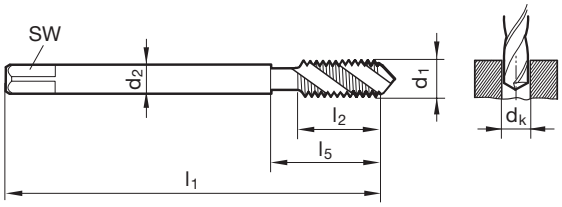
Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	X
Superficie	A
Tipo	VA R45
Forma	C
Refrigerazione interna	

NEW

P	•
M	•
K	○
N	○
S	○
H	

Dati di taglio a pag. 231



DIN 2184-1 DIN 5156 Articolo nr. **395**

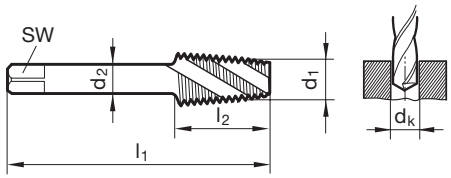
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	11,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955
G5/8	14,000	18,000	14,500	21,00	125,000	18,000	48,000	22,911
G3/4	14,000	20,000	16,000	24,50	140,000	20,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	22,000	53,000	30,201
G1	11,000	25,000	20,000	30,75	160,000	24,000	56,000	33,249

Maschi a macchina per filettatura NPT

P	
M	•
K	○
N	○
S	
H	

Dati di taglio a pag. 230

Materiale tagliente	HSS-E	
Tolleranza sul Ø		
Superficie		S
Tipo	N	N
Forma	C	C
Refrigerazione interna		



Norma di fab. Norma di fab.	Articolo nr.	1087	1088

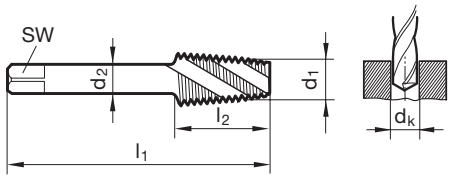
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
1/16	27,000	8,000	6,200	6,25	90,000	14,000	27,000	8,190
1/8	27,000	11,000	9,000	8,50	90,000	15,000	29,000	10,620
1/4	18,000	14,000	11,000	11,20	100,000	21,000	40,000	14,140
3/8	18,000	16,000	12,000	14,40	110,000	21,000	35,000	17,570
1/2	14,000	18,000	14,500	18,00	125,000	27,000	44,000	21,900
3/4	14,000	22,000	18,000	23,40	140,000	27,000	52,000	27,230
1	11,500	25,000	20,000	29,10	170,000	32,000	53,000	34,180

Maschi per filettatura NPTF

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	
M	•
K	○
N	○
S	
H	

Dati di taglio a pag. 230



Norma di fab. Norma di fab. Articolo nr. **4127**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
1/16	27,000	8,000	6,200	6,25	90,000	14,000	27,000	8,190
1/8	27,000	11,000	9,000	8,50	90,000	15,000	29,000	10,620
1/4	18,000	14,000	11,000	11,20	100,000	21,000	40,000	14,140
3/8	18,000	16,000	12,000	14,40	110,000	21,000	35,000	17,570
1/2	14,000	18,000	14,500	18,00	125,000	27,000	44,000	21,900
3/4	14,000	22,000	18,000	23,40	140,000	27,000	52,000	27,230
1	11,500	25,000	20,000	29,10	170,000	32,000	53,000	34,180

MASCHI A RULLARE

M

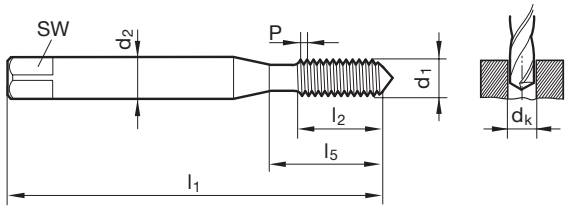
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM	HSS-E	HSS-E-PM
Tolleranza sul Ø	6GX	6HX	6HX
Superficie	S	S	S
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

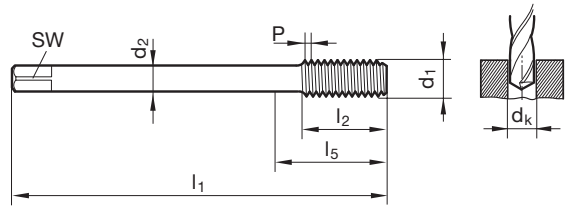
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	903	921	1255

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,90	40,000	4,000	
M1,2	0,250	2,500	2,100	1,10	40,000	4,800	
M1,4	0,300	2,500	2,100	1,25	40,000	5,600	
M1,6	0,350	2,500	2,100	1,45	40,000	6,400	
M1,7	0,350	2,500	2,100	1,55	40,000	6,800	
M1,8	0,350	2,500	2,100	1,65	40,000	7,300	
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	952	925	1256

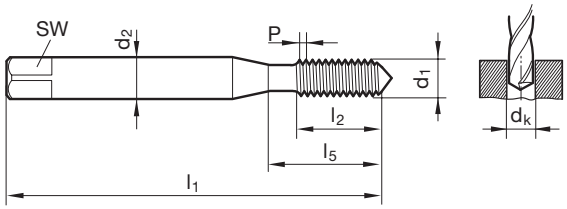
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232



DIN 2174 ~DIN 371 Articolo nr. **920**

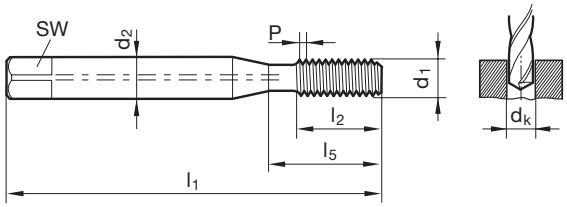
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 232



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **2518**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

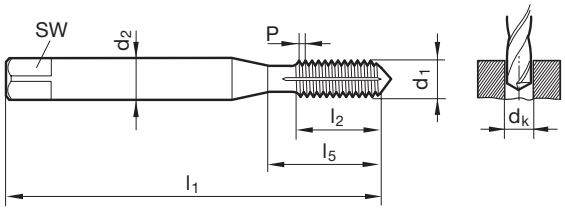
Maschi a macchina a rullare per fil. metrica ISO

P	•	
M	•	
K		
N	○	
S	○	
H		

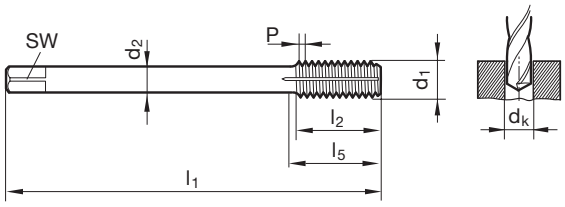
Dati di taglio a pag. 232

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6GX	6HX	6HX
Superficie	S	S	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	918	919	2012

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	922	923	2013

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M6	1,000	4,500	3,400	5,55	80,000	16,000	30,000
M8	1,250	6,000	4,900	7,40	90,000	17,000	35,000
M10	1,500	7,000	5,500	9,30	100,000	20,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000
M22	2,500	18,000	14,500	20,90	140,000	32,000	62,000
M24	3,000	18,000	14,500	22,70	160,000	36,000	73,000
M27	3,000	20,000	16,000	25,70	160,000	36,000	73,000
M30	3,500	22,000	18,000	28,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	31,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	34,30	200,000	50,000	102,000
M39	4,000	32,000	24,000	37,30	200,000	50,000	107,000

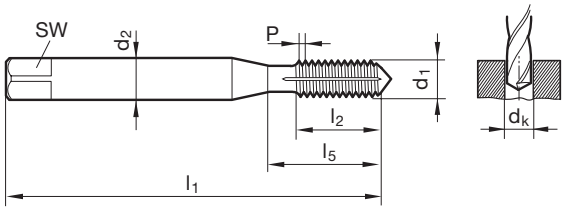
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

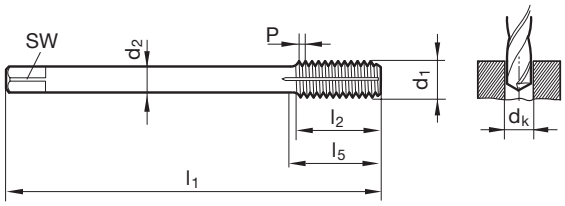
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **322**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **339**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

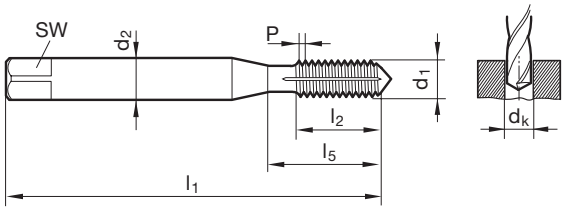
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

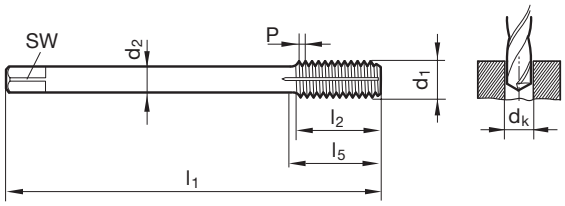
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1266**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1267**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

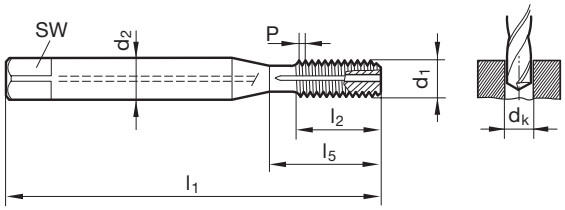
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6HX	6GX	6HX
Superficie	S	S	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

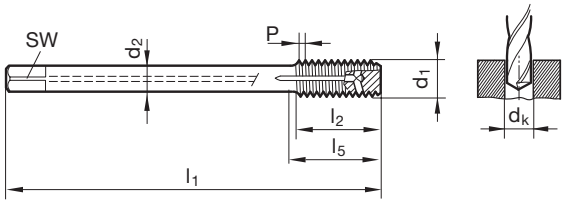
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **2442** **2443** **2446**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **2444** **2445** **2448**

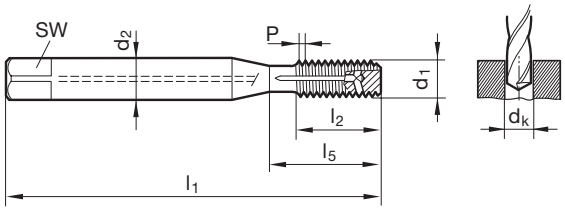
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 233



DIN 2174 ~DIN 371 Articolo nr. **2447**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

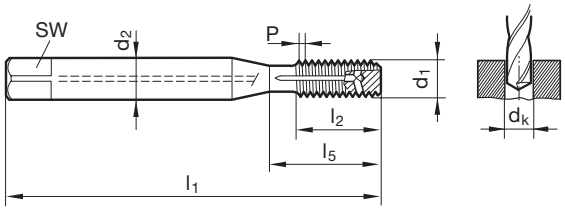
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

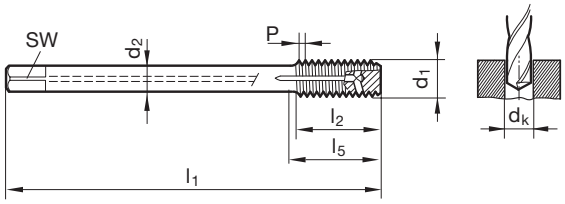
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **323**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **342**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

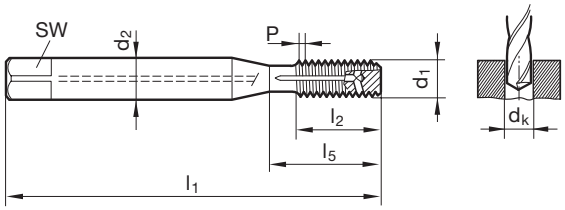
Maschi a rullare forati per fil. metrica ISO

P	•	
M	•	
K		
N	≥ 7	
S	•	
H		

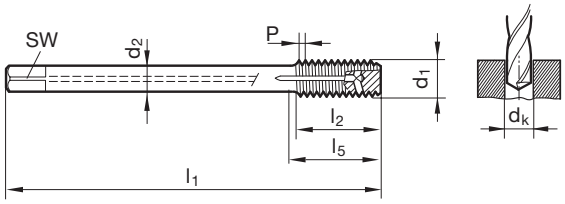
Dati di taglio a pag. 233

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	1270	1717	1725

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	1271	1719	1727

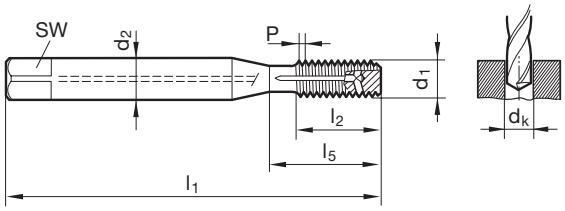
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 233



DIN 2174 ~DIN 371 Articolo nr. **1713**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

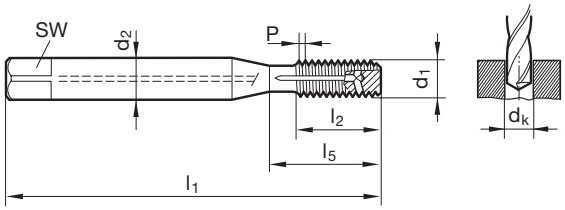
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	A	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

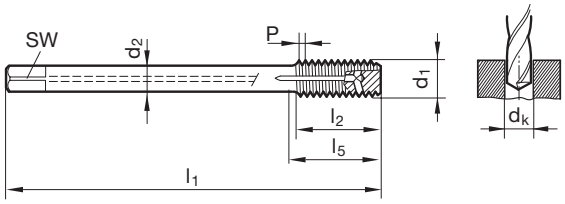
P	•
M	•
K	
N	
S	•
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1718** **1726**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1720** **1728**

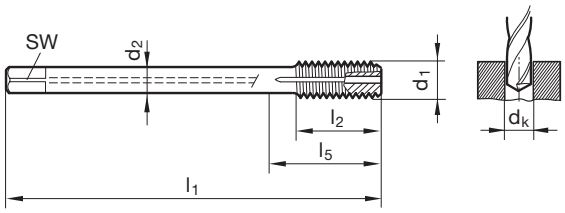
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233



Norma di fab. Norma di fab. Articolo nr. **4143**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	112,000	6,000	18,000
M4	0,700	2,800	2,100	3,70	112,000	7,500	77,000
M5	0,800	3,500	2,700	4,65	125,000	8,500	90,000
M6	1,000	4,500	3,400	5,55	125,000	11,000	90,000
M8	1,250	6,000	4,900	7,40	140,000	14,000	97,000
M10	1,500	7,000	5,500	9,30	160,000	16,000	117,000
M12	1,750	9,000	7,000	11,20	180,000	18,500	133,000
M16	2,000	12,000	9,000	15,10	220,000	20,000	168,000
M20	2,500	16,000	12,000	18,90	280,000	25,000	225,000

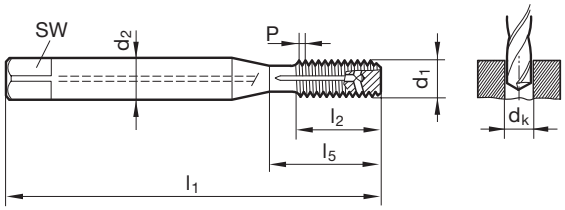
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

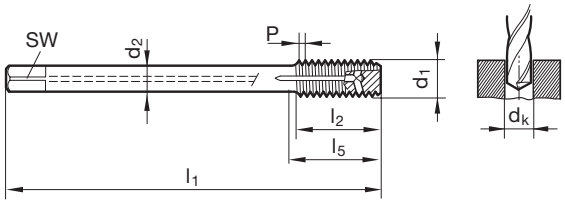
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1972**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1931**

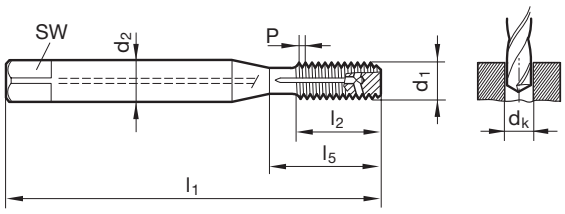
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	25,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

Maschi a rullare forati per fil. metrica ISO

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 233

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	E
Refrigerazione interna	



DIN 2174 ~DIN 371 Articolo nr. **1927**

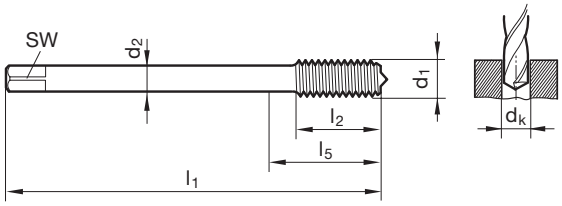
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

Maschi a macc. a rullare per fil. metr. ISO fine

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	



DIN 2174 ~DIN 374 Articolo nr. **929**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

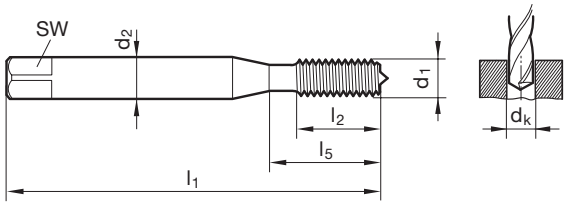
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

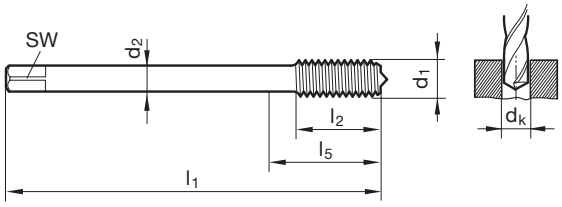
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1257**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1258**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

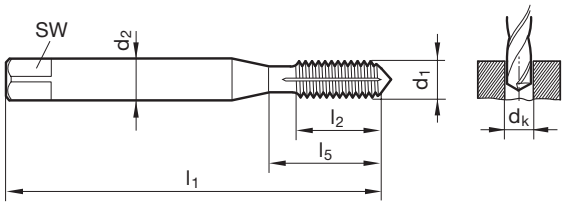
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

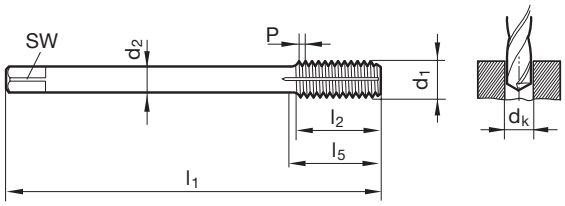
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1275**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	6,000	4,900	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	8,000	6,200	7,65	80,000	14,000	30,000	8,004
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 Articolo nr. **927**

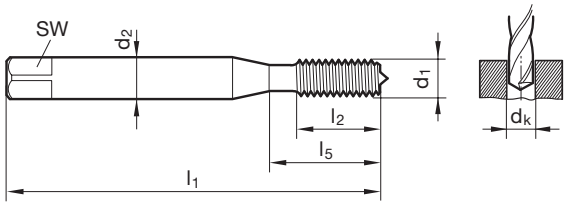
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232



DIN 2174 ~DIN 371 Articolo nr. **1740**

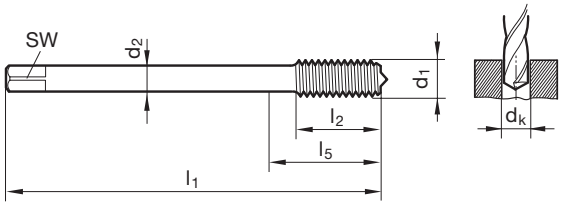
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232



DIN 2174 ~DIN 374 Articolo nr. **928**

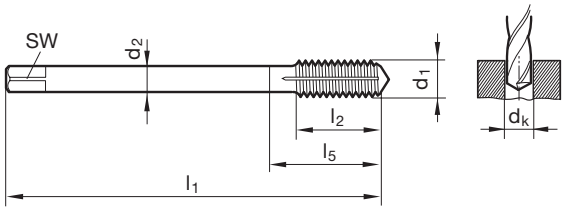
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 233



DIN 2174 ~DIN 374 Articolo nr. **2008**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

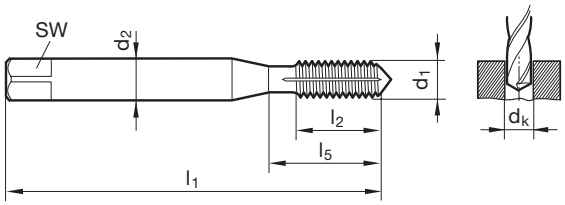
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

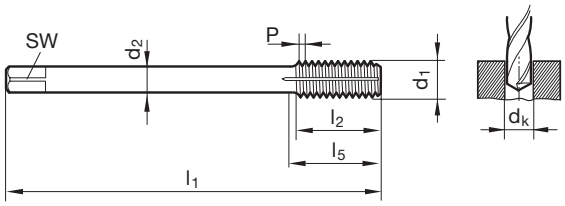
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1277**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **926**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

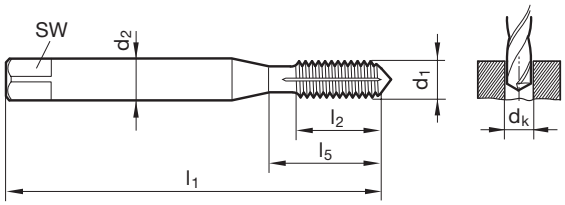
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

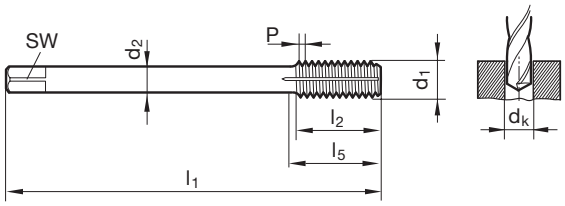
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1268**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1269**

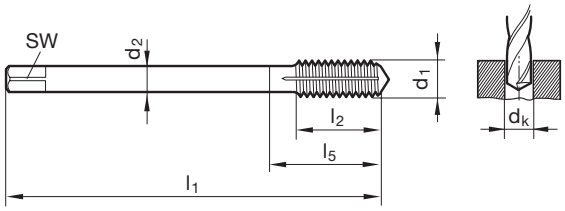
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

Maschi a macc. a rullare per fil. metr. ISO fine

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	



DIN 2174 ~DIN 374 Articolo nr. **333**

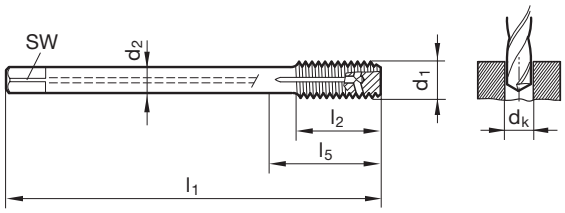
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	16,000	44,000	20,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233



DIN 2174 ~DIN 374 Articolo nr. **338**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007

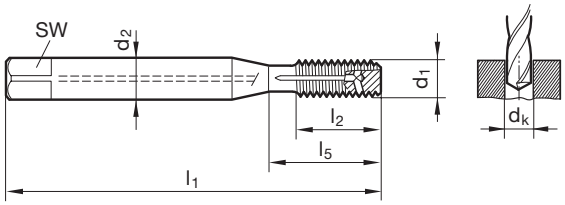
Maschi a rullare forati per fil. metrica ISO passo fine

P	•	
M	•	
K		
N	≥ 7	
S	•	
H		

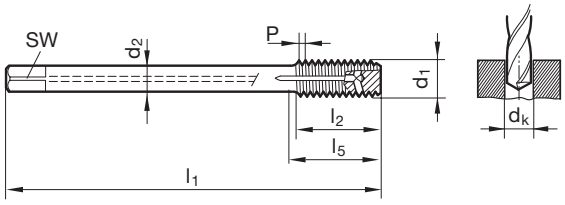
Dati di taglio a pag. 233

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1272** **1721** **1729**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1273** **1723** **1731**

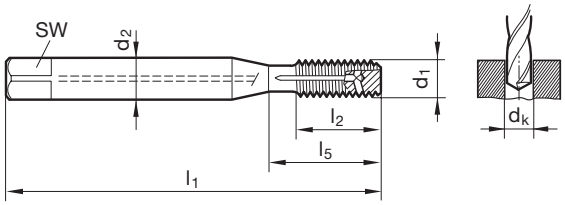
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

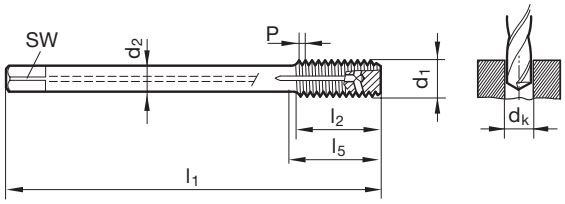
P	•	Dati di taglio a pag. 233
M	•	
K		
N	≥ 7	
S	•	
H		

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	C	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1715** **1730**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1716** **1732**

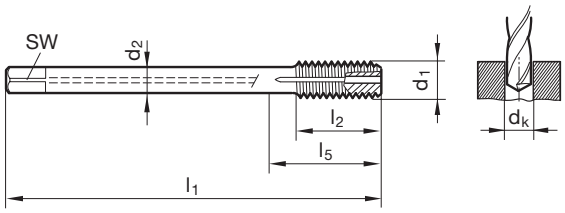
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**HSS-E-PM**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 233



Norma di fab. Norma di fab. Articolo nr. **4145**

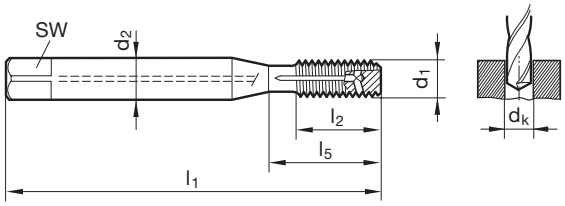
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	140,000	14,000	97,000	8,005
M10 x 1	7,000	5,500	9,55	160,000	16,000	117,000	10,005
M10 x 1,25	7,000	5,500	9,40	160,000	16,000	117,000	10,006
M12 x 1	9,000	7,000	11,55	180,000	18,500	133,000	12,005
M12 x 1,5	9,000	7,000	11,30	180,000	18,500	133,000	12,007
M14 x 1,5	11,000	9,000	13,30	220,000	20,000	168,000	14,007
M16 x 1,5	12,000	9,000	15,30	220,000	20,000	168,000	16,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 233



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **1581**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M10 x 1	10,000	8,000	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	15,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	15,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	15,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	15,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	15,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	15,000	48,000	24,007

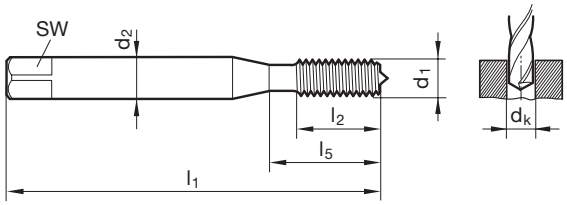
Maschi a macchina a rullare per filettatura UNC

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		

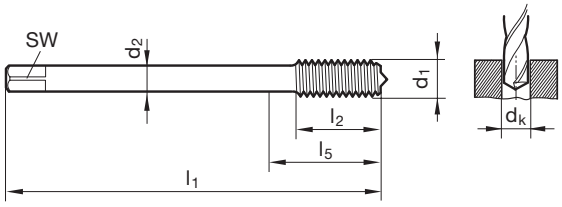
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232/233

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 — Articolo nr. **2273** **1582**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,55	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,90	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	3,15	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,80	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	4,35	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	5,00	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,75	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	7,30	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,80	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 — Articolo nr. **2274** **1583**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	10,30	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	11,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	13,30	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	14,80	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	17,90	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	21,00	140,000	35,000	62,000	22,225

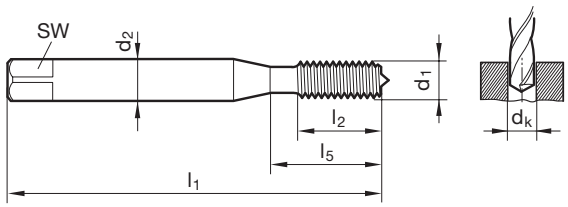
Maschi a macchina a rullare per filettatura UNF

P	•	
M	•	
K		
N	○	
S		
H		

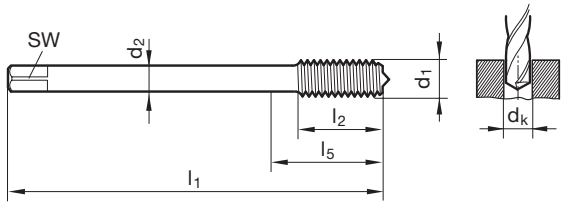
Dati di taglio a pag. 232/233

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 — Articolo nr. **1283** **1584**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	3,500	2,700	2,60	56,000	10,000	18,000	2,845
5 - 44	3,500	2,700	2,90	56,000	10,000	18,000	3,175
6 - 40	4,000	3,000	3,20	56,000	11,000	20,000	3,505
8 - 36	4,500	3,400	3,85	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,45	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	5,10	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,95	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	7,45	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	9,05	90,000	18,000	35,000	9,525

DIN 2184-1 ~DIN 374 — Articolo nr. **2275** **1585**

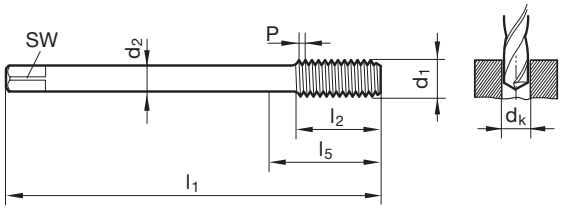
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,45	70,000	14,000	25,000	4,826
12 - 28	4,000	3,000	5,10	80,000	16,000	30,000	5,486
1/4 - 28	4,500	3,400	5,95	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	7,45	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	9,05	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	10,55	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	12,10	100,000	20,000	40,000	12,700
9/16 - 18	11,000	9,000	13,65	100,000	22,000	40,000	14,288
5/8 - 18	12,000	9,000	15,25	100,000	22,000	44,000	15,875
3/4 - 16	14,000	11,000	18,35	110,000	25,000	44,000	19,050
7/8 - 14	18,000	14,500	21,40	125,000	25,000	44,000	22,225
1 - 12	18,000	14,500	24,45	140,000	28,000	50,000	25,400

Maschi a macc. a rullare per fil. Whitworth BSP

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 232/233

Materiale tagliente	HSS-E	
Tolleranza sul Ø	X	X
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		



DIN 2184-1 DIN 2189 — Articolo nr. **966** **1586**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	7,30	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	9,30	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	12,50	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	16,00	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	20,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	25,50	140,000	28,000	53,000	26,441
G1	11,000	25,000	20,000	32,00	160,000	30,000	56,000	33,249
G1 1/4	11,000	32,000	24,000	40,75	170,000	30,000	57,000	41,910

FRESE A FILETTARE

M

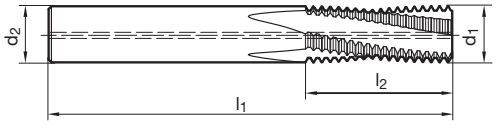
Frese a filettare senza fase di svasatura per filettatura metrica ISO

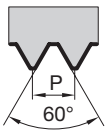
2xD

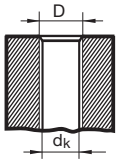
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD			
Superficie	C	C	C	C
Tipo	TM SP	TM SP	TM SP	TM SP
Refrigerazione interna				
Forma del gambo	HA	HB	HA	HB
		NEW		NEW







Norma di fab.	Articolo nr.	3737	3743	4132	4133

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M8 x 1	1,000	6,400	8,000	7,00	62,000	17,500	3	8,005
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M10 x 1	1,000	7,950	10,000	9,00	74,000	21,500	3	10,005
M10 x 1,25	1,250	7,950	10,000	8,80	74,000	21,900	3	10,006
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M12 x 1,5	1,500	9,950	10,000	10,50	74,000	26,300	4	12,007
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M14 x 1,5	1,500	11,200	12,000	12,50	90,000	30,800	4	14,007
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M16 x 1,5	1,500	12,800	14,000	14,50	90,000	33,800	4	16,007
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000
M20 x 1,5	1,500	14,950	16,000	18,50	102,000	42,800	4	20,007

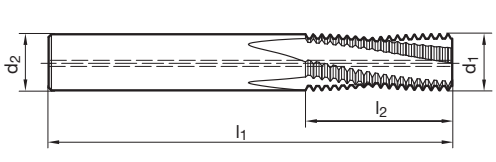
Frese a filettare senza fase di svasatura per filettatura metrica ISO

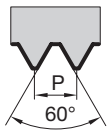
2,5xD

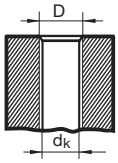
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3735	3740

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	16,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	21,900	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	26,300	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	32,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	37,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	43,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	48,800	4	20,000

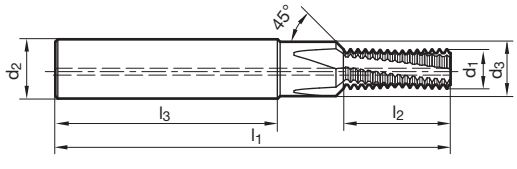
Frese a filettare con fase di svasatura per filettatura metrica ISO

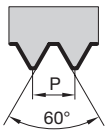
1,5xD

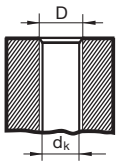
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3525	3543

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	5,300	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	7,400	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	9,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	10,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	13,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	17,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	20,100	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	25,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	27,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	33,800	4	20,000

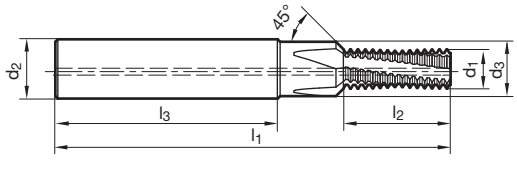
Frese a filettare con fase di svasatura per filettatura metrica ISO

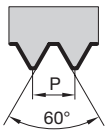
2xD

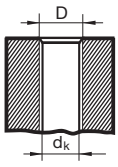
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3526	3544

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	6,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	8,800	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	10,800	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	13,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	18,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	21,800	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	25,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	31,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	35,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	41,300	4	20,000

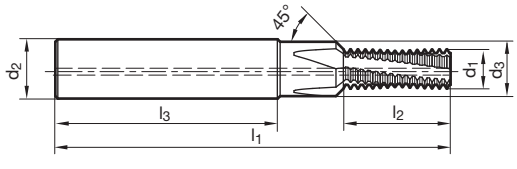
Frese a filettare con fase di svasatura per filettatura metrica ISO

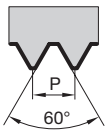
2,5xD

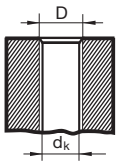
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3759	3760

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	7,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	35,600	10,900	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	13,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	16,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	21,900	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	26,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	32,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	37,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	43,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	48,800	4	20,000

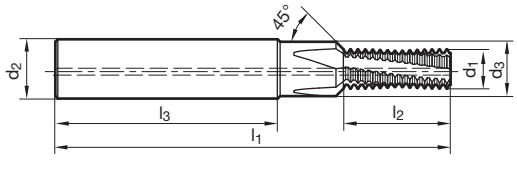
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

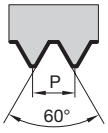
P	•
M	•
K	•
N	•
S	•
H	≤55

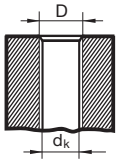
Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3527** **3545**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	7,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	8,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	9,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	10,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	13,100	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	13,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	16,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	16,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	19,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	20,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	23,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	26,300	4	16,007

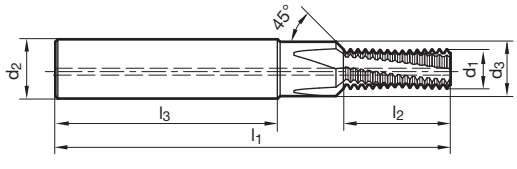
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

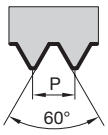
2xD

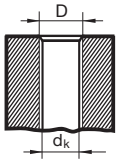
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3528** **3546**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	8,800	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	10,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	12,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	13,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	16,900	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	17,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	21,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	21,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	25,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	26,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	30,800	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	33,800	4	16,007

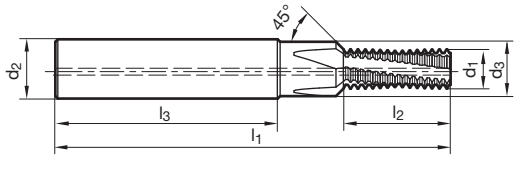
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

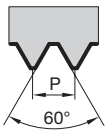
2,5xD

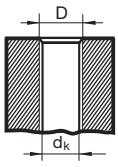
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3762	3763

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	10,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	12,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	15,300	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	15,400	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	20,600	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	20,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	25,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	25,600	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	30,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	30,800	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	38,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	41,300	4	16,007

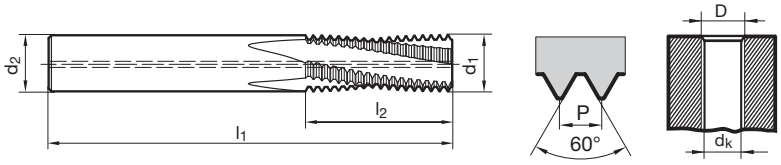
Frese a filettare senza fase di svasatura per filettatura UNC

2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	4134	4135

D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 24	3,400	6,000	3,90	54,000	11,100	3	4,826
12 - 24	4,100	6,000	4,50	54,000	12,200	3	5,486
1/4 - 20	4,700	6,000	5,10	54,000	14,600	3	6,350
5/16 - 18	6,100	8,000	6,60	64,000	17,600	3	7,938
3/8 - 16	7,600	8,000	8,00	64,000	21,400	3	9,525
7/16 - 14	9,000	10,000	9,40	74,000	24,500	3	11,113
1/2 - 13	9,950	10,000	10,80	74,000	28,300	4	12,700
9/16 - 12	11,400	12,000	12,20	90,000	30,700	4	14,288
5/8 - 11	12,700	14,000	13,50	90,000	35,800	4	15,875

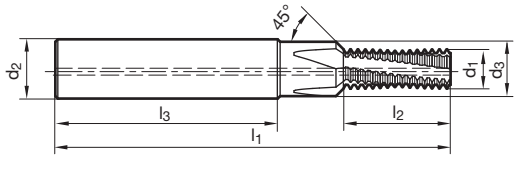
Frese a filettare con fase di svasatura per filettatura UNC

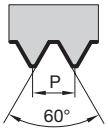
P	•
M	•
K	•
N	•
S	•
H	≤55

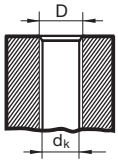
Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3516** **3534**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	12,100	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	14,800	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	16,700	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	19,000	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	22,500	4	12,700

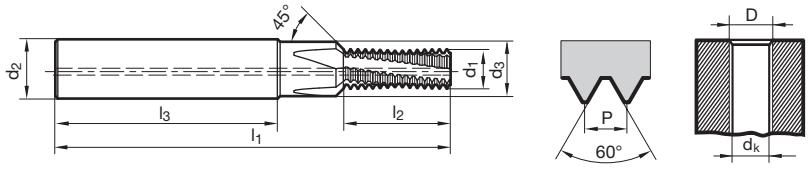
Frese a filettare con fase di svasatura per filettatura UNC

2xD

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

	Int. in MD	
Materiale tagliente		
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab. Articolo nr. **3517** **3535**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	14,600	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	17,600	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	21,400	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	24,500	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	28,300	4	12,700

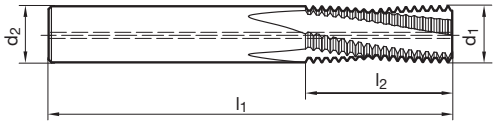
Frese a filettare senza fase di svasatura per filettatura UNF

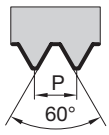
2xD

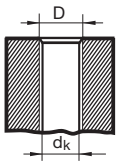
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	4136	4137

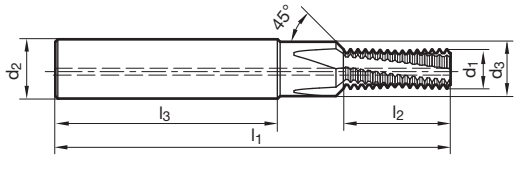
D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 32	3,800	6,000	4,10	54,000	11,500	3	4,826
12 - 28	4,300	6,000	4,60	54,000	12,200	3	5,486
1/4 - 28	5,100	6,000	5,50	54,000	14,100	3	6,350
5/16 - 24	6,300	8,000	6,90	64,000	17,500	3	7,938
3/8 - 24	7,800	8,000	8,50	64,000	20,600	3	9,525
7/16 - 20	9,400	10,000	9,90	74,000	24,800	3	11,113
1/2 - 20	9,950	10,000	11,50	74,000	27,300	4	12,700
9/16 - 18	11,400	12,000	12,90	90,000	30,300	4	14,288
5/8 - 18	12,700	14,000	14,50	90,000	33,200	4	15,875

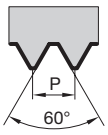
Frese a filettare con fase di svasatura per filettatura UNF

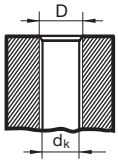
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3518	3536

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	11,300	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	13,200	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	16,400	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	18,400	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	21,000	4	12,700

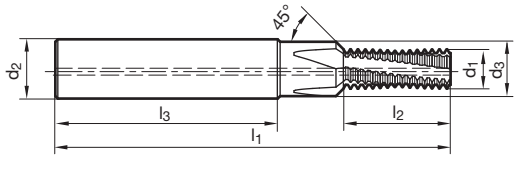
Frese a filettare con fase di svasatura per filettatura UNF

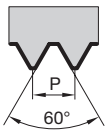
2xD

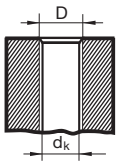
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3519	3537

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	14,100	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	17,500	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	20,600	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	24,800	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	27,300	4	12,700

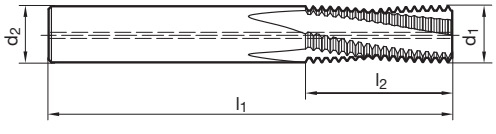
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

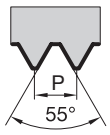
2xD

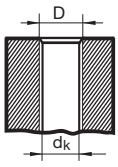
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3745	3748

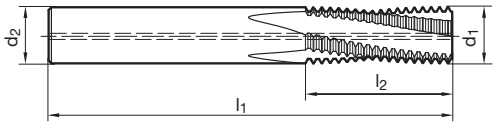
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	21,300	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	28,700	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	35,400	4	16,662

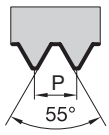
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

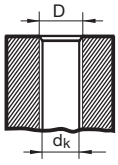
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3746** **3750**

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	24,900	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	35,400	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	43,500	4	16,662

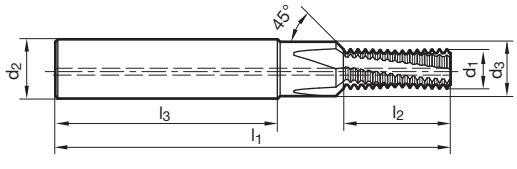
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

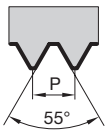
1,5xD

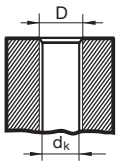
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3514	3529

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	15,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	22,100	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	27,400	4	16,662

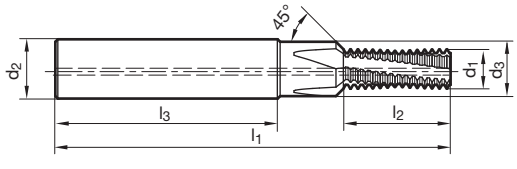
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

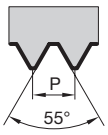
2xD

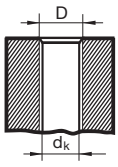
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3515	3533

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	21,300	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	28,700	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	35,400	4	16,662

Frese a filettare con fase di svasatura per filettatura Whitworth BSP

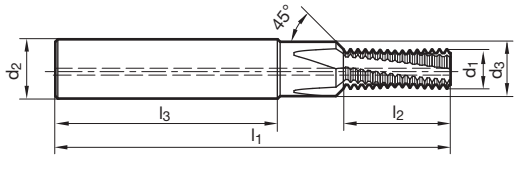
2,5xD

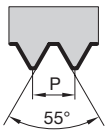
P	•
M	•
K	•
N	•
S	•
H	≤55

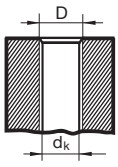
Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3765	3766

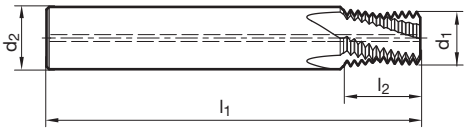
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	24,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	35,400	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	43,500	4	16,662

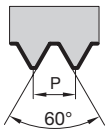
Frese a filettare senza fase di svasatura per filettatura NPT

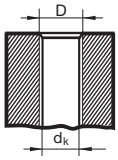
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3753	3754

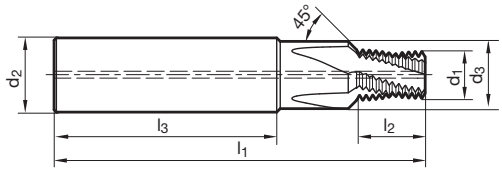
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

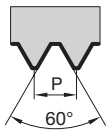
Frese a filettare con fase di svasatura per filettatura NPT

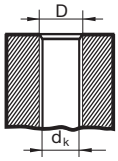
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3520	3538

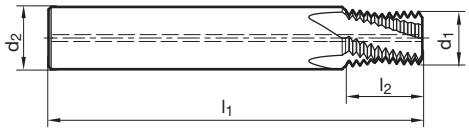
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

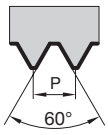
Frese a filettare senza fase di svasatura per filettatura NPTF

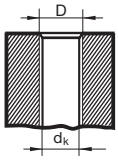
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3756** **3757**

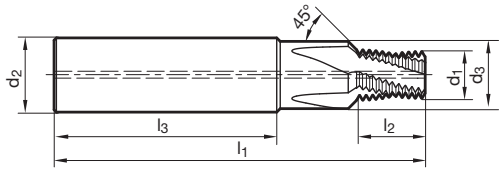
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

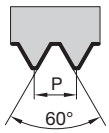
Frese a filettare con fase di svasatura per filettatura NPTF

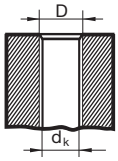
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 234

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3521	3539

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

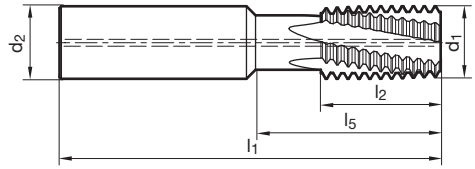
Fresa a filettare per impieghi multipli per filettatura metrica ISO

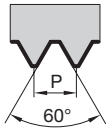
P	•
M	•
K	•
N	•
S	•
H	≤55

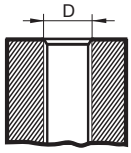
Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3541	3556

P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 10	7,950	8,000	64,000		20,000	4	8,050
1,000	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,100
1,250	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,125
1,500	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,150
1,000	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,150
1,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,100
1,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,200
3,000	≥ 24	17,950	18,000	102,000	50,000	33,000	5	18,300
1,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,100
1,500	≥ 26	19,950	20,000	105,000	50,000	33,000	5	20,150
2,000	≥ 27	19,950	20,000	105,000	50,000	33,000	5	20,200
2,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,250
3,000	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,300
3,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,350

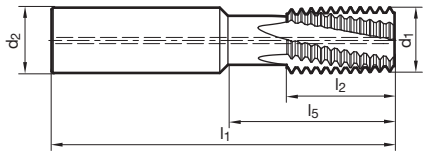
Fresa esterne a filettare

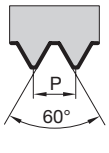
P	•
M	•
K	•
N	•
S	•
H	≤55

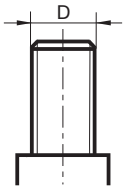
Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **4162** **4163**

P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 3	9,950	10,000	70,000	25,000	16,000	4	10,050
0,750	≥ 5	9,950	10,000	70,000	25,000	16,000	4	10,075
1,000	≥ 6	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 8	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 10	11,950	12,000	80,000	31,000	20,000	4	12,150
1,500	≥ 10	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 14	15,950	16,000	90,000	40,000	25,000	5	16,200
2,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,250
3,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,300

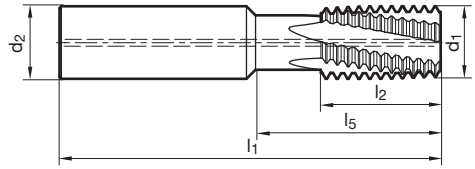
Fresa a filettare per impieghi multipli per filettatura UN

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU UN	TMU UN
Refrigerazione interna		
Forma del gambo	HA	HB

NEW



Norma di fab.	Articolo nr.	3595	3596

P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
10,000	≥ 3/4	11,950	12,000	80,000	31,000	20,000	4	12,100
16,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,160
18,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,180
20,000	≥ 11/16	11,950	12,000	80,000	31,000	20,000	4	12,200
24,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,240
12,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,120
14,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,140
16,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,160
18,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,180
20,000	≥ 13/16	15,950	16,000	90,000	40,000	25,000	5	16,200
7,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,070
8,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,080
12,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,120
14,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,140
16,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,160

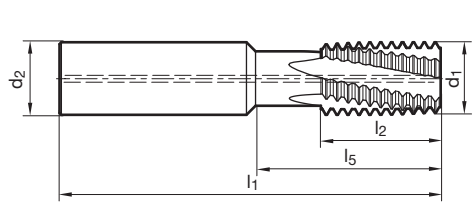
Fresa a filettare per impieghi multipli per filettatura Whitworth BSP

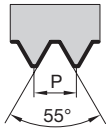
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

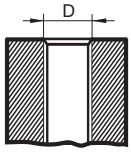
NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235







Norma di fab.	Articolo nr.	3542	3557

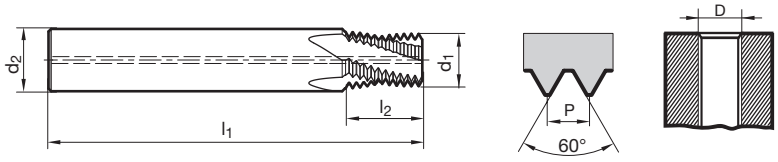
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
19,000	≥ 1/4	9,950	10,000	70,000	25,000	16,000	4	10,190
14,000	≥ 1/2	15,950	16,000	90,000	40,000	25,000	5	16,140
11,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,110

Fresa a filettare per impieghi multipli per filettatura NPT

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3768	3769

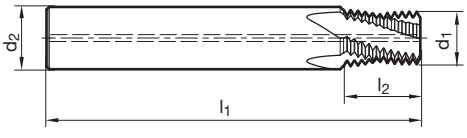
P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

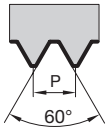
Fresa a filettare per impieghi multipli per filettatura NPTF

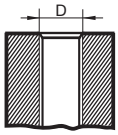
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 235

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3772	3773

P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

Micro frese a filettare

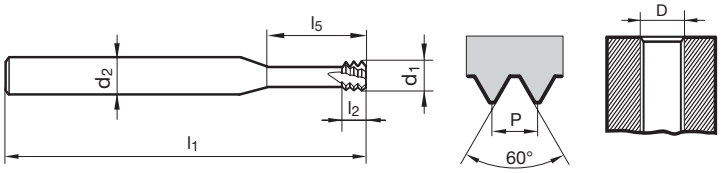
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 235

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4226**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,6	0,350	1,200	3,000	39,000	1,100	4,800	3	1,600
M1,8	0,350	1,400	3,000	39,000	1,100	5,400	3	1,800
M2	0,400	1,550	3,000	39,000	1,200	6,000	4	2,000
M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4	2,500
M3	0,500	2,400	6,000	58,000	1,500	9,500	4	3,000
M3,5	0,600	2,800	6,000	58,000	1,800	11,000	4	3,500
M4	0,700	3,200	6,000	58,000	2,100	12,500	4	4,000
M5	0,800	4,000	6,000	58,000	2,400	16,000	4	5,000
M6	1,000	4,800	6,000	58,000	3,000	20,000	4	6,000
M8	1,250	5,950	6,000	58,000	3,800	24,000	4	8,000
M10	1,500	7,800	8,000	73,000	4,500	33,000	4	10,000
M12	1,750	9,000	10,000	84,000	5,300	38,000	4	12,000
M16	2,000	11,800	10,000	84,000	6,000	35,000	5	16,000

Micro frese a filettare

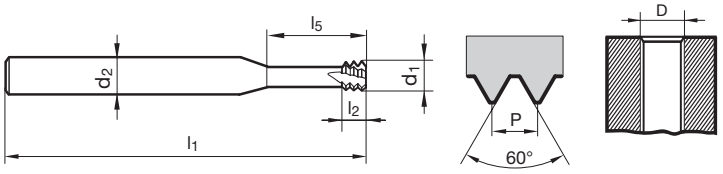
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 235

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP G
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4228**

D	P	d1	d2	l1	l2	l5	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	6,200	8,000	64,000	2,700	19,500	4	9,728
G3/8	19,000	9,950	10,000	73,000	4,000	25,000	4	16,662
G7/8	14,000	11,950	12,000	84,000	5,400	37,000	4	30,201
G2	11,000	15,950	16,000	105,000	6,900	44,000	5	59,614

Micro frese a filettare

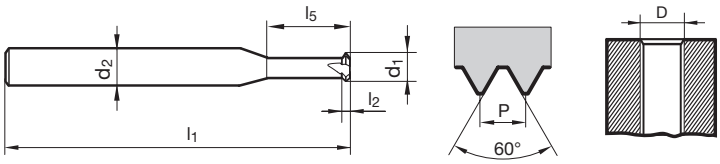
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 235

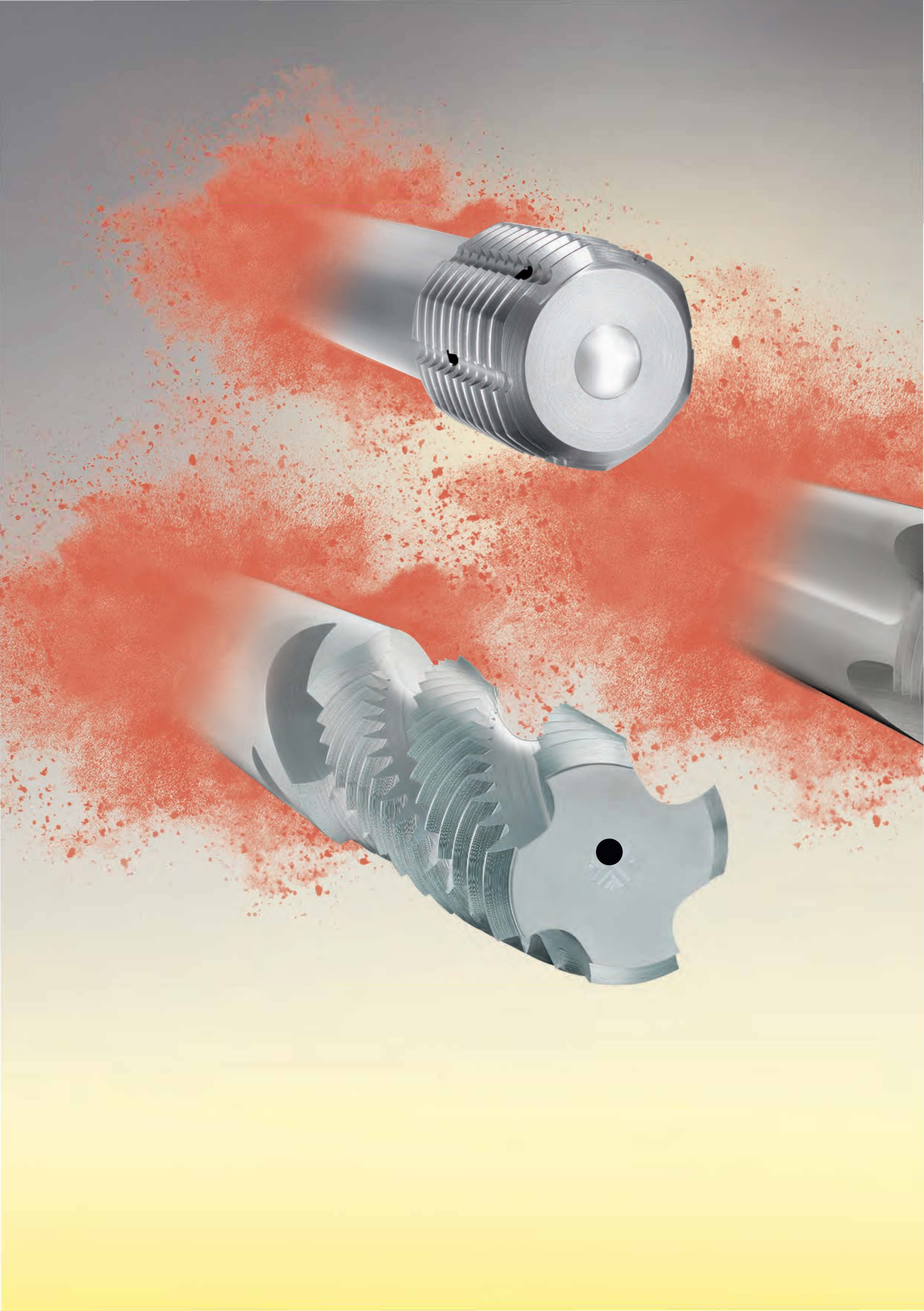
Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M/MF
filetti	1,0
Forma del gambo	HA

NEW



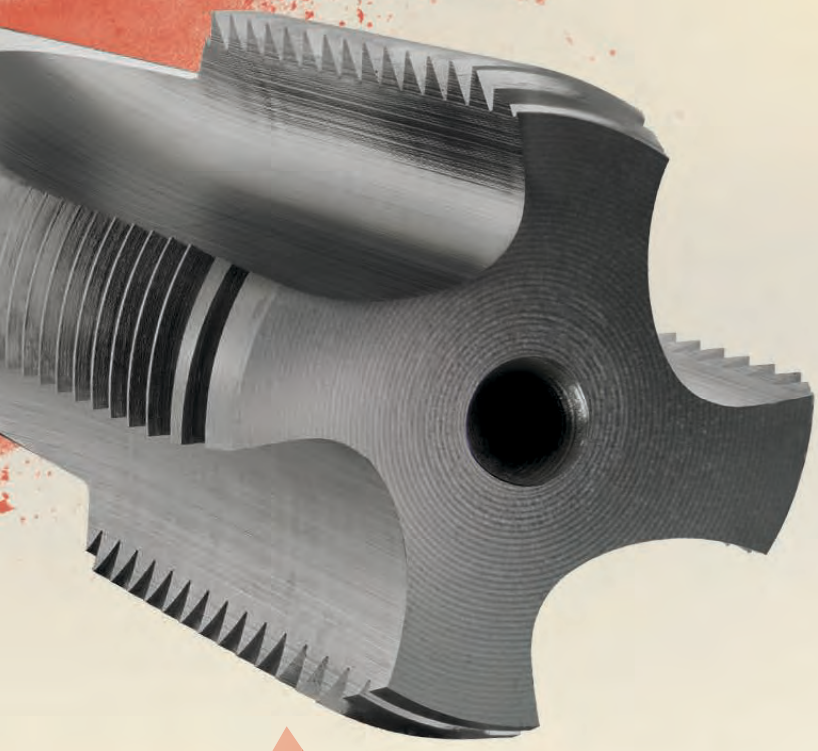
Norma di fab. Articolo nr. **4225**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,4 - M1,8	0,350	1,050	3,000	39,000	0,400	3,800	3	1,800
M2 - M2,4	0,400	1,500	3,000	39,000	0,400	7,000	3	2,400
M2,5 - M3	0,500	2,000	3,000	39,000	0,500	9,000	4	3,000
M3,5 - M4,5	0,750	2,800	6,000	58,000	0,800	14,000	4	4,500
M5 - M7	1,000	4,000	6,000	58,000	1,000	19,000	4	7,000
M8 - M10	1,500	6,400	8,000	64,000	1,500	24,000	5	10,000



GHISA

GHISA GRIGIA/ SFEROIDALE/ MALLEABILE



K

Acciai fusi come la ghisa (EN-GJL-250),
ghisa sferoidale,
leghe speciali di ghisa malleabile e abrasivi

GHISA GRIGIA

M

ISO 2/6H

ISO 3/6G

MF

ISO 2/6H

ISO 3/6G

no refrig. interna

No 1
M3 - M30
Art. 1918/1919
da pag. 356

No 1
M4x0,5 - M30x1,5
Art. 169
da pag. 365

M3 - M30
Art. 807/819
da pag. 356

M4x0,5 - M30x1,5
Art. 831
da pag. 365

con refrigerazione interna

No 1
M3 - M10
Art. 2311
da pag. 364

M3 - M20
Art. 1858/1859
da pag. 362

No 1
M5x0,5 - M20x1,5
Art. 1861/1860
da pag. 368

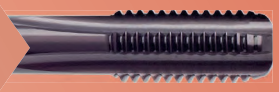
No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2B	2B	-

FORI PASSANTI

Ghisa grigia, ghisa malleabile, ghisa sferoidale



HSS-E, TiAlN, Forma C

No 1
No. 2 - 3/4
Art. 1979/1984
da pag. 370

No 1
No. 4 - 1
Art. 1989
da pag. 372

No 1
G1/16 - G2
Art. 961
da pag. 374

HSS-E, nitrurato, Forma C

METALLO DURO

Metallo duro, TiAlN, Forma C

METALLO DURO

Metallo duro, lucido, Forma C

GHISA GRIGIA

M

ISO 2/6H

ISO 3/6G

MF

ISO 2/6H

ISO 3/6G

no refrig. interna

No 1
M3 - M30
Art. 1918/1919
da pag. 356

No 1
M4x0,5 - M30x1,5
Art. 169
da pag. 365

M3 - M30
Art. 807/819
da pag. 356

M4x0,5 - M30x1,5
Art. 831
da pag. 365

con refrigerazione interna

No 1
M5 - M20
Art. 318/319
da pag. 358

No 1
M8x1 - M24x1,5
Art. 347
da pag. 366

No 1
M5 - M10
Art. 2506
da pag. 363

M3 - M20
Art. 969/1883
da pag. 362

No 1
M5x0,5 - M20x1,5
Art. 972/974
da pag. 368

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G	FORI CIECHI
2B	2B	-	

Ghisa grigia, ghisa malleabile, ghisa sferoidale

HSS-E, TiAlN, Forma C

No 1
No. 2 - 3/4
Art. 1979/1984
da pag. 370

No 1
No. 4 - 1
Art. 1989
da pag. 372

G1/16 - G2
Art. 961
da pag. 374

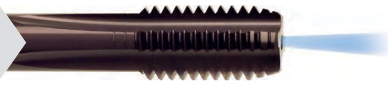
HSS-E, nitrurato, Forma C

No 1
No. 10 - 7/8
Art. 1085/1086
da pag. 371

No 1
No. 10 - 7/8
Art. 1082
da pag. 373

HSS-E, TiAlN, Forma C

METALLO DURO



Metallo duro, TiAlN, Forma C

METALLO DURO

Metallo duro, lucido, Forma C

MALLEABILE, SFEROIDALE

senza canalini di lub.

con canalini di lubr.

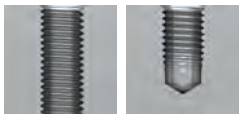
con refrigerazione interna

M		MF	
6HX	6GX	6HX	6GX
No 1 M1 - M20 Art. 921/925 da pag. 376	No 1 M2 - M10 Art. 920 da pag. 377	No 1 M8x1 - M20x1,5 Art. 929 da pag. 391	No 1 M8x1 - M18x1,5 Art. 928 da pag. 393
M3 - M39 Art. 919/923 da pag. 379	No 1 M3 - M39 Art. 918/922 da pag. 379	M6x0,75 - M24x1,5 Art. 1275/927 da pag. 395	No 1 M8x1 - M20x1,5 Art. 1277/926 da pag. 397
No 1 M3 - M39 Art. 2012/2013 da pag. 379		No 1 M6x0,75 - M20x1,5 Art. 2008 da pag. 396	
No 1 M3 - M20 Art. 1270/1271 da pag. 385	No 1 M5 - M10 Art. 1713 da pag. 386	No 1 M8x1 - M24x1,5 Art. 1272/1273 da pag. 401	No 1 M8x1 - M24x1,5 Art. 1715/1716 da pag. 402
No 1 M3 - M20 Art. 1725/1727 da pag.385	No 1 M3 - M20 Art. 1726/1728 da pag. 387	No 1 M8x1 - M24x1,5 Art. 1729/1731 da pag. 401	No 1 M8x1 - M24x1,5 Art. 1730/1732 da pag. 402
No 1 M3 - M20 Art. 1972/1931 da pag. 389		No 1 M10x1 - M24x1,5 Art. 1581 da pag. 404	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2BX	2BX	-



FORI PASSANTI
FORI CIECHI

Ghisa grigia, ghisa malleabile, ghisa sferoidale

No 1
Nr. 4 - 7/8
Art. 2273/2274
da pag. 405

No 1
Nr. 4 - 1
Art. 1283/2275
da pag. 406

No 1
G1/16 - G1 1/4
Art. 966
da pag. 407

HSS-E, TiN, Forma C

No 1
Nr. 4 - 7/8
Art. 1582/1583
da pag. 405

No 1
Nr. 4 - 1
Art. 1584/1585
da pag. 406

No 1
G1/16 - G3/4
Art. 1586
da pag. 408

HSS-E, TiN, Forma C

HSS-E, TiCN, Forma C

FORMA C

HSS-E-PM, TiCN, Forma C

FORMA E

HSS-E-PM, TiN, Forma E

METALLO DURO

Metallo duro, TiCN, Forma C

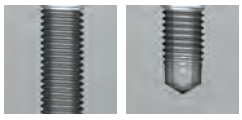
GHISA GRIGIA

	M UNIVERSALE	MF UNIVERSALE
1,5xD	No 1 M3 - M20 Art. 3525 da pag. 413	No 1 M4x0,5 - M16x1,5 Art. 3527 da pag. 416
2xD	No 1 M3 - M20 Art. 3526 da pag. 414	No 1 M4x0,5 - M16x1,5 Art. 3528 da pag. 417
2,5xD	No 1 M3 - M20 Art. 3759 da pag. 415	No 1 M4x0,5 - M16x1,5 Art. 3762 da pag. 418
3xD	No 1 M1,6 - M16 Art. 4226 da pag. 440	
universale	No 1 Ø8xP0,5 - Ø20xP3,5 Art. 3541 da pag. 434	No 1 Ø8xP0,5 - Ø20xP3,5 Art. 3541 da pag. 434

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
UNIVERSALE	UNIVERSALE	-



FORI PASSANTI
FORI CIECHI

Ghisa grigia, ghisa malleabile, ghisa sferoidale

No 1
1/4 - 1/2
Art. 3516
da pag. 420

No 1
1/4 - 1/2
Art. 3518
da pag. 423

No 1
1/8 - 3/8
Art. 3514
da pag. 429

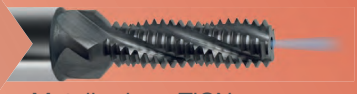
Metallo duro, TiCN

No 1
1/4 - 1/2
Art. 3517
da pag. 421

No 1
1/4 - 1/2
Art. 3519
da pag. 424

No 1
1/8 - 3/8
Art. 3515
da pag. 430

Metallo duro, TiCN



Metallo duro, TiCN

Metallo duro, TiCN

No 1
Ø10xUN24 - Ø20xUN7
Art. 3595
da pag. 436

No 1
Ø10xUN24 - Ø20xUN7
Art. 3595
da pag. 436

No 1
Ø10xG19 - Ø20xG11
Art. 3542
da pag. 437

Metallo duro, TiCN

GHISA GRIGIA

M
UNIVERSALE

MF
UNIVERSALE

1,5xD

No 1
M3 - M16
Art. 3777
da pag. 443

No 1
M4x0,5 - M16x1,5
Art. 3789
da pag. 446

M3 - M16
Art. 3776
da pag. 443

M4x0,5 - M16x1,5
Art. 3788
da pag. 446

2xD

No 1
M3 - M16
Art. 3781
da pag. 444

No 1
M4x0,5 - M16x1,5
Art. 3793
da pag. 447

M3 - M16
Art. 3780
da pag. 444

M4x0,5 - M16x1,5
Art. 3792
da pag. 447

2,5xD

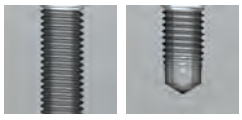
No 1
M3 - M16
Art. 3785
da pag. 445

M3 - M16
Art. 3784
da pag. 445

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
UNIVERSALE	UNIVERSALE	-



FORI PASSANTI
FORI CIECHI

Ghisa grigia, ghisa malleabile, ghisa sferoidale

Metallo duro, TiCN

Metallo duro, TiCN

No 1
1/4 - 5/8
Art. 4139
da pag. 448

No 1
1/4 - 5/8
Art. 4141
da pag. 449

Metallo duro, TiCN

Metallo duro, TiCN

Metallo duro, TiCN

Metallo duro, TiCN

BUSSOLA

K

GHISA GRIGIA, SFEROIDALE E GHISA MALLEABILE

FORI PASSANTI

Profondità filettatura		≤3xD						
Materiale tagliente		HSS-E				Int. in MD		
Tipo/forma		GG/C	GG/C	GGT/C	GG/C	H/C	H/C	
Superficie		●	S	S	A	○	A	
Erogazione del liquido di raffredd.		☒	☒	☒	☒	radiale	radiale	
Tolleranza codolo		h9	h9	h9	h9	h6	h6	
Filettatura	**Tolleranza**	**Articolo nr. / pagina**						
M	4H							
	6H			1875/1876 357				
	6HX	807/819 356	930/931 356		1918/1919 356	1858/1859 362	2311 364	
	6G							
MF	6H							
	6HX	831 365	932 365		169 365	1861/1860 368		
	6G							
UNC	2B	1979/1984 370						
	2BX							
UNF	2B	1989 372						
	2BX							
G		961 374						
BSW								
NPT								
NPTF								
EG M	6H Mod.							
MJ	4HX							
MJF	4HX							
UNJC	3BX							
UNJF	3BX							
PG								
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min					
K	Ghisa	300 HB	EN-GJL-150 EN-GJL-250 EN-GJL-300	0.6015 0.6025 0.6030	**15**	**20**	**20**	**25**	**45**	**45**
	ghisa a grafite sferoidale e ghisa malleabile	350 HB	EN-GJS-400-15 EN-GJS-600-3 EN-GJS-700-2	0.7040 0.7060 0.7070	**10**	**15**	**15**	**20**	**35**	**35**
	ADI GGV	1000 N/mm² 350 HB	EN-GJS1000-5 EN-GJV250 EN-GJV400		8	**12**	**12**	**15**	30	**30**

GHISA GRIGIA, SFEROIDALE E GHISA MALLEABILE

FORI CIECHI

Profondità filettatura		≤3xD					
Materiale tagliente		HSS-E					
Tipo/forma		GG/C	GG/C	GGT/C	GG/C	GG/C	GGT/C
Superficie		○	Ⓢ	Ⓢ	Ⓐ	○	Ⓐ
Erogazione del liquido di raffredd.		☒	☒	☒	☒	assiale	assiale
Tolleranza codolo		h9	h9	h9	h9	h9	h9
Filettatura	**Tolleranza**	**Articolo nr. / pagina**					
M	4H						
	6H			1875/1876 357			
	6HX	807/819 356	930/931 356		1918/1919 356	1890/1897 358	318/319 358
	6G						
MF	6H						
	6HX	831 365	932 365		169 365	1904 366	347 366
	6G						
UNC	2B	1979/1984 370					1085/1086 371
	2BX						
UNF	2B	1989 372					1082 373
	2BX						
G		961 374					
BSW							
NPT							
NPTF							
EG M	6H Mod.						
MJ	4HX						
MJF	4HX						
UNJC	3BX						
UNJF	3BX						
PG							
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min					
K	Ghisa	300 HB	EN-GJL-150 EN-GJL-250 EN-GJL-300	0.6015 0.6025 0.6030	**15**	**20**	**20**	**25**	**15**	**25**
	ghisa a grafite sferoidale e ghisa malleabile	350 HB	EN-GJS-400-15 EN-GJS-600-3 EN-GJS-700-2	0.7040 0.7060 0.7070	**10**	**15**	**15**	**20**	**10**	**20**
	ADI GGV	1000 N/mm² 350 HB	EN-GJS1000-5 EN-GJV250 EN-GJV400		8	**12**	**12**	**15**	8	**15**

≤3xD

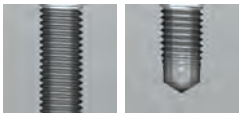
HSS-E-PM					VHM	
H/C	H/C	H/C	H/E	H/C	H/C	H/E
C	C	C	C	○	A	○
assiale	assiale	assiale	assiale	assiale	assiale	assiale
h9	h9	h9	h9	h6	h6	h6
Articolo nr. / pagina						
778 360	779 361	302/297 359	1091/4165 359	969/1883 362	2506 363	1008 364
		1090 367	1007 367	972/974 368		1009 369
○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△/□	○/●/△

Velocità di taglio consigliata vc m / min						
25	25	30	30	45	45	45
20	20	20	20	35	35	35
15	15	15	15	30	30	30

Ghisa grigia, ghisa malleabile, ghisa sferoidale

K

GHISA GRIGIA, SFEROIDALE E GHISA MALLEABILE



FORI PASSANTI E
FORI CIECHI

		≤1,5xD			≤3xD	
Materiale tagliente		HSS-E	HSS-E-PM	VHM	HSS-E	
Tipo/forma		N/C	N/C	N/C	N/C	N/C
Superficie		S	S	S	S	C
Erogazione del liquido di raffredd.		☒	☒	assiale	☒	☒
Tolleranza codolo		h9	h9	h6	h9	h9

Filettatura	Tolleranza	Articolo nr. / pagina				
M	4H					
	6H					
	6HX	921/925 376	1255/1256 376	2518 378	919/923 379	2012/2013 379
	6GX	920 377	903/952 376		918/922 379	
MF	6H					
	6HX	929 391	1257/1258 394		1275/927 395	2008 396
	6GX	928 393	1740 392		1277/926 397	
UNC	2B					
	2BX	2273/2274 405			1582/1583 405	
UNF	2B					
	2BX	1283/2275 406			1584/1585 406	
G		966 407			1586 408	
BSW						
NPT						
NPTF						
EG M	6H Mod.					
MJ	4HX					
MJF	4HX					
UNJC	3BX					
UNJF	3BX					
PG						
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min				
K	Ghisa	300 HB	EN-GJL-150	0.6015	-	-	-	-	-
			EN-GJL-250	0.6025					
			EN-GJL-300	0.6030					
	ghisa a grafite sferoidale e ghisa malleabile	350 HB	EN-GJS-400-15	0.7040	-	-	-	-	-
			EN-GJS-600-3	0.7060	**15**	**15**	**40**	**15**	**20**
			EN-GJS-700-2	0.7070					
	ADI GGV	1000 N/mm²	EN-GJS1000-5		**15**	**15**	**40**	**15**	**20**
		350 HB	EN-GJV250		-	-	-	-	-
			EN-GJV400						

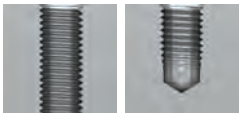
≤3xD

HSS-E		HSS-E-PM							VHM	
N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/E	N/C	N/E
S	C	S	S	S	S	C	A	S	C	C
assiale	radiale	☒	☒	radiale	assiale	radiale	radiale	assiale	radiale	radiale
h9	h9	h9	h9	h9	h9	h9	h9	h9	h6	h6
Articolo nr. / pagina										
2442/2444 382	2446/2448 382	322/339 380	1266/1267 381	323/342 384	4143 388	1270/1271 385	1717/1719 385	1725/1727 385	1972/1931 389	1927 390
2443/2445 382	2447 383					1713 386	1718/1720 387	1726/1728 387		
		333 399	1268/1269 398	338 400	4145 403	1272/1273 401	1721/1723 401	1729/1731 401	1581 404	
						1715/1716 402		1730/1732 402		
○/●/△	○/●/△/□	○/●/△	○/●/△	○/●/△/□	○/●/△	○/●/△/□	○/●/△/□	○/●/△	○/●/△/□	○/●/△/□

Velocità di taglio consigliata vc m / min										
-	-	-	-	-	-	-	-	-	-	-
- 15	- 20	- 15	- 15	- 15	- 15	- 25	- 25	- 15	- 40	- 40
15 -	20 -	15 -	15 -	15 -	15 -	20 -	20 -	15 -	40 -	40 -

K

GHISA GRIGIA, SFEROIDALE E GHISA MALLEABILE



FORI PASSANTI E **FORI** CIECHI

Profondità filettatura	≤2xD				≤2,5xD		≤1,5xD	
Materiale tagliente		Int. in MD						
Tipo	TM SP	TM SP	TM SP	TM SP	TM SP	TM SP	TMC SP	TMC SP
Superficie	C	C	C	C	C	C	C	C
Erogazione del liquido di raffredd.	☒	☒	assiale	assiale	assiale	assiale	assiale	assiale
Forma del gambo	HA	HB	HA	HB	HA	HB	HA	HA
Torsione	27°	27°	27°	27°	27°	27°	10°	10°

Filettatura	Articolo nr. / pagina							
M	4132 411	4133 411	3737 410	3743 410	3735 412	3740 412	3525 413	3543 413
MF			3737 410	3743 410			3527 416	3545 416
UNC			4134 419	4135 419			3516 420	3534 420
UNF			4136 422	4137 422			3518 423	3536 423
G			3745 427	3748 427	3746 428	3750 428	3514 429	3529 429
BSW								
NPT			3753 425	3754 425			3520 426	3538 426
NPTF			3756 432	3757 432			3521 433	3539 433
EG M	Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare							
MJ								
MJF								
UNJC								
UNJF								
PG								
lubrificante adatto	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Durezza	esempio materiale	Materiale nr.	consigli di applicazione							
K	Ghisa	300 HB	EN-GJL-150	0.6015	++	++	++	++	++	++	++	++
			EN-GJL-250	0.6025								
			EN-GJL-300	0.6030								
	ghisa a grafite sferoidale e ghisa malleabile	350 HB	EN-GJS-400-15	0.7040	++	++	++	++	++	++	++	++
			EN-GJS-600-3	0.7060								
			EN-GJS-700-2	0.7070								
	ADI GGV	1000 N/mm² 350 HB	EN-GJS1000-5		++	++	++	++	++	++	++	++
			EN-GJV250									
			EN-GJV400									

≤2xD		≤2,5xD		universale				≤3xD		≤1,5xD		≤2xD		≤2,5xD	
Int. in MD															
TMC SP	TMC SP	TMC SP	TMC SP	TMU SP	TMU SP	TMU SP	TMU SP	MTM 3 SP	MTM 1 SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP
C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
assiale	assiale	assiale	assiale	assiale	assiale	assiale	assiale	☒	☒	☒	radiale	☒	radiale	☒	radiale
HA	HB	HA	HB	HA	HB	HA	HB	HA	HA	HA	HA	HA	HA	HA	HA
10°	10°	27°	27°	15°	15°	15°	15°	15°	15°	27°	27°	27°	27°	27°	27°
						extra lunghe	extra lunghe								
Articolo nr. / pagina															
3526 414	3544 414	3759 415	3760 415	3541 434	3556 434	4162 435	4163 435	4226 440	4225 442	3776 443	3777 443	3780 444	3781 444	3784 445	3785 445
3528 417	3546 417	3762 418	3763 418	3541 434	3556 434	4162 435	4163 435		4225 442	3788 446	3789 446	3792 447	3793 447		
3517 421	3535 421			3595 436	3596 436								4139 448		
3519 424	3537 424			3595 436	3596 436								4141 449		
3515 430	3533 430	3765 431	3766 431	3542 437	3557 437	3542 437	3557 437	4228 441							
				3768 438	3769 438										
				3772 439	3773 439										
Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare															
○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

Ghisa grigia, ghisa malleabile, ghisa sferoidale

consigli di applicazione															
++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++

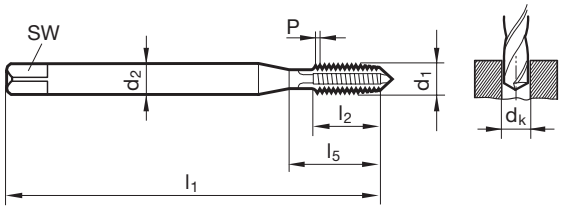
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	●	A	S
Tipo	GG	GG	GG
Forma	C	C	C
Refrigerazione interna	⊠	⊠	⊠

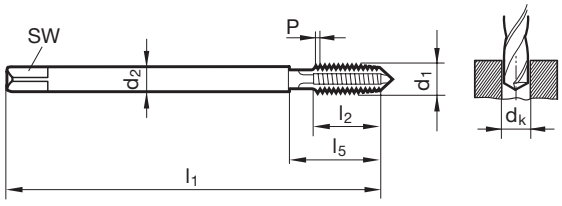
P
M
K •
N
S
H

Dati di taglio a pag. 349/350

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **807** **1918** **930**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **819** **1919** **931**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

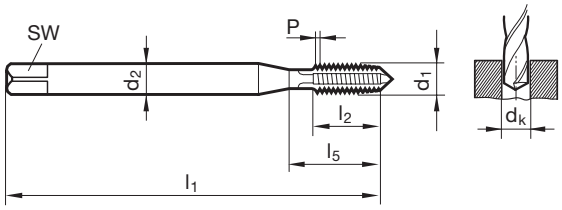
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	S
Tipo	GGT
Forma	C
Refrigerazione interna	

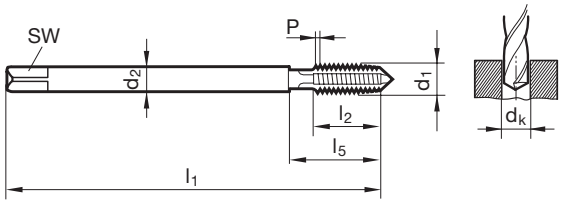
P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 349/350

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **1875**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **1876**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

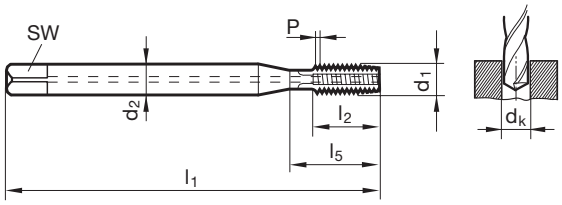
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	HSS-E	
Tolleranza sul Ø	6HX	6HX
Superficie	●	A
Tipo	GG	GG
Forma	C	C
Refrigerazione interna		

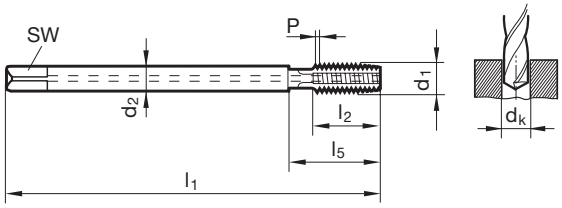
P
M
K •
N
S
H

Dati di taglio a pag. 350

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **1890** **318**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1897** **319**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

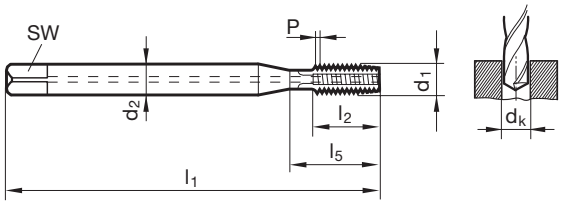
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	C
Tipo	H	H
Forma	C	E
Refrigerazione interna		

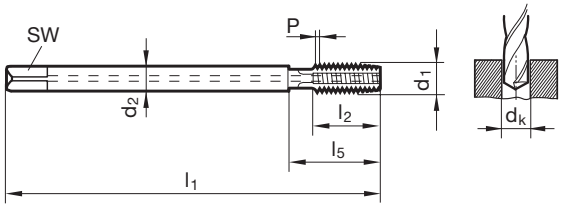
P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 351

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **302** **1091**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **297** **4165**

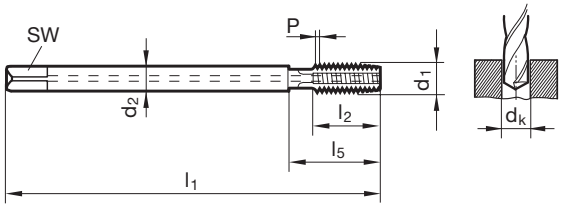
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	HSS-E
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	C
Refrigerazione interna	

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 350



DIN 2184-1 DIN 376 Articolo nr. **778**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	29,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	32,00	200,000	50,000	102,000
M39	4,000	32,000	24,000	35,00	200,000	50,000	107,000

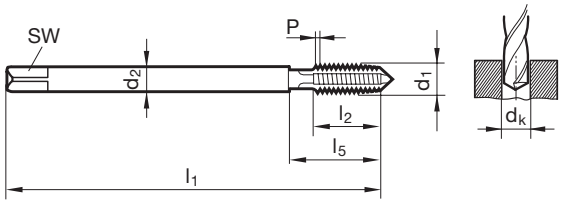
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	HSS-E
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	C
Refrigerazione interna	

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 350

NEW



Norma di fab. ~DIN 376 Articolo nr. **779**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M16	2,000	12,000	9,000	14,00	160,000	26,000	100,000
M20	2,500	16,000	12,000	17,50	180,000	32,000	120,000
M24	3,000	18,000	14,500	21,00	200,000	36,000	120,000
M27	3,000	20,000	16,000	24,00	225,000	36,000	145,000
M30	3,500	22,000	18,000	26,50	250,000	40,000	160,000
M33	3,500	25,000	20,000	29,50	275,000	40,000	170,000
M36	4,000	28,000	22,000	32,00	300,000	50,000	180,000
M39	4,000	32,000	24,000	35,00	325,000	50,000	210,000

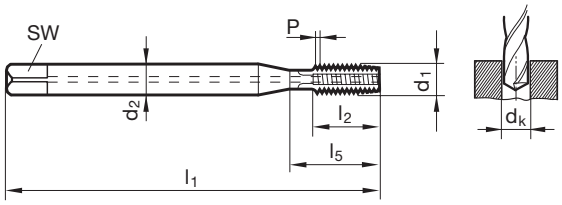
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	Int. in MD	
Tolleranza sul Ø	6HX	6HX
Superficie	◯	◯
Tipo	H	H
Forma	C	C
Refrigerazione interna		

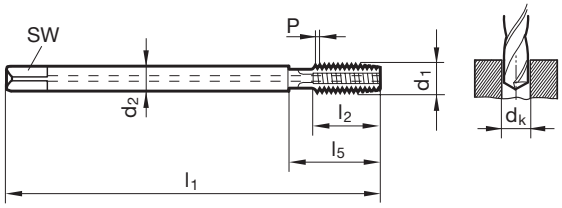
P	
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 349/351

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **969** **1858**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	8,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	10,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	10,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	12,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	16,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	18,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1883** **1859**

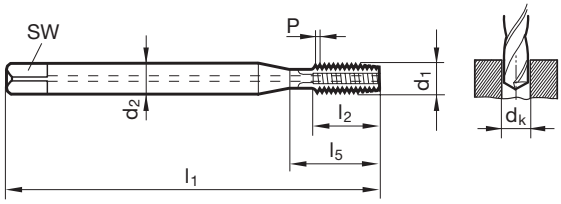
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	22,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	22,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	22,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	24,000	45,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	45,000

Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	A
Tipo	H
Forma	C
Refrigerazione interna	

P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 351



DIN 2184-1 DIN 371 Articolo nr. **2506**

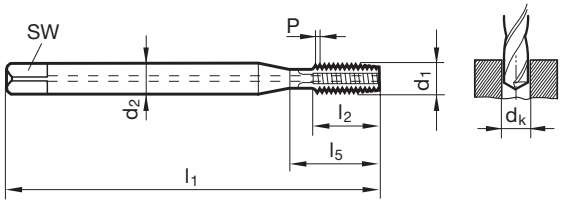
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	10,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	12,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	16,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	18,000	39,000

Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	Int. in MD		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	A	○	A
Tipo	H	H	N R15
Forma	C	E	C
Refrigerazione interna			

P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 349/351



DIN 2184-1 DIN 371 — Articolo nr. **2311** **1008** **2510**

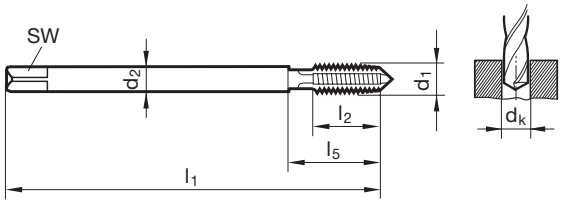
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	8,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	10,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	10,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	12,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	16,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	18,000	39,000

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	●	S	A
Tipo	GG	GG	GG
Forma	C	C	C
Refrigerazione interna	⊠	⊠	⊠

P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 349/350



DIN 2184-1 DIN 374 — Articolo nr. **831** **932** **169**

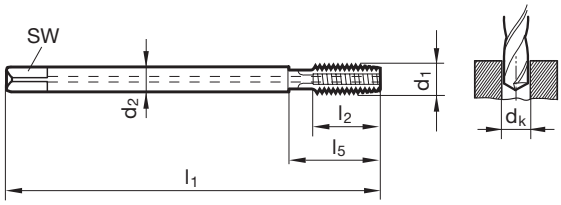
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M4 x 0,5	2,800	2,100	3,50	63,000	8,000	21,000	4,003
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,25	11,000	9,000	12,80	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007
M30 x 1,5	22,000	18,000	28,50	150,000	28,000	53,000	30,007

Maschi a macchina forati per fil. metr. ISO passo fine

Materiale tagliente	HSS-E	
Tolleranza sul Ø	6HX	6HX
Superficie	●	A
Tipo	GG	GG
Forma	C	C
Refrigerazione interna		

P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 350/351



DIN 2184-1 DIN 374 Articolo nr. **1904** **347**

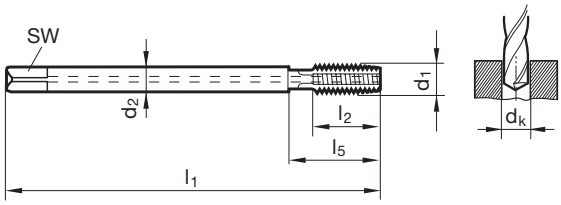
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	20,50	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007

Maschi a macchina forati per fil. metr. ISO passo fine

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 351

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	C
Tipo	H	H
Forma	C	E
Refrigerazione interna		



DIN 2184-1 DIN 374 — Articolo nr. **1090** **1007**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	13,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M9 x 1	7,000	5,500	8,00	90,000	16,000	35,000	9,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,00	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007

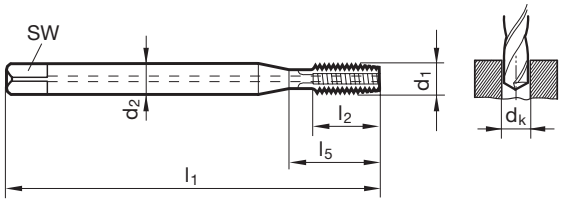
Maschi a macchina forati per fil. metr. ISO passo fine

Materiale tagliente	Int. in MD	
Tolleranza sul Ø	6HX	6HX
Superficie	◯	◯
Tipo	H	H
Forma	C	C
Refrigerazione interna		

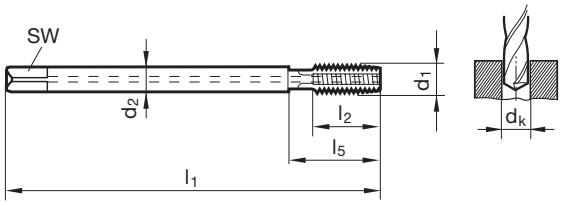
P	
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 349/351

DIN 371



DIN 374



DIN 2184-1 DIN 371 Articolo nr. **972** **1861**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	6,000	4,900	4,50	70,000	10,000	25,000	5,003
M8 x 1	8,000	6,200	7,00	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,00	90,000	18,000	35,000	10,005

DIN 2184-1 DIN 374 Articolo nr. **974** **1860**

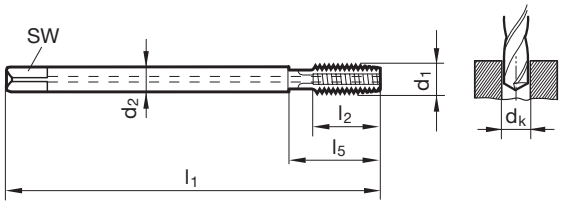
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,5	9,000	7,000	10,50	100,000	22,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	22,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	24,000	45,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	45,000	20,007

Maschi a macchina forati per fil. metr. ISO passo fine

P	
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 351

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	◯
Tipo	H
Forma	E
Refrigerazione interna	



DIN 2184-1 ~DIN 371/~DIN 374 Articolo nr. **1009**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M10 x 1	10,000	8,000	9,00	90,000	18,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	22,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	22,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	22,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007

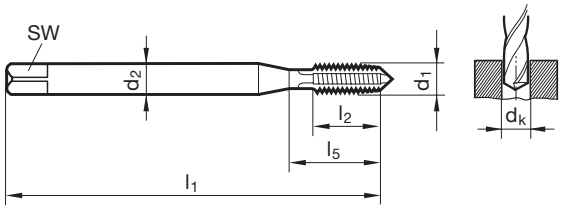
Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E
Tolleranza sul Ø	2B
Superficie	●
Tipo	GG
Forma	C
Refrigerazione interna	

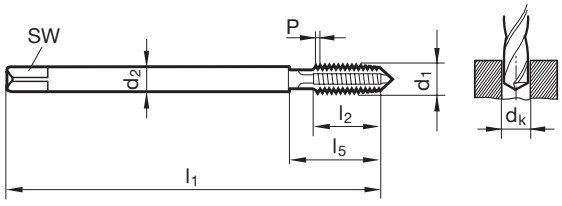
P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 349/350

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **1979**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
2 - 56	2,800	2,100	1,85	45,000	9,000	14,500	2,184
3 - 48	2,800	2,100	2,10	50,000	9,000	14,500	2,515
5 - 40	3,500	2,700	2,65	56,000	11,000	18,000	3,175
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **1984**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	33,000	62,000	19,050

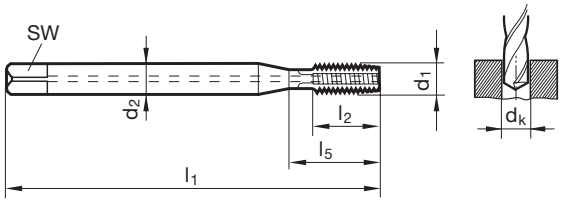
Maschi a macchina forati per fil. UNC

Materiale tagliente	HSS-E
Tolleranza sul Ø	2B
Superficie	A
Tipo	GG
Forma	C
Refrigerazione interna	

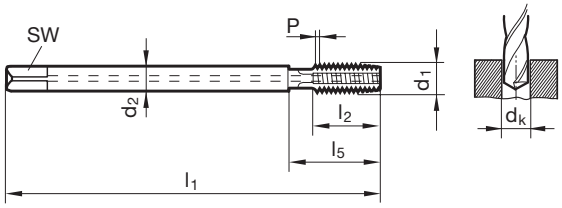
P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 350

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **1085**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **1086**

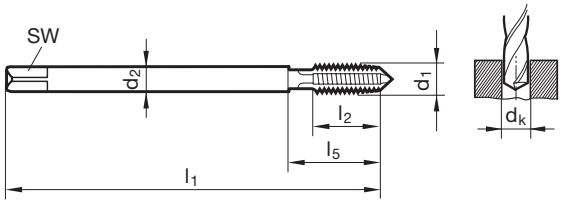
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	35,000	62,000	22,225

Maschi a macchina per filettatura UNF

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	●
Tipo	GG
Forma	C
Refrigerazione interna	

P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 349/350



DIN 2184-1 ~DIN 374 Articolo nr. **1989**

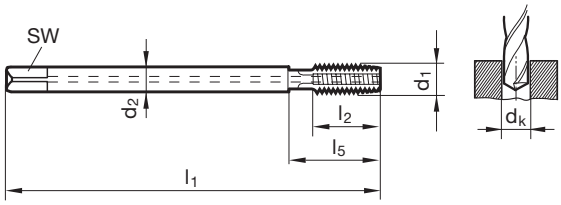
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	2,200		2,40	56,000	10,000	18,000	2,845
8 - 36	2,800	2,100	3,50	63,000	12,000	21,000	4,166
1/4 - 28	4,500	3,400	5,50	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	20,000	40,000	12,700
9/16 - 18	11,000	9,000	12,90	100,000	22,000	40,000	14,288
3/4 - 16	14,000	11,000	17,50	110,000	25,000	44,000	19,050
7/8 - 14	18,000	14,500	20,40	125,000	25,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	28,000	50,000	25,400

Maschi a macchina forati per fil. UNF

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	A
Tipo	GG
Forma	C
Refrigerazione interna	

P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 350



DIN 2184-1 ~DIN 374 Articolo nr. **1082**

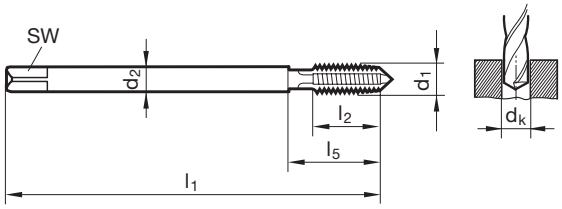
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,10	70,000	14,000	25,000	4,826
12 - 28	4,000	3,000	4,60	80,000	16,000	30,000	5,486
1/4 - 28	4,500	3,400	5,50	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	20,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875
3/4 - 16	14,000	11,000	17,50	110,000	25,000	44,000	19,050
7/8 - 14	18,000	14,500	20,40	125,000	25,000	44,000	22,225

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	
Superficie	●
Tipo	GG
Forma	C
Refrigerazione interna	

P	
M	
K	•
N	
S	
H	

Dati di taglio a pag. 349/350



DIN 2184-1 DIN 5156 Articolo nr. **961**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
G1/16	6,000	4,900	6,80	90,000	18,000	30,000	7,723
G1/8	7,000	5,500	8,80	90,000	18,000	35,000	9,728
G1/4	11,000	9,000	11,80	100,000	20,000	40,000	13,157
G3/8	12,000	9,000	15,25	100,000	22,000	44,000	16,662
G1/2	16,000	12,000	19,00	125,000	25,000	44,000	20,955
G5/8	18,000	14,500	21,00	125,000	25,000	48,000	22,911
G3/4	20,000	16,000	24,50	140,000	28,000	53,000	26,441
G7/8	22,000	18,000	28,25	150,000	28,000	53,000	30,201
G1	25,000	20,000	30,75	160,000	30,000	56,000	33,249
G1 1/8	28,000	22,000	35,50	170,000	30,000	56,000	37,897
G1 1/4	32,000	24,000	39,50	170,000	30,000	57,000	41,910
G1 3/8	36,000	29,000	41,75	180,000	32,000	60,000	44,323
G1 1/2	36,000	29,000	45,25	190,000	32,000	60,000	47,803
G1 3/4	40,000	32,000	51,00	190,000	40,000	93,000	53,746
G2	45,000	35,000	57,00	220,000	40,000	95,000	59,614

Ghisa grigia, ghisa malleabile, ghisa sferoidale

MASCHI A MACCHINA A RULLARE

K

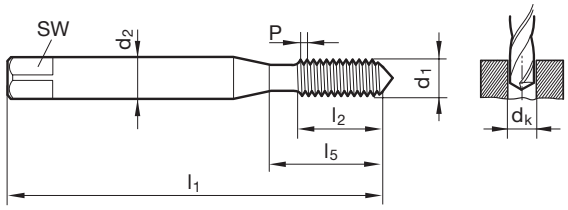
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM	HSS-E	HSS-E-PM
Tolleranza sul Ø	6GX	6HX	6HX
Superficie	S	S	S
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

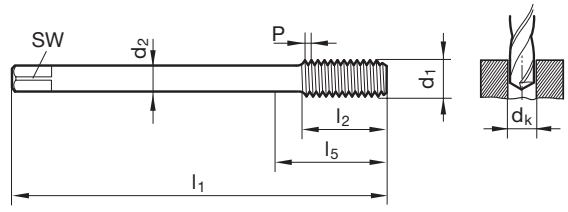
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	903	921	1255

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,90	40,000	4,000	
M1,2	0,250	2,500	2,100	1,10	40,000	4,800	
M1,4	0,300	2,500	2,100	1,25	40,000	5,600	
M1,6	0,350	2,500	2,100	1,45	40,000	6,400	
M1,7	0,350	2,500	2,100	1,55	40,000	6,800	
M1,8	0,350	2,500	2,100	1,65	40,000	7,300	
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	952	925	1256

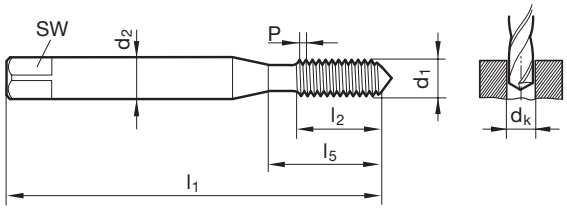
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352



DIN 2174 ~DIN 371 Articolo nr. **920**

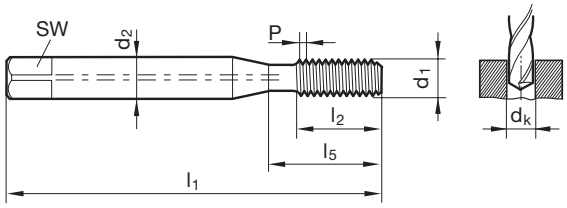
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 352



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **2518**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

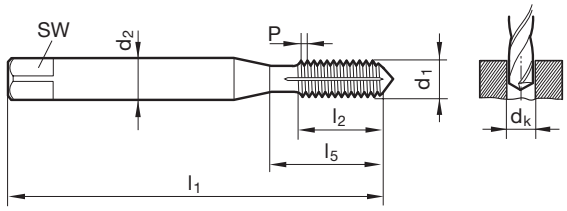
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6GX	6HX	6HX
Superficie	S	S	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 352

~ DIN 371



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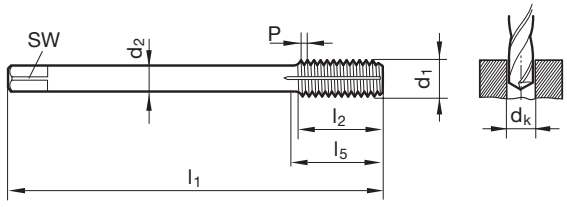


DIN 2174 ~DIN 371 — Articolo nr. **918** **919** **2012**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **922** **923** **2013**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M6	1,000	4,500	3,400	5,55	80,000	16,000	30,000
M8	1,250	6,000	4,900	7,40	90,000	17,000	35,000
M10	1,500	7,000	5,500	9,30	100,000	20,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000
M22	2,500	18,000	14,500	20,90	140,000	32,000	62,000
M24	3,000	18,000	14,500	22,70	160,000	36,000	73,000
M27	3,000	20,000	16,000	25,70	160,000	36,000	73,000
M30	3,500	22,000	18,000	28,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	31,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	34,30	200,000	50,000	102,000
M39	4,000	32,000	24,000	37,30	200,000	50,000	107,000

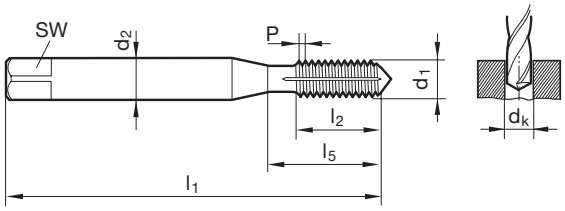
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

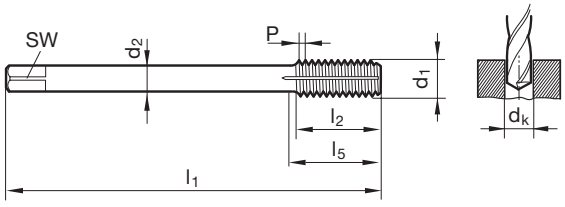
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **322**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **339**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

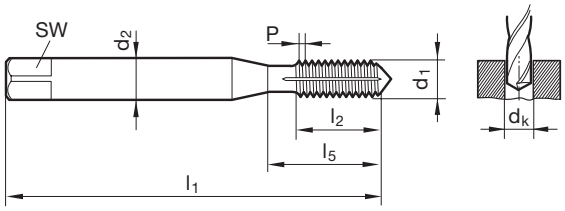
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

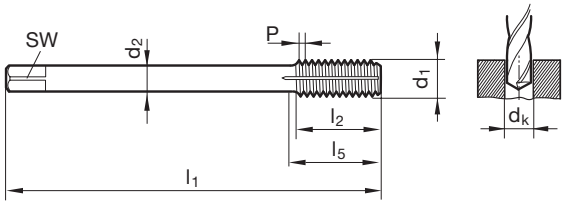
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1266**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1267**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

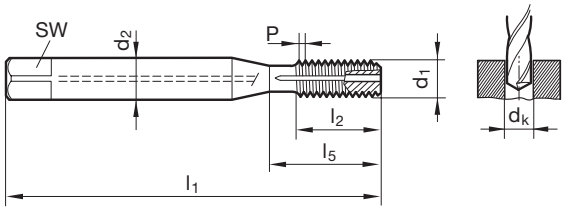
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6HX	6GX	6HX
Superficie	S	S	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

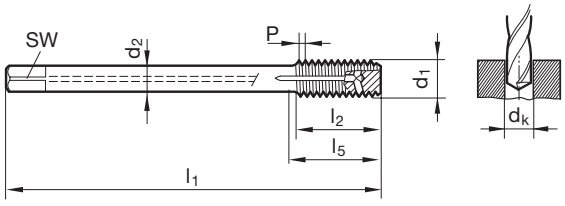
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **2442** **2443** **2446**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **2444** **2445** **2448**

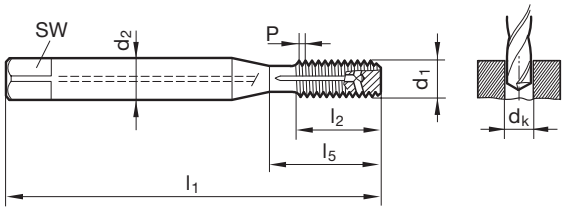
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 353



DIN 2174 ~DIN 371 Articolo nr. **2447**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

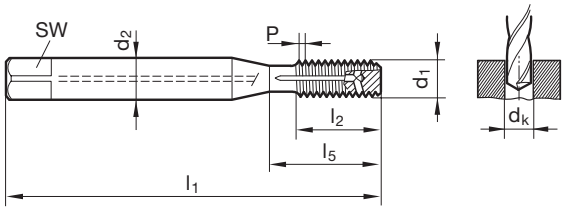
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

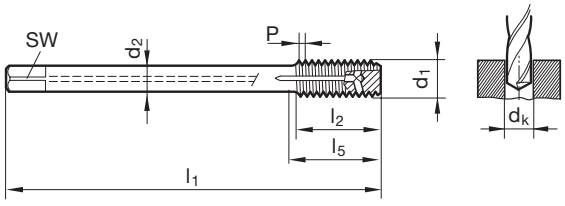
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **323**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **342**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

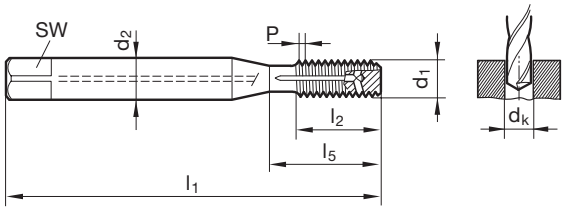
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

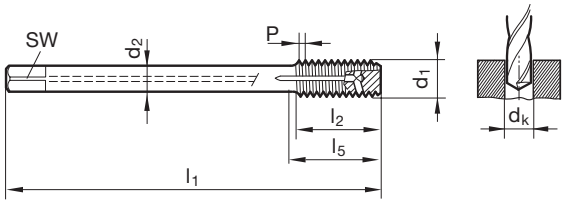
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1270** **1717** **1725**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1271** **1719** **1727**

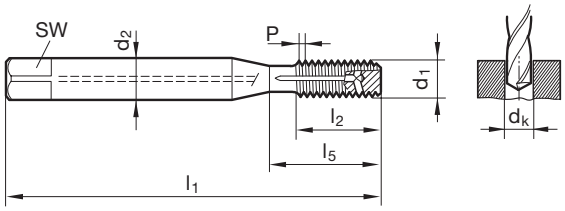
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 353



DIN 2174 ~DIN 371 Articolo nr. **1713**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

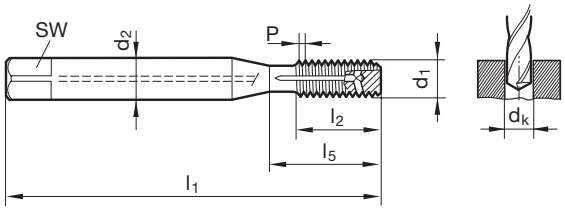
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	A	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

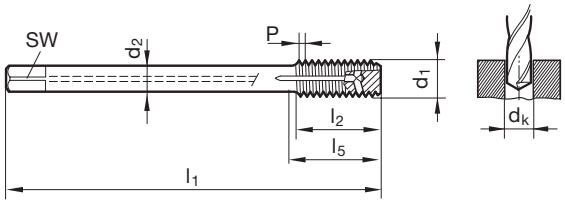
P	•
M	•
K	
N	
S	•
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1718** **1726**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1720** **1728**

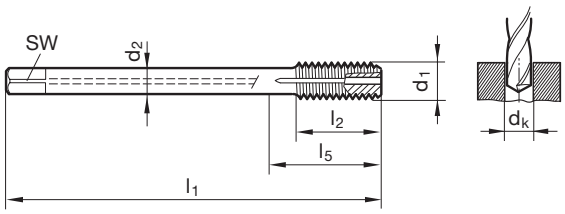
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353



Norma di fab. Norma di fab. Articolo nr. **4143**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	112,000	6,000	18,000
M4	0,700	2,800	2,100	3,70	112,000	7,500	77,000
M5	0,800	3,500	2,700	4,65	125,000	8,500	90,000
M6	1,000	4,500	3,400	5,55	125,000	11,000	90,000
M8	1,250	6,000	4,900	7,40	140,000	14,000	97,000
M10	1,500	7,000	5,500	9,30	160,000	16,000	117,000
M12	1,750	9,000	7,000	11,20	180,000	18,500	133,000
M16	2,000	12,000	9,000	15,10	220,000	20,000	168,000
M20	2,500	16,000	12,000	18,90	280,000	25,000	225,000

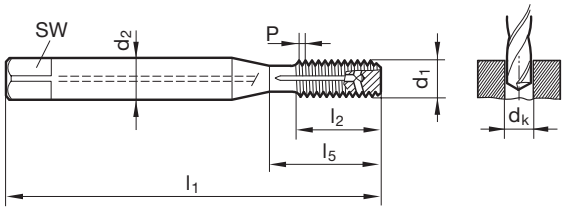
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

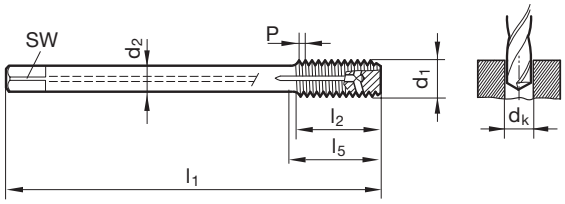
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1972**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1931**

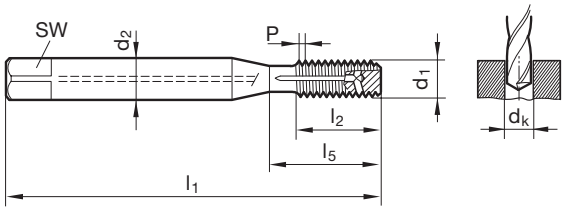
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	25,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	E
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 353



DIN 2174 ~DIN 371 Articolo nr. **1927**

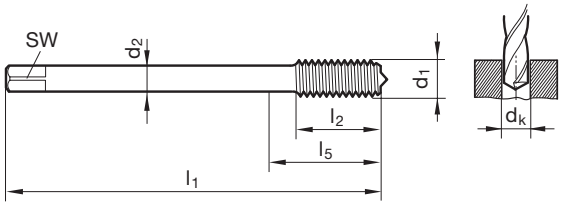
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352



DIN 2174 ~DIN 374 Articolo nr. **929**

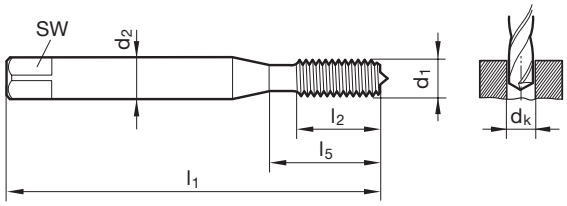
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352



DIN 2174 ~DIN 371 Articolo nr. **1740**

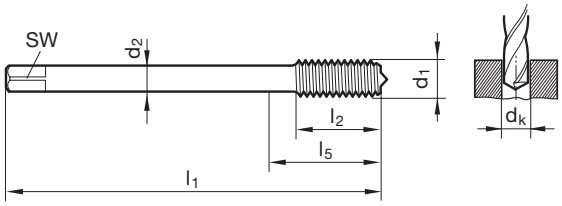
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352



DIN 2174 ~DIN 374 Articolo nr. **928**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007

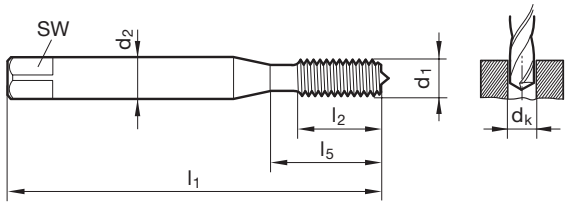
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

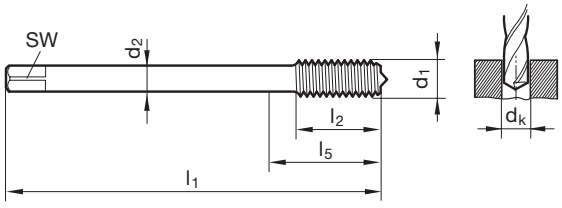
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1257**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1258**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

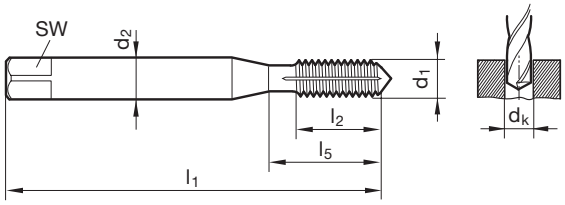
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

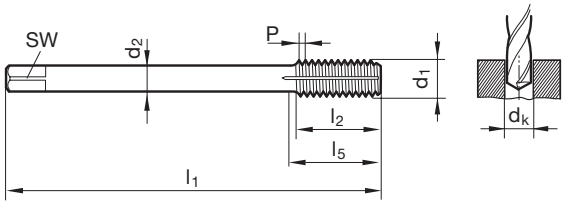
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 352

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1275**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	6,000	4,900	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	8,000	6,200	7,65	80,000	14,000	30,000	8,004
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 Articolo nr. **927**

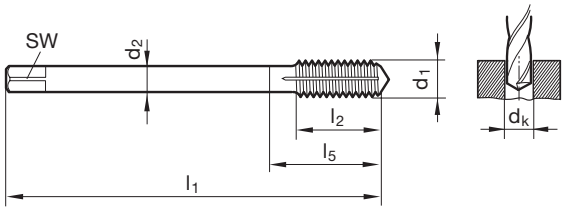
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 352



DIN 2174 ~DIN 374 Articolo nr. **2008**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

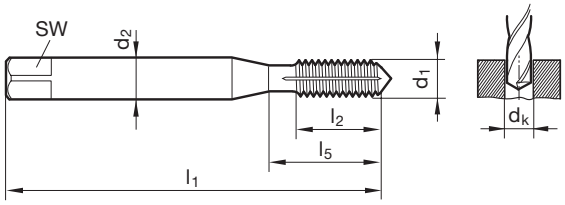
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

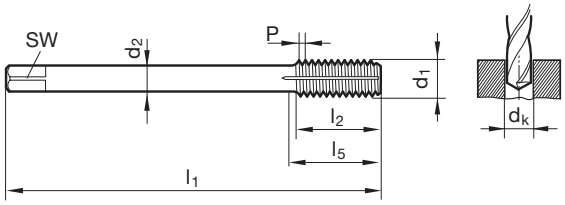
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 352

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1277**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **926**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

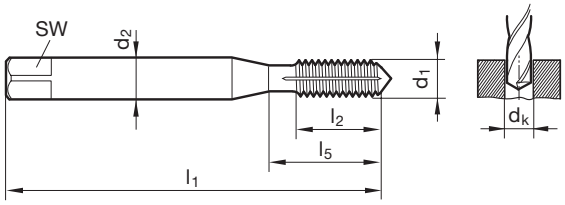
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

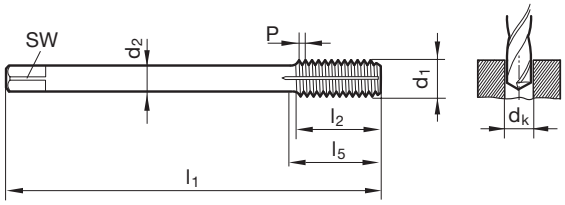
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1268**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1269**

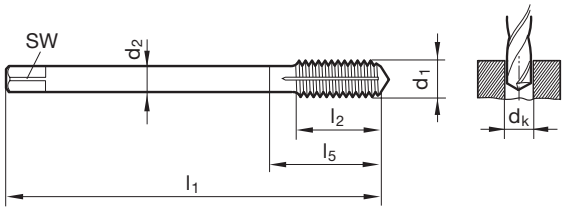
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353



DIN 2174 ~DIN 374 Articolo nr. **333**

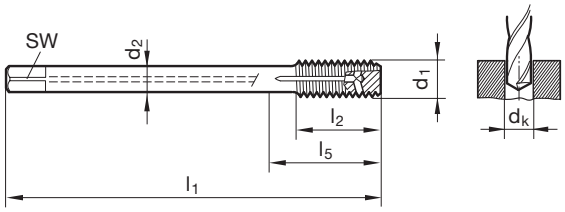
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	16,000	44,000	20,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353



DIN 2174 ~DIN 374 Articolo nr. **338**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007

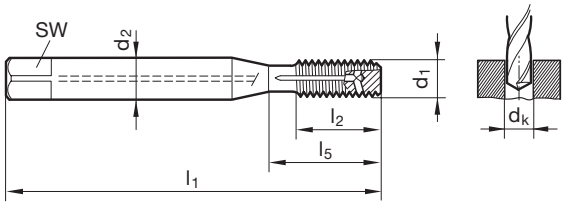
Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

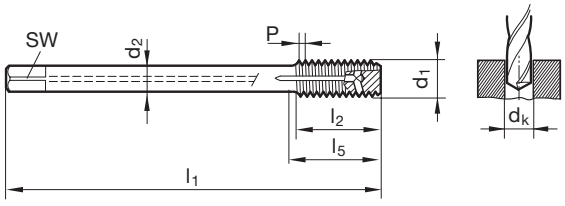
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1272** **1721** **1729**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1273** **1723** **1731**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

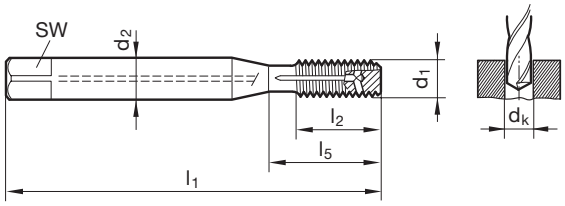
Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	C	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

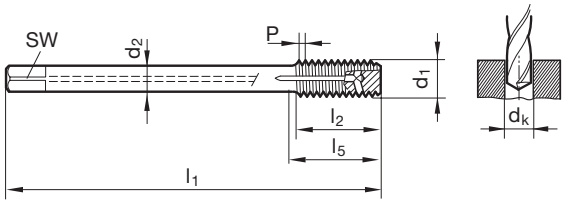
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 353

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1715** **1730**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1716** **1732**

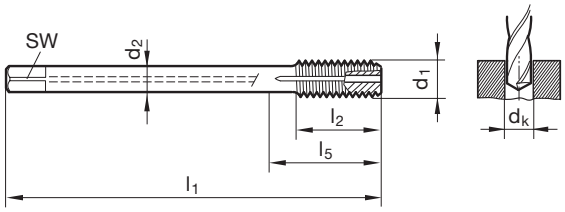
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 353



Norma di fab. Norma di fab. Articolo nr. **4145**

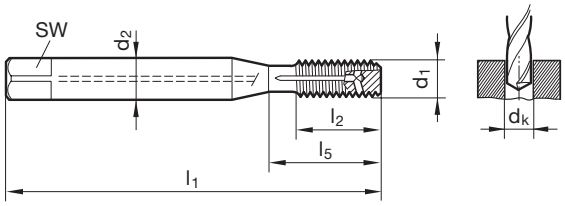
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	140,000	14,000	97,000	8,005
M10 x 1	7,000	5,500	9,55	160,000	16,000	117,000	10,005
M10 x 1,25	7,000	5,500	9,40	160,000	16,000	117,000	10,006
M12 x 1	9,000	7,000	11,55	180,000	18,500	133,000	12,005
M12 x 1,5	9,000	7,000	11,30	180,000	18,500	133,000	12,007
M14 x 1,5	11,000	9,000	13,30	220,000	20,000	168,000	14,007
M16 x 1,5	12,000	9,000	15,30	220,000	20,000	168,000	16,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 353



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **1581**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M10 x 1	10,000	8,000	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	15,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	15,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	15,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	15,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	15,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	15,000	48,000	24,007

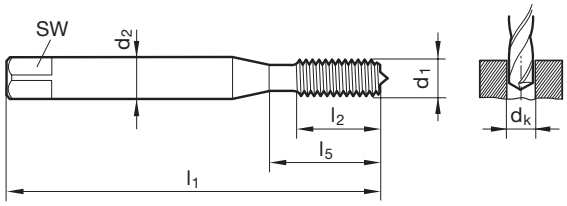
Maschi a macchina a rullare per filettatura UNC

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna	✗	✗

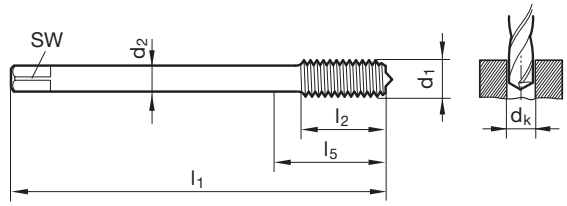
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 — Articolo nr. **2273** **1582**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,55	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,90	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	3,15	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,80	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	4,35	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	5,00	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,75	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	7,30	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,80	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 — Articolo nr. **2274** **1583**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	10,30	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	11,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	13,30	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	14,80	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	17,90	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	21,00	140,000	35,000	62,000	22,225

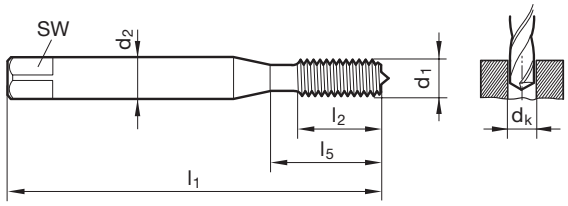
Maschi a macchina a rullare per filettatura UNF

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna	✗	✗

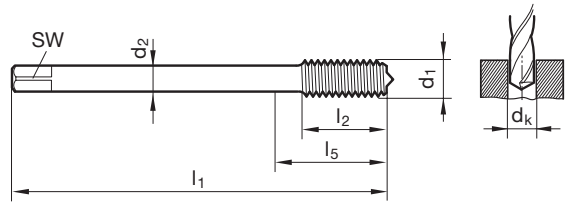
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352

~ DIN 371



~ DIN 374



DIN 2184-1 ~DIN 371 — Articolo nr. **1283** **1584**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	3,500	2,700	2,60	56,000	10,000	18,000	2,845
5 - 44	3,500	2,700	2,90	56,000	10,000	18,000	3,175
6 - 40	4,000	3,000	3,20	56,000	11,000	20,000	3,505
8 - 36	4,500	3,400	3,85	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,45	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	5,10	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,95	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	7,45	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	9,05	90,000	18,000	35,000	9,525

DIN 2184-1 ~DIN 374 — Articolo nr. **2275** **1585**

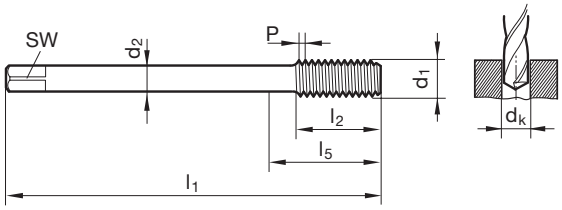
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
10 - 32	0,794	3,500	2,700	4,45	70,000	14,000	25,000
1/4 - 28	0,907	4,500	3,400	5,95	80,000	16,000	30,000
12 - 28	0,907	4,000	3,000	5,10	80,000	16,000	30,000
3/8 - 24	1,058	7,000	5,500	9,05	90,000	18,000	35,000
5/16 - 24	1,058	6,000	4,900	7,45	90,000	18,000	35,000
1/2 - 20	1,270	9,000	7,000	12,10	100,000	20,000	40,000
5/8 - 18	1,411	12,000	9,000	15,25	100,000	22,000	44,000
7/16 - 20	1,270	8,000	6,200	10,55	100,000	22,000	42,000
9/16 - 18	1,411	11,000	9,000	13,65	100,000	22,000	40,000
3/4 - 16	1,587	14,000	11,000	18,35	110,000	25,000	44,000
7/8 - 14	1,814	18,000	14,500	21,40	125,000	25,000	44,000
1 - 12	2,117	18,000	14,500	24,45	140,000	28,000	50,000

Maschi a macc. a rullare per fil. Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	X
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 352



DIN 2184-1 DIN 2189 Articolo nr. **966**

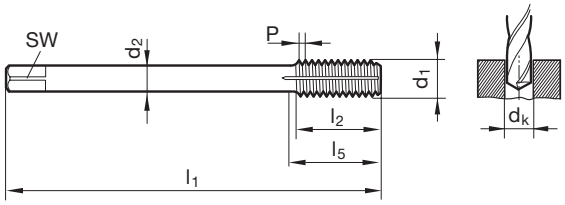
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	7,30	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	9,30	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	12,50	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	16,00	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	20,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	25,50	140,000	28,000	53,000	26,441
G1	11,000	25,000	20,000	32,00	160,000	30,000	56,000	33,249
G1 1/4	11,000	32,000	24,000	40,75	170,000	30,000	57,000	41,910

Maschi a macc. a rullare per fil. Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	X
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 352



DIN 2184-1 DIN 2189 Articolo nr. **1586**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	7,30	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	9,30	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	12,50	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	16,00	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	20,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	25,50	140,000	28,000	53,000	26,441

Ghisa grigia, ghisa malleabile, ghisa sferoidale

FRESE A FILETTARE

K

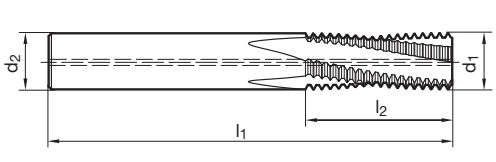
Frese a filettare senza fase di svasatura per filettatura metrica ISO

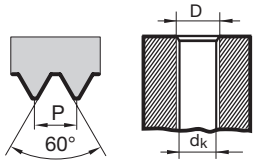
2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TM SP	TM SP	TM SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	





Norma di fab.	Articolo nr.	3737	3743	3734

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M8 x 1	1,000	6,400	8,000	7,00	62,000	17,500	3	8,005
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M10 x 1	1,000	7,950	10,000	9,00	74,000	21,500	3	10,005
M10 x 1,25	1,250	7,950	10,000	8,80	74,000	21,900	3	10,006
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M12 x 1,5	1,500	9,950	10,000	10,50	74,000	26,300	4	12,007
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M14 x 1,5	1,500	11,200	12,000	12,50	90,000	30,800	4	14,007
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M16 x 1,5	1,500	12,800	14,000	14,50	90,000	33,800	4	16,007
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000
M20 x 1,5	1,500	14,950	16,000	18,50	102,000	42,800	4	20,007

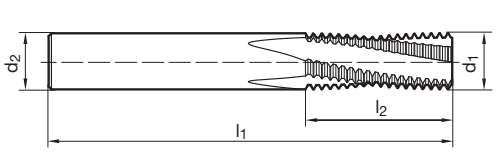
Frese a filettare senza fase di svasatura per filettatura metrica ISO

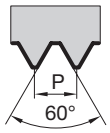
2xD

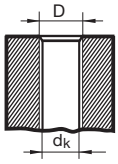
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	4132	4133

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000

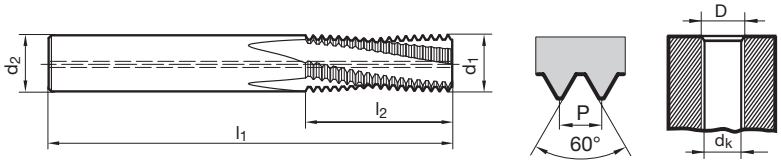
Frese a filettare senza fase di svasatura per filettatura metrica ISO

2,5xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3735	3740

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	16,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	21,900	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	26,300	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	32,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	37,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	43,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	48,800	4	20,000

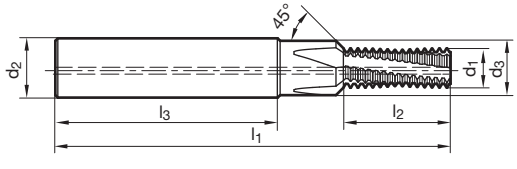
Frese a filettare con fase di svasatura per filettatura metrica ISO

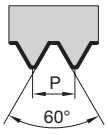
P	•
M	•
K	•
N	•
S	•
H	≤55

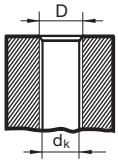
Dati di taglio a pag. 354

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA

NEW







Norma di fab. Articolo nr. **3525** **3543** **3510**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	5,300	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	7,400	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	9,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	10,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	13,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	17,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	20,100	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	25,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	27,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	33,800	4	20,000

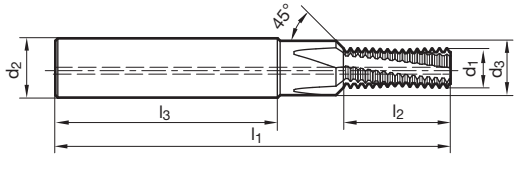
Frese a filettare con fase di svasatura per filettatura metrica ISO

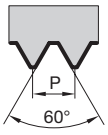
2xD

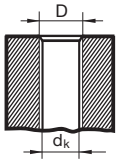
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab. Articolo nr. **3526** **3544** **3511**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	6,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	8,800	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	10,800	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	13,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	18,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	21,800	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	25,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	31,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	35,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	41,300	4	20,000

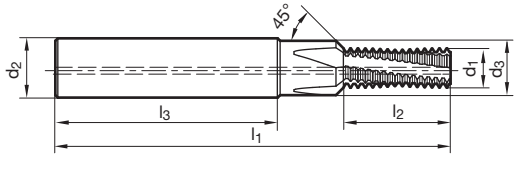
Frese a filettare con fase di svasatura per filettatura metrica ISO

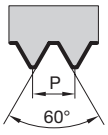
2,5xD

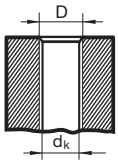
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355

	Int. in MD	
Materiale tagliente		
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3759** **3760**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	7,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	35,600	10,900	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	13,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	16,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	21,900	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	26,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	32,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	37,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	43,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	48,800	4	20,000

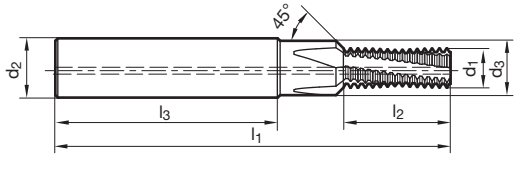
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

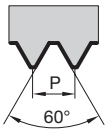
1,5xD

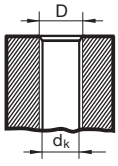
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab. Articolo nr. **3527** **3545** **3512**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	7,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	8,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	9,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	10,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	13,100	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	13,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	16,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	16,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	19,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	20,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	23,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	26,300	4	16,007

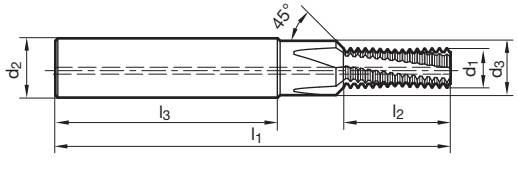
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

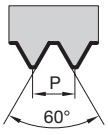
2xD

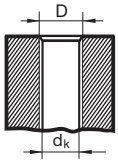
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab. Articolo nr. **3528** **3546** **3513**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	8,800	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	10,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	12,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	13,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	16,900	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	17,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	21,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	21,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	25,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	26,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	30,800	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	33,800	4	16,007

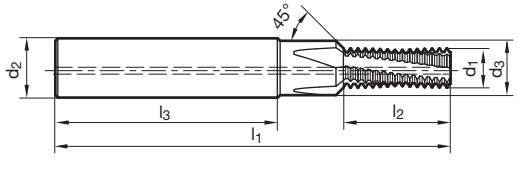
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

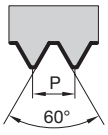
2,5xD

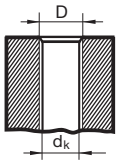
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3762** **3763**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	10,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	12,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	15,300	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	15,400	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	20,600	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	20,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	25,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	25,600	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	30,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	30,800	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	38,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	41,300	4	16,007

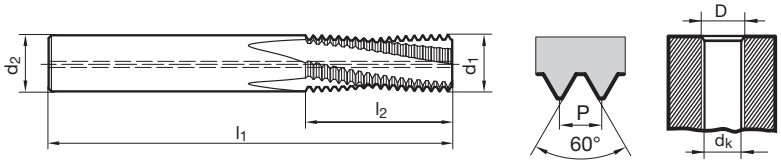
Frese a filettare senza fase di svasatura per filettatura UNC

2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	4134	4135

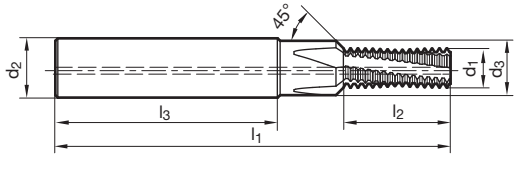
D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 24	3,400	6,000	3,90	54,000	11,100	3	4,826
12 - 24	4,100	6,000	4,50	54,000	12,200	3	5,486
1/4 - 20	4,700	6,000	5,10	54,000	14,600	3	6,350
5/16 - 18	6,100	8,000	6,60	64,000	17,600	3	7,938
3/8 - 16	7,600	8,000	8,00	64,000	21,400	3	9,525
7/16 - 14	9,000	10,000	9,40	74,000	24,500	3	11,113
1/2 - 13	9,950	10,000	10,80	74,000	28,300	4	12,700
9/16 - 12	11,400	12,000	12,20	90,000	30,700	4	14,288
5/8 - 11	12,700	14,000	13,50	90,000	35,800	4	15,875

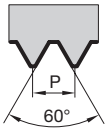
Frese a filettare con fase di svasatura per filettatura UNC

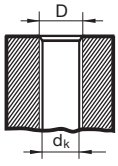
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3516** **3534**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	12,100	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	14,800	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	16,700	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	19,000	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	22,500	4	12,700

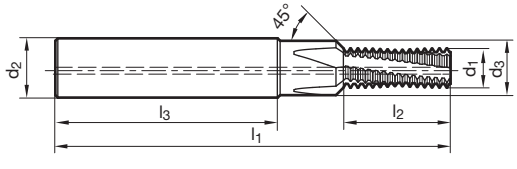
Frese a filettare con fase di svasatura per filettatura UNC

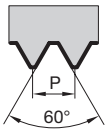
2xD

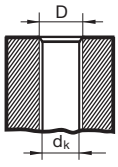
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3517** **3535**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	14,600	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	17,600	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	21,400	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	24,500	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	28,300	4	12,700

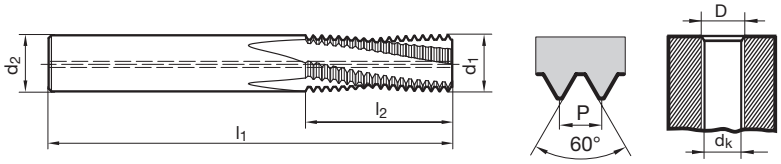
Frese a filettare senza fase di svasatura per filettatura UNF

2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	4136	4137

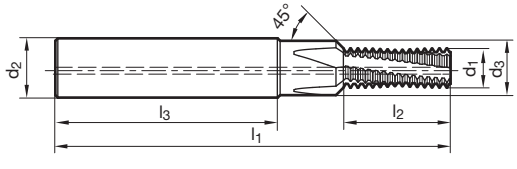
D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 32	3,800	6,000	4,10	54,000	11,500	3	4,826
12 - 28	4,300	6,000	4,60	54,000	12,200	3	5,486
1/4 - 28	5,100	6,000	5,50	54,000	14,100	3	6,350
5/16 - 24	6,300	8,000	6,90	64,000	17,500	3	7,938
3/8 - 24	7,800	8,000	8,50	64,000	20,600	3	9,525
7/16 - 20	9,400	10,000	9,90	74,000	24,800	3	11,113
1/2 - 20	9,950	10,000	11,50	74,000	27,300	4	12,700
9/16 - 18	11,400	12,000	12,90	90,000	30,300	4	14,288
5/8 - 18	12,700	14,000	14,50	90,000	33,200	4	15,875

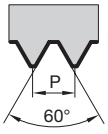
Frese a filettare con fase di svasatura per filettatura UNF

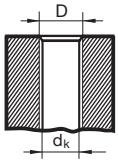
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3518** **3536**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	11,300	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	13,200	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	16,400	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	18,400	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	21,000	4	12,700

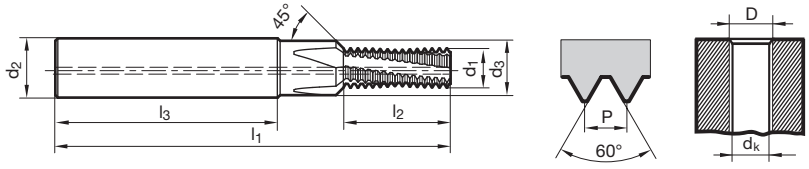
Frese a filettare con fase di svasatura per filettatura UNF

2xD

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3519	3537

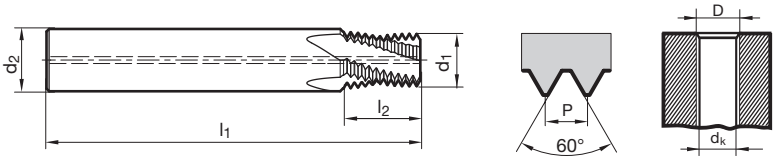
D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	14,100	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	17,500	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	20,600	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	24,800	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	27,300	4	12,700

Frese a filettare senza fase di svasatura per filettatura NPT

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3753	3754

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

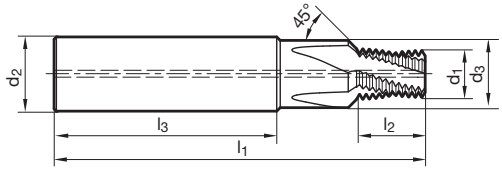
Frese a filettare con fase di svasatura per filettatura NPT

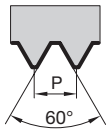
P	•	
M	•	
K	•	
N	•	
S	•	
H	≤55	

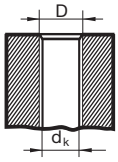
Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3520	3538

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

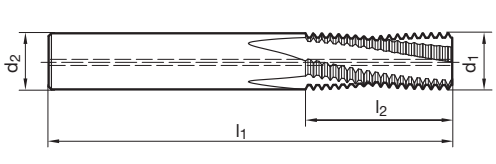
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

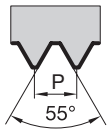
2xD

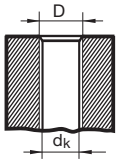
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	**Int. in MD**	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3745** **3748**

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	21,300	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	28,700	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	35,400	4	16,662

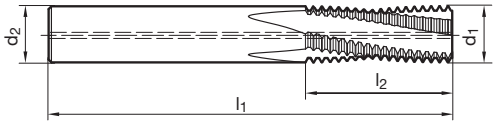
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

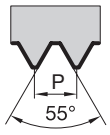
2,5xD

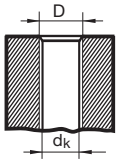
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3746** **3750**

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	24,900	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	35,400	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	43,500	4	16,662

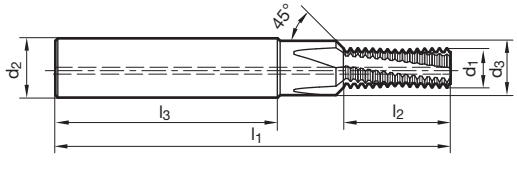
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

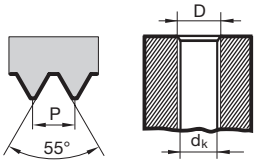
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 354

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW





Norma di fab. Articolo nr. **3514** **3529**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	15,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	22,100	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	27,400	4	16,662

Frese a filettare con fase di svasatura per filettatura Whitworth BSP

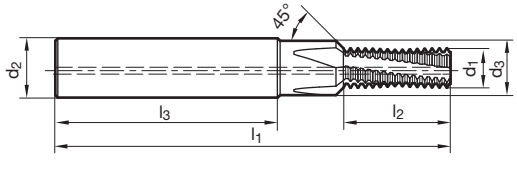
2xD

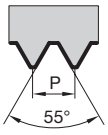
P	•
M	•
K	•
N	•
S	•
H	≤55

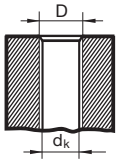
Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3515** **3533**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	21,300	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	28,700	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	35,400	4	16,662

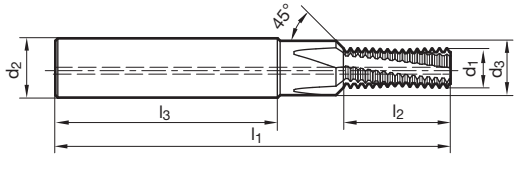
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

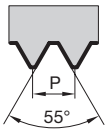
2,5xD

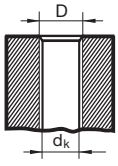
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3765	3766

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	24,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	35,400	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	43,500	4	16,662

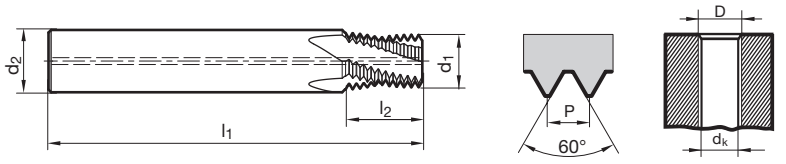
Frese a filettare senza fase di svasatura per filettatura NPTF

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 354



Norma di fab. Articolo nr. **3756** **3757**

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

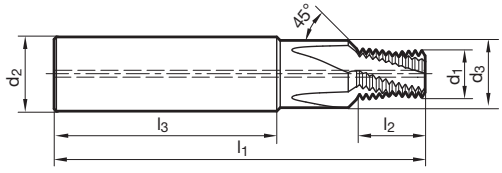
Frese a filettare con fase di svasatura per filettatura NPTF

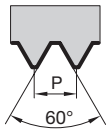
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

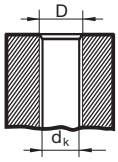
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 354

NEW







Norma di fab.	Articolo nr.	3521	3539

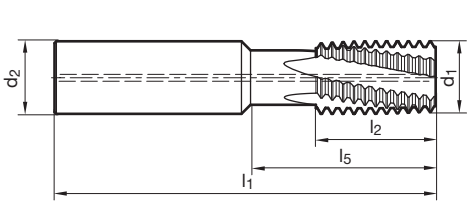
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

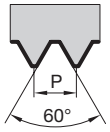
Fresa a filettare per impieghi multipli per filettatura metrica ISO

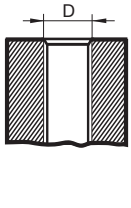
Materiale tagliente	**Int. in MD**		
Superficie	C	C	○
Tipo	TMU SP	TMU SP	TMU SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355







Norma di fab.	Articolo nr.	3541	3556	3523

P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 10	7,950	8,000	64,000		20,000	4	8,050
1,000	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,100
1,250	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,125
1,500	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,150
1,000	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,150
1,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,100
1,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,200
3,000	≥ 24	17,950	18,000	102,000	50,000	33,000	5	18,300
1,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,100
1,500	≥ 26	19,950	20,000	105,000	50,000	33,000	5	20,150
2,000	≥ 27	19,950	20,000	105,000	50,000	33,000	5	20,200
2,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,250
3,000	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,300
3,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,350

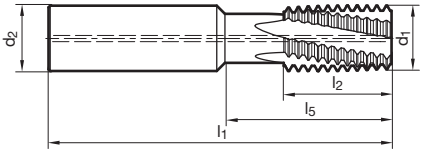
Fresa esterne a filettare

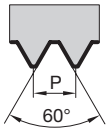
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

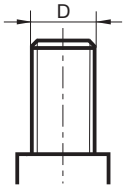
NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355







Norma di fab. Articolo nr. **4162** **4163**

P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 3	9,950	10,000	70,000	25,000	16,000	4	10,050
0,750	≥ 5	9,950	10,000	70,000	25,000	16,000	4	10,075
1,000	≥ 6	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 8	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 10	11,950	12,000	80,000	31,000	20,000	4	12,150
1,500	≥ 10	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 14	15,950	16,000	90,000	40,000	25,000	5	16,200
2,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,250
3,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,300

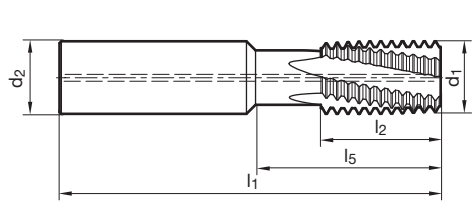
Fresa a filettare per impieghi multipli per filettatura UN

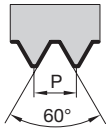
Materiale tagliente	**Int. in MD**	
Superficie	C	C
Tipo	TMU UN	TMU UN
Refrigerazione interna		
Forma del gambo	HA	HB

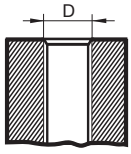
NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 355







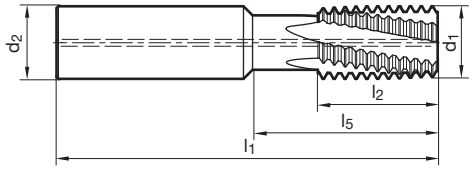
Norma di fab.	Articolo nr.	3595	3596

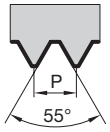
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
10,000	≥ 3/4	11,950	12,000	80,000	31,000	20,000	4	12,100
16,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,160
18,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,180
20,000	≥ 11/16	11,950	12,000	80,000	31,000	20,000	4	12,200
24,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,240
12,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,120
14,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,140
16,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,160
18,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,180
20,000	≥ 13/16	15,950	16,000	90,000	40,000	25,000	5	16,200
7,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,070
8,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,080
12,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,120
14,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,140
16,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,160

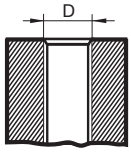
Fresa a filettare per impieghi multipli per filettatura Whitworth BSP

P	•	Dati di taglio a pag. 355
M	•	
K	•	
N	•	
S	•	
H	≤55	

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMU SP	TMU SP	TMU SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab.	Articolo nr.	3542	3557	3524

P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
19,000	≥ 1/4	9,950	10,000	70,000	25,000	16,000	4	10,190
14,000	≥ 1/2	15,950	16,000	90,000	40,000	25,000	5	16,140
11,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,110

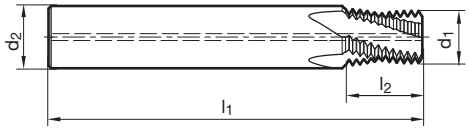
Fresa a filettare per impieghi multipli per filettatura NPT

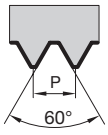
P	•
M	•
K	•
N	•
S	•
H	≤55

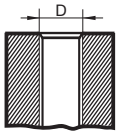
Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







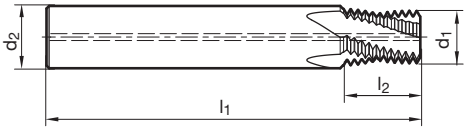
Norma di fab.	Articolo nr.	3768	3769

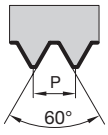
P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

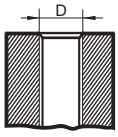
Fresa a filettare per impieghi multipli per filettatura NPTF

P	•	Dati di taglio a pag. 355
M	•	
K	•	
N	•	
S	•	
H	≤55	

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3772	3773

P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

Micro frese a filettare

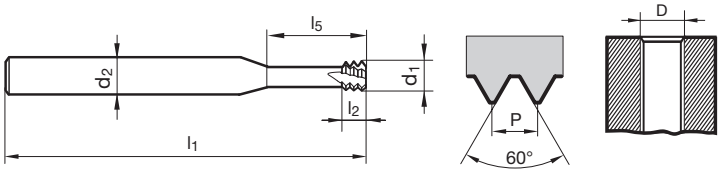
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 355

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4226**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,6	0,350	1,200	3,000	39,000	1,100	4,800	3	1,600
M1,8	0,350	1,400	3,000	39,000	1,100	5,400	3	1,800
M2	0,400	1,550	3,000	39,000	1,200	6,000	4	2,000
M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4	2,500
M3	0,500	2,400	6,000	58,000	1,500	9,500	4	3,000
M3,5	0,600	2,800	6,000	58,000	1,800	11,000	4	3,500
M4	0,700	3,200	6,000	58,000	2,100	12,500	4	4,000
M5	0,800	4,000	6,000	58,000	2,400	16,000	4	5,000
M6	1,000	4,800	6,000	58,000	3,000	20,000	4	6,000
M8	1,250	5,950	6,000	58,000	3,800	24,000	4	8,000
M10	1,500	7,800	8,000	73,000	4,500	33,000	4	10,000
M12	1,750	9,000	10,000	84,000	5,300	38,000	4	12,000
M16	2,000	11,800	10,000	84,000	6,000	35,000	5	16,000

Micro frese a filettare

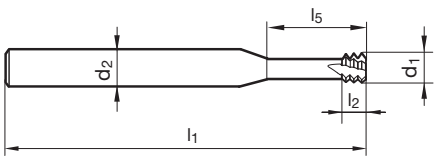
3xD

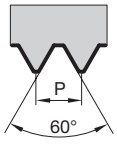
P	•
M	•
K	•
N	•
S	•
H	

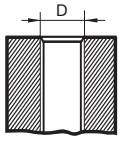
Dati di taglio a pag. 355

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP G
filetti	3,0
Forma del gambo	HA

NEW







Norma di fab. Articolo nr. **4228**

D	P	d1	d2	l1	l2	l5	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	6,200	8,000	64,000	2,700	19,500	4	9,728
G3/8	19,000	9,950	10,000	73,000	4,000	25,000	4	16,662
G7/8	14,000	11,950	12,000	84,000	5,400	37,000	4	30,201
G2	11,000	15,950	16,000	105,000	6,900	44,000	5	59,614

Micro frese a filettare

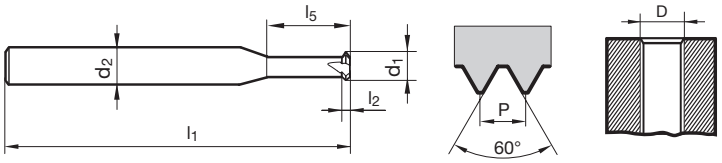
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 355

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M/MF
filetti	1,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4225**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,4 - M1,8	0,350	1,050	3,000	39,000	0,400	3,800	3	1,800
M2 - M2,4	0,400	1,500	3,000	39,000	0,400	7,000	3	2,400
M2,5 - M3	0,500	2,000	3,000	39,000	0,500	9,000	4	3,000
M3,5 - M4,5	0,750	2,800	6,000	58,000	0,800	14,000	4	4,500
M5 - M7	1,000	4,000	6,000	58,000	1,000	19,000	4	7,000
M8 - M10	1,500	6,400	8,000	64,000	1,500	24,000	5	10,000

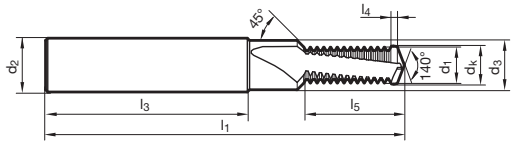
Frese a filettare e forare per filettatura metrica ISO

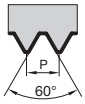
1,5xD

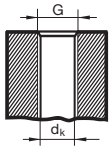
P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕		✕	
Forma del gambo	HA	HA	HA	HA







Norma di fab.	Articolo nr.	3774	3775	3776	3777

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,400	6,000	3,400	2,500	48,000	36,000	0,500	5,500	2	3,000
M4	0,700	3,200	6,000	4,500	3,300	48,000	36,000	0,700	6,900	2	4,000
M4	0,700	3,200	6,000	4,500	4,000	48,000	36,000	0,700	6,900	2	4,000
M5	0,800	4,000	6,000	5,500	4,200	54,000	36,000	0,800	8,800	2	5,000
M5	0,800	4,000	6,000	5,500	5,000	54,000	36,000	0,800	8,800	2	5,000
M6	1,000	4,750	8,000	6,600	5,000	62,000	36,000	1,000	10,900	2	6,000
M6	1,000	4,750	8,000	6,600	6,000	62,000	36,000	1,000	10,900	2	6,000
M8	1,250	6,350	10,000	9,000	6,800	74,000	40,000	1,250	13,700	2	8,000
M8	1,250	6,350	10,000	9,000	8,000	74,000	40,000	1,250	13,700	2	8,000
M10	1,500	7,950	12,000	11,000	10,000	80,000	45,000	1,500	18,000	2	10,000
M10	1,500	7,950	12,000	11,000	8,500	80,000	45,000	1,500	18,000	2	10,000
M12	1,750	9,950	14,000	13,500	10,200	90,000	45,000	1,500	20,900	2	12,000
M12	1,750	9,950	14,000	13,500	12,000	90,000	45,000	1,500	20,900	2	12,000
M14	2,000	11,200	16,000	15,500	12,000	102,000	48,000	1,500	23,700	2	14,000
M14	2,000	11,200	16,000	15,500	14,000	102,000	48,000	1,500	23,700	2	14,000
M16	2,000	13,200	18,000	17,500	16,000	102,000	48,000	1,500	26,000	2	16,000
M16	2,000	13,200	18,000	17,500	14,000	102,000	48,000	1,500	26,000	2	16,000

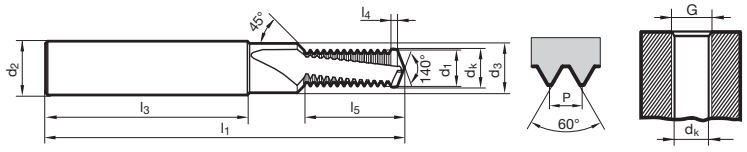
Frese a filettare e forare per filettatura metrica ISO

2xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕		✕	
Forma del gambo	HA	HA	HA	HA



Norma di fab.	Articolo nr.	3778	3779	3780	3781

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,400	6,000	3,400	2,500	48,000	36,000	0,500	7,000	2	3,000
M4	0,700	3,200	6,000	4,500	3,300	48,000	36,000	0,700	9,000	2	4,000
M4	0,700	3,200	6,000	4,500	4,000	48,000	36,000	0,700	9,000	2	4,000
M5	0,800	4,000	6,000	5,500	4,200	54,000	36,000	0,800	11,200	2	5,000
M5	0,800	4,000	6,000	5,500	5,000	54,000	36,000	0,800	11,200	2	5,000
M6	1,000	4,750	8,000	6,600	5,000	62,000	36,000	1,000	13,900	2	6,000
M6	1,000	4,750	8,000	6,600	6,000	62,000	36,000	1,000	13,900	2	6,000
M8	1,250	6,350	10,000	9,000	6,800	74,000	40,000	1,250	18,700	2	8,000
M8	1,250	6,350	10,000	9,000	8,000	74,000	40,000	1,250	18,700	2	8,000
M10	1,500	7,950	12,000	11,000	8,500	80,000	45,000	1,500	22,500	2	10,000
M10	1,500	7,950	12,000	11,000	10,000	80,000	45,000	1,500	22,500	2	10,000
M12	1,750	9,950	14,000	13,500	10,200	90,000	45,000	1,500	26,100	2	12,000
M12	1,750	9,950	14,000	13,500	12,000	90,000	45,000	1,500	26,100	2	12,000
M14	2,000	11,200	16,000	15,500	12,000	102,000	48,000	1,500	31,700	2	14,000
M14	2,000	11,200	16,000	15,500	14,000	102,000	48,000	1,500	31,700	2	14,000
M16	2,000	13,200	18,000	17,500	16,000	102,000	48,000	1,500	36,000	2	16,000
M16	2,000	13,200	18,000	17,500	14,000	102,000	48,000	1,500	36,000	2	16,000

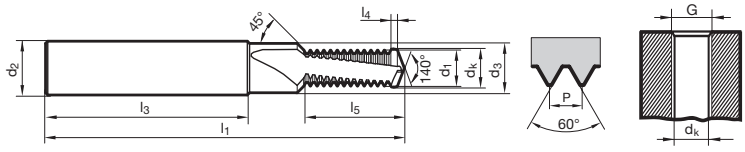
Frese a filettare e forare per filettatura metrica ISO

2,5xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕	≡	✕	≡
Forma del gambo	HA	HA	HA	HA



Norma di fab.	Articolo nr.	3782	3783	3784	3785

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,400	6,000	3,400	2,500	48,000	36,000	0,500	8,500	2	3,000
M4	0,700	3,200	6,000	4,500	3,300	48,000	36,000	0,700	11,100	2	4,000
M5	0,800	4,000	6,000	5,500	4,200	54,000	36,000	0,800	13,600	2	5,000
M6	1,000	4,750	8,000	6,600	5,000	62,000	36,000	1,000	16,900	2	6,000
M8	1,250	6,350	10,000	9,000	6,800	74,000	40,000	1,250	22,500	2	8,000
M10	1,500	7,950	12,000	11,000	8,500	80,000	45,000	1,500	27,000	2	10,000
M12	1,750	9,950	14,000	13,500	10,200	90,000	45,000	1,500	31,400	2	12,000
M14	2,000	11,200	16,000	15,500	12,000	102,000	48,000	1,500	39,700	2	14,000
M16	2,000	13,200	18,000	17,500	14,000	102,000	48,000	1,500	46,000	2	16,000

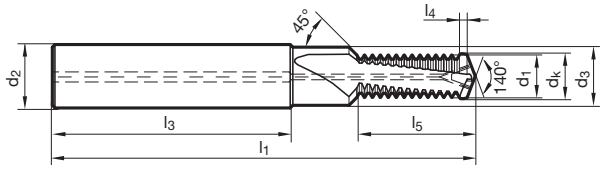
Frese a filettare e forare per filettatura metrica ISO passo fine

1,5xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD		
Superficie	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna			
Forma del gambo	HA	HA	HA



Norma di fab.	Articolo nr.	3787	3788	3789

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,200	6,000	4,500	3,500	48,000	36,000	0,500	6,600	2	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,500	54,000	36,000	0,500	8,300	2	5,003
M 6 X0,75	0,750	4,750	8,000	6,600	5,200	62,000	36,000	0,750	9,900	2	6,004
M8 x 0,75	0,750	6,350	10,000	9,000	7,200	74,000	40,000	0,750	14,100	2	8,004
M8 x 1	1,000	6,350	10,000	9,000	7,000	74,000	40,000	1,000	14,300	2	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,000	80,000	45,000	1,000	16,600	2	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,800	80,000	45,000	1,250	16,600	2	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,000	90,000	45,000	1,000	20,000	2	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,500	90,000	45,000	1,500	21,400	2	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,500	102,000	48,000	1,500	23,300	2	14,007
M16 x 1,5	1,500	13,200	18,000	17,500	14,500	102,000	48,000	1,500	26,600	2	16,007

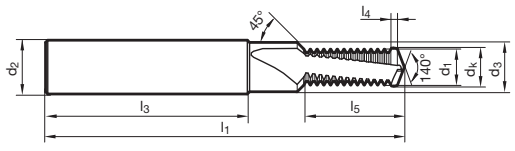
Frese a filettare e forare per filettatura metrica ISO passo fine

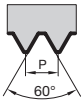
2xD

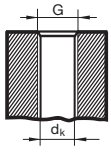
P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕		✕	
Forma del gambo	HA	HA	HA	HA







Norma di fab.	Articolo nr.	3790	3791	3792	3793

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,200	6,000	4,500	3,500	48,000	36,000	0,500	8,600	2	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,500	54,000	36,000	0,500	10,800	2	5,003
M 6 X0,75	0,750	4,750	8,000	6,600	5,200	62,000	36,000	0,750	12,900	2	6,004
M8 x 0,75	0,750	6,350	10,000	9,000	7,200	74,000	40,000	0,750	17,100	2	8,004
M8 x 1	1,000	6,350	10,000	9,000	7,000	74,000	40,000	1,000	17,300	2	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,000	80,000	45,000	1,000	21,600	2	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,800	80,000	45,000	1,250	21,600	2	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,000	90,000	45,000	1,000	26,000	2	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,500	90,000	45,000	1,500	27,400	2	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,500	102,000	48,000	1,500	30,800	2	14,007
M16 x 1,5	1,500	13,200	18,000	17,500	14,500	102,000	48,000	1,500	34,100	2	16,007

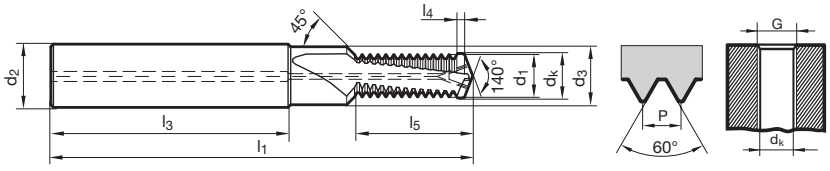
Frese a filettare e forare per filettatura UNC

2xD

P	
M	
K	•
N	•
S	
H	

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	◯	C
Tipo	DTMC SP	DTMC SP
Refrigerazione interna		
Forma del gambo	HA	HA



Norma di fab.	Articolo nr.	4138	4139

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	1,270	5,000	8,000	6,600	5,100	62,000	36,000	1,300	14,900	2	6,350
5/16 - 18	1,411	6,250	10,000	9,000	6,600	74,000	40,000	1,500	18,100	2	7,938
3/8 - 16	1,587	7,500	12,000	11,000	8,000	80,000	45,000	1,500	22,100	2	9,525
7/16 - 14	1,814	8,800	12,000	11,000	9,400	80,000	45,000	1,500	25,000	2	11,113
1/2 - 13	1,954	10,200	14,000	13,500	10,800	90,000	45,000	1,500	26,900	2	12,700
9/16 - 12	2,117	11,600	16,000	15,500	12,200	102,000	48,000	1,500	31,200	2	14,288
5/8 - 11	2,309	13,000	18,000	17,500	13,500	102,000	48,000	1,500	36,300	2	15,875

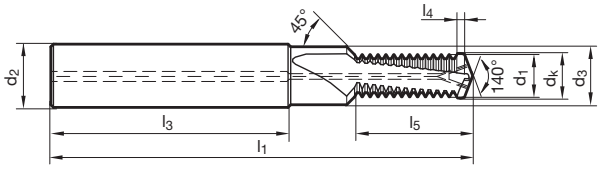
Frese a filettare e forare per filettatura UNF

2xD

P	
M	
K	•
N	•
S	
H	

Dati di taglio a pag. 355

Materiale tagliente	Int. in MD	
Superficie	◯	C
Tipo	DTMC SP	DTMC SP
Refrigerazione interna		
Forma del gambo	HA	HA

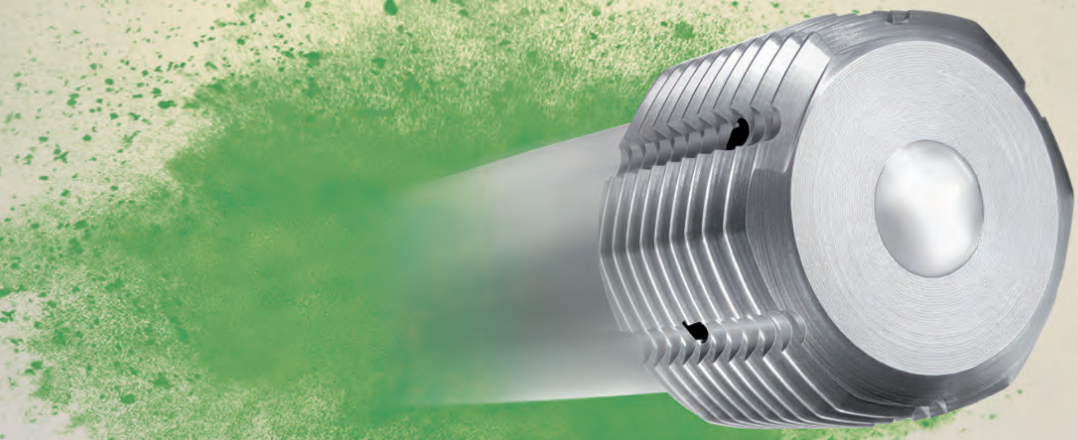


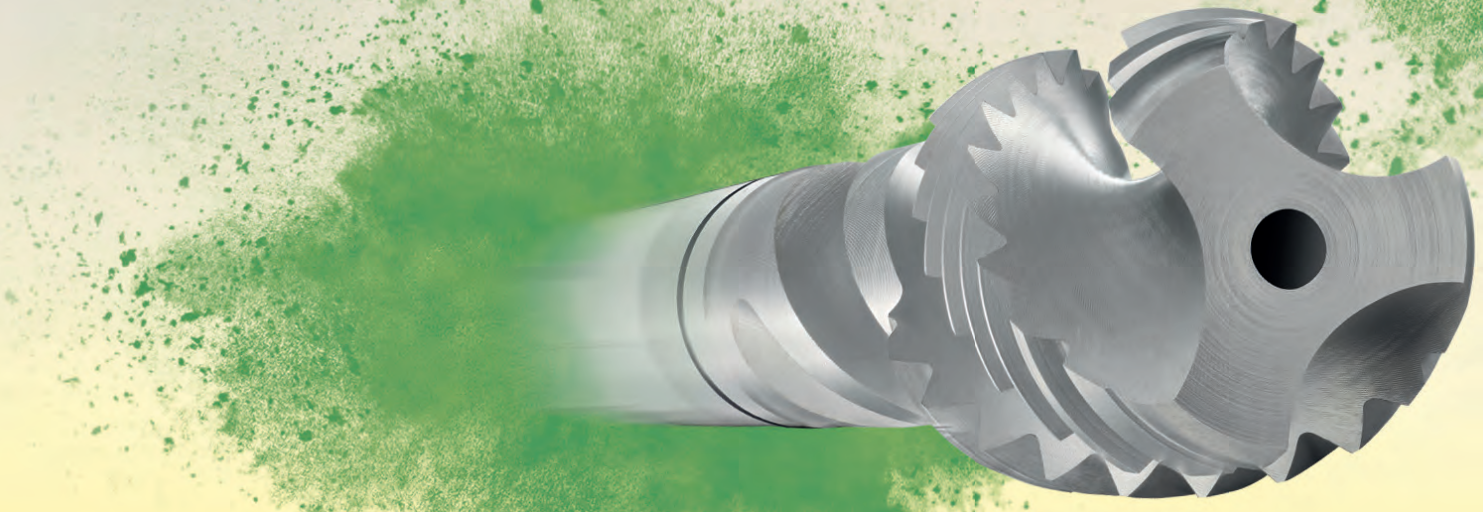
Norma di fab.	Articolo nr.	4140	4141

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	0,907	5,000	8,000	6,600	5,500	62,000	36,000	1,000	12,800	2	6,350
5/16 - 24	1,058	6,250	10,000	9,000	6,900	74,000	40,000	1,100	18,200	2	7,938
3/8 - 24	1,058	7,950	12,000	11,000	8,500	80,000	45,000	1,100	20,600	2	9,525
7/16 - 20	1,270	9,500	12,000	11,000	9,900	80,000	45,000	1,300	24,700	2	11,113
1/2 - 20	1,270	10,200	14,000	13,500	11,500	90,000	45,000	1,300	27,500	2	12,700
9/16 - 18	1,411	11,600	16,000	15,500	12,900	102,000	48,000	1,500	30,600	2	14,288
5/8 - 18	1,411	13,000	18,000	17,500	14,500	102,000	48,000	1,500	33,700	2	15,875

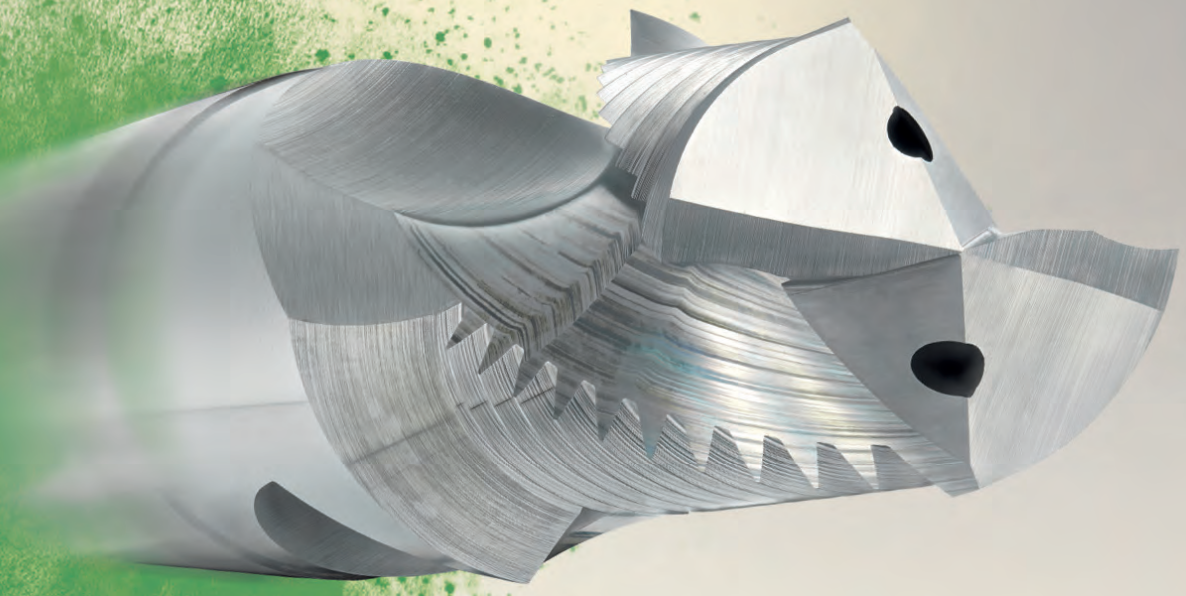
N

Alluminio, leghe di ghisa,
alluminio ad alta resistenza, leghe di rame
e metalli non ferrosi





ALLU MINIO



Alluminio, metalli non ferrosi e plastica

MATERIALI NON FERROSI

N ALLUMINIO, NE, PLASTICA

	M		MF	
	ISO 2/6H	ISO 3/6G	ISO 2/6H	ISO 3/6G
Alluminio ≤ 6% Si	No 1 M2 - M24 per art. 805/817 da pag. 472			
	M2 - M30 per art. 1870/1872 da pag. 473		No 1 M5x0,5 - M24x2 per art. 1873 da pag. 487	
Alluminio ≥ 6% Si	No 1 M3 - M20 per art. 1858/1859 da pag. 476		No 1 M5x0,5 - M20x1,5 per art. 1861/1860 da pag. 491	
truciolo corto non ferrosi	No 1 M3 - M10 per art. 800 da pag. 482	No 1 M3 - M10 per art. 1084 da pag. 482		
	No 1 M3 - M20 per art. 1858/1859 da pag. 476		No 1 M5x0,5 - M20x1,5 per art. 1861/1860 da pag. 491	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2B	2B	-

FORI PASSANTI

HSS-E, lucido, forma B

No 1
Nr. 4 - 1
per art. 1980/1985
da pag. 498

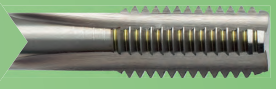
No 1
Nr. 10 - 3/8
per art. 1990
da pag. 500

No 1
G1/16 - G7/8
per art. 967
da pag. 502

Form B, lucido

METALLO DURO

Metallo duro, lucido, forma C



HSS-E, lucido, forma E

METALLO DURO

Metallo duro, lucido, forma C

Alluminio, metalli non ferrosi e plastica

N ALUMINIUM, NE, PLASTICA

	M		MF	
	ISO 2/6H	ISO 3/6G	ISO 2/6H	ISO 3/6G
Alluminio ≤ 6% Si	No 1 M1,6 - M24 per art. 812/824 da pag. 474			
	M3 - M30 per art. 814/825 da pag. 475			
Alluminio ≥ 6% Si	No 1 M5 - M20 per art. 302/297 da pag. 479		No 1 M5x0,5 - M16x1,5 per art. 1090 da pag. 496	
	No 1 M3 - M20 per art. 969/1883 da pag. 476		No 1 M5x0,5 - M20x1,5 per art. 972/974 da pag. 491	
truciolo corto non ferrosi	No 1 M3 - M10 per art. 800 da pag. 482	No 1 M3 - M10 per art. 1084 da pag. 482		
	No 1 M3 - M20 per art. 969/1883 da pag. 476		No 1 M5x0,5 - M20x1,5 per art. 972/974 da pag. 491	

No 1 utensile ideale

QUICKFINDER

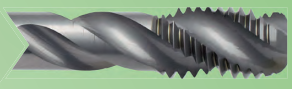
UNC	UNF	G
2B	2B	-

FORI CIECHI

HSS-E, lucido, forma C

No 1
Nr. 2 - 7/8
per art. 1981/1986
da pag. 499

No 1
Nr. 1/4 - 1
per art. 2867
da pag. 501



HSS-E, lucido, forma C

Alluminio, metalli non ferrosi e plastica

HSS-E-PM, TiCN, forma C

METALLO DURO

Metallo duro, lucido, forma C

HSS-E, lucido, forma E

METALLO DURO

Metallo duro, lucido, forma C

N ALUMINIUM, NE, PLASTICA

senza canalini di lub.

con canalini di lubr.

con refrigerazione interna

M

ISO 2/6HX

No 1
M1 - M20
per art. 1347/1566
da pag. 506

M1 - M20
per art. 921/925
da pag. 506

M3 - M39
per art. 919/923
da pag. 510

No 1
M3 - M39
per art. 2012/2013
da pag. 510

No 1
M5 - M20
per art. 2515
da pag. 517

No 1
M3 - M20
per art. 1725/1727
da pag. 516

No 1
M3 - M20
per art. 1972/1931
da pag. 522

ISO 3/6GX

No 1
M2 - M20
per art. 1565/1567
da pag. 508

M2 - M10
per art. 920
da pag. 507

No 1
M3 - M39
per art. 918/922
da pag. 510

No 1
M5 - M20
per art. 4146
da pag. 520

No 1
M3 - M20
per art. 1726/1728
da pag. 519

MF

ISO 2/6HX

No 1
M8x1 - M10x1
per art. 1568
da pag. 526

M8x1 - M20x1,5
per art. 929
da pag. 524

M6x0,75 - M24x1,5
per art. 1275/927
da pag. 530

No 1
M6x0,75 - M20x1,5
per art. 2008
da pag. 531

No 1
M8x1 - M16x1,5
per art. 4147
da pag. 537

No 1
M8x1 - M24x1,5
per art. 1729/1731
da pag. 536

No 1
M10x1 - M24x1,5
per art. 1581
da pag. 541

ISO 3/6GX

No 1
M8x1 - M24x1,5
per art. 1569/1580
da pag. 529

M8x1 - M18x1,5
per art. 928
da pag. 528

No 1
M8x1 - M20x1,5
per art. 1277/926
da pag. 532

No 1
M8x1 - M16x1,5
per art. 4151
da pag. 539

No 1
M8x1 - M24x1,5
per art. 1730/1732
da pag. 538

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2BX	2BX	-

FORI PASSANTI
FORI CIECHI

HSS-E-PM, Carbo, forma C

No 1
Nr. 4 - 7/8
per art. 2273/2274
da pag. 542

No 1
Nr. 4 - 1
per art. 1283/2275 da
pag. 543

No 1
G1/16 - G1 1/4
per art. 966
da pag. 544

HSS-E, TiN, forma C

No 1
Nr. 4 - 7/8
per art. 1582/1583
da pag. 542

No 1
Nr. 4 - 1
per art. 1584/1585
da pag. 543

No 1
G1/16 - G3/4
per art. 1586
da pag. 545

HSS-E, TiN, forma C

HSS-E, TiCN, forma C

FORMA C

No 1
G1/16 - G1
per art. 4152
da pag. 546

HSS-E, Carbo, forma C

FORMA E

HSS-E-PM, TiN, forma E

METALLO DURO

Metallo duro, TiAlN, forma C

Alluminio, metalli non ferrosi e plastica

N ALUMINIUM, NE, PLASTICA

	M UNIVERSALE	MF UNIVERSALE
1,5xD	No 1 M3 - M20 per art. 3510 da pag. 551	No 1 M4x0,5 - M16x1,5 per art. 3512 da pag. 554
2xD	No 1 M3 - M20 per art. 3511 da pag. 552	No 1 M4x0,5 - M16x1,5 per art. 3513 da pag. 555
2,5xD	No 1 M3 - M20 per art. 3759 da pag. 553	No 1 M4x0,5 - M16x1,5 per art. 3762 da pag. 556
3xD	No 1 M1,6 - M16 per art. 4226 da pag. 578	
universale	No 1 Ø8xP0,5 - Ø20xP3,5 per art. 3523 da pag. 572	No 1 Ø8xP0,5 - Ø20xP3,5 per art. 3523 da pag. 572

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
UNIVERSALE	UNIVERSALE	-

FORI PASSANTI
FORI CIECHI

Alluminio, metalli non ferrosi e plastica

No 1
1/4 - 1/2
per art. 3516
da pag. 558

No 1
1/4 - 1/2
per art. 3518
da pag. 561

No 1
1/8 - 3/8
per art. 3514
da pag. 565

Metallo duro, lucido

No 1
1/4 - 1/2
per art. 3517
da pag. 559

No 1
1/4 - 1/2
per art. 3519
da pag. 562

No 1
1/8 - 3/8
per art. 3515
da pag. 566

Metallo duro, lucido

Metallo duro, TiCN

Metallo duro, TiCN

No 1
Ø10xUN24 -
Ø20xUN7
per art. 3595
da pag. 574

No 1
Ø10xUN24 -
Ø20xUN7
per art. 3595
da pag. 574

No 1
Ø10xG19 -
Ø20xG11
per art. 3542
da pag. 575

Metallo duro, lucido

N ALUMINIUM, NE, PLASTICA

	M	MF
	UNIVERSALE	**UNIVERSALE**
1,5xD	No 1 M3 - M16 per art. 3775 da pag. 581	No 1 M4x0,5 - M16x1,5 per art. 3787 da pag. 584
	M3 - M16 per art. 3774 da pag. 581	
2xD	No 1 M3 - M16 per art. 3779 da pag. 582	No 1 M4x0,5 - M16x1,5 per art. 3791 da pag. 585
	M3 - M16 per art. 3778 da pag. 582	M4x0,5 - M16x1,5 per art. 3790 da pag. 585
2,5xD	No 1 M3 - M16 per art. 3783 da pag. 583	
	M3 - M16 per art. 3782 da pag. 583	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
UNIVERSALE	UNIVERSALE	-

FORI PASSANTI
FORI CIECHI

Metallo duro, lucido

Metallo duro, lucido

Metallo duro, lucido

Metallo duro, lucido

Metallo duro, lucido

Metallo duro, lucido

Alluminio, metalli non ferrosi e plastica

N

BUSSOLA

N

ALLUMINIO, METALLI NON FERROSI, MAT. PLASTICHE

FORI PASSANTI

	Profondità filettatura		≤3xD				
	Materiale tagliente		HSS-E			Int. in MD	
	Tipo/forma		Al / B	VA / B	MS / E	H /C	NL15 /D
	Superficie		○	○	○	○	○
	Erogazione del liquido di raffredd.		☒	☒	☒	radiale	radiale
	Tolleranza codolo		h9	h9	h9	h9	h9
	Filettatura	**Tolleranza**	**Articolo nr. / pagina**				
	M	4H					
		6H	805/817 472	1870/1872 473	800 482		
		6HX				1858/1859 476	
		6G			1084 482		
	MF	6H		1873 487			
		6HX				1861/1860 491	975/976 495
		6G					
	UNC	2B		1980/1985 498			
		2BX					
	UNF	2B		1990 500			
		2BX					
	G			967 502			
	BSW						
	NPT						
	NPTF						
	EG M	6H Mod.					
	MJ	4HX					
	MJF	4HX					
	UNJC	3BX					
	UNJF	3BX					
	PG						
		lubrificante adatto	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
□ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min				
N	alluminio e leghe	≤450 N/mm²	Al99,5H AlMgSi1 AlZn4,5Mg	3.0250 32315 3.4335	**15**	**15**	-	-	-
	leghe di alluminio e ghisa	≤600 N/mm²	GD-AlSi5Cu1Mg GD-AlSi8Cu3 G-AlSi9Mg G-AlSi12	3.2134 3.2162 3.2373 3.2581	-	-	-	**50**	**50**
	leghe di magnesio	≤500 N/mm²	GDMgAl8Zn1	3.5812.08	-	-	-	**50**	**50**
	Rame e leghe	truciolo lungo	CuZn20 CuZn37Pb0,5	2.0250 2.0332	**15**	**15**	-	-	-
		truciolo corto	CuZn39Pb2 CuZn43Pb2	2.0380 2.0410	-	-	**20**	**50**	**50**
	Rame in leghe speciali	≤1400 N/mm²	Ampco		-	-	2	-	-

N

ALLUMINIO, METALLI NON FERROSI, MAT. PLASTICHE

FORI CIECHI

Profondità filettatura		≤3xD			
Materiale tagliente		HSS-E			
Tipo/forma		Al R45 / C	NR40 / C	MS / E	NAZ / E
Superficie		○	○	○	A+M
Erogazione del liquido di raffredd.		☒	☒	☒	assiale
Tolleranza codolo		h9	h9	h9	h9
Filettatura	**Tolleranza**	**Articolo nr. / pagina**			
M	4H				
	6H	812/824 474	814/825 475	800 482	2899 484
	6HX				
	6G			1084 482	
MF	6H		936 488		
	6HX				
	6G				
UNC	2B		1981/1986 499		
	2BX				
UNF	2B		2867 501		
	2BX				
G			939 503		
BSW					
NPT					
NPTF					
EG M	6H Mod.				
MJ	4HX				
MJF	4HX				
UNJC	3BX				
UNJF	3BX				
PG					
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min			
N	alluminio e leghe	≤450 N/mm²	Al99,5H AlMgSi1 AlZn4,5Mg	3.0250 32315 3.4335	**15**	**15**	-	-
	leghe di alluminio e ghisa	≤600 N/mm²	GD-AlSi5Cu1Mg GD-AlSi8Cu3 G-AlSi9Mg G-AlSi12	3.2134 3.2162 3.2373 3.2581	-	-	-	-
	leghe di magnesio	≤500 N/mm²	GDMgAl8Zn1	3.5812.08	-	-	-	**20**
	Rame e leghe	truciolo lungo	CuZn20 CuZn37Pb0,5	2.0250 2.0332	**15**	**15**	-	-
		truciolo corto	CuZn39Pb2 CuZn43Pb2	2.0380 2.0410	-	-	**20**	-
	Rame in leghe speciali	≤1400 N/mm²	Ampco		-	-	2	-

≤3xD

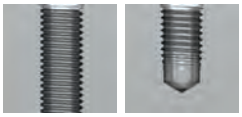
HSS-E		HSS-E-PM						Int. in MD		
H / C	H / C	H / C	H / E	NR50 / C	NR50 / C	VA R50/C	VA R50/C	H / C	H / E	HR 15 / C
C	C	C	C	S	C	S	C	○	○	○
assiale	assiale	assiale	assiale	☒	assiale	☒	assiale	assiale	assiale	assiale
h9	h9	h9	h9	h9	h9	h6	h6	h6	h6	h6
	extra lunghe					maschi syncro	maschi syncro			
Articolo nr. / pagina										
				767/1098 485	1152/1293 485					
778 480	779 481	302/297 479	1091/4165 479			761/763 486	1139/1142 486	969/1883 476	1008 477	971 478
				1100 489	1294 489					
		1090 496	1007 497			764 490	1144 490	972/974 491	1009 492	977/978 493
						4159 504				
○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

Alluminio, metalli non ferrosi e plastica

Velocità di taglio consigliata vc m / min										
-	-	-	-	-	-	-	-	-	-	-
25	**25**	**30**	**30**	**20**	**25**	**25**	**25**	**50**	**50**	**50**
-	-	-	-	-	-	-	-	**50**	**50**	**50**
-	-	-	-	**20**	**25**	**25**	**25**	-	-	-
-	-	-	-	-	-	-	-	**50**	**50**	**50**
-	-	-	-	-	-	-	-	-	-	-

N

ALLUMINIO, METALLI NON FERROSI, MAT. PLASTICHE



FORI PASSANTI E
FORI CIECHI

Profondità filettatura		1,5xD			
Materiale tagliente		HSS-E	HSS-E-PM		Int. in MD
Tipo/forma		N / C	N / C	N / C	N / C
Superficie		(S)	(S)	(Cb)	(S)
Erogazione del liquido di raffredd.		☒	☒	☒	assiale
Tolleranza codolo		h9	h9	h9	h6
Filettatura	**Tolleranza**	**Articolo nr. / pagina**			
M	4H				
	6H				
	6HX	921/925 506	1255/1256 506	1347/1556 506	2518 509
	6GX	920 507	903/952 508	1565/1567 508	
MF	6H				
	6HX	929 524	1257/1258 525	1568 526	
	6GX	928 528	1740 527	1569/1580 529	
UNC	2B				
	2BX	2273/2274 542			
UNF	2B				
	2BX	1283/2275 543			
G		966 544			
BSW					
NPT					
NPTF					
EG M	6H Mod.				
MJ	4HX				
MJF	4HX				
UNJC	3BX				
UNJF	3BX				
PG					
lubrificante adatto		○/●/△	○/●/△	○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
□ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min			
N	alluminio e leghe	≤450 N/mm²	Al99,5H AlMgSi1 AlZn4,5Mg	3.0250 32315 3.4335	20	20	**30**	**45**
	leghe di alluminio e ghisa	≤600 N/mm²	GD-AlSi5Cu1Mg GD-AlSi8Cu3 G-AlSi9Mg G-AlSi12	3.2134 3.2162 3.2373 3.2581	**20**	**20**	**30**	**45**
	leghe di magnesio	≤500 N/mm²	GDMgAl8Zn1	3.5812.08	-	-	-	-
	Rame e leghe	truciolo lungo	CuZn20 CuZn37Pb0,5	2.0250 2.0332	20	20	**30**	**45**
		truciolo corto	CuZn39Pb2 CuZn43Pb2	2.0380 2.0410	-	-	-	-
	Rame in leghe speciali	≤1400 N/mm²	Ampco		-	-	-	-

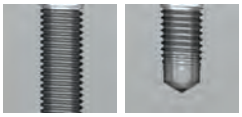
≤3xD

HSS-E					HSS-E-PM						Int. in MD	
N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / C	N / E	N / C	N / E
S	C	S+	C	Cb	S	S	S	S	C	S	C	C
☒	☒	assiale	radiale	assiale	☒	☒	radiale	assiale	radiale	assiale	radiale	radiale
h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h9	h6	h6
Articolo nr. / pagina												
919/923 510	2012/2013 510	2442/2444 513	2446/2448 513	2515 517	322/339 511	1266/1267 512	323/342 515	4143 521	1270/1271 516	1725/1727 516	1972/1931 522	1927 523
918/922 510		2443/2445 513	2447 514	4146 520					1713 518	1726/1728 519		
1275/927 530	2008 531			4147 537	333 533	1268/1269 534	338 535	4145 540	1272/1273 536	1729/1731 536	1581 541	
1277/926 532				4151 539					1715/1716 538	1730/1732 538		
1582/1583 542												
1584/1585 543												
1586 545				4152 546								
○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△	○/●/△

Velocità di taglio consigliata vc m / min												
20	**25**	20	**25**	**30**	20	20	20	20	**20**	20	**45**	**45**
20	**25**	**20**	**25**	**30**	**20**	**20**	**20**	**20**	**25**	**20**	**45**	**45**
-	-	-	-	-	-	-	-	-	-	-	-	-
20	25	20	25	30	20	20	20	20	20	20	**45**	**45**
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

N

ALLUMINIO, METALLI NON FERROSI, MAT. PLASTICHE



FORI PASSANTI E
FORI CIECHI

Profondità filettatura	≤2xD					≤2,5xD	
Materiale tagliente	Int. in MD						
Tipo	TM SP	TM SP	TM SP	TM SP	TM SP	TM SP	TM SP
Superficie	C	C	○	C	C	C	C
Erogazione del liquido di raffredd.	☒	☒	assiale	assiale	assiale	assiale	assiale
Forma del gambo	HA	HB	HA	HA	HB	HA	HB
Torsione	27°	27°	27°	27°	27°	27°	27°

Filettatura	Articolo nr. / pagina						
M	4132 549	4133 549	3734 548	3737 548	3743 548	3735 550	3740 550
MF			3734 548	3737 548	3743 548		
UNC				4134 557	4135 557		
UNF				4136 560	4137 560		
G				3745 563	3748 563	3746 564	3750 564
BSW							
NPT				3753 568	3754 568		
NPTF				3756 570	3757 570		
EG M	Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare						
MJ							
MJF							
UNJC							
UNJF							
PG							
lubrificante adatto	●/●	●/●	●/●	●/●	●/●	●/●	●/●

= No 1

○ = Aria
● = olio intero
● = olio solubile
△ = Incolla
□ = lubrificazione minimale (MQL)

parametri di taglio dettagliati a pag. 817

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	consigli di applicazione						
N	alluminio e leghe	≤450 N/mm²	Al99,5H AlMgSi1 AlZn4,5Mg	3.0250 32315 3.4335	+	+	++	+	+	+	+
	leghe di alluminio e ghisa	≤600 N/mm²	GD-AlSi5Cu1Mg GD-AlSi8Cu3 G-AlSi9Mg G-AlSi12	3.2134 3.2162 3.2373 3.2581	+ + ++ ++	+ + ++ ++	++ ++ + +	+ + ++ ++	+ + ++ ++	+ + ++ ++	+ + ++ ++
	leghe di magnesio	≤500 N/mm²	GDMgAl8Zn1	3.5812.08	++	++	+	++	++	++	++
	Rame e leghe	truciolo lungo	CuZn20 CuZn37Pb0,5	2.0250 2.0332	+	+	++	+	+	+	+
		truciolo corto	CuZn39Pb2 CuZn43Pb2	2.0380 2.0410	+	+	++	+	+	+	+
	Rame in leghe speciali	≤1400 N/mm²	Ampco		+	+	+	+	+	+	+

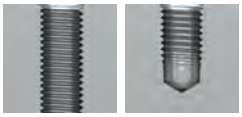
≤1,5xD			≤2xD			≤2,5xD	
Int. in MD							
TMC SP	TMC SP	TMC SP	TMC SP	TMC SP	TMC SP	TMC SP	TMC SP
○	C	C	○	C	C	C	C
assiale	assiale	assiale	assiale	assiale	assiale	assiale	assiale
HA	HA	HB	HA	HA	HB	HA	HB
10°	10°	10°	10°	10°	10°	27°	27°
Articolo nr. / pagina							
3510 551	3525 551	3543 551	3511 552	3526 552	3544 552	3759 553	3760 553
3512 554	3527 554	3545 554	3513 555	3528 555	3546 555	3762 556	3763 556
	3516 558	3534 558		3517 559	3535 559		
	3518 561	3536 561		3519 562	3537 562		
	3514 565	3529 565		3515 566	3533 566	3765 567	3766 567
	3520 569	3538 569					
	3521 571	3539 571					
Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare							
○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

parametri di taglio dettagliati a pag, 817

consigli di applicazione							
++	+	+	++	+	+	+	+
++	+	+	++	+	+	+	+
+	++	++	+	++	++	++	++
+	++	++	+	++	++	++	++
++	+	+	++	+	+	+	+
++	+	+	++	+	+	+	+
+	+	+	+	+	+	+	+

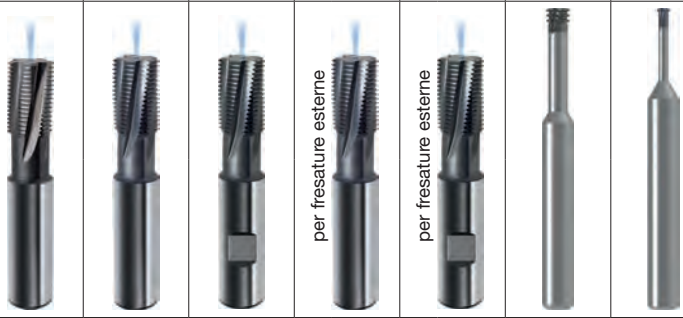
N

ALLUMINIO, METALLI NON FERROSI, MAT. PLASTICHE



FORI PASSANTI E
FORI CIECHI

Profondità filettatura	universale					≤3xD	
Materiale tagliente	Int. in MD						
Tipo	TMU SP	TMU SP	TMU SP	TMU SP	TMU SP	MTM 3 SP	MTM 1 SP
Superficie	○	C	C	C	C	C	C
Erogazione del liquido di raffredd.	assiale	assiale	assiale	assiale	assiale	☒	☒
Forma del gambo	HA	HA	HB	HA	HB	HA	HA
Torsione	15°	15°	15°	15°	15°	15°	15°



Filettatura	Articolo nr. / pagina						
M	3523 572	3541 572	3556 572	4162 573	4163 573	4226 578	4225 580
MF	3523 572	3541 572	3556 572	4162 573	4163 573		4225 580
UNC		3595 574	3596 574				
UNF		3595 574	3596 574				
G	3524 575	3542 575	3557 575	3542 575	3557 575	4228 579	
BSW							
NPT		3769 576	3768 576				
NPTF		3772 577	3773 577				
EG M	Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare						
MJ							
MJF							
UNJC							
UNJF							
PG							
lubrificante adatto	○/●	○/●	○/●	○/●	○/●	○/●	○/●

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
□ = lubrificazione minimale (MQL)

parametri di taglio dettagliati a pag 817

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	consigli di applicazione						
N	alluminio e leghe	≤450 N/mm²	Al99,5H AlMgSi1 AlZn4,5Mg	3.0250 32315 3.4335	++	+	+	+	+	++	++
	leghe di alluminio e ghisa	≤600 N/mm²	GD-AlSi5Cu1Mg GD-AlSi8Cu3 G-AlSi9Mg G-AlSi12	3.2134 3.2162 3.2373 3.2581	++ +	+ ++	+ ++	+ ++	+ ++	++ ++	++ ++
	leghe di magnesio	≤500 N/mm²	GDMgAl8Zn1	3.5812.08	+	++	++	++	++	++	++
	Rame e leghe	truciolo lungo	CuZn20 CuZn37Pb0,5	2.0250 2.0332	++	+	+	+	+	++	++
		truciolo corto	CuZn39Pb2 CuZn43Pb2	2.0380 2.0410	++	+	+	+	+	++	++
	Rame in leghe speciali	≤1400 N/mm²	Ampco		+	+	+	+	+	++	++

≤1,5xD				≤2xD				≤2,5xD			
Int. in MD											
DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP	DTMC SP
◯	◯	Ⓒ	Ⓒ	◯	◯	Ⓒ	Ⓒ	◯	◯	Ⓒ	Ⓒ
☒	radiale	☒	radiale	☒	radiale	☒	radiale	☒	radiale	☒	radiale
HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA
27°	27°	27°	27°	27°	27°	27°	27°	27°	27°	27°	27°
Articolo nr. / pagina											
3774 581	3775 581	3776 581	3777 581	3778 582	3779 582	3780 582	3781 582	3782 583	3783 583	3784 583	3785 583
	3787 584	3788 584	3789 584	3790 585	3791 585	3792 585	3793 585				
				4138 586			4139 586				
				4140 587			4141 587				
Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare											
◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●	◯/●

Alluminio, metalli non ferrosi e plastica

parametri di taglio dettagliati a pag. 817

consigli di applicazione											
++	++	+	+	++	++	+	+	++	++	+	+
++	++	+	+	++	++	+	+	++	++	+	+
+	+	++	++	+	+	++	++	+	+	++	++
+	+	++	++	+	+	++	++	+	+	++	++
++	++	+	+	++	++	+	+	++	++	+	+
++	++	+	+	++	++	+	+	++	++	+	+
+	+	+	+	+	+	+	+	+	+	+	+

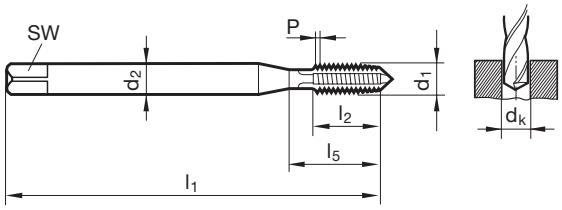
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	AI
Forma	B
Refrigerazione interna	⊠

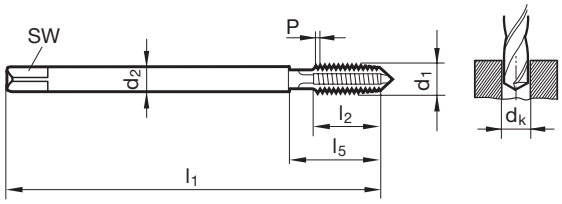
P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 463

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **805**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **817**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000

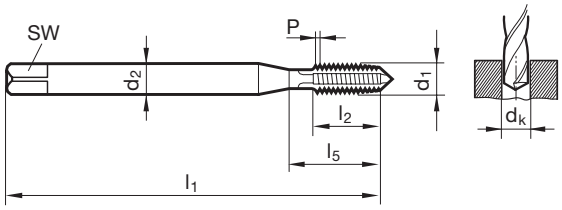
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	⊠

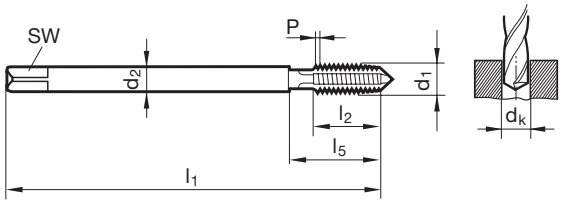
P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 463

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **1870**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **1872**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	10,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	12,000	21,000
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	30,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000

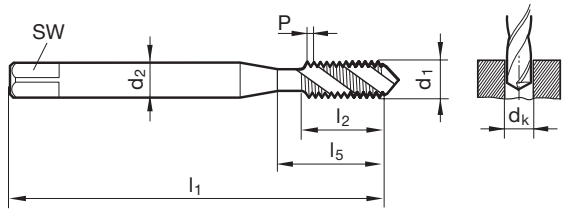
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	Al R45
Forma	C
Refrigerazione interna	

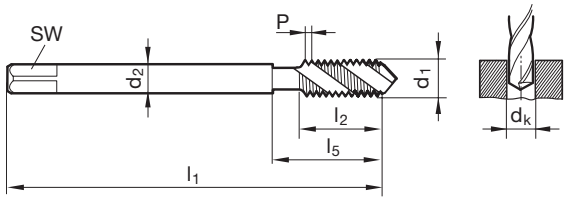
P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 464

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **812**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1,6	0,350	2,500	2,100	1,25	40,000	4,500	
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	5,000	14,500
M2,3	0,400	2,800	2,100	1,90	45,000	4,500	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	5,000	14,500
M2,6	0,450	2,800	2,100	2,15	50,000	5,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	7,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **824**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	2,200		2,50	56,000	6,000	18,000
M4	0,700	2,800	2,100	3,30	63,000	7,500	21,000
M5	0,800	3,500	2,700	4,20	70,000	8,500	25,000
M6	1,000	4,500	3,400	5,00	80,000	11,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	14,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000

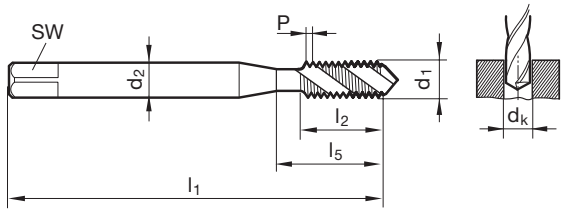
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	VA R40
Forma	C
Refrigerazione interna	⊠

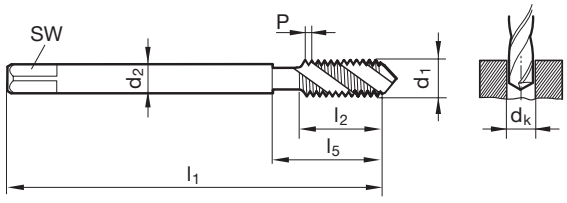
P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 464

DIN 371



DIN 376



DIN 2184-1 DIN 371 Articolo nr. **814**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 Articolo nr. **825**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	25,000	62,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000
M22	2,500	18,000	14,500	19,50	140,000	27,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	30,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	35,000	85,000

Maschi a macchina forati per fil. metr. ISO

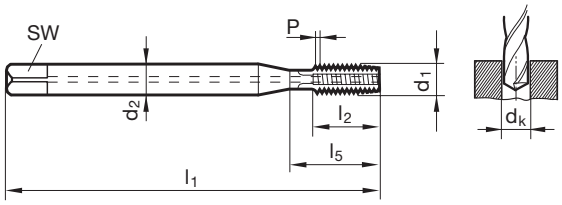
h6

P	
M	
K	•
N	≥ 7
S	
H	

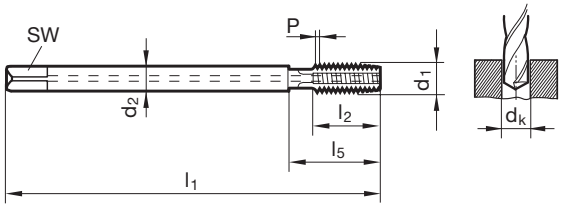
Dati di taglio a pag. 463/465

Materiale tagliente	Int. in MD	
Tolleranza sul Ø	6HX	6HX
Superficie	◯	◯
Tipo	H	H
Forma	C	C
Refrigerazione interna		

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **969** **1858**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	8,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	10,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	10,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	12,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	16,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	18,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1883** **1859**

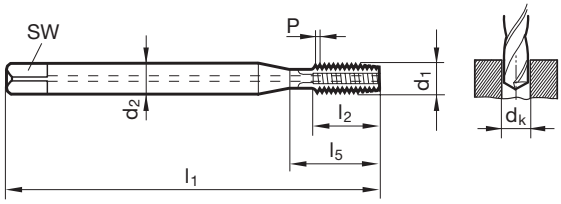
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	22,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	22,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	22,000	54,000
M18	2,500	14,000	11,000	15,50	125,000	24,000	45,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	45,000

Maschi a macchina forati per fil. metr. ISO

P	
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 465

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	◯
Tipo	H
Forma	E
Refrigerazione interna	



DIN 2184-1 DIN 371 Articolo nr. **1008**

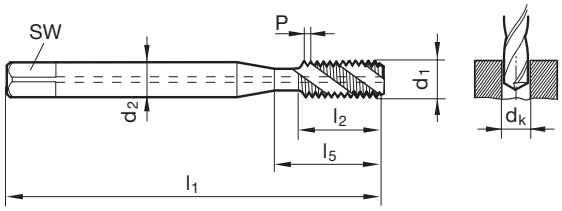
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	8,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	10,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	10,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	12,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	16,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	18,000	39,000

Maschi a macchina forati per fil. metr. ISO

P	
M	
K	○
N	≥ 7
S	
H	

Dati di taglio a pag. 465

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	◯
Tipo	N R15
Forma	C
Refrigerazione interna	



DIN 2184-1 DIN 371 Articolo nr. **971**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	8,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	10,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	10,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	12,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	16,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	18,000	39,000

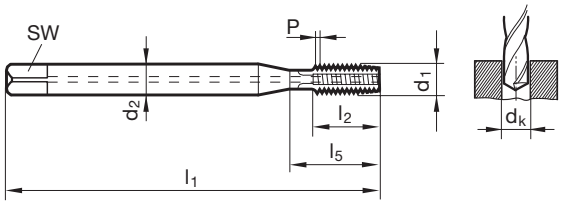
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	C
Tipo	H	H
Forma	C	E
Refrigerazione interna		

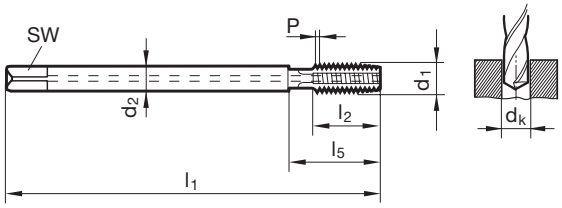
P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 465

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **302** **1091**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **297** **4165**

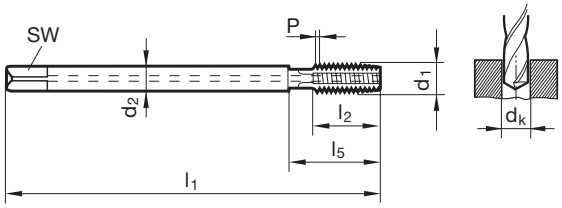
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	C
Refrigerazione interna	

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 465



DIN 2184-1 DIN 376 Articolo nr. **778**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	29,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	32,00	200,000	50,000	102,000
M39	4,000	32,000	24,000	35,00	200,000	50,000	107,000

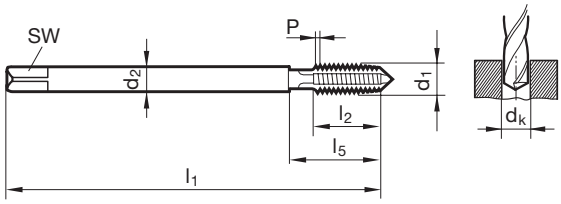
Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	C
Refrigerazione interna	

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 465

NEW



Norma di fab. Articolo nr. **779**

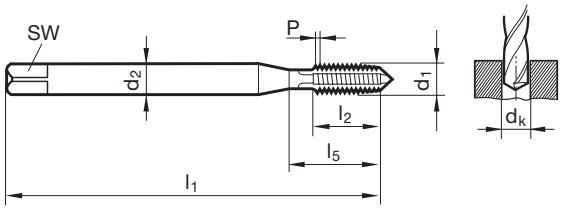
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M16	2,000	12,000	9,000	14,00	160,000	26,000	100,000
M20	2,500	16,000	12,000	17,50	180,000	32,000	120,000
M24	3,000	18,000	14,500	21,00	200,000	36,000	120,000
M27	3,000	20,000	16,000	24,00	225,000	36,000	145,000
M30	3,500	22,000	18,000	26,50	250,000	40,000	160,000
M33	3,500	25,000	20,000	29,50	275,000	40,000	170,000
M36	4,000	28,000	22,000	32,00	300,000	50,000	180,000
M39	4,000	32,000	24,000	35,00	325,000	50,000	210,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E	
Tolleranza sul Ø	ISO2/6H	ISO3/6G
Superficie	◯	◯
Tipo	Ms	Ms
Forma	E	E
Refrigerazione interna	⊠	⊠

P	
M	
K	○
N	≥ 7
S	
H	

Dati di taglio a pag. 463/464



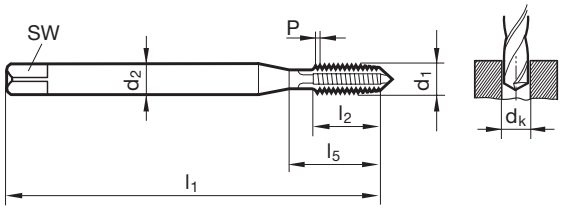
DIN 2184-1 DIN 371 — Articolo nr. **800** **1084**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	●
Tipo	H AZ
Forma	C
Refrigerazione interna	⊠

P	
M	
K	
N	○
S	
H	



DIN 2184-1 DIN 371 Articolo nr. **788**

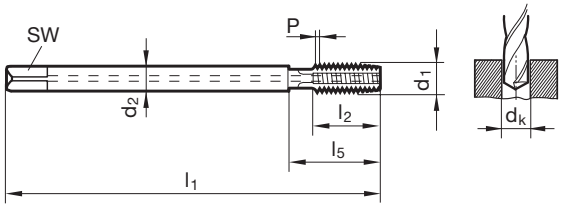
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	45,000	8,000	13,500
M2,2	0,450	2,800	2,100	1,75	45,000	9,000	14,500
M2,5	0,450	2,800	2,100	2,05	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	2,90	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000

Maschi a macchina forati per fil. metr. ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	A+M
Tipo	N AZ
Forma	E
Refrigerazione interna	

P	
M	
K	
N	○
S	
H	

Dati di taglio a pag. 464



DIN 2184-1 DIN 376 Articolo nr. **2899**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	3,500	2,700	4,20	70,000	14,000	25,000
M6	1,000	4,500	3,400	5,00	80,000	16,000	30,000
M8	1,250	6,000	4,900	6,80	90,000	17,000	35,000
M10	1,500	7,000	5,500	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000

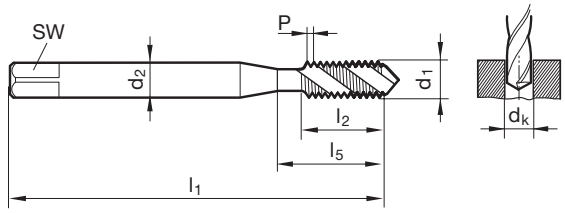
Maschi a macchina per filettatura metrica ISO

P	•
M	•
K	○
N	•
S	○
H	

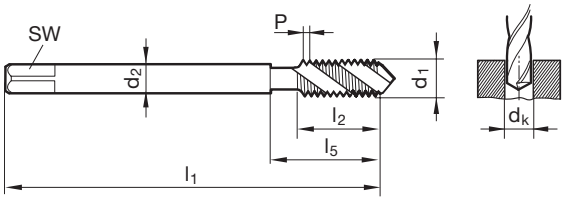
Dati di taglio a pag. 465

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	C
Tipo	N R50	N R50
Forma	C	C
Refrigerazione interna		

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **767** **1152**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000

DIN 2184-1 DIN 376 — Articolo nr. **1098** **1293**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	25,000	62,000

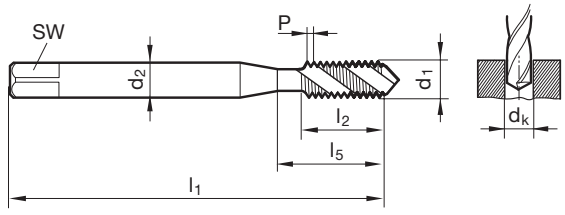
Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	S	C
Tipo	VA R50	VA R50
Forma	C	C
Refrigerazione interna		

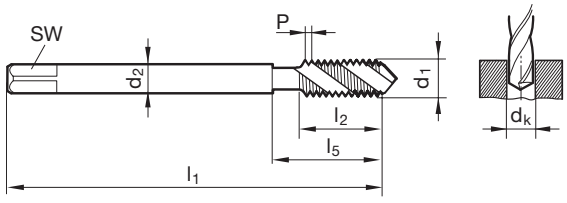
P	•
M	•
K	○
N	•
S	○
H	

Dati di taglio a pag. 465

DIN 371



DIN 376



DIN 2184-1 DIN 371 — Articolo nr. **761** **1139**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	2,500	18,000
M4	0,700	4,500	3,400	3,30	63,000	3,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	4,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	5,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	6,300	35,000
M10	1,500	10,000	8,000	8,50	100,000	7,500	39,000

DIN 2184-1 DIN 376 — Articolo nr. **763** **1142**

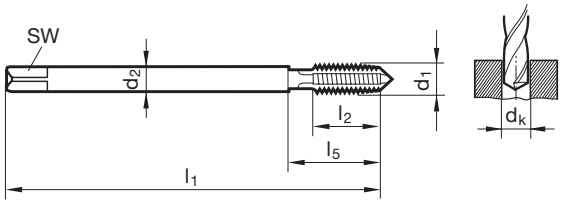
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	10,20	110,000	8,800	63,000
M14	2,000	11,000	9,000	12,00	110,000	10,000	58,000
M16	2,000	12,000	9,000	14,00	110,000	10,000	58,000
M20	2,500	16,000	12,000	17,50	140,000	12,500	85,000

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	⊠

P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 463



DIN 2184-1 DIN 374 Articolo nr. **1873**

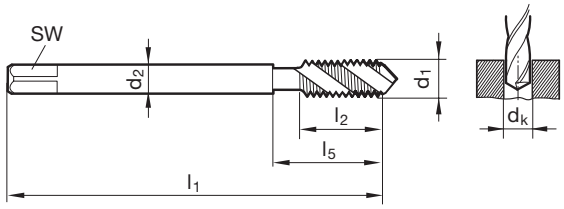
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M7 x 0,75	5,500	4,300	6,20	80,000	13,000	30,000	7,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	22,50	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	22,00	140,000	28,000	48,000	24,008

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	ISO2/6H
Superficie	◯
Tipo	VA R40
Forma	C
Refrigerazione interna	

P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 464



DIN 2184-1 DIN 374 Articolo nr. **936**

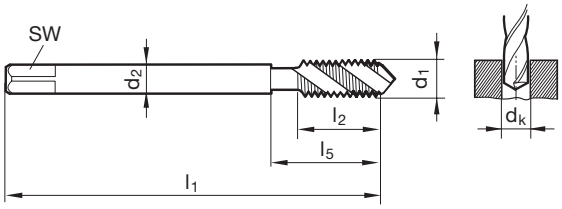
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

P	•	
M	•	
K	○	
N	○	
S	•	
H		

Dati di taglio a pag. 464

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	ISO2/6H	ISO2/6H
Superficie	S	C
Tipo	N R50	N R50
Forma	C	C
Refrigerazione interna		



DIN 2184-1 DIN 374 — Articolo nr. **1100** **1294**

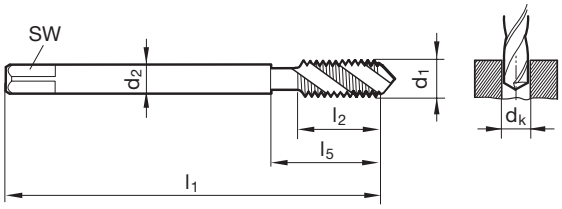
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	16,000	44,000	20,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	S	C
Tipo	VA R50	VA R50
Forma	C	C
Refrigerazione interna		

P	•
M	•
K	○
N	•
S	•
H	

Dati di taglio a pag. 464



DIN 2184-1 DIN 374 — Articolo nr. **764** **1144**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	5,000	44,000	8,005
M8 x 1	6,000	4,900	7,00	90,000	5,000	47,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	5,000	47,000	10,005
M10 x 1	7,000	5,500	9,00	90,000	5,000	44,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	5,000	53,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	7,500	53,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	7,500	48,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	7,500	48,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	7,500	58,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	7,500	70,000	20,007

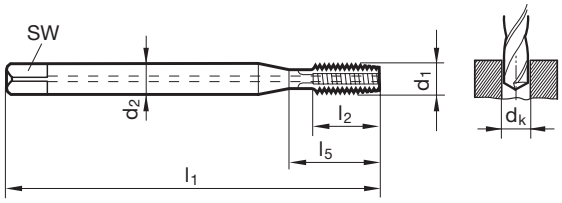
Maschi a macchina forati per fil. metr. ISO passo fine

P	
M	
K	•
N	≥ 7
S	
H	

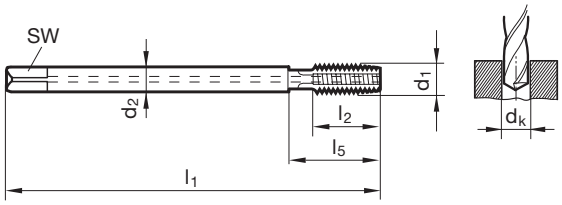
Dati di taglio a pag. 463-465

Materiale tagliente	Int. in MD	
Tolleranza sul Ø	6HX	6HX
Superficie	◯	◯
Tipo	H	H
Forma	C	C
Refrigerazione interna		

DIN 371



DIN 374



DIN 2184-1 DIN 371 — Articolo nr. **972** **1861**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	6,000	4,900	4,50	70,000	10,000	25,000	5,003
M8 x 1	8,000	6,200	7,00	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,00	90,000	18,000	35,000	10,005

DIN 2184-1 DIN 374 — Articolo nr. **974** **1860**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,5	9,000	7,000	10,50	100,000	22,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	22,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	24,000	45,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	45,000	20,007

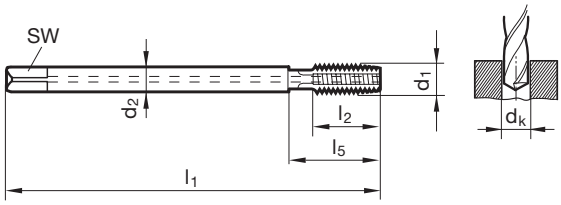
Maschi a macchina forati per fil. metr. ISO passo fine

h6

P	
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 464

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	◯
Tipo	H
Forma	E
Refrigerazione interna	



DIN 2184-1 ~DIN 371/~DIN 374 Articolo nr. **1009**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M10 x 1	10,000	8,000	9,00	90,000	18,000	35,000	10,005
M12 x 1	9,000	7,000	11,00	100,000	22,000	40,000	12,005
M12 x 1,5	9,000	7,000	10,50	100,000	22,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	22,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007

Maschi a macchina forati per fil. metr. ISO passo fine

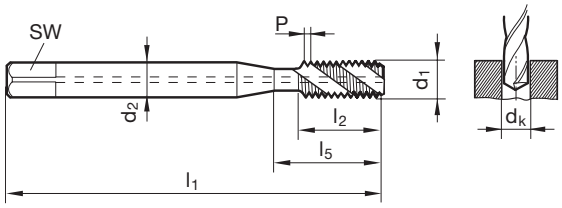
h6

P	
M	
K	○
N	≥ 7
S	
H	

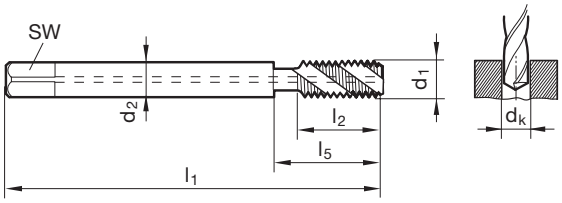
Dati di taglio a pag. 464

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	◯
Tipo	N R15
Forma	C
Refrigerazione interna	

~ DIN 371



DIN 374



DIN 2184-1 DIN 371 Articolo nr. **977**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M4 x 0,5	4,500	3,400	3,50	63,000	10,000	21,000	4,003
M5 x 0,5	6,000	4,900	4,50	70,000	10,000	25,000	5,003
M6 x 0,5	6,000	4,900	5,50	80,000	12,000	30,000	6,003
M8 x 1	8,000	6,200	7,00	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,00	90,000	18,000	35,000	10,005

DIN 2184-1 DIN 374 Articolo nr. **978**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,5	9,000	7,000	10,50	100,000	22,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	22,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	24,000	45,000	18,007
M20 x 1,5	16,000	12,000	18,50	125,000	25,000	45,000	20,007

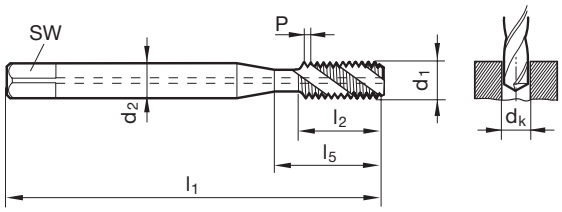
Maschi a macchina forati per fil. metr. ISO

h6

P	
M	
K	
N	≥ 7
S	
H	

Dati di taglio a pag. 464

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	M
Tipo	N R15
Forma	C
Refrigerazione interna	



DIN 2184-1 DIN 371 Articolo nr. **2516**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5	6,000	4,900	4,20	70,000	10,000	25,000	5,000
M6	6,000	4,900	5,00	80,000	12,000	30,000	6,000
M8	8,000	6,200	6,80	90,000	16,000	35,000	8,000
M10	10,000	8,000	8,50	100,000	18,000	39,000	10,000

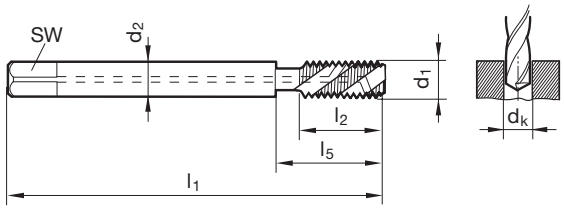
Maschi a macchina forati per fil. metr. ISO passo fine

P	
M	
K	
N	≥ 7
S	
H	

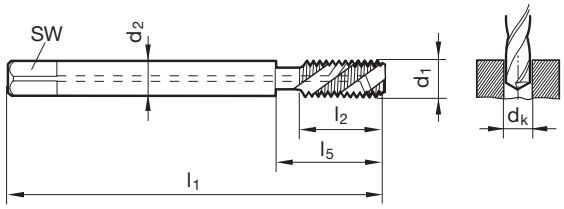
Dati di taglio a pag. 463

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	◯
Tipo	N L15
Forma	D
Refrigerazione interna	

~ DIN 371



DIN 374



DIN 2184-1 DIN 371 Articolo nr. **975**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M4 x 0,5	4,500	3,400	3,50	63,000	10,000	21,000	4,003
M5 x 0,5	6,000	4,900	4,50	70,000	10,000	25,000	5,003
M6 x 0,5	6,000	4,900	5,50	80,000	12,000	30,000	6,003
M8 x 1	8,000	6,200	7,00	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,00	90,000	18,000	35,000	10,005

DIN 2184-1 DIN 374 Articolo nr. **976**

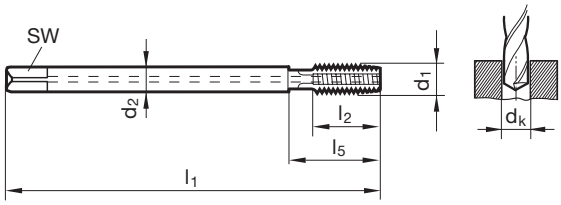
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,5	9,000	7,000	10,50	100,000	22,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	22,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	16,50	110,000	24,000	45,000	18,007

Maschi a macchina forati per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	C
Refrigerazione interna	

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 465



DIN 2184-1 DIN 374 Articolo nr. **1090**

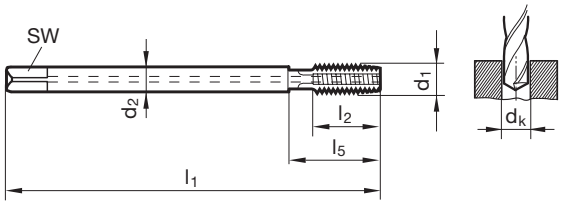
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M5 x 0,5	3,500	2,700	4,50	70,000	10,000	25,000	5,003
M6 x 0,5	4,500	3,400	5,50	80,000	13,000	30,000	6,003
M6 x 0,75	4,500	3,400	5,20	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,20	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007

Maschi a macchina forati per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	E
Refrigerazione interna	

P	≤ 1200
M	
K	•
N	≥ 7
S	
H	

Dati di taglio a pag. 465



DIN 2184-1 DIN 374 Articolo nr. **1007**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,00	90,000	16,000	35,000	8,005
M9 x 1	7,000	5,500	8,00	90,000	16,000	35,000	9,005
M10 x 1	7,000	5,500	9,00	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	8,80	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,00	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	10,80	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	10,50	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,00	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	12,80	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	12,50	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,00	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	14,50	100,000	22,000	44,000	16,007

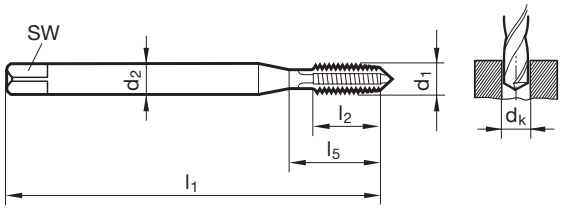
Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E
Tolleranza sul Ø	2B
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	

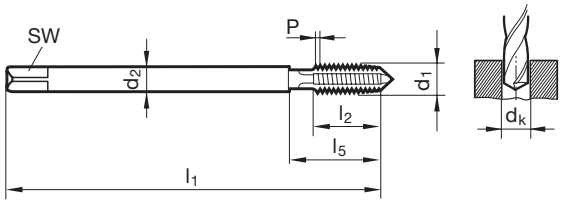
P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 463

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **1980**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,35	56,000	11,000	18,000	2,845
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **1985**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	35,000	62,000	22,225
1 - 8	18,000	14,500	22,25	160,000	38,000	73,000	25,400

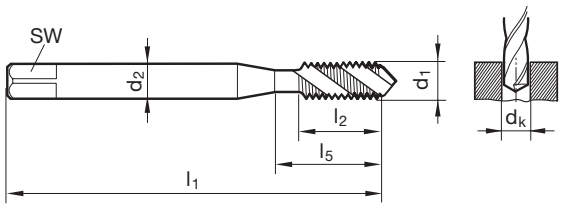
Maschi a macchina per filettatura UNC

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	◯
Tipo	VA R40
Forma	C
Refrigerazione interna	⊠

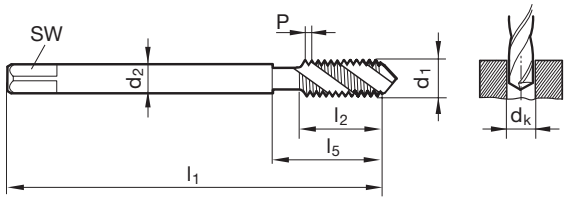
P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 464

~ DIN 371



~ DIN 376



DIN 2184-1 ~DIN 371 Articolo nr. **1981**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
2 - 56	2,800	2,100	1,85	45,000	5,000	14,500	2,184
4 - 40	3,500	2,700	2,35	56,000	7,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	7,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	8,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	8,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	11,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	11,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	13,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	14,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	16,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **1986**

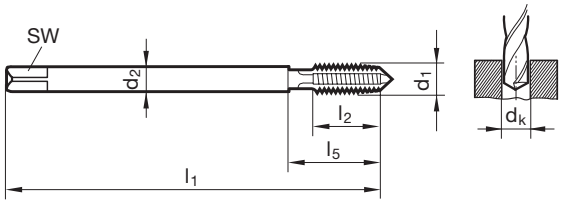
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	9,40	100,000	18,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	20,000	49,000	12,700
9/16 - 12	11,000	9,000	12,20	110,000	21,000	53,000	14,288
5/8 - 11	12,000	9,000	13,50	110,000	24,000	53,000	15,875
3/4 - 10	14,000	11,000	16,50	125,000	25,000	62,000	19,050
7/8 - 9	18,000	14,500	19,50	140,000	28,000	62,000	22,225

Maschi a macchina per filettatura UNF

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	⊠

P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 463



DIN 2184-1 ~DIN 374 Articolo nr. **1990**

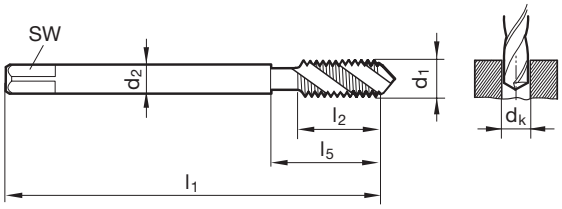
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,10	70,000	14,000	25,000	4,826
1/4 - 28	4,500	3,400	5,50	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	18,000	35,000	9,525

Maschi a macchina per filettatura UNF

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	2B
Superficie	◯
Tipo	VA R40
Forma	C
Refrigerazione interna	

P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 464



DIN 2184-1 ~DIN 374 Articolo nr. **2867**

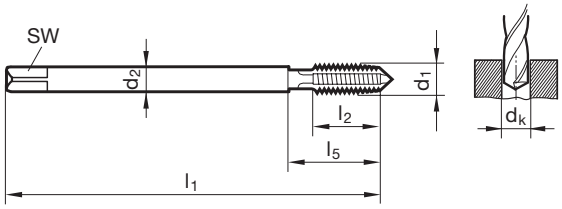
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
1/4 - 28	4,500	3,400	5,50	80,000	9,000	30,000	6,350
5/16 - 24	6,000	4,900	6,90	90,000	11,000	35,000	7,938
3/8 - 24	7,000	5,500	8,50	90,000	11,000	35,000	9,525
1/2 - 20	9,000	7,000	11,50	100,000	13,000	40,000	12,700
7/8 - 14	18,000	14,500	20,40	125,000	19,000	44,000	22,225
1 - 12	18,000	14,500	23,25	140,000	22,000	50,000	25,400

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	
Superficie	◯
Tipo	N
Forma	B
Refrigerazione interna	

P	≤ 1000
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 463



DIN 2184-1 DIN 5156 Articolo nr. **967**

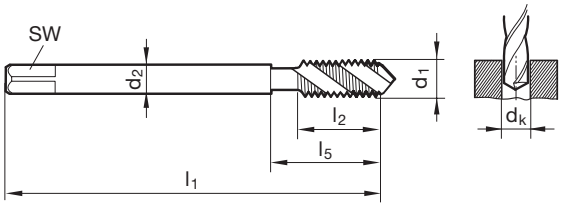
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	24,50	140,000	28,000	53,000	26,441
G7/8	14,000	22,000	18,000	28,25	150,000	28,000	53,000	30,201

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	
Superficie	◯
Tipo	VA R40
Forma	C
Refrigerazione interna	⊠

P	
M	•
K	
N	•
S	
H	

Dati di taglio a pag. 464



DIN 2184-1 DIN 5156 — Articolo nr. **939**

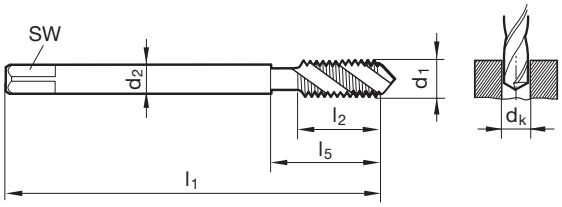
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/8	28,000	7,000	5,500	8,80	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	18,000	44,000	20,955

Maschi a macchina per filettatura Whitworth BSP

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	
Superficie	S
Tipo	VA R50
Forma	C
Refrigerazione interna	

P	•
M	•
K	○
N	•
S	○
H	

Dati di taglio a pag. 465



DIN 2184-1 DIN 5156 Articolo nr. **4159**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	6,80	90,000	4,500	47,000	7,723
G1/8	28,000	7,000	5,500	8,80	90,000	4,500	47,000	9,728
G1/4	19,000	11,000	9,000	11,80	100,000	6,700	48,000	13,157
G3/8	19,000	12,000	9,000	15,25	100,000	6,700	48,000	16,662
G1/2	14,000	16,000	12,000	19,00	125,000	9,100	70,000	20,955

Alluminio, metalli non ferrosi e plastica

MASCHI A RULLARE

N

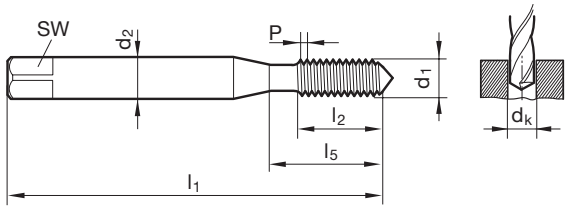
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	S	S	Cb
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

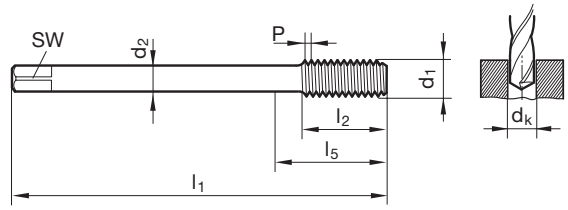
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	921	1255	1347

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,90	40,000	4,000	
M1,2	0,250	2,500	2,100	1,10	40,000	4,800	
M1,4	0,300	2,500	2,100	1,25	40,000	5,600	
M1,6	0,350	2,500	2,100	1,45	40,000	6,400	
M1,7	0,350	2,500	2,100	1,55	40,000	6,800	
M1,8	0,350	2,500	2,100	1,65	40,000	7,300	
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	925	1256	1566

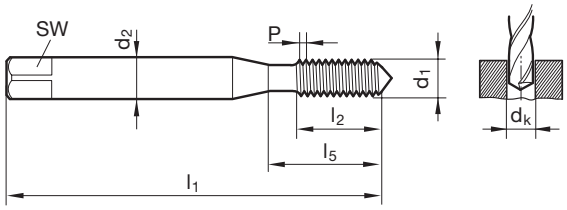
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466



DIN 2174 ~DIN 371 Articolo nr. **920**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

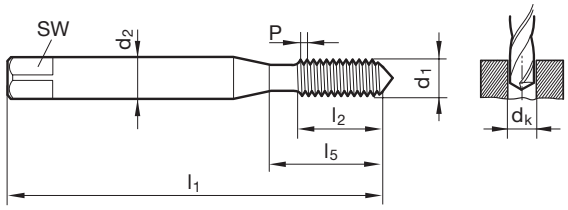
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	S	Cb
Tipo	N	N
Forma	C	C
Refrigerazione interna		

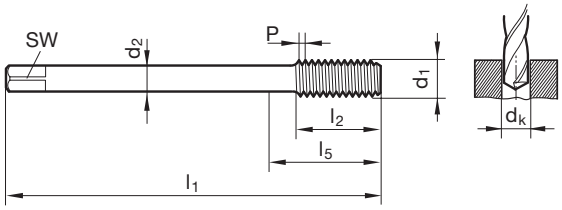
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **903** **1565**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **952** **1567**

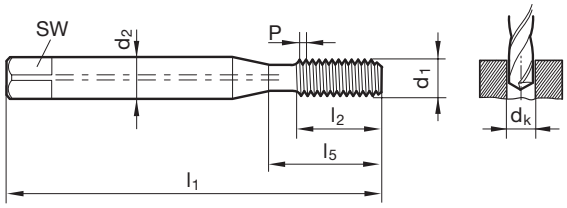
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 466

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **2518**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

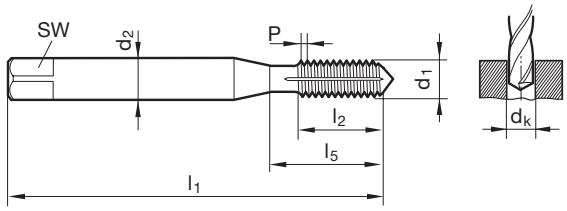
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6GX	6HX	6HX
Superficie	S	S	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

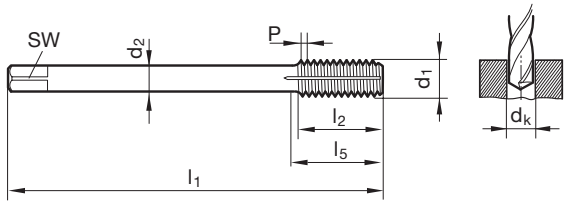
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371	Articolo nr.	918	919	2012

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M3,5	0,600	4,000	3,000	3,25	56,000	12,000	20,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376	Articolo nr.	922	923	2013

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M6	1,000	4,500	3,400	5,55	80,000	16,000	30,000
M8	1,250	6,000	4,900	7,40	90,000	17,000	35,000
M10	1,500	7,000	5,500	9,30	100,000	20,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000
M22	2,500	18,000	14,500	20,90	140,000	32,000	62,000
M24	3,000	18,000	14,500	22,70	160,000	36,000	73,000
M27	3,000	20,000	16,000	25,70	160,000	36,000	73,000
M30	3,500	22,000	18,000	28,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	31,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	34,30	200,000	50,000	102,000
M39	4,000	32,000	24,000	37,30	200,000	50,000	107,000

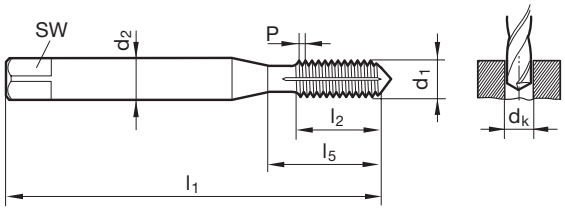
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



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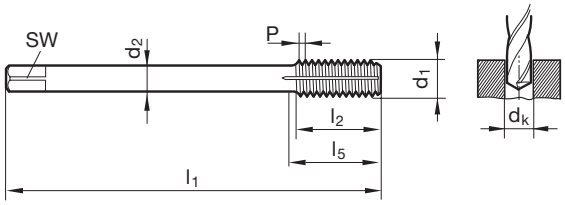


DIN 2174 ~DIN 371 Articolo nr. **322**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **339**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

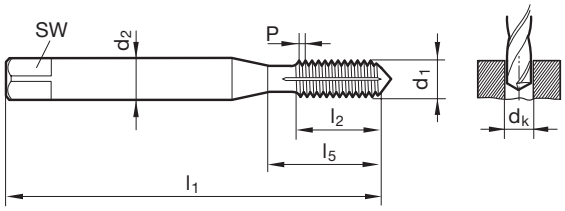
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

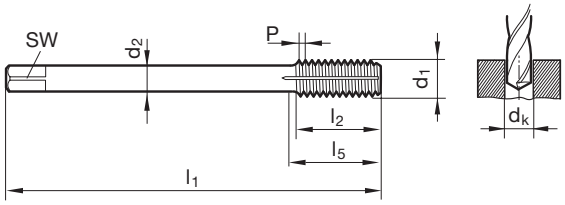
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1266**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1267**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

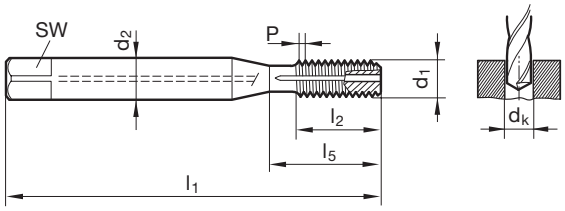
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E		
Tolleranza sul Ø	6HX	6GX	6HX
Superficie	S	S	C
Tipo	N	N	N
Forma	C	C	C
Refrigerazione interna			

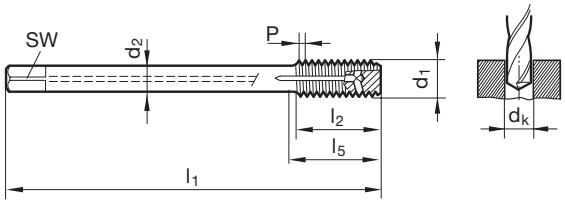
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **2442** **2443** **2446**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **2444** **2445** **2448**

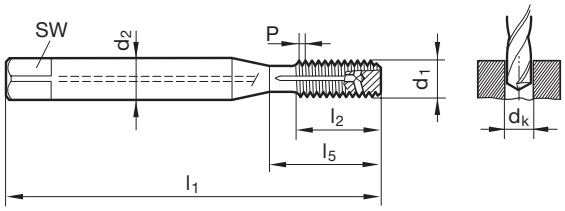
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 371 Articolo nr. **2447**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

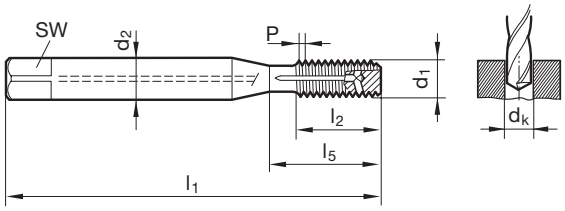
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



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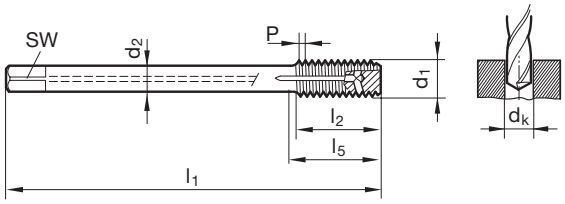


DIN 2174 ~DIN 371 Articolo nr. **323**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **342**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

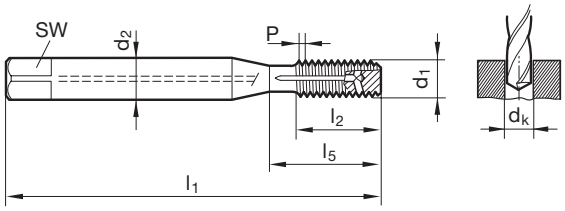
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

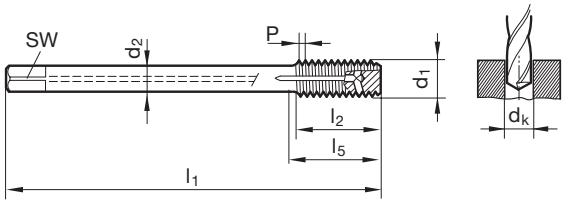
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1270** **1725**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1271** **1727**

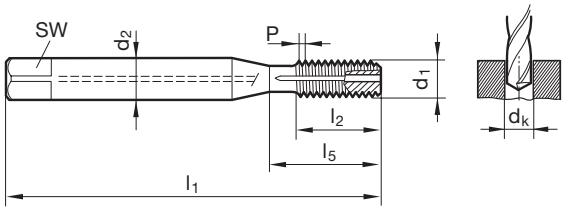
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	Cb
Tipo	N
Forma	C
Refrigerazione interna	

P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **2515**

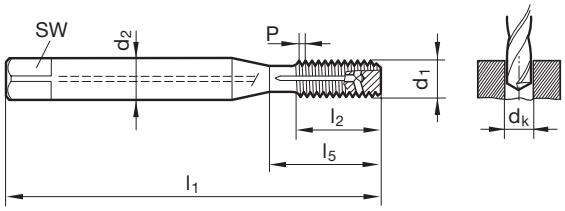
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 371 Articolo nr. **1713**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

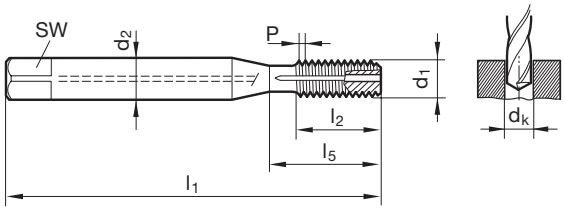
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	E
Refrigerazione interna	

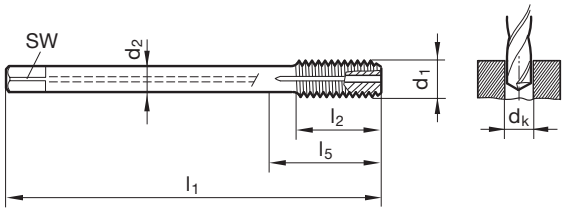
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1726**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1728**

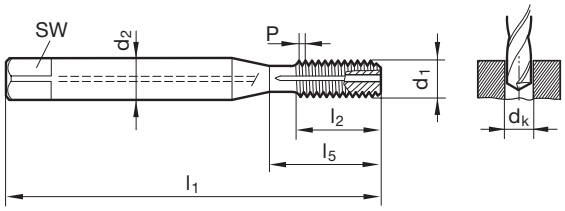
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	Cb
Tipo	N
Forma	C
Refrigerazione interna	

P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **4146**

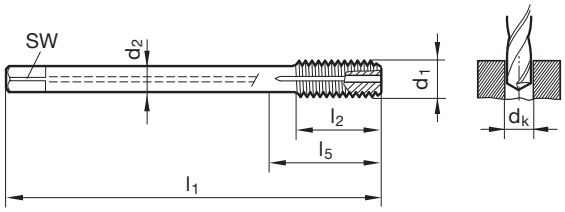
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467



Norma di fab. Norma di fab. Articolo nr. **4143**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	112,000	6,000	18,000
M4	0,700	2,800	2,100	3,70	112,000	7,500	77,000
M5	0,800	3,500	2,700	4,65	125,000	8,500	90,000
M6	1,000	4,500	3,400	5,55	125,000	11,000	90,000
M8	1,250	6,000	4,900	7,40	140,000	14,000	97,000
M10	1,500	7,000	5,500	9,30	160,000	16,000	117,000
M12	1,750	9,000	7,000	11,20	180,000	18,500	133,000
M16	2,000	12,000	9,000	15,10	220,000	20,000	168,000
M20	2,500	16,000	12,000	18,90	280,000	25,000	225,000

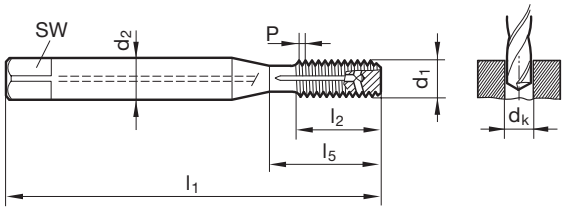
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

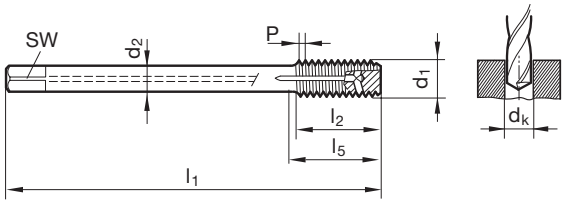
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1972**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1931**

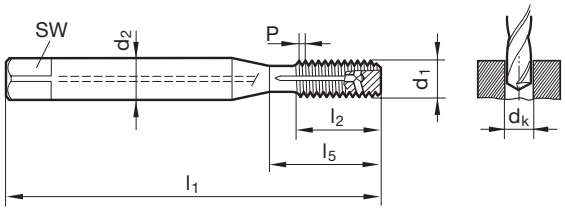
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	25,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	E
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 371 Articolo nr. **1927**

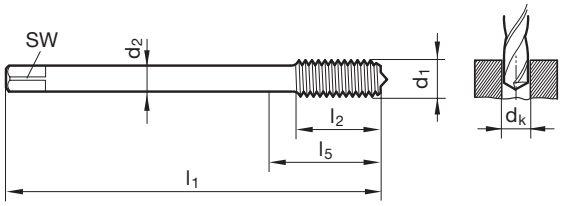
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466



DIN 2174 ~DIN 374 Articolo nr. **929**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

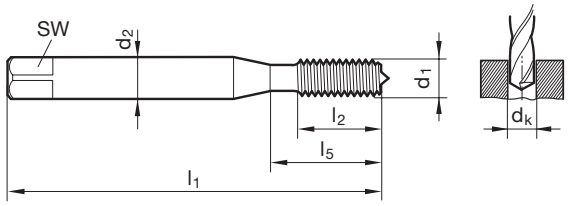
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

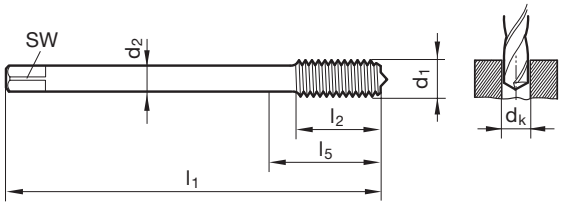
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1257**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1258**

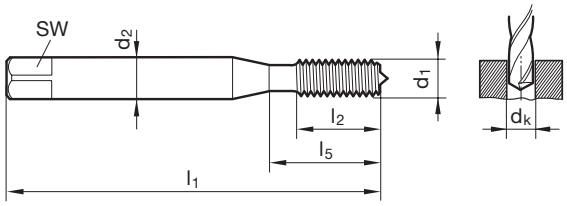
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	Cb
Tipo	N
Forma	C
Refrigerazione interna	

P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 466



DIN 2174 ~DIN 371 Articolo nr. **1568**

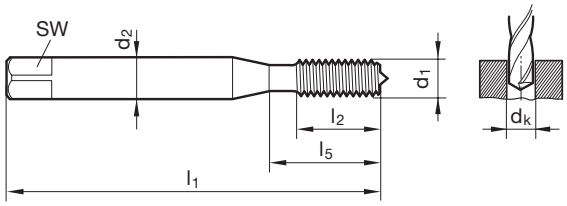
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466



DIN 2174 ~DIN 371 Articolo nr. **1740**

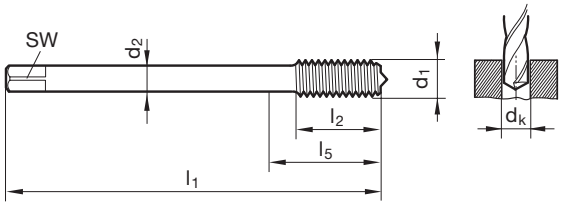
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466



DIN 2174 ~DIN 374 Articolo nr. **928**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007

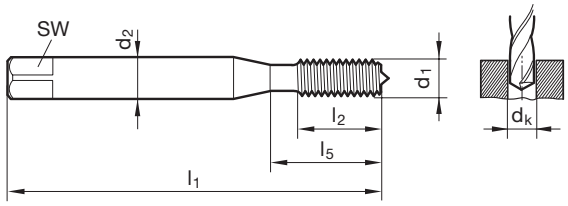
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	Cb
Tipo	N
Forma	C
Refrigerazione interna	

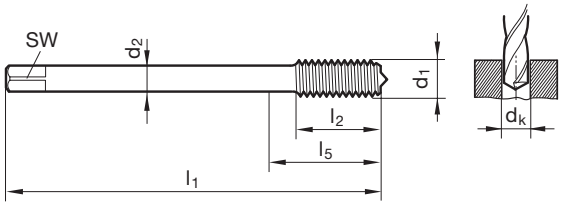
P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 466

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1569**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1580**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

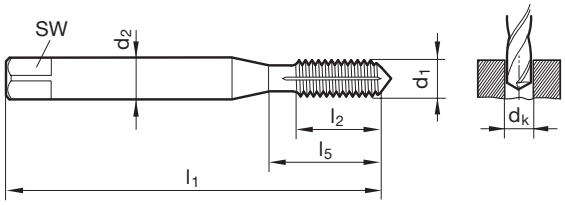
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

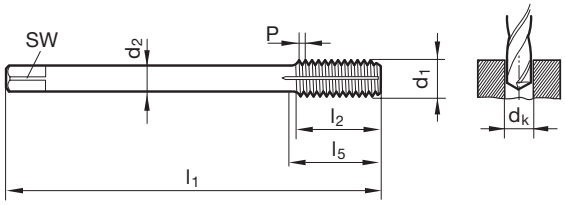
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1275**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	6,000	4,900	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	8,000	6,200	7,65	80,000	14,000	30,000	8,004
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 Articolo nr. **927**

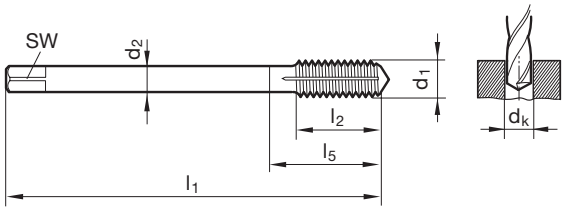
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1	14,000	11,000	17,55	110,000	25,000	44,000	18,005
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a macc. a rullare per fil. metr. ISO fine

P	•
M	•
K	
N	≥ 7
S	○
H	

Dati di taglio a pag. 467

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	



DIN 2174 ~DIN 374 Articolo nr. **2008**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M6 x 0,75	4,500	3,400	5,65	80,000	13,000	30,000	6,004
M8 x 0,75	6,000	4,900	7,65	80,000	14,000	30,000	8,004
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1,25	7,000	5,500	9,40	100,000	20,000	39,000	10,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

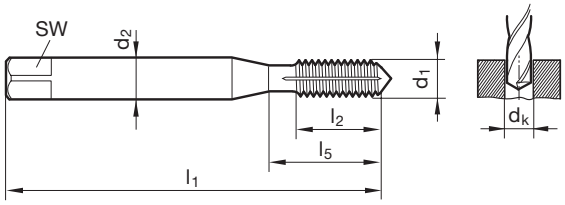
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

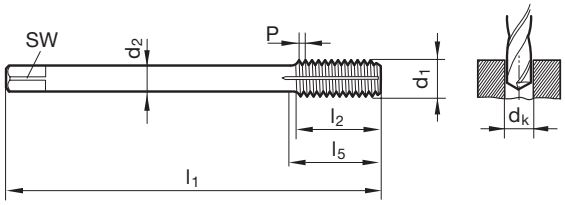
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1277**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **926**

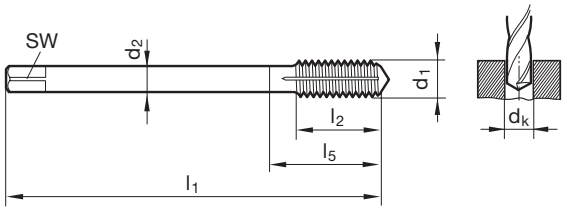
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	16,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	16,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1	12,000	9,000	15,55	100,000	22,000	44,000	16,005
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 374 Articolo nr. **333**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	16,000	44,000	20,007

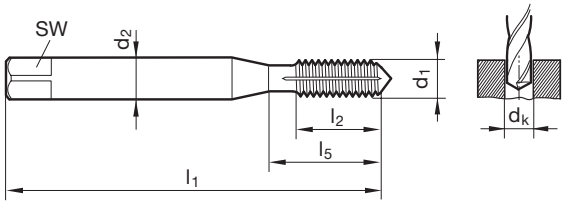
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

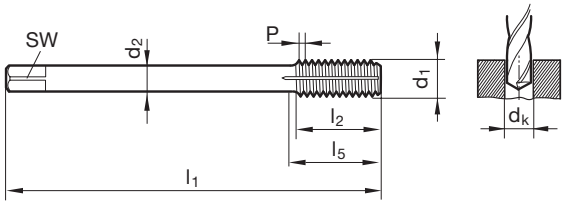
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1268**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1269**

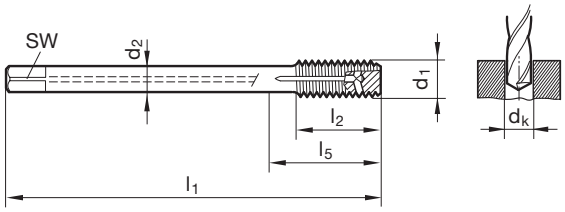
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 374 Articolo nr. **338**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007

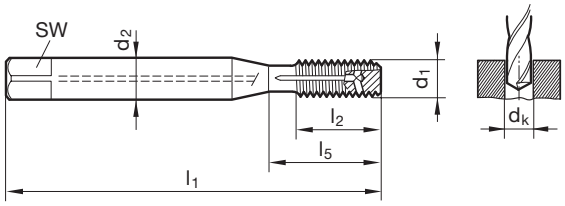
Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

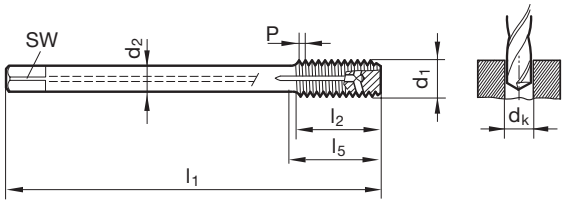
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 467

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1272** **1729**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1273** **1731**

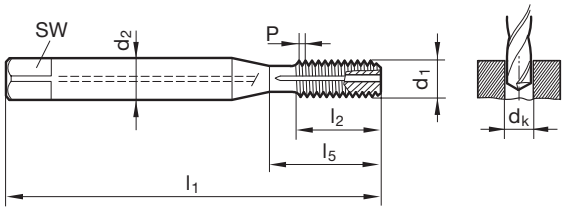
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6HX
Superficie	Cb
Tipo	N
Forma	C
Refrigerazione interna	

P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 371/~DIN 374 Articolo nr. **4147**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	11,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	11,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,55	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007

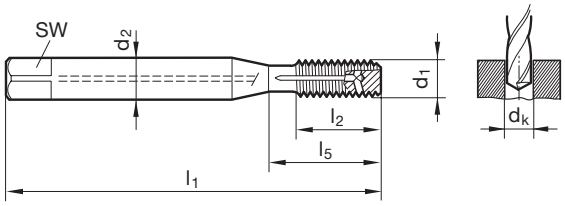
Maschi a rullare forati per fil. metrica ISO passo fine

P	•	
M	•	
K		
N	≥ 7	
S	•	
H		

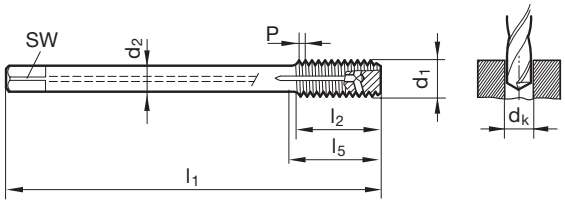
Dati di taglio a pag. 467

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	C	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1715** **1730**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1716** **1732**

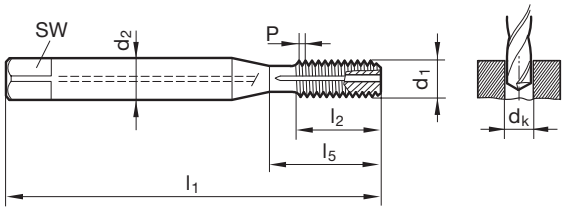
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	6GX
Superficie	Cb
Tipo	N
Forma	C
Refrigerazione interna	

P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 467



DIN 2174 ~DIN 371/~DIN 374 Articolo nr. **4151**

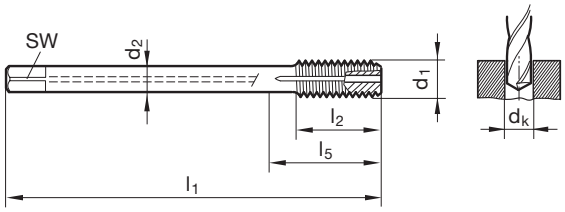
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	11,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	11,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	14,000	39,000	10,006
M12 x 1	9,000	7,000	11,55	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467



Norma di fab. Articolo nr. **4145**

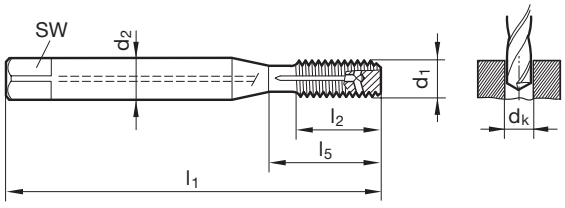
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	140,000	14,000	97,000	8,005
M10 x 1	7,000	5,500	9,55	160,000	16,000	117,000	10,005
M10 x 1,25	7,000	5,500	9,40	160,000	16,000	117,000	10,006
M12 x 1	9,000	7,000	11,55	180,000	18,500	133,000	12,005
M12 x 1,5	9,000	7,000	11,30	180,000	18,500	133,000	12,007
M14 x 1,5	11,000	9,000	13,30	220,000	20,000	168,000	14,007
M16 x 1,5	12,000	9,000	15,30	220,000	20,000	168,000	16,007

Maschi a rullare forati per fil. metrica ISO passo fine

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 467

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **1581**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M10 x 1	10,000	8,000	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	15,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	15,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	15,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	15,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	15,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	15,000	48,000	24,007

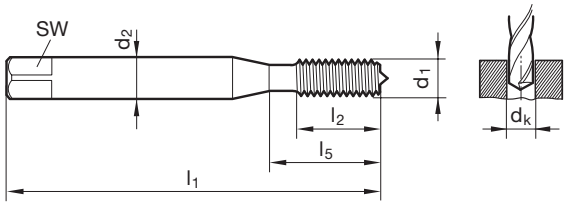
Maschi a macchina a rullare per filettatura UNC

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		

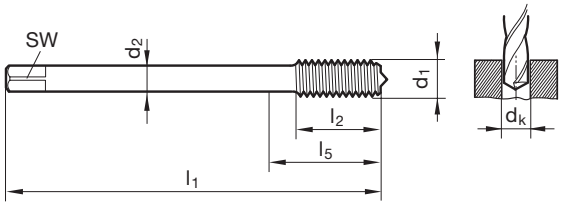
P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466/467

~ DIN 371



~ DIN 374



DIN 2184-1 ~DIN 371 Articolo nr. **2273** **1582**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,55	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,90	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	3,15	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,80	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	4,35	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	5,00	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,75	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	7,30	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,80	100,000	20,000	39,000	9,525

DIN 2184-1 ~DIN 376 Articolo nr. **2274** **1583**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
7/16 - 14	8,000	6,200	10,30	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	11,80	110,000	25,000	49,000	12,700
9/16 - 12	11,000	9,000	13,30	110,000	28,000	53,000	14,288
5/8 - 11	12,000	9,000	14,80	110,000	30,000	53,000	15,875
3/4 - 10	14,000	11,000	17,90	125,000	33,000	62,000	19,050
7/8 - 9	18,000	14,500	21,00	140,000	35,000	62,000	22,225

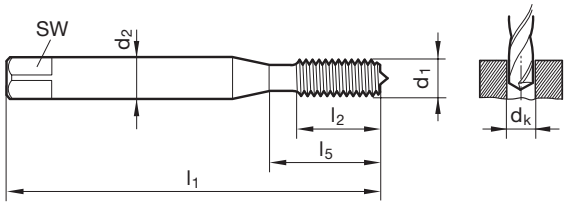
Maschi a macchina a rullare per filettatura UNF

P	•
M	•
K	
N	○
S	
H	

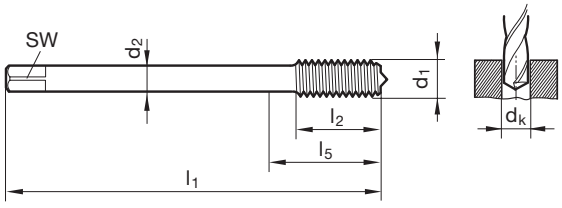
Dati di taglio a pag. 466/467

Materiale tagliente	HSS-E	
Tolleranza sul Ø	2BX	2BX
Superficie	S	S
Tipo	N	N
Forma	C	C
Refrigerazione interna		

~ DIN 371



~ DIN 374



DIN 2184-1 ~DIN 371 — Articolo nr. **1283** **1584**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	3,500	2,700	2,60	56,000	10,000	18,000	2,845
5 - 44	3,500	2,700	2,90	56,000	10,000	18,000	3,175
6 - 40	4,000	3,000	3,20	56,000	11,000	20,000	3,505
8 - 36	4,500	3,400	3,85	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,45	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	5,10	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,95	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	7,45	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	9,05	90,000	18,000	35,000	9,525

DIN 2184-1 ~DIN 374 — Articolo nr. **1585** **2275**

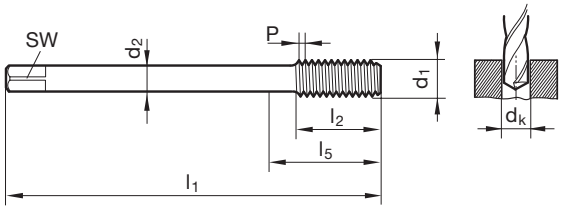
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
10 - 32	3,500	2,700	4,45	70,000	14,000	25,000	4,826
12 - 28	4,000	3,000	5,10	80,000	16,000	30,000	5,486
1/4 - 28	4,500	3,400	5,95	80,000	16,000	30,000	6,350
5/16 - 24	6,000	4,900	7,45	90,000	18,000	35,000	7,938
3/8 - 24	7,000	5,500	9,05	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	10,55	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	12,10	100,000	20,000	40,000	12,700
9/16 - 18	11,000	9,000	13,65	100,000	22,000	40,000	14,288
5/8 - 18	12,000	9,000	15,25	100,000	22,000	44,000	15,875
3/4 - 16	14,000	11,000	18,35	110,000	25,000	44,000	19,050
7/8 - 14	18,000	14,500	21,40	125,000	25,000	44,000	22,225
1 - 12	18,000	14,500	24,45	140,000	28,000	50,000	25,400

Maschi a macc. a rullare per fil. Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	
H	

Dati di taglio a pag. 466



DIN 2184-1 DIN 2189 Articolo nr. **966**

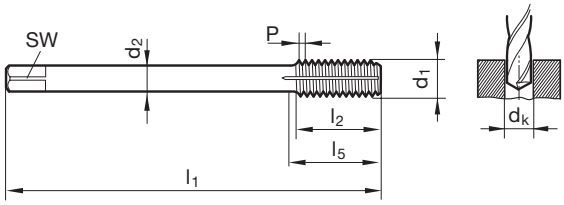
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	7,30	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	9,30	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	12,50	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	16,00	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	20,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	25,50	140,000	28,000	53,000	26,441
G1	11,000	25,000	20,000	32,00	160,000	30,000	56,000	33,249
G1 1/4	11,000	32,000	24,000	40,75	170,000	30,000	57,000	41,910

Maschi a macc. a rullare per fil. Whitworth BSP

Materiale tagliente	**HSS-E**
Tolleranza sul Ø	
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 467



DIN 2184-1 DIN 2189 Articolo nr. **1586**

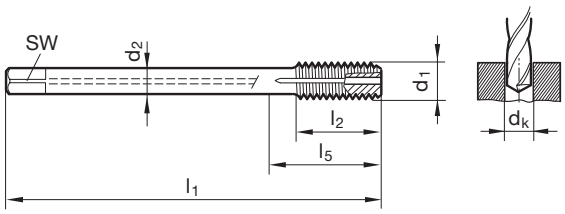
d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	7,30	90,000	18,000	30,000	7,723
G1/8	28,000	7,000	5,500	9,30	90,000	18,000	35,000	9,728
G1/4	19,000	11,000	9,000	12,50	100,000	20,000	40,000	13,157
G3/8	19,000	12,000	9,000	16,00	100,000	22,000	44,000	16,662
G1/2	14,000	16,000	12,000	20,00	125,000	25,000	44,000	20,955
G3/4	14,000	20,000	16,000	25,50	140,000	28,000	53,000	26,441

Maschi a macc. a rullare forati per fil. Whitworth BSP

Materiale tagliente	HSS-E
Tolleranza sul Ø	
Superficie	Cb
Tipo	N
Forma	C
Refrigerazione interna	

P	
M	
K	
N	•
S	
H	

Dati di taglio a pag. 467



DIN 2184-1 DIN 2189 Articolo nr. **4152**

d1	P	d2	SW	dk	l1	l2	l5	Codice
	G/inch	mm	mm	mm	mm	mm	mm	
G1/16	28,000	6,000	4,900	7,30	90,000	11,000	30,000	7,723
G1/8	28,000	7,000	5,500	9,30	90,000	11,000	35,000	9,728
G1/4	19,000	11,000	9,000	12,50	100,000	14,000	40,000	13,157
G3/8	19,000	12,000	9,000	16,00	100,000	14,000	44,000	16,662
G1/2	14,000	16,000	12,000	20,00	125,000	18,000	44,000	20,955
G3/4	14,000	20,000	16,000	25,50	140,000	20,000	53,000	26,441
G1	11,000	25,000	20,000	32,00	160,000	24,000	56,000	33,249

Alluminio, metalli non ferrosi e plastica

FRESE A FILETTARE

N

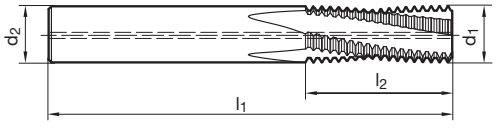
Frese a filettare senza fase di svasatura per filettatura metrica ISO

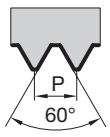
2xD

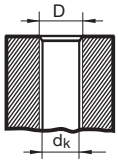
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TM SP	TM SP	TM SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab. Articolo nr. **3737** **3743** **3734**

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M8 x 1	1,000	6,400	8,000	7,00	62,000	17,500	3	8,005
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M10 x 1	1,000	7,950	10,000	9,00	74,000	21,500	3	10,005
M10 x 1,25	1,250	7,950	10,000	8,80	74,000	21,900	3	10,006
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M12 x 1,5	1,500	9,950	10,000	10,50	74,000	26,300	4	12,007
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M14 x 1,5	1,500	11,200	12,000	12,50	90,000	30,800	4	14,007
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M16 x 1,5	1,500	12,800	14,000	14,50	90,000	33,800	4	16,007
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000
M20 x 1,5	1,500	14,950	16,000	18,50	102,000	42,800	4	20,007

Frese a filettare senza fase di svasatura per filettatura metrica ISO

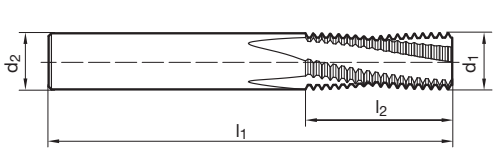
2xD

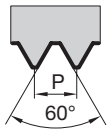
P	•
M	○
K	•
N	•
S	○
H	≤55

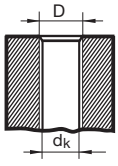
Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **4132** **4133**

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000

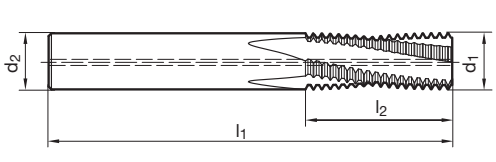
Frese a filettare senza fase di svasatura per filettatura metrica ISO

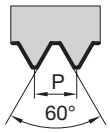
2,5xD

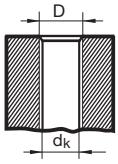
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3735** **3740**

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	16,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	21,900	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	26,300	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	32,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	37,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	43,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	48,800	4	20,000

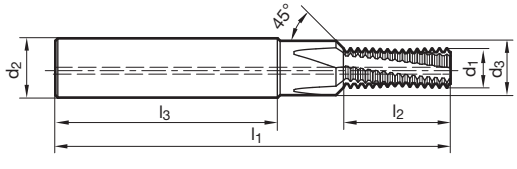
Frese a filettare con fase di svasatura per filettatura metrica ISO

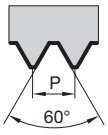
P	•
M	•
K	•
N	•
S	•
H	≤55

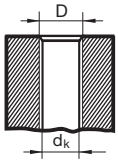
Dati di taglio a pag. 469

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA

NEW







Norma di fab. Articolo nr. **3525** **3543** **3510**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	5,300	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	7,400	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	9,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	10,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	13,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	17,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	20,100	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	25,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	27,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	33,800	4	20,000

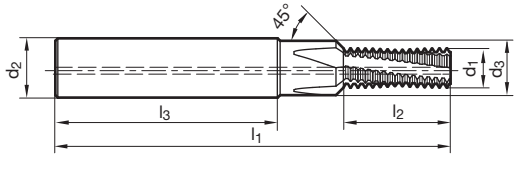
Frese a filettare con fase di svasatura per filettatura metrica ISO

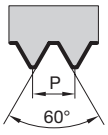
2xD

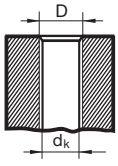
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab.	Articolo nr.	3526	3544	3511

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	6,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	8,800	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	10,800	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	13,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	18,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	21,800	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	25,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	31,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	35,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	41,300	4	20,000

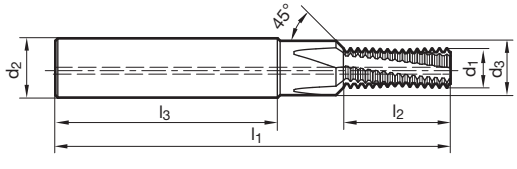
Frese a filettare con fase di svasatura per filettatura metrica ISO

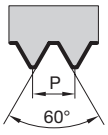
P	•
M	•
K	•
N	•
S	•
H	≤55

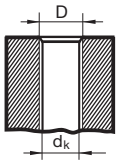
Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3759	3760

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	7,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	35,600	10,900	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	13,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	16,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	21,900	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	26,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	32,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	37,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	43,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	48,800	4	20,000

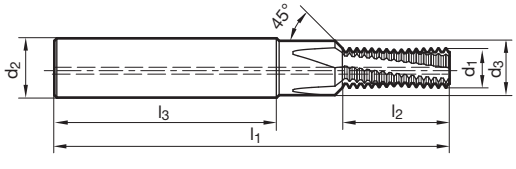
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

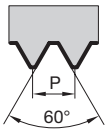
1,5xD

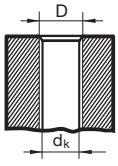
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab. Articolo nr. **3527** **3545** **3512**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	7,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	8,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	9,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	10,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	13,100	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	13,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	16,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	16,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	19,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	20,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	23,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	26,300	4	16,007

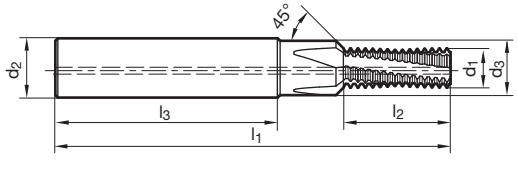
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

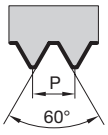
2xD

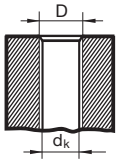
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab. Articolo nr. **3528** **3546** **3513**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	8,800	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	10,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	12,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	13,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	16,900	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	17,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	21,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	21,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	25,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	26,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	30,800	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	33,800	4	16,007

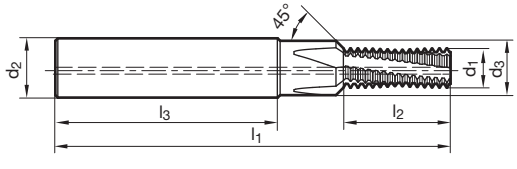
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

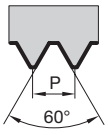
2,5xD

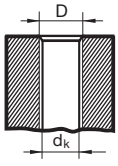
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3762** **3763**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	10,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	12,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	15,300	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	15,400	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	20,600	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	20,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	25,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	25,600	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	30,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	30,800	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	38,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	41,300	4	16,007

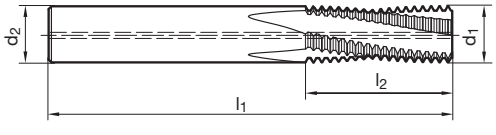
Frese a filettare senza fase di svasatura per filettatura UNC

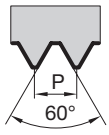
2xD

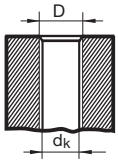
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	4134	4135

D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 24	3,400	6,000	3,90	54,000	11,100	3	4,826
12 - 24	4,100	6,000	4,50	54,000	12,200	3	5,486
1/4 - 20	4,700	6,000	5,10	54,000	14,600	3	6,350
5/16 - 18	6,100	8,000	6,60	64,000	17,600	3	7,938
3/8 - 16	7,600	8,000	8,00	64,000	21,400	3	9,525
7/16 - 14	9,000	10,000	9,40	74,000	24,500	3	11,113
1/2 - 13	9,950	10,000	10,80	74,000	28,300	4	12,700
9/16 - 12	11,400	12,000	12,20	90,000	30,700	4	14,288
5/8 - 11	12,700	14,000	13,50	90,000	35,800	4	15,875

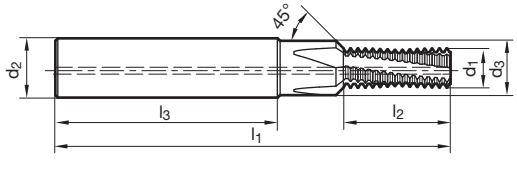
Frese a filettare con fase di svasatura per filettatura UNC

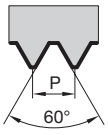
P	•
M	•
K	•
N	•
S	•
H	≤55

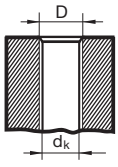
Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3516** **3534**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	12,100	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	14,800	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	16,700	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	19,000	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	22,500	4	12,700

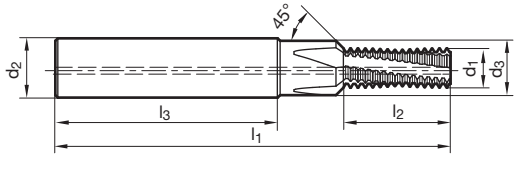
Frese a filettare con fase di svasatura per filettatura UNC

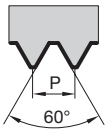
2xD

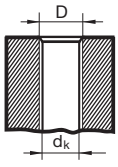
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3517** **3535**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	14,600	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	17,600	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	21,400	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	24,500	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	28,300	4	12,700

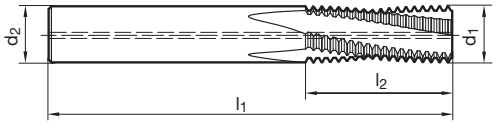
Frese a filettare senza fase di svasatura per filettatura UNF

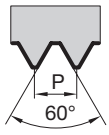
2xD

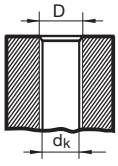
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **4136** **4137**

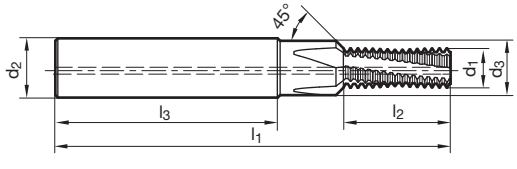
D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 32	3,800	6,000	4,10	54,000	11,500	3	4,826
12 - 28	4,300	6,000	4,60	54,000	12,200	3	5,486
1/4 - 28	5,100	6,000	5,50	54,000	14,100	3	6,350
5/16 - 24	6,300	8,000	6,90	64,000	17,500	3	7,938
3/8 - 24	7,800	8,000	8,50	64,000	20,600	3	9,525
7/16 - 20	9,400	10,000	9,90	74,000	24,800	3	11,113
1/2 - 20	9,950	10,000	11,50	74,000	27,300	4	12,700
9/16 - 18	11,400	12,000	12,90	90,000	30,300	4	14,288
5/8 - 18	12,700	14,000	14,50	90,000	33,200	4	15,875

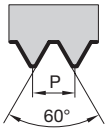
Frese a filettare con fase di svasatura per filettatura UNF

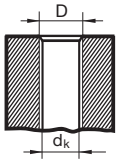
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3518	3536

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	11,300	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	13,200	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	16,400	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	18,400	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	21,000	4	12,700

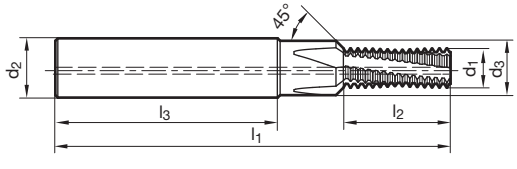
Frese a filettare con fase di svasatura per filettatura UNF

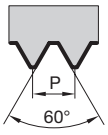
2xD

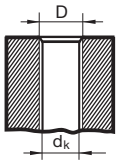
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3519** **3537**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	14,100	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	17,500	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	20,600	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	24,800	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	27,300	4	12,700

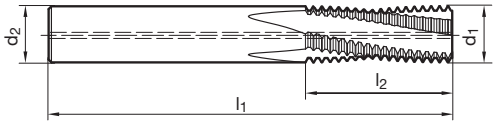
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

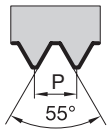
2xD

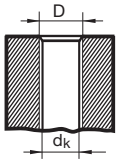
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3745	3748

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	21,300	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	28,700	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	35,400	4	16,662

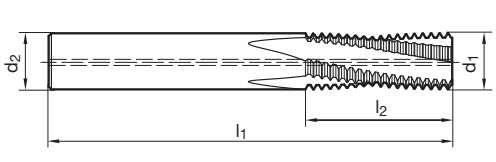
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

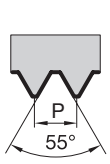
2,5xD

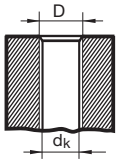
P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3746** **3750**

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	24,900	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	35,400	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	43,500	4	16,662

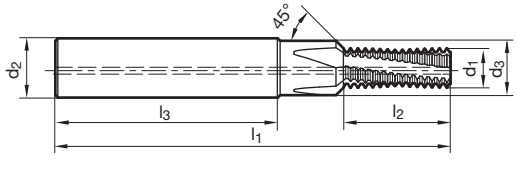
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

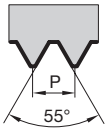
P	•
M	•
K	•
N	•
S	•
H	≤55

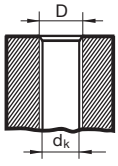
Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3514** **3529**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	15,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	22,100	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	27,400	4	16,662

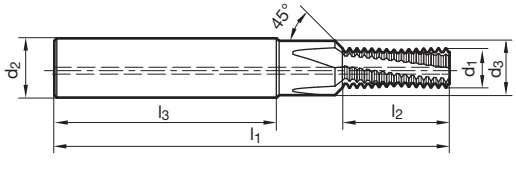
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

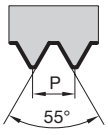
2xD

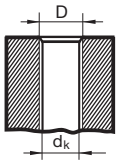
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3515** **3533**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	21,300	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	28,700	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	35,400	4	16,662

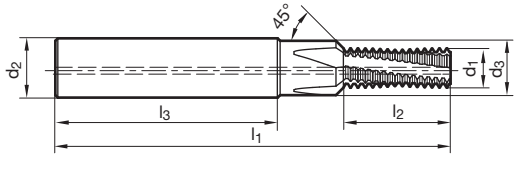
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

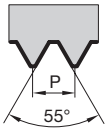
P	•
M	•
K	•
N	•
S	•
H	≤55

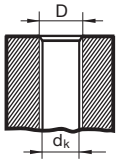
Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3765	3766

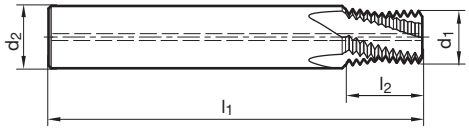
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	24,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	35,400	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	43,500	4	16,662

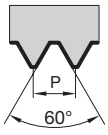
Frese a filettare senza fase di svasatura per filettatura NPT

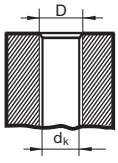
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3753** **3754**

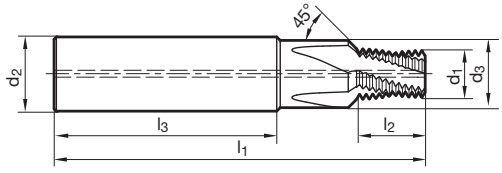
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

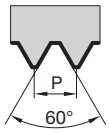
Frese a filettare con fase di svasatura per filettatura NPT

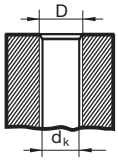
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3520	3538

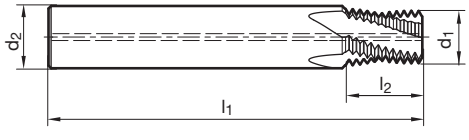
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

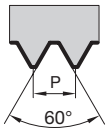
Frese a filettare senza fase di svasatura per filettatura NPTF

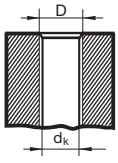
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 468

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3756** **3757**

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

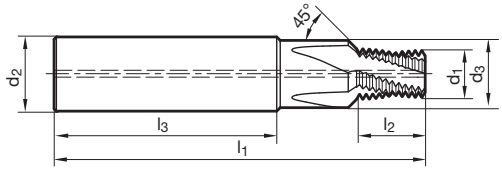
Frese a filettare con fase di svasatura per filettatura NPTF

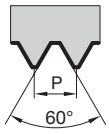
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

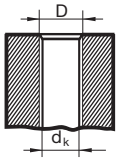
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 469

NEW







Norma di fab. Articolo nr. **3521** **3539**

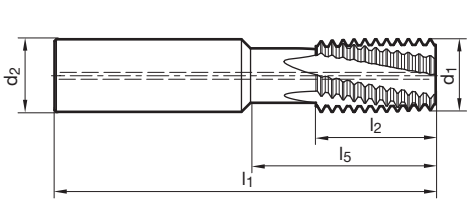
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

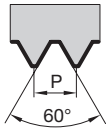
Fresa a filettare per impieghi multipli per filettatura metrica ISO

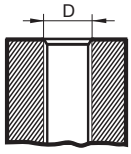
Materiale tagliente	**Int. in MD**		
Superficie	C	C	○
Tipo	TMU SP	TMU SP	TMU SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 470







Norma di fab.	Articolo nr.	3541	3556	3523

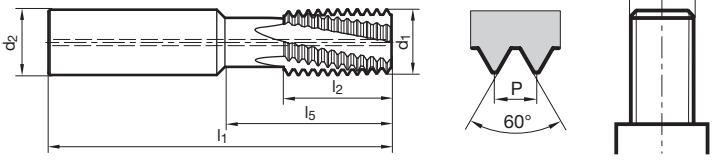
P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 10	7,950	8,000	64,000		20,000	4	8,050
1,000	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,100
1,250	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,125
1,500	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,150
1,000	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,150
1,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,100
1,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,200
3,000	≥ 24	17,950	18,000	102,000	50,000	33,000	5	18,300
1,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,100
1,500	≥ 26	19,950	20,000	105,000	50,000	33,000	5	20,150
2,000	≥ 27	19,950	20,000	105,000	50,000	33,000	5	20,200
2,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,250
3,000	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,300
3,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,350

Fresa esterne a filettare

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 470

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab. Articolo nr. **4162** **4163**

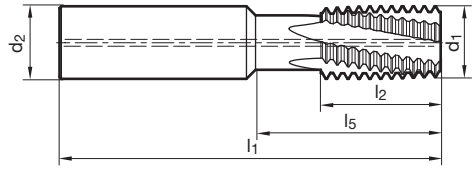
P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 3	9,950	10,000	70,000	25,000	16,000	4	10,050
0,750	≥ 5	9,950	10,000	70,000	25,000	16,000	4	10,075
1,000	≥ 6	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 8	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 10	11,950	12,000	80,000	31,000	20,000	4	12,150
1,500	≥ 10	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 14	15,950	16,000	90,000	40,000	25,000	5	16,200
2,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,250
3,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,300

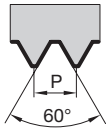
Fresa a filettare per impieghi multipli per filettatura UN

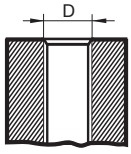
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 470

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU UN	TMU UN
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3595	3596

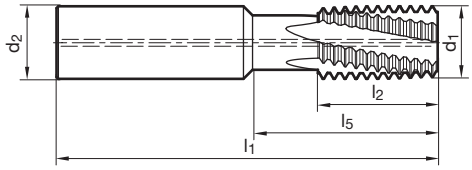
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
10,000	≥ 3/4	11,950	12,000	80,000	31,000	20,000	4	12,100
16,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,160
18,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,180
20,000	≥ 11/16	11,950	12,000	80,000	31,000	20,000	4	12,200
24,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,240
12,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,120
14,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,140
16,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,160
18,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,180
20,000	≥ 13/16	15,950	16,000	90,000	40,000	25,000	5	16,200
7,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,070
8,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,080
12,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,120
14,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,140
16,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,160

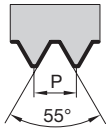
Fresa a filettare per impieghi multipli per filettatura Whitworth BSP

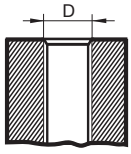
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 470

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMU SP	TMU SP	TMU SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab.	Articolo nr.	3542	3557	3524

P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
19,000	≥ 1/4	9,950	10,000	70,000	25,000	16,000	4	10,190
14,000	≥ 1/2	15,950	16,000	90,000	40,000	25,000	5	16,140
11,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,110

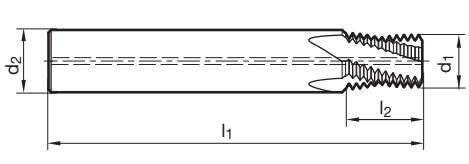
Fresa a filettare per impieghi multipli per filettatura NPT

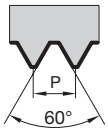
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB

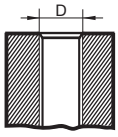
NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 470







Norma di fab.	Articolo nr.	3768	3769

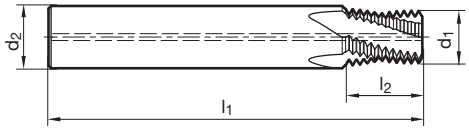
P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

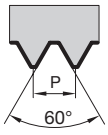
Fresa a filettare per impieghi multipli per filettatura NPTF

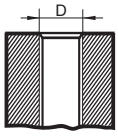
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 470

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3772	3773

P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

Micro frese a filettare

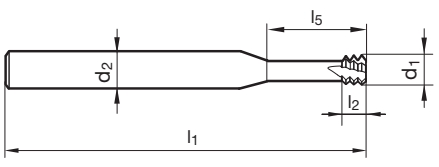
3xD

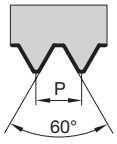
P	•
M	•
K	•
N	•
S	•
H	

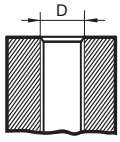
Dati di taglio a pag. 470

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M
filetti	3,0
Forma del gambo	HA

NEW







Norma di fab. Articolo nr. **4226**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,6	0,350	1,200	3,000	39,000	1,100	4,800	3	1,600
M1,8	0,350	1,400	3,000	39,000	1,100	5,400	3	1,800
M2	0,400	1,550	3,000	39,000	1,200	6,000	4	2,000
M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4	2,500
M3	0,500	2,400	6,000	58,000	1,500	9,500	4	3,000
M3,5	0,600	2,800	6,000	58,000	1,800	11,000	4	3,500
M4	0,700	3,200	6,000	58,000	2,100	12,500	4	4,000
M5	0,800	4,000	6,000	58,000	2,400	16,000	4	5,000
M6	1,000	4,800	6,000	58,000	3,000	20,000	4	6,000
M8	1,250	5,950	6,000	58,000	3,800	24,000	4	8,000
M10	1,500	7,800	8,000	73,000	4,500	33,000	4	10,000
M12	1,750	9,000	10,000	84,000	5,300	38,000	4	12,000
M16	2,000	11,800	10,000	84,000	6,000	35,000	5	16,000

Micro frese a filettare

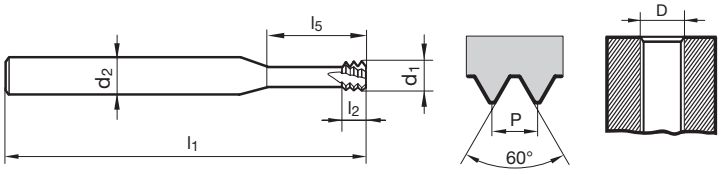
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 470

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP G
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4228**

D	P	d1	d2	l1	l2	l5	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	6,200	8,000	64,000	2,700	19,500	4	9,728
G3/8	19,000	9,950	10,000	73,000	4,000	25,000	4	16,662
G7/8	14,000	11,950	12,000	84,000	5,400	37,000	4	30,201
G2	11,000	15,950	16,000	105,000	6,900	44,000	5	59,614

Micro frese a filettare

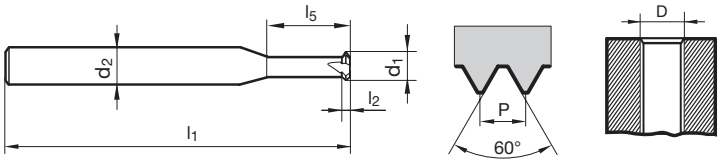
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 470

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M/MF
filetti	1,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4225**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,4 - M1,8	0,350	1,050	3,000	39,000	0,400	3,800	3	1,800
M2 - M2,4	0,400	1,500	3,000	39,000	0,400	7,000	3	2,400
M2,5 - M3	0,500	2,000	3,000	39,000	0,500	9,000	4	3,000
M3,5 - M4,5	0,750	2,800	6,000	58,000	0,800	14,000	4	4,500
M5 - M7	1,000	4,000	6,000	58,000	1,000	19,000	4	7,000
M8 - M10	1,500	6,400	8,000	64,000	1,500	24,000	5	10,000

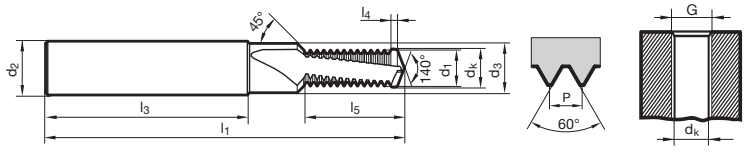
Frese a filettare e forare per filettatura metrica ISO

1,5xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 471

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕	≡	✕	≡
Forma del gambo	HA	HA	HA	HA



Norma di fab.	Articolo nr.	3774	3775	3776	3777

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,400	6,000	3,400	2,50	48,000	36,000	0,500	5,500	2	3,000
M4	0,700	3,200	6,000	4,500	3,30	48,000	36,000	0,700	6,900	2	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	0,800	8,800	2	5,000
M6	1,000	4,750	8,000	6,600	5,00	62,000	36,000	1,000	10,900	2	6,000
M8	1,250	6,350	10,000	9,000	6,80	74,000	40,000	1,250	13,700	2	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	1,500	18,000	2	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	1,500	20,900	2	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	1,500	23,700	2	14,000
M16	2,000	13,200	18,000	17,500	14,00	102,000	48,000	1,500	26,000	2	16,000

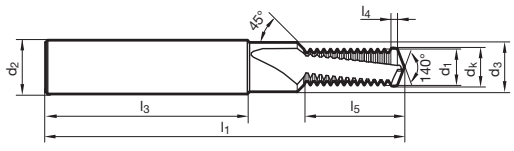
Frese a filettare e forare per filettatura metrica ISO

2xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 471

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕		✕	
Forma del gambo	HA	HA	HA	HA



Norma di fab. Articolo nr. **3778** **3779** **3780** **3781**

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,400	6,000	3,400	2,50	48,000	36,000	0,500	7,000	2	3,000
M4	0,700	3,200	6,000	4,500	3,30	48,000	36,000	0,700	9,000	2	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	0,800	11,200	2	5,000
M6	1,000	4,750	8,000	6,600	5,00	62,000	36,000	1,000	13,900	2	6,000
M8	1,250	6,350	10,000	9,000	6,80	74,000	40,000	1,250	18,700	2	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	1,500	22,500	2	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	1,500	26,100	2	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	1,500	31,700	2	14,000
M16	2,000	13,200	18,000	17,500	14,00	102,000	48,000	1,500	36,000	2	16,000

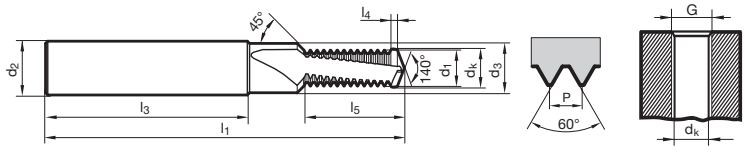
Frese a filettare e forare per filettatura metrica ISO

2,5xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 471

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕	≡	✕	≡
Forma del gambo	HA	HA	HA	HA



Norma di fab.	Articolo nr.	3782	3783	3784	3785

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,400	6,000	3,400	2,500	48,000	36,000	0,500	8,500	2	3,000
M4	0,700	3,200	6,000	4,500	3,300	48,000	36,000	0,700	11,100	2	4,000
M5	0,800	4,000	6,000	5,500	4,200	54,000	36,000	0,800	13,600	2	5,000
M6	1,000	4,750	8,000	6,600	5,000	62,000	36,000	1,000	16,900	2	6,000
M8	1,250	6,350	10,000	9,000	6,800	74,000	40,000	1,250	22,500	2	8,000
M10	1,500	7,950	12,000	11,000	8,500	80,000	45,000	1,500	27,000	2	10,000
M12	1,750	9,950	14,000	13,500	10,200	90,000	45,000	1,500	31,400	2	12,000
M14	2,000	11,200	16,000	15,500	12,000	102,000	48,000	1,500	39,700	2	14,000
M16	2,000	13,200	18,000	17,500	14,000	102,000	48,000	1,500	46,000	2	16,000

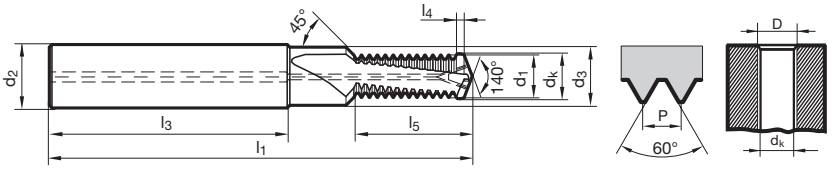
Frese a filettare e forare per filettatura metrica ISO passo fine

1,5xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 471

Materiale tagliente	Int. in MD		
Superficie	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna			
Forma del gambo	HA	HA	HA



Norma di fab.	Articolo nr.	3787	3788	3789

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,200	6,000	4,500	3,500	48,000	36,000	0,500	6,600	2	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,500	54,000	36,000	0,500	8,300	2	5,003
M 6 X0,75	0,750	4,750	8,000	6,600	5,200	62,000	36,000	0,750	9,900	2	6,004
M8 x 0,75	0,750	6,350	10,000	9,000	7,200	74,000	40,000	0,750	14,100	2	8,004
M8 x 1	1,000	6,350	10,000	9,000	7,000	74,000	40,000	1,000	14,300	2	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,000	80,000	45,000	1,000	16,600	2	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,800	80,000	45,000	1,250	16,600	2	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,000	90,000	45,000	1,000	20,000	2	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,500	90,000	45,000	1,500	21,400	2	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,500	102,000	48,000	1,500	23,300	2	14,007
M16 x 1,5	1,500	13,200	18,000	17,500	14,500	102,000	48,000	1,500	26,600	2	16,007

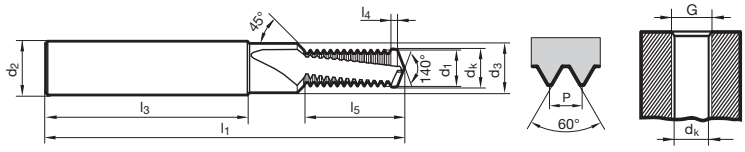
Frese a filettare e forare per filettatura metrica ISO passo fine

2xD

P	
M	
K	○
N	•
S	
H	

Dati di taglio a pag. 471

Materiale tagliente	Int. in MD			
Superficie	◯	◯	C	C
Tipo	DTMC SP	DTMC SP	DTMC SP	DTMC SP
Refrigerazione interna	✕	≡	✕	≡
Forma del gambo	HA	HA	HA	HA



Norma di fab.	Articolo nr.	3790	3791	3792	3793

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,200	6,000	4,500	3,500	48,000	36,000	0,500	8,600	2	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,500	54,000	36,000	0,500	10,800	2	5,003
M 6 X0,75	0,750	4,750	8,000	6,600	5,200	62,000	36,000	0,750	12,900	2	6,004
M8 x 0,75	0,750	6,350	10,000	9,000	7,200	74,000	40,000	0,750	17,100	2	8,004
M8 x 1	1,000	6,350	10,000	9,000	7,000	74,000	40,000	1,000	17,300	2	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,000	80,000	45,000	1,000	21,600	2	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,800	80,000	45,000	1,250	21,600	2	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,000	90,000	45,000	1,000	26,000	2	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,500	90,000	45,000	1,500	27,400	2	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,500	102,000	48,000	1,500	30,800	2	14,007
M16 x 1,5	1,500	13,200	18,000	17,500	14,500	102,000	48,000	1,500	34,100	2	16,007

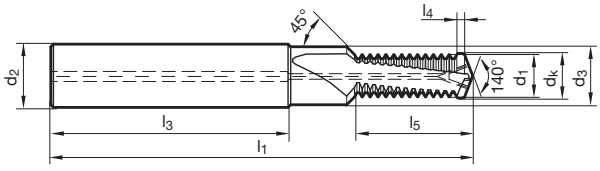
Frese a filettare e forare per filettatura UNC

2xD

P	
M	
K	•
N	•
S	
H	

Dati di taglio a pag. 471

Materiale tagliente	Int. in MD	
Superficie	◯	C
Tipo	DTMC SP	DTMC SP
Refrigerazione interna		
Forma del gambo	HA	HA



Norma di fab. Articolo nr. **4138** **4139**

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	20,000	5,000	8,000	6,600	5,100	62,000	36,000	1,300	14,900	2	6,350
5/16 - 18	18,000	6,250	10,000	9,000	6,600	74,000	40,000	1,500	18,100	2	7,938
3/8 - 16	16,000	7,500	12,000	11,000	8,000	80,000	45,000	1,500	22,100	2	9,525
7/16 - 14	14,000	8,800	12,000	11,000	9,400	80,000	45,000	1,500	25,000	2	11,113
1/2 - 13	13,000	10,200	14,000	13,500	10,800	90,000	45,000	1,500	26,900	2	12,700
9/16 - 12	12,000	11,600	16,000	15,500	12,200	102,000	48,000	1,500	31,200	2	14,288
5/8 - 11	11,000	13,000	18,000	17,500	13,500	102,000	48,000	1,500	36,300	2	15,875

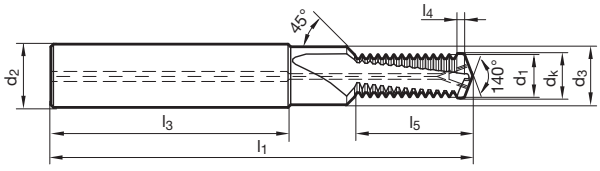
Frese a filettare e forare per filettatura UNF

2xD

P	
M	
K	•
N	•
S	
H	

Dati di taglio a pag. 471

Materiale tagliente	Int. in MD	
Superficie	◯	C
Tipo	DTMC SP	DTMC SP
Refrigerazione interna		
Forma del gambo	HA	HA



Norma di fab. Articolo nr. **4140** **4141**

D	P	d1	d2	d3	dk	l1	l3	l4	l5	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	28,000	5,000	8,000	6,600	5,500	62,000	36,000	1,000	12,800	2	6,350
5/16 - 24	24,000	6,250	10,000	9,000	6,900	74,000	40,000	1,100	18,200	2	7,938
3/8 - 24	24,000	7,950	12,000	11,000	8,500	80,000	45,000	1,100	20,600	2	9,525
7/16 - 20	20,000	9,500	12,000	11,000	9,900	80,000	45,000	1,300	24,700	2	11,113
1/2 - 20	20,000	10,200	14,000	13,500	11,500	90,000	45,000	1,300	27,500	2	12,700
9/16 - 18	18,000	11,600	16,000	15,500	12,900	102,000	48,000	1,500	30,600	2	14,288
5/8 - 18	18,000	13,000	18,000	17,500	14,500	102,000	48,000	1,500	33,700	2	15,875

TITANIO

S

Leghe speciali a base di Nickel, Ferro e Cobalto, Titanio e leghe di Titanio

LEGHE SPECIALI SUPERLEGHE E LEGHE DI TITANIO

S TITANIO, LEGHE SPECIALI

titanio

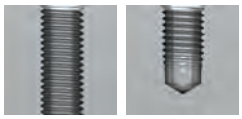
nichel

M		MF	
ISO 2/6H	ISO 3/6G	ISO 2/6H	ISO 3/6G
No 1 M3 - M16 Art. 2901 da pag. 602		No 1 M3x0,35 - M10x1,25 Art. 2903 da pag. 606	
No 1 M3 - M16 Art. 2909 da pag. 604		No 1 M3x0,35 - M10x1,25 Art. 2910 da pag. 608	
No 1 M3 - M16 Art. 2916 da pag. 602		No 1 M3x0,35 - M10x1,25 Art. 2917 da pag. 606	
No 1 M3 - M16 Art. 2920 da pag. 604		No 1 M3x0,35 - M10x1,25 Art. 2921 da pag. 608	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2B	2B	-



FORI PASSANTI
FORI CIECHI

No 1
Nr. 6 - 3/8
Art. 2905
da pag. 610

Fori passanti
HSS-E-PM, TiCN, forma B

No 1
Nr. 4 - 5/8
Art. 2912
da pag. 612

No 1
Nr. 4 - 5/8
Art. 2914
da pag. 617

Fori ciechi
HSS-E-PM, TiCN, forma C

No 1
Nr. 6 - 3/8
Art. 2918
da pag. 610

No 1
Nr. 6 - 3/8
Art. 2919
da pag. 614

Fori passanti
HSS-E-PM, TiAlN, forma B

No 1
Nr. 4 - 5/8
Art. 2922
da pag. 612

No 1
Nr. 4 - 5/8
Art. 2923
da pag. 616

Fori ciechi
HSS-E-PM, TiAlN, forma C

S TITANIO, LEGHE SPECIALI

con refrigerazione interna

M		MF	
6HX	6GX	6HX	6GX
No 1 M3 - M20 Art. 1270/1271 da pag. 623	No 1 M5 - M10 Art. 1713 da pag. 624	No 1 M8x1 - M24x1,5 Art. 1272/1273 da pag. 632	No 1 M8x1 - M24x1,5 Art. 1715/1716 da pag. 633
No 1 M3 - M20 Art. 1725/1727 da pag. 623	No 1 M3 - M20 Art. 1726/1728 da pag. 625	No 1 M8x1 - M24x1,5 Art. 1729/1731 da pag. 632	No 1 M8x1 - M24x1,5 Art. 1730/1732 da pag. 633
No 1 M3 - M20 Art. 1972/1931 da pag. 627		No 1 M10x1 - M24x1,5 Art. 1581 da pag. 635	

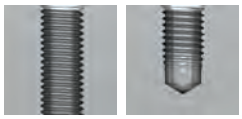
con canalini di lubr.

M3 - M20 Art. 1266/1267 da pag. 621	M8x1 - M24x2 Art. 1268/1269 da pag. 630

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2BX	2BX	-



FORI PASSANTI
FORI CIECHI

FORMA C

HSS-E-PM, TiCN, forma C

FORMA E

HSS-E-PM, TiN, forma E

METALLO DURO

Metallo duro, TiCN, forma C

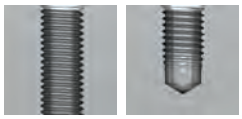
HSS-E, TiN, forma C

S TITANIO, LEGHE SPECIALI

	M UNIVERSAL	MF UNIVERSAL
1,5xD	No 1 M3 - M20 Art. 3525 da pag. 643	No 1 M4x0,5 - M16x1,5 Art. 3527 da pag. 646
2xD	No 1 M3 - M20 Art. 3526 da pag. 644	No 1 M4x0,5 - M16x1,5 Art. 3528 da pag. 647
2,5xD	No 1 M3 - M20 Art. 3759 da pag. 645	No 1 M4x0,5 - M16x1,5 Art. 3762 da pag. 648
3xD	No 1 M1,6 - M16 Art. 4226 da pag. 637	
universal	No 1 Ø8xP0,5 - Ø30xP3,5 Art. 3541 da pag. 664	No 1 Ø8xP0,5 - Ø30xP3,5 Art. 3541 da pag. 664

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G	
UNIVERSAL	UNIVERSAL	-	 FORI PASSANTI FORI CIECHI

No 1
1/4 - 1/2
Art. 3516
da pag. 650

No 1
1/4 - 1/2
Art. 3518
da pag. 653

No 1
1/8 - 3/8
Art. 3514
da pag. 657

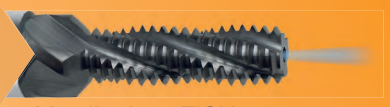
Metallo duro, TiCN

No 1
1/4 - 1/2
Art. 3517
da pag. 651

No 1
1/4 - 1/2
Art. 3519
da pag. 654

No 1
1/8 - 3/8
Art. 3515
da pag. 658

Metallo duro, TiCN



Metallo duro, TiCN

Metallo duro, TiCN

No 1
Ø10xUN24 - Ø20xUN16
Art. 3595
da pag. 666

No 1
Ø10xUN24 - Ø20xUN16
Art. 3595
da pag. 666

No 1
Ø10xG19 - Ø20xG11
Art. 3542
da pag. 667

Metallo duro, TiCN

S

LEGHE SPECIALI, SUPERLEGHE E LEGHE DI TITANIO

FORI PASSANTI

	Profondità filettatura	≤3xD	
	Materiale tagliente	HSS-E-PM	
	Tipo/forma	TiNi/B	TiNi/B
	Superficie	C	A
	Erogazione del liquido di raffredd.	☒	☒
	Tolleranza codolo	h9	h9

Filettatura	Tolleranza	Articolo nr. / pagina	
M	4H		
	6H		
	6HX	2901 602	2916 602
	6GX		
MF	6H		
	6HX	2903 606	2917 606
	6GX		
UNC	2B		
	2BX	2905 610	2918 610
UNF	2B		
	2BX		2919 614
G			
BSW			
NPT			
NPTF			
EG M	6H Mod.		
MJ	4HX	1057 603	
MJF	4HX	1058 607	
UNJC	3BX	1059 611	
UNJF	3BX	1060 615	
PG			
lubrificante adatto		○/●/△	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min	
S	Titanio e leghe di titanio	≤ 1200 N/mm²	titanio	3.7025	4	4
			TiAl5Sn2	3.7115		
			TiAl6V4	3.7165		
	Leghe di nichel, cobalto e ferro	≤ 1400 N/mm²	Hastelloy C4	2.4610	4	4
			Inconel 718	2.4668		
			Nimonic 105	2.4634		

S

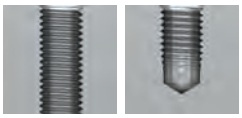
LEGHE SPECIALI, SUPERLEGHE E LEGHE DI TITANIO

FORI CIECHI

	Profondità filettatura		≤3xD	
	Materiale tagliente		HSS-E-PM	
	Tipo/forma		Ti R15/C	Ni R10/C (K)
	Superficie		C	A
	Erogazione del liquido di raffredd.		☒	☒
	Tolleranza codolo		h9	h9
	Filettatura	**Tolleranza**	**Articolo nr. / pagina**	
	M	4H		
		6H		
		6HX	2909 604	2920 604
		6G		
	MF	6H		
		6HX	2910 608	2921 608
		6G		
	UNC	2B		
		2BX	2912 612	2922 612
	UNF	2B		
		2BX	2914 617	2923 616
	G			
	BSW			
	NPT			
	NPTF			
	EG M	6H Mod.		
	MJ	4HX	1061 605	1065 605
	MJF	4HX	1062 609	1066 609
	UNJC	3BX	1063 613	1067 613
	UNJF	3BX	1064 618	1068 618
	PG			
	lubrificante adatto		○/●/△	○/●/△

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min	
S	Titanio e leghe di titanio	≤ 1200 N/mm²	titanio TiAl5Sn2 TiAl6V4	3.7025 3.7115 3.7165	4	-
	Leghe di nichel, cobalto e ferro	≤ 1400 N/mm²	Hastelloy C4 Inconel 718 Nimonic 105	2.4610 2.4668 2.4634	-	4

LEGHE SPECIALI, SUPERLEGHE E LEGHE DI TITANIO



FORI PASSANTI E
FORI CIECHI

Profondità filettatura		≤3xD			
Materiale tagliente		HSS-E-PM			
Tipo/forma		N/C	N/C	N/C	N/C
Superficie		S	S	S	S
Erogazione del liquido di raffredd.		☒	☒	radiale	assiale
Tolleranza codolo		h9	h9	h9	h9
Filettatura	**Tolleranza**	**Articolo nr. / pagina**			
M	4H				
	6H				
	6HX	322/339 620	1266/1267 621	323/342 622	4143 626
	6GX				
MF	6H				
	6HX	333 629	1268/1269 630	338 631	4145 634
	6GX				
UNC	2B				
	2BX				
UNF	2B				
	2BX				
G					
BSW					
NPT					
NPTF					
EG M	6H Mod.				
MJ	4HX				
MJF	4HX				
UNJC	3BX				
UNJF	3BX				
PG					
lubrificante adatto		○/●/△	○/●/△	○/●/△/□	○/●/△

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
□ = lubrificazione minimale (MQL)

	Gruppo di materiali	Resistenza alla trazione	esempio materiale	Materiale nr.	Velocità di taglio consigliata vc m / min			
S	Titanio e leghe di titanio	≤ 1200 N/mm²	titanio TiAl5Sn2 TiAl6V4	3.7025 3.7115 3.7165	4	4	4	4
	Leghe di nichel, cobalto e ferro	≤ 1400 N/mm²	Hastelloy C4 Inconel 718 Nimonic 105	2.4610 2.4668 2.4634	4	4	4	4

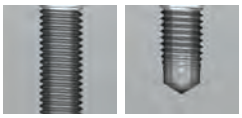
≤3xD

HSS-E-PM			Int. in MD	
N/C	N/C	N/E	N/C	N/E
C	A	S	C	C
radiale	radiale	assiale	radiale	radiale
h9	h9	h9	h6	h6
Articolo nr. / pagina				
1270/1271 623	1717/1719 623	1725/1727 623	1972/1931 627	1927 628
1713 624	1718/1720 625	1726/1728 625		
1272/1273 632	1721/1723 632	1729/1731 632	1581 635	
1715/1716 633		1730/1732 633		
○/●/△/□	○/●/△/□	○/●/△	○/●/△/□	○/●/△/□

Velocità di taglio consigliata vc m / min				
4	4	4	10	10
4	4	4	10	10

S

LEGHE SPECIALI, SUPERLEGHE E LEGHE DI TITANIO



FORI PASSANTI E
FORI CIECHI

	Profondità filettatura	≤2xD				≤2,5xD		≤1,5xD	
	Materiale tagliente		Int. in MD						
	Tipo	TM SP	TM SP	TM SP	TM SP	TM SP	TM SP	TMC SP	TMC SP
	Superficie	C	C	C	C	C	C	C	C
	Erogazione del liquido di raffredd.	☒	☒	assiale	assiale	assiale	assiale	assiale	assiale
	Forma del gambo	HA	HB	HA	HB	HA	HB	HA	HA
	Torsione	27°	27°	27°	27°	27°	27°	10°	10°
	Filettatura		**Articolo nr. / pagina**						
	M	4132 641	4133 641	3737 640	3743 640	3735 642	3740 642	3525 643	3543 643
	MF			3737 640	3743 640			3527 646	3545 646
	UNC			4134 649	4135 649			3516 650	3534 650
	UNF			4136 652	4137 652			3518 653	3536 653
	G			3745 655	3748 655	3746 656	3750 656	3514 657	3529 657
	BSW								
	NPT			3753 660	3754 660			3520 661	3538 661
	NPTF			3756 662	3757 662			3521 663	3539 663
	EG M	Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare							
	MJ								
	MJF								
	UNJC								
	UNJF								
	PG								
	lubrificante adatto	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

= No 1

○ = Aria
● = olio intero
○ = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Durezza	esempio materiale	Materiale nr.	consigli di applicazione							
S	Titanio e leghe di titanio	≤ 1200 N/mm²	titanio TiAl5Sn2 TiAl6V4	3.7025 3.7115 3.7165	+	+	+	+	+	+	++	++
	Leghe di nichel, cobalto e ferro	≤ 1400 N/mm²	Hastelloy C4 Inconel 718 Nimonic 105	2.4610 2.4668 2.4634	+	+	+	+	+	+	++	++

≤2xD		≤2,5xD		universale				≤3xD	
Int. in MD									
TMC SP	TMC SP	TMC SP	TMC SP	TMU SP	TMU SP	TMU SP	TMU SP	MTM 3 SP	MTM 1 SP
C	C	C	C	C	C	C	C	C	C
assiale	assiale	assiale	assiale	assiale	assiale	assiale	assiale	☒	☒
HA	HB	HA	HB	HA	HB	HA	HB	HA	HA
10°	10°	27°	27°	15°	15°	15°	15°	15°	15°
Articolo nr. / pagina									
3526 644	3544 644	3759 645	3760 645	3541 664	3556 664	4162 665	4163 665	4226 637	4225 639
3528 647	3546 647	3762 648	3763 648	3541 664	3556 664	4162 665	4163 665		4225 639
3517 651	3535 651			3595 666	3596 666				
3519 654	3537 654			3595 666	3596 666				
3515 658	3533 658	3765 659	3766 659	3542 667	3557 667	3542 667	3557 667	4228 638	
				3768 668	3769 668				
				3772 669	3773 669				
Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare									
○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●	○/●

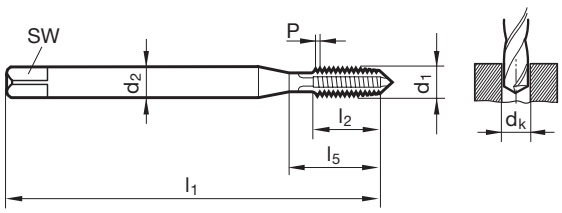
consigli di applicazione									
++	++	++	++	++	++	++	++	++	++
++	++	++	++	++	++	++	++	++	++

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	A
Tipo	TiNi	TiNi
Forma	B	B
Refrigerazione interna		

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 596



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **2901** **2916**

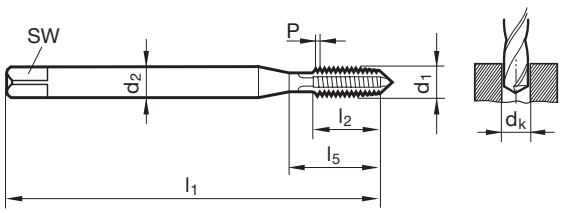
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	4HX
Superficie	C
Tipo	TiNi
Forma	B
Refrigerazione interna	

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 596



DIN 2184-1 DIN 371/DIN 376 Articolo nr. **1057**

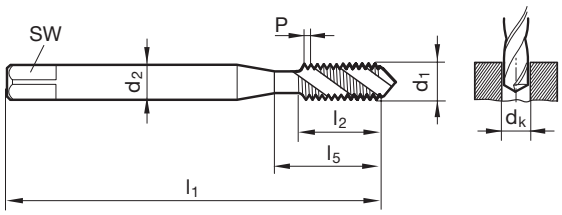
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
MJ3 x 0,5	0,500	3,500	2,700	2,60	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,40	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,30	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,10	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,90	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,60	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,40	110,000	24,000	49,000
M16	2,000	12,000	9,000	14,20	110,000	26,000	54,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	A
Tipo	Ti R15	Ni R10
Forma	C	C (K)
Refrigerazione interna		

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 597



DIN 2184-1 DIN 371/DIN 376 — Articolo nr. **2909** **2920**

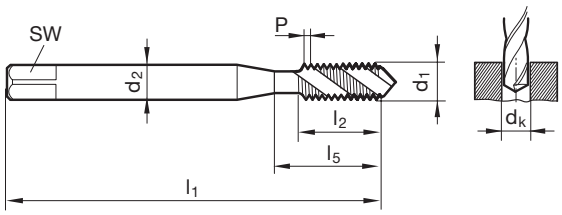
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	4HX	4HX
Superficie	C	A
Tipo	Ti R15	Ni R10
Forma	C	C (K)
Refrigerazione interna		

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 597



DIN 2184-1 DIN 371/DIN 376 — Articolo nr. **1061** **1065**

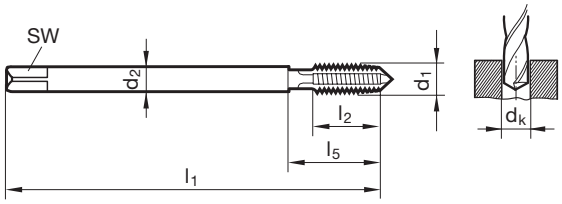
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
MJ3 x 0,5	0,500	3,500	2,700	2,60	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,40	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,30	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,10	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,90	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,60	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,40	110,000	24,000	49,000
M16	2,000	12,000	9,000	14,20	110,000	26,000	54,000

Maschi a macchina per fil. metr. ISO passo fine

P		
M		
K		
N		
S	•	
H		

Dati di taglio a pag. 596

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	A
Tipo	TiNi	TiNi
Forma	B	B
Refrigerazione interna		



DIN 2184-1 DIN 371 — Articolo nr. **2903** **2917**

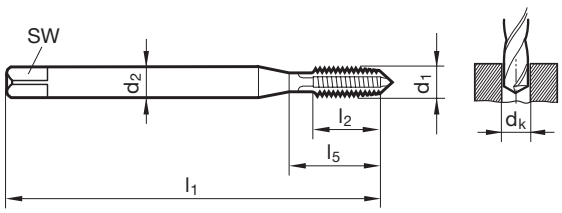
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	3,500	2,700	2,65	56,000	6,000	18,000	3,002
M4 x 0,5	4,500	3,400	3,50	63,000	7,500	21,000	4,003
M5 x 0,5	6,000	4,900	4,50	70,000	8,500	25,000	5,003
M6 x 0,5	6,000	4,900	5,50	80,000	11,000	30,000	6,003
M6 x 0,75	6,000	4,900	5,20	80,000	11,000	30,000	6,004
M8 x 0,5	8,000	6,200	7,50	80,000	14,000	30,000	8,003
M8 x 0,75	8,000	6,200	7,20	80,000	14,000	30,000	8,004
M8 x 1	8,000	6,200	7,00	90,000	14,000	35,000	8,005
M10 x 1	10,000	8,000	9,00	90,000	20,000	35,000	10,005
M10 x 1,25	10,000	8,000	8,80	100,000	20,000	39,000	10,006

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	4HX
Superficie	C
Tipo	TiNi
Forma	B
Refrigerazione interna	

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 596



DIN 2184-1 DIN 371 Articolo nr. **1058**

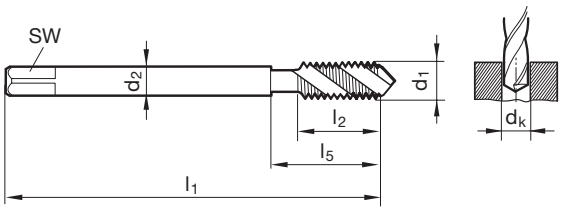
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
MJ6 x 0,5	6,000	4,900	5,60	80,000	11,000	30,000	6,003
MJ6 x 0,75	6,000	4,900	5,40	80,000	11,000	30,000	6,004
MJ8 x 1	8,000	6,200	7,10	90,000	14,000	35,000	8,005
MJ10 x 1	10,000	8,000	9,10	90,000	20,000	35,000	10,005
MJ10 x 1,25	10,000	8,000	8,90	100,000	20,000	39,000	10,006

Maschi a macchina per fil. metr. ISO passo fine

P		
M		
K		
N		
S	•	
H		

Dati di taglio a pag. 597

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6HX	6HX
Superficie	C	A
Tipo	Ti R15	Ni R10
Forma	C	C (K)
Refrigerazione interna		



DIN 2184-1 DIN 371 — Articolo nr. **2910** **2921**

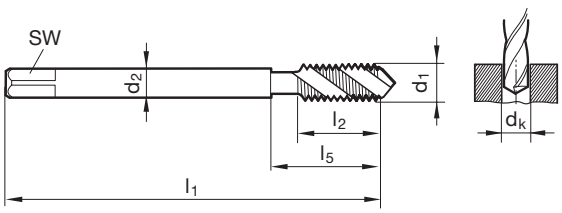
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M3 x 0,35	3,500	2,700	2,65	56,000	6,000	18,000	3,002
M4 x 0,5	4,500	3,400	3,50	63,000	7,500	21,000	4,003
M5 x 0,5	6,000	4,900	4,50	70,000	8,500	25,000	5,003
M6 x 0,5	6,000	4,900	5,50	80,000	11,000	30,000	6,003
M6 x 0,75	6,000	4,900	5,20	80,000	11,000	30,000	6,004
M8 x 0,5	8,000	6,200	7,50	80,000	14,000	30,000	8,003
M8 x 0,75	8,000	6,200	7,20	80,000	14,000	30,000	8,004
M8 x 1	8,000	6,200	7,00	90,000	14,000	35,000	8,005
M10 x 1	10,000	8,000	9,00	90,000	20,000	35,000	10,005
M10 x 1,25	10,000	8,000	8,80	100,000	20,000	39,000	10,006

Maschi a macchina per fil. metr. ISO passo fine

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 597

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	4HX	4HX
Superficie	C	A
Tipo	Ti R15	Ni R10
Forma	C	C (K)
Refrigerazione interna		



DIN 2184-1 DIN 371 — Articolo nr. **1062** **1066**

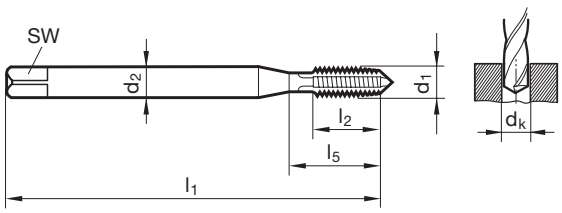
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
MJ6 x 0,5	6,000	4,900	5,60	80,000	11,000	30,000	6,003
MJ6 x 0,75	6,000	4,900	5,40	80,000	11,000	30,000	6,004
MJ8 x 0,5	8,000	6,200	7,60	80,000	14,000	30,000	8,003
MJ8 x 0,75	8,000	6,200	7,40	80,000	14,000	30,000	8,004
MJ8 x 1	8,000	6,200	7,10	90,000	14,000	35,000	8,005
MJ10 x 1	10,000	8,000	9,10	90,000	16,000	35,000	10,005
MJ10 x 1,25	10,000	8,000	8,90	100,000	16,000	39,000	10,006

Maschi a macchina per filettatura UNC

P		
M		
K		
N		
S	•	
H		

Dati di taglio a pag. 596

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	2BX	2BX
Superficie	C	A
Tipo	TiNi	TiNi
Forma	B	B
Refrigerazione interna		



DIN 2184-1 ~DIN 371 Articolo nr. **2905** **2918**

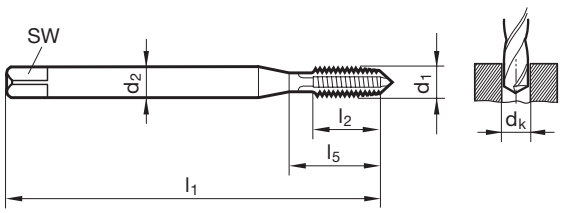
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525

Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	3BX
Superficie	C
Tipo	TiNi
Forma	B
Refrigerazione interna	

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 596



DIN 2184-1 ~DIN 371/~DIN 376 Articolo nr. **1059**

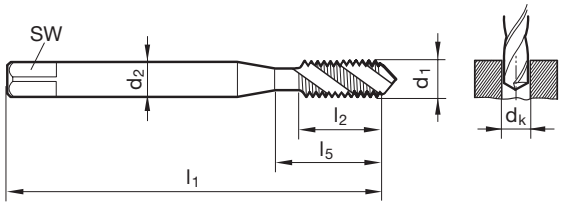
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525
7/16 - 14	8,000	6,200	9,40	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875

Maschi a macchina per filettatura UNC

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	2BX	2BX
Superficie	C	A
Tipo	Ti R15	Ni R10
Forma	C	C (K)
Refrigerazione interna		

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 597



DIN 2184-1 ~DIN 371/~DIN 376 — Articolo nr. **2912** **2922**

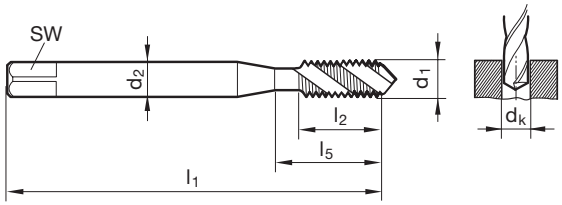
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 40	3,500	2,700	2,35	56,000	11,000	18,000	2,845
5 - 40	3,500	2,700	2,65	56,000	11,000	18,000	3,175
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525
7/16 - 14	8,000	6,200	9,40	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875

Maschi a macchina per filettatura UNC

P		
M		
K		
N		
S	•	
H		

Dati di taglio a pag. 597

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	3BX	3BX
Superficie	C	A
Tipo	Ti R15	Ni R10
Forma	C	C (K)
Refrigerazione interna		



DIN 2184-1 ~DIN 371/~DIN 376 — Articolo nr. **1063** **1067**

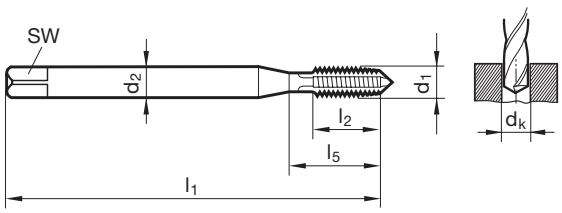
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
6 - 32	4,000	3,000	2,85	56,000	12,000	20,000	3,505
8 - 32	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 24	6,000	4,900	3,90	70,000	14,000	25,000	4,826
12 - 24	6,000	4,900	4,50	80,000	16,000	30,000	5,486
1/4 - 20	7,000	5,500	5,10	80,000	16,000	30,000	6,350
5/16 - 18	8,000	6,200	6,60	90,000	18,000	35,000	7,938
3/8 - 16	10,000	8,000	8,00	100,000	20,000	39,000	9,525
7/16 - 14	8,000	6,200	9,40	100,000	22,000	42,000	11,113
1/2 - 13	9,000	7,000	10,80	110,000	25,000	49,000	12,700
5/8 - 11	12,000	9,000	13,50	110,000	30,000	53,000	15,875

Maschi a macchina per filettatura UNF

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	2BX
Superficie	A
Tipo	TiNi
Forma	B
Refrigerazione interna	

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 596



DIN 2184-1 ~DIN 371 Articolo nr. **2919**

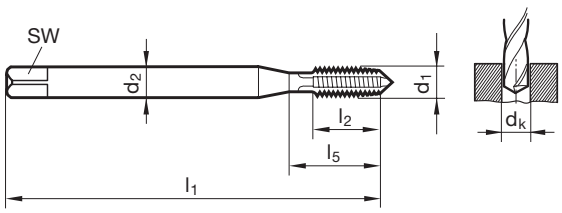
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
6 - 40	4,000	3,000	2,95	56,000	11,000	20,000	3,505
8 - 36	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,10	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	4,60	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,50	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	6,90	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	8,50	90,000	18,000	35,000	9,525

Maschi a macchina per filettatura UNF

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	3BX
Superficie	C
Tipo	TiNi
Forma	B
Refrigerazione interna	

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 596



DIN 2184-1 ~DIN 371/~DIN 374 Articolo nr. **1060**

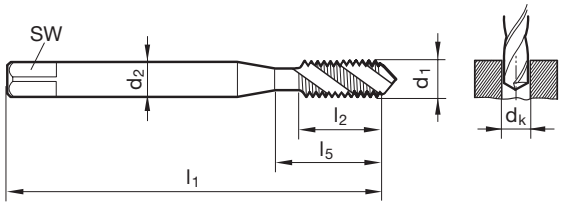
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
6 - 40	4,000	3,000	2,95	56,000	12,000	20,000	3,505
8 - 36	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,10	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	4,60	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,50	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	6,90	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	8,50	100,000	20,000	39,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	20,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875

Maschi a macchina per filettatura UNF

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	2BX
Superficie	A
Tipo	Ni R10
Forma	C (K)
Refrigerazione interna	

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 597



DIN 2184-1 ~DIN 371/~DIN 374 Articolo nr. **2923**

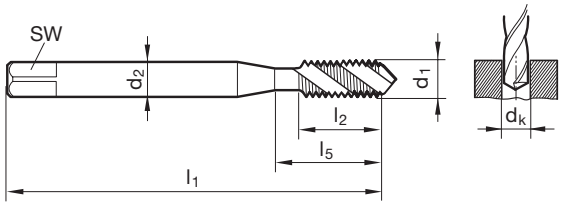
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	3,500	2,700	2,40	56,000	10,000	18,000	2,845
5 - 44	3,500	2,700	2,70	56,000	10,000	18,000	3,175
6 - 40	4,000	3,000	2,95	56,000	11,000	20,000	3,505
8 - 36	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,10	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	4,60	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,50	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	6,90	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	8,50	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	20,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875

Maschi a macchina per filettatura UNF

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	2BX
Superficie	C
Tipo	Ti R15
Forma	C
Refrigerazione interna	

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 597



DIN 2184-1 ~DIN 371/~DIN 374 Articolo nr. **2914**

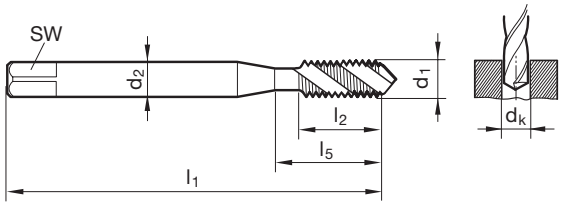
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
4 - 48	3,500	2,700	2,40	56,000	10,000	18,000	2,845
5 - 44	3,500	2,700	2,70	56,000	10,000	18,000	3,175
6 - 40	4,000	3,000	2,95	56,000	11,000	20,000	3,505
8 - 36	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,10	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	4,60	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,50	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	6,90	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	8,50	90,000	18,000	35,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	20,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875

Maschi a macchina per filettatura UNF

P	
M	
K	
N	
S	•
H	

Dati di taglio a pag. 597

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	3BX	3BX
Superficie	C	A
Tipo	Ti R15	Ni R10
Forma	C	C (K)
Refrigerazione interna		



DIN 2184-1 ~DIN 371/~DIN 374 Articolo nr. **1064** **1068**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
6 - 40	4,000	3,000	2,95	56,000	12,000	20,000	3,505
8 - 36	4,500	3,400	3,50	63,000	12,000	21,000	4,166
10 - 32	6,000	4,900	4,10	70,000	14,000	25,000	4,826
12 - 28	6,000	4,900	4,60	80,000	16,000	30,000	5,486
1/4 - 28	7,000	5,500	5,50	80,000	16,000	30,000	6,350
5/16 - 24	8,000	6,200	6,90	90,000	18,000	35,000	7,938
3/8 - 24	10,000	8,000	8,50	100,000	20,000	39,000	9,525
7/16 - 20	8,000	6,200	9,90	100,000	22,000	42,000	11,113
1/2 - 20	9,000	7,000	11,50	100,000	20,000	40,000	12,700
5/8 - 18	12,000	9,000	14,50	100,000	22,000	44,000	15,875

MASCHI A MACCHINA A RULLARE

S

Leghe speciali, superleghe e leghe di titanio

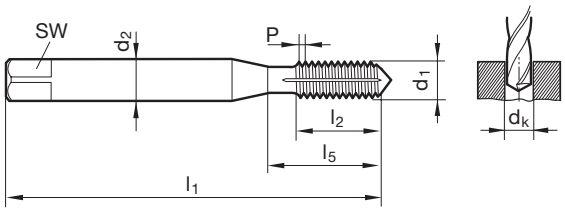
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

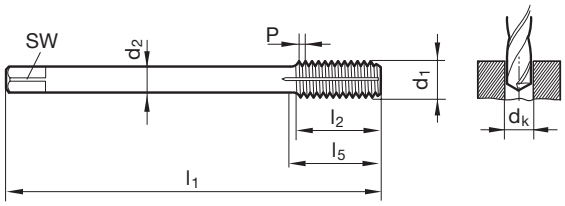
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **322**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **339**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

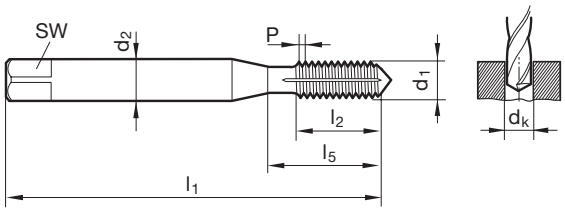
Maschi a macchina a rullare per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

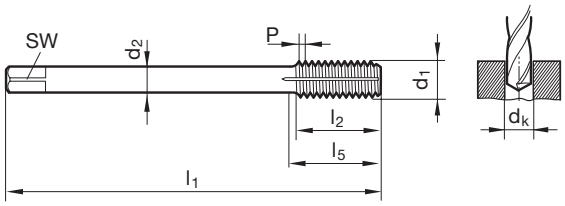
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1266**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1267**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

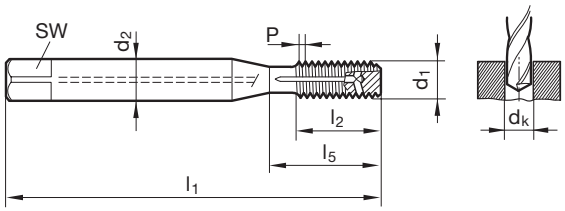
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

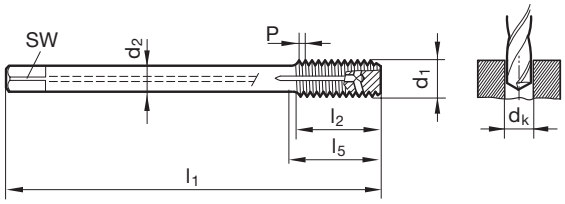
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **323**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **342**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000

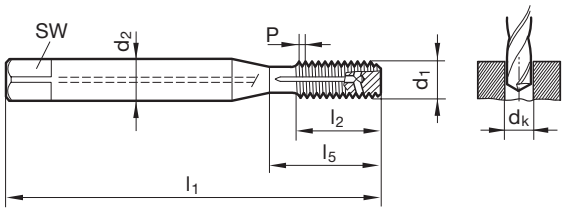
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

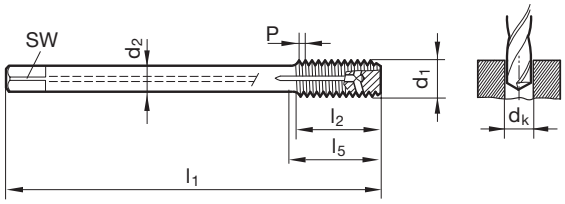
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 599

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1270** **1717** **1725**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1271** **1719** **1727**

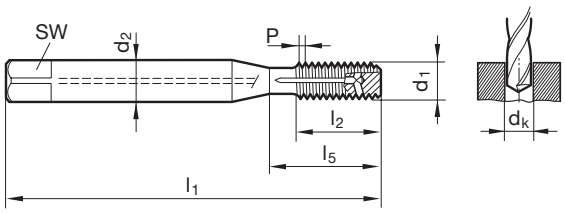
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	30,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6GX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 599



DIN 2174 ~DIN 371 Articolo nr. **1713**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

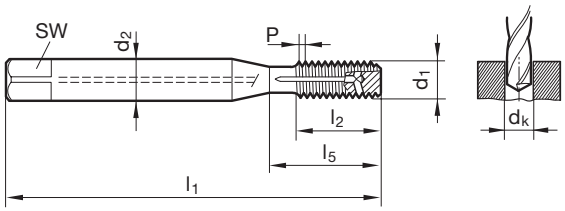
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	A	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

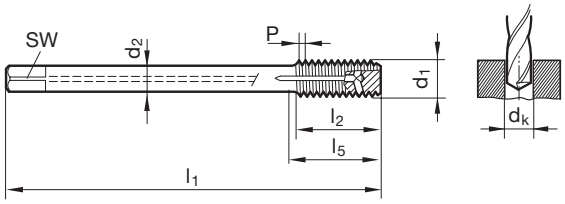
P	•
M	•
K	
N	
S	•
H	

Dati di taglio a pag. 599

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 — Articolo nr. **1718** **1726**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000

DIN 2174 ~DIN 376 — Articolo nr. **1720** **1728**

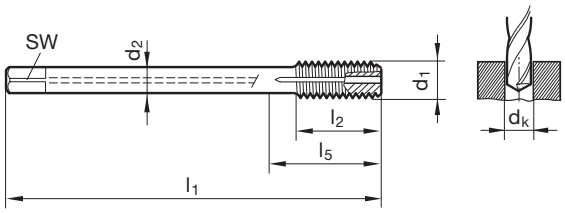
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598



Norma di fab. Norma di fab. Articolo nr. **4143**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	112,000	6,000	18,000
M4	0,700	2,800	2,100	3,70	112,000	7,500	77,000
M5	0,800	3,500	2,700	4,65	125,000	8,500	90,000
M6	1,000	4,500	3,400	5,55	125,000	11,000	90,000
M8	1,250	6,000	4,900	7,40	140,000	14,000	97,000
M10	1,500	7,000	5,500	9,30	160,000	16,000	117,000
M12	1,750	9,000	7,000	11,20	180,000	18,500	133,000
M16	2,000	12,000	9,000	15,10	220,000	20,000	168,000
M20	2,500	16,000	12,000	18,90	280,000	25,000	225,000

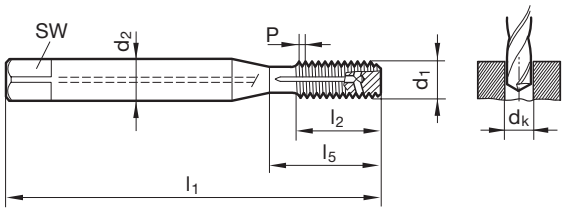
Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

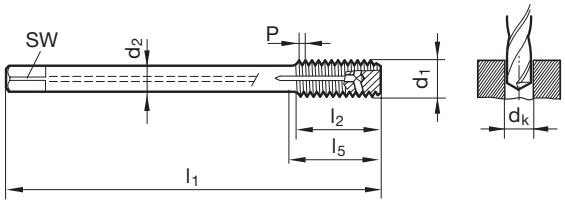
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 599

~ DIN 371



~ DIN 376



DIN 2174 ~DIN 371 Articolo nr. **1972**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

DIN 2174 ~DIN 376 Articolo nr. **1931**

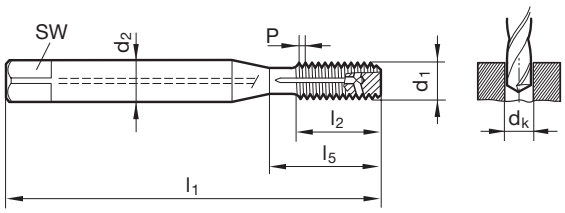
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M18	2,500	14,000	11,000	16,90	125,000	25,000	62,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

Maschi a rullare forati per fil. metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	E
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 599



DIN 2174 ~DIN 371 Articolo nr. **1927**

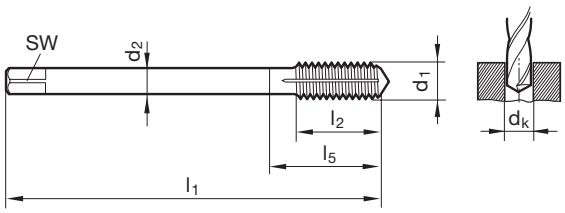
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,80	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000

Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598



DIN 2174 ~DIN 374 Articolo nr. **333**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	11,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	16,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	16,000	44,000	20,007

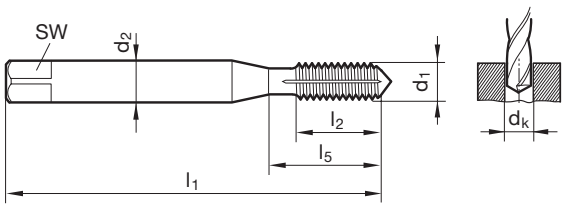
Maschi a macc. a rullare per fil. metr. ISO fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

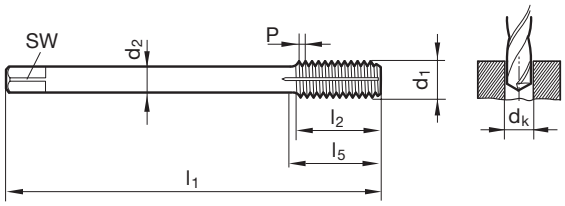
P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 Articolo nr. **1268**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005

DIN 2174 ~DIN 374 Articolo nr. **1269**

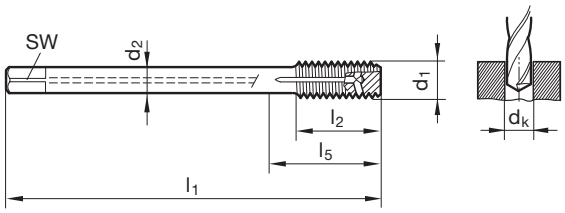
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 2	18,000	14,500	23,10	140,000	28,000	48,000	24,008

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598



DIN 2174 ~DIN 374 Articolo nr. **338**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	90,000	11,000	35,000	8,005
M10 x 1	7,000	5,500	9,55	90,000	11,000	35,000	10,005
M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007

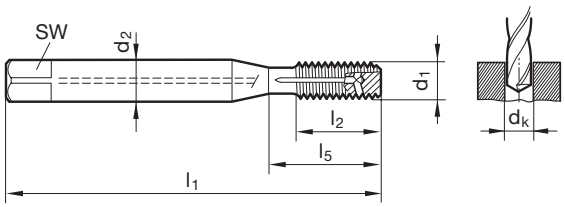
Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM		
Tolleranza sul Ø	6HX	6HX	6HX
Superficie	C	A	S
Tipo	N	N	N
Forma	C	C	E
Refrigerazione interna			

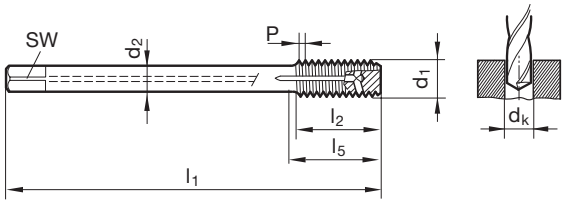
P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 599

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1272** **1721** **1729**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M9 x 1	9,000	7,000	8,55	90,000	16,000	35,000	9,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1273** **1723** **1731**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000	12,006
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	20,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1	16,000	12,000	19,55	125,000	25,000	44,000	20,005
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M22 x 1,5	18,000	14,500	21,30	125,000	25,000	44,000	22,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

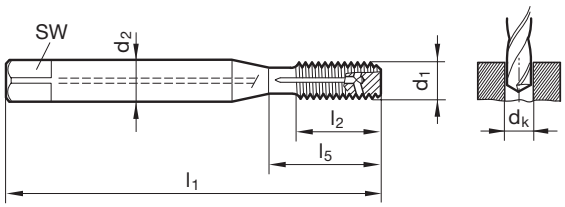
Maschi a rullare forati per fil. metrica ISO passo fine

P	•	
M	•	
K		
N	≥ 7	
S	•	
H		

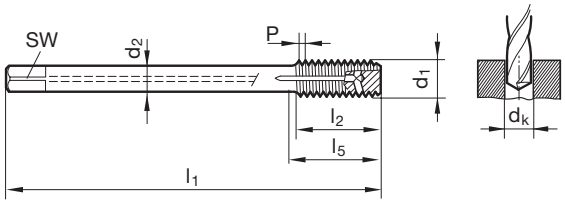
Dati di taglio a pag. 599

Materiale tagliente	HSS-E-PM	
Tolleranza sul Ø	6GX	6GX
Superficie	C	S
Tipo	N	N
Forma	C	E
Refrigerazione interna		

~ DIN 371



~ DIN 374



DIN 2174 ~DIN 371 — Articolo nr. **1715** **1730**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,55	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,55	90,000	16,000	35,000	10,005
M10 x 1,25	10,000	8,000	9,40	100,000	20,000	39,000	10,006

DIN 2174 ~DIN 374 — Articolo nr. **1716** **1732**

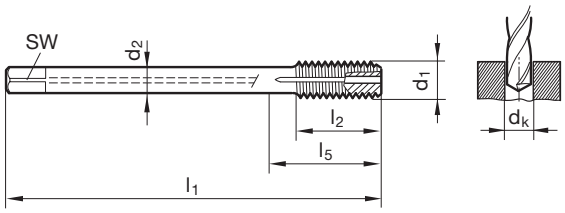
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M12 x 1	9,000	7,000	11,55	100,000	20,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000	12,007
M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	25,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	28,000	48,000	24,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	S
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	○
S	○
H	

Dati di taglio a pag. 598



Norma di fab. Norma di fab. Articolo nr. **4145**

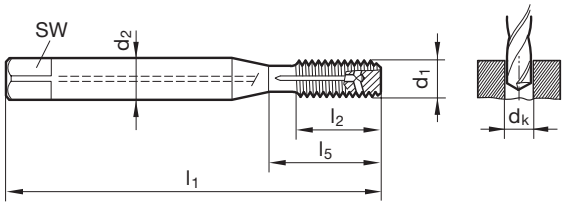
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	6,000	4,900	7,55	140,000	14,000	97,000	8,005
M10 x 1	7,000	5,500	9,55	160,000	16,000	117,000	10,005
M10 x 1,25	7,000	5,500	9,40	160,000	16,000	117,000	10,006
M12 x 1	9,000	7,000	11,55	180,000	18,500	133,000	12,005
M12 x 1,5	9,000	7,000	11,30	180,000	18,500	133,000	12,007
M14 x 1,5	11,000	9,000	13,30	220,000	20,000	168,000	14,007
M16 x 1,5	12,000	9,000	15,30	220,000	20,000	168,000	16,007

Maschi a rullare forati per fil. metrica ISO passo fine

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	6HX
Superficie	C
Tipo	N
Forma	C
Refrigerazione interna	

P	•
M	•
K	
N	≥ 7
S	•
H	

Dati di taglio a pag. 599



DIN 2174 ~DIN 371/~DIN 376 Articolo nr. **1581**

d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M10 x 1	10,000	8,000	9,55	90,000	11,000	35,000	10,005
M12 x 1	9,000	7,000	11,55	100,000	15,000	40,000	12,005
M12 x 1,5	9,000	7,000	11,30	100,000	15,000	40,000	12,007
M14 x 1	11,000	9,000	13,55	100,000	15,000	40,000	14,005
M14 x 1,25	11,000	9,000	13,40	100,000	15,000	40,000	14,006
M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000	14,007
M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000	16,007
M18 x 1,5	14,000	11,000	17,30	110,000	15,000	44,000	18,007
M20 x 1,5	16,000	12,000	19,30	125,000	15,000	44,000	20,007
M24 x 1,5	18,000	14,500	23,30	140,000	15,000	48,000	24,007

FRESE A FILETTARE

S

Micro frese a filettare

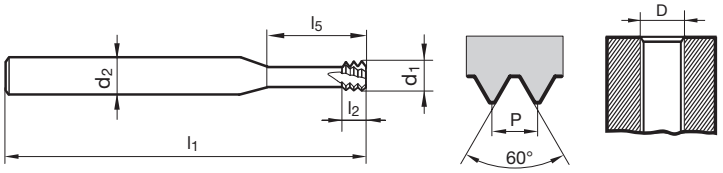
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 601

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4226**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,6	0,350	1,200	3,000	39,000	1,100	4,800	3	1,600
M1,8	0,350	1,400	3,000	39,000	1,100	5,400	3	1,800
M2	0,400	1,550	3,000	39,000	1,200	6,000	4	2,000
M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4	2,500
M3	0,500	2,400	6,000	58,000	1,500	9,500	4	3,000
M3,5	0,600	2,800	6,000	58,000	1,800	11,000	4	3,500
M4	0,700	3,200	6,000	58,000	2,100	12,500	4	4,000
M5	0,800	4,000	6,000	58,000	2,400	16,000	4	5,000
M6	1,000	4,800	6,000	58,000	3,000	20,000	4	6,000
M8	1,250	5,950	6,000	58,000	3,800	24,000	4	8,000
M10	1,500	7,800	8,000	73,000	4,500	33,000	4	10,000
M12	1,750	9,000	10,000	84,000	5,300	38,000	4	12,000
M16	2,000	11,800	10,000	84,000	6,000	35,000	5	16,000

Micro frese a filettare

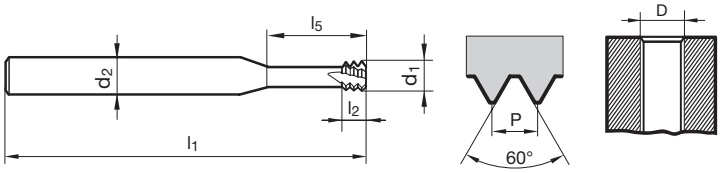
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 601

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP G
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4228**

D	P	d1	d2	l1	l2	l5	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	6,200	8,000	64,000	2,700	19,500	4	9,728
G3/8	19,000	9,950	10,000	73,000	4,000	25,000	4	16,662
G7/8	14,000	11,950	12,000	84,000	5,400	37,000	4	30,201
G2	11,000	15,950	16,000	105,000	6,900	44,000	5	59,614

Micro frese a filettare

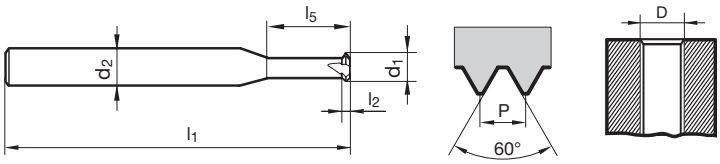
3xD

P	•
M	•
K	•
N	•
S	•
H	

Dati di taglio a pag. 601

Materiale tagliente	**Int. in MD**
Superficie	C
Tipo	SP M/MF
filetti	1,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4225**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M1,4 - M1,8	0,350	1,050	3,000	39,000	0,400	3,800	3	1,800
M2 - M2,4	0,400	1,500	3,000	39,000	0,400	7,000	3	2,400
M2,5 - M3	0,500	2,000	3,000	39,000	0,500	9,000	4	3,000
M3,5 - M4,5	0,750	2,800	6,000	58,000	0,800	14,000	4	4,500
M5 - M7	1,000	4,000	6,000	58,000	1,000	19,000	4	7,000
M8 - M10	1,500	6,400	8,000	64,000	1,500	24,000	5	10,000

Frese a filettare senza fase di svasatura per filettatura metrica ISO

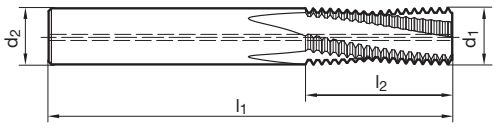
2xD

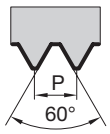
P	•
M	○
K	•
N	•
S	○
H	≤55

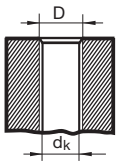
Dati di taglio a pag. 600

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TM SP	TM SP	TM SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA

NEW







Norma di fab.	Articolo nr.	3737	3743	3734

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M8 x 1	1,000	6,400	8,000	7,00	62,000	17,500	3	8,005
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M10 x 1	1,000	7,950	10,000	9,00	74,000	21,500	3	10,005
M10 x 1,25	1,250	7,950	10,000	8,80	74,000	21,900	3	10,006
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M12 x 1,5	1,500	9,950	10,000	10,50	74,000	26,300	4	12,007
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M14 x 1,5	1,500	11,200	12,000	12,50	90,000	30,800	4	14,007
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M16 x 1,5	1,500	12,800	14,000	14,50	90,000	33,800	4	16,007
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000
M20 x 1,5	1,500	14,950	16,000	18,50	102,000	42,800	4	20,007

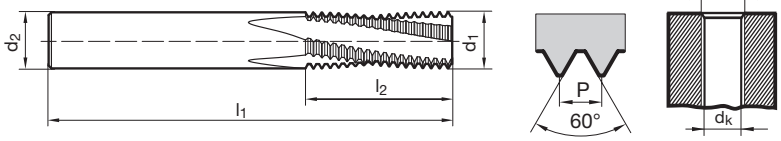
Frese a filettare senza fase di svasatura per filettatura metrica ISO

2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	4132	4133

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	13,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	18,100	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	21,800	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	25,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	31,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	35,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	41,300	4	20,000

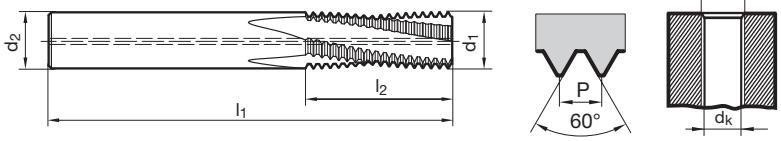
Frese a filettare senza fase di svasatura per filettatura metrica ISO

2,5xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3735	3740

D	P	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm	mm		
M6	1,000	4,800	6,000	5,00	54,000	16,500	3	6,000
M8	1,250	6,400	8,000	6,80	62,000	21,900	3	8,000
M10	1,500	7,950	10,000	8,50	74,000	26,300	3	10,000
M12	1,750	9,950	10,000	10,20	74,000	32,400	4	12,000
M14	2,000	11,200	12,000	12,00	90,000	37,000	4	14,000
M16	2,000	12,800	14,000	14,00	90,000	43,000	4	16,000
M20	2,500	14,950	16,000	17,50	102,000	48,800	4	20,000

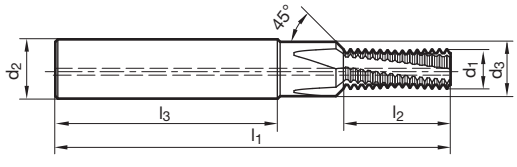
Frese a filettare con fase di svasatura per filettatura metrica ISO

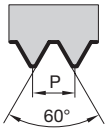
P	•
M	•
K	•
N	•
S	•
H	≤55

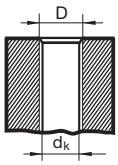
Dati di taglio a pag. 600

Materiale tagliente	Int. in MD		
Superficie	C	C	○
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA

NEW







Norma di fab.	Articolo nr.	3525	3543	3510

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	5,300	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	7,400	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	9,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	10,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	13,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	17,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	20,100	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	25,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	27,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	33,800	4	20,000

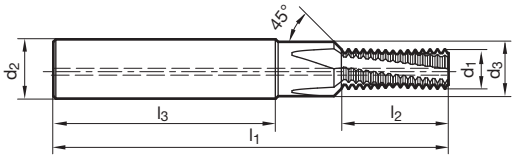
Frese a filettare con fase di svasatura per filettatura metrica ISO

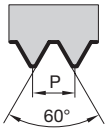
2xD

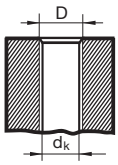
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab. Articolo nr. **3526** **3544** **3511**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	6,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	8,800	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	10,800	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	13,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	18,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	21,800	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	25,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	31,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	35,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	41,300	4	20,000

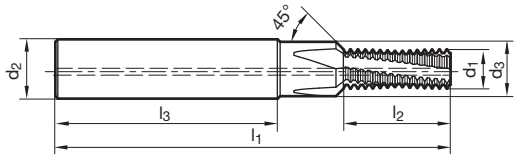
Frese a filettare con fase di svasatura per filettatura metrica ISO

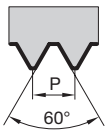
2,5xD

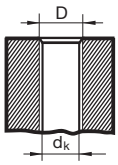
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3759	3760

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	7,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	35,600	10,900	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	13,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	16,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	21,900	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	26,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	32,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	37,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	43,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	48,800	4	20,000

Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

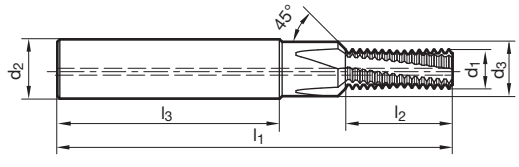
1,5xD

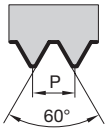
P	•
M	•
K	•
N	•
S	•
H	≤55

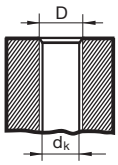
Dati di taglio a pag. 600

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA

NEW







Norma di fab. Articolo nr. **3527** **3545** **3512**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	7,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	8,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	9,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	10,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	13,100	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	13,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	16,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	16,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	19,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	20,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	23,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	26,300	4	16,007

Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

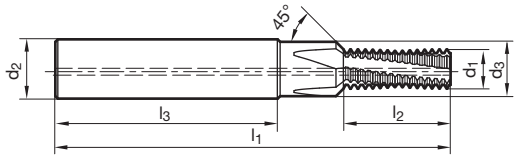
2xD

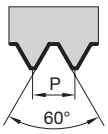
P	•
M	•
K	•
N	•
S	•
H	≤55

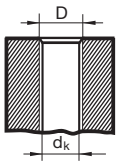
Dati di taglio a pag. 601

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMC SP	TMC SP	TMC SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA

NEW







Norma di fab.	Articolo nr.	3528	3546	3513

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	8,800	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	10,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	12,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	13,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	16,900	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	17,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	21,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	21,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	25,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	26,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	30,800	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	33,800	4	16,007

Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

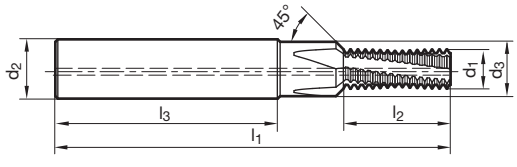
2,5xD

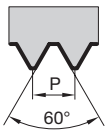
P	•
M	•
K	•
N	•
S	•
H	≤55

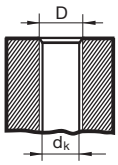
Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3762** **3763**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	10,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	12,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	15,300	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	15,400	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	20,600	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	20,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	25,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	25,600	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	30,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	30,800	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	38,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	41,300	4	16,007

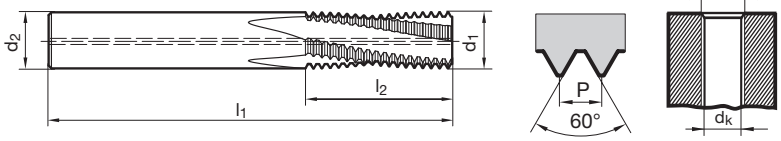
Frese a filettare senza fase di svasatura per filettatura UNC

2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	4134	4135

D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 24	3,400	6,000	3,90	54,000	11,100	3	4,826
12 - 24	4,100	6,000	4,50	54,000	12,200	3	5,486
1/4 - 20	4,700	6,000	5,10	54,000	14,600	3	6,350
5/16 - 18	6,100	8,000	6,60	64,000	17,600	3	7,938
3/8 - 16	7,600	8,000	8,00	64,000	21,400	3	9,525
7/16 - 14	9,000	10,000	9,40	74,000	24,500	3	11,113
1/2 - 13	9,950	10,000	10,80	74,000	28,300	4	12,700
9/16 - 12	11,400	12,000	12,20	90,000	30,700	4	14,288
5/8 - 11	12,700	14,000	13,50	90,000	35,800	4	15,875

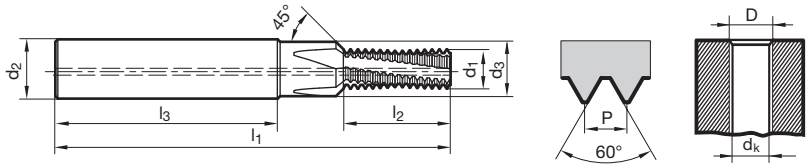
Frese a filettare con fase di svasatura per filettatura UNC

1,5xD

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3516	3534

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	12,100	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	14,800	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	16,700	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	19,000	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	22,500	4	12,700

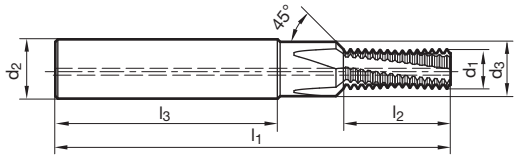
Frese a filettare con fase di svasatura per filettatura UNC

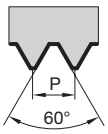
2xD

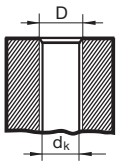
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3517	3535

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	14,600	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	17,600	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	21,400	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	24,500	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	28,300	4	12,700

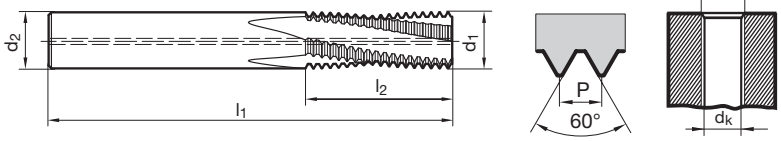
Frese a filettare senza fase di svasatura per filettatura UNF

2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	4136	4137

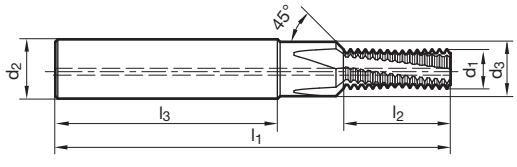
D	d1	d2	dk	l1	l2	Z	Codice
	mm	mm	mm	mm	mm		
10 - 32	3,800	6,000	4,10	54,000	11,500	3	4,826
12 - 28	4,300	6,000	4,60	54,000	12,200	3	5,486
1/4 - 28	5,100	6,000	5,50	54,000	14,100	3	6,350
5/16 - 24	6,300	8,000	6,90	64,000	17,500	3	7,938
3/8 - 24	7,800	8,000	8,50	64,000	20,600	3	9,525
7/16 - 20	9,400	10,000	9,90	74,000	24,800	3	11,113
1/2 - 20	9,950	10,000	11,50	74,000	27,300	4	12,700
9/16 - 18	11,400	12,000	12,90	90,000	30,300	4	14,288
5/8 - 18	12,700	14,000	14,50	90,000	33,200	4	15,875

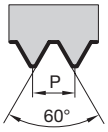
Frese a filettare con fase di svasatura per filettatura UNF

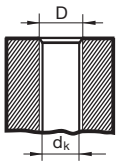
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3518** **3536**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	11,300	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	13,200	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	16,400	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	18,400	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	21,000	4	12,700

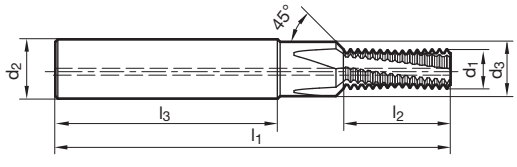
Frese a filettare con fase di svasatura per filettatura UNF

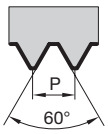
2xD

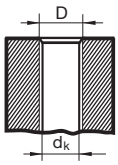
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3519	3537

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	14,100	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	17,500	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	20,600	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	24,800	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	27,300	4	12,700

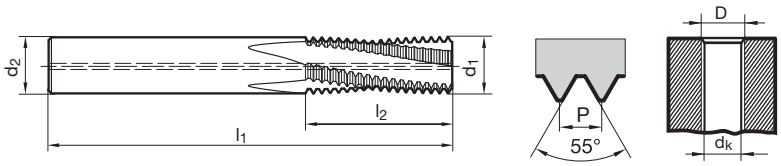
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

2xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3745	3748

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	21,300	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	28,700	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	35,400	4	16,662

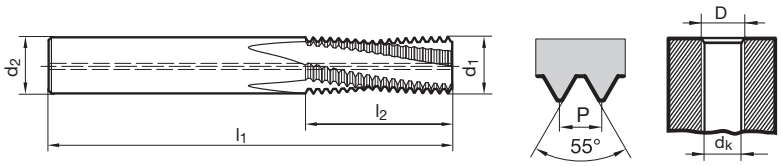
Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

2,5xD

P	•
M	○
K	•
N	•
S	○
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW



Norma di fab.	Articolo nr.	3746	3750

D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	8,000	8,80	64,000	24,900	3	9,728
G1/4	19,000	10,500	12,000	11,80	90,000	35,400	4	13,157
G3/8	19,000	13,600	14,000	15,25	90,000	43,500	4	16,662

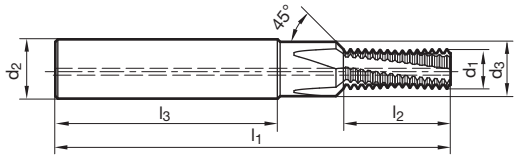
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

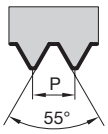
1,5xD

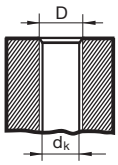
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3514** **3529**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	15,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	22,100	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	27,400	4	16,662

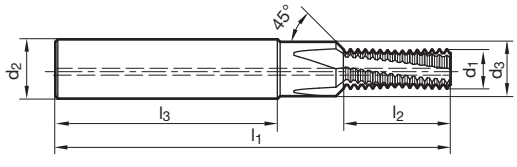
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

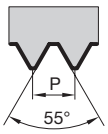
2xD

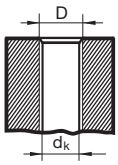
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3515** **3533**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	21,300	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	28,700	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	35,400	4	16,662

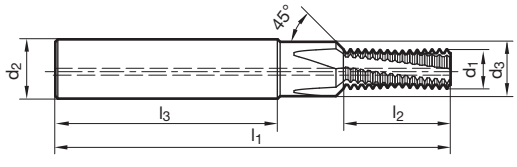
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

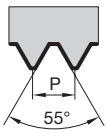
2,5xD

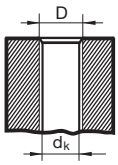
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3765	3766

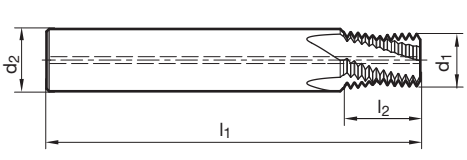
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	24,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	35,400	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	43,500	4	16,662

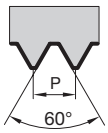
Frese a filettare senza fase di svasatura per filettatura NPT

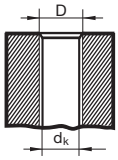
Materiale tagliente	**Int. in MD**	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 600







Norma di fab. Articolo nr. **3753** **3754**

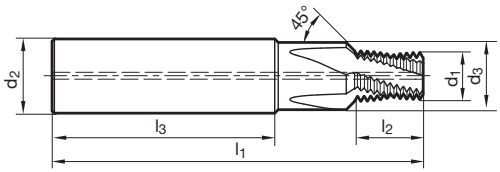
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

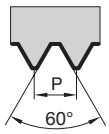
Frese a filettare con fase di svasatura per filettatura NPT

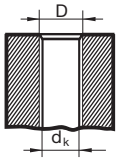
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3520	3538

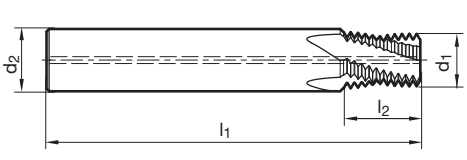
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

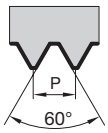
Frese a filettare senza fase di svasatura per filettatura NPTF

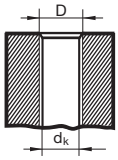
Materiale tagliente	**Int. in MD**	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 600







Norma di fab.	Articolo nr.	**3756**	**3757**

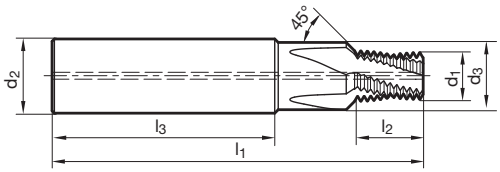
D	P	d1	d2	dk	l1	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm		
1/16	27,000	5,900	8,000	6,15	54,000	9,900	3	8,190
1/8	27,000	7,300	8,000	8,40	64,000	9,900	3	10,620
1/4	18,000	9,950	12,000	11,10	72,000	19,000	4	14,140
3/8	18,000	12,500	14,000	14,30	80,000	14,800	4	17,570

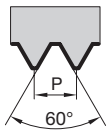
Frese a filettare con fase di svasatura per filettatura NPTF

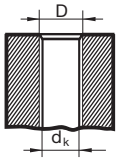
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 600

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3521	3539

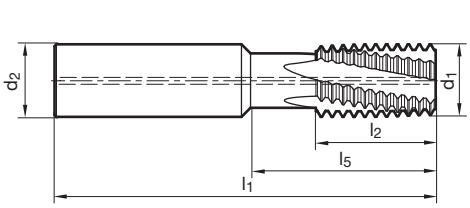
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

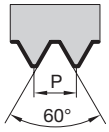
Fresa a filettare per impieghi multipli per filettatura metrica ISO

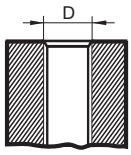
Materiale tagliente	Int. in MD		
Superficie	C	C	◯
Tipo	TMU SP	TMU SP	TMU SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601







Norma di fab.	Articolo nr.	3541	3556	3523

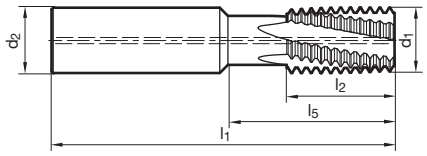
P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 10	7,950	8,000	64,000		20,000	4	8,050
1,000	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,100
1,250	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,125
1,500	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,150
1,000	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,150
1,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,100
1,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,200
3,000	≥ 24	17,950	18,000	102,000	50,000	33,000	5	18,300
1,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,100
1,500	≥ 26	19,950	20,000	105,000	50,000	33,000	5	20,150
2,000	≥ 27	19,950	20,000	105,000	50,000	33,000	5	20,200
2,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,250
3,000	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,300
3,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,350

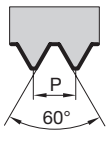
Fresa esterne a filettare

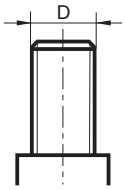
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **4162** **4163**

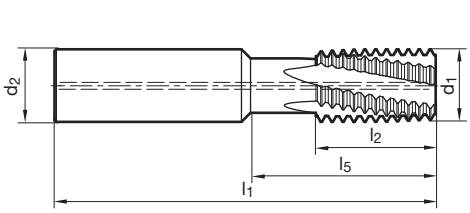
P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 3	9,950	10,000	70,000	25,000	16,000	4	10,050
0,750	≥ 5	9,950	10,000	70,000	25,000	16,000	4	10,075
1,000	≥ 6	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 8	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 10	11,950	12,000	80,000	31,000	20,000	4	12,150
1,500	≥ 10	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 14	15,950	16,000	90,000	40,000	25,000	5	16,200
2,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,250
3,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,300

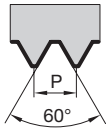
Fresa a filettare per impieghi multipli per filettatura UN

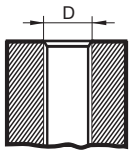
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU UN	TMU UN
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3595	3596

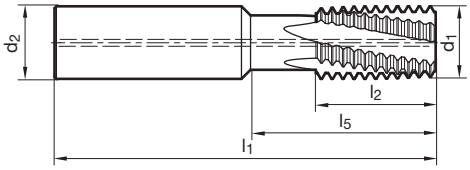
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
10,000	≥ 3/4	11,950	12,000	80,000	31,000	20,000	4	12,100
16,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,160
18,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,180
20,000	≥ 11/16	11,950	12,000	80,000	31,000	20,000	4	12,200
24,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,240
12,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,120
14,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,140
16,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,160
18,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,180
20,000	≥ 13/16	15,950	16,000	90,000	40,000	25,000	5	16,200
7,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,070
8,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,080
12,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,120
14,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,140
16,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,160

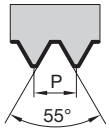
Fresa a filettare per impieghi multipli per filettatura Whitworth BSP

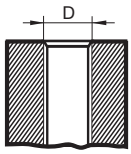
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD		
Superficie	C	C	
Tipo	TMU SP	TMU SP	TMU SP
Refrigerazione interna			
Forma del gambo	HA	HB	HA
		NEW	







Norma di fab.	Articolo nr.	3542	3557	3524

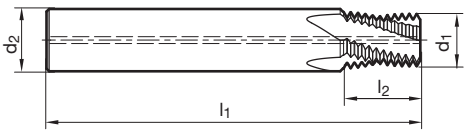
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
19,000	≥ 1/4	9,950	10,000	70,000	25,000	16,000	4	10,190
14,000	≥ 1/2	15,950	16,000	90,000	40,000	25,000	5	16,140
11,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,110

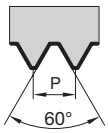
Fresa a filettare per impieghi multipli per filettatura NPT

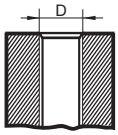
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3768	3769

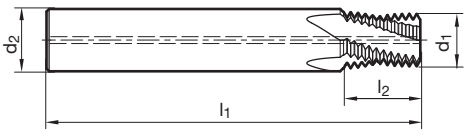
P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

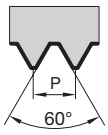
Fresa a filettare per impieghi multipli per filettatura NPTF

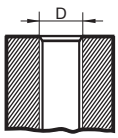
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 601

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3772	3773

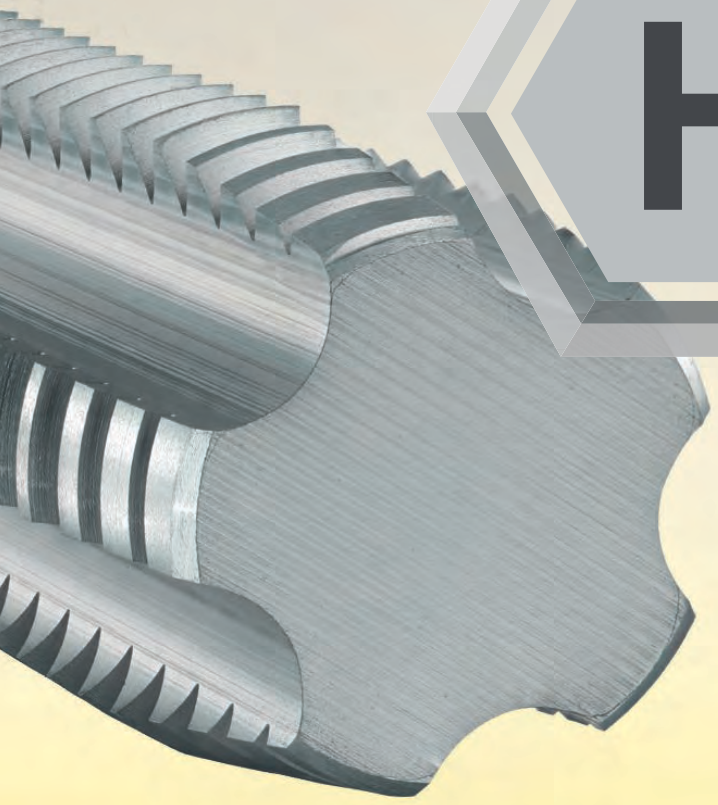
P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

TEMPRATO

ACCIAIO TEMPRATO

Acciai ad alta resistenza,
acciai temprati,
ghisa in conchiglia

H



H ACCIAIO TEMPRATO

M		MF	
ISO2/6H	ISO3/6G	ISO2/6H	ISO3/6G

45 – 55 HRC

M		MF	
No 1 M3 - M16 Art. nr. 1201 da pag. 680		No 1 M8x1 - M12x1,5 Art. nr. 4161 da pag. 682	

55 – 62 HRC

M		MF	
No 1 M3 - M16 Art. nr. 2944 da pag. 681		No 1 M6x0,5 - M12x1,5 Art. nr. 1161 da pag. 683	

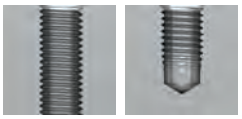
Punta usata per il preforo

M		MF	
No 1 Art. nr. 1946 da pag. 677		No 1 Art. nr. 1946 da pag. 677	

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
2B	2B	-



FORI **PASSANTI**
FORI **CIECHI**

HSS-E-PM, TiCN, forma D

Metallo duro, TiCN, forma D

Metallo duro, TiAlN

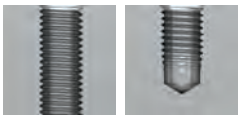
H ACCIAIO TEMPRATO

	M UNIVERSALE	MF UNIVERSALE
max. 55 HRC 1.5xD	No 1 M3 - M20 Art. nr. 3525 da pag. 685	No 1 M4x0,5 - M16x1,5 Art. nr. 3527 da pag. 687
max. 55 HRC 2xD	No 1 M3 - M20 Art. nr. 3526 da pag. 686	No 1 M4x0,5 - M16x1,5 Art. nr. 3528 da pag. 688
max. 65 HRC 3xD	No 1 M2 - M12 Art. nr. 4227 da pag. 703	
Punta usata per il preforo	No 1 Art. nr. 1946 da pag. 677	No 1 Art. nr. 1946 da pag. 677

No 1 utensile ideale

QUICKFINDER

UNC	UNF	G
UNIVERSALE	UNIVERSALE	-



FORI **PASSANTI**
FORI **CIECHI**

UNC	UNF	G	
No 1 1/4 - 1/2 Art. nr. 3516 da pag. 689	No 1 1/4 - 1/2 Art. nr. 3518 da pag. 691	No 1 1/8 - 3/8 Art. nr. 3514 da pag. 693	Metallo duro, TiCN
No 1 1/4 - 1/2 Art. nr. 3517 da pag. 690	No 1 1/4 - 1/2 Art. nr. 3519 da pag. 692	No 1 1/8 - 3/8 Art. nr. 3515 da pag. 694	Metallo duro, TiCN

Metallo duro, TiCN

VHM, TiAlN

H

ACCIAIO TEMPRATO

Profondità filettatura		≤1,5xD	≤3xD	
Materiale tagliente		HSS-E	Int. in MD	
Tipo/forma		H/D	H/D	H
Superficie		C	C	A
Erogazione del liquido di raffredd.		☒	☒	☒
Tolleranza codolo		h9	h9	HA
FORI PASSANTI		45 ... 55 HRC	≤ 65 HRC	Punta usata per il preforo
Filettatura	**Tolleranza**	**Articolo nr. / pagina**		
M	4H			
	6H		2944 681	1946 677
	6HX	1201 680		1946 677
	6G			
MF	6H		1161 683	1946 677
	6HX	4161 682		1946 677
	6G			
UNC	2B			
	2BX			
UNF	2B			
	2BX			
G				
BSW				
NPT				
NPTF				
EG M	6H Mod.			
MJ	4HX			
MJF	4HX			
UNJC	3BX			
UNJF	3BX			
PG				
lubrificante adatto		●/△	●/△	●/●

= No 1

○ = Aria
● = olio intero
● = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Durezza	esempio materiale	Materiale nr.	consigli di applicazione		
H	Acciai ad alta resistenza, acciai temprati	45 - 55 HRC	Hardox 500		**3**	-	
		55 - 62 HRC			-	**2**	

Fori di filettatura speciali per lavorazione materiali temprati con art. 2944

Ø nom. filettatura	Ø preforo		Ø preforo madrevite			
			min.		max.	
	a DIN 336 mm	con art. 2944 mm	a DIN 336 mm	con art. 2944 mm	a DIN 336 mm	con art. 2944 mm
M3	2,50	2,60	2,495	2,559	2,599	2,699
M4	3,30	3,40	3,242	3,342	3,422	3,522
M5	4,20	4,30	4,134	4,234	4,334	4,434
M6	5,00	5,10	4,917	5,017	5,153	5,253
M8	6,80	6,90	6,647	6,747	6,912	7,012
M10	8,50	8,60	8,376	8,476	8,676	8,776
M12	10,20	10,40	10,106	10,206	10,441	10,541
M16	12,00	14,10	13,835	15,935	14,210	16,310

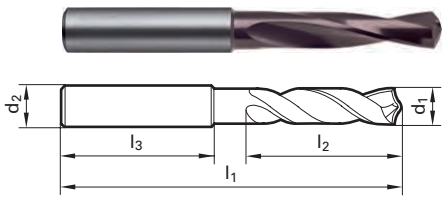
Fori di filettatura speciali per lavorazione materiali temprati con art. 1161

Ø nom. filettatura	Ø preforo		Ø preforo madrevite			
			min.		max.	
	a DIN 336 mm	con art. 1161 mm	a DIN 336 mm	con art. 1161 mm	a DIN 336 mm	con art. 1161 mm
M6x0,5	5,50	5,60	5,459	5,559	5,599	5,699
M8x1	7,00	7,10	6,917	7,017	7,153	7,253
M10x1	9,00	9,10	8,917	9,017	9,153	9,253
M12x1	11,00	11,10	10,917	11,017	11,153	11,253
M12x1,5	10,50	10,60	10,376	10,476	10,676	10,776

Articolo nr.	**1946**
Materiale	**Int. in MD**
Tipo di metallo duro	K
Tipo	H
Tratt. superficie	A
Norma	DIN 6537
Forma codolo	HA

La punta Gühring per produrre fori di filettatura in materiali temprati!

La nuova punta Gühring per materiali temprati consente la produzione razionale e con procedimento sicuro di fori in acciai temprati fino a 62 HRC. I taglienti convessi conferiscono all'utensile una stabilità molto alta ed assicurano una rottura del truciolo ottimale. Il profilo delle scanalature, adeguato alla lavorazione di materiali temprati, fa scorrere i trucioli in modo sicuro fuori dal foro.
La punta Gühring per materiali temprati è a disposizione come utensile standard, con codolo clindrico a DIN 6535 HA, nei diametri da 3,0 fino a 12,0 mm.

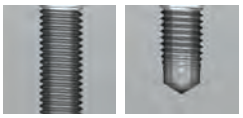


d1	d2	l1	l2	l3
mm	mm	mm	mm	mm
2,600	6,000	62,00	20,00	36,00
3,000	6,000	62,00	20,00	36,00
3,400	6,000	62,00	20,00	36,00
4,000	6,000	66,00	24,00	36,00
4,300	6,000	66,00	24,00	36,00
5,000	6,000	66,00	28,00	36,00
5,100	6,000	66,00	28,00	36,00
5,600	6,000	66,00	28,00	36,00
6,000	6,000	66,00	28,00	36,00
6,900	8,000	79,00	34,00	36,00
7,100	8,000	79,00	34,00	36,00
8,000	8,000	79,00	41,00	36,00
8,600	10,000	89,00	47,00	40,00
9,100	10,000	89,00	47,00	40,00
10,000	10,000	89,00	47,00	40,00
10,400	12,000	102,00	55,00	45,00
10,600	12,000	102,00	55,00	45,00
11,100	12,000	102,00	55,00	45,00
12,000	12,000	102,00	55,00	45,00
14,100	16,000	115,00	65,00	48,00

Valori di taglio per 3 x D con art. nr. 1946

	Durezza	HRC 40…48	HRC 48 … 62
	Vel. di taglio v_c	40 m/min	30 m/min
	Avanzamento	f (mm/giro):	f (mm/giro):
Ø punta in mm	2,6	0,032	0,025
	3,4	0,040	0,032
	4,3	0,050	0,040
	5,1	0,050	0,040
	5,6	0,050	0,040
	6,9	0,070	0,055
	7,1	0,070	0,055
	8,6	0,090	0,070
	9,1	0,090	0,070
	10,4	0,110	0,090
	10,5	0,110	0,090
	11,0	0,120	0,100
	14,1	0,120	0,100

ACCIAIO TEMPRATO



FORI PASSANTI E
FORI CIECHI

	Profondità filettatura	≤1,5xD	
	Materiale tagliente		
	Tipo	TMC SP	TMC SP
	Superficie	C	C
	Erogazione del liquido di raffredd.	assiale	assiale
	Forma del gambo	HA	HA
	Torsione	10°	10°

Filettatura	Articolo nr. / pagina	
M	3525 685	3543 685
MF	3527 687	3545 687
UNC	3516 689	3534 689
UNF	3518 691	3536 691
G	3514 693	3529 693
BSW		
NPT	3520 695	3538 695
NPTF	3521 696	3539 696
EG M		
MJ		
MJF		
UNJC		
UNJF		
PG		
lubrificante adatto	●/●	●/●

= No 1

○ = Aria
● = olio intero
● = olio solubile
△ = Incolla
☐ = lubrificazione minimale (MQL)

	Gruppo di materiali	Durezza	esempio materiale	Materiale nr.	consigli di applicazione	
H	Acciai ad alta resistenza, acciai temprati	45 - 55 HRC	Hardox 500		++	++
		55 - 62 HRC			-	-

≤2xD		universale				≤3xD	
Int. in MD							
TMC SP	TMC SP	TMU SP	TMU SP	TMU SP	TMU SP	MTM 3 SP	H
C	C	C	C	C	C	C	A
assiale	assiale	assiale	assiale	assiale	assiale	☒	☒
HA	HB	HA	HB	HA	HB	HA	HA
10°	10°	15°	15°	15°	15°	15°	15°
Articolo nr. / pagina							
3526 686	3544 686	3541 697	3556 697	4162 698	4163 698	4227 703	1946 677
3528 688	3546 688	3541 697	3556 697	4162 698	4163 698		1946 677
3517 690	3535 690	3595 699	3596 699				
3519 692	3537 692	3595 699	3596 699				
3515 694	3533 694	3542 700	3557 700	3542 700	3557 700		
		3768 701	3769 701				
		3772 702	3773 702				
Filetti EG possono essere prodotti praticamente con tutti i tipi e dimensioni di fresa a filettare							
○/●	○/●	○/●	○/●	○/●	○/●	○	○/●

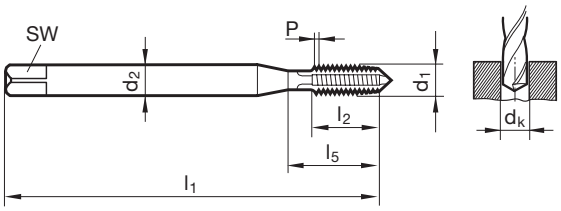
consigli di applicazione							
++	++	+	+	+	+	++	++
-	-	-	-	-	-	++	++

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	D
Refrigerazione interna	

P	
M	
K	
N	
S	
H	45-55

Dati di taglio a pag. 676



DIN 2184-1 DIN 371 Articolo nr. **1201**

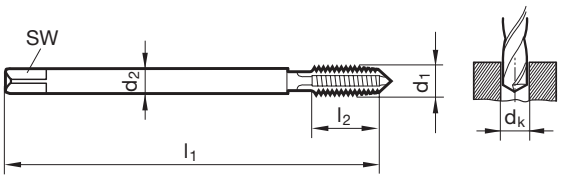
d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,60	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,40	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,30	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,10	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,90	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,60	100,000	20,000	39,000
M12	1,750	12,000	9,000	10,40	110,000	24,000	49,000
M14	2,000	11,000	11,000	12,10	110,000	26,000	53,000
M16	2,000	12,000	12,000	14,10	110,000	26,000	54,000

Maschi a macchina per filettatura metrica ISO

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	ISO2/6H
Superficie	C
Tipo	H
Forma	D
Refrigerazione interna	

P	
M	
K	
N	
S	
H	≤62

Dati di taglio a pag. 676



Norma di fab. ~DIN 371 Articolo nr. **2944**

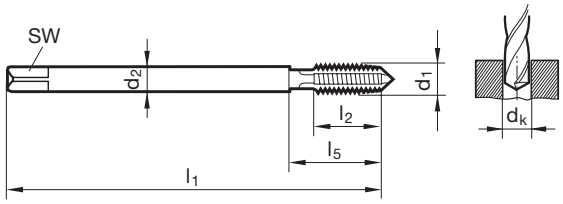
d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,60	56,000	12,000
M4	0,700	4,500	3,400	3,40	63,000	14,000
M5	0,800	6,000	4,900	4,30	70,000	17,000
M6	1,000	6,000	4,900	5,10	80,000	20,000
M8	1,250	8,000	6,200	6,90	90,000	20,000
M10	1,500	10,000	8,000	8,60	100,000	24,000
M12	1,750	12,000	9,000	10,40	110,000	28,000
M16	2,000	16,000	12,000	14,10	110,000	40,000

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	HSS-E-PM
Tolleranza sul Ø	6HX
Superficie	C
Tipo	H
Forma	D
Refrigerazione interna	

P	
M	
K	
N	
S	
H	45-55

Dati di taglio a pag. 676



DIN 2184-1 DIN 371 Articolo nr. **4161**

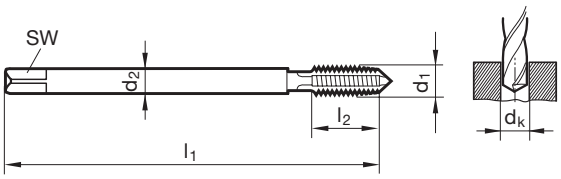
d1	d2	SW	dk	l1	l2	l5	Codice
	mm	mm	mm	mm	mm	mm	
M8 x 1	8,000	6,200	7,10	90,000	16,000	35,000	8,005
M10 x 1	10,000	8,000	9,10	90,000	16,000	35,000	10,005
M12 x 1	12,000	9,000	11,10	100,000	20,000	40,000	12,005
M12 x 1,5	12,000	9,000	10,60	100,000	20,000	40,000	12,007

Maschi a macchina per fil. metr. ISO passo fine

Materiale tagliente	**Int. in MD**
Tolleranza sul Ø	ISO2/6H
Superficie	C
Tipo	H
Forma	D
Refrigerazione interna	

P	
M	
K	
N	
S	
H	≤62

Dati di taglio a pag. 676



Norma di fab. ~DIN 371 Articolo nr. **1161**

d1	d2	SW	dk	l1	l2	Codice
	mm	mm	mm	mm	mm	
M6 x 0,5	6,000	4,900	5,60	80,000	15,000	6,003
M8 x 1	8,000	6,200	7,10	90,000	18,000	8,005
M10 x 1	10,000	8,000	9,10	90,000	22,000	10,005
M12 x 1	12,000	9,000	11,10	100,000	25,000	12,005
M12 x 1,5	12,000	9,000	10,60	100,000	28,000	12,007

FRESE A FILETTARE H

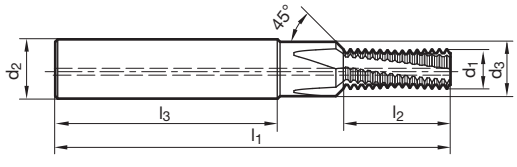
Frese a filettare con fase di svasatura per filettatura metrica ISO

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 678

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW



Norma di fab. Articolo nr. **3525** **3543**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	5,300	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	7,400	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	9,200	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	10,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	13,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	17,300	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	20,100	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	25,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	27,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	33,800	4	20,000

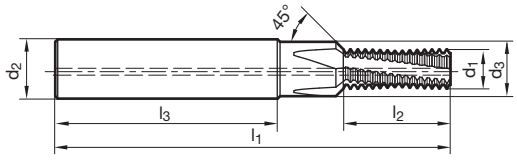
Frese a filettare con fase di svasatura per filettatura metrica ISO

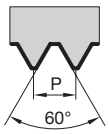
2xD

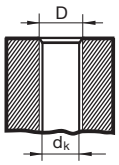
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3526** **3544**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M3	0,500	2,300	6,000	3,400	2,50	48,000	36,000	6,800	3	3,000
M4	0,700	3,000	6,000	4,500	3,30	48,000	36,000	8,800	3	4,000
M5	0,800	4,000	6,000	5,500	4,20	54,000	36,000	10,800	3	5,000
M6	1,000	4,800	8,000	6,600	5,00	62,000	36,000	13,500	3	6,000
M8	1,250	6,400	10,000	9,000	6,80	74,000	40,000	18,100	3	8,000
M10	1,500	7,950	12,000	11,000	8,50	80,000	45,000	21,800	4	10,000
M12	1,750	9,950	14,000	13,500	10,20	90,000	45,000	25,400	4	12,000
M14	2,000	11,200	16,000	15,500	12,00	102,000	48,000	31,000	4	14,000
M16	2,000	12,800	18,000	17,500	14,00	102,000	48,000	35,000	4	16,000
M20	2,500	14,500	20,000	21,500	17,50	125,000	50,000	41,300	4	20,000

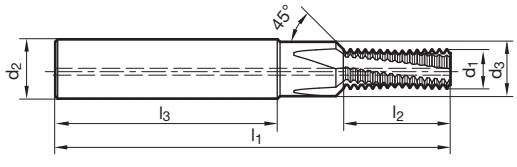
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

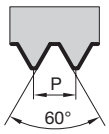
P	•
M	•
K	•
N	•
S	•
H	≤55

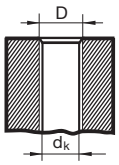
Dati di taglio a pag. 678

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3527** **3545**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	7,300	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	8,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	9,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	10,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	13,100	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	13,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	16,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	16,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	19,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	20,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	23,300	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	26,300	4	16,007

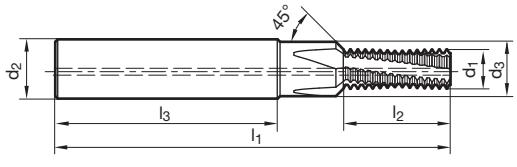
Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

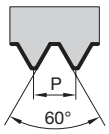
2xD

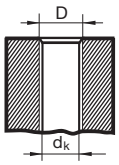
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3528	3546

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm	mm		
M4 x 0,5	0,500	3,000	6,000	4,500	3,50	48,000	36,000	8,800	3	4,003
M5 x 0,5	0,500	4,000	6,000	5,500	4,50	54,000	36,000	10,800	3	5,003
M6 x 0,5	0,500	4,800	8,000	6,600	5,50	62,000	36,000	12,800	3	6,003
M6 x 0,75	0,750	4,800	8,000	6,600	5,20	62,000	36,000	13,100	3	6,004
M8 x 0,75	0,750	6,400	10,000	9,000	7,20	74,000	40,000	16,900	3	8,004
M8 x 1	1,000	6,400	10,000	9,000	7,00	74,000	40,000	17,500	3	8,005
M10 x 1	1,000	7,950	12,000	11,000	9,00	80,000	45,000	21,500	4	10,005
M10 x 1,25	1,250	7,950	12,000	11,000	8,80	80,000	45,000	21,900	4	10,006
M12 x 1	1,000	9,950	14,000	13,500	11,00	90,000	45,000	25,500	4	12,005
M12 x 1,5	1,500	9,950	14,000	13,500	10,50	90,000	45,000	26,300	4	12,007
M14 x 1,5	1,500	11,200	16,000	15,500	12,50	102,000	48,000	30,800	4	14,007
M16 x 1,5	1,500	12,800	18,000	17,500	14,50	102,000	48,000	33,800	4	16,007

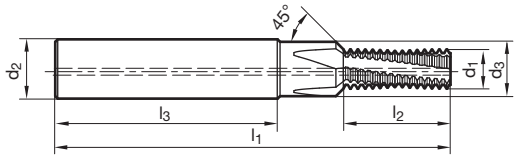
Frese a filettare con fase di svasatura per filettatura UNC

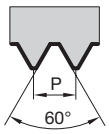
P	•
M	•
K	•
N	•
S	•
H	≤55

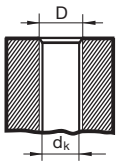
Dati di taglio a pag. 678

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3516** **3534**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	12,100	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	14,800	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	16,700	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	19,000	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	22,500	4	12,700

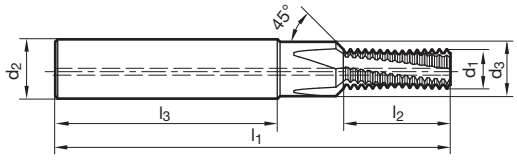
Frese a filettare con fase di svasatura per filettatura UNC

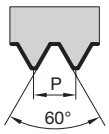
2xD

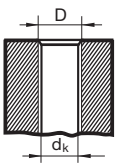
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3517	3535

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 20	4,800	8,000	6,600	5,10	62,000	36,000	14,600	3	6,350
5/16 - 18	5,950	10,000	9,000	6,60	74,000	40,000	17,600	3	7,938
3/8 - 16	7,100	12,000	11,000	8,00	80,000	45,000	21,400	4	9,525
7/16 - 14	7,950	12,000	11,000	9,40	80,000	45,000	24,500	4	11,113
1/2 - 13	9,950	14,000	13,500	10,80	90,000	45,000	28,300	4	12,700

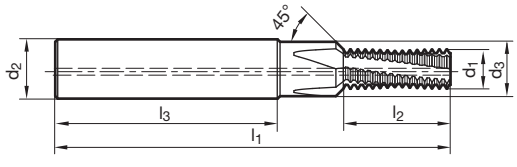
Frese a filettare con fase di svasatura per filettatura UNF

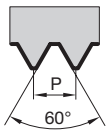
P	•
M	•
K	•
N	•
S	•
H	≤55

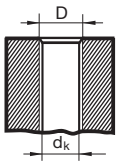
Dati di taglio a pag. 678

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3518** **3536**

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	11,300	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	13,200	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	16,400	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	18,400	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	21,000	4	12,700

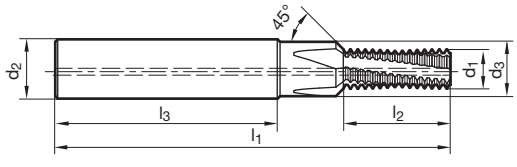
Frese a filettare con fase di svasatura per filettatura UNF

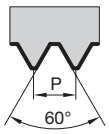
2xD

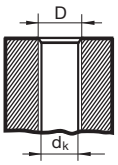
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3519	3537

D	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	mm	mm	mm	mm	mm	mm	mm		
1/4 - 28	4,800	8,000	6,600	5,50	62,000	36,000	14,100	3	6,350
5/16 - 24	5,950	10,000	9,000	6,90	74,000	40,000	17,500	3	7,938
3/8 - 24	7,950	12,000	11,000	8,50	80,000	45,000	20,600	4	9,525
7/16 - 20	7,950	12,000	11,000	9,90	80,000	45,000	24,800	4	11,113
1/2 - 20	9,950	14,000	13,500	11,50	90,000	45,000	27,300	4	12,700

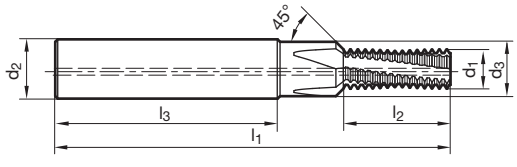
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

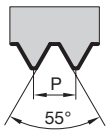
P	•
M	•
K	•
N	•
S	•
H	≤55

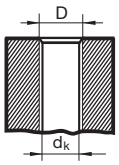
Dati di taglio a pag. 678

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab. Articolo nr. **3514** **3529**

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	15,900	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	22,100	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	27,400	4	16,662

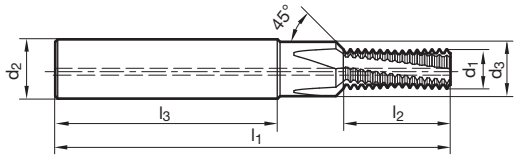
Frese a filettare con fase di svasatura per filettatura Whitworth BSP

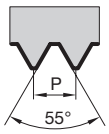
2xD

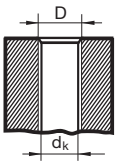
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab. Articolo nr. **3515** **3533**

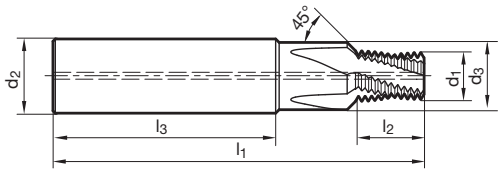
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
G1/8	28,000	7,950	12,000	11,000	8,80	80,000	45,000	21,300	4	9,728
G1/4	19,000	9,950	14,000	13,900	11,80	90,000	45,000	28,700	4	13,157
G3/8	19,000	13,600	18,000	17,500	15,25	102,000	48,000	35,400	4	16,662

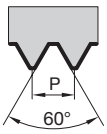
Frese a filettare con fase di svasatura per filettatura NPT

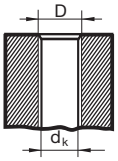
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 678

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3520	3538

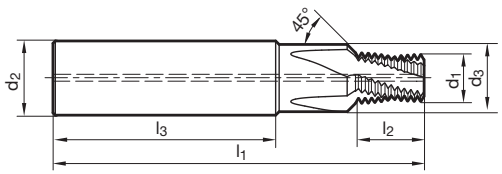
D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

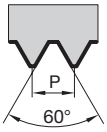
Frese a filettare con fase di svasatura per filettatura NPTF

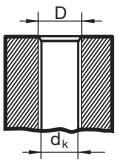
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMC SP	TMC SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 678







Norma di fab.	Articolo nr.	3521	3539

D	P	d1	d2	d3	dk	l1	l3	l2	Z	Codice
	G/inch	mm	mm	mm	mm	mm	mm	mm		
1/8	27,000	7,300	12,000	11,000	8,40	70,000	45,000	9,900	4	10,620
1/4	18,000	9,950	16,000	14,500	11,10	80,000	48,000	14,800	4	14,140
3/8	18,000	12,500	18,000	17,500	14,30	80,000	48,000	14,800	4	17,570

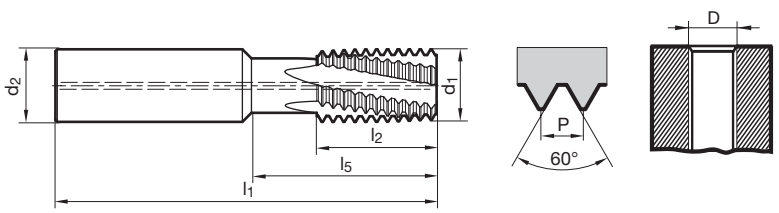
Fresa a filettare per impieghi multipli per filettatura metrica ISO

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679



Norma di fab. Articolo nr. **3541** **3556**

P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 10	7,950	8,000	64,000		20,000	4	8,050
1,000	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,100
1,250	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,125
1,500	≥ 12	9,950	10,000	70,000	25,000	16,000	4	10,150
1,000	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 14	11,950	12,000	80,000	31,000	20,000	4	12,150
1,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,100
1,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,200
3,000	≥ 24	17,950	18,000	102,000	50,000	33,000	5	18,300
1,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,100
1,500	≥ 26	19,950	20,000	105,000	50,000	33,000	5	20,150
2,000	≥ 27	19,950	20,000	105,000	50,000	33,000	5	20,200
2,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,250
3,000	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,300
3,500	≥ 30	19,950	20,000	105,000	50,000	33,000	5	20,350

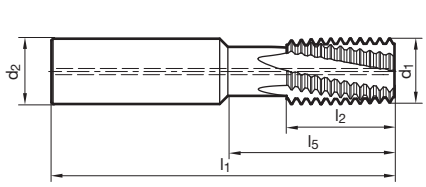
Fresa esterne a filettare

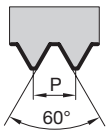
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

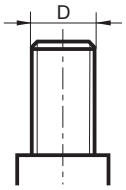
NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679







Norma di fab. Articolo nr. **4162** **4163**

P	D	d1	d2	l1	l5	l2	Z	Codice
mm		mm	mm	mm	mm	mm		
0,500	≥ 3	9,950	10,000	70,000	25,000	16,000	4	10,050
0,750	≥ 5	9,950	10,000	70,000	25,000	16,000	4	10,075
1,000	≥ 6	11,950	12,000	80,000	31,000	20,000	4	12,100
1,250	≥ 8	11,950	12,000	80,000	31,000	20,000	4	12,125
1,500	≥ 10	11,950	12,000	80,000	31,000	20,000	4	12,150
1,500	≥ 10	15,950	16,000	90,000	40,000	25,000	5	16,150
2,000	≥ 14	15,950	16,000	90,000	40,000	25,000	5	16,200
2,500	≥ 18	15,950	16,000	90,000	40,000	25,000	5	16,250
3,000	≥ 24	19,950	20,000	105,000	50,000	33,000	5	20,300

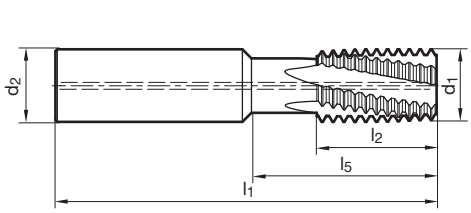
Fresa a filettare per impieghi multipli per filettatura UN

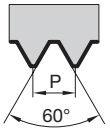
P	•
M	•
K	•
N	•
S	•
H	≤55

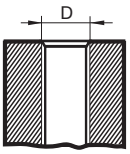
Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU UN	TMU UN
Refrigerazione interna		
Forma del gambo	HA	HB

NEW







Norma di fab.	Articolo nr.	3595	3596

P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
24,000	≥ 1/2	9,950	10,000	70,000	25,000	16,000	4	10,240
10,000	≥ 3/4	11,950	12,000	80,000	31,000	20,000	4	12,100
16,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,160
18,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,180
20,000	≥ 11/16	11,950	12,000	80,000	31,000	20,000	4	12,200
24,000	≥ 5/8	11,950	12,000	80,000	31,000	20,000	4	12,240
12,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,120
14,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,140
16,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,160
18,000	≥ 7/8	15,950	16,000	90,000	40,000	25,000	5	16,180
20,000	≥ 13/16	15,950	16,000	90,000	40,000	25,000	5	16,200
7,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,070
8,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,080
12,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,120
14,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,140
16,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,160

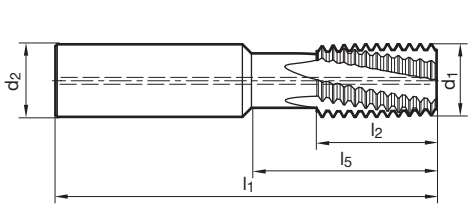
Fresa a filettare per impieghi multipli per filettatura Whitworth BSP

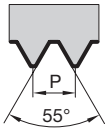
Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TMU SP	TMU SP
Refrigerazione interna		
Forma del gambo	HA	HB

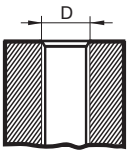
NEW

P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679







Norma di fab. Articolo nr. **3542** **3557**

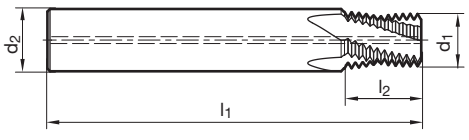
P	D	d1	d2	l1	l5	l2	Z	Codice
G/inch		mm	mm	mm	mm	mm		
19,000	≥ 1/4	9,950	10,000	70,000	25,000	16,000	4	10,190
14,000	≥ 1/2	15,950	16,000	90,000	40,000	25,000	5	16,140
11,000	≥ 1	19,950	20,000	105,000	50,000	33,000	5	20,110

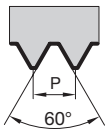
Fresa a filettare per impieghi multipli per filettatura NPT

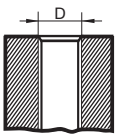
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3768	3769

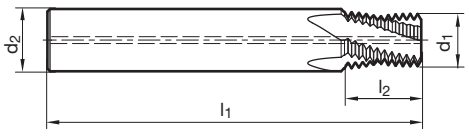
P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

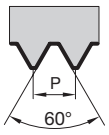
Fresa a filettare per impieghi multipli per filettatura NPTF

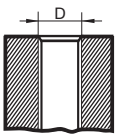
P	•
M	•
K	•
N	•
S	•
H	≤55

Dati di taglio a pag. 679

Materiale tagliente	Int. in MD	
Superficie	C	C
Tipo	TM SP	TM SP
Refrigerazione interna		
Forma del gambo	HA	HB
		NEW







Norma di fab.	Articolo nr.	3772	3773

P	D	d1	d2	l1	l2	Z	Codice
G/inch		mm	mm	mm	mm		
14,000	≥ 1/2	14,500	16,000	90,000	19,050	5	21,900
11,500	≥ 1	18,500	20,000	90,000	23,190	5	34,180

Micro frese a filettare

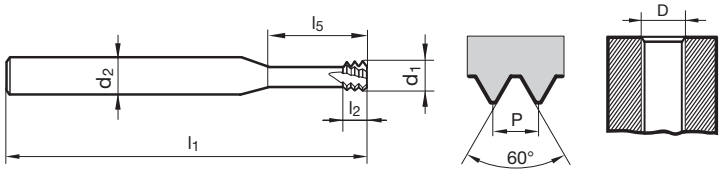
3xD

P	
M	
K	
N	
S	○
H	•

Dati di taglio a pag. 679

Materiale tagliente	**Int. in MD**
Superficie	A
Tipo	SP M
filetti	3,0
Forma del gambo	HA

NEW



Norma di fab. Articolo nr. **4227**

D	P	d1	d2	l1	l2	l5	Z	Codice
	mm	mm	mm	mm	mm	mm		
M2	0,400	1,550	3,000	39,000	1,200	6,000	4	2,000
M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4	2,500
M3	0,500	2,350	6,000	58,000	1,500	9,500	4	3,000
M4	0,700	3,100	6,000	58,000	2,100	12,500	4	4,000
M5	0,800	3,800	6,000	58,000	2,400	16,000	4	5,000
M6	1,000	4,800	6,000	58,000	3,000	20,000	4	6,000
M8	1,250	5,950	6,000	58,000	3,800	24,000	4	8,000
M10	1,500	7,800	8,000	64,000	4,500	23,000	4	10,000
M12	1,750	9,000	10,000	73,000	5,300	26,000	5	12,000

F

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NO

Materiale	Resistenza MPa (N/mm2)	Durezza HB	Velocità di taglio vc m/min	
			HSS	HSS-E
Acciai da costruzione	≤ 800	–	8 - 12	–
Acciai automatici	≤ 1000	–	10 - 14	–
Acciai da cementazione non legati	≤ 750	–	6 - 10	–
Acciai da bonifica non legati	≤ 850	–	6 - 10	–
Acciai da cementazione legati	≥ 850 … 1200	–	–	5 - 8
Acciai da bonifica legati	≥ 850 … 1200	–	–	5 - 8
Acciai utensili legati	≤ 1000	–	–	5 - 8
Acciai super rapidi	≥ 650 … 1000	–	–	5 - 8
Acciai inossidabili, allo zolfo	≤ 850	–	–	4 - 6
austenitici	≤ 850	–	–	4 - 6
martensitici	≤ 850	–	–	4 - 6
Acciai da costruzione	≤ 800	–	8 - 12	–
Acciai automatici	≤ 1000	–	10 - 14	–
Acciai da cementazione	≤ 1000	–	6 - 10	–
Acciai da bonifica	≤ 1200	–	6 - 10	–
Acciai nitrurati	≤ 1200	–	–	5 - 8
Ghise sferoidali	–	≤ 240	5 - 8	–
Alluminio e leghe di alu	≤ 400	–	10 - 20	–
Leghe di alu per lav. plastiche	≤ 400	–	10 - 20	–
Leghe di alu-ghisa ≤ 10 % Si	≤ 600	–	10 - 15	–
> 10 % Si	≤ 600	–	10 - 12	–
Ghise	–	≤ 240	5 - 8	–
Ghise sferoidali	–	≤ 240	5 - 8	–
Ghise temprate	–	< 300	5 - 8	–
Ottone a truciolo corto	≤ 600	–	5 - 8	–
a truciolo lungo	≤ 600	–	20 - 30	–
Materie plastiche	–	–	12 - 18	–
Leghe di magnesio	≤ 450	–	10 - 20	–
Titanio e leghe di titanio	≤ 1200	–	–	2 - 6
Leghe di Ni	≤ 1200	–	–	2 - 6

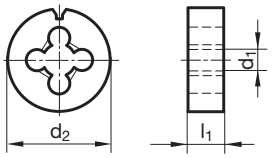
Materiale	Esempi di materiali	Angolo di spoglia	Refrigerante/lubrificante
Acciai da costruzione	St 37-2, St 50-2 ecc.	17 - 22°	olio di taglio
Acciai automatici	9 S Mn 28, 9 S MnPb 28 ecc.	17 - 22°	olio di taglio
Acciai da cementazione	C 15, Ck 15, 16 MnCr 5 ecc.	17 - 22°	olio di taglio, olio di taglio spec.
Acciai da bonifica	C 35 Pb, C 45 usw.	13 - 18°	olio di taglio, olio di taglio spec.
Acciai inossidabili	x12 CrMoS 17, x12 CrNiS 188 ecc.	13 - 18°	olio di taglio spec.
Ghise	GG 15, GG25	8 - 12°	olio di taglio, petrolio
Ottone a truciolo corto, Ot58	CuZn 39 Pb 2, CuZn 40 Pb 2	10 - 12°	olio di taglio
Ottone a truciolo lungo, Ot60	CuZn 20, CuZn 37	3 - 7°	olio di taglio
Leghe di alu, a truciolo lungo	AlCuMg 1, AlMg 3 Si	23 - 28°	olio di taglio spec., petrolio
Leghe di alu, a truciolo corto	GD-AlSI 8 Cu 3, GD AlSi 12	13 - 18°	olio di taglio spec., petrolio

Filiere automatiche per filettatura metrica ISO

6g	R	WN	B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
	> M 2,6
Lunghezza d'imbocco	1,75xP



Norma di fab. Articolo nr. **121**

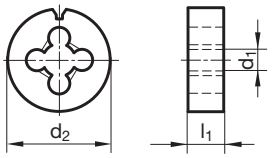
d1	P	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	mm	
M3	0,500	16,000	5,000	2,92	3,010
M4	0,700	20,000	5,000	3,91	4,020
M5	0,800	16,000	5,000	4,90	5,010
M5	0,800	20,000	7,000	4,90	5,020
M6	1,000	16,000	5,000	5,88	6,010
M6	1,000	20,000	7,000	5,88	6,020
M8	1,250	25,000	9,000	7,87	8,000
M10	1,500	30,000	11,000	9,85	10,000
M12	1,750	38,000	14,000	11,83	12,000

Filiere automatiche per filettatura metrica ISO

6g	R	WN	B

Materiale tagliente	HSS
Superficie	◯
	> M 2,6
Lunghezza d'imbocco	1,75xP

P	≤ 1000
M	
K	•
N	•
S	
H	



Norma di fab. Articolo nr. **125**

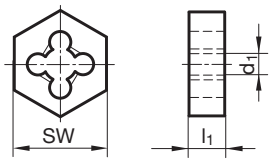
d1	P	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	mm	
M2	0,400	16,000	3,500	1,94	2,000
M3	0,500	20,000	3,500	2,92	3,000
M5	0,800	20,000	7,000	4,90	5,000
M6	1,000	20,000	7,000	5,88	6,000
M8	1,250	25,000	9,000	7,87	8,000
M10	1,500	30,000	11,000	9,85	10,000

Filiere per filettatura metrica ISO

6g | R | DIN 382

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
Lunghezza d'imbocco	1,75xP



DIN 382 Articolo nr. **139**

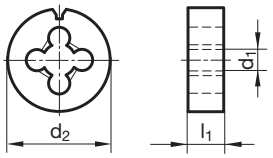
d1	P	SW	l1	Workpiece Ø	Codice
	mm	mm	mm	mm	
M5	0,800	18,000	7,000	4,90	5,000
M6	1,000	18,000	7,000	5,88	6,000
M8	1,250	21,000	9,000	7,87	8,000
M10	1,500	27,000	11,000	9,85	10,000
M12	1,750	36,000	14,000	11,83	12,000
M16	2,000	41,000	18,000	15,82	16,000
M20	2,500	41,000	18,000	19,79	20,000
M24	3,000	50,000	22,000	23,77	24,000
M52	5,000	85,000	36,000	51,66	52,000

Filiere per filettatura metrica ISO

6g | R | DIN EN 22568 | B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS	
Superficie	◯	◯
		> M 2,6
Lunghezza d'imbocco	1,75xP	1,75xP



DIN EN 22568 — Articolo nr. **151** **153**

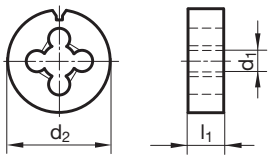
d1	P	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	mm	
M1	0,250	16,000	5,000	0,97	1,000
M1,2	0,250	16,000	5,000	1,17	1,200
M1,4	0,300	16,000	5,000	1,36	1,400
M1,6	0,350	16,000	5,000	1,54	1,600
M2	0,400	16,000	5,000	1,94	2,000
M2,3	0,400	16,000	5,000	2,25	2,300
M2,5	0,450	16,000	5,000	2,43	2,500
M2,6	0,450	16,000	5,000	2,54	2,600
M3	0,500	20,000	5,000	2,92	3,000
M3,5	0,600	20,000	5,000	3,41	3,500
M4	0,700	20,000	5,000	3,91	4,000
M5	0,800	20,000	7,000	4,90	5,000
M6	1,000	20,000	7,000	5,88	6,000
M7	1,000	25,000	9,000	6,88	7,000
M8	1,250	25,000	9,000	7,87	8,000
M10	1,500	30,000	11,000	9,85	10,000
M12	1,750	38,000	14,000	11,83	12,000
M14	2,000	38,000	14,000	13,82	14,000
M16	2,000	45,000	18,000	15,82	16,000
M18	2,500	45,000	18,000	17,79	18,000
M20	2,500	45,000	18,000	19,79	20,000
M24	3,000	55,000	22,000	23,77	24,000
M30	3,500	65,000	25,000	29,73	30,000

Filiere per filettatura metrica ISO

6g | R | DIN EN 22568 | B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
	> M 2,6
Lunghezza d'imbocco	1,75xP



DIN EN 22568 Articolo nr. **152**

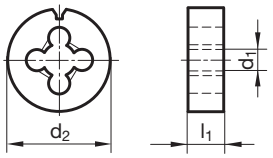
d1	P	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	mm	
M3	0,500	20,000	5,000	2,92	3,000
M3,5	0,600	20,000	5,000	3,41	3,500
M4	0,700	20,000	5,000	3,91	4,000
M5	0,800	20,000	7,000	4,90	5,000
M6	1,000	20,000	7,000	5,88	6,000
M7	1,000	25,000	9,000	6,88	7,000
M8	1,250	25,000	9,000	7,87	8,000
M9	1,250	25,000	9,000	8,87	9,000
M10	1,500	30,000	11,000	9,85	10,000
M12	1,750	38,000	14,000	11,83	12,000
M14	2,000	38,000	14,000	13,82	14,000
M16	2,000	45,000	18,000	15,82	16,000
M18	2,500	45,000	18,000	17,79	18,000
M20	2,500	45,000	18,000	19,79	20,000
M22	2,500	55,000	22,000	21,79	22,000
M24	3,000	55,000	22,000	23,77	24,000
M27	3,000	65,000	25,000	26,77	27,000
M30	3,500	65,000	25,000	29,73	30,000

Filiere per filettatura metrica ISO

6g | R | DIN EN 22568 | B

P	≤ 1200
M	•
K	
N	
S	
H	

Materiale tagliente	**HSS-E**
Superficie	●
	> M 2,6
Lunghezza d'imbocco	1,75xP



DIN EN 22568 Articolo nr. **130**

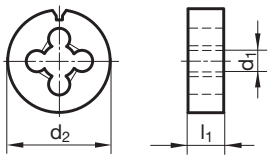
d1	P	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	mm	
M2	0,400	16,000	3,500	1,94	2,000
M2,2	0,450	16,000	3,500	2,13	2,200
M2,5	0,450	16,000	5,000	2,43	2,500
M3	0,500	16,000	5,000	2,92	3,010
M3	0,500	20,000	5,000	2,92	3,020
M4	0,700	16,000	5,000	3,91	4,010
M4	0,700	20,000	5,000	3,91	4,020
M5	0,800	20,000	7,000	4,90	5,000
M6	1,000	20,000	7,000	5,88	6,000
M8	1,250	25,000	9,000	7,87	8,000
M10	1,500	30,000	11,000	9,85	10,000
M12	1,750	38,000	14,000	11,83	12,000
M14	2,000	38,000	14,000	13,82	14,000
M16	2,000	45,000	18,000	15,82	16,000
M20	2,500	45,000	18,000	19,79	20,000

Filiere per filettatura metrica ISO

6g | L | DIN EN 22568 | B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
	> M 2,6
Lunghezza d'imbocco	1,75xP



DIN EN 22568 Articolo nr. **156**

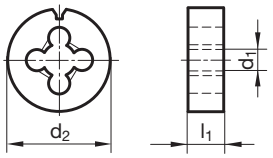
d1	P	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	mm	
M3	0,500	20,000	5,000	2,92	3,000
M4	0,700	20,000	5,000	3,91	4,000
M5	0,800	20,000	7,000	4,90	5,000
M6	1,000	20,000	7,000	5,88	6,000
M8	1,250	25,000	9,000	7,87	8,000
M10	1,500	30,000	11,000	9,85	10,000
M12	1,750	38,000	14,000	11,83	12,000
M14	2,000	38,000	14,000	13,82	14,000
M16	2,000	45,000	18,000	15,82	16,000
M20	2,500	45,000	18,000	19,79	20,000

Filiere per filettatura metrica ISO passo fine

6g | R | DIN EN 22568 | B

P	≤ 1000	
M		
K	•	
N	•	
S		
H		

Materiale tagliente	HSS	
Superficie	◯	◯
		> M 2,6
Lunghezza d'imbocco	1,75xP	1,75xP



DIN EN 22568 — Articolo nr. **161** **162**

d1	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	
M3 x 0,35	20,000	5,000	2,94	3,002
M4 x 0,5	20,000	5,000	3,92	4,003
M5 x 0,5	20,000	5,000	4,92	5,003
M6 x 0,5	20,000	5,000	5,92	6,003
M6 x 0,75	20,000	7,000	5,91	6,004
M7 x 0,5	25,000	9,000	6,92	7,003
M7 x 0,75	25,000	9,000	6,91	7,004
M8 x 0,5	25,000	9,000	7,92	8,003
M8 x 0,75	25,000	9,000	7,91	8,004
M8 x 1	25,000	9,000	7,88	8,005
M9 x 0,75	25,000	9,000	8,91	9,004
M9 x 1	25,000	9,000	8,88	9,005
M10 x 0,75	30,000	11,000	9,91	10,004
M10 x 1	30,000	11,000	9,88	10,005
M10 x 1,25	30,000	11,000	9,87	10,006
M11 x 1	30,000	11,000	10,88	11,005
M12 x 0,75	38,000	10,000	11,91	12,004
M12 x 1	38,000	10,000	11,88	12,005
M12 x 1,25	38,000	10,000	11,87	12,006
M12 x 1,5	38,000	10,000	11,85	12,007
M13 x 1	38,000	10,000	12,88	13,005
M14 x 1	38,000	10,000	13,88	14,005
M14 x 1,25	38,000	10,000	13,87	14,006
M14 x 1,5	38,000	10,000	13,85	14,007
M15 x 1	38,000	10,000	14,88	15,005
M16 x 1	45,000	14,000	15,88	16,005
M16 x 1,5	45,000	14,000	15,85	16,007
M17 x 1	45,000	14,000	16,88	17,005
M18 x 1	45,000	14,000	17,88	18,005
M18 x 1,5	45,000	14,000	17,85	18,007
M20 x 1	45,000	14,000	19,88	20,005
M20 x 1,5	45,000	14,000	19,85	20,007
M20 x 2	45,000	14,000	19,82	20,008
M22 x 1	55,000	16,000	21,88	22,005
M22 x 1,5	55,000	16,000	21,85	22,007
M24 x 1,5	55,000	16,000	23,85	24,007

DIN EN 22568 Articolo nr. **161** **162**

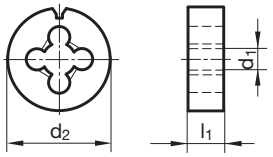
d1	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	
M24 x 2	55,000	16,000	23,82	24,008
M25 x 1,5	55,000	16,000	24,85	25,007
M26 x 1,5	55,000	16,000	25,85	26,007
M27 x 1,5	65,000	18,000	26,85	27,007
M27 x 2	65,000	18,000	26,82	27,008
M28 x 1,5	65,000	18,000	27,85	28,007
M30 x 1,5	65,000	18,000	29,85	30,007
M30 x 2	65,000	18,000	29,82	30,008

Filiere per filettatura UNC

2a | R | DIN EN 22568 | B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
Lunghezza d'imbocco	1,75xP



DIN EN 22568 Articolo nr. **182**

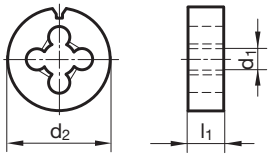
d1	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	
8 - 32	20,000	7,000	4,07	4,166
10 - 24	20,000	7,000	4,71	4,826
1/4 - 20	20,000	7,000	6,22	6,350
5/16 - 18	25,000	9,000	7,80	7,938
3/8 - 16	30,000	11,000	9,37	9,525
7/16 - 14	30,000	11,000	10,95	11,113
1/2 - 13	38,000	14,000	12,52	12,700
5/8 - 11	45,000	18,000	15,68	15,875
3/4 - 10	45,000	18,000	18,84	19,050

Filiere per filettatura UNF

2a	R	DIN EN 22568	B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
Lunghezza d'imbocco	1,75xP



DIN EN 22568 Articolo nr. **185**

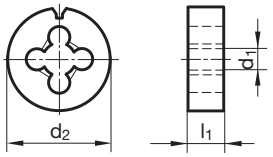
d1	d2	l1	Workpiece Ø	Codice
	mm	mm	mm	
10 - 32	20,000	7,000	4,73	4,826
1/4 - 28	20,000	7,000	6,24	6,350
5/16 - 24	25,000	9,000	7,82	7,938
3/8 - 24	30,000	11,000	9,41	9,525
7/16 - 20	30,000	11,000	10,98	11,113
1/2 - 20	38,000	10,000	12,56	12,700
9/16 - 18	38,000	10,000	14,14	14,288
5/8 - 18	45,000	14,000	15,73	15,875
3/4 - 16	45,000	14,000	18,89	19,050
7/8 - 14	55,000	16,000	22,05	22,225

Filiere per filettatura BSP

R | DIN EN 24231 | B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS	
Superficie	◯	◯
Lunghezza d'imbocco	1,75xP	1,75xP



DIN EN 24231	Articolo nr.	175	176

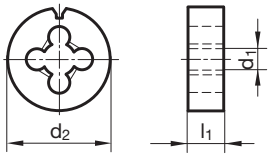
d1	P	d2	l1	Workpiece Ø	Codice
	G/inch	mm	mm	mm	
G1/8	28,000	30,000	11,000	9,62	9,728
G1/4	19,000	38,000	10,000	13,03	13,157
G3/8	19,000	45,000	14,000	16,54	16,662
G1/2	14,000	45,000	14,000	20,81	20,955
G5/8	14,000	55,000	16,000	22,77	22,911
G3/4	14,000	55,000	16,000	26,30	26,441
G1	11,000	65,000	18,000	33,07	33,249
G1 1/4	11,000	75,000	20,000	41,73	41,910
G1 1/2	11,000	90,000	22,000	47,62	47,803

Filiere per filettatura BSPT

R | DIN EN 24230 | B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
Lunghezza d'imbocco	1,75xP



DIN EN 24230 Articolo nr. **198**

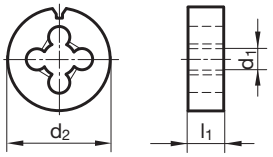
d1	P	d2	l1	Workpiece Ø	Codice
	G/inch	mm	mm	mm	
R1/8	28	30,000	11,000	9,48	9,728
R1/4	19	38,000	14,000	12,78	13,157
R3/8	19	45,000	14,000	16,26	16,662
R1/2	14	45,000	18,000	20,44	20,955

Filiere per filettatura NPT

R | DIN EN 22568 | B

P	≤ 1000
M	
K	•
N	•
S	
H	

Materiale tagliente	HSS
Superficie	◯
Lunghezza d'imbocco	1,75xP



DIN EN 22568 Articolo nr. **191**

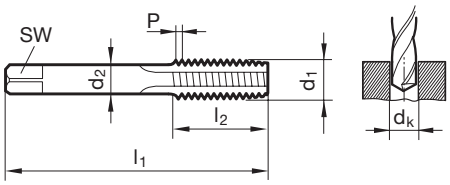
d1	P	d2	l1	Workpiece Ø	Codice
	G/inch	mm	mm	mm	
1/8	27,000	30,000	11,000	9,93	10,620
1/4	18,000	38,000	14,000	13,18	14,140
3/8	18,000	45,000	14,000	16,60	17,570
1/2	14,000	45,000	18,000	20,63	21,900
3/4	14,000	55,000	22,000	25,95	27,230

Maschi a mano per filettatura metrica ISO

ISO2/6H

P	≤ 800
M	
K	
N	○
S	
H	

Materiale tagliente	HSS			
Superficie	○	○	○	○
Tipo	N	N	N	N
Descrizione	Serie	V	M	F



DIN 352 — Articolo nr. **861** **862** **863** **864**

d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,75	32,000	5,500
M1,1	0,250	2,500	2,100	0,85	32,000	5,500
M1,2	0,250	2,500	2,100	0,95	32,000	5,500
M1,4	0,300	2,500	2,100	1,10	32,000	7,000
M1,6	0,350	2,500	2,100	1,25	32,000	8,000
M1,7	0,350	2,500	2,100	1,35	32,000	8,000
M1,8	0,350	2,500	2,100	1,45	32,000	8,000
M2	0,400	2,800	2,100	1,60	36,000	8,000
M2,2	0,450	2,800	2,100	1,75	36,000	9,000
M2,3	0,400	2,800	2,100	1,90	36,000	9,000
M2,5	0,450	2,800	2,100	2,05	40,000	9,000
M2,6	0,450	2,800	2,100	2,15	40,000	9,000
M3	0,500	3,500	2,700	2,50	40,000	10,000
M3,5	0,600	4,000	3,000	2,90	45,000	12,000
M4	0,700	4,500	3,400	3,30	45,000	12,000
M4,5	0,750	6,000	4,900	3,70	50,000	14,000
M5	0,800	6,000	4,900	4,20	50,000	14,000
M6	1,000	6,000	4,900	5,00	56,000	16,000
M7	1,000	6,000	4,900	6,00	56,000	16,000
M8	1,250	6,000	4,900	6,80	63,000	17,000
M9	1,250	7,000	5,500	7,80	63,000	17,000
M10	1,500	7,000	5,500	8,50	70,000	20,000
M11	1,500	8,000	6,200	9,50	70,000	20,000
M12	1,750	9,000	7,000	10,20	75,000	24,000
M14	2,000	11,000	9,000	12,00	80,000	26,000
M16	2,000	12,000	9,000	14,00	80,000	26,000
M18	2,500	14,000	11,000	15,50	95,000	30,000
M20	2,500	16,000	12,000	17,50	95,000	32,000
M22	2,500	18,000	14,500	19,50	100,000	32,000
M24	3,000	18,000	14,500	21,00	110,000	36,000
M27	3,000	20,000	16,000	24,00	110,000	36,000
M30	3,500	22,000	18,000	26,50	125,000	40,000
M36	4,000	28,000	22,000	32,00	150,000	50,000
M42	4,500	32,000	24,000	37,50	150,000	56,000
M45	4,500	36,000	29,000	40,50	160,000	58,000
M60	5,500	45,000	35,000	54,50	200,000	70,000

DIN 352 Articolo nr. **861** **862** **863** **864**

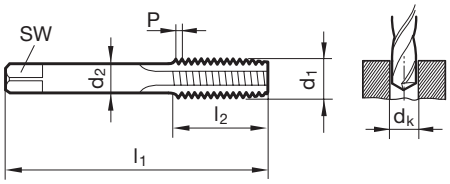
d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M64	6,000	50,000	39,000	58,00	220,000	75,000
M68	6,000	50,000	39,000	62,00	220,000	75,000

Maschi a mano per filettatura metrica ISO

ISO2/6H

P	≤ 800
M	
K	
N	○
S	
H	

Materiale tagliente	HSS		
Superficie	◯	◯	◯
Tipo	N	N	N
Descrizione	Serie	V	F



DIN 352 — Articolo nr. **882** **883** **864**

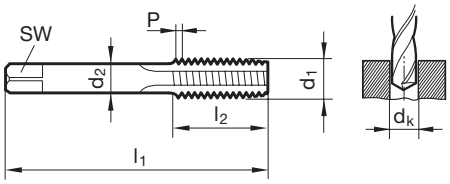
d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M1	0,250	2,500	2,100	0,75	32,000	5,500
M1,1	0,250	2,500	2,100	0,85	32,000	5,500
M1,2	0,250	2,500	2,100	0,95	32,000	5,500
M1,4	0,300	2,500	2,100	1,10	32,000	7,000
M1,6	0,350	2,500	2,100	1,25	32,000	8,000
M1,7	0,350	2,500	2,100	1,35	32,000	8,000
M1,8	0,350	2,500	2,100	1,45	32,000	8,000
M2	0,400	2,800	2,100	1,60	36,000	8,000
M2,2	0,450	2,800	2,100	1,75	36,000	9,000
M2,3	0,400	2,800	2,100	1,90	36,000	9,000
M2,5	0,450	2,800	2,100	2,05	40,000	9,000
M2,6	0,450	2,800	2,100	2,15	40,000	9,000
M3	0,500	3,500	2,700	2,50	40,000	10,000
M3,5	0,600	4,000	3,000	2,90	45,000	12,000
M4	0,700	4,500	3,400	3,30	45,000	12,000
M4,5	0,750	6,000	4,900	3,70	50,000	14,000
M5	0,800	6,000	4,900	4,20	50,000	14,000
M6	1,000	6,000	4,900	5,00	56,000	16,000
M7	1,000	6,000	4,900	6,00	56,000	16,000
M8	1,250	6,000	4,900	6,80	63,000	17,000
M9	1,250	7,000	5,500	7,80	63,000	17,000
M10	1,500	7,000	5,500	8,50	70,000	20,000
M11	1,500	8,000	6,200	9,50	70,000	20,000
M12	1,750	9,000	7,000	10,20	75,000	24,000
M14	2,000	11,000	9,000	12,00	80,000	26,000
M16	2,000	12,000	9,000	14,00	80,000	26,000
M18	2,500	14,000	11,000	15,50	95,000	30,000
M20	2,500	16,000	12,000	17,50	95,000	32,000
M22	2,500	18,000	14,500	19,50	100,000	32,000
M24	3,000	18,000	14,500	21,00	110,000	36,000
M27	3,000	20,000	16,000	24,00	110,000	36,000
M30	3,500	22,000	18,000	26,50	125,000	40,000
M36	4,000	28,000	22,000	32,00	150,000	50,000
M42	4,500	32,000	24,000	37,50	150,000	56,000
M45	4,500	36,000	29,000	40,50	160,000	58,000

Maschi a mano per filettatura metrica ISO

ISO2/6H

P	≤ 800
M	
K	
N	○
S	
H	

Materiale tagliente	HSS			
Superficie	◯	◯	◯	◯
Tipo	N	N-LH	N-LH	N-LH
Descrizione	Serie	V	M	F



DIN 352 — Articolo nr. **904** **905** **906** **907**

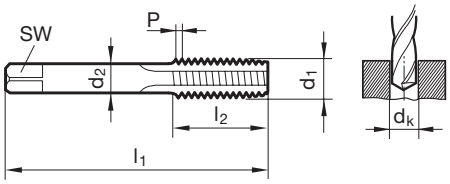
d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	36,000	8,000
M2,2	0,450	2,800	2,100	1,75	36,000	9,000
M2,5	0,450	2,800	2,100	2,05	40,000	9,000
M3	0,500	3,500	2,700	2,50	40,000	10,000
M4	0,700	4,500	3,400	3,30	45,000	12,000
M5	0,800	6,000	4,900	4,20	50,000	14,000
M6	1,000	6,000	4,900	5,00	56,000	16,000
M8	1,250	6,000	4,900	6,80	63,000	17,000
M10	1,500	7,000	5,500	8,50	70,000	20,000
M12	1,750	9,000	7,000	10,20	75,000	24,000
M14	2,000	11,000	9,000	12,00	80,000	26,000
M16	2,000	12,000	9,000	14,00	80,000	26,000
M18	2,500	14,000	11,000	15,50	95,000	30,000

Maschi a mano per filettatura metrica ISO

ISO2/6H

P	≤ 1000
M	•
K	•
N	•
S	
H	

Materiale tagliente	HSS-E			
Superficie	◯	◯	◯	◯
Tipo	VA	VA	VA	VA
Descrizione	Serie	V	M	F



DIN 352 — Articolo nr. **853** **854** **855** **856**

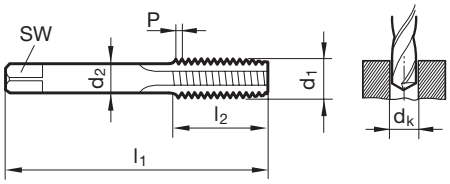
d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	36,000	8,000
M2,5	0,450	2,800	2,100	2,05	40,000	9,000
M3	0,500	3,500	2,700	2,50	40,000	10,000
M4	0,700	4,500	3,400	3,30	45,000	12,000
M5	0,800	6,000	4,900	4,20	50,000	14,000
M6	1,000	6,000	4,900	5,00	56,000	16,000
M8	1,250	6,000	4,900	6,80	63,000	17,000
M10	1,500	7,000	5,500	8,50	70,000	20,000
M12	1,750	9,000	7,000	10,20	75,000	24,000
M16	2,000	12,000	9,000	14,00	80,000	26,000
M20	2,500	16,000	12,000	17,50	95,000	32,000

Maschi a mano per filettatura metrica ISO

ISO2/6H

P	•
M	•
K	•
N	•
S	
H	

Materiale tagliente	HSS-E			
Superficie	●	●	●	●
Tipo	H	H	H	H
Descrizione	Serie	V	M	F



DIN 352 — Articolo nr. **857** **858** **859** **860**

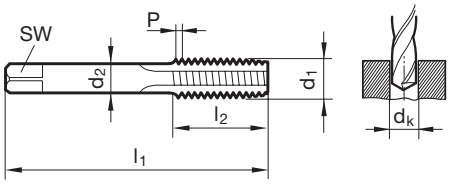
d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,60	36,000	6,400
M2	0,400	2,800	2,100	1,60	36,000	8,000
M2,5	0,450	2,800	2,100	2,05	40,000	7,000
M2,5	0,450	2,800	2,100	2,05	40,000	9,000
M3	0,500	3,500	2,700	2,50	40,000	8,000
M3	0,500	3,500	2,700	2,50	40,000	10,000
M3,5	0,600	4,000	3,000	2,90	45,000	12,000
M4	0,700	4,500	3,400	3,30	45,000	9,000
M4	0,700	4,500	3,400	3,30	45,000	12,000
M5	0,800	6,000	4,900	4,20	50,000	14,000
M5	0,800	6,000	4,900	4,20	50,000	11,000
M6	1,000	6,000	4,900	5,00	56,000	16,000
M6	1,000	6,000	4,900	5,00	56,000	12,000
M8	1,250	6,000	4,900	6,80	63,000	17,000
M8	1,250	6,000	4,900	6,80	63,000	11,000
M10	1,500	7,000	5,500	8,50	70,000	20,000
M10	1,500	7,000	5,500	8,50	70,000	14,000
M12	1,750	9,000	7,000	10,20	75,000	24,000
M12	1,750	9,000	7,000	10,20	75,000	18,000
M14	2,000	11,000	9,000	12,00	80,000	26,000
M14	2,000	11,000	9,000	12,00	80,000	19,000
M16	2,000	12,000	9,000	14,00	80,000	26,000
M16	2,000	12,000	9,000	14,00	80,000	18,000
M18	2,500	14,000	11,000	15,50	95,000	30,000
M18	2,500	14,000	11,000	15,50	95,000	21,000
M20	2,500	16,000	12,000	17,50	95,000	32,000
M20	2,500	16,000	12,000	17,50	95,000	22,000

Maschi a mano per filettatura metrica ISO

ISO2/6H

P	•
M	•
K	•
N	•
S	
H	

Materiale tagliente	HSS-E-PM			
Superficie	●	●	●	●
Tipo	H	H	H	H
Descrizione	Serie	V	M	F



DIN 352 — Articolo nr. **1818** **1819** **1820** **1821**

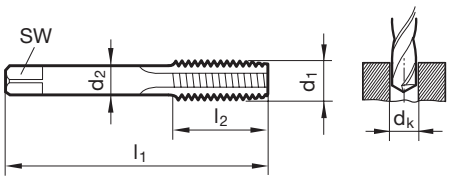
d1	P	d2	SW	dk	l1	l2
	mm	mm	mm	mm	mm	mm
M3	0,500	3,500	2,700	2,50	40,000	8,000
M3	0,500	3,500	2,700	2,50	40,000	10,000
M4	0,700	4,500	3,400	3,30	45,000	12,000
M4	0,700	4,500	3,400	3,30	45,000	9,000
M5	0,800	6,000	4,900	4,20	50,000	14,000
M5	0,800	6,000	4,900	4,20	50,000	11,000
M6	1,000	6,000	4,900	5,00	56,000	16,000
M6	1,000	6,000	4,900	5,00	56,000	12,000
M8	1,250	6,000	4,900	6,80	63,000	17,000
M8	1,250	6,000	4,900	6,80	63,000	11,000
M10	1,500	7,000	5,500	8,50	70,000	20,000
M10	1,500	7,000	5,500	8,50	70,000	14,000
M12	1,750	9,000	7,000	10,20	75,000	24,000
M12	1,750	9,000	7,000	10,20	75,000	18,000

Maschi a mano per fil. metr. ISO passo fine

ISO2/6H

P	≤ 800
M	
K	
N	○
S	
H	

Materiale tagliente	HSS		
Superficie	◯	◯	◯
Tipo	N	N	N
Descrizione	Serie	V	F



DIN 2181 — Articolo nr. **884** **885** **886**

d1	d2	SW	dk	l1	l2	Codice
	mm	mm	mm	mm	mm	
M2 x 0,25	2,800	2,100	1,75	36,000	8,000	2,001
M2,2 x 0,25	2,800	2,100	1,95	36,000	9,000	2,201
M2,3 x 0,25	2,800	2,100	2,05	36,000	9,000	2,301
M2,6 x 0,35	2,800	2,100	2,25	40,000	9,000	2,602
M3 x 0,35	3,500	2,700	2,65	40,000	8,000	3,002
M4 x 0,35	4,500	3,400	3,65	45,000	9,000	4,002
M4 x 0,5	4,500	3,400	3,50	45,000	9,000	4,003
M5 x 0,5	6,000	4,900	4,50	50,000	11,000	5,003
M6 x 0,5	6,000	4,900	5,50	56,000	12,000	6,003
M6 x 0,75	6,000	4,900	5,20	56,000	12,000	6,004
M7 x 0,75	6,000	4,900	6,20	56,000	14,000	7,004
M8 x 0,5	6,000	4,900	7,50	56,000	14,000	8,003
M8 x 0,75	6,000	4,900	7,20	56,000	14,000	8,004
M8 x 1	6,000	4,900	7,00	63,000	17,000	8,005
M9 x 1	7,000	5,500	8,00	63,000	17,000	9,005
M10 x 0,75	7,000	5,500	9,20	63,000	18,000	10,004
M10 x 1	7,000	5,500	9,00	63,000	18,000	10,005
M10 x 1,25	7,000	5,500	8,80	70,000	20,000	10,006
M11 x 1	8,000	6,200	10,00	63,000	18,000	11,005
M12 x 1	9,000	7,000	11,00	70,000	18,000	12,005
M12 x 1,25	9,000	7,000	10,80	70,000	20,000	12,006
M12 x 1,5	9,000	7,000	10,50	70,000	20,000	12,007
M14 x 1	11,000	9,000	13,00	70,000	20,000	14,005
M14 x 1,25	11,000	9,000	12,80	70,000	20,000	14,006
M14 x 1,5	11,000	9,000	12,50	70,000	20,000	14,007
M15 x 1	12,000	9,000	14,00	70,000	20,000	15,005
M15 x 1,5	12,000	9,000	13,50	70,000	20,000	15,007
M16 x 1	12,000	9,000	15,00	70,000	20,000	16,005
M16 x 1,5	12,000	9,000	14,50	70,000	20,000	16,007
M18 x 1	14,000	11,000	17,00	80,000	22,000	18,005
M18 x 1,5	14,000	11,000	16,50	80,000	22,000	18,007
M18 x 2	14,000	11,000	16,00	80,000	22,000	18,008
M20 x 1	16,000	12,000	19,00	80,000	22,000	20,005
M20 x 1,5	16,000	12,000	18,50	80,000	22,000	20,007
M20 x 2	16,000	12,000	18,00	80,000	22,000	20,008
M22 x 1	18,000	14,500	21,00	80,000	22,000	22,005

DIN 2181 Articolo nr. **884** **885** **886**

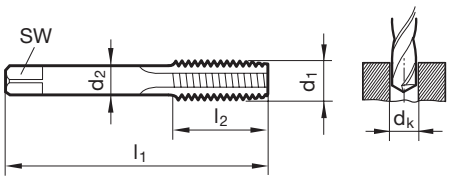
d1	d2	SW	dk	l1	l2	Codice
	mm	mm	mm	mm	mm	
M22 x 1,5	18,000	14,500	20,50	80,000	22,000	22,007
M22 x 2	18,000	14,500	20,00	80,000	22,000	22,008
M24 x 1	18,000	14,500	23,00	90,000	22,000	24,005
M24 x 1,5	18,000	14,500	22,50	90,000	22,000	24,007
M24 x 2	18,000	14,500	22,00	90,000	22,000	24,008
M26 x 1,5	18,000	14,500	24,50	90,000	22,000	26,007
M27 x 1,5	20,000	16,000	25,50	90,000	22,000	27,007
M27 x 2	20,000	16,000	25,00	90,000	22,000	27,008
M30 x 1	22,000	18,000	29,00	90,000	22,000	30,005
M30 x 1,5	22,000	18,000	28,50	90,000	22,000	30,007
M30 x 2	22,000	18,000	28,00	90,000	22,000	30,008
M32 x 1,5	22,000	18,000	30,50	90,000	22,000	32,007
M34 x 1,5	28,000	22,000	32,50	100,000	25,000	34,007
M35 x 1,5	28,000	22,000	33,50	100,000	25,000	35,007
M36 x 1,5	28,000	22,000	34,50	100,000	25,000	36,007
M38 x 1,5	28,000	22,000	36,50	100,000	25,000	38,007
M45 x 1,5	36,000	29,000	43,50	110,000	25,000	45,007
M52 x 1,5	40,000	32,000	50,50	140,000	32,000	52,007

Maschi a mano per filettatura UNC

2B R

P	≤ 800
M	
K	
N	○
S	
H	

Materiale tagliente	HSS			
Superficie	○	○	○	○
Tipo	N	N	N	N
Descrizione	Serie	V	M	F



~DIN 352 — Articolo nr. **981** **982** **983** **984**

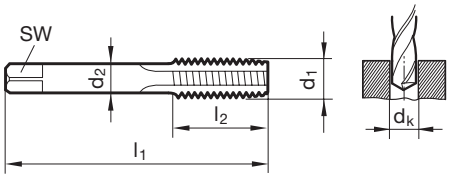
d1	d2	SW	dk	l1	l2	Codice
	mm	mm	mm	mm	mm	
1 - 64	2,800	2,100	1,55	36,000	8,000	1,854
2 - 56	2,800	2,100	1,85	36,000	9,000	2,184
3 - 48	2,800	2,100	2,10	40,000	9,000	2,515
4 - 40	3,500	2,700	2,35	40,000	11,000	2,845
5 - 40	4,000	2,700	2,65	40,000	11,000	3,175
5 - 40	3,500	2,700	2,65	40,000	11,000	3,175
6 - 32	4,000	3,000	2,85	45,000	12,000	3,505
8 - 32	4,500	3,400	3,50	45,000	12,000	4,166
10 - 24	6,000	4,900	3,90	50,000	14,000	4,826
12 - 24	6,000	4,900	4,50	56,000	16,000	5,486
1/4 - 20	6,000	4,900	5,10	56,000	16,000	6,350
5/16 - 18	6,000	4,900	6,60	63,000	18,000	7,938
3/8 - 16	7,000	5,500	8,00	70,000	20,000	9,525
7/16 - 14	8,000	6,200	9,40	70,000	22,000	11,113
1/2 - 13	9,000	7,000	10,80	75,000	25,000	12,700
9/16 - 12	11,000	9,000	12,20	80,000	28,000	14,288
5/8 - 11	12,000	9,000	13,50	80,000	30,000	15,875
3/4 - 10	16,000	11,000	16,50	95,000	33,000	19,050
3/4 - 10	14,000	11,000	16,50	95,000	33,000	19,050
7/8 - 9	18,000	14,500	19,50	100,000	35,000	22,225
1 - 8	18,000	14,500	22,25	110,000	38,000	25,400
1 1/8 - 7	22,000	18,000	25,00	125,000	44,000	28,575
1 1/4 - 7	22,000	18,000	28,00	125,000	44,000	31,750
1 3/8 - 6	28,000	22,000	30,75	150,000	50,000	34,925
1 1/2 - 6	32,000	22,000	34,00	150,000	50,000	38,100
1 3/4 - 5	36,000	29,000	39,50	160,000	58,000	44,450
2 - 4 1/2	40,000	32,000	45,00	180,000	65,000	50,800

Maschi a mano per filettatura UNF

2B R

P	≤ 800
M	
K	
N	○
S	
H	

Materiale tagliente	HSS		
Superficie	◯	◯	◯
Tipo	N	N	N
Descrizione	Serie	V	F



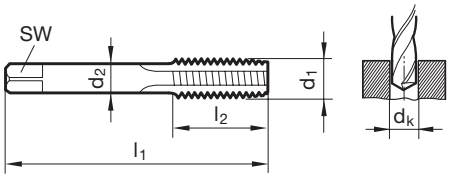
~DIN 2181 — Articolo nr. **985** **986** **987**

d1	d2	SW	dk	l1	l2	Codice
	mm	mm	mm	mm	mm	
1 - 72	2,800	2,100	1,55	36,000	8,000	1,854
2 - 64	2,800	2,100	1,85	36,000	9,000	2,184
3 - 56	2,800	2,100	2,15	40,000	9,000	2,515
4 - 48	3,500	2,700	2,40	40,000	8,000	2,845
5 - 44	3,500	2,700	2,70	40,000	8,000	3,175
5 - 44	4,000	2,700	2,70	40,000	8,000	3,175
6 - 40	4,000	3,000	2,95	45,000	9,000	3,505
8 - 36	4,500	3,400	3,50	45,000	10,000	4,166
8 - 36	4,500	3,400	3,50	45,000	12,000	4,166
10 - 32	6,000	4,900	4,10	50,000	14,000	4,826
12 - 28	6,000	4,900	4,60	56,000	16,000	5,486
1/4 - 28	6,000	4,900	5,50	56,000	17,000	6,350
5/16 - 24	6,000	4,900	6,90	63,000	17,000	7,938
3/8 - 24	7,000	5,500	8,50	63,000	18,000	9,525
7/16 - 20	8,000	6,200	9,90	70,000	20,000	11,113
7/16 - 20	8,000	6,200	9,90	70,000	18,000	11,113
1/2 - 20	9,000	7,000	11,50	70,000	20,000	12,700
9/16 - 18	11,000	9,000	12,90	70,000	20,000	14,288
5/8 - 18	12,000	9,000	14,50	70,000	20,000	15,875
3/4 - 16	16,000	11,000	17,50	80,000	22,000	19,050
3/4 - 16	14,000	11,000	17,50	80,000	22,000	19,050
7/8 - 14	18,000	14,500	20,40	80,000	22,000	22,225
1 - 12	18,000	14,500	23,25	90,000	22,000	25,400

Maschi a mano per filettatura BSW

Materiale tagliente	HSS			
Superficie	◯	◯	◯	◯
Tipo	N	N	N	N
Descrizione	Serie	V	M	F

P	≤ 800
M	
K	
N	○
S	
H	



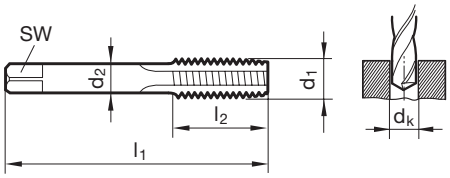
~DIN 352 — Articolo nr. **954** **955** **956** **957**

d1	P	d2	SW	dk	l1	l2	Codice
	G/inch	mm	mm	mm	mm	mm	
W3/32	48,000	2,800	2,100	1,80	40,000	9,000	2,381
W1/8	40,000	3,500	2,700	2,50	40,000	11,000	3,175
W1/8	40,000	4,000	2,700	2,50	40,000	11,000	3,175
W5/32	32,000	4,500	3,400	3,20	45,000	12,000	3,969
W3/16	24,000	6,000	4,900	3,60	50,000	14,000	4,762
W7/32	24,000	6,000	4,900	4,50	56,000	16,000	5,556
W1/4	20,000	6,000	4,900	5,10	56,000	16,000	6,350
W5/16	18,000	6,000	4,900	6,50	63,000	18,000	7,938
W3/8	16,000	7,000	5,500	7,90	70,000	20,000	9,525
W7/16	14,000	8,000	6,200	9,20	70,000	22,000	11,113
W1/2	12,000	9,000	7,000	10,50	75,000	25,000	12,700
W9/16	12,000	11,000	9,000	12,00	80,000	28,000	14,287
W5/8	11,000	12,000	9,000	13,50	80,000	30,000	15,876
W3/4	10,000	16,000	11,000	16,25	95,000	33,000	19,051
W1	8,000	18,000	14,500	22,00	110,000	38,000	25,401
W1 1/2	6,000	32,000	22,000	33,50	150,000	50,000	38,101
W1 5/8	5,000	32,000	24,000	35,50	150,000	58,000	41,277
W1 3/4	5,000	36,000	29,000	39,00	160,000	58,000	44,452
W2	4,500	40,000	32,000	44,50	180,000	65,000	50,802

Maschi a mano per filettatura Bsp

Materiale tagliente	HSS		
Superficie	◯	◯	◯
Tipo	N	N	N
Descrizione	Serie	V	F

P	≤ 800
M	
K	
N	○
S	
H	



DIN 5157 — Articolo nr. **958** **959** **960**

d1	P	d2	SW	dk	l1	l2	Codice
	G/inch	mm	mm	mm	mm	mm	
G1/8	28,000	7,000	5,500	8,80	63,000	20,000	9,728
G1/8	28,000	7,000	5,500	8,80	63,000	18,000	9,728
G1/4	19,000	11,000	9,000	11,80	70,000	20,000	13,157
G3/8	19,000	12,000	9,000	15,25	70,000	20,000	16,662
G3/8	19,000	12,000	9,000	15,25	70,000	22,000	16,662
G1/2	14,000	16,000	12,000	19,00	80,000	22,000	20,955
G5/8	14,000	18,000	14,500	21,00	80,000	22,000	22,911
G3/4	14,000	20,000	16,000	24,50	90,000	22,000	26,441
G1	11,000	25,000	20,000	30,75	100,000	25,000	33,249
G1 1/4	11,000	32,000	24,000	39,50	125,000	40,000	41,910
G1 3/8	11,000	36,000	29,000	41,75	125,000	40,000	44,323
G1 1/2	11,000	36,000	29,000	45,25	140,000	40,000	47,803
G1 3/4	11,000	40,000	32,000	51,00	140,000	40,000	53,746
G2	11,000	45,000	35,000	57,00	160,000	40,000	59,614

MAN
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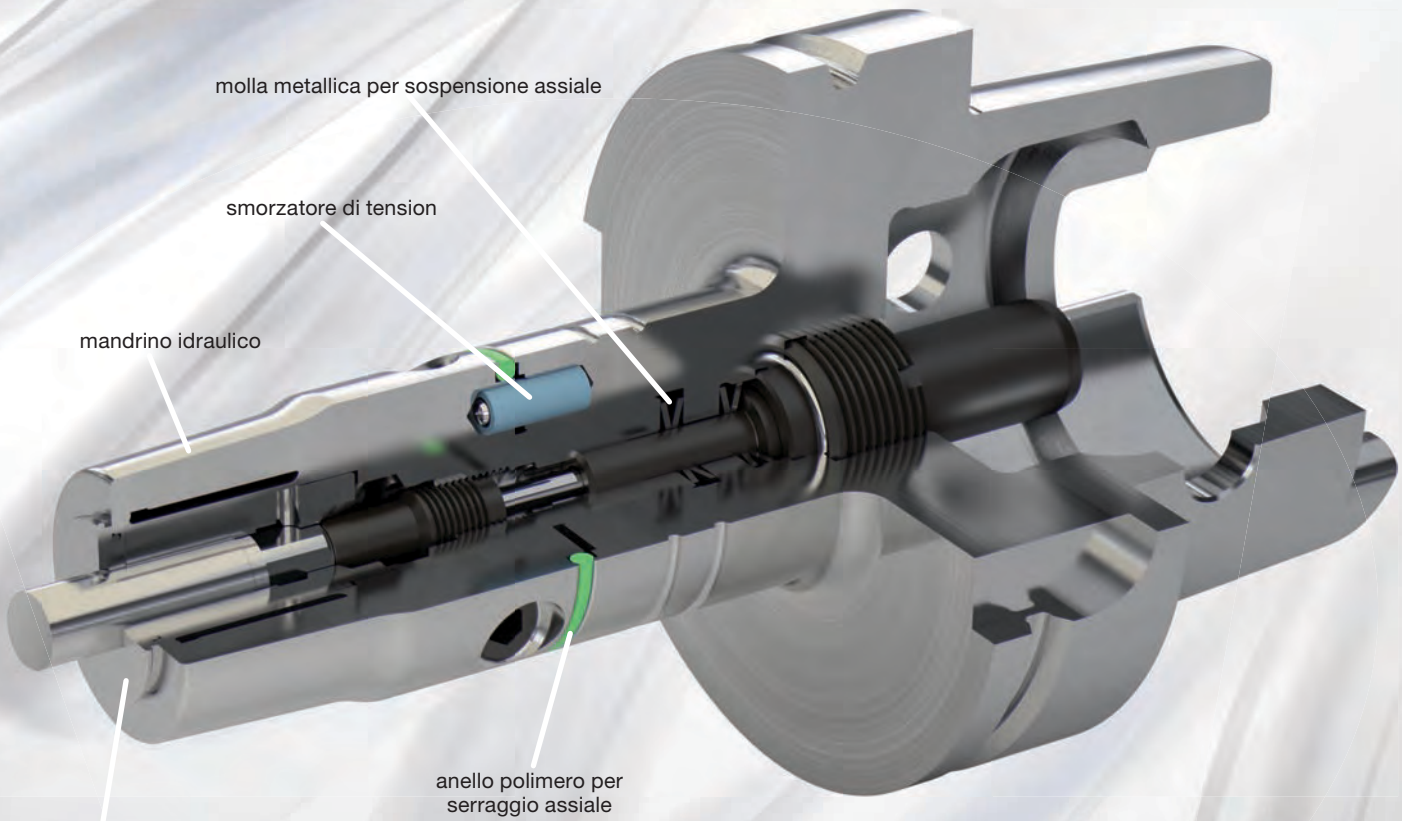
DRINI
ER MA
HIATURA
CRONA

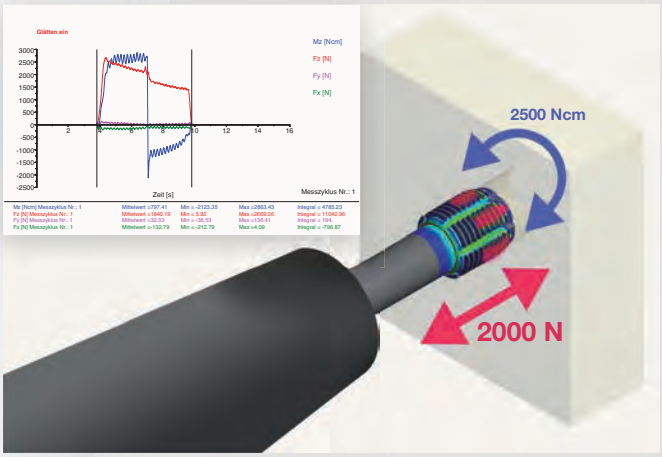
GÜHROSYNC

IL MODO PIÙ SEMPLICE PER LA PERFETTA FILETTATURA PERFETTA

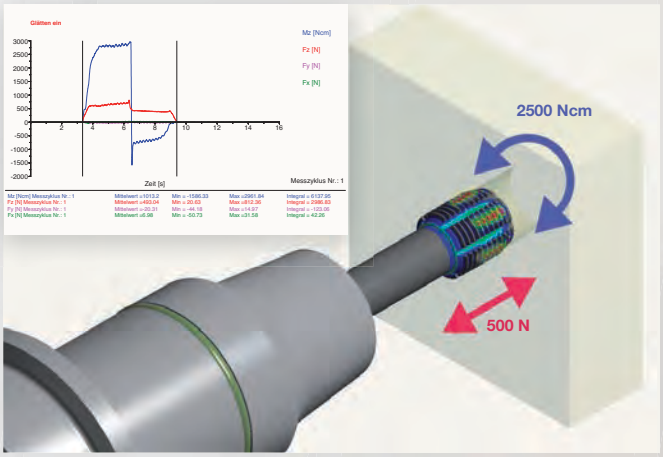


Design intelligente:
Oltre che per la sospensione e per gli elementi di smorzamento, nei mandrini Guhrosync (per la riduzione delle forze assiali e radiali durante il processo di maschiatura) c'è spazio anche per la lubrificazione MMS o convenzionale e per la vite di regolazione della lunghezza

l‘ottima combinazione, e tra molla metallica a lunga durata ed elementi di smorzamento polimerici, riduce notevolmente le forze assiali e radiali



mandrino rigido

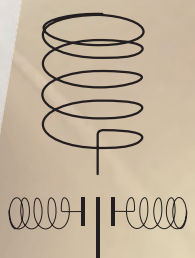


GÜHROSync

VITA UTENSILE MIGLIORATA

MIGLIORE QUALITÀ DI FILETTATURA

PROCESSO DI MAGGIORE AFFIDABILITÀ



Il simbolo a spirale sul Gührosync mostra l‘effetto della forza assiale e radiale.

GÜHRING

RIDUZIONE DELLE FORZE ASSIALI E RADIALI

ERRORI DI SINCRONIZZAZIONE ANNULLATI

RAPIDO ED ACCURATO POSIZIONAMENTO DELL'UTENSILE

DIFFERENTI DESIGN PER DIVERSI STANDARD O VERSIONI SPECIALI

VITA UTENSILE MIGLIORATA

RIDOTTI I TEMPI DI CICLO

MIGLIORE QUALITÀ DI FILETTATURA

PROCESSO DI MAGGIORE AFFIDABILITÀ

IL MEGLIO DI DUE SISTEMI

I VANTAGGI DEL MANDRINO IDRAULICO
E DEL MANDRINO PER MASCHIATURA
SINCRONA IN UN UNICO UTENSILE

GUHROSync Mandrini per maschiatura sincrona

4949 unità di adduzione tradizionale HSK-A per il raffreddamento convenzionale

4925 perni per SK
4926

4927 perni per MAS/BT
4928

mandrino a calettamento termico

4736 HSK-A
4726 TSG 3000 HSK-A
4758 HSK-C
4738 SK

mandrini idraulici Syncro con forza di serraggio aumentata

4221 MAS-BT
4299 HSK-A
4267 HSK-C
4213 SK

mandrini idraulici Syncro

4601 HSK-A

mandrini idraulici Syncro

4576 SK

mandrini idraulici Syncro

4577 MAS-BT

4525
mandrino idraulico cilindrico Syncro Ø 20 con lubrificazione interna

4364
vite di regolazione per mandrini sincroni con lubrificazione interna

4605 bussola di riduzione a tenuta stagna
4606 GÜHROJET bussola di riduzione

Utensile di filettatura:
diametro del gambo x quadro

4949
Unità di adduzione tradizionaleHSK-A per il raffreddamento convenzionale (per cambio utensili automatico)

4927
4928
Perni BT

4925
4926
Perni SK

4949
Unità di adduzione tradizionale HSK-A per il raffreddamento convenzionale (per cambio utensili automatico)

4949
Unità di adduzione tradizionale HSK-A per il raffreddamento convenzionale (per cambio utensili automatico)

4328
Mandrini di masch. cambio rapido HSK-A con lubrificazione interna

4233
Attacchi cilindrici Whistle-Notch MAS/BT

4322
Attacchi cilindrici Whistle-Notch SK

4329
Weldon
4334
Whistle-Notch
Attacchi cilindrici HSK-A
4343
Attacchi base HSK-A

4327
Mandrini per maschiatura sincrona HSK-A con lubrificazione interna

4340
Mandrini di masch. cambio rapido senza lubrificazione interna

4342
Mandrini di masch. cambio rapido con lubrificazione interna

4326
Mandrini per maschiatura sincrona cilindrici con lubrificazione interna

4206
Attacchi per mandrini di masch. a cambio rapido

4364
Viti di regolazione „plan“ per mandrini sincroni con lubrificazione interna

4308
Pinza di serraggio

4335
Disco di tenuta per dadi di serraggio

Maschio

Maschio

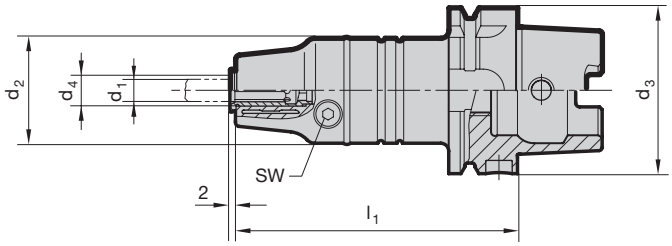
Informazioni sul prodotto

- HSK-A a ISO 12164-1/DIN 69893-1
- compensazione degli errori di sincronizzazione
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima lunghezza di compensazione in spinta e trazione bilancia le piccole differenze tra mandrini syncro e maschi
- riduce al minimo l'aumento delle forze assiali durante il ciclo di filettatura
- bloccaggio idraulico semplice utilizzando bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3 mm di regolazione
- adatto per lubrificazione interna identificabile con l'anello di colore nero vite di regolazione 3 mm di regolazione
- pressione lubrificante oltre max 80 bar

Dotazione

- incl. Chiave di serraggio esagonale articolo nr. 4912
- incl. Chiave di regolazione per vite di aggiustamento

- vite di regolazione „Plan" articolo nr. 4364 da ordinare a parte
- boccole di riduzione art. nr. 4605 o 4606 da ordinare a parte
- unità di adduzione refrigerante convenzionale art. nr. 4949 da ordinare separatamente



GÜHROSync

Articolo	4601

HSK-A d_3	d_4 mm	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./ press. ± mm	SW	kg	Codice
63	12.00	2.8-10	M3-M12	40	106.5	0.3	4	1.5	12.063
63	20.00	6-16	M8-M20	40	120.5	0.3	5	1.6	20.063
100	12.00	2.8-10	M3-M12	40	113.0	0.3	4	2.8	12.100
100	20.00	6-16	M8-M20	40	127.0	0.3	5	2.9	20.100

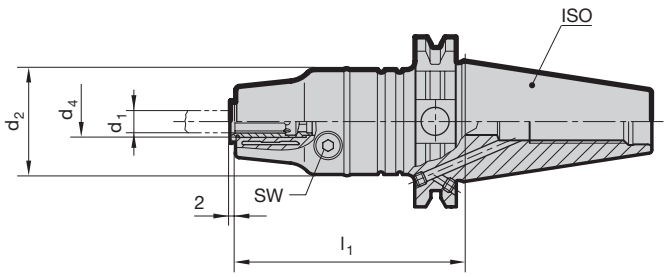
Informazioni sul prodotto

- SK30 a DIN ISO 7388-1 a forma AD senza alimentazione del refrigerante sul collare
- SK40 a DIN ISO 7388-1 forma AD/AF (AD/B)
- Foro per Forma B chiuso con vita a brugola
- compensazione degli errori di sincronizzazione
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima lunghezza di compensazione in spinta e trazione bilancia le piccole differenze tra mandrini syncro e maschi
- riduce al minimo l'aumento delle forze assiali durante il ciclo di filettatura
- bloccaggio idraulico semplice utilizzando bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3 mm di regolazione
- adatto per lubrificazione interna identificabile con l'anello di colore nero
- pressione lubrificante oltre max 80 bar

Dotazione

- incl. Chiave di serraggio esagonale articolo nr. 4912
- incl. Chiave di regolazione per vite di aggiustamento

- vite di regolazione „Plan" articolo nr. 4364 da ordinare a parte
- boccole di riduzione art. nr. 4605 o 4606 da ordinare a parte
- perni art. nr. 4925 o 4926 da ordinare a parte



GÜHROSync

Articolo	4576

SK	d_4 mm	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./ press. ± mm	SW	kg	Codice
30	12.00	2.8-10	M3-M12	40	81	0.3	4	0.8	12,030
30	20.00	6-16	M8-M20	40	95	0.3	5	0.9	20,030
40	12.00	2.8-10	M3-M12	40	85	0.3	4	1.3	12,040
40	20.00	6-16	M8-M20	40	99	0.3	5	1.4	20,040

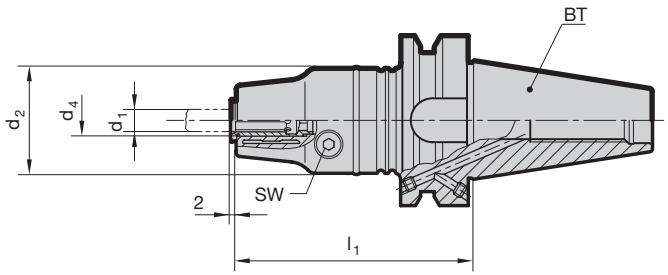
Informazioni sul prodotto

- MAS/BT30 a DIN ISO 7388-2 forma JD senza alimentazione refrigerante sul collare
- MAS/BT40 a DIN ISO 7388-2 forma JD/JF (forma AD/B)
- Foro per Forma B chiuso con vita a brugola
- compensazione degli errori di sincronizzazione
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima lunghezza di compensazione in spinta e trazione bilancia le piccole differenze tra mandrini syncro e maschi
- riduce al minimo l'aumento delle forze assiali durante il ciclo di filettatura
- bloccaggio idraulico semplice utilizzando bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3 mm di regolazione
- adatto per lubrificazione interna identificabile con l'anello di colore nero
- pressione lubrificante oltre max 80 bar

Dotazione

- incl. Chiave di serraggio esagonale articolo nr. 4912
- incl. Chiave di regolazione per vite di aggiustamento

- vite di regolazione „Plan" articolo nr. 4364 da ordinare a parte
- boccole di riduzione art. nr. 4605 o 4606 da ordinare a parte
- perni art. nr. 4927 o 4928 da ordinare a parte



GÜHROSync

Articolo	4577

BT	d_4 mm	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./ press. ± mm	SW	kg	Codice
30	12.00	2.8-10	M3-M12	40	81	0.3	4	0.8	12,030
30	20.00	6-16	M8-M20	40	95	0.3	5	0.9	20,030
40	12.00	2.8-10	M3-M12	40	85	0.3	4	1.3	12,040
40	20.00	6-16	M8-M20	40	99	0.3	5	1.4	20,040

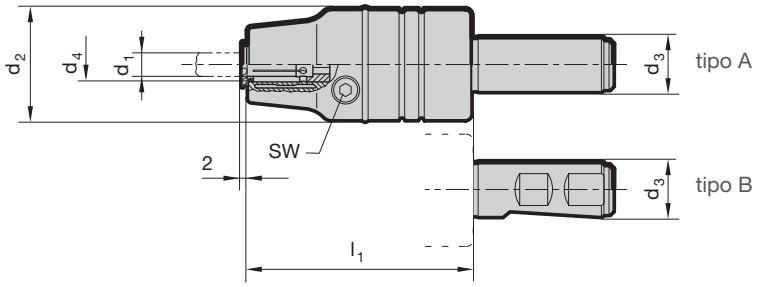
Informazioni sul prodotto

- compensazione degli errori di sincronizzazione
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima lunghezza di compensazione in spinta e trazione bilancia le piccole differenze tra mandrini syncro e maschi
- riduce al minimo l'aumento delle forze assiali durante il ciclo di filettatura
- bloccaggio idraulico semplice utilizzando bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3 mm di regolazione
- supporto del gambo a DIN 1835-A per l'inserimento in mandrini di precisione (idraulico, a calettamento o mandrini a forte serraggio)
- adatto per lubrificazione interna identificabile con l'anello di colore nero
- pressione lubrificante oltre max 80 bar

Dotazione

- incl. Chiave di serraggio esagonale articolo nr. 4912
- incl. Chiave di regolazione per vite di aggiustamento

- vite di regolazione „Plan" articolo nr. 4364 da ordinare a parte
- boccole di riduzione art. nr. 4605 o 4606 da ordinare a parte



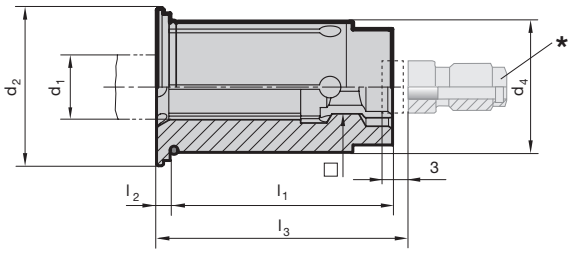
GÜHROSync

Articolo **4525**

d_3 h6 mm	d_4 mm	tipo	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./press. ± mm	SW	kg	Codice
20	12.00	A	2.8-10	M3-M12	40	80	0.3	4	0.7	12,020
20	20.00	A	6-16	M8-M20	40	94	0.3	5	0.8	20,020
25	12.00	B	2.8-10	M3-M12	40	80	0.3	4	0.7	12,025
25	20.00	B	6-16	M8-M20	40	94	0.3	5	0.8	20,025

Informazioni sul prodotto
- per il serraggio di maschi con codolo quadro per mandrini per maschiatura sincrona Guhrosync
- serraggio per tolleranza h6-h9
- chiusura frontale, con ottima tenuta del refrigerante per filettatura con IC
- trascinamento positivo
- crea la regolazione per la vite sul codolo del maschio
- vite di regolazione della lunghezza che consente 3 mm di regolazione

Dotazione
- vite di regolazione „Plan“ articolo nr. 4364 da ordinare a parte
- ordinare viti di regolazione art. nr. 4305 a parte



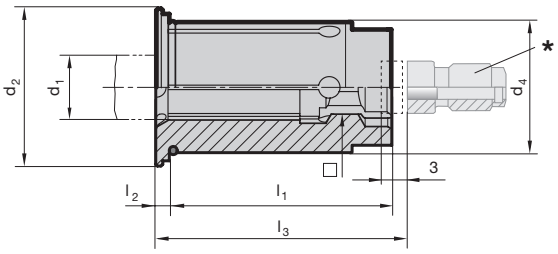
Articolo												4605
d_4 mm	d_1 mm	□ mm	Norma	d_1 inch	□ inch	d_2 mm	l_1 mm	l_2 mm	l_3 mm	* per regolare		per filettatura	Codice
12.00	2.800	2.100	DIN	-	-	16.50	29.00	2.00	-	-		M2 / M4	2,812
12.00	3.500	2.700	DIN	-	-	16.50	29.00	2.00	-	-		M3 / M4.5 / M5	3,512
12.00	4.000	3.200	JIS	-	-	16.50	29.00	2.00	-	-		M3	4,012
12.00	4.500	3.400	DIN	-	-	16.50	29.00	2.00	26.00	4364	5.020	M4 / M6	4,512
12.00	4.928	3.861	ANSI	0.194	0.152	16.50	29.00	2.00	26.00	4364	5.020	10-24 & 10-32	4,912
12.00	5.000	4.000	JIS	-	-	16.50	29.00	2.00	26.00	4364	5.020	M4	5,012
12.00	5.500	4.500	JIS	-	-	16.50	29.00	2.00	26.00	4364	5.020	M5	5,512
12.00	5.588	4.191	ANSI	0.220	0.165	16.50	29.00	2.00	26.00	4364	5.020	12-24 & 12-28	15,512
12.00	6.000	4.500	JIS	-	-	16.50	29.00	2.00	26.00	4364	5.020	M6	16,012
12.00	6.000	4.900	DIN	-	-	16.50	29.00	2.00	26.00	4364	6.020	M4.5 / M5 / M6 / M8	6,012
12.00	6.200	5.000	JIS	-	-	16.50	29.00	2.00	26.00	4364	6.020	M7 / M8	6,212
12.00	6.477	4.851	ANSI	0.255	0.191	16.50	29.00	2.00	26.00	4364	6.020	1/4-20 & 1/4-28	6,412
12.00	7.000	5.500	DIN / JIS	-	-	16.50	29.00	2.00	26.00	4364	7.020	M7 / M9 / M10	7,012
12.00	7.938	5.944	ANSI	0.3125	0.234	16.50	29.00	2.00	31.00	4364	7.020	1/16-27	7,912
12.00	8.000	6.200	DIN	-	-	16.50	29.00	2.00	31.00	4364	8.020	M8 / M11	8,012
12.00	8.000	6.500	JIS	-	-	16.50	29.00	2.00	31.00	4364	8.020	M11	18,012
12.00	8.077	6.045	ANSI	0.318	0.238	16.50	29.00	2.00	31.00	4364	7.020	5/16-18 & 5/16-24	28,012
12.00	8.204	6.147	ANSI	0.323	0.242	16.50	29.00	2.00	31.00	4364	7.020	7/16-14 & 7/16-20	8,212
12.00	8.500	6.500	JIS	-	-	16.50	29.00	2.00	31.00	4364	8.020	M12	8,512
12.00	9.000	7.000	DIN	-	-	16.50	29.00	2.00	32.00	4364	9.020	M9 / M12	9,012
12.00	9.322	6.985	ANSI	0.367	0.275	16.50	29.00	2.00	32.00	4364	9.020	1/2-13 & 1/2-20	9,312
12.00	9.677	7.264	ANSI	0.381	0.286	16.50	29.00	2.00	33.00	4364	9.020	3/8-16 & 3/8-24	9,612
12.00	10.000	8.000	DIN	-	-	16.50	29.00	2.00	36.00	4364	10.020	M10	10,012

Informazioni sul prodotto

- per il serraggio di maschi con codolo quadro per mandrini per maschiatura sincrona Guhrosync
- serraggio per tolleranza h6-h9
- chiusura frontale, con ottima tenuta del refrigerante per filettatura con IC
- trascinamento positivo
- crea la regolazione per la vite sul codolo del maschio
- vite di regolazione della lunghezza che consente 3 mm di regolazione

Dotazione

- vite di regolazione „Plan“ articolo nr. 4364 da ordinare a parte
- ordinare viti di regolazione art. nr. 4305 a parte



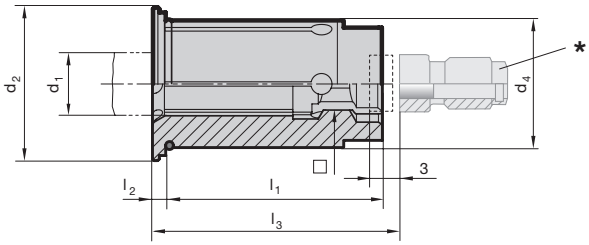
Articolo												4605
d_4 mm	d_1 mm	□ mm	Norma	d_1 inch	□ inch	d_2 mm	l_1 mm	l_2 mm	l_3 mm	* per regolare		per filettatura	**Codice**
20.00	6.000	4.500	JIS	-	-	24.10	34.00	2.00	26.00	4364	6.032	M6	26,020
20.00	6.000	4.900	DIN	-	-	24.10	34.00	2.00	26.00	4364	6.032	M4.5/M5/M6/M8	6,020
20.00	6.200	5.000	JIS	-	-	24.10	34.00	2.00	26.00	4364	6.032	M7 / M8	6,220
20.00	6.477	4.851	ANSI	0.255	0.191	24.10	34.00	2.00	26.00	4364	6.032	1/4-20 & 1/4-28	6,420
20.00	7.000	5.500	DIN / JIS	-	-	24.10	34.00	2.00	26.00	4364	7.032	M7 / M9 / M10	7,020
20.00	7.938	5.944	ANSI	0.3125	0.234	24.10	34.00	2.00	31.00	4364	7.032	1/16-27	7,920
20.00	8.000	6.200	DIN	-	-	24.10	34.00	2.00	31.00	4364	8.032	M8 / M11	8,020
20.00	8.000	6.500	JIS	-	-	24.10	34.00	2.00	31.00	4364	8.032	M11	18,020
20.00	8.077	6.045	ANSI	0.318	0.238	24.10	34.00	2.00	31.00	4364	8.032	5/16-18 & 5/16-24	28,020
20.00	8.204	6.147	ANSI	0.323	0.242	24.10	34.00	2.00	31.00	4364	8.032	7/16-14 & 7/16-20	8,220
20.00	8.500	6.500	JIS	-	-	24.10	34.00	2.00	31.00	4364	8.032	M12	8,520
20.00	9.000	7.000	DIN	-	-	24.10	34.00	2.00	32.00	4364	9.032	M9 / M12	9,020
20.00	9.322	6.985	ANSI	0.367	0.275	24.10	34.00	2.00	32.00	4364	8.032	1/2-13 & 1/2-20	9,320
20.00	9.677	7.264	ANSI	0.381	0.286	24.10	34.00	2.00	33.00	4364	9.032	3/8-16 & 3/8-24	9,620
20.00	10.000	8.000	DIN	-	-	24.10	34.00	2.00	36.00	4364	10.032	M10	10,020
20.00	10.500	8.000	JIS	-	-	24.10	34.00	2.00	36.00	4364	10.032	M14	10,520
20.00	10.897	8.179	ANSI	0.4290	0.3220	24.10	34.00	2.00	35.00	4364	10.032	9/16-12 & 9/16-18	10,820
20.00	11.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	4364	11.032	M14	11,020
20.00	12.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	4364	11.032	M12 / M16	12,020
20.00	12.192	9.144	ANSI	0.480	0.36	24.10	34.00	2.00	36.00	4364	11.032	5/8-11 & 5/8-18	12,120
20.00	12.500	10.000	JIS	-	-	24.10	34.00	2.00	38.00	4364	11.032	M16	12,520
20.00	13.000	10.000	JIS	-	-	24.10	34.00	2.00	38.00	4364	11.032	M17	13,020
20.00	14.000	11.000	DIN / JIS	-	-	24.10	34.00	2.00	39.00	4364	11.032	M18	14,020
20.00	14.288	10.693	ANSI	0.5625	0.421	24.10	34.00	2.00	38.00	4364	11.032	1/4-18	14,220
20.00	14.986	11.227	ANSI	0.590	0.442	24.10	34.00	2.00	39.00	4364	11.032	3/4-10 & 3/4-16	14,920
20.00	15.000	12.000	JIS	-	-	24.10	34.00	2.00	40.00	4364	16.032	M20	15,020
20.00	16.000	12.000	DIN	-	-	24.10	34.00	2.00	41.00	4364	16.032	M20	16,020

Informazioni sul prodotto

- per il serraggio di maschi con codolo quadro per mandrini per maschiatura sincrona Guhrosync
- serraggio per tolleranza h6-h9
- trascinamento positivo per la riduzione delle boccole nei mandrini Guhrosyncro
- con scanalature refrigeranti per il raffreddamento periferico, si migliora il processo e la vita utensile
- i trucioli a spirale sono constantemente lavati via
- crea la regolazione per la vite sul codolo del maschio
- vite di regolazione della lunghezza che consente 3 mm di regolazione

Dotazione

- ordinare viti di regolazione art. nr. 4305 a parte
- vite di regolazione „Plan“ articolo nr. 4364 da ordinare a parte



GÜHROJET

Articolo 4606

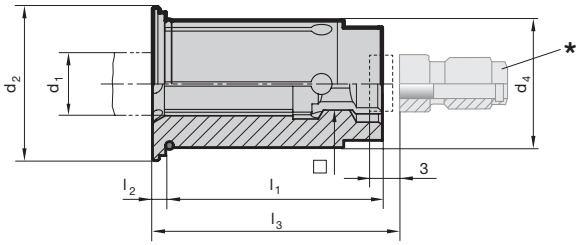
d_4 mm	d_1 mm	□ mm	Norma	d_1 inch	□ inch	d_2 mm	l_1 mm	l_2 mm	l_3 mm	* per regolare	per filettatura	Codice
12.00	2.800	2.100	DIN	-	-	16.50	29.00	2.00	-	-	M2 / M4	2.812
12.00	3.500	2.700	DIN	-	-	16.50	29.00	2.00	-	-	M3 / M4.5 / M5	3.512
12.00	4.000	3.200	JIS	-	-	16.50	29.00	2.00	-	-	M3	4.012
12.00	4.500	3.400	DIN	-	-	16.50	29.00	2.00	-	-	M4 / M6	4.512
12.00	4.928	3.861	ANSI	0.194	0.152	16.50	29.00	2.00	-	-	10-24 & 10-32	4.912
12.00	5.000	4.000	JIS	-	-	16.50	29.00	2.00	-	-	M4	5.012
12.00	5.500	4.500	JIS	-	-	16.50	29.00	2.00	-	-	M5	5.512
12.00	5.588	4.191	ANSI	0.220	0.165	16.50	29.00	2.00	-	-	12-24 & 12-28	15.512
12.00	6.000	4.500	JIS	-	-	16.50	29.00	2.00	26.00	6.020	M6	16.012
12.00	6.000	4.900	DIN	-	-	16.50	29.00	2.00	26.00	6.020	M4.5/M5/M6/M8	6.012
12.00	6.200	5.000	JIS	-	-	16.50	29.00	2.00	26.00	6.020	M7 / M8	6.212
12.00	6.477	4.851	ANSI	0.255	0.191	16.50	29.00	2.00	26.00	6.020	1/4-20 & 1/4-28	6.412
12.00	7.000	5.500	DIN / JIS	-	-	16.50	29.00	2.00	26.00	7.020	M7 / M9 / M10	7.012
12.00	7.938	5.944	ANSI	0.3125	0.234	16.50	29.00	2.00	31.00	7.020	1/16-27	7.912
12.00	8.000	6.200	DIN	-	-	16.50	29.00	2.00	31.00	8.020	M8 / M11	8.012
12.00	8.000	6.500	JIS	-	-	16.50	29.00	2.00	31.00	8.020	M11	18.012
12.00	8.077	6.045	ANSI	0.318	0.238	16.50	29.00	2.00	31.00	7.020	5/16-18 & 5/16-24	28.012
12.00	8.204	6.147	ANSI	0.323	0.242	16.50	29.00	2.00	31.00	8.020	7/16-14 & 7/16-20	8.212
12.00	8.500	6.500	JIS	-	-	16.50	29.00	2.00	31.00	8.020	M12	8.512
12.00	9.000	7.000	DIN	-	-	16.50	29.00	2.00	32.00	9.020	M9 / M12	9.012
12.00	9.322	6.985	ANSI	0.367	0.275	16.50	29.00	2.00	32.00	9.020	1/2-13 & 1/2-20	9.312
12.00	9.677	7.264	ANSI	0.381	0.286	16.50	29.00	2.00	33.00	9.020	3/8-16 & 3/8-24	9.612
12.00	10.000	8.000	DIN	-	-	16.50	29.00	2.00	36.00	10.020	M10	10.012

Informazioni sul prodotto

- per il serraggio di maschi con codolo quadro per mandrini per maschiatura sincrona Guhrosync
- serraggio per tolleranza h6-h9
- trascinamento positivo per la riduzione delle boccole nei mandrini Guhrosyncro
- con scanalature refrigeranti per il raffreddamento periferico, si migliora il processo e la vita utensile
- i trucioli a spirale sono constantemente lavati via
- crea la regolazione per la vite sul codolo del maschio
- vite di regolazione della lunghezza che consente 3 mm di regolazione

Dotazione

- ordinare viti di regolazione art. nr. 4305 a parte
- vite di regolazione „Plan“ articolo nr. 4364 da ordinare a parte



GÜHROJET

Articolo **4606**

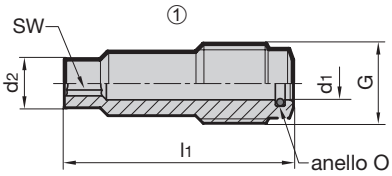
d4 mm	d1 mm	□ mm	Norma	d1 inch	□ inch	d2 mm	l1 mm	l2 mm	l3 mm	* per regolare	per filettatura	Codice
20.00	6.000	4.500	JIS	-	-	24.10	34.00	2.00	26.00	6.032	M6	26,020
20.00	6.000	4.900	DIN	-	-	24.10	34.00	2.00	26.00	6.032	M4.5/M5/M6/M8	6,020
20.00	6.200	5.000	JIS	-	-	24.10	34.00	2.00	26.00	6.032	M7 / M8	6,220
20.00	6.477	4.851	ANSI	0.255	0.191	24.10	34.00	2.00	26.00	6.032	1/4-20 & 1/4-28	6,420
20.00	7.000	5.500	DIN / JIS	-	-	24.10	34.00	2.00	26.00	7.032	M7 / M9 / M10	7,020
20.00	7.938	5.944	ANSI	0.3125	0.234	24.10	34.00	2.00	31.00	7.032	1/16-27	7,920
20.00	8.000	6.200	DIN	-	-	24.10	34.00	2.00	31.00	8.032	M8 / M11	8,020
20.00	8.000	6.500	JIS	-	-	24.10	34.00	2.00	31.00	8.032	M11	18,020
20.00	8.077	6.045	ANSI	0.318	0.238	24.10	34.00	2.00	31.00	8.032	5/16-18 & 5/16-24	28,020
20.00	8.204	6.147	ANSI	0.323	0.242	24.10	34.00	2.00	31.00	8.032	7/16-14 & 7/16-20	8,220
20.00	8.500	6.500	JIS	-	-	24.10	34.00	2.00	31.00	8.032	M12	8,520
20.00	9.000	7.000	DIN	-	-	24.10	34.00	2.00	32.00	9.032	M9 / M12	9,020
20.00	9.322	6.985	ANSI	0.367	0.275	24.10	34.00	2.00	32.00	9.032	1/2-13 & 1/2-20	9,320
20.00	9.677	7.264	ANSI	0.381	0.286	24.10	34.00	2.00	33.00	9.032	3/8-16 & 3/8-24	9,620
20.00	10.000	8.000	DIN	-	-	24.10	34.00	2.00	36.00	10.032	M10	10,020
20.00	10.500	8.000	JIS	-	-	24.10	34.00	2.00	36.00	10.032	M14	10,520
20.00	10.897	8.179	ANSI	0.4290	0.3220	24.10	34.00	2.00	35.00	10.032	9/16-12 & 9/16-18	10,820
20.00	11.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	11.032	M14	11,020
20.00	12.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	11.032	M12 / M16	12,020
20.00	12.192	9.144	ANSI	0.480	0.36	24.10	34.00	2.00	36.00	11.032	5/8-11 & 5/8-18	12,120
20.00	12.500	10.000	JIS	-	-	24.10	34.00	2.00	38.00	11.032	M16	12,520
20.00	13.000	10.000	JIS	-	-	24.10	34.00	2.00	38.00	11.032	M17	13,020
20.00	14.000	11.000	DIN / JIS	-	-	24.10	34.00	2.00	39.00	14.032	M18	14,020
20.00	14.288	10.693	ANSI	0.5625	0.421	24.10	34.00	2.00	38.00	11.032	1/4-18	14,220
20.00	14.986	11.227	ANSI	0.590	0.442	24.10	34.00	2.00	39.00	11.032	3/4-10 & 3/4-16	14,920
20.00	15.000	12.000	JIS	-	-	24.10	34.00	2.00	40.00	16.032	M20	15,020
20.00	16.000	12.000	DIN	-	-	24.10	34.00	2.00	41.00	16.032	M20	16,020

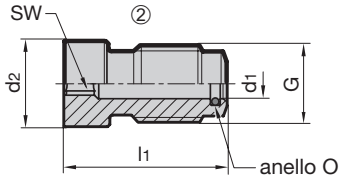
Informazioni sul prodotto

- per mandrini idraulici syncro art. nr.4601, 4576, 4577 e 4525
- per mandrini syncro art. nr. 4326 e 4327
- per lubrificazione interna convenzionale
- con arresto piatto per estremità del codolo normali
- crea la regolazione per la vite sul codolo del maschio
- vite di regolazione della lunghezza che consente 3 mm di regolazione

Dotazione

- con anello O per tenuta stagna



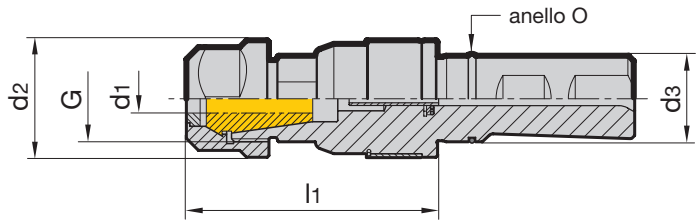


									Articolo	4364
per Grandezza nom.	per codolo mandrino Ø x □	G	d_1 mm	d_2 mm	l_1 mm	SW	anello O	illus-trazio-ne		Codice
ER20 / Hydro12	< Ø6	M8x1	3.6	3.3	28.0	2.0	3.5x1	1		5,020
ER20 / Hydro12	6x4.9	M8x1	3.6	4.8	26.0	2.5	3.5x1	1		6,020
ER20 / Hydro12	7x5.5	M8x1	3.6	5.4	25.8	2.5	3.5x1	1		7,020
ER20 / Hydro12	8x6.2	M8x1	3.6	6.1	20.9	2.5	3.5x1	1		8,020
ER20 / Hydro12	9x7	M8x1	3.6	6.9	20.3	2.5	3.5x1	1		9,020
ER20 / Hydro12	10x8	M8x1	3.6	7.8	15.8	2.5	3.5x1	2		10,020
ER20 / Hydro12	11x9	M8x1	3.6	8.8	14.8	2.5	3.5x1	2		11,020
ER32 / Hydro20	< Ø6	M10x1	4.1	3.3	33.0	2.0	4x1	1		5,032
ER32 / Hydro20	6x4.9	M10x1	4.1	4.8	34.0	3.0	4x1	1		6,032
ER32 / Hydro20	7x5.5	M10x1	4.1	5.4	33.8	3.0	4x1	1		7,032
ER32 / Hydro20	8x6.2	M10x1	4.1	6.1	28.8	3.0	4x1	1		8,032
ER32 / Hydro20	9x7	M10x1	4.1	6.9	28.3	3.0	4x1	1		9,032
ER32 / Hydro20	10x8	M10x1	4.1	7.8	23.8	3.0	4x1	1		10,032
ER32 / Hydro20	11x9 & 12x9	M10x1	4.1	8.8	22.9	3.0	4x1	1		11,032
ER32 / Hydro20	14x11	M10x1	4.1	10.8	20.7	3.0	4x1	2		14,032
ER32 / Hydro20	16x12	M10x1	4.1	11.8	19.7	3.0	4x1	2		16,032
ER32 / Hydro20	18x14.5 & 20x16	M10x1	4.1	14.3	18.0	3.0	4x1	2		18,032

Informazioni sul prodotto
- compensa errori di sincronizzazione
- minima lunghezza di compensazione in spinta e in tirata bilancia piccole differenzae tra i mandrini e i maschi, i quali causano alti forze d'attrito sui fianchi del filetto
- la vite di regolazione della lunghezza consente 2-3 mm di registrazione
- adatti per refrigerazione interna
- pressione refrigerante max. 50 bar

Dotazione
- incl. regolazione IC/ER dadi di serraggio art. 4306
- completi di chiave a tubo per viti di regolazione

- viti di regolazione „plan" art. 4364, pinza di serraggio art. 4308, disco di tenutan art. 4335 e chiave di serraggio art. 4913, da ordinare separatamente



Articolo **4326**

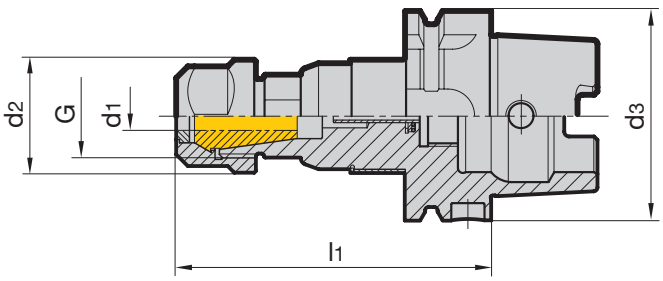
d_3 ~DIN 1835 mm	Grandezza nom.	per filettatura	d_1 mm	d_2 mm	l_1 mm	Traz./ press. mm	Coppia* Nm	G	kg	Codice
25	ER20	M3.5-M14	4-11.0	34	73	0.15	40	M25x1.5	0.50	20,025
25	ER32	M3.5-M28	4-20.0	50	88	0.15	170	M40x1.5	1.30	32,025

MANDRINI DI MASCHIATURA SINCRONA HSK-A CON RAFFR. INTERNO

Informazioni sul prodotto
- compensano errori di sincronizzazione
- garantiscono con maschi convenzionali la migliore qualità di filettatura con tempi di impiego ottimali
- compensatore minimo di lunghezze in direzione compressione/trazione assiale tra mandrino sincrono e maschio riduce eccessive forze di attrito sui fianchi
- riducono al minimo eventuali aumenti di forza assiale durante il ciclo di filettatura
- la vite di regolazione della lunghezza consente 2-3 mm di registrazione
- adatti per refrigerazione interna
- pressione refrigerante max. 50 bar
- HSK-A a ISO 12164-1/DIN 69893-1

Dotazione
- incl. dadi di serraggio IC/ER a tenuta stagna art. 4306 (*vedi coppia di serraggio)
- completi di chiave a tubo per viti di regolazione

- viti di regolazione „plan" art. 4364, pinza di serraggio art. 4308, disco di tenuta 4335 e chiave di serraggio art. 4913, da ordinare separatamente
- per il raffreddamento convenzionale unità adduzione refrigerante art. 4949, da ordinare separatamente



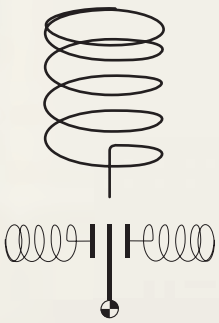
Articolo **4327**

HSK-A d_3 mm	Grandezza nom.	per filettatura	d_1 mm	d_2 mm	l_1 mm	Traz./ press. mm	Coppia* Nm	G	kg	Codice
63	ER20	M3.5-M14	4-11.0	34	95.5	0.15	40	M25x1.5	1.00	20,063
63	ER20	M3.5-M14	4-11.0	34	160.0	0.15	40	M25x1.5	1.50	20,163
63	ER32	M3.5-M28	4-20.0	50	109.0	0.15	170	M40x1.5	1.70	32,063
100	ER20	M3.5-M14	4-11.0	34	102.0	0.15	40	M25x1.5	2.50	20,100
100	ER32	M3.5-M28	4-20.0	50	115.5	0.15	170	M40x1.5	2.70	32,100

Mandrini di maschiatura Guhrosync + maschi VA

il modo più facile per la filettatura ottimale

i mandrini di maschiatura Guhrosync forniscono un'ottima evacuazione del truciolo e una più lunga durata dell'utensile, grazie al serraggio perfetto dell'utensile in combinazione ai maschi VA.

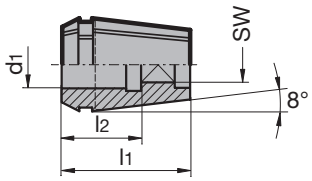


il simbolo a spirale sul Gührosync mostra l'effetto della forza assiale e radiale

GÜHROSync

Informazioni sul prodotto

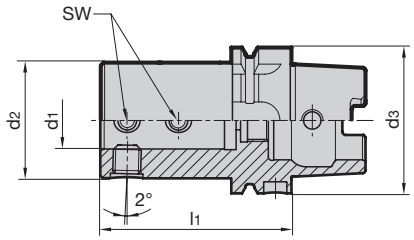
- per mandrini sincroni di maschiatura ed attacchi con pinze di serraggio
- inferiore a 4 mm di diametro può essere bloccato con l'articolo 4307-VK pinze senza trascinamento
- per il serraggio completo vedere i dadi art. nr. 4306



					Articolo	4308
Grand. nominale	per Ø attacco d_1 mm	Vierkant SW	l_1 mm	l_2 mm		Codice
ER16	4.5	3.4	27.5	18		4,516
ER16	5.5	4.3	27.5	18		5,516
ER16	6.0	4.9	27.5	18		6,016
ER16	7.0	5.5	27.5	18		7,016
ER16	8.0	6.2	27.5	22		8,016
ER20	4.0	3.0	31.5	15		4,020
ER20	4.5	3.4	31.5	18		4,520
ER20	5.5	4.3	31.5	18		5,520
ER20	6.0	4.9	31.5	18		6,020
ER20	7.0	5.5	31.5	18		7,020
ER20	8.0	6.2	31.5	22		8,020
ER20	9.0	7.0	31.5	22		9,020
ER20	10.0	8.0	31.5	25		10,020
ER20	11.0	9.0	31.5	25		11,020
ER25	4.5	3.4	34.0	18		4,525
ER25	5.5	4.3	34.0	18		5,525
ER25	6.0	4.9	34.0	18		6,025
ER25	7.0	5.5	34.0	18		7,025
ER25	8.0	6.2	34.0	22		8,025
ER25	9.0	7.0	34.0	22		9,025
ER25	10.0	8.0	34.0	25		10,025
ER25	11.0	9.0	34.0	25		11,025
ER25	12.0	9.0	34.0	25		12,025
ER32	4.0	3.0	40.0	15		4,032
ER32	4.5	3.4	40.0	18		4,532
ER32	5.5	4.3	40.0	18		5,532
ER32	6.0	4.9	40.0	18		6,032
ER32	7.0	5.5	40.0	18		7,032
ER32	8.0	6.2	40.0	22		8,032
ER32	9.0	7.0	40.0	22		9,032
ER32	10.0	8.0	40.0	25		10,032
ER32	11.0	9.0	40.0	25		11,032
ER32	12.0	9.0	40.0	25		12,032
ER32	14.0	11.0	40.0	25		14,032
ER32	16.0	12.0	40.0	25		16,032
ER32	18.0	14.5	40.0	25		18,032
ER32	20.0	16.0	40.0	28		20,032
ER40	7.0	5.5	46.0	18		7,040
ER40	8.0	6.2	46.0	22		8,040
ER40	9.0	7.0	46.0	22		9,040
ER40	10.0	8.0	46.0	25		10,040
ER40	11.0	9.0	46.0	25		11,040
ER40	12.0	9.0	46.0	25		12,040
ER40	14.0	11.0	46.0	25		14,040
ER40	16.0	12.0	46.0	25		16,040
ER40	18.0	14.5	46.0	25		18,040
ER40	20.0	16.0	46.0	28		20,040
ER40	22.0	18.0	46.0	28		22,040

Informazioni sul prodotto
- per mandrini a cambio rapido e mandrini sincroni di maschiatura con codolo cilindrico (tranne per articolo nr 4342)
- HSK-A a ISO 12164-1/DIN 69893-1

Dotazione
- completi di viti di serraggio art. 4903, Codice 12,001
- Unità di adduzione tradizionale art. 4949, da ordinare separatamente

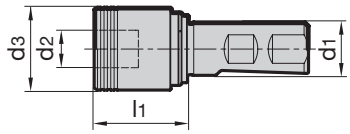


	Articolo	4343

HSK-A d_3	d_1 mm	d_2 mm	l_1 mm	SW	kg	Codice
50	25	50	80	6	0.89	25,050
63	25	50	82	6	1.26	25,063
80	25	50	87	6	3.10	25,080
100	25	50	89	6	4.08	25,100

MANDRINI DI MASCH. CAMBIO RAPIDO NO REFRIG. INTERNO

Informazioni sul prodotto
- i mandrini a cambio rapido di filettatura sono equipaggiati con bussole a compensazione assiale, guidate su sfere, che pareggiano la differenza tra avanzamento del mandrino e passo del filetto.

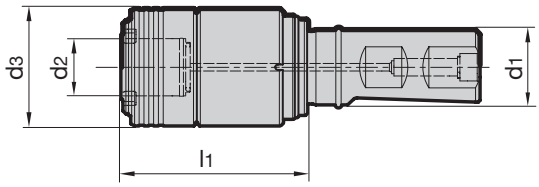


	Articolo	4340

per filettatura	d_1 mm	d_2 mm	d_3 mm	l_1 mm	Traz./press. mm	kg	Codice
M3-M12	25	19	36	39	± 7.5	0.4	19,025
M8-M20	25	31	53	63	±10.0	0.9	31,025

Informazioni sul prodotto

- i mandrini a cambio rapido di filettatura sono equipaggiati con bussole a compensazione assiale, guidate su sfere, che pareggiano la differenza tra avanzamento del mandrino e passo del filetto.
- il lubro-refrigerante è guidato, attraverso mandrino ed adattatore nel codolo del maschio. Gli elementi funzionali sono a tenuta stagna.
- pressione refrigerante max. 50 bar



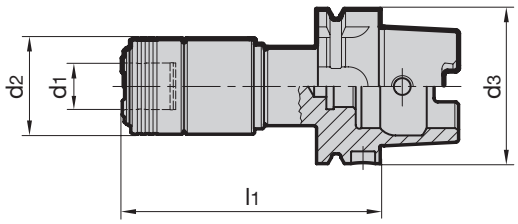
	Articolo	4342

per filettatura	d_1 mm	d_2 mm	d_3 mm	l_1 mm	Traz./press. mm	kg	Codice
M3-M12	25	19	39	62	7.5/7.5	0.6	19,025
M8-M20	25	31	60	88	10/10	1.0	31,025

MANDRINI A CAMBIO RAPIDO HSK-A CON RAFFR. INTERNO

Informazioni sul prodotto

- i mandrini a cambio rapido di filettatura sono equipaggiati con bussole a compensazione assiale, guidate su sfere, che pareggiano la differenza tra avanzamento del mandrino e passo del filetto.
- garantiscono con maschi convenzionali la migliore qualità di filettatura con tempi di impiego ottimali
- pressione refrigerante max. 50 bar.
- HSK-A a ISO 12164-1/DIN 69893-1

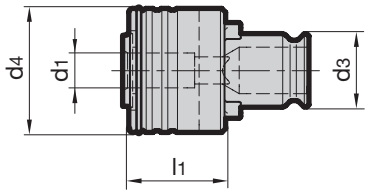


	Articolo	4328

HSK-A d_3 mm	per filettatura	d_1 mm	d_2 mm	l_1 mm	Traz./press. ± mm	kg	Codice
63	M3-M12	19	39	105	7.5	1.13	19,063
63	M8-M20	31	60	140	10.0	2.28	31,063

Informazioni sul prodotto

- con frizione di sicurezza
- per maschi in HSS
- per maschi in metallo duro è necessario una gola di serraggio sul codolo per permettere una tenuta dell'utensile maggiore
- adatto per alimentazione interna del refrigerante max. 50 bar



					Articolo	4206
per filettatura	Ø attacco x Vk d_1 mm	d_3 mm	d_4 mm	l_1 mm		Codice
M3-M12	2.2	19	32	25		19,022
M3-M12	2.5 x 2.1	19	32	25		19,025
M3-M12	2.8 x 2.1	19	32	25		19,028
M3-M12	3.5 x 2.7	19	32	25		19,035
M3-M12	4 x 3	19	32	25		19,040
M3-M12	4.5 x 3.4	19	32	25		19,045
M3-M12	5.5 x 4.5	19	32	25		19,055
M3-M12	6 x 4.9	19	32	25		19,060
M3-M12	7 x5.5	19	32	25		19,070
M3-M12	8 x 6.2	19	32	25		19,080
M3-M12	9 x 7	19	32	25		19,090
M3-M12	10 x 8	19	32	25		19,100
M8-M20	6 x 4.9	31	50	34		31,060
M8-M20	7 x 5.5	31	50	34		31,070
M8-M20	8 x 6.2	31	50	34		31,080
M8-M20	9 x 7	31	50	34		31,090
M8-M20	10 x 8	31	50	34		31,100
M8-M20	11 x 9	31	50	34		31,110
M8-M20	12 x 9	31	50	34		31,120
M8-M20	14 x 11	31	50	34		31,140
M8-M20	16 x 12	31	50	34		31,160

SISTEMA GÜHRING MQL

SOLO LA QUANTITÀ DI OLIO NECESSARIA

Come precursori nella tecnogia MMS vi presentiamo la nostra affermata esperienza nel campo della nebulizzazione. I nostri mandrini di serraggio MQL, a norma di fabbrica riconosciuta in tutto il mondo nell'industria automobilistica in svariati modi, sono soluzioni pronte all'uso per sistemi ad 1 o 2 canali.

Grazie al raffreddamento utilizzato sono possibili superiori velocità di taglio e una più lunga durata dell'utensile, così come è possibile ottenere una qualità delle superfici ottimale attraverse un lubrificante puro. Utensili e trucioli rimangono asciutti! Risparmiate con la sgrassatura, con l'eliminazione dei trucioli e l'emulsione.

1 MQL BY GÜHRING

I nostri prodotti per sistemi MQL ad 1 canale sono evidenzati con questo simbolo sono.

La caratteristica visiva del Sistema ad 1 canale è la vite di regolazione MQL color oro.

2 MQL BY GÜHRING

I nostri prodotti per i sistemi MQL a 2 canali ono evidenziati con questo simbolo specifico.

La caratteristica visiva del Sistema a 2 canali è la vite di regolazione MQL color nero.

Mandrini per maschiatura sincrona

GÜHRING

Mandrini di calettamento per nebulizzazione MMS HSK-A
cambio ut. automatico

4741 1 MQL BY GÜHRING
4614 2 MQL BY GÜHRING
man. tool change
4735 1 MQL BY GÜHRING
4613 2 MQL BY GÜHRING

Mandrini idraulici HSK-A per MMS
cambio ut. automatico

4210 1 MQL BY GÜHRING
4612 2 MQL BY GÜHRING
man. tool change
4209 1 MQL BY GÜHRING
4611 2 MQL BY GÜHRING

4508 1 MQL BY GÜHRING
MQL coolant delivery set for single channel HSK-A

Mandrino Syncro HSK-A MMS per sistema ad 1 canale con cambio utensili automatico
4602 1 MQL BY GÜHRING

4511 2 MQL BY GÜHRING
Set per adduzione refrigerante per mandrino HSK-A 2 canali MQL

Mandrino Syncro HSK-A MMS per sistema a 2 canali con cambio utensili automatico
4603 2 MQL BY GÜHRING

4513 1 MQL BY GÜHRING
2 MQL BY GÜHRING
Set per adduzione refrigerante per mandrino HSK-A MQL

Mandrino Syncro HSK-A MQL con cambio utensili manuale
1 MQL BY GÜHRING
4604 2 MQL BY GÜHRING

4524 1 MQL BY GÜHRING 2 MQL BY GÜHRING
Mandrino idraulico Syncro Ø 12 / Ø 20 con refrigerante interno MQL Ø 20

4305
vite di regolazione MQL con cono interno per mandrini Syncro per nebulizzazione MQL

4605
Bussola di riduzione a tenuta stagna

4606
GUHROJET bussola di riduzione

Utensile di filettatura con gambo MQL:
gambo con quadro

Set per adduzione refrigerante per mandrino MQL per cambio utensili manuale

Set per adduzione refrigerante per cambio utensili automatico

Set per adduzione refrigerante per mandrino MQL per cambio utensili automatico

4298

Mandrini HSK-A per cambio utensili manuale per MQL a 1 canale o a 2 canali

4330

Mandrini HSK-A per cambio utensili automatico per MQL a 1 canale

4341

Mandrini HSK-A per cambio utensili automatico per MQL a 2 canali

4305

Vite di regolazione per MQL con cono interno per mandrini sincroni

4308

Pinza di serraggio

4335

Disco di tenuta per dadi di serraggio

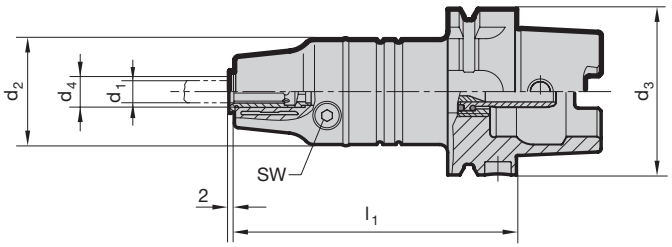
Maschio

Informazioni sul prodotto

- per sistema MQL ad 1 canale
- Pressione refrigerante MQL fino a max 16bar
- errori di sincronizzazione compensati
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima correzione di lunghezza in tensione, e la direzione di compressione,
- bilanciano le piccole differenze di passo tra mandrino synchro e maschio
- riduzione al minimo dell'aumento delle forze assiali durante la fase di taglio
- bloccaggio idraulico ottimale con le bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3mm di regolazione
- Guhring MQL identificabile con l'anello di colore verde

Dotazione

- incl. chiave di serraggio esagonale Articolo 4912
- incl. Set per adduzione refrigerante per mandrino HSK-A 1 canale MQL
- incl. chiave di regolazione per vite di registrazione MQL
- vite di regolazione Articolo 4305 da ordinare a parte
- bussola di riduzione Articolo 4605 o 4606 da ordinare a parte



1 MQL BY GÜHRING

GÜHROSync

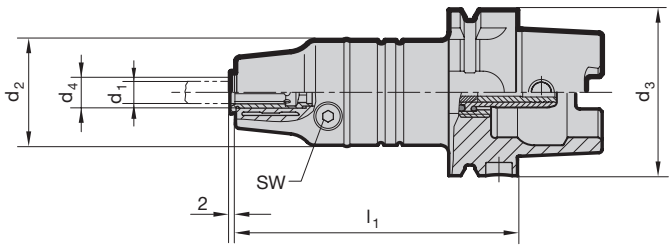
									Articolo	4602
HSK-A d_3	d_4 mm	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./ press. ± mm	SW	kg		Codice
63	12.00	2.8-10	M3-M12	40	106.5	0.3	4	1.5		12.063
63	20.00	6-16	M8-M20	40	120.5	0.3	5	1.6		20.063
100	12.00	2.8-10	M3-M12	40	113.0	0.3	4	2.8		12.100
100	20.00	6-16	M8-M20	40	127.0	0.3	5	2.9		20.100

Informazioni sul prodotto

- per sistema MQL a 2 canali
- Pressione refrig. MQL fino a max 16bar
- errori di sincronizzazione compensati
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima correzione di lunghezza in tensione e la direzione di compressione bilanciano le piccole differenze di passo tra mandrino synchro e maschio
- riduzione al minimo dell'aumento delle forze assiali durante la fase di taglio
- bloccaggio idraulico ottimale con le bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3mm di regolazione
- Guhring MQL identificabile con l'anello di colore verde

Dotazione

- incl. chiave di serraggio esagonale Articolo 4912
- incl. Set per adduzione
- refrigerante per mandrino HSK-A 2 canali MQL Articolo 4511
- incl. chiave di regolazione per vite di registrazione MQL
- vite di regolazione Articolo 4305 da ordinare a parte
- bussola di riduzione Articolo 4605 o 4606 da ordinare a parte



2 MQL BY GÜHRING

GÜHROSync

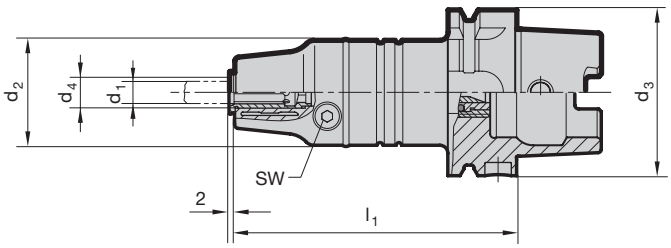
									Articolo	4603
HSK-A d_3	d_4 mm	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./ press. ± mm	SW	kg		Codice
63	12.00	2.8-10	M3-M12	40	106.5	0.3	4	1.5		12,063
63	20.00	6-16	M8-M20	40	120.5	0.3	5	1.6		20,063
100	12.00	2.8-10	M3-M12	40	113.0	0.3	4	2.8		12,100
100	20.00	6-16	M8-M20	40	127.0	0.3	5	2.9		20,100

Informazioni sul prodotto

- per sistema MQL a 1 o a 2 canali
- Pressione refrig. MQL fino a max 16bar
- errori di sincronizzazione compensati
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima correzione di lunghezza in tensione e la direzione di compressione, bilanciano le piccole differenze di passo tra mandrino synchro e maschio
- riduzione al min. dell'aumento delle forze
- assiali durante la fase di taglio
- bloccaggio idraulico ottimale con le bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3mm di regolazione
- Guhring MQL identificabile con l'anello di colore verde

Dotazione

- incl. chiave di serraggio esagonale Articolo 4912
- incl. set di adduzione refrigerante per cambio utensili manuale MQL Articolo 4513
- incl. chiave di regolazione per vite di registrazione MQL
- vite di regolazione Articolo 4305 da ordinare a parte
- bussola di riduzione Articolo 4605 o 4606 da ordinare a parte



1 MQL BY GÜHRING

2 MQL BY GÜHRING

GÜHROSync

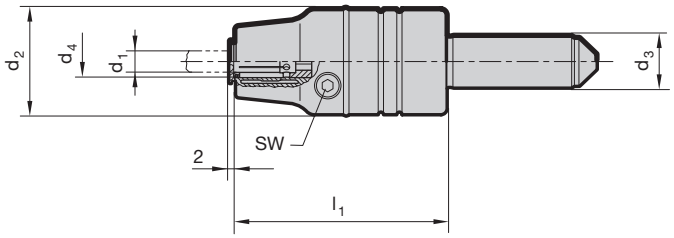
									Articolo	4604
HSK-A d_3	d_4 mm	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./ press. ± mm	SW	kg		Codice
63	12.00	2.8-10	M3-M12	40	106.5	0.3	4	1.5		12,063
63	20.00	6-16	M8-M20	40	120.5	0.3	5	1.6		20,063
100	12.00	2.8-10	M3-M12	40	113.0	0.3	4	2.8		12,100
100	20.00	6-16	M8-M20	40	127.0	0.3	5	2.9		20,100

Informazioni sul prodotto

- per sistema MQL a 1 o a 2 canali
- Pressione refrig. MQL fino a max 16bar
- errori di sincronizzazione compensati
- garanzia di filettatura di alta qualità e vita utensile ottimale
- la minima correzione di lunghezza in tensione, e la direzione di compressione, bilanciano le piccole differenze di passo tra mandrino synchro e maschio
- riduzione al minimo dell'aumento delle forze assiali durante la fase di taglio
- bloccaggio idraulico ottimale con le bussole di riduzione con guida attiva
- vite di regolazione della lunghezza che consente 3mm di regolazione
- supportdo del gambo a DIN 1835-A per l'inserimento in mandrini di precisione (idraulico, a calettamento o mandrini a forte serraggio)
- Guhring MQL identificabile con l'anello di colore verde

Dotazione

- incl. chiave di serraggio esagonale Articolo 4912
- incl. chiave di regolazione per vite di registrazione MQL
- vite di regolazione Articolo 4305 da ordinare a parte
- boccole di riduzione
- Articolo 4605 o 4606 da ordinare a parte



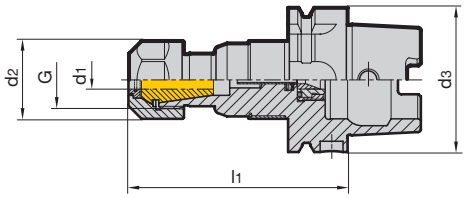
1 MQL BY GÜHRING
2 MQL BY GÜHRING
GÜHROSync

Articolo	4524

d_3 h6 mm	d_4 mm	per codolo-Ø d_1	per filettatura	d_2 mm	l_1 mm	Traz./ press. ± mm	SW	kg	Codice
20	12.00	2.8-10	M3-M12	40	80	0.3	4	0.7	12,020
20	20.00	6-16	M8-M20	40	94	0.3	5	0.8	20,020

Informazioni sul prodotto
- per nebulizzazione 1- e 2-Canali
- compensa errori di sincronizzazione
- la minima correzione della lunghezza, in tensione e compressione, equilibra le piccole differenze di passo tra mandrino sincro e maschio, che possono causare elevate forze di attrito sui fianchi del filetto e aumentare la qualità di filettatura e la durata dell'utensile
- la vite di regolazione della lunghezza consente 2-3 mm di registrazione
- pressione MQL max.10 bar
- unità di adduzione refrigerante già integr.
- Gühring MQL riconoscibile per l'anello verde
- HSK-A in base alla norma ISO 12164-1 / DIN 69893-1

Dotazione
- compl. dell'unità di adduzione refrig. per neb. per cambio utensili man.
- incl. dadi di serraggio IC/ER a tenuta stagna art. 4306 (*vedi coppia di serraggio)
- incl. regolazione per vite di regolazione per nebulizzazione da ordinare a parte:
- vite di regolazione per MQL art. 4305
- disco di tenuta art. 4335
- pinza di serraggio art. 4308
- Chiave di serraggio art. 4913



1 MQL BY GÜHRING 2 MQL BY GÜHRING

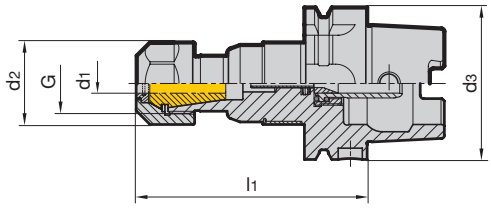
Articolo	4298

HSK-A d_3	grandezza nom.	per filettatura	G	d_1 mm	d_2 mm	l_1 mm	traz./ press. ± mm	torque* Nm	kg	Codice
63	ER20	M3.5-M14	M25x1.5	4.5-11	34	95.5	0.15	40	1.00	20,063
63	ER32	M3.5-M28	M40x1.5	4.5-20	50	109.0	0.15	170	1.50	32,063

MQL 1 CANALE - MANDRINI PER MASCHIATURA SYNCRO HSK-A PER CAMBIO UT. AUTOMATICO

Informazioni sul prodotto
- per sistemi ad 1 canale
- compensa errori di sincronizzazione
- la minima correzione della lunghezza, in tensione e compressione, equilibra le piccole differenze di passo tra mandrino sincro e maschio, che possono causare elevate forze di attrito sui fianchi del filetto e aumentare la qualità di filettatura e la durata dell'utensile
- la vite di regolazione della lunghezza consente 2-3 mm di registrazione
- pressione MQL max.10 bar
- unità di adduzione refrigerante già integrata

Dotazione
- compl. dell'unità di adduzione refrig. per
- neb. per cambio utensili man.
- incl. dadi di serraggio IC/ER a tenuta stagna art. 4306 (*vedi coppia di serraggio)
- incl. regolazione per vite di regolazione per nebulizzazione da ordinare a parte:
- vite di regolazione per MQL art. 4305
- disco di tenuta art. 4335
- pinza di serraggio art. 4308
- Chiave di serraggio art. 4913



1 MQL BY GÜHRING

Articolo	4330

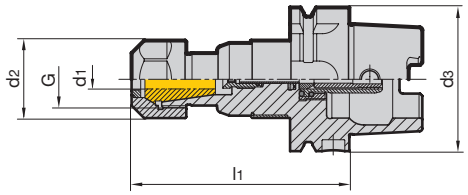
HSK-A d_3	grandezza nom.	per filettatura	G	d_1 mm	d_2 mm	l_1 mm	traz./ press. ± mm	torque* Nm	kg	Codice
63	ER20	M3.5-M14	M25x1.5	4.5-11	34	95.5	0.15	40	1.00	20,063
63	ER32	M3.5-M28	M40x1.5	4.5-20	50	109.0	0.15	170	1.50	32,063
100	ER20	M3.5-M14	M25x1.5	4.5-11	34	102.0	0.15	40	2.40	20,100
100	ER32	M3.5-M28	M40x1.5	4.5-20	50	115.5	0.15	170	3.00	32,100

Informazioni sul prodotto

- per sistemi ad 2 canali
- compensa errori di sincronizzazione
- la minima correzione della lunghezza, in tensione e compressione, equilibra le piccole differenze di passo tra mandrino sincro e maschio, che possono causare elevate forze di attrito sui fianchi del filetto e aumentare la qualità di filettatura e la durata dell'utensile
- la vite di regolazione della lunghezza consente 2-3 mm di registrazione
- pressione MQL max.10 bar
- unità di adduzione refrigerante già integr.
- Gühring MQL riconoscibile per l'anello verde

Dotazione

- compl. dell'unità di adduzione refrig. per neb. per cambio utensili man.
- incl. dadi di serraggio IC/ER a tenuta stagna art. 4306 (*vedi coppia di serraggio)
- incl. regolazione per vite di regolazione per nebulizzazione da ordinare a parte:
- vite di regolazione per MQL art. 4305
- disco di tenuta art. 4335
- pinza di serraggio art. 4308
- Chiave di serraggio art. 4913

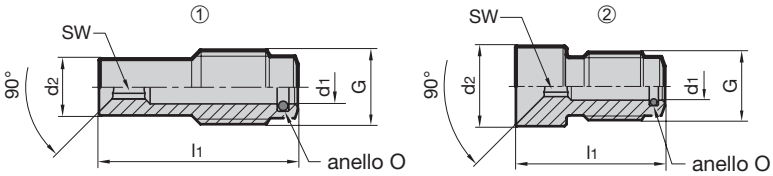


2 MQL BY GÜHRING

										Articolo	4341
HSK-A d_3	grandezza nom.	per filettatura	G	d_1 mm	d_2 mm	l_1 mm	traz./ press. ± mm	torque* Nm	kg		**Codice**
63	ER20	M3.5-M14	M25x1.5	4.5-11	34	95.5	0.15	40	1.00		20,063
63	ER32	M3.5-M28	M40x1.5	4.5-20	50	109.0	0.15	170	1.50		32,063
100	ER20	M3.5-M14	M25x1.5	4.5-11	34	102.0	0.15	40	2.40		20,100
100	ER32	M3.5-M28	M40x1.5	4.5-20	50	115.5	0.15	170	3.00		32,100

Informazioni sul prodotto
- viti di regolazione per nebulizzazione con cono interno
- per sistemi ad 1 o 2 canali
- per utensili filettati MQL con cono esterno
- per mandrini sincroni MQL art. 4298, 4330 e 4341

Dotazione
- con O-ring per una tenuta sicura

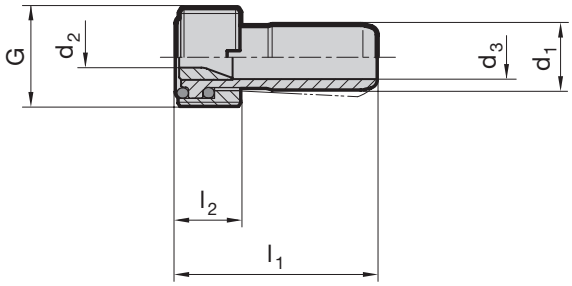


1 MQL BY GÜHRING
2 MQL BY GÜHRING

									Articolo	4305
per grandezza nom.	per codolo filettato-Ø x □	G	d_1 mm	d_2 mm	l_1 mm	SW	anello O	disegno		Codice
ER20 / Hydro12	6x4.9	M8x1	3.6	4.8	26.5	2.5	3.5x1	1		6,020
ER20 / Hydro12	7x5.5	M8x1	3.6	5.4	26.5	2.5	3.5x1	1		7,020
ER20 / Hydro12	8x6.2	M8x1	3.6	6.1	21.5	2.5	3.5x1	1		8,020
ER20 / Hydro12	9x7	M8x1	3.6	6.9	21.0	2.5	3.5x1	1		9,020
ER20 / Hydro12	10x8	M8x1	3.6	7.8	17.0	2.5	3.5x1	2		10,020
ER20 / Hydro12	11x9	M8x1	3.6	8.8	16.0	2.5	3.5x1	2		11,020
ER32 / Hydro20	6x4.9	M10x1	4.1	4.8	34.5	3.0	4x1	1		6,032
ER32 / Hydro20	7x5.5	M10x1	4.1	5.4	34.5	3.0	4x1	1		7,032
ER32 / Hydro20	8x6.2	M10x1	4.1	6.1	29.5	3.0	4x1	1		8,032
ER32 / Hydro20	9x7	M10x1	4.1	6.9	29.0	3.0	4x1	1		9,032
ER32 / Hydro20	10x8	M10x1	4.1	7.8	25.0	3.0	4x1	1		10,032
ER32 / Hydro20	11x9 & 12x9	M10x1	4.1	8.8	24.0	3.0	4x1	1		11,032
ER32 / Hydro20	14x11	M10x1	4.1	10.8	22.5	3.0	4x1	2		14,032
ER32 / Hydro20	16x12	M10x1	4.1	11.8	22.0	3.0	4x1	2		16,032
ER32 / Hydro20	18x14.5 & 20x16	M10x1	4.1	14.3	20.5	3.0	4x1	2		18,032

Informazioni sul prodotto

- a MQL standard
- versione simile a DIN 69895
- per sistemi MQL ad 1 canale
- per mandrini con bloccaggio utensile automatico
- dimensioni d2 e l1



1 MQL BY GÜHRING

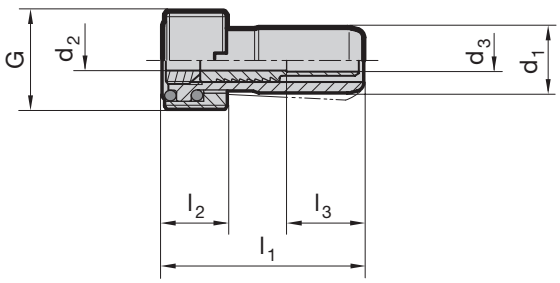
Articolo	4508

per HSK-A	d_1 mm	d_2 mm	d_3 mm	l_1 mm	l_2 mm	G	Codice
32	6.00	3.00	4.00	26.00	5.50	M10x1	10,032
40	8.00	3.80	5.40	29.50	7.50	M12x1	12,040
50	10.00	3.80	6.40	33.00	9.50	M16x1	16,050
63	12.00	3.80	8.00	36.50	11.50	M18x1	18,063
80	14.00	3.80	10.00	40.00	13.50	M20x1.5	20,080
100	16.00	3.80	12.00	44.00	15.50	M24x1.5	24,100

SET PER ADDUZIONE REFRIGERANTE PER MANDRINO HSK-A 2 CANALI MMS

Informazioni sul prodotto

- a MMS standard
- versione simile a DIN 69895
- per sistemi MMS a 2 canali
- per mandrini con bloccaggio utensile automatico
- Versione „Crash Safe“ simile a disegno del collo DIN 69090-2
- dimensioni d2 e l1 in base alla condizione installata



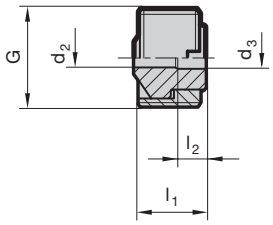
2 MQL BY GÜHRING

Articolo	4511

per HSK-A	d_1 mm	d_2 mm	d_3 mm	l_1 mm	l_2 mm	l_3 mm	G	Codice
32	6.00	3.00	4.00	26.00	5.50	-	M10x1	10,032
40	8.00	3.80	5.40	29.50	7.50	-	M12x1	12,040
50	10.00	3.60	4.00	33.00	9.50	21.00	M16x1	16,050
63	12.00	3.60	4.00	36.50	11.50	13.80	M18x1	18,063
80	14.00	3.60	4.00	40.00	13.50	14.00	M20x1.5	20,080
100	16.00	3.60	4.00	44.00	15.50	14.00	M24x1.5	24,100

Informazioni sul prodotto

- a MQL standard
- per sistemi MQL ad 1 e 2 canali
- per mandrini con serraggio manuale dell'utensile
- dimensioni d2 e l1 in base alla condizione installata



1 MQL BY GÜHRING

2 MQL BY GÜHRING

Articolo	4513

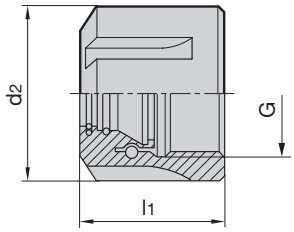
per HSK-A	d_2 mm	d_3 mm	l_1 mm	l_2 mm	G	Codice
32	3.00	3.00	6.30	-	M10x1	10,032
40	3.60	4.00	8.30	5.00	M12x1	12,040
50	3.60	4.00	10.30	5.00	M16x1	16,050
50	5.00	5.00	10.30	-	M16x1	16,150
63	3.60	4.00	12.30	5.00	M18x1	18,063
63	6.00	6.00	12.30	-	M18x1	18,163
80	3.60	4.00	14.40	5.00	M20x1.5	20,080
80	8.00	8.00	14.40	-	M20x1.5	20,180
100	3.60	4.00	16.40	5.00	M24x1.5	24,100
100	8.00	8.00	16.40	-	M24x1.5	24,101

Informazioni sul prodotto

- per pinze di serraggio DIN ISO 15488
- per applicazioni con lubrificazione interna IC/ER per rondelle di tenuta
- per un maggior bloccaggio, versione ER o IC/ER con anello di scorrimento

Dotazione

- esec. per forza di serraggio aumentata: completo di anello scorrevole
- esecuzione IC/ER: pinze di serraggio art. 4335, da ordinare separatamente



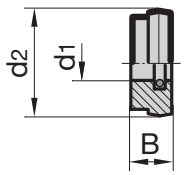
							Articolo	4306
per disco di tenuta art. 4335	con anello scorrevole	Grandezza nominale	d_2 mm	l_1 mm	G	max. Tenuta		Codice
–	–	ER16 mini	22	18.4	M19x1.0	55		16,200
–	–	ER20 mini	28	19.0	M24x1.0	75		20,200
–	–	ER25 mini	35	20.0	M30x1.0	100		25,200
–	–	ER11 (4008E)	19	11.3	M14x0.75	25		11,000
–	–	ER16 (426E)	28	17.5	M22x1.5	55		16,000
–	–	ER20 (428E)	34	19.0	M25x1.5	75		20,000
–	–	ER25 (430E)	42	20.0	M32x1.5	100		25,000
–	–	ER32 (470E)	50	22.5	M40x1.5	140		32,000
–	–	ER40 (472E)	63	25.5	M50x1.5	200		40,000
x	–	IC/ER16 mini	22	22.0	M19x1.0	55		16,300
x	–	IC/ER20 mini	28	24.0	M24x1.0	75		20,300
x	–	IC/ER25 mini	35	25.0	M30x1.0	100		25,300
x	–	IC/ER16	28	22.5	M22x1.5	55		16,600
x	–	IC/ER20	34	24.0	M25x1.5	75		20,600
x	–	IC/ER25	42	25.0	M32x1.5	100		25,600
x	–	IC/ER32	50	27.5	M40x1.5	140		32,600
x	–	IC/ER40	63	30.5	M50x1.5	200		40,600
–	x	ER16	28	20.3	M22x1.5	55		16,400
–	x	ER20	34	21.8	M25x1.5	75		20,400
–	x	ER25	42	22.4	M32x1.5	100		25,400
–	x	ER32	50	25.0	M40x1.5	140		32,400
–	x	ER40	63	28.3	M50x1.5	200		40,400
x	x	IC/ER16	28	22.7	M22x1.5	55		16,500
x	x	IC/ER20	34	24.2	M25x1.5	75		20,500
x	x	IC/ER25	42	25.2	M32x1.5	100		25,500
x	x	IC/ER32	50	27.4	M40x1.5	140		32,500
x	x	IC/ER40	63	30.7	M50x1.5	200		40,500

Informazioni sul prodotto

- il campo di impiego di un disco di tenuta art. 4325 va dal Ø nominale d1 fino alla precedente misura inferiore, cioè per un Ø di 6,3 mm (per grand. nominale ER20) deve essere ordinato un disco di tenuta con d1 = 6,5 mm (codice 06,520).

Esempio di ordine:

Ø d1	= 3.5
grand. nominale	= ER 20
art./codice	= 4335 03,520



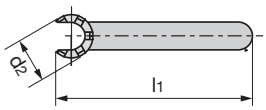
Articolo				4335
Grandezza no da incr. di 0,5 mm minale	d_1 mm	d_2 mm	B mm	Codice
ER16	3.0…10 um 0.5 mm stg.	13	4	3,016 - 10,016
ER20	3.0…13 um 0.5 mm stg.	16	4	3,020 - 13,020
ER25	3.0…16 um 0.5 mm stg.	21	4	3,025 - 16,025
ER32	3.0…20 um 0.5 mm stg.	27	4	3,032 - 20,032
ER40	3.5…26 um 0.5 mm stg.	33.5	4	3,540 - 26,040

CHIAVE DI SERRAGGIO

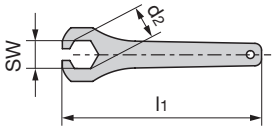
Informazioni sul prodotto

- per attacchi con pinze di serraggio
- tipo A: con speciale chiave a gancio per dadi di seraggio
- tipo B: per dadi di serraggio con un design esagonale
- tipo C: per dadi di serraggio con scanalature esterne

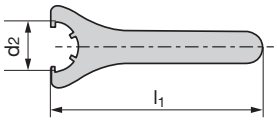
Tipo A



Tipo B

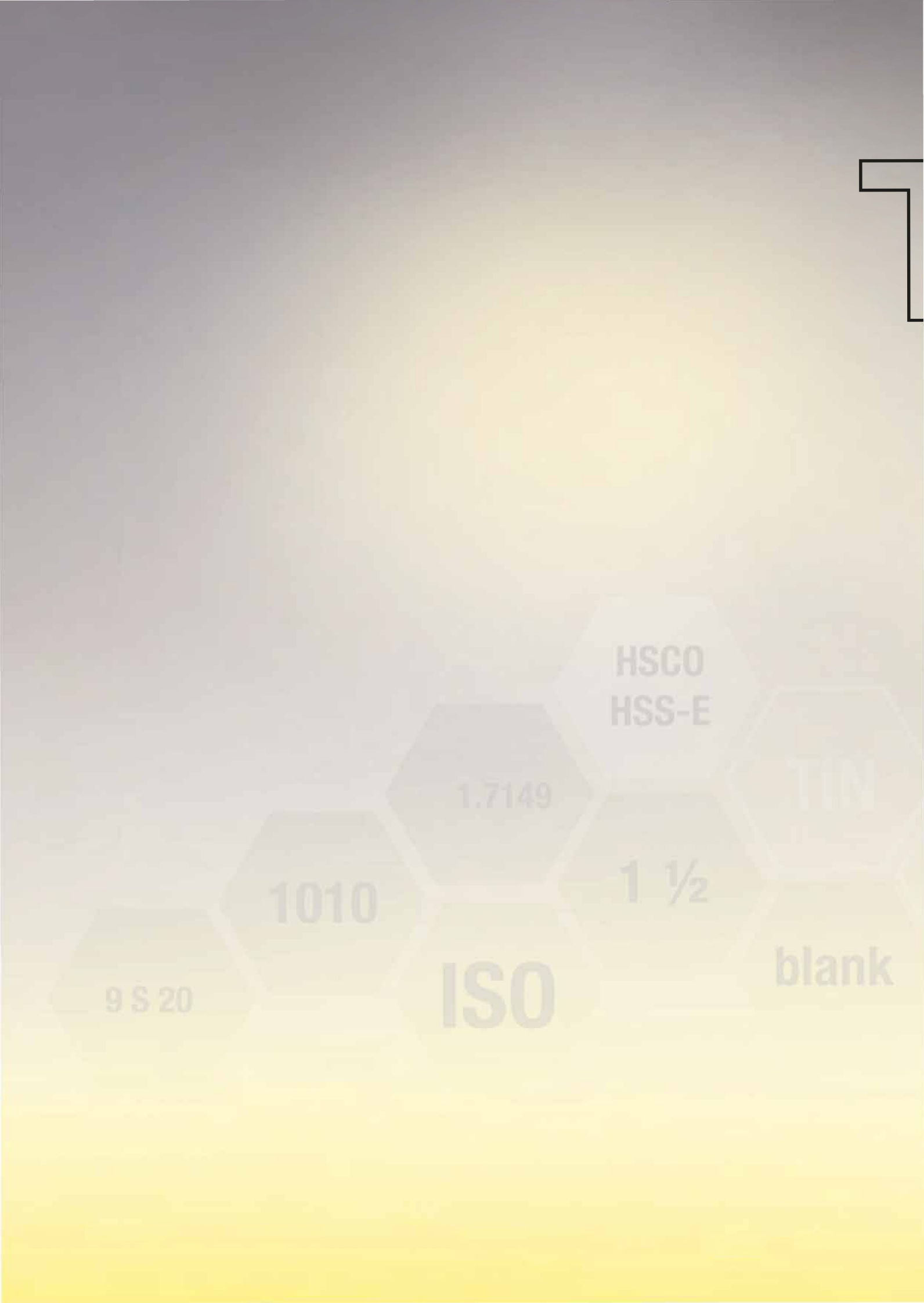


Tipo C



Articolo					4913
Grandezza nominale mm	Tipo	l_1 mm	per ER d_2 mm	SW	Codice
ER16 mini	A	122	22	-	16,200
ER20 mini	A	139	28	-	20,200
ER25 mini	A	143	35	-	25,200
ER11	B	141	19	17	11,000
ER16	B	178	28	25	16,000
ER16	C	161	32	-	16,032
ER20	B	200	34	30	20,000
ER20	C	183	35	-	20,100
ER25	C	210	42	-	25,000
ER32	C	250	50	-	32,000
ER40	C	290	63	-	40,000

GÜHROSYNC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PARTE TECNICA

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Diametri dei fori di filettatura per la maschiatura

Filettatura metrica ISO DIN 13

Ø nom.	passo P mm	Ø preforo (foro) Ø DIN 336 mm	Ø preforo madrevite 6H* min. mm	max. mm
M 1	0,25	**0,75**	0,729	0,785
M 1,1	0,25	**0,85**	0,829	0,885
M 1,2	0,25	**0,95**	0,929	0,985
M 1,4	0,30	**1,10**	1,075	1,142
M 1,6	0,35	**1,25**	1,221	1,321
M 1,8	0,35	**1,45**	1,421	1,521
M 2	0,40	**1,60**	1,567	1,679
M 2,2	0,45	**1,75**	1,713	1,838
M 2,5	0,45	**2,05**	2,013	2,138
M 3	0,50	**2,50**	2,459	2,599
M 3,5	0,60	**2,90**	2,850	3,010
M 4	0,70	**3,30**	3,242	3,422
M 4,5	0,75	**3,70**	3,688	3,878
M 5	0,80	**4,20**	4,134	4,334
M 6	1,00	**5,00**	4,917	5,153
M 7	1,00	**6,00**	5,917	6,153
M 8	1,25	**6,80**	6,647	6,912
M 9	1,25	**7,80**	7,647	7,912
M 10	1,50	**8,50**	8,376	8,676
M 11	1,50	**9,50**	9,376	9,676
M 12	1,75	**10,20**	10,106	10,441
M 14	2,00	**12,00**	11,835	12,210
M 16	2,00	**14,00**	13,835	14,210
M 18	2,50	**15,50**	15,294	15,744
M 20	2,50	**17,50**	17,294	17,744
M 22	2,50	**19,50**	19,294	19,744
M 24	3,00	**21,00**	20,752	21,252
M 27	3,00	**24,00**	23,752	24,252
M 30	3,50	**26,50**	26,211	26,771
M 33	3,50	**29,50**	29,211	29,771
M 36	4,00	**32,00**	31,670	32,270
M 39	4,00	**35,00**	34,670	35,270
M 42	4,50	**37,50**	37,129	37,799
M 45	4,50	**40,50**	40,129	40,799
M 48	5,00	**43,00**	42,587	43,297
M 52	5,00	**47,00**	46,587	47,297
M 56	5,50	**50,50**	50,046	50,796

* M 1,1 fino a M 1,4 nom.-Ø madrevite 5H

Filettatura metrica ISO, passo fine DIN 13

Ø x passo P nom. mm	Ø preforo (foro) Ø DIN 336 mm	Ø preforo madrevite 6H min. mm	max. mm
M 2,5 x 0,35	**2,15**	2,121	2,221
M 3,0 x 0,35	**2,65**	2,621	2,721
M 3,5 x 0,35	**3,15**	3,121	3,221
M 4,0 x 0,50	**3,50**	3,459	3,599
M 4,5 x 0,50	**4,00**	3,959	4,099
M 5,0 x 0,50	**4,50**	4,459	4,599
M 5,5 x 0,50	**5,00**	4,959	5,099
M 6,0 x 0,75	**5,20**	5,188	5,378
M 7,0 x 0,75	**6,20**	6,188	6,378
M 8,0 x 0,50	**7,50**	7,459	7,599
M 8,0 x 0,75	**7,20**	7,188	7,378
M 8,0 x 1,00	**7,00**	6,917	7,153
M 9,0 x 0,75	**8,20**	8,188	8,378
M 9,0 x 1,00	**8,00**	7,917	8,153
M 10 x 0,75	**9,20**	9,188	9,378
M 10 x 1,00	**9,00**	8,917	9,153
M 10 x 1,25	**8,80**	8,647	8,912
M 11 x 0,75	**10,20**	10,188	10,378
M 11 x 1,00	**10,00**	9,917	10,153
M 12 x 1,00	**11,00**	10,917	11,153
M 12 x 1,25	**10,80**	10,647	10,912
M 12 x 1,50	**10,50**	10,376	10,676
M 14 x 1,00	**13,00**	12,917	13,153
M 14 x 1,25	**12,80**	12,647	12,912
M 14 x 1,50	**12,50**	12,376	12,676
M 15 x 1,00	**14,00**	13,917	14,153
M 15 x 1,50	**13,50**	13,376	13,676
M 16 x 1,00	**15,00**	14,917	15,153
M 16 x 1,25	**14,80**	14,647	14,912
M 16 x 1,50	**14,50**	14,376	14,676
M 17 x 1,00	**16,00**	15,917	16,153
M 17 x 1,50	**15,50**	15,376	15,676
M 18 x 1,00	**17,00**	16,917	17,153
M 18 x 1,50	**16,50**	16,376	16,676
M 20 x 1,00	**19,00**	18,917	19,153
M 20 x 1,50	**18,50**	18,376	18,676
M 20 x 2,00	**18,00**	17,835	18,210
M 22 x 1,00	**21,00**	20,917	21,153

Ø x passo P nom. mm	Ø preforo (foro) Ø DIN 336 mm	Ø preforo madrevite 6H min. mm	max. mm
M 22 x 1,50	**20,50**	20,376	20,676
M 22 x 2,00	**20,00**	19,835	20,210
M 24 x 1,00	**23,00**	22,917	23,153
M 24 x 1,50	**22,50**	22,376	22,676
M 24 x 2,00	**22,00**	21,835	22,210
M 25 x 1,00	**24,00**	23,917	24,153
M 25 x 1,50	**23,50**	23,376	23,676
M 25 x 2,00	**23,00**	22,835	23,210
M 27 x 1,00	**26,00**	25,917	26,153
M 27 x 1,50	**25,50**	25,376	25,676
M 27 x 2,00	**25,00**	24,835	25,210
M 28 x 1,00	**27,00**	26,917	27,153
M 28 x 1,50	**26,50**	26,376	26,676
M 28 x 2,00	**26,00**	25,835	26,210
M 30 x 1,00	**29,00**	28,917	29,153
M 30 x 1,50	**28,50**	28,376	28,676
M 30 x 2,00	**28,00**	27,835	28,210
M 30 x 3,00	**27,00**	26,752	27,252
M 32 x 1,50	**30,50**	30,376	30,676
M 32 x 2,00	**30,00**	29,835	30,210
M 33 x 1,50	**31,50**	31,376	31,676
M 33 x 2,00	**31,00**	30,835	31,210
M 33 x 3,00	**30,00**	29,752	30,252
M 35 x 1,50	**33,50**	33,376	33,676
M 36 x 1,50	**34,50**	34,376	34,676

Filettatura UNC ASME B1.1

Ø nom.	filetti per pollici	Ø preforo (foro) Ø DIN 336 mm	Ø preforo madrevite 2B min. mm	max. mm
Nr. 1	- 64	**1,55**	1,425	1,580
Nr. 2	- 56	**1,85**	1,694	1,872
Nr. 3	- 48	**2,10**	1,941	2,146
Nr. 4	- 40	**2,35**	2,157	2,385
Nr. 5	- 40	**2,65**	2,487	2,698
Nr. 6	- 32	**2,85**	2,642	2,896
Nr. 8	- 32	**3,50**	3,302	3,531
Nr. 10	- 24	**3,90**	3,683	3,937
Nr. 12	- 24	**4,50**	4,343	4,597
1/4	- 20	**5,10**	4,978	5,258
5/16	- 18	**6,60**	6,401	6,731
3/8	- 16	**8,00**	7,798	8,153
7/16	- 14	**9,40**	9,144	9,550
1/2	- 13	**10,80**	10,592	11,024
9/16	- 12	**12,20**	11,989	12,446
5/8	- 11	**13,50**	13,386	13,868
3/4	- 10	**16,50**	16,307	16,840
7/8	- 9	**19,50**	19,177	19,761
1	- 8	**22,25**	21,971	22,606
1 1/8	- 7	**25,00**	24,638	25,349
1 1/4	- 7	**28,00**	27,813	28,524
1 3/8	- 6	**30,75**	30,353	31,115
1 1/2	- 6	**34,00**	33,528	34,290
1 3/4	- 5	**39,50**	38,938	39,802
2	- 4,5	**45,00**	44,679	45,593

Filettatura MJ DIN ISO 5855

Ø nom.	x passo P mm	Ø preforo (foro) Ø mm	Ø preforo madrevite 5H* min. mm	max. mm
MJ 3	x 0,50	**2,60**	2,513	2,653
MJ 4	x 0,70	**3,40**	3,318	3,498
MJ 5	x 0,80	**4,30**	4,221	4,421
MJ 6	x 0,50	**5,55**	5,513	5,625
MJ 6	x 0,75	**5,35**	5,269	5,419
MJ 6	x 1,00	**5,10**	5,026	5,216
MJ 8	x 0,50	**7,55**	7,513	7,625
MJ 8	x 0,75	**7,35**	7,269	7,419
MJ 8	x 1,00	**7,10**	7,026	7,216
MJ 8	x 1,25	**6,90**	6,782	6,994
MJ 10	x 1,00	**9,10**	9,026	9,216
MJ 10	x 1,25	**8,90**	8,782	8,994
MJ 10	x 1,50	**8,60**	8,539	8,775
MJ 12	x 1,75	**10,40**	10,295	10,560
MJ 16	x 2,00	**14,20**	14,051	14,351

* MJ3 x 0,50 bis MJ 5 x 0,80 nom.-Ø madrevite 6H

Filettatura UNC ISO 3161

Ø nom.	filetti per pollici	Ø preforo (foro) Ø mm	Ø preforo madrevite 3B min. mm	max. mm
Nr. 6	- 32	**2,85**	2,733	2,939
Nr. 8	- 32	**3,55**	3,393	3,599
Nr. 10	- 24	**4,00**	3,795	4,064
Nr. 12	- 24	**4,60**	4,455	4,704
1/4	- 20	**5,30**	5,113	5,387
5/16	- 18	**6,75**	6,563	6,833
3/8	- 16	**8,20**	7,978	8,255
7/16	- 14	**9,60**	9,346	9,639
1/2	- 13	**11,00**	10,798	11,095
9/16	- 12	**12,40**	12,228	12,482
5/8	- 11	**13,80**	13,627	13,904

Filettatura UNF ISO 3161

Ø nom.	filetti per pollici	Ø preforo (foro) Ø mm	Ø preforo madrevite 3B min. mm	max. mm
Nr. 6	- 40	**3,00**	2,888	3,053
Nr. 8	- 36	**3,60**	3,480	3,663
Nr. 10	- 32	**4,20**	4,054	4,255
Nr. 12	- 28	**4,75**	4,602	4,816
1/4	- 28	**5,60**	5,466	5,662
5/16	- 24	**7,00**	6,906	7,109
3/8	- 24	**8,60**	8,494	8,679
7/16	- 20	**10,00**	9,876	10,084
1/2	- 20	**11,60**	11,463	11,661
9/16	- 18	**13,00**	12,913	13,122
5/8	- 18	**14,60**	14,501	14,702

Diametri dei fori di filettatura per la maschiatura

Filettatura UNF ASME B1.1

Ø nom.	filetti per pollici	Ø preforo (foro) Ø DIN 336 mm	Ø preforo madrevite 2B min. mm	Ø preforo madrevite 2B max. mm
Nr. 1	72	**1,55**	1,473	1,610
Nr. 2	64	**1,85**	1,755	1,910
Nr. 3	56	**2,15**	2,024	2,197
Nr. 4	48	**2,40**	2,271	2,459
Nr. 5	44	**2,70**	2,550	2,741
Nr. 6	40	**2,95**	2,819	3,023
Nr. 8	36	**3,50**	3,404	3,607
Nr. 10	32	**4,10**	3,962	4,166
Nr. 12	28	**4,60**	4,496	4,724
1/4	28	**5,50**	5,359	5,588
5/16	24	**6,90**	6,782	7,036
3/8	24	**8,50**	8,382	8,636
7/16	20	**9,90**	9,728	10,033
1/2	20	**11,50**	11,328	11,608
9/16	18	**12,90**	12,751	13,081
5/8	18	**14,50**	14,351	14,681
3/4	16	**17,50**	17,323	17,678
7/8	14	**20,40**	20,269	20,650
1	12	**23,25**	23,114	23,571
1 1/8	12	**26,50**	26,289	26,746
1 1/4	12	**29,50**	29,464	29,921
1 3/8	12	**32,75**	32,639	33,096
1 1/2	12	**36,00**	35,814	36,271

Filettatura BSW-(Whitworth) BS84

Ø nom. pollici	filetti per pollici	Ø preforo (foro) Ø mm	Ø preforo madrevite min. mm	Ø preforo madrevite max. mm
W 1/16	60	**1,20**	1,045	1,230
W 3/32	48	**1,80**	1,704	1,912
W 1/8	40	**2,50**	2,362	2,591
W 5/32	32	**3,20**	2,952	3,214
W 3/16	24	**3,60**	3,407	3,745
W 7/32	24	**4,50**	4,201	4,539
W 1/4	20	**5,10**	4,724	5,156
W 5/16	18	**6,50**	6,130	6,590
W 3/8	16	**7,90**	7,492	7,987
W 7/16	14	**9,20**	8,789	9,330
W 1/2	12	**10,50**	9,989	10,591
W 9/16	12	**12,00**	11,577	12,179
W 5/8	11	**13,50**	12,918	13,558
W 3/4	10	**16,25**	15,797	16,483
W 7/8	9	**19,25**	18,611	19,353
W 1	8	**22,00**	21,334	22,147
W 1 1/8	7	**24,50**	23,928	24,832
W 1 1/4	7	**27,75**	27,103	28,007
W 1 3/8	6	**30,50**	29,504	30,528
W 1 1/2	6	**33,50**	32,679	33,703
W 1 5/8	5	**35,50**	34,769	35,963
W 1 3/4	5	**39,00**	37,944	39,138
W 2	4,5	**44,50**	43,571	44,877

Filettatura (Whitworth-) (a DIN-ISO 228-1)

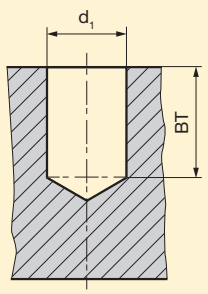
Ø nom. pollici	filetti per pollici	Ø preforo (foro) Ø DIN 336 mm	Ø preforo madrevite min. mm	Ø preforo madrevite max. mm
G 1/16	28	**6,80**	6,561	6,843
G 1/8	28	**8,80**	8,566	8,848
G 1/4	19	**11,80**	11,445	11,890
G 3/8	19	**15,25**	14,950	15,395
G 1/2	14	**19,00**	18,631	19,172
G 5/8	14	**21,00**	20,587	21,128
G 3/4	14	**24,50**	24,117	24,658
G 7/8	14	**28,25**	27,877	28,418
G 1	11	**30,75**	30,291	30,931
G 1 1/8	11	**35,50**	34,939	35,579
G 1 1/4	11	**39,50**	38,952	39,592
G 1 1/2	11	**45,25**	44,845	45,485
G 1 3/4	11	**51,00**	50,788	51,428
G 2	11	**57,00**	56,656	57,296

Filettatura PG a DIN 40430

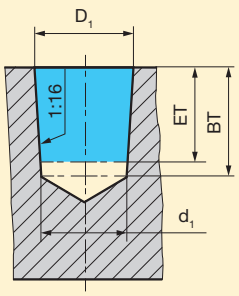
Ø nom.	filetti per pollici	Ø preforo (foro) Ø mm	Ø preforo madrevite min. mm	Ø preforo madrevite max. mm
Pg 7	20	**11,40**	11,280	11,430
Pg 9	18	**14,00**	13,860	14,010
Pg 11	18	**17,30**	17,260	17,410
Pg 13,5	18	**19,00**	19,060	19,210
Pg 16	18	**21,30**	21,160	21,310
Pg 21	16	**26,90**	26,780	27,030
Pg 29	16	**35,50**	35,480	35,730
Pg 36	16	**45,50**	45,480	45,730
Pg 42	16	**52,50**	52,480	52,730
Pg 48	16	**57,80**	57,780	58,030

Filettatura NPT ANSI B 2.1
filettatura conica americana, conicità 1:16

versione A (da evitare se possibile)



versione B



Ø nom.	filetti per pollici	Ø preforo cilindr. (A) d_1	Ø preforo conico (B) D_1	prof. t. p. ET mm	prof. fil. BT (min) mm
1/16	27	**6,15**	6,39	9,29	10,7
1/8	27	**8,40**	8,74	9,32	10,8
1/4	18	**11,10**	**11,36**	13,52	15,6
3/8	18	**14,30**	**14,80**	13,83	16,0
1/2	14	**17,90**	**18,32**	18,07	20,8
3/4	14	**23,30**	**23,67**	18,55	21,3
1	11,5	**29,00**	**29,69**	22,29	25,6
1 1/4	11,5	**37,70**	**38,45**	22,80	26,1
1 1/2	11,5	**43,70**	**44,52**	22,80	26,1
2	11,5	**55,60**	**56,56**	23,20	26,5
2 1/2	8	**66,30**	**67,62**	31,75	36,3
3	8	**82,30**	**83,52**	33,74	38,5

Filett. EG metr./metr. passo fine (EG M 14 x 1,25) per impiego di helicoil DIN 8140

Ø nom.	x passo P mm	Ø preforo (foro) Ø mm	Ø preforo madrevite min. mm	Ø preforo madrevite max. mm
EG M 4	0,70	**4,20**	4,152	4,292
EG M 5	0,80	**5,25**	5,174	5,334
EG M 6	1,00	**6,30**	6,217	6,407
EG M 8	1,25	**8,40**	8,271	8,483
EG M10	1,50	**10,50**	10,324	10,560
EG M12	1,75	**12,50**	12,379	12,644
EG M14 x	1,25	**14,40**	14,271	14,483
EG M16	2,00	**16,50**	16,433	16,733

Filettatura EG UNC (UNC-STI) per impiego di helicoil ASME B18.29.1

Ø nom.	filetti per pollici	Ø preforo (foro) Ø mm	Ø preforo madrevite min. mm	Ø preforo madrevite max. mm
EG Nr. 6	32	**3,80**	3,678	3,879
EG Nr. 8	32	**4,40**	4,338	4,524
EG Nr. 10	24	**5,20**	5,055	5,283
EG Nr. 12	24	**5,80**	5,715	5,944
EG 1/4	20	**6,70**	6,624	6,868
EG 5/16	18	**8,40**	8,242	8,489
EG 3/8	16	**10,00**	9,868	10,127
EG 7/16	14	**11,60**	11,506	11,783
EG 1/2	13	**13,30**	13,122	13,393
EG 9/16	12	**14,90**	14,747	15,032
EG 5/8	11	**16,50**	16,375	16,673

Filettatura EG UNF (UNF-STI) per impiego di helicoil ASME B18.29.1

Ø nom.	filetti per pollici	Ø preforo (foro) Ø mm	Ø preforo madrevite min. mm	Ø preforo madrevite max. mm
EG Nr. 6	40	**3,70**	3,644	3,818
EG Nr. 8	36	**4,40**	4,321	4,498
EG Nr. 10	32	**5,10**	4,999	5,184
EG Nr. 12	28	**5,70**	5,682	5,809
EG 1/4	28	**6,60**	6,546	6,721
EG 5/16	24	**8,25**	8,166	8,352
EG 3/8	24	**9,80**	9,754	9,931
EG 7/16	20	**11,50**	11,389	11,585
EG 1/2	20	**13,10**	12,974	13,172
EG 9/16	18	**14,70**	14,592	14,798
EG 5/8	18	**16,25**	16,180	16,386

Diametri dei fori consigliati per maschiatura a rullare

Filettatura metrica ISO DIN 13

Ø nom.	passo P	Ø foro	Ø foro		Ø preforo madrevite 7H*	
mm	mm	mm	min. mm	max. mm	min. mm	max. mm
M1	0,25	**0,90**	0,89	0,92	0,729	0,819
M1,2	0,25	**1,10**	1,09	1,12	0,929	1,019
M1,4	0,30	**1,28**	1,27	1,30	1,075	1,181
M1,6	0,35	**1,46**	1,45	1,48	1,221	1,346
M1,7	0,35	**1,56**	1,55	1,58	1,321	1,446
M1,8	0,35	**1,66**	1,65	1,68	1,421	1,546
M 2	0,40	**1,85**	1,84	1,88	1,567	1,679
M 2,2	0,45	**2,00**	2,01	2,05	1,713	1,838
M 2,5	0,45	**2,30**	2,28	2,32	2,013	2,138
M 3	0,50	**2,80**	2,78	2,85	2,459	2,639
M 3,5	0,60	**3,25**	3,23	3,30	2,850	3,050
M 4	0,70	**3,70**	3,68	3,76	3,242	3,466
M 4,5	0,75	**4,20**				
M 5	0,80	**4,65**	4,62	4,71	4,134	4,384
M 6	1,00	**5,55**	5,52	5,62	4,917	5,217
M 7	1,00	**6,55**	6,52	6,62	5,917	6,217
M 8	1,25	**7,40**	7,36	7,47	6,647	6,982
M 9	1,25	**8,40**	8,36	8,47	7,647	7,982
M 10	1,50	**9,30**	9,26	9,38	8,376	8,751
M 11	1,50	**10,30**	10,26	10,38	9,376	9,751
M 12	1,75	**11,20**	11,15	11,29	10,106	10,531
M 14	2,00	**13,10**	13,05	13,20	11,835	12,310
M 16	2,00	**15,10**	15,05	15,20	13,835	14,310
M 18	2,50	**16,90**	16,83	17,02	15,294	15,854
M 20	2,50	**18,90**	18,83	19,02	17,294	17,854
M 22	2,50	**20,90**	20,83	21,02	19,294	19,854
M 24	3,00	**22,70**	22,62	22,80	20,752	21,382
M 27	3,00	**25,70**	25,62	25,80	23,752	24,382
M 30	3,50	**28,50**	28,40	28,60	26,211	26,921
M 33	3,50	**31,50**	31,40	31,60	29,211	29,921
M 36	4,00	**34,30**	34,17	34,40	31,670	32,420
M 39	4,00	**37,30**	37,17	37,40	34,670	35,420
M 42	4,50	**40,10**	39,95	40,20	37,129	37,979

* M 2 a M 2,5 Ø preforo madrevite 6H

Filettatura metrica ISO, passo fine DIN 13

Ø nom.	x passo P	Ø foro	Ø foro		Ø preforo madrevite 7H*	
mm	mm	mm	min. mm	max. mm	min. mm	max. mm
M 2,5	x 0,35	**2,35**	2,35	2,38	2,121	2,221
M 3	x 0,35	**2,85**	2,85	2,88	2,621	2,721
M 4	x 0,35	**3,85**	3,85	3,88	3,621	3,721
M 4	x 0,50	**3,80**	3,78	3,83	3,459	3,639
M 5	x 0,50	**4,80**	4,78	4,83	4,459	4,639
M 5,5	x 0,50	**5,30**	5,28	5,33	4,959	5,139
M 6	x 0,75	**5,65**	5,62	5,70	5,188	5,424
M 7	x 0,75	**6,65**	6,62	6,70	6,188	6,424
M 8	x 0,75	**7,65**	7,62	7,70	7,188	7,424
M 8	x 1,00	**7,55**	7,52	7,62	6,917	7,217
M 9	x 0,75	**8,65**	8,62	8,70	8,188	8,424
M 9	x 1,00	**8,55**	8,52	8,62	7,917	8,217
M 10	x 0,75	**9,65**	9,62	9,70	9,188	9,424
M 10	x 1,00	**9,55**	9,52	9,62	8,917	9,217
M 10	x 1,25	**9,40**	9,36	9,47	8,647	8,982
M 11	x 0,75	**10,65**	10,62	10,70	10,188	10,424
M 11	x 1,00	**10,55**	10,52	10,62	9,917	10,217
M 12	x 1,00	**11,55**	11,52	11,62	10,917	11,217
M 12	x 1,25	**11,40**	11,36	11,47	10,647	10,982
M 12	x 1,50	**11,30**	11,26	11,38	10,376	10,751
M 14	x 1,00	**13,55**	13,52	13,62	12,917	13,217
M 14	x 1,25	**13,40**	13,36	13,47	12,647	12,982
M 14	x 1,50	**13,30**	13,26	13,38	12,376	12,751
M 15	x 1,00	**14,55**	14,52	14,62	13,917	14,217
M 15	x 1,50	**14,30**	14,26	14,38	13,376	13,751
M 16	x 1,00	**15,55**	15,52	15,62	14,917	15,217
M 16	x 1,50	**15,30**	15,26	15,38	14,376	14,751
M 17	x 1,00	**16,55**	16,52	16,62	15,917	16,217

* M 2,5 x 0,35 a M 4 x 0,35 Ø preforo madrevite 6H

Ø nom.	x passo P	Ø foro	Ø foro		Ø preforo madrevite 7H*	
mm	mm	mm	min. mm	max. mm	min. mm	max. mm
M 17	x 1,50	**16,30**	16,26	16,38	15,376	15,751
M 18	x 1,00	**17,55**	17,52	17,62	16,917	17,217
M 18	x 1,50	**17,30**	17,26	17,38	16,376	16,751
M 18	x 2,00	**17,10**	17,05	17,20	15,835	16,310
M 20	x 1,00	**19,55**	19,52	19,62	18,917	19,217
M 20	x 1,50	**19,30**	19,26	19,38	18,376	19,751
M 24	x 1,00	**23,55**	23,52	23,62	22,917	23,217
M 24	x 1,50	**23,30**	23,26	23,38	22,376	22,751
M 24	x 2,00	**23,10**	23,05	23,20	21,835	22,310
M 27	x 1,50	**26,30**	26,26	26,38	25,376	25,751
M 30	x 1,50	**29,30**	29,26	29,38	28,376	28,751
M 33	x 1,50	**32,30**	32,26	32,38	31,376	31,751
M 36	x 1,50	**35,30**	35,26	35,38	34,376	34,751
M 39	x 1,50	**38,30**	38,26	38,38	37,376	37,751
M 42	x 1,50	**41,30**	41,26	41,38	42,376	42,751

Tolleranza dei diametri di fori di filettatura nei maschi a rullare (a DIN 13, parte 50)

Per ragioni di resistenza, non è necessario mantenere la tolleranza 6H per i fori di filettatura; la tolleranza 7H è sufficiente a garantire che non sia superato il ricoprimento del diametro medio di 0,32 x P tra madrevite e bullone. Inoltre, la filettatura a rullare, per la corsa della fase non interrotta e la deformazione a freddo, conferisce di regola una resistenza superiore a quella della filettatura normale.

Filettatura UNC ASME B1.1

Ø nom.	filetti per pollici	Ø foro	Ø foro		Ø preforo madrevite 2B	
		mm	min. mm	max. mm	min. mm	max. mm
Nr. 1	- 64	**1,68**	1,67	1,70	1,425	1,580
Nr. 2	- 56	**1,98**	1,97	2,01	1,694	1,872
Nr. 3	- 48	**2,28**	2,27	2,32	1,941	2,146
Nr. 4	- 40	**2,55**	2,54	2,59	2,157	2,385
Nr. 5	- 40	**2,90**	2,89	2,94	2,487	2,698
Nr. 6	- 32	**3,15**	3,14	3,19	2,642	2,896
Nr. 8	- 32	**3,80**	3,78	3,82	3,302	3,531
Nr. 10	- 24	**4,35**	4,33	4,39	3,683	3,937
Nr. 12	- 24	**5,00**	4,97	5,03	4,343	4,597
1/4	- 20	**5,75**	5,72	5,80	4,978	5,258
5/16	- 18	**7,30**	7,26	7,37	6,401	6,731
3/8	- 16	**8,80**	8,77	8,88	7,798	8,153
7/16	- 14	**10,30**	10,27	10,37	9,144	9,550
1/2	- 13	**11,80**	11,77	11,88	10,592	11,024
9/16	- 12	**13,30**	13,28	13,39	11,989	12,446
5/8	- 11	**14,80**	14,78	14,90	13,386	13,868
3/4	- 10	**17,90**	17,85	17,97	16,307	16,840
7/8	- 9	**21,00**	20,95	21,10	19,177	19,761
1	- 8	**24,00**	23,95	24,12	21,971	22,606

Filettatura UNF ASME B1.1

Ø nom.	filetti per pollici	Ø foro	Ø foro		Ø preforo madrevite 2B	
		mm	min. mm	max. mm	min. mm	max. mm
Nr. 1	- 72	**1,70**	1,69	1,72	1,473	1,610
Nr. 2	- 64	**2,00**	1,99	2,03	1,755	1,910
Nr. 3	- 56	**2,30**	2,29	2,34	2,024	2,197
Nr. 4	- 48	**2,60**	2,59	2,63	2,271	2,459
Nr. 5	- 44	**2,90**	2,89	2,93	2,550	2,741
Nr. 6	- 40	**3,20**	3,19	3,24	2,819	3,023
Nr. 8	- 36	**3,85**	3,83	3,88	3,404	3,607
Nr. 10	- 32	**4,45**	3,43	4,49	3,962	4,166
Nr. 12	- 28	**5,10**	5,07	5,13	4,496	4,724
1/4	- 28	**5,95**	5,92	5,99	5,359	5,588
5/16	- 24	**7,45**	7,42	7,50	6,782	7,036
3/8	- 24	**9,05**	9,02	9,10	8,838	8,636
7/16	- 20	**10,55**	10,48	10,58	9,728	10,033
1/2	- 20	**12,10**	12,08	12,18	11,328	11,608
9/16	- 18	**13,65**	13,61	13,72	12,751	13,081
5/8	- 18	**15,25**	15,21	15,32	14,351	14,681
3/4	- 16	**18,35**	15,30	18,41	17,323	17,678
7/8	- 14	**21,40**	21,35	21,49	20,269	20,650
1	- 12	**24,45**	24,40	24,54	23,114	23,571

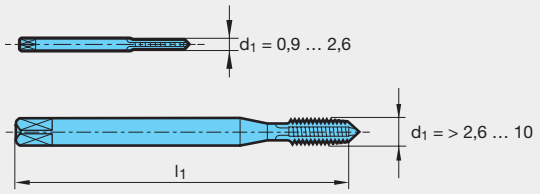
Filettatura (Whitworth-) DIN EN ISO 228-1

Ø nom.	filetti per pollici	Ø foro	Ø foro		Ø preforo madrevite	
pollici		mm	min. mm	max. mm	min. mm	max. mm
G 1/16	28	**7,30**	7,28	7,35	6,561	6,843
G 1/8	28	**9,30**	9,28	9,35	8,566	8,848
G 1/4	19	**12,50**	12,48	12,55	11,445	11,890
G 3/8	19	**16,00**	15,98	16,05	14,950	15,395
G 1/2	14	**20,00**	19,98	20,12	18,631	19,172
G 5/8	14	**22,00**	21,98	22,12	20,587	21,128
G 3/4	14	**25,50**	25,48	25,62	24,117	24,658
G 7/8	14	**29,25**	29,23	29,37	27,877	28,418
G 1	11	**32,00**	31,98	32,15	30,291	30,931
G 1 1/4	11	**40,75**	40,70	40,85	38,952	39,592

Caratteristiche delle singole norme

DIN 371

nel piano generale DIN 2184-**1**



Norma per maschi a macchina per filettatura metrica ISO e filettatura metrica ISO, passo fine con codolo rinforzato.
Esecuzione lunga.
Esecuzione del codolo secondo i campi di diametri (mm) riportati a sinistra.

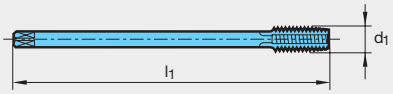
DIN 376

nel piano generale DIN 2184-**1**

Norma per maschi a macchina per filettatura metrica ISO con codolo ridotto (passante). Esecuzione lunga.
Diametri d1 = 1,6 … 68 mm
(≤ Ø M3, codolo senza quadro)

DIN 374

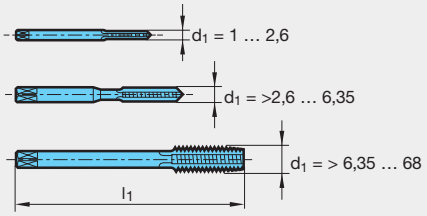
nel piano generale DIN 2184-**1**



Norma per maschi a macchina per filettaturametrica ISO, passo fine, con codolo ridotto(passante).
Esecuzione lunga.
Diametri d1 = 3 … 52 mm

DIN 352

nel piano generale DIN 2184-**2**

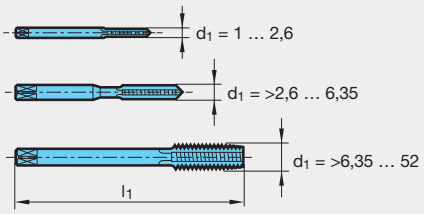


Norma per maschi a mano e a macchina per filettatura metrica ISO. Esecuzione corta. Esecuzione del codolo secondo i campi di diametri (mm) a sinistra riportati.

Caratteristiche delle singole norme

DIN 2181

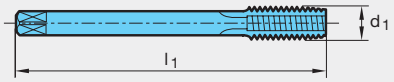
nel piano generale DIN 2184-**2**



Norma per maschi a mano e a macchina per filettatura metrica fine ISO. Esecuzione corta. Esecuzione del codolo secondo i campi di diametri (mm) a sinistra riportati.

DIN 5156

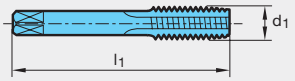
nel piano generale DIN 2184-**1**



Norma per maschi a macchina per filettatura BSP gas cilindrica a DIN ISO 228 e per filettatura gas Whitworth a DIN 2999.
Esecuzione lunga.
Campi di diametri:
Filettatura gas cilindrica G $^1/_{16}$“ ... G 4“
Filettatura Whitworth Rp $^1/_{16}$“... Rp 4“

DIN 5157

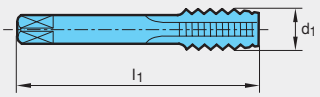
nel piano generale DIN 2184-**2**



Norma per maschi a macchina per filettatura BSP gas cilindrica a DIN ISO 228 e per filettatura gas Withworth a DIN EN 10 226-1.
Esecuzione corta.
Campi di diametri:
Filettatura gas cilindrica $^1/_{16}$“ ... G 4“
Filettatura Whitworth Rp $^1/_{16}$“... Rp 4“

DIN 40 432

nel piano generale DIN 2184-**2**

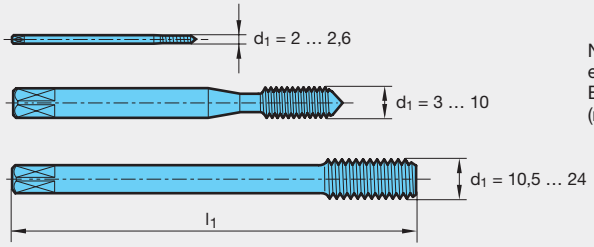


Norma per maschi a macchina per filettatura PG a DIN 40430.
Esecuzione corta.
Campo di diametri:
Pg 7 (12,5 mm) ... Pg 48 (59,3 mm)
Sarà sostituita dalla DIN 374 ISO 3 6G

Caratteristiche delle singole norme

DIN 2174

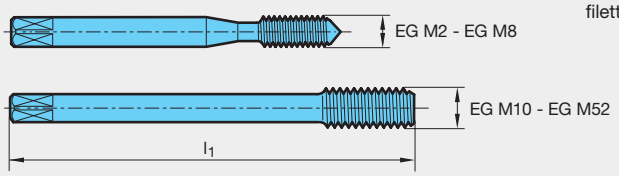
nel piano generale DIN 2184-**1**



Norma per maschi a rullare per filettatura metrica ISO e filettatura metrica ISO, passo fine. Esecuzione lunga. Esecuzione del codolo secondo i campi di diametri (mm) a sinistra.

DIN 40 435

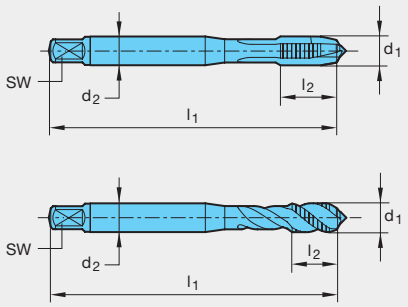
nel piano generale DIN 2184-**1**



Norma per maschi a macchina per la filettatura di guida (EG) per impiego di helicoil per filetta-tura metrica ISO a DIN 8140. filettatura EG da M2 a EG M52 e filettatura passo fine EG da M8 x 1 a EG M48 x 3

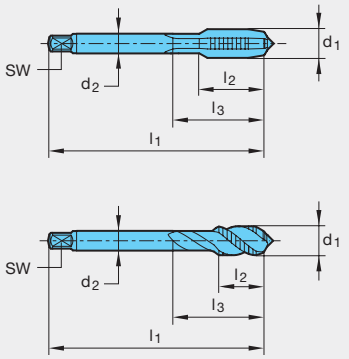
Standard internazionali DIN

DIN 2184-1
DIN 2184-2

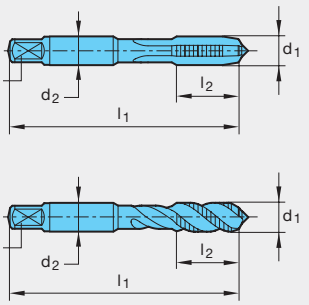


JIS B 4430

Japan Industrial Standard

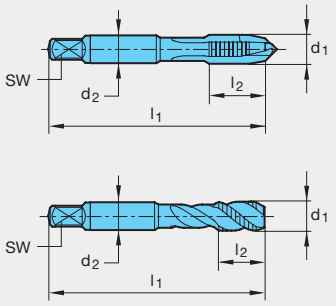


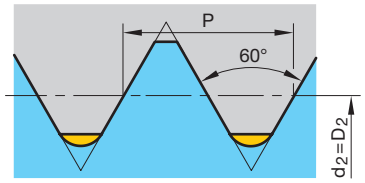
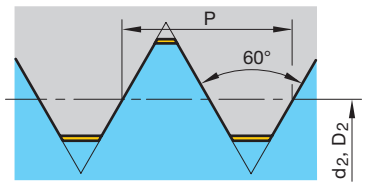
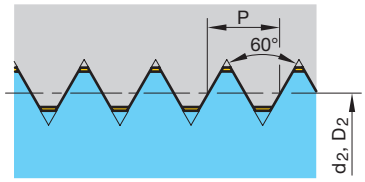
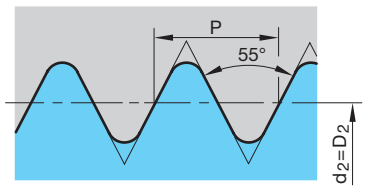
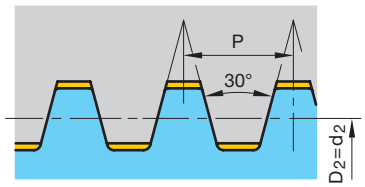
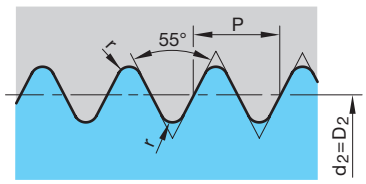
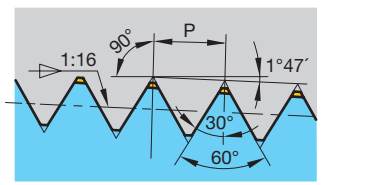
ISO 529

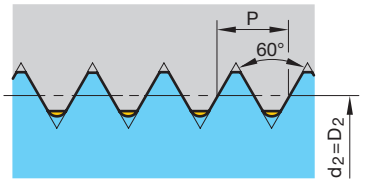
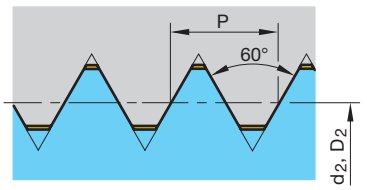
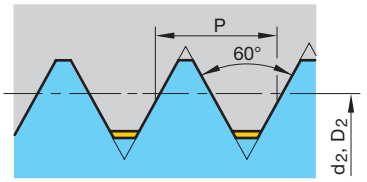
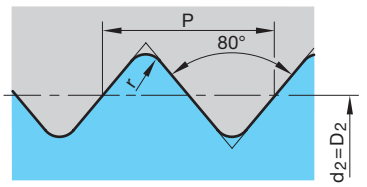
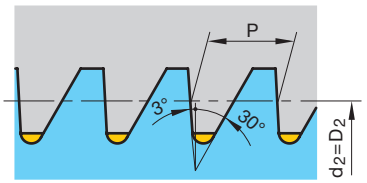
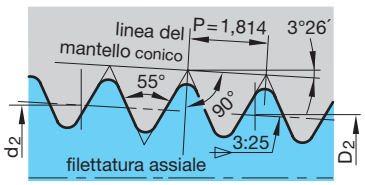
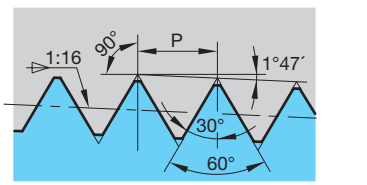


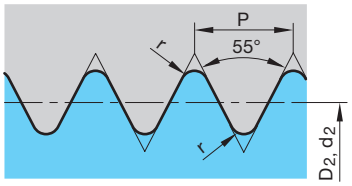
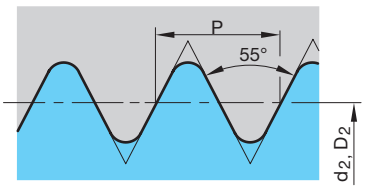
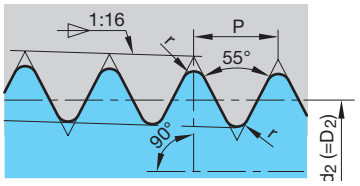
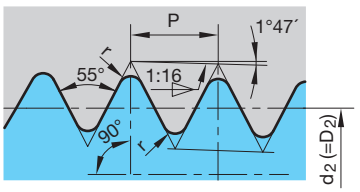
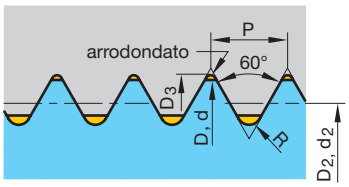
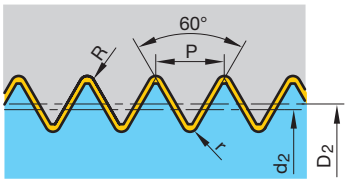
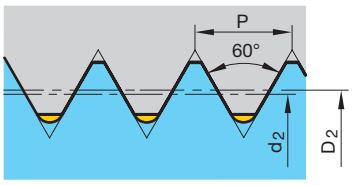
ASME B94.9

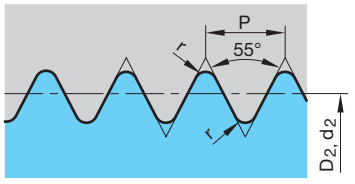
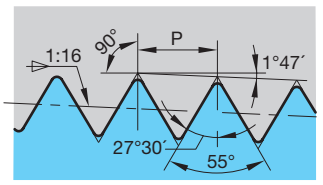
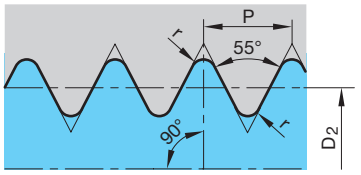
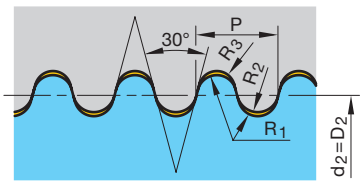
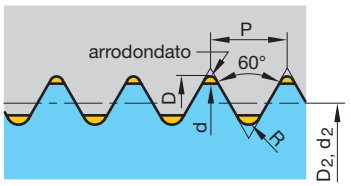
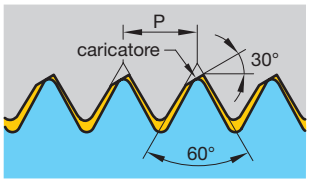
The American Society of Mechanical Engineers



contorno del profilo	Norma	Campo di impiego
M filettatura ISO metrica		
	DIN 13-1	regole generali di filettatura
UNC passo grezzo di filettatura unificata		
	ASME B1.1	UN regole generali di filettatura
UNEF passo di filettatura in pollice extra fine		
	ASME B1.1	UN extra generale filettatura fine
G Mascho per filettatura Pg cilindrica dove non è richiesta tramite un filetto la tenuta collegati		
	DIN EN ISO 228-1	per filettatura Pg collegamenti Pg e attrezzature
TR metrica ISO trapezioidale		
	DIN 103	Piano serraggio generale veicoli su binari
W filettatura cilindrica Whitworth		
	DIN 477	tappi laterali e accessori per valvole per bombole a gas
NPT filettatura base americana pollice standard conico con liquido di tenuta		
	ANSI/ ASME B1.20.1	filettature Pg e accessori

contorno del profilo	Norma	Campo di impiego
MF filettatura fine ISO metrica		
	DIN 13-2 seconda DIN 13-11	Passi fini in generale
UNF filettatura unificata a passo fine Inch		
	ASME B 1.1 filettatura trapezio-idale ISO metrica	UN passi fini in generale
UNS filettatura unificata speciale pollice		
	ASME B1.1	UN filettatura speciale generale
PG filettatura corazzata in Pg acciaio		
	DIN 40430 filettatura circolare cilindrica	elettrotecnico
S filettatura a dente di sega metrica		
	DIN 513	per mandrini regolabili da una parte forze vincolanti
W filettatura conica Whitworth		
	DIN 477	tappo di avvitamento e gola della bombola a gas per valvola della bombola a gas
NPTF filettatura base pollice standard americana tenuta conica a secco		
	ANSI B1.20.3	filettature Pg e accessori

contorno del profilo	Norma	Campo di impiego
BSW filettatura cilindrica Whitworth		
	B.S. 84 Standard britannico	filettature per Pg collegamenti base e attrezzature
BSP filettatura base cilindrica (indentica con G)		
	B.S. 93 Standard britannico	filettature per Pg collegamenti base e attrezzature
R Whitworth filettatura Pg filettatura esterna conica		
	DIN EN 10226 - 1 (basata su ISO 7- 1) in sostitu-zione della DIN 2999 -1	filettatura esterna per filettature Pg e accessori per ottenere una tenuta tramite filetto collegato
Rc Whitworth filettature Pg filettature interne coniche		
	DIN -EN -10226 -2 (in europa verranno proposte sostituibilicon filettatura Pg secondo ISO 7-1)	filettatura interna per filettature Pg e accessori per ottenere una tenuta tramite filetto collegato
MJ filettatura filettatura metrica		
	DIN ISO 5855-1	per aria e navigazione spaziale
Vg filettatura sedi valvole		
	DIN 7756	valvole per camera d'aria delle vetture scatole cambio valvole
MFS		
	DIN 8141	serrato in Allunimio - leghe di ghisa

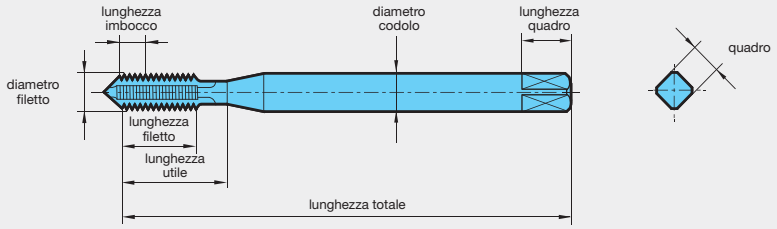
contorno del profilo	Norma	Campo di impiego
BSF Filettatura fine cilindrica Whitworth		
	B.S. 84 standard fine britannica	per filettatura Pg collegamenti Pg e attrezzature
BSPT filettatura base conica (identica con Rc)		
	B.S. 93 Standard britannico	filettatura interna per filettatura Pg e accessori
Rp filettatura Pg Whitworth filettatura interna cilindrica		
	DIN EN 10226 - 1 (baata su ISO -7-1) in sosti-tuzione di DIN - 2999-1	filettatura interna per filettatura Pg e accessori per ottenere una tenuta tramite filetto collegato
RD filettatura circolare cilindrica		
	DIN 405	generale, gancio di carico costruzione mineraria e industria alimentare
UNJ filettatura filettatura pollice		
	ISO 3161	per aria e navigazione spaziale
filiera MSG		
	a norma di fabbrica	filettatura autobloccante scatola cambio ,etc

bullone

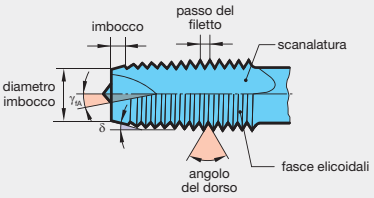
filiera

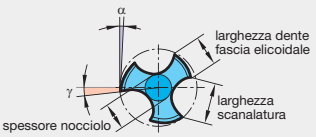
gioco

Definizioni ed angoli, centrature e tipi di scanalature



δ = Angolo imbocco
γ_{fA} = Angolo imbocco corretto
α = Angolo spoglia inferiore
γ = Angolo spoglia superiore





Tipi di scanalature

taglienti diritti, forma C **senza** imbocco corretto

taglienti diritti, forma B **con** imbocco corretto

elicoidali a **15°**

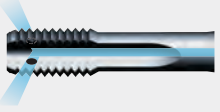
elicoidali a **40°**

Centrature (norma, secondo DIN 2197/DIN 2175)

Per diametro di filettatura mm	Tipo di centratura sulla parte tagliente		Tipo di centratura sul codolo
	per forme di imbocco A, C, D, E	per forme di imbocco B	
≤ 4,2	①	①	④⑤⑥
> 4,2 … 5,6	①②	①	④⑤⑥
> 5,6 … 10,0	①②③	①②③	④⑤⑥
> 10,0	③	③	⑥

Geometria fori di refrigerazione

alimentazione del refrigerante assiale con uscita assiale



alimentazione assiale con uscita radiale nelle scanalature all'altezza dell'imbocco

Imbocco, scelta ed impiego

Nel filettare internamente, l'intero lavoro di truciolatura grava sui denti dell'imbocco. Di conseguenza la scelta della forma di imbocco più adatta deve essere molto accurata, poichè da essa dipende non solo la durata del maschio, ma anche la qualità della filettatura.

La forma e la lunghezza dell'imbocco dipendono principalmente dal tipo di preforo, se passante o cieco. Il foro passante non richiede ulteriori definizioni. Al contrario con il termine foro cieco sono indicate tutte le forature nelle quali lo scarico del truciolo è in direzione contraria a quella dell'avanzamento ed esso deve quindi essere tagliato nel ritorno del maschio. Fori ciechi possono anche essere forature passanti.

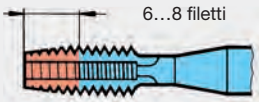
Anche la lunghezza dell'imbocco deve essere ben ponderata. Per evitare sovraccarichi, blocchi e filettature troppo grosse, non si deve tenere troppo basso il numero dei denti del filetto. D'altra parte un imbocco troppo lungo aumenta il momento di torsione e quindi fa insorgere pericolo di rottura. L'imbocco corretto forma B permette che lo scarico del truciolo avvenga nella direzione dell'avanzamento.

foro passante

foro cieco

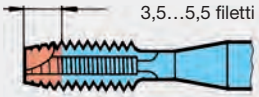
Forme di imbocco a DIN 2197

Forma A



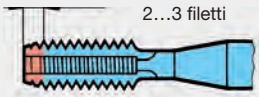
lunga, 6 - 8 filetti
per fori passanti corti

Forma B



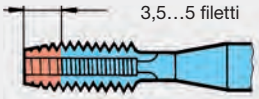
media, 3,5 - 5,5 filetti,
con imbocco corretto,
per tutti i fori passanti e
grosse profondità di filettatura in materiali
a truciolo medio e lungo

Forma C



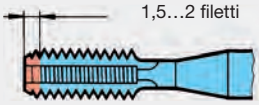
corta, 2 - 3 filetti
per fori ciechi ed
in generale per alu,
ghisa grigia ed ottone

Forma D



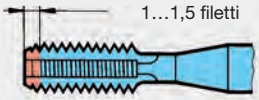
media, 3,5 - 5 filetti
per fori passanti corti

Forma E



molto corta, 1,5-2 filetti,
per fori ciechi con sbocco
del filetto molto corto.

Forma F

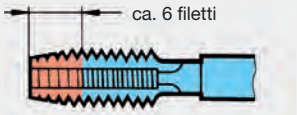


molto corta, 1,5-2 filetti,
per fori ciechi con sbocco
del filetto molto corto.
Da evitare se possibile.

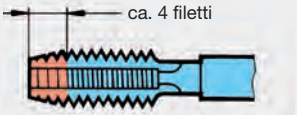
Imbocco, scelta ed impiego

Lunghezza di imbocco per serie di maschi, 3 pezzi

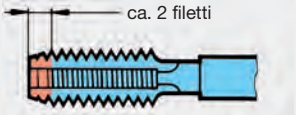
Forma A
per sbozzatore



Forma D
per intermedio

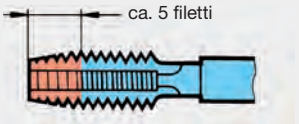


Forma C
per finitore

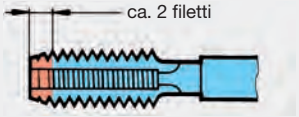


Lunghezza di imbocco per serie di maschi, 2 pezzi

Forma D
per sbozzatore



Forma C
per finitore



Consigli per l'impiego

Mentre il tipo di preforo determina in primo luogo l'imbocco, il resto della geometria del maschio, come forma, numero e direzione dei taglienti, angolo di taglio, ecc., dipendono anche dal materiale da lavorare e dal tipo di lavoro. Perciò i maschi per filettatura metrica ISO od in generale per lavo-razione di acciaio hanno, di norma, 3 taglienti fino a M 16, per misure superiori, 4 o più taglienti.

Maschi con taglienti elicoidali sinistri come pure maschi con imbocco corretto spingono i trucioli nella direzione di taglio e di avanzamento e sono quindi molto indicati per la lavorazione di fori passanti. Anche taglienti diritti ed imbocco lungo (forma D) danno in questo caso buoni risultati.

Per fori ciechi consigliamo maschi con taglienti elicoidali destri o diritti con imbocco corto. Gli utensili con taglienti destri portano i trucioli verso la parte posteriore in direzione del gambo. L'imbocco è concepito in modo tale che, nell'uscire, il truciolo non incolli, bensì sia facilmente asportato.

Per la lavorazione di alluminio, ghisa grigia ed ottone, sono necessari maschi speciali, generalmente con imbocco corto, sia che si tratti di fori passanti che di fori ciechi. Un imbocco lungo in questi materiali allargherebbe solo il preforo sul diametro nominale di filettatura invece di eseguire il filetto.

Maschi a taglienti diritti senza imbocco corretto sono utensili non specifici con lo svantaggio di non dare risultati ottimali nei singoli materiali. Vale la pena di fare lo sforzo di scegliere l'utensile più adatto per i vari tipi di lavorazione.

foro passante

maschi a taglienti diritti con imbocco corretto

maschi con taglienti elicoidali sinistri

maschi a taglienti diritti con imbocco lungo

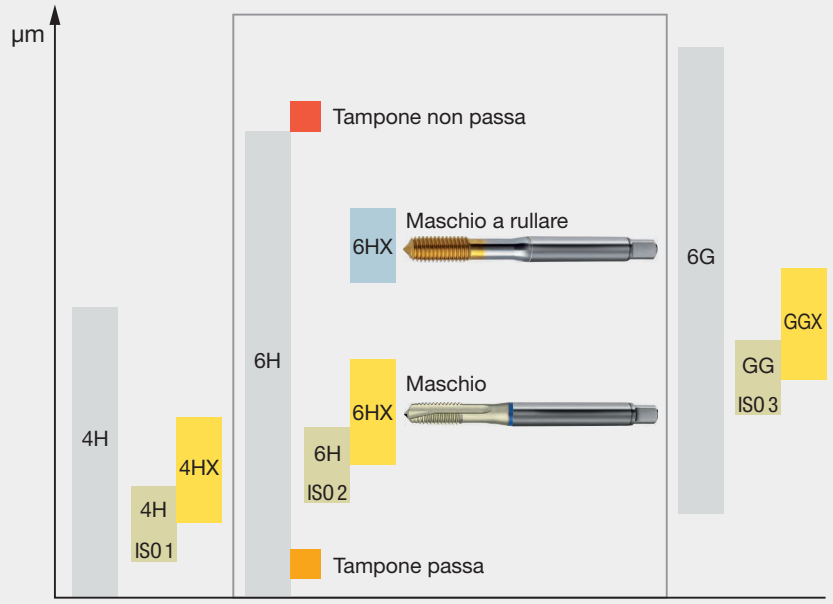
foro cieco

maschi con taglienti elicoidali destri

maschi a taglienti diritti con imbocco corto

Campi di tolleranza a DIN EN 22857

Filettatura metrica



Tolleranza filettatura interna a DIN ISO 965-1

Tolleranza filettatura a DIN EN 22857

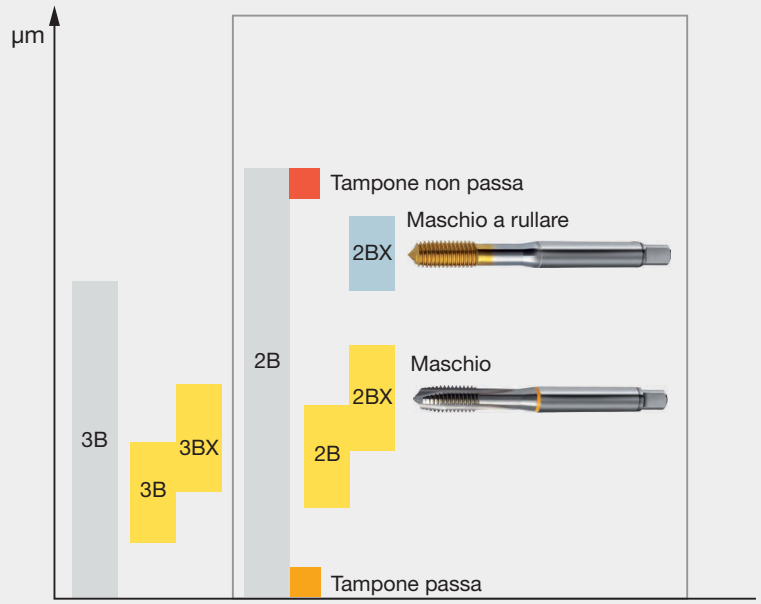
Tollernza filettatura a Gühring Standard

Tolleranza filettatura a rullare a Gühring Standard

Tolleranza Tampone non passa a DIN ISO 1502

Tolleranza tampone passa a DIN ISO 1502

Filettatura unificata



Tolleranza interna a ASME B1.1

Tolleranza filettatura a Gühring Standard

Tolleranza filettatura a rullare a Gühring Standard

Tolleranza tampone non passa a ANSI/ASME B1.2

Tolleranza tampone passa a ANSI/ASME B1.2

Maschi per filettatura metrica ISO a DIN EN 22857 (estratto)

Gli accoppiamenti dei filetti
Gli accoppiamenti di filetti interni ed esterni sono separati da un segno trasversale p. es. 6H/6g (madre/bullone). L'accoppiamento deve essere scelto corrispondentemente ai rispettivi collegamenti di filettatura.
I campi delle tolleranze medio, fine, grosso sono classificati in base ai tre gruppi di avvitamento normale (N), corto (S) e lungo (L). In generale, per la scelta della tolleranza, valgono le seguenti regole:

Tolleranza fine (S):
per filettature di precisione, quando sono consentite solo piccole variazioni nelle caratteristiche dell'accoppiamento.

Tolleranza media (N):
per impiego in generale.

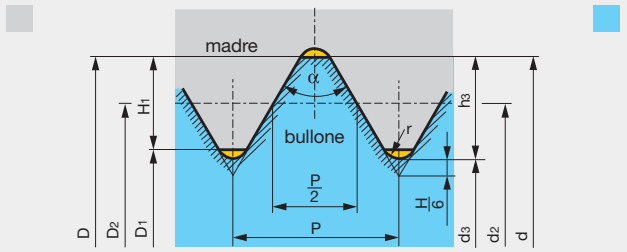
Tolleranza grossa (L):
quando non esistono particolari esigenze di precisione ed in casi, nei quali potrebbero insorgere difficoltà produttive, p. es.: in filettature di barre laminate a caldo, nel filettare fori base profondi oppure nel filettare pezzi in materie sintetiche.

Le lunghezze di avvitamento
Anche le lunghezze di avvitamento influenzano la qualità dei collegamenti di filetti. Il sistema di tolleranza ISO è stato predisposto - specificatamente per i diametri medi - su tre gruppi di avvitamento:

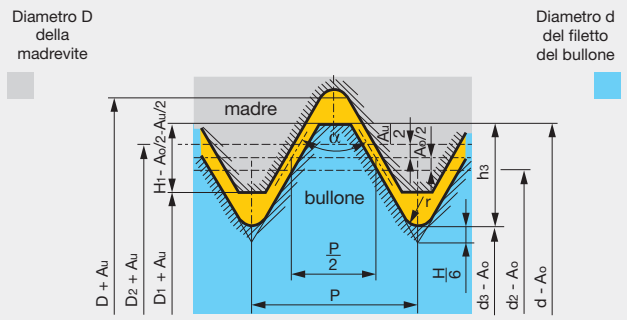
S	(Short)	= corto
N	(Normal)	= normale
L	(Long)	= lungo

Per la normale lunghezza di avvitamento N si devono scegliere i seguenti accoppiamenti:
Nell'interesse di una maggiore portata del collegamento dei filetti, consigliamo di scegliere, per avvitamenti stretti, accoppiamenti stretti. Per avvitamenti lunghi, per pareggiare gli scostamenti di passo, si devono scegliere accoppiamenti con tolleranze maggiori.

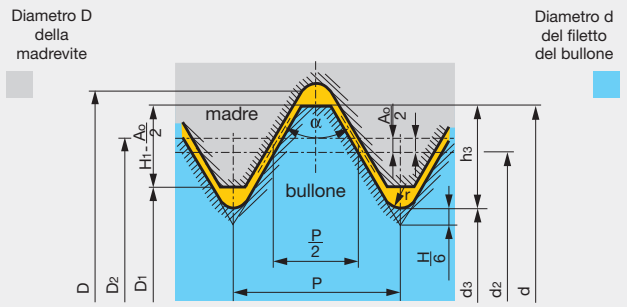
Gli accoppiamenti dei filetti con differenti giochi sui fianchi



Profilo zero nell'accoppiamento di filetti senza gioco sui fianchi (accoppiamento H/h)



Accoppiamento dei filetti con gioco largo sui fianchi (accoppiamento G/g o G/e) con scostamento di base nel bullone e nella madre.



Accoppiamento dei filetti con gioco stretto sui fianchi (accoppiamento H/g o H/e) con scostamento di base nel bullone.

Legenda
indicazioni formula

D	=	diametro nominale della madrevite
D_1	=	diametro preforo della madrevite
D_2	=	diametro medio della madrevite
d	=	diametro nominale del filetto del bullone
d_2	=	diametro preforo del filetto del bullone
d_3	=	diametro medio del filetto del bullone
P	=	passo
α	=	angolo del fianco
H	=	altezza del profilo del filetto
A_o	=	scostamento superiore
A_u	=	scostamento inferiore

Maschi per lavorazioni su acciai temprati (45 - 55 HRC)

Per le operazioni di maschiatura in materiali con una resistenza alla trazione superiore a 1200 N / mm² abbiamo sviluppato un maschio HSS-E-PM con rivestimento TiCN.

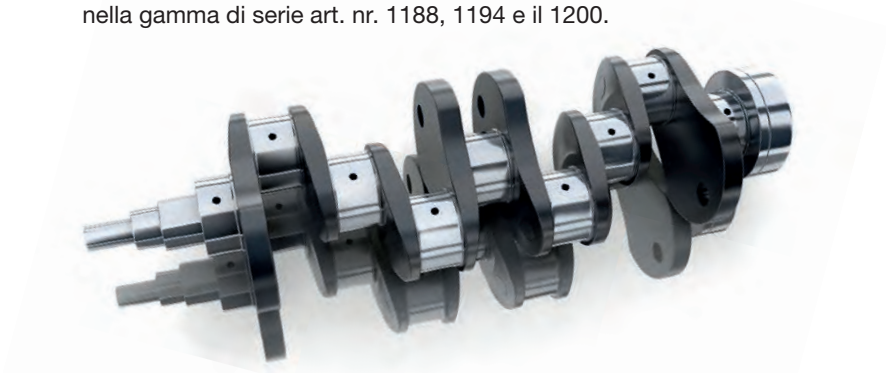
Lo speciale design rende il processo di produzione affidabile per filetti in materiali duri e fornisce un'eccellente durata dell'utensile.

Adatto per applicazioni nell'industria dello stampo e per varie lavorazioni o componenti automobilistici dopo il trattamento termico.

Consigliata vc velocità di taglio = 2 -8 m / min in base alla durezza del componente.

Processo affidabile di filettatura grazie a trucioli corti

Al fine di raggiungere l'affidabilità del processo assoluta e una lunga durata dell'utensile nella produzione in serie di acciai ad alta resistenza (850-1250 N / mm²), come ad esempio un albero motore, i trucioli corti sono essenziali. Questo è possibile solo in combinazione con scanalature lucide e alcune correzioni. Per questo, Guhring fornisce la soluzione ideale nella gamma di serie art. nr. 1188, 1194 e il 1200.



Maschi universali con lubrificazione interna per materiali a truciolo corto (GG, Al, Acciaio)

Solitamente, con un maschio i trucioli vengono evacuati da un foro cieco attraverso le scanalature a spirale. Ghisa, leghe di Alu e Si, ottone e rame sono materiali a truciolo corto. Sono necessarie scanalature dritte per tali materiali. Con i maschi con condotti di raffreddamento, il refrigerante evacua i trucioli corti dal foro cieco.

I nostri nuovi maschi M (art. N ° 302, 297,1091, 4165) e maschi MF (art. N ° 1007, 1090), con condotti di raffreddamento sono particolarmente adatti per i materiali a truciolo corto.

L'evacuazione trucioli lunghi da componenti in acciaio tramite le scanalature a spirale è un problema crescente.

Di conseguenza, l'obiettivo è di produrre trucioli corti con maschi a scanalature diritte ed evacuare dal foro cieco, con il lubrificante di raffreddamento.

Il maschio, con IC nel mandrino della macchina, raggiunge una maggiore durata dell'utensile e migliore qualità di superficie.

Le applicazioni tipiche sono la lavorazione di riduttori, blocchi cilindri e teste, alberi motore, corpi pompa, componenti idraulici etc.

Finitura lucida

I nostri utensili realizzati in acciaio ad alta velocità o in metallo duro di produzione propria offrono buone proprietà di base per la lavorazione di diversi materiali.

Vaporizzato

Quando vengono trattati a vapore, le zone di confine delle superfici in acciaio sono chimicamente modificate nella gamma micron, sviluppando così un rivestimento di ossido di ferro cristallino (3-10 µmm). Queste superfici migliorano la reazione degli utensili. Grazie a questa transizione superficiale, il lubrificante e il refrigerante aderiscono meglio all'utensile. Questo procedimento viene applicato per la lavorazione di acciaio al carbonio che tende a sviluppare bordi e saldature a freddo a basse velocità di taglio. Una nitrurazione aggiuntiva sugli utensili lucidi, assicura una maggiore durezza della superficie grazie all'incorporazione di azoto che rende possibile anche le applicazioni abrasive.

Rivestimento TiN

Max. temperatura di applicazione: < 600° C
Colore: oro
Durezza: 2300 $HV_{0,05}$

Introdotto dalla Guhring nei primi anni del 1980, viene considerato il rivestimento maggiormente usato per la filettatura su ampia scala.

Rivestimento TiCN

Max. temperatura di applicazione: < 400° C
colore: viola grigio
Durezza: 3000 $HV_{0,05}$

Un ulteriore incorporazione di carbonio aumenta la resistenza e la durezza di TiN e possiede un coefficiente di attrito inferiore rispetto al rivestimento TiN. Grazie alla sua resistenza all'usura è particolarmente adatto per applicazioni abrasive.

Rivestimento TiAlN

Max. Temperatura di applicazione: < 800° C
Colore: violetto
Durezza: 3300 $HV_{0,05}$

Il rivestimento TiAlN fornisce valori di durezza superiori, pur offrendo una maggiore stabilità termica, rispetto al TiN e TiCN ed è molto adatto per l'uso nella fusione e nella lavorazione di acciaio in generale.

Rivestimento SIRIUS

Max. Temperatura di applicazione: < 900° C
Colore: oro chiaro
Durezza: 3400 $HV_{0,05}$

Il Sirius è un rivestimento multistrato. Grazie alla sua componente TiAlN ha una maggiore resistenza all'usura e allo stesso tempo una minore tendenza alla accumulo di bordi. È particolarmente adatto per la lavorazione di filettature foro passante in acciaio inox.

Rivestimento Carbo

Max. Temperatura di applicazione: < 500° C
Colore: grigio nero
Durezza: 5000 $HV_{0,05}$

Lo strato di carbonio amorfo (ta-C) apre un ampio campo di applicazione nel campo dei metalli non ferrosi. Il carbonio può essere applicato per la maschiatura semplice, maschiatura rullare e per la lavorazione di ghisa alluminio (<12% Si) e leghe di alluminio battuto, rame, ottone e bronzo.

Rivestimento AlCrN

Max. Temperatura di applicazione: < 1100° C
Colore: grigio blu
Durezza: 3200 $HV_{0,05}$

AlCrN può essere un'alternativa al rivestimento Tin / TiCN in maschiatura a rullare del settore acciai. Il rivestimento Ti eccelle grazie alla sua eccellente resistenza all'usura ed all'elevata resistenza all'ossidazione.

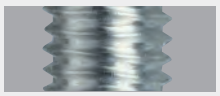
	Maschi			Frese a filettare		Maschi a rullare		
	Metallo duro		HSS	Metallo duro		Metallo duro		HSS
	convenzionale	MMS		convenzionale	MMS	convenzionale	MMS	
Acciaio al Carbonio,	-	-	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
Automatici,	-	-	TiAlN	-	-	TiN	TiN	TiN
Acciai Mn	-	-	TiN	-	-	-	-	-
	-	-	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
Acciao, basse leghe	-	-	TiAlN	-	-	TiN	TiN	TiN
	-	-	TiN	-	-	-	-	AlCrN
	-	-	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
Acciaio legato	-	-	TiAlN	-	-	TiN	TiN	TiN
	-	-	TiN	-	-	-	-	AlCrN
	-	-	TiCN	TiAlN	TiAlN	-	-	-
Acciao temprato <55 HRC	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	TiCN	-	-	TiAlN	TiAlN	-	-	-
Acciao temprato 55-65 HRC	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	Sirius[1]/TiAlN[2]	TiCN	TiCN	TiCN	TiCN	TiCN
Acciaio, inossidabile e resistente agli acidi	-	-	TiN	-	-	TiN	-	TiN
	-	-	-	-	-	-	-	-
	TiAlN	TiAlN	TiAlN	TiCN	TiCN	TiCN	TiCN	TiCN
Ghisa	TiCN	-	TiCN	-	-	TiN	TiN	TiN
	-	-	TiN	-	-	-	-	-
	lucido	lucido	lucido	lucido	lucido	Carbo	Carbo	Carbo
Lega di alluminio battuto	Carbo	Carbo	Carbo	-	-	-	-	-
	-	-	-	-	-	-	-	-
	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
Pressofuso in lega di alluminio (<12% di silicio)	-	-	-	lucido	lucido	Carbo	Carbo	Carbo
	-	-	-	-	-	-	-	-
	TiCN	TiCN	TiCN	TiCN	TiCN	-	-	-
Lega di alluminio (≥ 12% di silicio)	Cristall	-	-	Cristall	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
Leghe di nichel-base (per esempio, Inconel)	-	-	TiAlN	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
Leghe di titanio / titanio	-	-	TiAlN	-	-	-	-	-
	lucido	lucido	lucido	lucido	-	Carbo	Carbo	Carbo
Rame / bronzo / ottone	Carbo	Carbo	Carbo	-	-	-	-	-
	lucido	-	lucido	TiCN	TiCN	-	-	-
Leghe di cobalto-cromo	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
Metalli preziosi	-	-	-	-	-	-	-	-
Ceramica	-	-	-	-	-	-	-	-
Materie plastiche, non rinforzate	lucido	-	lucido	lucido	lucido	-	-	-
Materie plastiche rinforzate con fibre	TiCN	TiCN	-	TiCN	TiCN	-	-	-
	-	-	-	-	-	-	-	-

[1]... con foro passante [2]... con foro cieco

Nota:

Lo schema mostra le raccomandazioni generali dell'applicazione dei rivestimenti Gühring. La priorità viene effettuata in ciascun caso da cima a fondo.

Errori, cause e contromisure con utensili nuovi

Errore	Possibile causa	Contromisure
1. La superficie filettata non corrisponde alla esigenze (non pulita) 	Geometria tagliente non adatta per l'impiego	Usare il maschio „giusto" per il materiale da lavorare
	Velocità di taglio troppo elevata	diminuire velocità di taglio ottimizzare lubrificanzione
	Refrigerante insufficiente (composizione ed adduzione)	Adottare il refrigerante adatto nel quantitativo sufficiente
	Intasamento da trucioli	Impiegare un tipo di maschio adatto
	Foro di filettatura troppo piccolo	Tenere presenti le indicazioni del Ø del foro di filettatura a DIN 336 o norma corrisponde Controllare le tabelle per maschi a rullare
	Con materiali tenaci, carico utensile troppo alto ovvero passo eccessivo	Impiego di serie di maschi
	Taglienti di riporto	Impiegare maschi con trattamento di superficie
	Saldature a freddo	Migliorare adduzione refrigerante
2. Durata di impiego troppo corta	Superficie foro filettatura indurita	verificare l'usura dell'utensilea forare effettuare trattamento termico o disuperficie dopo la filettatura
	Tutti i motivi elencati in „la superficie filettata non corrisponde alle esigenze"	Vedere errori: „la superficie filettata non corrisponde alle esigenze"
	Intasamento da trucioli	Impiegare il giusto maschio
3. Rottura dell'utensile in entrata o nella corsa di ritorno	Foro di filettatura troppo piccolo	Verificare i diametri dei fori di filettatura a DIN 336 o norma corrisponde
	Filetti di imbocco sovracaricati	controllare lunghezza imbocco (foro cieco o passante) aumentare il numero dei filetti diimbocco con più taglienti impiegare serie di maschi
	Il maschio arriva fino al fondodel foro filettato	verificare profondità di foro impiegare mandrini di maschiatura con compensazione di lunghezza e/o sicurezza sovracarico momento torcente
	svasatura del foro filettato mancanteo sbagliata errore di posizionamento o dell'angolo del foro di filettatura	effettuare la svasatura del forofilettato con l'angolo giusto verificare l'esattezza del serraggio usare mandrino di maschiatura conoscillazione parallela all'asse controllare la punta per preforo
	durezza utensile non adatta per illavoro geometria tagliente non adattaper il lavoro	Impiegare il maschio adatto al lavoro

Errori o difficoltà con utensili riaffilati

Errore	Possibile causa	Contromisure
1. Il filetto diventa troppo grosso	Bave di rettifica	Eliminare le bave
	Geometrie taglienti (angoli di imbocco, spoglia inferiore e superiore, angolo imbocco corretto) non mantenute	Nella riaffilatura tenere conto dei dati tecnici e delle prescrizioni
2. Il filetto diventa troppo stretto	Parte usurata non riaffilata bene	Riaffilare nuovamente od impiegare maschio nuovo, tenere conto limite max. riaffilature
	Maschio minorato per eccessivo numero di riaffilature	Raggiunto limite max. riaffilature. Impiegare maschio nuovo
3. La superficie filettata non corrisponde alla esigenze (non pulita)	Bave di rettifica	Eliminare le bave
	Geometrie taglienti (angoli di imbocco, spoglia inferiore e superiore, angolo imbocco corretto) non mantenute	Nella riaffilatura tenere conto dei dati tecnici e delle prescrizioni
	Profondità di rugosità di superficie eccessiva sul maschio riaffilato	Riaffilare nuovamente Seguire istruzioni per riaffilatura
	Formazione di saldature a freddo sui fianchi del maschio	rimuovere le formazioni
4. Durata di impiego troppo corta	Geometrie taglienti (angoli di imbocco, spoglia inferiore e superiore, angolo imbocco corretto) non mantenute	Nella riaffilatura tenere conto dei dati tecnici e delle prescrizioni
	Perdita di durezza dell'utensile perinflusso termico durante la riaffilatura	controllare qualità della mola controllare adduzione refrigerante
	Perdita del trattamento di superficie	ricoprire nuovamente verificare ricopertura in base almateriale da lavorare

Filettature ottenute con sagomatura a pressione

I maschi a rullare sono utensili per l'esecuzione, senza asportazione di trucioli, di filettature interne. Al contrario della maschiatura, nella quale il materiale viene asportato dal pezzo in lavorazione, nella maschiatura a rullare il pezzo in questione viene modellato a freddo. La filettatura interna è infatti ottenuta tramite un'operazione di deformazione per compressione senza formazione di truciolo e senza interrompere il corso della fase.

La maschiatura a rullare è definita, secondo DIN 8583, come l' "impronta del filetto in un pezzo in lavorazione tramite un utensile dotato di una superficie efficace elicoidale". La sezione elicoidale del filetto del maschio, realizzata seguendo una poligonale, viene condotta nel pezzo in lavorazione, precedentemente forato, con un avanzamento adeguato, ovvero proporzionato al passo del filetto. Il profilo del filetto viene gradualmente impresso nel pezzo in lavorazione, partendo dall'avvicinamento (imbocco) della sezione del filetto. La tensione supera il limite di deformazione della zona da filettare ed il materiale subisce così deformazione plastica. Il materiale si muove radialmente, "scorre" lungo il profilo del filetto nella base libera del dente e crea così il diametro di nocciolo della madrevite. Grazie a tale processo di scorrimento, sulle punte dei filetti si formano tasche sagomate (graffe) specifiche del procedimento.

Il diametro di preforo dipende soprattutto dalla duttilità del materiale, dalla geometria del pezzo in lavorazione e dalla profondità di innesto voluta. A differenza delle operazioni di maschiatura con asportazione di truciolo, il diametro di preforo deve essere di dimensioni maggiori. Con diametri di preforo maggiori, diminuisce lo sforzo dell'utensile e, contemporaneamente, aumenta la vita dell'utensile. La capacità di carico della filettatura, negli acciai anche con una profondità di innesto del 50 per cento, risulta ancora affidabile grazie alla continuità delle fibre ed alla deformazione a freddo.

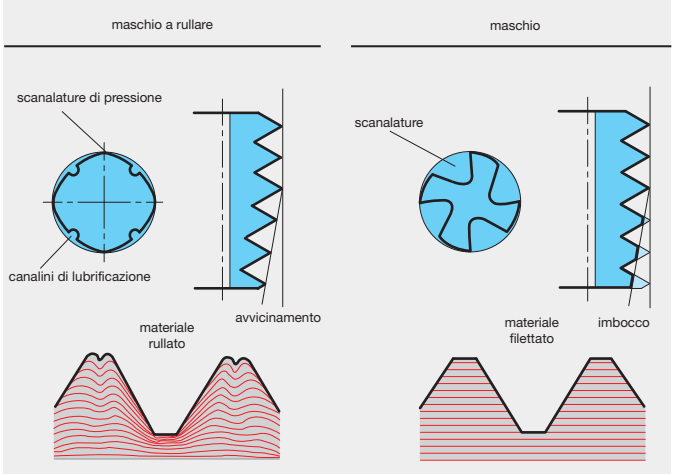
Le punte dei filetti che terminano in modo incompleto, in corrispondenza delle parti terminali, sono una caratteristica dei filetti modellati. Con fianchi completamente conformati, esse non hanno alcuna influenza sulla resistenza del filetto. Il grado di deformazione del filetto deve essere, all'occorrenza, verificato tramite una prova.

Nella maschiatura a rullare è decisivo il ruolo giocato dalla lubrificazione. Essa evita che del materiale si depositi sui dorsi dei filetti e garantisce che il momento torcente, che è fondamentale, non diventi troppo elevato. Per questo la lubrificazione non deve assolutamente mancare. I refrigeranti grafitati oppure gli olii nella maschiatura a rullare, così come nella rullatura, sono i più indicati. Lavorate sempre secondo la filosofia "una buona lubrificazione è una maschiatura per metà già completata".

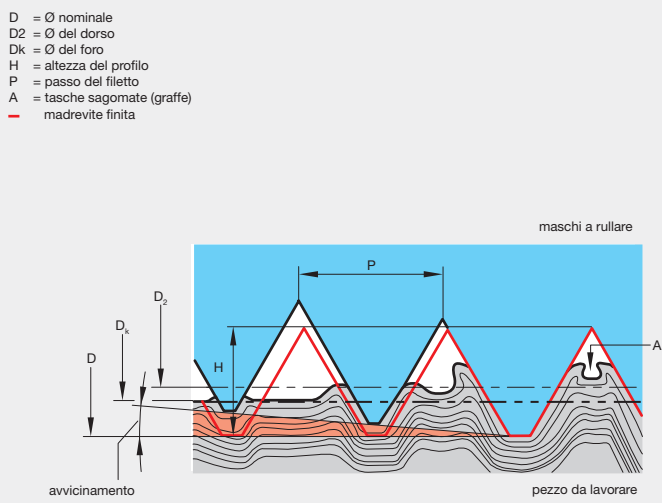
Il vantaggi della maschiatura a rullare

- Nessuna asportazione di trucioli.
- Possono essere realizzate con lo stesso utensile filettature in fori passanti e ciechi
- Si può lavorare un'ampia gamma di materiali.
- Non si verifica un accavallamento dei filetti.
- A differenza delle filettature per asportazione non si verificano errori di passo del filetto e di angolo del dorso.
- Filettature interne di rullatura hanno una maggiore resistenza, specialmente nei fianchi dei filetti portanti, grazie al cosìdetto "corso ininterrotto della fase" ed alla deformazione a freddo.
- Il filetto presenta una migliore qualità di superficie.
- I maschi a rullare possono essere impiegati con velocità di taglio superiori, in quanto la deformabilità di parecchi materiali cresce all'aumentare della velocità di sagomatura.
- Limitato pericolo di rottura grazie alla costruzione stabile dell'utensile.

Metodo di lavoro
La filettatura interna senza asportazione trucioli (rullatura) raffrontata con la maschiatura



Il comportamento di scorrimento del mat. lavorato nella deformazione a pressione con maschi a rullare



Maschi a rullare Gühring „Profile“
Caratteristiche e vantaggi

Solo i maschi a rullare ottenuti per molatura presentano, sulla superficie dell'utensile, striature più o meno fitte e microscopiche. Questo vale anche per la lunghezza filettante che il processo di sagomatura deve realizzare.

Questa “topografia” (struttura) di superficie si ripercuote negativamente sull'attrito tra utensile e materiale da sagomare e sul conseguente sviluppo di calore, sul momento torcente (che è fondamentale) e, non ultimo, sull'usura delle scanalature sagomatrici a pressione. Inoltre le “striature di molatura” favoriscono il fissaggio del materiale da deformare nei fianchi del maschio a rullare. In questo caso si dice che si ha deposito di materiale.

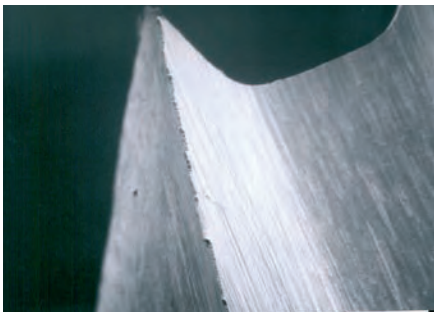
Grazie ad una speciale tecnica di miglioramento della “topografia” di superficie, con i nuovi maschi a rullare non si hanno più le “striature di molatura”. Ciò è messo in evidenza da prove e da test condotti in condizioni di produzione, in differenti materiali.

Questa speciale tecnica garantisce durata maggiore dell'utensile e velocità di taglio superiori. I tempi di impiego, a seconda del materiale da lavorare e delle condizioni di utilizzo, possono aumentare considerevolmente. Non sono rari tempi di impiego raddoppiati.

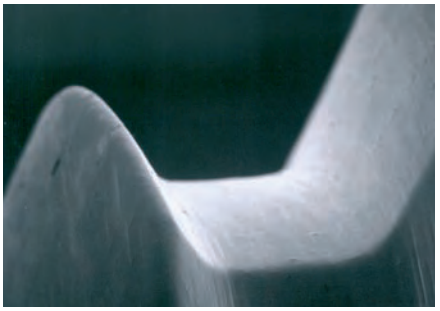
Questa migliorata “topografia” di superficie risulta vantaggiosa non solo per gli utensili lucidi. Sono gli utensili ricoperti a trarre particolare beneficio dalla nuova tecnica.

Contorno esterno ed avvicinamento determinano in grande misura il rendimento del maschio a rullare. Numerose prove hanno infatti dimostrato che il nostro maschio “Profile”, con geometria e numero delle scanalature di pressione ottimali, permette tempi di impiego elevati e precisione delle dimensioni.

Otteniamo un ulteriore progresso qualitativo grazie alla realizzazione, in un solo bloccaggio e con una sola mola ravvivata con un rullo speciale, dell'intera geometria del maschio a rullare.
Non ci sono errori di passo all'apice del filetto nel trasferimento dell'avvicinamento, come di solito capita lavorando con la mola.

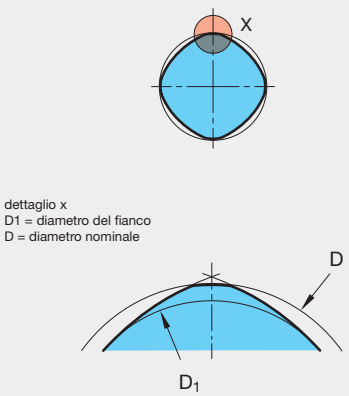


Dente di un maschio a rullare tradizionale

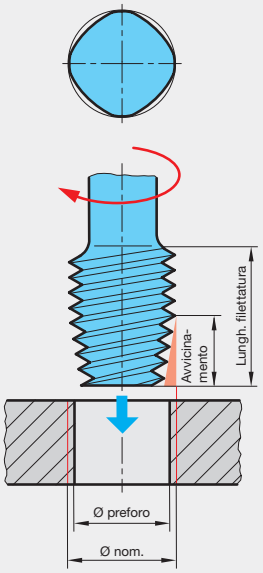


Superficie ottimizzata di un maschio a rullare Gühring

Il tagliente trasversale del maschio a rullare



Il principio di funzionamento



Tipi di preforo

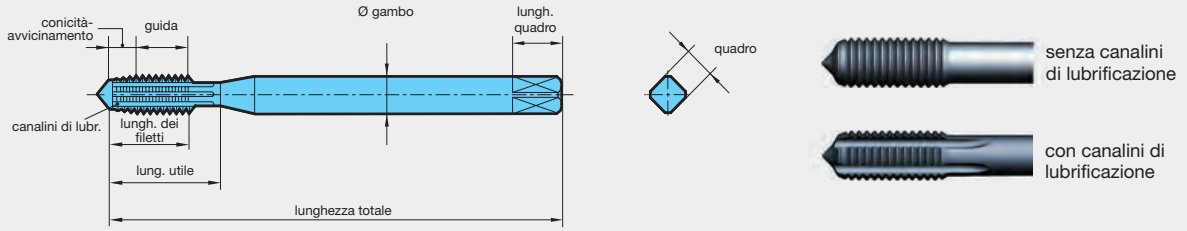
Maschi a rullare senza canalini di lubrificazione per filettature ≤ 1 x D

per filettature ≥ 1 x D

Maschi a rullare con canalini di lubrificazione per tutte le filettature

Definizioni ed angoli, centrature ed accoppiamenti dei filetti

Parte filettata



Centrature (regola, secondo DIN 2197/DIN 2175)

Per diametro di filettatura mm	Tipo di centratura sulla parte tagliente		Tipo di centratura sul codolo
	per forme di imbocco A, C, D, E	per forme di imbocco B	
≤ 5,6	①	①	④⑤⑥
> 5,6 ... 12,8	①②③	①②③	④⑤⑥
> 12,8	③	③	⑥

Gli accoppiamenti dei filetti

Gli accoppiamenti di filetti interni ed esterni sono separati da un segno trasversale p. es. 6H/6g (madre/bullone). L'accoppiamento deve essere scelto corrispondentemente ai rispettivi collegamenti di filettatura.
I campi delle tolleranze medio, fine, grosso sono classificati in base ai tre gruppi di avvitamento normale (N), corto (S) e lungo (L). In generale, per la scelta della tolleranza, valgono le seguenti regole:

Tolleranza fine (S):
per filettature di precisione, quando sono consentite solo piccole variazioni nelle caratteristiche dell'accoppiamento.

Tolleranza media (N):
Allgemeine Verwendung

Tolleranza grossa (L):
quando non esistono particolari esigenze di precisione ed in casi, nei quali potrebbero insorgere difficoltà produttive, p. es.: in filettature di barre laminate a caldo, nel filettare fori base profondi oppure nel filettare pezzi in materie sintetiche.

Le lunghezze di avvitamento
Anche le lunghezze di avvitamento influenzano la qualità dei collegamenti di filetti. Il sistema di tolleranza ISO è stato predisposto - specificatamente per i diametri medi - su tre gruppi di avvitamento:

S (Short) = corto
N (Normal) = normale
L (Long) = lungo

Per la normale lunghezza di avvitamento N si devono scegliere i seguenti accoppiamenti:
nell'interesse di una maggiore portata del collegamento dei filetti, consigliamo di scegliere, per avvitamenti stretti, accoppiamenti stretti. Per avvitamenti lunghi, per pareggiare gli scostamenti di passo, si devono scegliere accoppiamenti con tolleranze maggiori.

Diametro del preforo

Nella maschiatura a rullare, il diametro del preforo influenza l'impronta del filetto rullato. Un preforo troppo piccolo porta ad una rullatura eccessiva e deve essere assolutamente evitato, perchè potrebbe anche portare alla rottura dell'utensile. Un diametro del preforo troppo grosso potrebbe essere accettato in determinate tolleranze, dato che filetti rullati hanno un carico ammissibile sufficiente già dal 50% dell'altezza utile.

Utilizzando l'esempio di una filettatura M18x1,5 mm, l'influenza del diametro selezionato nel foro di carotaggio mostra chiaramente:

M 18 x 1,00	**17,55**	**17,52**	**17,62**	**16,917**	**17,217**
M 18 x 1,50	**17,30**	**17,26**	**17,38**	**16,376**	**16,751**
M 18 x 2,00	**17,10**	**17,05**	**17,20**	**15,835**	**16,310**

Preforo-Ø 17,1 mm

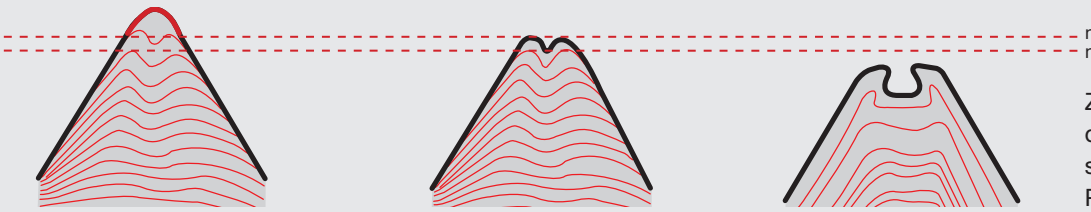
Preforo-Ø 17,3 mm

Preforo-Ø 17,4 mm

Ø preforo troppo piccolo
- filetto troppo sagomato
- nessuna tasca sagomata (graffa)
- altezza profilo eccessiva

Ø preforo ottimale
- filetti completamente sagomati
- tasche sagomate (graffe) piccole
- altrezza profilo ottimizzata

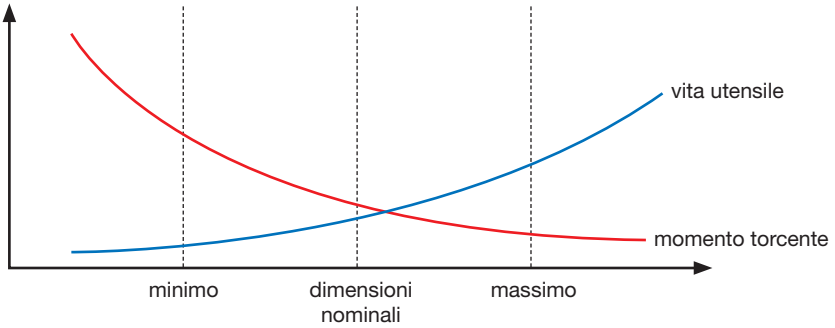
Ø preforo troppo grosso:
- filetto non sagomato
- tasche sagomate (graffe) grosse
- altezza profilo troppo bassa



Zona di tolleranza diametro del nucleo secondo DIN 13, Parte 50

Influenza del foro di maschiatura sulla durata dell'utensile, la sicurezza e la coppia di processo

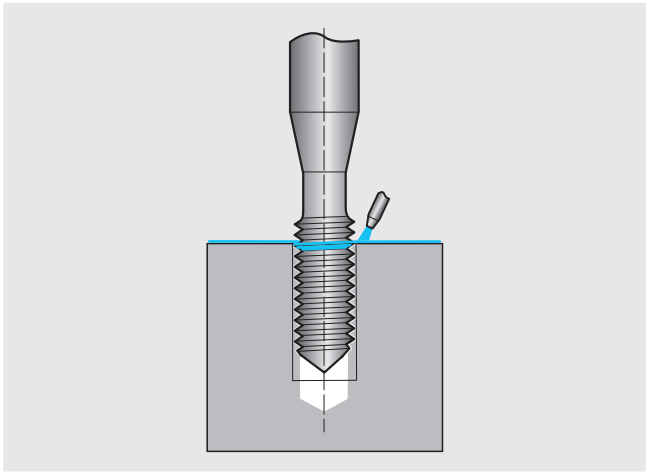
L'ottimizzazione del diametro pre-foratura è particolarmente utile nella produzione di massa. Più grande è, maggiore è la durata dell'utensile e minore è la coppia richiesta.
Il grafico mostra chiaramente il rapporto.



Lubrificanti per maschiatura a rullare

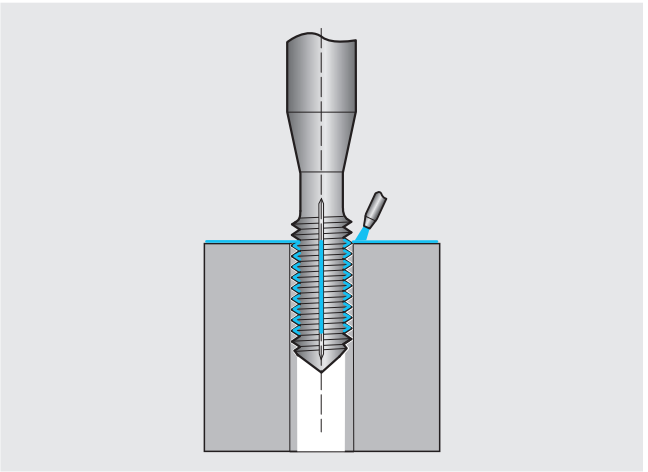
Per la progettazione dell'utensile dovrebbero essere considerate 4 differenze.

Lavorazione verticale del foro cieco



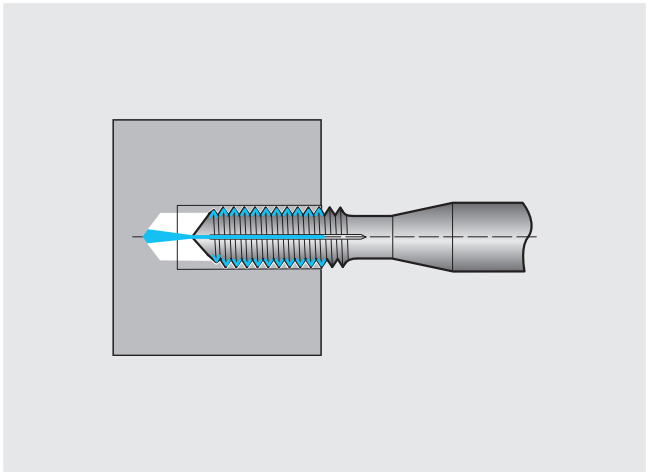
Lubrificazione e adduzione refrigerante interna non necessaria; è sufficiente l'alimentazione di refrigerante esterna (per le filettature profonde si raccomanda refrigerante assiale).

Lavorazione verticale del foro passante (> 1,5xD_N)



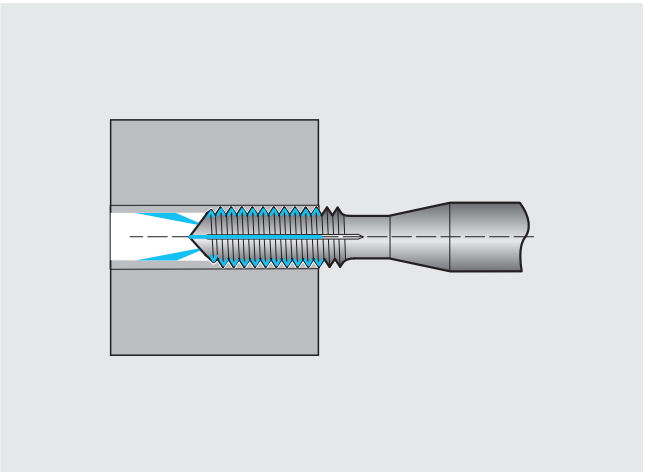
È necessaria la lubrificazione; L'adduzione interna non è necessaria. Con le scanalature di lubrificazione, il liquido di raffreddamento erogato esternamente può avanzare fino ai bordi (per le filettature profonde si raccomanda refrigerante radiale).

Lavorazione orizzontale del foro cieco



Scanalature di lubrificazione e adduzione refrigerante interna necessarie. Uscita del liquido di raffreddamento assiale sufficiente.

Lavorazione orizzontale del foro passante



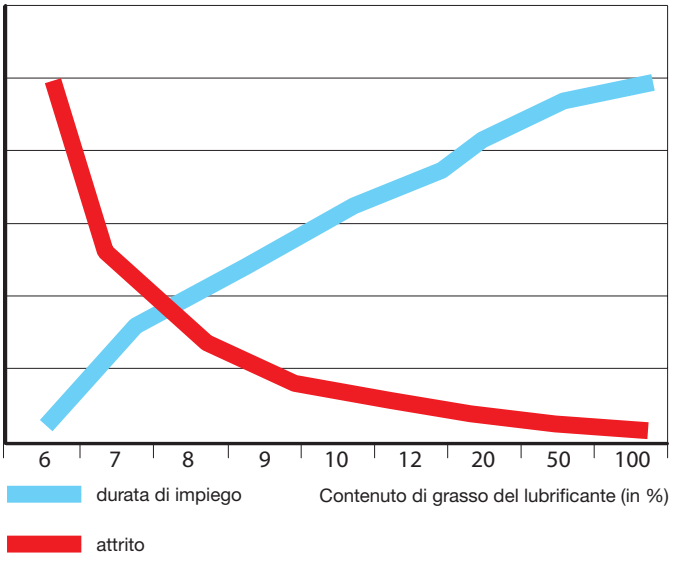
Lubrificazione richiesta. Si raccomanda liquido di raffreddamento interno con uscita radiale.

Lubrificanti per maschiatura a rullare

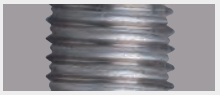
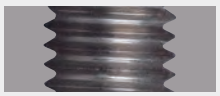
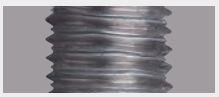
Nella maschiatura a rullare il compito principale del refrigerante è la lubrificazione. Più lubrificante, con il maggior quantitativo possibile di grasso, si impiega, maggiore diventa la durata dell'utensile.
Si distinguono due tipi di lubrificanti:

lubrificanti non emulsionabili con acqua
Sono olii minerali con le migliori proprietà lubrificanti. Eliminano l'attrito e danno le massime durate di impiego.

Lubrificanti emulsionati con acqua
Questi lubrificanti emulsionabili sono ottenuti diluendo con acqua il concentrato prima dell'impiego. Qui il contenuto non deve essere inferiore al 6%. Ideale sarebbe un contenuto >12%, per ottenere, con una buona azione lubrificante, una durata di impiego elevata.



Errori, cause e contromisure con maschi a rullare nuovi

Errore	Possibile causa	Contromisure
1. Filetti rullati troppo stretti 	diametro preforo eccessivo	scegliere l'esatto preforo di filettatura in base alla tabella
2. Filetti rullati oltre misura 	diametro preforo troppo piccolo	scegliere l'esatto preforo di filettatura in base alla tabella
3. Superficie filettata non pulita 	taglienti di riporto sull'utensile	aumentare il grasso nel refrigerante o usare olio
	refrigerante con contenuto di grasso insufficiente	aumentare il grasso nel refrigerante o usare olio
4. Durata di impiego troppo corta	refrigerante con contenuto di grasso insufficiente	aumentare il grasso nel refrigerante o usare olio
	preforo troppo piccolo	scegliere l'esatto preforo di filettatura in base alla tabella
	velocità di taglio troppo alta	adeguare la velocità di taglio
	refrigerante sporco	controllare il filtraggio
5. Rottura utensile	refrigerante con contenuto di grasso insufficiente	aumentare il grasso nel refrigerante o usare olio
	diametro preforo troppo piccolo	scegliere l'esatto preforo di filettatura in base alla tabella
	cattivo serraggio dell'utensile	verificare serraggio utensile

Quali sono i vantaggi della fresatura a filettare rispetto alla maschiatura e alla maschiatura a rullare?

- Differenti materiali possono essere lavorati con un solo utensile (alluminio, acciaio, ghisa, acciaio inossidabile, titanio, Inconel, max. HRC 65 e più)
- Vari diametri e tolleranze sono possibili con un solo utensile (cioè 6H + 0,1, 7G, EG e molto altro).
- Un utensile per fori passanti e ciechi, nonché filettature destre e sinistre
- Profondità di filettatura possibile fino alla base del foro (0.5xP).
- Nessuna miscelazione assiale
- Riduzione delle posizioni utensili (tipo TCM, tipo DTMC)
- Rimozione dei trucioli senza problemi, vengono infatti creati trucioli corti
- Riduzione dei costi di lavorazione con lo stesso passo e grandi filettature (tipo TMU)
- Brevi tempi di ciclo grazie all'alta velocità di taglio e di avanzamento
- Elevata sicurezza di processo anche in caso di rottura dell'utensile, la fresa a filettare può essere completamente rimossa dal pezzo e dalla macchina
- Alta efficienza economica grazie al servizio di riaffilatura utensili Guhring

Tipi di frese a filettare Gühring

TM SP – Fresatura a filettare senza svasatura

- Opzione semplice e conveniente per la fresatura di filettature interne
- 2-3 filettature aventi lo stesso passo possono essere fatte sulla dimensione nominale specificata
- 2-3 filettature aventi lo stesso passo possono essere fatte sulla dimensione nominale specificata ≤ 1000 N/mm²
- Disponibile con o senza raffreddamento interno

Tipi di filettatura: M, MF, UNC, UNF, G, NPT, NPTF

TMC SP – Fresatura a filettare con svasatura a 45°

- Svasatura e fresatura di filetti con un solo strumento
- Esecuzione molto liscia e forze laterali basse
- Progettata per l'applicazione di materiali difficili da lavorare, disponibile anche senza svasatura
- Possono essere prodotte, sulla dimensione nominale specificata, 2-3 dimensioni del filetto con lo stesso passo
- Disponibile solo con raffreddamento interno

Tipi di filettatura: M, MF,UNC, UNF,G, NPT, NPTF

TMU SP – Fresa universale con collarino

- Applicazioni universali
- Per diverse dimensioni della filettatura con lo stesso passo, per esempio filettare M30x1,5 con la fresa Ø12xM1,5, Ø16xM1,5 o Ø20xM1,5
- Disponibile solo con refrigerazione interna

Tipi di filettatura: M, MF, G, UN, NPT, NPTF
e filettatura esterna M, MF, G

DTMC SP – Frese fora filetta con 2 taglienti e smusso a 45°

- Foratura, svasatura e fresatura di filetti con un unico strumento
- Riduzione dei tempi di lavorazione, dei costi di lavorazione e del magazzino
- Utilizzare solo in alluminio, ghisa, ottone e plastica
- Disponibile con o senza raffreddamento interno

Tipi di filettatura: M, MF, UNC, UNF

MTM 3 SP – Micro frese a filettare (3 taglienti)

- Dimensione della filettatura e il passo sono fissi
- Eccellenti proprietà nei materiali ad alta resistenza come il titanio, VA etc.
- Adatto per lavorazione di acciai temprati 45HRC-65HRC
- Filettatura per 3xD
- Disponibile con o senza raffreddamento interno

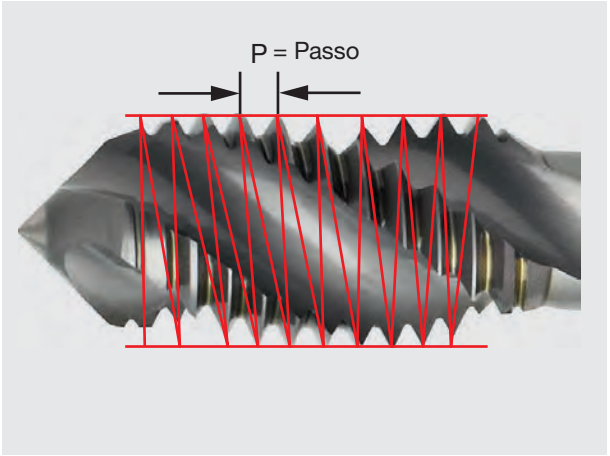
Tipi di filettatura: M, MF, G, UNC, UNF, MJ, UNJC, UNJF

MTM 1 SP – Micro frese a filettare (1 tagliente)

- produzione universale dei diametri nominali di filettatura fino al passo massimo
- Disponibile solo con raffreddamento interno

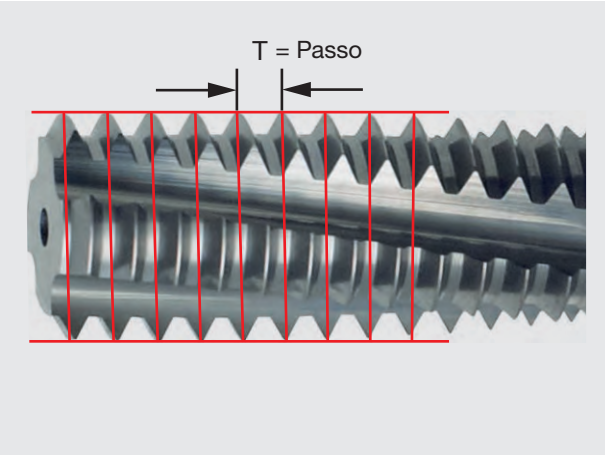
Tipi di filettatura: M, MF

Maschi



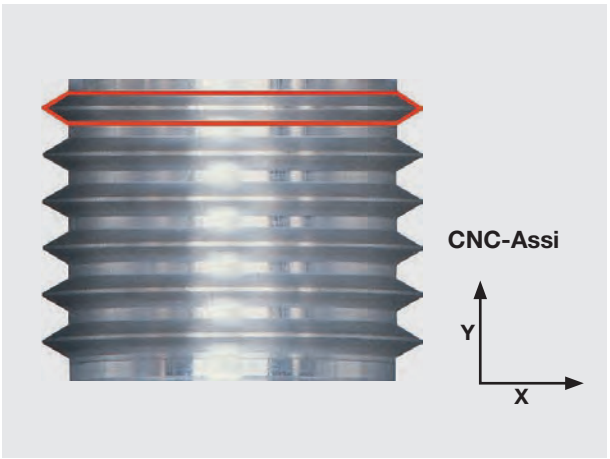
Le linee rosse indicano l'angolo di inclinazione della filettatura che viene creata nell'utensile.
Questo significa che il passo viene tagliato all'interno del pezzo da lavorare dall'utensile.

Frese a filettare

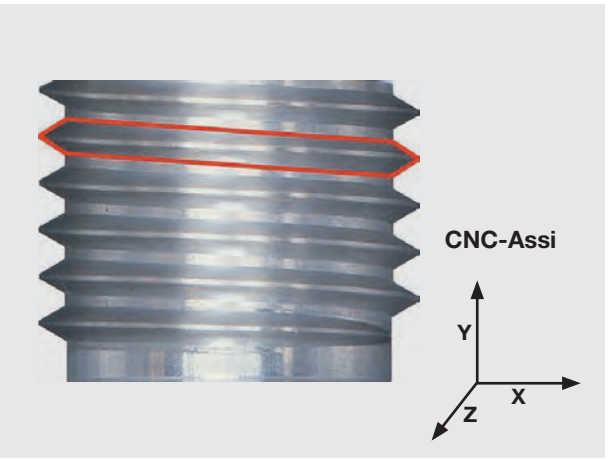


Le linee rosse mostrano che l'utensile ha un angolo di inclinazione. Il passo è generato da una macchina CNC con l'asse Z.

Creazione dei filetti con una fresa a filettare



Profilo di filettatura senza avanzamento assiale (asse Z) della macchina.
Il risultato è un profilo ondulato, senza inclinazione.
Questo non produce filettature funzionanti.

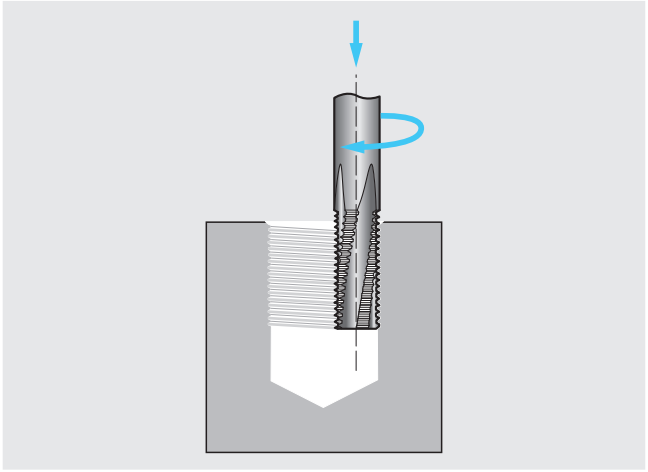


Attraverso la programmazione supplementare di Z, il passo necessario viene prodotto.

Nota:
Grazie alla fresatura diagonale, l'angolo d'inclinazione (asse Z) del profilo del filetto dell'utensile viene trasferito all'elemento deformato.
Più il diametro della fresa (80% del Ø nom.) si avvicina al diametro del filetto e più alto è il passo, più è pronunciato il profilo di distorsione.

Fresatura convenzionale

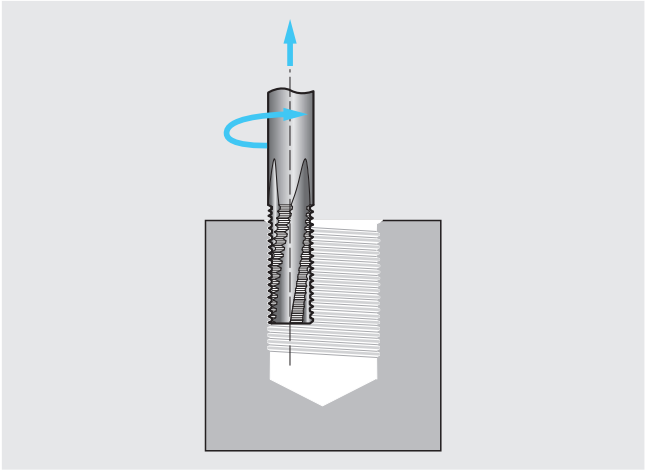
in senso orario, con G02



La fresatura convenzionale è preferibilmente utilizzata nella lavorazione di materiali più duri o per porre rimedio ad una filettatura rastremata.

Fresatura sincrona

in senso antiorario, con G03

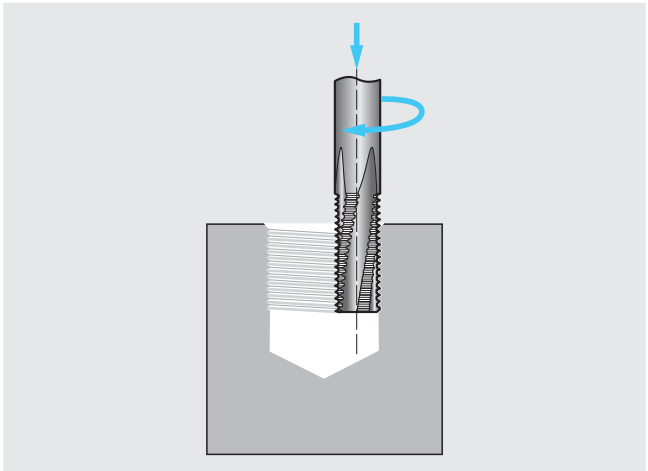


La fresatura sincrona si applica con una profondità di filettatura di dimensioni inferiori a 1.5xD.
Vantaggio: una migliore finitura superficiale.

Filettatura con un utensile

Filettatura destra

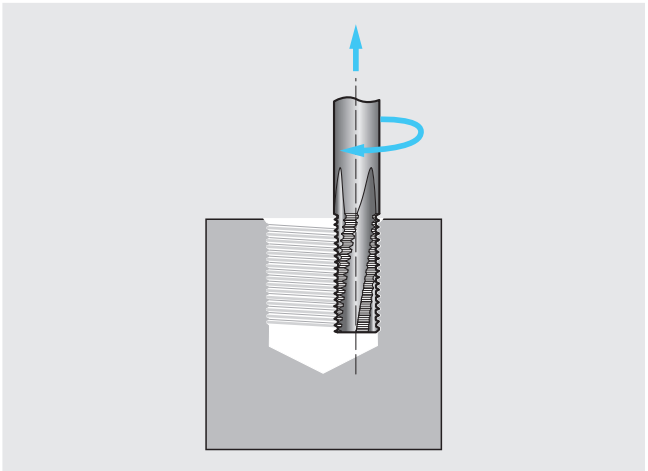
Fresatura convenzionale



Rotazione oraria dall'alto al basso

Filettatura sinistra

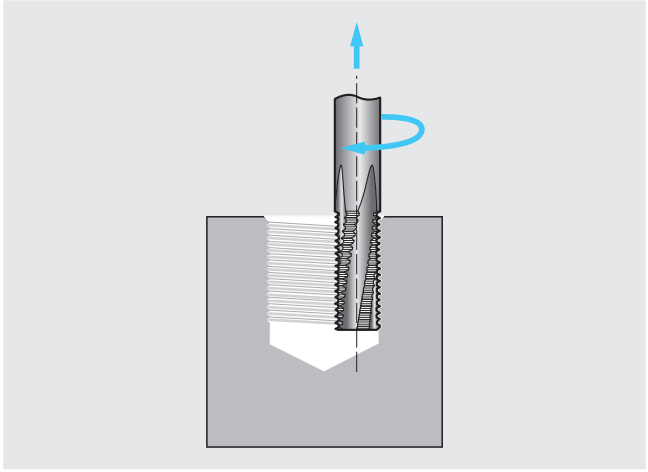
Fresatura convenzionale



Rotazione oraria dal basso all'alto

Filettatura destra

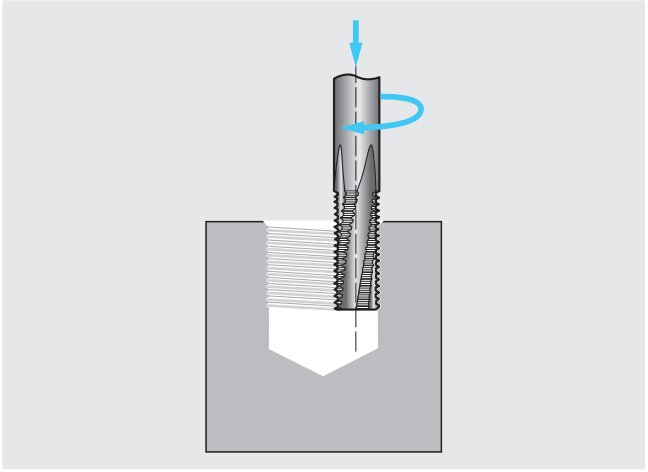
Fresatura sincrona



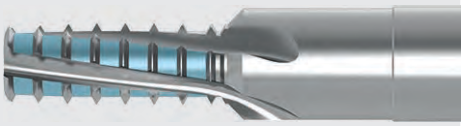
Rotazione oraria dal basso all'alto

Filettatura sinistra

Fresatura sincrona



Rotazione oraria dall'alto al basso

Immagine	Modifiche	Effetti
	Scanalature di refrigerazione sul gambo	Raffreddamento mirato, senza indebolire la sezione trasversale dell'utensile nell'area tagliente
	uscite di raffreddamento radiali	raffreddamento mirato con filettatura foro passante
	filetti rimossi	forze di taglio ridotte, ma tempo di lavorazione maggiore poiché sono necessari due giri
	sbavatura sul tagliente	Togliere la filettatura incompleta dall'ingresso del pezzo senza azionamento supplementare
	Prima profilo filettatura allungato in corrispondenza della faccia	Smussare il foro
	collare di rettifica	permette disposizioni taglienti assiali - utile per filettatura profonde

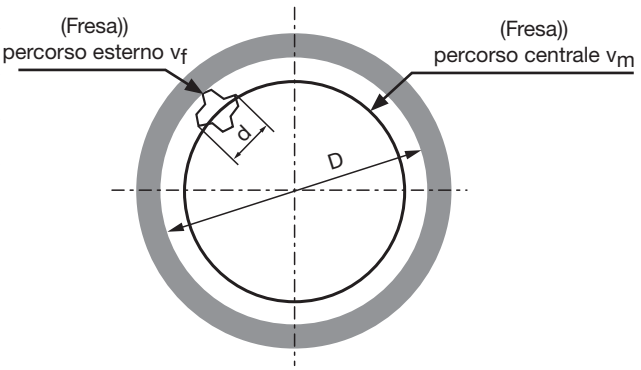
Specifiche del programma

Funzioni per frese a filettare

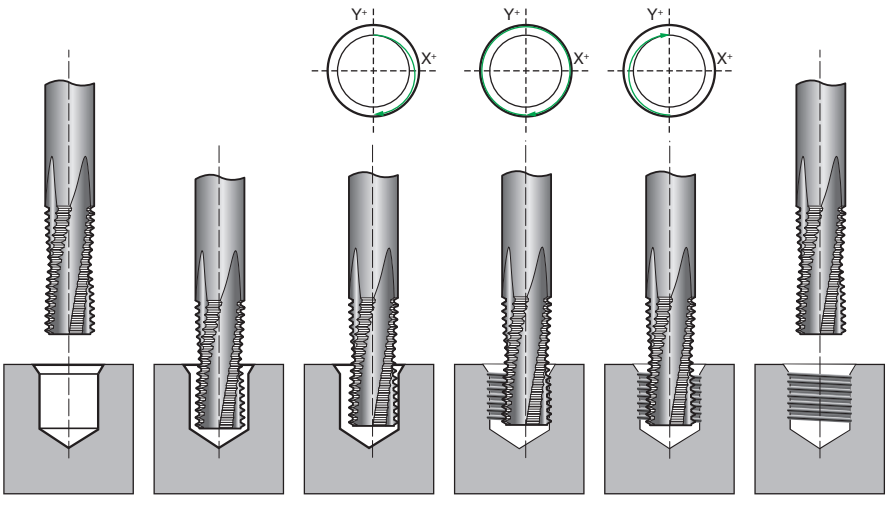
G00	posizionamento in entrata	**G90**	indicazione misura di riferimento
G01	avanzamento	**G91**	indicazione della misura relativa
G02	interpolazione circolare (in senso orario)	**M03**	attivare il mandrino con corsa a destra
G03	interpolazione circolare (in senso antiorario)	**M05**	spegnere il mandrino
G17	Selezione del piano dell'asse X-Y	**M08**	Interruttore di lubrificazione di raffreddamento
G18	Selezione del piano dell'asse z-x	**X**	Asse
G19	Selezione del piano dell'asse y-z	**Y**	Asse
G40	Annullamento della correzione sull'utensile	**Z**	Asse
G41	Correzione della traiettoria utensile (sinistra del profilo)	**I**	passo del filetto parallelo all'asse X
G42	Correzione della traiettoria utensile (destra del profilo)	**J**	passo del filetto parallelo all'asse Y
G43	Correzione lunghezza utensile (seleziona)	**S**	Torsione del mandrino principale
G49	Correzione lunghezza utensile (deseleziona)	**F**	velocità di avanzamento
G54	allineamento al punto zero		

CNC fresatura a filettare interna

1. posizionarsi al punto di partenza
2. muoversi alla profondità di filettatura nel foro
3. rettifica in entrata a 180°
4. ciclo fresatura a filettare a 360°
5. rettifica in uscita a 180° verso il punto centrale del foro
6. uscita dal foro in posizione iniziale sul foro di filettatura



ciclo di entrata 180°
(Sempre mezzo avanzamento)



Formula di calcolo

$$v_c = \frac{d \cdot \pi \cdot n}{1000}$$

$$n = \frac{v_c \cdot 1000}{d \cdot \pi}$$

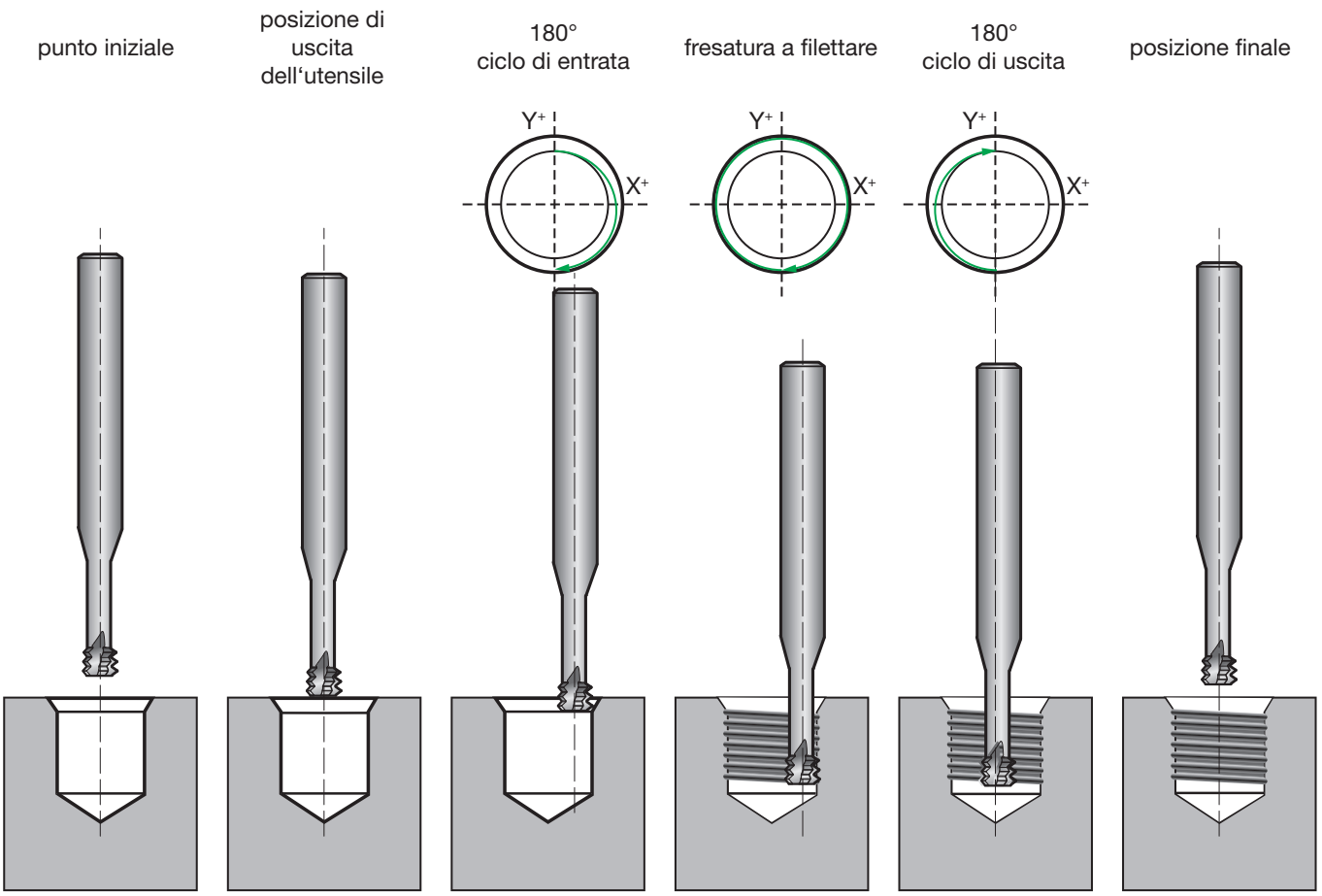
$$v_f = n \cdot z \cdot f_z$$

$$v_m = \frac{v_f \cdot (D - d)}{D}$$

$$v_b = n \cdot f_b$$

v_c = velocità di taglio
v_f = avanzamento di contornatura
v_m = avanzamento punto centrale contornatura
n = numero giri
z = numero denti
f_z = avanzamento per dente
f_b = avanzamento al giro per foratura*
v_b = velocità avanzamento per foratura*
D = diametro nominale filettatura [mm]
d = diametro esterno fresa [mm]
* per forare con frese a filettare

Programma di micro fresatura a filettare (filettatura destra in rotazione inversa)



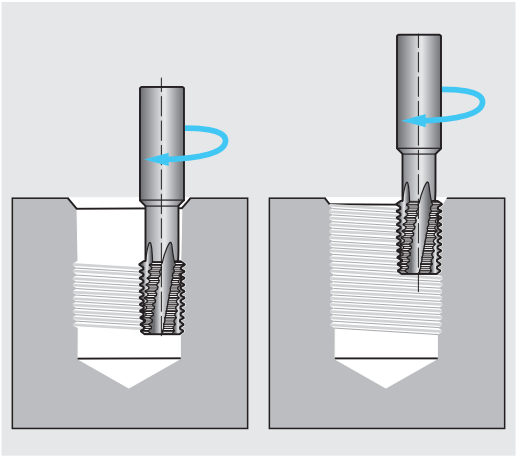
Possibilità di riduzione delle forze radiali

per ridurre le forze radiali può essere applicata una distribuzione del taglio:

vantaggi:
- Per profondità filettatura più elevate
- Contrasta filettature rastremate
- Per condizioni di serraggio instabili

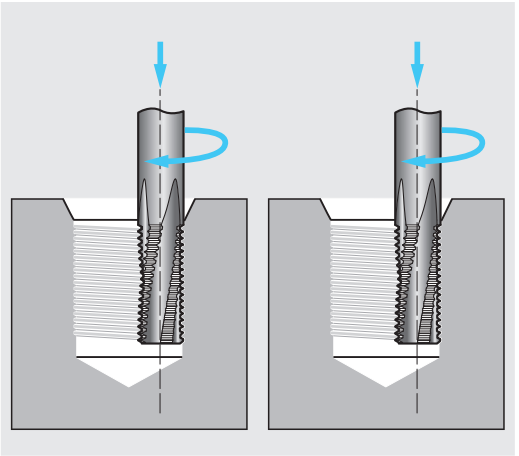
svantaggi:
- Usura degli utensili superiore
- Tempi di produzione superiore

divisone tagliente assiale



1° step 2° step

divisone tagliente radiale



1° step 2° step

Selezionare il corretto mandrino

Il corretto utensile di serraggio svolge un ruolo essenziale nella fresatura a filettare. Le frese a filettare dovrebbero di regola essere bloccate nel più breve tempo possibile. Una forza di bloccaggio compatta e meccanica è preferibile. L'errore di concentricità non dovrebbe superare 0,02 mm.

Mandrini autocentranti

max. eccentricità ammissibile: 0,003 mm

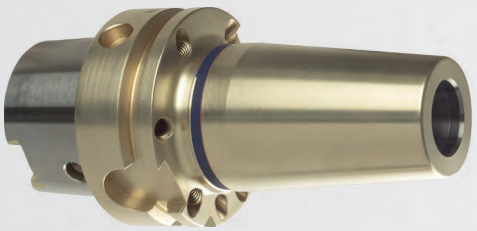
Il mandrino di potenza è caratterizzato da una concentricità estremamente precisa. Le elevate forze di bloccaggio e la silenziosità di funzionamento sono le condizioni ideali per la produzione di filettature in tutti i materiali a grandi dislivelli.

Mandrini cono cilindrico

max. eccentricità ammissibile: 0,02 mm

Un mandrino con cono cilindrico per HB e HE codoli è un mandrino di bloccaggio robusto ed economicamente efficiente con una forza massima di serraggio. La superficie di bloccaggio impedisce la torsione dell'utensile o l'estrazione durante la lavorazione. Pertanto, questi supporti di bloccaggio sono adatti per la produzione in tutti i materiali con elevati dislivelli.

Mandrini a calettamento



max. eccentricità ammissibile: 0,005 mm

Un mandrino a calettamento crea un rigido collegamento con l'utensile serrato. L'incorretto calettamento, o un mandrino vecchio possono creare l'uscita dell'utensile. Un'altra conseguenza potrebbe essere la rottura dell'utensile. Pertanto, il mandrino di calettamento è adatto solo per un passo di filettatura <P = 1,5 mm.

Mandrini idraulici

max. eccentricità ammissibile: 0,005 mm

Il mandrino idraulico, simile al mandrino a calettamento, non è molto idoneo per la fresatura di filetti. Soprattutto con le forze radiali elevate, questo mandrino di serraggio raggiunge i suoi limiti. Pertanto, il mandrino idraulico è raccomandato per materiali morbidi: come alluminio e un passo del filetto <P = 1,5 mm.

Pinza di serraggio

max. eccentricità ammissibile: 0,01 mm

Mandrini a pinza sono molto adatti per la micro fresatura di filetti, perché si creano solo sforzi assiali. Le forze di serraggio basse consentono solo la fresatura di materiali morbidi. Di conseguenza, le pinze di serraggio non sono adatte per la fresatura a filettare convenzionale.

Applicazioni pratiche delle frese a filettare

1.) Utensile di serraggio::
è importante una buona concentricità , quindi, utilizzare il bloccaggio più corto e rigido possibile

2.) Inserire dati utensile nella memoria della macchina
1.) lunghezza utensile dalla parte frontale, prendere dal punto la punta a forare e fresare i filetti (DTMC).
2.) misurare il raggio dell'utensile con lo strumento di presetting. regola generale:
raggio misurato - 0,022 x passo fornisce il valore da inserire nella memoria della macchina

3.) Inserire il programma CNC in controllo
(preferibilmente integrato come sottoprogramma in posizioni corrispondenti)
a) Richiamo di un ciclo di auto-controllo (le procedure dovrebbero già essere note)
b) Integrazione dei dati del file dal nostro software di fresatura (DIN o Haidenhain).

4.) Esecuzione di prova sul pezzo
a) Estendere la misurazione della lunghezza dell'utensile nella memoria ad un valore intero, a seconda della lunghezza di impiego (ad esempio, 30 mm) o mettere a zero
b) Programma di uscita in unico step, osservare il percorso utensile.
c) Lasciare il programma da eseguire in modo automatico.

Attenzione:
Con i controlli in cui non è assolutamente chiaro quale percorso di fresatura viene assegnato, deve essere chiarito se l'alimentazione è posizionata sul v_f percorso esterno o sul v_m percorso centrale. Come regola generale utilizziamo il centro di fresatura del percorso del punto v_m.

5.) Lavorazione sul pezzo
Re-impostare l'estensione dell' utensile o il punto zero. Quindi avviare il programma da eseguire nel pezzo, l'avanzamento deve essere regolato al 100%. Il raggio dell'utensile richiede la correzione nella memoria utensile, se la filettatura non è calibrata.
Esempio:
- filetto troppo stretto: correzione raggio - input
- filetto troppo ampio: correzione del raggio + input

TM SP – Frese senza fase di svasatura

Esempio di lavorazione Tipo TM			
Articolo Nr.:	3737 TiCN	**Velocità di taglio [v_c]:**	80 m/min
Filettatura da produrre:	M10x(1)	**Avanzamento per dente:**	0,05 mm
Profondità del filetto:	20 mm / foro cieco	**Lavorazione:**	Fresatura convenzionale
Materiale da lavorare:	St- 37	**Tempo di lavoro:**	6,9 sec.

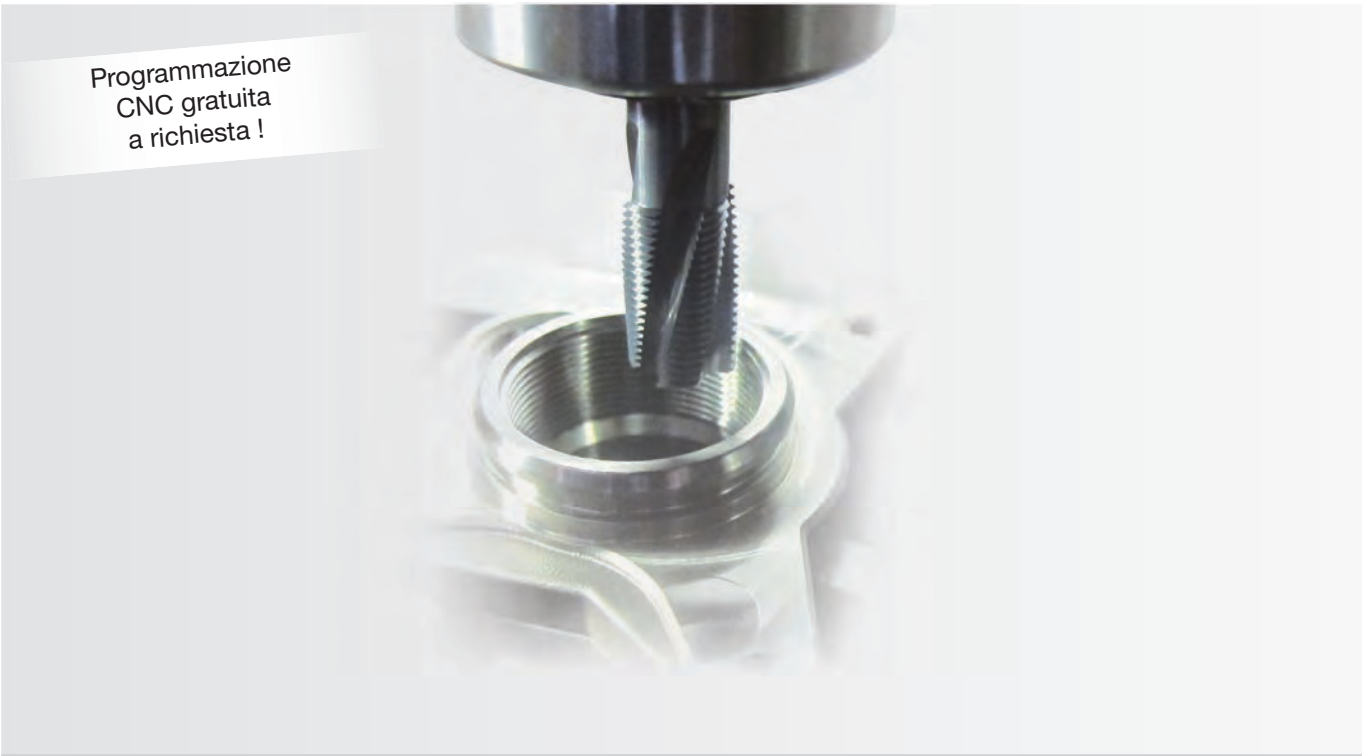
CNC-Programma	
N10 M6 T1	
N20 G90 G54 G00 X0 Y0	
N30 Z2 S3203 M3 M8	Posizione di start sopra il pezzo
N40 Z-18.70	Posizione nella profondità del filetto
N50 G91	Correzione su incremento
N60 G42 G01 X0 Y3.975 F50	Correzione del raggio
N70 G02 X0 Y-9.005 I0 J-4.503 Z-0.150	Ciclo di entrata 180°
N80 G02 X0 Y0 I0 J5.030 Z-1.000 F101	Ciclo fresatura a filettare 360°
N90 G02 X0 Y9.005 I0 J4.503 Z-0.150	Ciclo di uscita 180°
N100 G40 G01 X0 Y-3.975	Deselezione correzione del raggio
N110 G90	Commutazione su assoluto
N120 G00 Z2 M9	Uscita dal foro verso la posizione di start
N130 M30	

TMC SP – frese a filettare con fase di svasatura 45°

Esempio di lavorazione Tipo TMC			
Articolo Nr.:	3528 TiCN	**Velocità di taglio [v_c]:**	100 m/min
Filettatura da produrre:	M12x(1,5)	**Avanzamento per dente:**	0,075 mm
Profondità del filetto:	18 mm / foro cieco	**Lavorazione:**	Fresatura convenzionale
Materiale da lavorare:	42CrMo4	**Tempo di lavoro:**	4,15 sec.

CNC-Programma	
N10 M6 T1	
N20 G90 G54 G00 X0 Y0	
N30 Z2 S1600 M3 M8	Posizione di start sopra il pezzo
N40 Z-26.20	Posizione di start sulla smussatura 45°
N50 G01 Z-27.57 F85	Smussatura 45°
N60 G00 Z-16.05 S3199	Posizione nella profondità del filetto
N70 G91	Correzione su incremento
N80 G42 G01 X0 Y4.975 F85	Correzione del raggio
N90 G02 X0 Y-11.015 I0 J-5.508 Z-0.225	Ciclo di entrata 180°
N100 G02 X0 Y0 I0 J6.040 Z-1.5 F169	Ciclo fresatura a filettare 360°
N110 G02 X0 Y11.015 I0 J5.508 Z-0.225	Ciclo di uscita 180°
N120 G40 G01 X0 Y-4.975	Deselezione correzione del raggio
N130 G90	Commutazione su assoluto
N140 G00 Z2 M9	Uscita dal foro verso la posizione di start
N150 M30	

TMU SP – frese a filettare universali



Esempio di lavorazione Tipo TMU			
Articolo Nr.:	3541 Ø 12xM1 TiCN	**Velocità di taglio [v_c]:**	60 m/min
Filettatura da produrre::	M28x1	**Avanzamento per dente:**	0,05 mm
Profondità del filetto:	12 mm / Cieco VA	**Lavorazione:**	Fresatura convenzionale
Profondità del filetto:	VA [1.4301]	**Tempo di lavoro:**	28,96 sec.

CNC-Programma	
N10 M6 T1	
N20 G90 G54 G00 X0 Y0	
N30 Z2 S1598 M3 M8	Posizione di start sopra il pezzo
N40 Z-10.70	Posizione nella profondità del filetto
N50 G91	Correzione su incremento
N60 G42 G01 X0 Y5.975 F92	Correzione del raggio
N70 G02 X0 Y-20.015 I0 J-10.008 Z-0.150	Ciclo di entrata 180°
N80 G02 X0 Y0 I0 J14.040 Z-1.000 F184	Ciclo fresatura a filettare 360°
N90 G02 X0 Y20.015 I0 J10.008 Z-0.150	ciclo di uscita 180°
N100 G40 G01 X0 Y-5.975	deselezionare correzione del raggio
N110 G90	commutazione su assoluto
N120 G00 Z2 M9	Uscita dal foro verso la posizione di start
N130 M30	

DTMC SP – frese a forare e filettare

Esempio di lavorazione Tipo DTMC

Articolo Nr.:	3779 blank	**Velocità di taglio [v_c]:**	230 m/min
Filettatura da produrre:	M8x(1,25)	**Avanzamento punta:**	0,1 mm / U
Profondità del filetto:	15 mm / Cieco	**Avanzamento per dente:**	0,05 mm
Profondità del filetto:	AlSi 10%	**Lavorazione:**	Fresatura convenzionale
		Tempo di lavoro:	3,44 sec.

CNC-Programma

N10 M6 T1	
N20 G90 G54 G00 X0 Y0	
N30 Z2 S11529 M3 M8	Posizione di start sopra il pezzo
N40 G01 Z-1 F577	Foratura (meglio centrare il foro)
N50 G01 Z-19.86 F1153	Foratura per tutta la profondità del foro, con 45° di svasatura
N60 G00 Z2 S11529	Corsa di ritorno dell'utensile dal foro e scarico trucioli
N70 Z-13.38	Posizione nella profondità del filetto
N80 G91	Correzione su incremento
N90 G42 G01 X0 Y3.175 F122	Correzione del raggio
N100 G02 X0 Y-7.205 I0 J-3.603 Z-0.188	Ciclo di entrata 180°
N110 G02 X0 Y0 I0 J4.030 Z-1.250 F245	Ciclo fresatura a filettare 360°
N120 G02 X0 Y7.205 I0 J3.603 Z-0.188	ciclo di uscita 180°
N130 G40 G01 X0 Y-3.175	deselezionare correzione del raggio
N140 G90	commutazione su assoluto
N150 G00 Z2 M9	Uscita dal foro verso la posizione di start
N160 M30	

TMU SP – fresa a filettare universale per filettatura esterna

Programmazione CNC gratuita a richiesta !

Esempio di programmazione M14x1,5 - 6g (filettatura esterna)		
Tipo utensile:	TMU D12x20xM1,5-A TiCN Z=4 (Utensile-Ø 11,95 mm)	
	(in alternativa TMU D16x25xM1,5-A TICN Z=5)	
Materiale da lavorare:	38MnSiV5	
Parametri:	v_c = 130 m/min, f_z = 0,06 (Fresatura convenzionale) v_f = 831 mm/min, v_m = 1548 mm/min	
N10 M6 T1		
N20 G90 G54 G00 X0 Y0		
N30 Z2 S3463 M3 M8		Processo centrato sopra le viti
N40 G91		Correzione su incremento
N50 X7.033 Y11.99		Posizione di start laterale alla vite
N60 G01 Z-14.5		viaggio alla profondità di start
N70 G42 G01 X0 Y-5.975		Correzione del raggio
N80 G01 X-7.033 Y0.000 F774		modo di ingresso lineare
N90 G03 X0.000 Y0.000 Z1.5 I0 J-6.015 F1548		ciclo fresatura a filettare 360°
N100 G01 X-7.033 Y0.000		percorso di uscita lineare
N110 G40 G01 X0.000 Y5.975		Correzione del raggio
N120 G90		Commutazione su assoluto
N130 G80 G00 Z2 M9		Fine processo sopra le viti
N140 M30		

TYP TM SP – per filettatura NPT (coniche, cono 1:16)

Esempio di programmazione NPT ¼-18: (coniche, cono 1:16)	
Tipo utensile:	TM D 9,95x19,05xNPT18 IK (4-taglienti)
Utensile-Ø :	d1 = 9,95 mm (misurato sul primo tagliente)
Lunghezza utensile:	Misurata sulla faccia utensile
Ø filettatura:	Ø 11,10 mm cilindrica (preferibile prelavorazione conica D1 = 11,36 mm / d1 = 11,10 mm)
Materiale da lavorare:	16 Mn Cr 5
Parametri:	v_c = 70 m/min, f_z = 0,05 (Fresatura convenzionale) v_f = 447 mm/min, v_m = 102 mm/min
N10 M6 T1	
N20 G90 G54 G00 X0.000 Y0.000	
N30 Z2.000 S2239 M3 D1	Posizione di start sopra il pezzo
N40 G00 Z-10.016	Posizione utensile nel foro
N50 G91	Correzione su incremento
N60 G42 G01 X0.000 Y4.975 F1000	Correzione del raggio
N70 G02 X0.000 Y-11.432 I0.000 J-5.716 Z-0.212 F51	Ciclo di entrata 180°
N80 G02 X-6.457 Y6.457 I0.000 J6.457 Z-0.353 F102	¼ Filettatura, senza correzione
N90 G02 X6.445 Y6.445 I6.445 J0.000 Z-0.353	¼ Filettatura, con correzione
N100 G02 X6.434 Y-6.434 I0.000 J-6.434 Z-0.353	¼ Filettatura, con correzione
N110 G02 X-6.423 Y-6.423 I-6.423 J0.000 Z-0.353	¼ Filettatura, con correzione
N120 G02 X0.000 Y11.387 I0.000 J5.694 Z-0.212	Ciclo di uscita 180°
N130 G40 G01 X0.000 Y-4.975 F1000	Correzione del raggio
N140 G90	Commutazione su assoluto
N150 G53 G00 Z2.000	Uscita dal foro verso la posizione di start
N160 M30	

MTM 3 SP micro frese a filettare

Programmazione CNC gratuita a richiesta !

Micro frese a filettare

Le micro frese a filettare in metallo dure sono state crete apposta per filettare piccoli fori:

- eccellenti proprietà nei materiali ad alta resistenza (Ad esempio, leghe di titanio, acciaio inossidabile, ecc)
- per fori ciechi e fori passanti fino 3xD
- pressione di taglio bassa
- ottima qualità dei filetti
- brevi tempi di lavorazione
- adatte per materiali più morbidi (Come ad esempio alluminio o plastica)

Esempio di programmazione: M3x(0.5) MTM 3 SP	
Materiale:	TiAl6V4
Filettatura:	M3, profondità 7,0 mm / Cieco
Utensile:	MTM 3 SP M3x(0,5) utensile-Ø 2,4 mm Z=3
Parametri:	v_c = 40 m/min, f_z = 0,025 (Fresatura convenzionale) v_f = 398 mm/min, v_m = 84 mm/min
N10 M6 T1	
N20 G90 G54 G00 X0 Y0	
N30 Z2 S5305 M3 M8	
N40 Z0.1	
N50 G91	
N60 G42 G01 X0 Y1.200 F42	
N70 G02 X0 Y-2.720 I0 J-1.360 Z-0.075	
N80 G02 X0 Y0 I0 J1.520 Z-0.500 F84	
numero di ripetizione del set N80 =15	
N90 G02 X0 Y2.720 I0 J1.360 Z-0.075	
N100 G40 G01 X0 Y-1.200	
N110 G90	
N120 G00 Z2 M9	
N130 M30	

Parametri di applicazione per frese a filettare

Tipo	TM	TMC	TMU

ISO	Materiali	Velocità di taglio v_c (m/min)	Avanzamento mm / dente fz per Ø (**Fresatura convenzionale**) Diametro parte fresante Ø2 mm	Ø3 mm	Ø4 mm	Ø5 mm	Ø6 mm	Ø7 mm	Ø8 mm	Ø9 mm	Ø10 mm	Ø12 mm	Ø14 mm	Ø16 mm	Ø18 mm	Ø20 mm	TM	TMC	TMU
P	Acciai da costruzione Acciai automatici Acciai da cem. non legati Acciai da bonifica non legati	110	0,02	0,02	0,025	0,03	0,035	0,045	0,05	0,055	0,06	0,06	0,065	0,065	0,07	0,08	++	++	++
P	Acciai da cem. legati Acciai da bonifica legati Acciai da utensili	90	0,015	0,015	0,02	0,025	0,03	0,035	0,04	0,045	0,05	0,05	0,05	0,055	0,06	0,07	+	++	++
M	Acciaio inox e resist. agli acidi Acciaio sulfureo austenitico martensitico	60	0,01	0,01	0,015	0,02	0,025	0,03	0,03	0,035	0,04	0,045	0,05	0,05	0,055	0,06	+	++	++
K	Ghisa grigia, ghisa grigia con ghisa sferoidale e malleabile	120	0,02	0,02	0,025	0,03	0,035	0,045	0,05	0,055	0,06	0,06	0,065	0,07	0,08	0,1	++	++	++
N	Materiali non ferrosi: Alluminio e altri materiali leghe di rame	250	0,03	0,035	0,04	0,045	0,05	0,055	0,06	0,065	0,07	0,08	0,085	0,09	0,1	0,12	++	++	++
N	Plastica	350	0,03	0,04	0,045	0,05	0,055	0,055	0,06	0,07	0,075	0,085	0,09	0,1	0,12	0,15	++	++	++
S	Leghe speciali e Titanio	35	0,01	0,01	0,015	0,02	0,025	0,03	0,03	0,035	0,04	0,045	0,05	0,05	0,055	0,06	+	++	++
H	Acciai temprati [max. 65 HRC]	25	-	0,005	0,005	0,01	0,012	0,014	0,018	0,02	0,02	0,022	0,025	0,03	0,035	0,04	+	++	+

Nota: in acciai temprati fino a max. 55HRC il diametro di filettatura deve essere eseguito in passate 3!

Parametri di applicazione per punte fora/fresa a filettare 2xD, 2,5xD

Tipo	DTMC

ISO	Materiali	Velocità di taglio v_c (m/min)	Avanzamento mm / dente fz per Ø (**Fresatura convenzionale**) Diametro parte fresante M3 fb mm/U	M3 fz mm	M4 fb mm/U	M4 fz mm	M5 fb mm/U	M5 fz mm	M6 fb mm/U	M6 fz mm	M8 fb mm/U	M8 fz mm	M10 fb mm/U	M10 fz mm	M12 fb mm/U	M12 fz mm	DTMC
K	Ghisa grigia, ghisa grigia con ghisa sferoidale e malleabile	100	0,05	0,01	0,06	0,02	0,07	0,025	0,08	0,035	0,1	0,04	0,12	0,055	0,14	0,065	+
N	Materiali non ferrosi: Alluminio e altri materiali leghe di rame	230	0,06	0,015	0,07	0,025	0,08	0,03	0,1	0,04	0,12	0,05	0,15	0,07	0,18	0,08	++
N	Plastica	300	0,07	0,02	0,08	0,03	0,09	0,04	0,12	0,05	0,13	0,06	0,18	0,09	0,2	0,12	++

Parametri di applicazione per micro frese a filettare

Tipo	MTM 3	MTM 1	MTMH 3

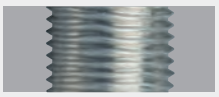
ISO	Materiali	Velocità di taglio v_c (m/min)	Avanzamento mm / dente fz per Ø (**Fresatura convenzionale**) Diametro parte fresante Ø1 mm	Ø1.5 mm	Ø2 mm	Ø3 mm	Ø4 mm	Ø5 mm	Ø6 mm	Ø7 mm	Ø8 mm	Ø9 mm	Ø10 mm	Ø12 mm	Ø14 mm	MTM 3	MTM 1	MTMH 3
P	Acciai da costruzione Acciai automatici Acciai da cem. non legati Acciai da bonifica non legati	70 - 120	0,04	0,04	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,1	0,12	++	++	–
P	Acciai da cem. legati Acciai da bonifica legati Acciai da utensili	60-90	0,03	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,1	++	++	–
M	Acciaio inox e resist. agli acidi Acciaio sulfureo austenitico	40-80	0,02	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,05	0,06	0,06	0,06	0,07	++	++	–
M	martensitico	40-80	0,02	0,03	0,03	0,04	0,04	0,05	0,05	0,05	0,06	0,07	0,07	0,08	0,09	++	++	–
K	Ghisa grigia, ghisa grigia con ghisa sferoidale e malleabile	60-80	0,04	0,04	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,1	0,12	++	++	–
N	Materiali non ferrosi: Alluminio e altri materiali leghe di rame	80 - 150	0,04	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,1	0,11	0,12	0,14	++	++	–
N	Plastica	60 - 200	0,05	0,05	0,06	0,07	0,07	0,08	0,09	0,09	0,1	0,11	0,12	0,13	0,15	++	++	–
S	Leghe speciali e Titanio	20-40	0,02	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,05	0,06	0,06	0,06	0,07	++	++	+
H	Acciai temprati [max. 65 HRC]	40-50	0,01	0,02	0,02	0,03	0,03	0,035	0,035	0,04	0,045	0,045	0,05	0,055	0,06	–	–	++

Nota:
I valori di taglio specificati nelle rispettive colonne sono valori guida, che devono essere adattati in base alle condizioni di applicazione (materiale, lubrificazione, sistemi di bloccaggio, macchina etc.)
A seconda del tipo di lavorazione i valori ottimali di taglio possono diversi da quelli in tabella fino a + - 30%!

Gühro Fresa filettare
(CNC - programmazione semplice) Il software di fresatura di filetti Guhring semplifica notevolmente la programmazione CNC. Con l'aiuto di una semplice maschera di input, l'utente inserisce tutti i dati necessari, quali, ad esempio, il tipo di fresatura da filettare, filettatura, diametro, parametri macchina etc. e immediatamente ottiene il programma CNC appropriato in base ai dati.
Il sotware è gratuito, su richiesta, per DIN o per controllo Heidenhain.

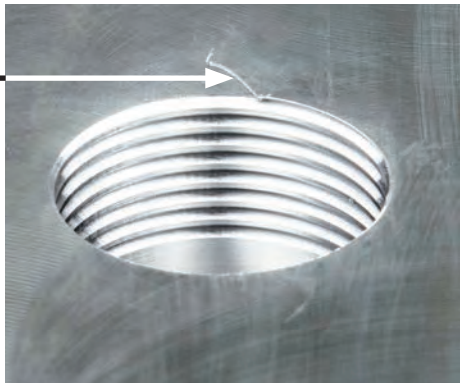
++ soluzione ottimale + soluzione ottimale solo in cere occasioni

Errori, cause e contromisure con frese a filettare nuove

Errore	Possibile causa	Contromisure
1. Il filetto risulta troppo grosso o troppo piccolo	raggio sbagliato nel programma CNC, di conseguenza fresatura del segmento sbagliato	correggere il raggio della fresa sino ad ottenere in filetto a misura
2. Filetti non cilindrici	eccessivo avanzamento fresatura unidirezionale con filetti lunghi	ridurre l'avanzamento invertire la corsa di rotazione della fresatura
3. Superficie filettata non buona, segni di vibrazioni 	velocità di taglio eccessiva utensili o serraggio non ottimali	adeguare i parametri di taglio verificare utensile e serraggio
4. Rottura utensile	Errore nel programma CNC valori di taglio eccessivi	verificare il programma CNC adeguare i parametri di taglio
5. Durata di impiego troppo limitata	valori di taglio eccessivi l'utensile impiegato non è ricoperto cattiva refrigerazione e cattivo scarico dei trucioli	adeguare i parametri di taglio impiegare utensile ricoperto migliorare lubrificazione, raffreddamento utensile attraverso il mandrino
6. Rottura utensile nella foratura con frese a filettare	problemi di trucioli nel forare avanzamenti troppo alti nella foratura	impiegare utensile con fori di refrigerazione effettuare cicli di scarico

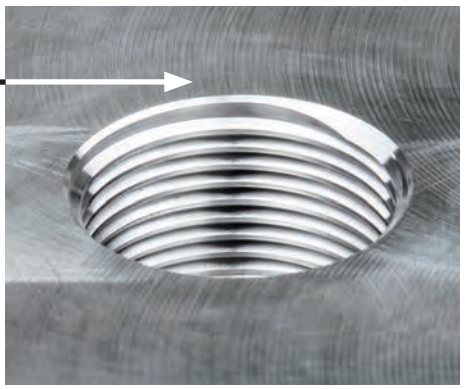
Filetti senza sbavature - Nessun problema per le frese a filettare Gühring

Problema:
sbavatura all'entrata della filettatura



Soluzione::
Utensili speciale
con bordo contro le sbavature

Risultato::
la fresa a filettare così costruita inserita alla massima profondità elimane le bave di lavorazione



Il nostro know-how tecnico è a disposizione per lo sviluppo di soluzioni speciali in qualsiasi momento.

Frese a filettare speciali

Non è possibile trovare un utensile adatto nella nostra vasta gamma di frese a filettare? Siamo più che felici di realizzare un utensile adattato in modo ottimale al tipo di lavorazione come soluzione speciale.
Contattateci!

Riaffilatura e Ricopertura

Gühring offre un servizio continuo di riaffilatura e di ricopertura per le frese a filettare.
Riaffilatura e ricopertura alle geometrie e ai rivestimenti originali.
Gühring ripristina al 100% le performance iniziali.

Riaffilatura

Nei nostri centri Service, gli utensili vengono riaffilati a seconda del grado di usura. Secondo l'usura, il servizio è possibile due o tre volte (da fresatura dal d1> 5,0 mm).

Per definire il diametro di fresatura, il numero delle riaffilature è indicato da una tacca sulla estremità del gambo. Ad ogni tacca viene assegnato un diametro e viene inciso.

Ricopertura

Se una fresa a filettare è stata migliorata con un rivestimento, l'utensile viene nuovamente rivestito dopo la riaffilatura. In questo modo, non solo la protezione all'usura e alla corrosione e le caratteristiche di scorrevolezza sono riprodotte, ma anche la vita dell'utensile viene prolungata.

INDICE PER GAMMA

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
800 VI							WN	N	D	ISO2/6H	HSS-E	○	M3 - M12	1839	18	87
800 VI							WN	N	B	ISO2/6H	HSS-E	○	M3 - M20	998	19	86
800 VI							WN	N R40	C	ISO2/6H	HSS-E	○	M3 - M20	888	23	88
1000 VI	○	○					WN	N R40	C	6HX	HSS-E	S	M3 - M20	4153	25	67
800 VI							DIN 352	N	C	ISO2/6H	HSS-E	○	M2,2 - M16	995	22	53
800 VI							DIN 352	N	B	ISO2/6H	HSS-E	○	M2 - M24	991	19	35
800 VI							DIN 352	N R15	C	ISO2/6H	HSS-E	○	M3 - M20	992	22	58
800 VI							DIN 352	N R40	C	ISO2/6H	HSS-E	○	M2 - M22	993	23	65
800 VI							DIN 357	N		ISO2/6H	HSS-E	○	M3 - M30	851	18	85
		•					DIN 371	GGT	C	ISO2/6H	HSS-E	S	M3 - M10	1875	349	357
800 VI							DIN 371	N	C	ISO2/6H	HSS-E	○	M1 - M10	806	18	50
800 VI							DIN 371	N	C	ISO3/6G	HSS-E	○	M2 - M10	795	22	52
800 VI							DIN 371	N	D	ISO2/6H	HSS-E	○	M2 - M10	801	18	49
800 VI							DIN 371	N	B	ISO1/4H	HSS-E	○	M2 - M10	794	18	36
1000 VI	○						DIN 371	N	B	ISO2/6H	HSS-E	S	M2 - M10	313	20	33
800 VI							DIN 371	N	B	ISO2/6H	HSS-E	○	M2 - M10	802	19	55
800 VI							DIN 371	N	B	ISO2/6H	HSS-E	○	M1 - M10	803	19	30
800 VI							DIN 371	N	B	ISO2/6H	HSS-E	○	M1,2 - M10	838	19	54
800 VI							DIN 371	N	B	ISO2/6H	HSS-E	○	M1,2 - M10	839	19	54
800 VI							DIN 371	N	B	ISO2/6H	HSS-E	S	M1 - M10	912	19	30
800 VI							DIN 371	N	B	ISO2/6H	HSS-E	●	M1 - M10	945	19	30
800 VI							DIN 371	N	B	ISO2/6H	HSS-E	C	M1 - M10	1246	19	30
1000 VI	•		•				DIN 371	N	B	ISO2/6H	HSS-E	○	M2 - M10	1870	229	236
1000 VI	•						DIN 371	N	B	ISO2/6H	HSS-E	S	M2 - M10	2086	229	236

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 1000	○						DIN 371	N	B	ISO2/6H	HSS-E	A	M2 - M10	2427	20	33
≤ 1000	○						DIN 371	N	B	ISO2/6H	HSS-E	A	M5 - M10	2517	20	34
≤ 1000	○						DIN 371	N	B	ISO2/6H	HSS-E	●	M2 - M10	2876	20	33
≤ 1000	●		○				DIN 371	N	B	ISO2/6H	HSS-E-PM	○	M2 - M10	877	229	237
≤ 1000	○						DIN 371	N	B	ISO2/6H	HSS-E-PM	S	M2 - M10	1285	20	39
≤ 1000	○						DIN 371	N	B	ISO2/6H	HSS-E-PM	C	M3 - M20	1287	20	40
≤ 800							DIN 371	N	B	ISO3/6G	HSS-E	○	M2 - M10	796	19	56
≤ 800							DIN 371	N	B	ISO3/6G	HSS-E	○	M2 - M10	797	19	56
≤ 800							DIN 371	N	B	ISO3/6G	HSS-E	○	M1,4 - M10	837	19	37
≤ 800							DIN 371	N	B	ISO3/6G	HSS-E	○	M2 - M10	869	19	56
≤ 1000	○						DIN 371	N	B	ISO3/6G	HSS-E	●	M2 - M10	2990	20	41
≤ 1000	○						DIN 371	N	B	ISO3/6G	HSS-E	S	M2 - M10	2991	20	41
≤ 800							DIN 371	N-LH	B	ISO2/6H	HSS-E	○	M3 - M10	789	19	32
≤ 800							DIN 371	N R15	C	ISO2/6H	HSS-E	○	M2 - M10	809	22	57
≤ 800							DIN 371	N R15	C	ISO2/6H	HSS-E	S	M2 - M10	913	22	57
≤ 800							DIN 371	N R15	C	ISO2/6H	HSS-E	●	M2 - M10	946	22	57
≤ 800							DIN 371	N R15	C	ISO2/6H	HSS-E	○	M5 - M10	1891	22	59
≤ 800							DIN 371	N R15	C	ISO2/6H	HSS-E	S	M5 - M10	2436	23	59
		○	≥ 7				DIN 371	N R15	C	6HX	VHM	○	M3 - M10	971	465	478
		●					DIN 371	N R15	C	6HX	VHM	A	M3 - M10	2510	-	364
≤ 800							DIN 371	N R15	C	ISO3/6G	HSS-E	○	M2 - M10	799	22	52
≤ 800							DIN 371	N L15	D	ISO2/6H	HSS-E	○	M3 - M10	808	19	89
≤ 1000	○	○	○				DIN 371	N R40	E	ISO2/6H	HSS-E	○	M3 - M10	2790	24	69
≤ 1000	○	○					DIN 371	N R40	C	ISO2/6H	HSS-E	S	M5 - M10	174	25	70

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 800							DIN 371	N R40	C	ISO2/6H	HSS-E	●	M2 - M10	783	23	60
≤ 800							DIN 371	N R40	C	ISO2/6H	HSS-E	○	M2 - M10	810	23	60
≤ 1000	○	○					DIN 371	N R40	C	ISO2/6H	HSS-E	●	M2 - M10	836	24	66
≤ 1000	○	○	○				DIN 371	N R40	C	ISO2/6H	HSS-E	○	M2 - M10	889	24	66
≤ 800							DIN 371	N R40	C	ISO2/6H	HSS-E	S	M2 - M10	914	23	60
≤ 800							DIN 371	N R40	C	ISO2/6H	HSS-E	C	M2 - M10	1252	24	60
≤ 800							DIN 371	N R40	C	ISO2/6H	HSS-E	○	M5 - M10	1893	24	63
≤ 1000	○	○					DIN 371	○ N R40	C	ISO2/6H	HSS-E	A	M2 - M10	2425	-	66
≤ 800							DIN 371	N R40	C	ISO2/6H	HSS-E	S	M5 - M10	2438	24	64
≤ 1000	○	○					DIN 371	N R40	C	ISO2/6H	HSS-E	S	M2 - M10	2440	24	66
≤ 1000	○	○					DIN 371	N R40	C	ISO2/6H	HSS-E	A	M5 - M10	2514	-	68
≤ 1000	○	○					DIN 371	N R40	C	ISO2/6H	HSS-E-PM	S	M2 - M10	1288	25	72
≤ 1000	○	○					DIN 371	N R40	C	ISO2/6H	HSS-E-PM	C	M2 - M20	1290	25	73
≤ 800							DIN 371	N R40	C	ISO3/6G	HSS-E	○	M3 - M10	844	23	61
≤ 1000	○	○					DIN 371	N R40	C	ISO3/6G	HSS-E	●	M2 - M20	2994	24	73
≤ 1000	○	○					DIN 371	N R40	C	ISO3/6G	HSS-E	S	M2 - M20	2995	24	73
≤ 800							DIN 371	N L40 LH	C	ISO2/6H	HSS-E	○	M3 - M10	786	24	62
●	●	○	●	○			DIN 371	N R50	C	ISO2/6H	HSS-E-PM	S	M3 - M10	767	25	74
●	●	○	●	○			DIN 371	N R50	C	ISO2/6H	HSS-E-PM	C	M3 - M10	1152	25	74
≤ 1200		●	≥ 7				DIN 371	H	E	6HX	HSS-E-PM	C	M5 - M10	1091	23	78
		●	≥ 7				DIN 371	H	E	6HX	VHM	○	M3 - M10	1008	351	364
≤ 1200		●	≥ 7				DIN 371	H	C	6HX	HSS-E-PM	C	M5 - M10	302	23	78
		●	≥ 7				DIN 371	H	C	6HX	VHM	○	M3 - M10	969	351	362
		●	≥ 7				DIN 371	H	C	6HX	VHM	○	M3 - M10	1858	349	362

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
		•			45/55		DIN 371	H	C	6HX	VHM	A	M3 - M10	2311	349	364
		•					DIN 371	H	C	6HX	VHM	A	M5 - M10	2506	351	363
							DIN 371	H	D	6HX	HSS-E-PM	C	M3 - M16	1201	676	680
≤ 1200							DIN 371	H	B	ISO2/6H	HSS-E		M2 - M10	733	21	43
≤ 1200							DIN 371	H	B	ISO2/6H	HSS-E		M2 - M10	804	21	43
≤ 1200							DIN 371	H	B	ISO2/6H	HSS-E	C	M2 - M10	1914	21	43
≤ 1200							DIN 371	H	B	ISO2/6H	HSS-E	●	M2 - M10	2941	21	43
≤ 1200							DIN 371	H	B	ISO2/6H	HSS-E-PM	S	M3 - M10	57	21	47
≤ 1200							DIN 371	H	B	ISO2/6H	HSS-E-PM		M3 - M10	875	21	46
≤ 1200							DIN 371	H	B	ISO2/6H	HSS-E-PM	A	M3 - M10	1575	21	47
≤ 1200							DIN 371	H	B	ISO3/6G	HSS-E		M2 - M10	2465	21	45
≤ 1200							DIN 371	H	B	ISO3/6G	HSS-E	S	M2 - M10	2710	21	45
≤ 1200							DIN 371	H R15	C	ISO2/6H	HSS-E-PM		M3 - M10	872	23	76
≤ 1200							DIN 371	H R15	C	ISO2/6H	HSS-E-PM	A	M3 - M10	1577	23	76
≤ 1200							DIN 371	H R15	C	6HX	HSS-E-PM	C	M6 - M10	1188	23	77
≤ 1200							DIN 371	H R40	C	ISO2/6H	HSS-E	S	M2 - M10	361	25	82
≤ 1200							DIN 371	H R40	C	ISO2/6H	HSS-E		M2 - M10	811	25	81
≤ 1200							DIN 371	H R40	C	ISO2/6H	HSS-E	●	M2 - M10	947	25	81
≤ 1200							DIN 371	H R40	C	ISO2/6H	HSS-E		M5 - M10	1894	25	83
≤ 1200							DIN 371	H R40	C	ISO2/6H	HSS-E	C	M2 - M10	1916	25	82
≤ 1200							DIN 371	H R40	C	ISO2/6H	HSS-E	●	M2 - M10	2850	25	81
≤ 1200							DIN 371	H R40	C	ISO3/6G	HSS-E	●	M2 - M10	2985	25	84
≤ 1200							DIN 371	H R40	C	ISO3/6G	HSS-E	S	M2 - M10	2986	25	84
			○				DIN 371	H AZ	C	ISO2/6H	HSS-E	●	M2 - M10	788	-	483

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 1200							DIN 371	H AZ	B	ISO2/6H	HSS-E	○	M2 - M10	791	21	44
≤ 1000	•						DIN 371	VA	B	ISO2/6H	HSS-E	●	M2 - M10	2869	229	236
	•						DIN 371	VA R15	C	ISO2/6H	HSS-E	●	M2 - M10	843	230	241
	•						DIN 371	VA R15	C	ISO2/6H	HSS-E	S	M2 - M10	2896	230	241
	•		•				DIN 371	VA R40	C	ISO2/6H	HSS-E	○	M3 - M10	814	231	243
	•		•				DIN 371	VA R40	C	ISO2/6H	HSS-E	○	M3 - M10	1892	231	243
	•						DIN 371	VA R40	C	ISO2/6H	HSS-E	●	M3 - M10	2862	231	243
	•						DIN 371	VA R40	C	ISO2/6H	HSS-E-PM	S	M3 - M10	59	231	246
	•		○				DIN 371	VA R40	C	ISO2/6H	HSS-E-PM	○	M3 - M10	909	231	246
•	•	○	•	○			DIN 371	VA R50	C	6HX	HSS-E-PM	S	M3 - M10	761	25	75
•	•	○	•	○			DIN 371	VA R50	C	6HX	HSS-E-PM	C	M3 - M10	1139	25	75
≤ 1000	•		○				DIN 371	VA AZ	B	ISO2/6H	HSS-E	○	M3 - M10	1871	229	240
			•				DIN 371	Al	B	ISO2/6H	HSS-E	○	M2 - M10	805	463	472
			•				DIN 371	Al R45	C	ISO2/6H	HSS-E	○	M1,6 - M10	812	464	474
		•					DIN 371	GG	C	6HX	HSS-E	A	M5 - M10	318	350	358
		•					DIN 371	GG	C	6HX	HSS-E	●	M3 - M10	807	349	356
		•					DIN 371	GG	C	6HX	HSS-E	S	M3 - M10	930	349	356
		•					DIN 371	GG	C	6HX	HSS-E	●	M5 - M10	1890	350	358
		•					DIN 371	GG	C	6HX	HSS-E	A	M3 - M10	1918	349	356
		○	≥ 7				DIN 371	Ms	E	ISO2/6H	HSS-E	○	M3 - M10	800	463	482
		○	≥ 7				DIN 371	Ms	E	ISO3/6G	HSS-E	○	M3 - M10	1084	463	482
≤ 1000							~DIN 371	N	B	6HX	VHM	C	M5 - M12	942	21	42
					≤ 62		~DIN 371	H	D	ISO2/6H	VHM	C	M3 - M16	2944	676	681
		•					DIN 376	GGT	C	ISO2/6H	HSS-E	S	M3 - M16	1876	349	357

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
800 VI							DIN 376	N	C	ISO2/6H	HSS-E	○	M1,6 - M48	818	22	51
800 VI							DIN 376	N	D	ISO2/6H	HSS-E	○	M2 - M30	813	18	49
1000 VI	○						DIN 376	N	B	ISO2/6H	HSS-E	S	M3 - M36	315	20	33
800 VI							DIN 376	N	B	ISO2/6H	HSS-E	○	M1,6 - M52	815	19	31
800 VI							DIN 376	N	B	ISO2/6H	HSS-E	○	M3 - M16	846	19	54
800 VI							DIN 376	N	B	ISO2/6H	HSS-E	○	M3 - M16	847	19	54
800 VI							DIN 376	N	B	ISO2/6H	HSS-E	S	M1,6 - M52	915	19	31
800 VI							DIN 376	N	B	ISO2/6H	HSS-E	●	M1,6 - M52	948	19	31
800 VI							DIN 376	N	B	ISO2/6H	HSS-E	C	M1,6 - M52	1249	19	31
1000 VI	●		●				DIN 376	N	B	ISO2/6H	HSS-E	○	M3 - M30	1872	229	236
1000 VI	○						DIN 376	N	B	ISO2/6H	HSS-E	A	M3 - M36	2428	20	33
1000 VI	○						DIN 376	N	B	ISO2/6H	HSS-E	●	M3 - M36	2877	20	33
1000 VI	●		○				DIN 376	N	B	ISO2/6H	HSS-E-PM	○	M12 - M20	879	229	237
1000 VI	○						DIN 376	N	B	ISO2/6H	HSS-E-PM	S	M12 - M20	1286	20	39
1000 VI	●						DIN 376	N	B	6HX	HSS-E	S	M3 - M30	2087	229	236
800 VI							DIN 376	N	B	ISO3/6G	HSS-E	○	M2 - M20	845	19	37
800 VI							DIN 376	N-LH	B	ISO2/6H	HSS-E	○	M12 - M20	790	19	32
800 VI							DIN 376	N R15	C	ISO2/6H	HSS-E	○	M3 - M30	821	22	57
800 VI							DIN 376	N R15	C	ISO2/6H	HSS-E	S	M3 - M30	916	22	57
800 VI							DIN 376	N R15	C	ISO2/6H	HSS-E	●	M3 - M30	949	22	57
800 VI							DIN 376	N R15	C	ISO2/6H	HSS-E	○	M12 - M20	1898	22	59
800 VI							DIN 376	N R15	C	ISO2/6H	HSS-E	S	M12 - M20	2437	23	59
800 VI							DIN 376	N L15	D	ISO2/6H	HSS-E	○	M3 - M16	820	19	89
1000 VI	○	○	○				DIN 376	N R40	E	ISO2/6H	HSS-E	○	M4 - M16	2791	24	69

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 1000	○	○					DIN 376	N R40	C	ISO2/6H	HSS-E	S	M5 - M30	196	25	70
≤ 800							DIN 376	N R40	C	ISO2/6H	HSS-E	●	M3 - M30	784	23	60
≤ 800							DIN 376	N R40	C	ISO2/6H	HSS-E	○	M3 - M30	822	23	60
≤ 1000	○	○					DIN 376	N R40	C	ISO2/6H	HSS-E	●	M3 - M36	826	24	66
≤ 1000	○	○	○				DIN 376	N R40	C	ISO2/6H	HSS-E	○	M3 - M36	890	24	66
≤ 800							DIN 376	N R40	C	ISO2/6H	HSS-E	S	M3 - M30	917	23	60
≤ 800							DIN 376	N R40	C	ISO2/6H	HSS-E	C	M3 - M30	1254	24	60
≤ 1000	○	○					DIN 376	N R40	C	ISO2/6H	HSS-E	A	M3 - M36	2426	-	66
≤ 800							DIN 376	N R40	C	ISO2/6H	HSS-E	S	M12 - M20	2439	24	64
≤ 1000	○	○					DIN 376	N R40	C	ISO2/6H	HSS-E-PM	S	M12 - M20	1289	25	72
≤ 1000	○	○					DIN 376	N R40	C	6HX	HSS-E	S	M3 - M36	2441	24	66
≤ 800							DIN 376	N R40	C	ISO3/6G	HSS-E	○	M3 - M24	848	23	61
≤ 800							DIN 376	N L40 LH	C	ISO2/6H	HSS-E	○	M12 - M20	787	24	62
●	●	○	○	○			DIN 376	N R50	C	ISO2/6H	HSS-E-PM	S	M12 - M20	1098	25	74
●	●	○	●	○			DIN 376	N R50	C	ISO2/6H	HSS-E-PM	C	M12 - M20	1293	25	74
			○				DIN 376	N AZ	E	ISO2/6H	HSS-E	A	M5 - M12	2899	464	484
≤ 1200		●	≥ 7				DIN 376	H	E	6HX	HSS-E-PM	C	M10 - M20	4165	351	359
≤ 1200		●	≥ 7				DIN 376	H	C	6HX	HSS-E	C	M16 - M39	778	23	79
≤ 1200		●	≥ 7				DIN 376	H	C	6HX	HSS-E-PM	C	M10 - M20	297	23	78
		●	≥ 7				DIN 376	H	C	6HX	VHM	○	M12 - M20	1859	349	362
		●	≥ 7				DIN 376	H	C	6HX	VHM	○	M12 - M20	1883	351	362
≤ 1200							DIN 376	H	B	ISO2/6H	HSS-E	●	M3 - M24	734	21	43
≤ 1200							DIN 376	H	B	ISO2/6H	HSS-E	○	M3 - M24	816	21	43
≤ 1200							DIN 376	H	B	ISO2/6H	HSS-E	C	M3 - M24	1915	21	43

Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 1200							DIN 376	H	B	ISO2/6H	HSS-E	●	M3 - M24	2942	21	43
≤ 1200							DIN 376	H	B	ISO2/6H	HSS-E-PM	S	M12 - M30	58	21	47
≤ 1200							DIN 376	H	B	ISO2/6H	HSS-E-PM	A	M12 - M30	1576	21	47
≤ 1200							DIN 376	H R15	C	ISO2/6H	HSS-E-PM	○	M12 - M20	935	23	76
≤ 1200							DIN 376	H R15	C	ISO2/6H	HSS-E-PM	A	M12 - M20	1578	23	76
≤ 1200							DIN 376	H R15	C	6HX	HSS-E-PM	C	M12 - M24	1194	23	77
≤ 1200							DIN 376	H R40	C	ISO2/6H	HSS-E	S	M3 - M30	362	25	82
≤ 1200							DIN 376	H R40	C	ISO2/6H	HSS-E	○	M3 - M30	823	25	81
≤ 1200							DIN 376	H R40	C	ISO2/6H	HSS-E	●	M3 - M30	950	25	81
≤ 1200							DIN 376	H R40	C	ISO2/6H	HSS-E	○	M12 - M20	1901	25	83
≤ 1200							DIN 376	H R40	C	ISO2/6H	HSS-E	C	M3 - M30	1917	25	82
≤ 1200							DIN 376	H R40	C	ISO2/6H	HSS-E	◍	M3 - M30	2851	25	81
≤ 1200							DIN 376	H AZ	B	ISO2/6H	HSS-E	○	M12 - M16	849	21	44
≤ 1000	●						DIN 376	VA	B	ISO2/6H	HSS-E	◍	M3 - M30	2870	229	236
	●						DIN 376	VA R15	C	ISO2/6H	HSS-E	◍	M12 - M24	785	230	241
	●						DIN 376	VA R15	C	ISO2/6H	HSS-E	S	M12 - M24	2895	230	241
	●		●				DIN 376	VA R40	C	ISO2/6H	HSS-E	○	M12 - M30	825	231	243
	●		●				DIN 376	VA R40	C	ISO2/6H	HSS-E	○	M12 - M30	1899	231	243
	●						DIN 376	VA R40	C	ISO2/6H	HSS-E	◍	M12 - M30	2863	231	243
	●						DIN 376	VA R40	C	ISO2/6H	HSS-E-PM	S	M12 - M24	60	231	246
	●		●				DIN 376	VA R40	C	ISO2/6H	HSS-E-PM	○	M12 - M24	910	231	246
●	●	○	●	○			DIN 376	VA R50	C	6HX	HSS-E-PM	S	M12 - M20	763	25	75
●	●	○	●	○			DIN 376	VA R50	C	6HX	HSS-E-PM	C	M12 - M20	1142	25	75
≤ 1000	●		○				DIN 376	VA AZ	B	ISO2/6H	HSS-E	○	M12 - M16	792	229	240

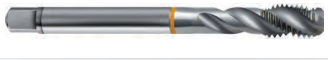
Maschi a macchina per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
			•				DIN 376	AI	B	ISO2/6H	HSS-E	○	M12 - M24	817	463	472
			•				DIN 376	AI R45	C	ISO2/6H	HSS-E	○	M3 - M24	824	464	474
		•					DIN 376	GG	C	6HX	HSS-E	A	M12 - M20	319	350	358
		•					DIN 376	GG	C	6HX	HSS-E	●	M3 - M30	819	349	356
		•					DIN 376	GG	C	6HX	HSS-E	S	M3 - M30	931	349	356
		•					DIN 376	GG	C	6HX	HSS-E	●	M12 - M20	1897	350	358
		•					DIN 376	GG	C	6HX	HSS-E	A	M3 - M30	1919	349	356
≤ 1200		•	≥ 7				~DIN 376	H	C	6HX	HSS-E	C	M16 - M39	779	23	80
≤ 1000	•						DIN 371/376	N	B	ISO2/6H	HSS-E-PM	S	M2 - M12	1002	229	238
•	•	○	○	○			DIN 371/376	N	B	6HX	HSS-E	S	M2 - M30	4218	21	38
≤ 1000	○	○					DIN 371/376	N R15	E	ISO2/6H	HSS-E	C	M3 - M20	4155	23	48
≤ 1000	○	○					DIN 371/376	N R15	C	ISO2/6H	HSS-E	C	M3 - M20	4154	23	48
•	•	○	○	○			DIN 371/376	VA R45	C	6HX	HSS-E	A	M2 - M30	393	25	71
				•			DIN 371/376	Ti R15	C	4HX	HSS-E-PM	C	MJ3 x 0,5 - M16	1061	597	605
				•			DIN 371/376	Ti R15	C	6HX	HSS-E-PM	C	M3 - M16	2909	597	604
				•			DIN 371/376	Ni R10	C	4HX	HSS-E-PM	A	MJ3 x 0,5 - M16	1065	597	605
				•			DIN 371/376	Ni R10	C	6HX	HSS-E-PM	A	M3 - M16	2920	597	604
				•			DIN 371/376	Ti Ni	B	4HX	HSS-E-PM	C	MJ3 x 0,5 - M16	1057	596	603
				•			DIN 371/376	Ti Ni	B	6HX	HSS-E-PM	C	M3 - M16	2901	596	602
				•			DIN 371/376	Ti Ni	B	6HX	HSS-E-PM	A	M3 - M16	2916	596	602

Maschi a macchina per fil. metr. ISO passo fine

≤ 800							DIN 2180	N R40	C	ISO2/6H	HSS-E	○	M 6 X0,75 - M12 X1,5	1970	23	106
≤ 800							DIN 374	N	C	ISO2/6H	HSS-E	○	M 3 X0,35 - M63 X1,5	830	18	100
≤ 800							DIN 374	N	C	ISO3/6G	HSS-E	○	M 3 X0,35 - M63 X1,5	829	18	100

Maschi a macchina per fil. metr. ISO passo fine

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 800							DIN 374	N	B	ISO2/6H	HSS-E	○	M 3 X0,35 - M40 X1,5	827	19	91
≤ 800							DIN 374	N	B	ISO2/6H	HSS-E	S	M 3 X0,35 - M40 X1,5	832	19	91
≤ 1000	○						DIN 374	N	B	ISO2/6H	HSS-E	A + M	M 5 X0,5 - M50 X1,5	2878	20	94
≤ 1000	○						DIN 374	N	B	ISO2/6H	HSS-E	●	M 5 X0,5 - M50 X1,5	2879	20	94
≤ 800							DIN 374	N	B	ISO2/6H	HSS-E	●	M 3 X0,35 - M40 X1,5	2888	19	91
≤ 1000	●						DIN 374	N	B	ISO2/6H	HSS-E-PM	S	M 6 X0,75 - M24 X2	1291	20	98
●	●	○	○	○			DIN 374	N	B	6HX	HSS-E	S	M 6 X0,75 - M24 X1,5	4219	21	90
≤ 1000							DIN 374	N	B	6HX	VHM	C	M14 X1,25 - M16 X1,5	944	21	96
≤ 800							DIN 374	N	B	ISO3/6G	HSS-E	○	M 6 X0,75 - M20 X1,5	316	19	93
≤ 1000	○						DIN 374	N	B	ISO3/6G	HSS-E	S	M 6 X0,75 - M20 X1,5	2993	20	93
≤ 1000	○	○					DIN 374	N R15	E	ISO2/6H	HSS-E	C	M 8 X1 - M16 X1,5	4157	23	103
≤ 800							DIN 374	N R15	C	ISO2/6H	HSS-E	○	M 4 X0,5 - M30 X2	833	22	102
≤ 800							DIN 374	N R15	C	ISO2/6H	HSS-E	○	M 5 X0,5 - M20 X1,5	1905	22	104
≤ 800							DIN 374	N R15	C	ISO2/6H	HSS-E	S	M 4 X0,5 - M30 X2	1971	22	102
≤ 800							DIN 374	N R15	C	ISO2/6H	HSS-E	●	M 4 X0,5 - M30 X2	2838	22	102
≤ 1000	○	○					DIN 374	N R15	C	ISO2/6H	HSS-E	C	M 8 X1 - M16 X1,5	4156	23	103
		○	≥ 7				DIN 374	N R15	C	6HX	VHM	○	M12 X1,5 - M20 X1,5	978	465	493
			≥ 7				DIN 374	N L15	D	6HX	VHM	○	M12 X1,5 - M18 X1,5	976	463	495
≤ 1000	○	○	○				DIN 374	N R40	E	ISO2/6H	HSS-E	○	M 5 X0,5 - M30 X2	2792	24	107
≤ 800							DIN 374	N R40	C	ISO2/6H	HSS-E	○	M 3 X0,35 - M30 X2	834	23	105
≤ 800							DIN 374	N R40	C	ISO2/6H	HSS-E	S	M 3 X0,35 - M30 X2	852	23	105
≤ 1000	○	○	○				DIN 374	N R40	C	ISO2/6H	HSS-E	○	M 5 X0,5 - M30 X2	2424	24	107
≤ 800							DIN 374	N R40	C	ISO2/6H	HSS-E	●	M 3 X0,35 - M30 X2	2843	23	105
≤ 1000	○	○					DIN 374	N R40	C	ISO2/6H	HSS-E	●	M 5 X0,5 - M30 X2	2853	24	107

Maschi a macchina per fil. metr. ISO passo fine

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 1000	○	○					DIN 374	N R40	C	ISO2/6H	HSS-E-PM	S	M 6 X0,75 - M24 X2	1292	25	109
≤ 1000	○	○					DIN 374	N R40	C	ISO3/6G	HSS-E	S	M 8 X1 - M20 X1,5	1049	24	108
≤ 1000	○	○	○				DIN 374	N R40	C	ISO3/6G	HSS-E	○	M 8 X1 - M20 X1,5	2998	24	108
≤ 1000	○	○					DIN 374	N R40	C	ISO3/6G	HSS-E	●	M 8 X1 - M20 X1,5	2999	24	108
≤ 1000	○	○					DIN 374	N R40	C(K)	ISO2/6H	HSS-E	S	M 6 X0,75 - M24 X2	273	25	109
●	●	○	○	○			DIN 374	N R50	C	ISO2/6H	HSS-E-PM	S	M 8 X1 - M20 X1,5	1100	25	110
●	●	○	●	○			DIN 374	N R50	C	ISO2/6H	HSS-E-PM	C	M 8 X1 - M20 X1,5	1294	25	110
≤ 1200		●	≥ 7				DIN 374	H	E	6HX	HSS-E-PM	C	M 5 X0,5 - M16 X1,5	1007	23	113
		●	≥ 7				DIN 374	H	E	6HX	VHM	○	M10 X1 - M16 X1,5	1009	351	369
≤ 1200		●	≥ 7				DIN 374	H	C	6HX	HSS-E-PM	C	M 5 X0,5 - M16 X1,5	1090	23	113
		●	≥ 7				DIN 374	H	C	6HX	VHM	○	M12 X1,5 - M20 X1,5	974	351	368
		●	≥ 7				DIN 374	H	C	6HX	VHM	○	M12 X1,5 - M20 X1,5	1860	349	368
≤ 1200							DIN 374	H	B	ISO2/6H	HSS-E	○	M 3 X0,35 - M24 X1,5	828	21	97
≤ 1200							DIN 374	H	B	ISO2/6H	HSS-E	●	M 3 X0,35 - M24 X1,5	2943	21	97
≤ 1200							DIN 374	H	B	ISO3/6G	HSS-E	S	M 8 X1 - M20 X1,5	2983	21	99
≤ 1200							DIN 374	H R15	C	ISO2/6H	HSS-E-PM	○	M 6 X0,75 - M24 X1,5	874	23	112
≤ 1200							DIN 374	H R15	C	6HX	HSS-E-PM	C	M 6 X0,75 - M24 X1,5	1200	23	112
≤ 1200							DIN 374	H R40	C	ISO2/6H	HSS-E	○	M 6 X0,75 - M24 X1,5	835	25	114
≤ 1200							DIN 374	H R40	C	ISO2/6H	HSS-E	●	M 6 X0,75 - M24 X1,5	2852	25	114
≤ 1200							DIN 374	H R40	C	ISO2/6H	HSS-E	●	M 6 X0,75 - M24 X1,5	2940	25	114
≤ 1200							DIN 374	H R40	C	ISO3/6G	HSS-E	●	M 8 X1 - M20 X1,5	2988	25	116
≤ 1200							DIN 374	H R40	C	ISO3/6G	HSS-E	S	M 8 X1 - M20 X1,5	2989	25	116
≤ 1000	•						DIN 374	VA	B	ISO2/6H	HSS-E	S	M 3 X0,35 - M24 X1,5	1001	229	257
≤ 1000	•		•				DIN 374	VA	B	ISO2/6H	HSS-E	○	M 5 X0,5 - M24 X2	1873	229	256

Maschi a macchina per fil. metr. ISO passo fine

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 1000	•						DIN 374	VA	B	ISO2/6H	HSS-E	●	M 3 X0,35 - M24 X1,5	2871	229	257
≤ 1000	•						DIN 374	VA	B	ISO2/6H	HSS-E-PM	○	M 5 X0,5 - M24 X2	887	229	256
	•						DIN 374	VA R15	C	ISO2/6H	HSS-E	●	M 4 X0,5 - M24 X1,5	1874	230	249
	•						DIN 374	VA R15	C	ISO2/6H	HSS-E	S	M 4 X0,5 - M24 X1,5	2897	230	249
	•						DIN 374	VA R40	C	ISO2/6H	HSS-E	●	M 3 X0,35 - M24 X1,5	2864	231	251
	•		•				DIN 374	VA R40	C	ISO2/6H	HSS-E-PM	○	M 8 X1 - M20 X1,5	936	231	253
	•						DIN 374	VA R40	C	ISO2/6H	HSS-E-PM	S	M 8 X1 - M20 X1,5	1004	231	253
•	•	○	○	○			DIN 374	VA R45	C	6HX	HSS-E	A	M 6 X0,75 - M24 X1,5	394	25	115
•	•	○	•	○			DIN 374	VA R50	C	6HX	HSS-E-PM	S	M 8 X1 - M20 X1,5	764	25	111
•	•	○	•	○			DIN 374	VA R50	C	6HX	HSS-E-PM	C	M 8 X1 - M20 X1,5	1144	25	111
		•					DIN 374	GG	C	6HX	HSS-E	A	M 4 X0,5 - M30 X1,5	169	349	365
		•					DIN 374	GG	C	6HX	HSS-E	A	M 8 X1 - M24 X1,5	347	350	366
		•					DIN 374	GG	C	6HX	HSS-E	●	M 4 X0,5 - M30 X1,5	831	349	365
		•					DIN 374	GG	C	6HX	HSS-E	S	M 4 X0,5 - M30 X1,5	932	349	365
		•					DIN 374	GG	C	6HX	HSS-E	●	M 8 X1 - M24 X1,5	1904	350	366
		○	≥ 7				DIN 371	N R15	C	6HX	VHM	○	M 4 X0,5 - M10 X1	977	465	493
			≥ 7				DIN 371	N R15	C	6HX	VHM	M	M 5 - M10	2516	-	494
			≥ 7				DIN 371	N L15	D	6HX	VHM	○	M 4 X0,5 - M10 X1	975	463	495
		•	≥ 7				DIN 371	H	C	6HX	VHM	○	M 5 X0,5 - M10 X1	972	351	368
		•	≥ 7				DIN 371	H	C	6HX	VHM	○	M 5 X0,5 - M10 X1	1861	349	368
					45-55		DIN 371	H	D	6HX	HSS-E-PM	C	M 8 X1 - M12 X1,5	4161	676	682
				•			DIN 371	Ti R15	C	4HX	HSS-E-PM	C	MJ 6 X0,5 - MJ10 X1,25	1062	597	609
				•			DIN 371	Ti R15	C	6HX	HSS-E-PM	C	M 3 X0,35 - M10 X1,25	2910	597	608
				•			DIN 371	Ni R10	C(K)	4HX	HSS-E-PM	A	MJ 6 X0,5 - MJ10 X1,25	1066	597	609

Maschi a macchina per fil. metr. ISO passo fine

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
				•			DIN 371	Ni R10	C(K)	6HX	HSS-E-PM	A	M 3 X0,35 - M10 X1,25	2921	597	608
				•			DIN 371	Ti Ni	B	4HX	HSS-E-PM	C	MJ 6 X0,5 - MJ10 X1,25	1058	596	607
				•			DIN 371	Ti Ni	B	6HX	HSS-E-PM	C	M 3 X0,35 - M10 X1,25	2903	596	606
				•			DIN 371	Ti Ni	B	6HX	HSS-E-PM	A	M 3 X0,35 - M10 X1,25	2917	596	606
≤ 1000							~DIN 371	N	B	6HX	VHM	C	M 5 X0,5 - M12 X1,5	943	21	95
					≤62		~DIN 371	H	D	ISO2/6H	VHM	C	M 6 X0,5 - M12 X1,5	1161	676	683

Maschi a macchina per filettatura UNC

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 800							~DIN 371	N	C	2B	HSS-E	○	3 - 48 - 3/8 - 16	1977	18	121
≤ 800							~DIN 371	N	B	2B	HSS-E	○	1 - 64 - 3/8 - 16	873	19	117
≤ 1000	•		•				~DIN 371	N	B	2B	HSS-E	○	4 - 40 - 3/8 - 16	1980	229	258
≤ 1000	○						~DIN 371	N	B	2B	HSS-E	●	4 - 40 - 3/8 - 16	2881	20	118
≤ 800							~DIN 371	N	B	2B	HSS-E	●	1 - 64 - 3/8 - 16	2889	19	117
≤ 800							~DIN 371	N R15	C	2B	HSS-E	○	4 - 40 - 3/8 - 16	1978	22	119
≤ 800							~DIN 371	N R15	C	2B	HSS-E	●	4 - 40 - 10 - 24	2839	22	120
≤ 800							~DIN 371	N R40	C	2B	HSS-E	○	2 - 56 - 3/8 - 16	876	23	122
≤ 1000	○	○					~DIN 371	N R40	C	2B	HSS-E	S	10 - 24 - 3/8 - 16	1837	25	124
≤ 800							~DIN 371	N R40	C	2B	HSS-E	●	2 - 56 - 3/8 - 16	2844	23	122
≤ 1000	○	○	○				~DIN 371	N R40	C	2B	HSS-E	○	2 - 56 - 3/8 - 16	2854	24	123
≤ 1000	○	○					~DIN 371	N R40	C	2B	HSS-E	●	2 - 56 - 3/8 - 16	2855	24	123
≤ 1000	•						~DIN 371	VA	B	2B	HSS-E	●	4 - 40 - 3/8 - 16	2872	229	258
	•		•				~DIN 371	VA R40	C	2B	HSS-E	○	2 - 56 - 3/8 - 16	1981	231	259
	•						~DIN 371	VA R40	C	2B	HSS-E	●	2 - 56 - 3/8 - 16	2865	231	259
		•					~DIN 371	GG	C	2B	HSS-E	A	10 - 24 - 3/8 - 16	1085	350	371
		•					~DIN 371	GG	C	2B	HSS-E	●	2 - 56 - 3/8 - 16	1979	349	370

Maschi a macchina per filettatura UNC

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
				•			~DIN 371	Ti Ni	B	2BX	HSS-E-PM	C	6 - 32 - 3/8 - 16	2905	596	610
				•			~DIN 371	Ti Ni	B	2BX	HSS-E-PM	A	6 - 32 - 3/8 - 16	2918	596	610
VI 800							~DIN 376	N	B	2B	HSS-E	○	7/16 - 14 - 1 1/2 - 6	878	19	117
VI 1000	•		•				~DIN 376	N	B	2B	HSS-E	○	1/2 - 13 - 1 - 8	1985	229	258
VI 1000	○						~DIN 376	N	B	2B	HSS-E	●	7/16 - 14 - 1 - 8	2883	20	118
VI 800							~DIN 376	N	B	2B	HSS-E	●	7/16 - 14 - 1 1/2 - 6	2890	19	117
VI 800							~DIN 376	N R15	C	2B	HSS-E	●	1/2 - 13 - 1 - 8	2840	22	120
VI 800							~DIN 376	N R40	C	2B	HSS-E	○	7/16 - 14 - 1 - 8	881	23	122
VI 800							~DIN 376	N R40	C	2B	HSS-E	●	7/16 - 14 - 1 - 8	2845	23	122
VI 1000	○	○	○				~DIN 376	N R40	C	2B	HSS-E	○	7/16 - 14 - 1 - 8	2856	24	123
VI 1000	○	○					~DIN 376	N R40	C	2B	HSS-E	●	7/16 - 14 - 1 - 8	2857	24	123
VI 1000	•						~DIN 376	VA	B	2B	HSS-E	●	1/2 - 13 - 1 - 8	2873	229	258
	•		•				~DIN 376	VA R40	C	2B	HSS-E	○	7/16 - 14 - 7/8 - 9	1986	231	259
	•						~DIN 376	VA R40	C	2B	HSS-E	●	7/16 - 14 - 7/8 - 9	2866	231	259
		•					~DIN 376	GG	C	2B	HSS-E	A	7/16 - 14 - 7/8 - 9	1086	350	371
		•					~DIN 376	GG	C	2B	HSS-E	●	7/16 - 14 - 3/4 - 10	1984	349	370
				•			~DIN 371/376	Ti R15	C	2BX	HSS-E-PM	C	4 - 40 - 5/8 - 11	2912	597	612
				•			~DIN 371/376	Ti R15	C	3BX	HSS-E-PM	C	6 - 32 - 5/8 - 11	1063	597	613
				•			~DIN 371/376	Ni R10	C	2BX	HSS-E-PM	A	4 - 40 - 5/8 - 11	2922	597	612
				•			~DIN 371/376	Ni R10	C	3BX	HSS-E-PM	A	6 - 32 - 5/8 - 11	1067	597	613
				•			~DIN 371/376	Ti Ni	B	3BX	HSS-E-PM	C	6 - 32 - 5/8 - 11	1059	596	611

Maschi a macchina per filettatura UNF

VI 800							~DIN 374	N	C	2B	HSS-E	○	3 - 56 - 1 - 12	1987	18	126
VI 800							~DIN 374	N	B	2B	HSS-E	○	3 - 56 - 1 1/4 - 12	908	18	125

Maschi a macchina per filettatura UNF

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
≤ 1000 N/mm²	•		•				~DIN 374	N	B	2B	HSS-E	○	10 - 32 - 3/8 - 24	1990	229	260
≤ 1000 N/mm²	○						~DIN 374	N	B	2B	HSS-E	●	6 - 40 - 1 - 12	2885	20	130
≤ 800 N/mm²							~DIN 374	N	B	2B	HSS-E	●	3 - 56 - 1 1/4 - 12	2891	19	125
≤ 800 N/mm²							~DIN 374	N R15	C	2B	HSS-E	○	3 - 56 - 1 - 12	1988	22	127
≤ 800 N/mm²							~DIN 374	N R15	C	2B	HSS-E	●	3 - 56 - 1 - 12	2841	22	127
≤ 800 N/mm²							~DIN 374	N R40	C	2B	HSS-E	○	3 - 56 - 1 - 12	911	23	128
≤ 1000 N/mm²	○	○					~DIN 374	N R40	C	2B	HSS-E	S	10 - 32 - 1 - 12	1838	25	131
≤ 800 N/mm²							~DIN 374	N R40	C	2B	HSS-E	●	3 - 56 - 1 - 12	2846	23	128
≤ 1000 N/mm²	○	○					~DIN 374	N R40	C	2B	HSS-E	●	10 - 32 - 7/8 - 14	2859	24	129
≤ 1000 N/mm²	•						~DIN 374	VA	B	2B	HSS-E	●	4 - 48 - 1 - 12	2874	229	260
	•						~DIN 374	VA R15	C	2B	HSS-E	●	5 - 44 - 1 - 12	1991	230	261
	•						~DIN 374	VA R15	C	2B	HSS-E	S	5 - 44 - 1 - 12	2898	230	261
	•		•				~DIN 374	VA R40	C	2B	HSS-E	○	1/4 - 28 - 1 - 12	2867	231	262
	•						~DIN 374	VA R40	C	2B	HSS-E	●	10 - 32 - 1 - 12	2868	231	262
		•					~DIN 374	GG	C	2B	HSS-E	A	10 - 32 - 7/8 - 14	1082	350	373
		•					~DIN 374	GG	C	2B	HSS-E	●	4 - 48 - 1 - 12	1989	349	372
				•			~DIN 371	Ti Ni	B	2BX	HSS-E-PM	A	6 - 40 - 3/8 - 24	2919	596	614
				•			~DIN 371-374	Ti R15	C	2BX	HSS-E-PM	C	4 - 48 - 5/8 - 18	2914	597	617
				•			~DIN 371-374	Ti R15	C	3BX	HSS-E-PM	C	6 - 40 - 5/8 - 18	1064	597	618
				•			~DIN 371-374	Ni R10	C	2BX	HSS-E-PM	A	4 - 48 - 5/8 - 18	2923	597	616
				•			~DIN 371-374	Ni R10	C	3BX	HSS-E-PM	A	6 - 40 - 5/8 - 18	1068	597	618
				•			~DIN 371-374	Ti Ni	B	3BX	HSS-E-PM	C	6 - 40 - 5/8 - 18	1060	596	615
		•					DIN 5156	GG	C		HSS-E	●	G1/16 - G2	961	349	374

Maschi a macchina per filettatura Whitworth BSP

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
< 800							DIN 5156	N	C		HSS-E	○	G 1/16 - G2	963	18	133
< 800							DIN 5156	N	B		HSS-E	○	G 1/16 - G2	962	19	132
< 1000	●		●				DIN 5156	N	B		HSS-E	○	G 1/16 - G1	967	229	263
< 1000	○						DIN 5156	N	B		HSS-E	A	G 1/8 - G2	2886	20	140
< 1000	○						DIN 5156	N	B		HSS-E	●	G 1/8 - G2	2887	20	140
< 800							DIN 5156	N	B		HSS-E	●	G 1/16 - G2	2894	19	132
●	●	○	○	○			DIN 5156	N	B		HSS-E	S	G 1/16 - G1	4220	21	134
< 1000	○	○					DIN 5156	N R15	E		HSS-E	C	G 1/16 - G1	4158	23	135
< 800							DIN 5156	N R15	C		HSS-E	○	G 1/16 - G1	964	22	135
< 800							DIN 5156	N R15	C		HSS-E	●	G 1/16 - G1	2842	22	135
< 1000	○	○					DIN 5156	N R40	C		HSS-E	S	G 1/8 - G1	937	25	141
< 800							DIN 5156	N R40	C		HSS-E	○	G 1/16 - G1 1/2	965	23	136
< 800							DIN 5156	N R40	C		HSS-E	●	G 1/16 - G1 1/2	2849	23	136
< 1000	○	○	○				DIN 5156	N R40	C		HSS-E	○	G 1/8 - G2	2860	24	137
< 1000	○	○					DIN 5156	N R40	C		HSS-E	●	G 1/8 - G2	2861	24	137
< 1000	●						DIN 5156	VA	B		HSS-E	●	G 1/16 - G1	2875	229	263
	●						DIN 5156	VA R40	C		HSS-E	●	G 1/16 - G1 1/2	968	231	265
	●		●				DIN 5156	VA R40	C		HSS-E-PM	○	G 1/16 - G1 1/2	939	231	265
●	●	○	○	○			DIN 5156	VA R45	C		HSS-E	A	G 1/16 - G1	395	25	139
●	●	○	●	○			DIN 5156	VA R50	C		HSS-E-PM	S	G 1/16 - G 1/2	4159	25	138

Maschi a macchina per filettatura BSW

< 800							~DIN 371	N	B		HSS-E	●	W 1/8 - W 3/8	2892	19	142
< 800							~DIN 371	N R40	C		HSS-E	●	W 1/8 - W 3/8	2847	23	143
< 800							~DIN 376	N	B		HSS-E	●	W 7/16 - W1	2893	19	142

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
Maschi a macchina per filettatura BSW																
≤ 800							~DIN 376	N R40	C		HSS-E		W 3/8 - W1	2848	23	143
Maschi a macchina per filettatura EG																
≤ 1000	○						DIN 40435	N	B		HSS-E	S	EG M 4 - EG M16	1010	20	144
≤ 1000	○	○					DIN 40435	N R40	C		HSS-E	S	EG M 4 - EG M16	1011	24	145
Maschi a macchina per filettatura NPT																
≤ 800							WN	N	C		HSS-E		1/16 - 2	973	18	146
	●	○	○				WN	N	C		HSS-E		1/16 - 1	1087	230	268
	●	○	○				WN	N	C		HSS-E	S	1/16 - 1	1088	230	268
Maschi a macchina per filettatura NPTF																
	●	○	○				WN	N	C		HSS-E	S	1/16 - 1	4127	230	269
Maschi a macchina per filettatura Pg																
≤ 800							DIN 40432	N	C		HSS-E		PG7 - PG29	979	18	147
≤ 800							DIN 40432	N	B		HSS-E		PG7 - PG29	980	19	147
Maschi a macchina a rullare per fil. metrica ISO																
●	●		○	○			~DIN 371	N	C	6HX	HSS-E-PM	S	M 3 - M10	322	27	154
●	●		○	○			~DIN 371	N	C	6HX	HSS-E-PM	S	M 5 - M10	323	27	158
●	●		○	○			~DIN 376	N	C	6HX	HSS-E-PM	S	M12 - M16	339	27	154
●	●		○	○			~DIN 376	N	C	6HX	HSS-E-PM	S	M12 - M16	342	27	158
●	●		○	○			~DIN 371	N	C	6HX	HSS-E	S	M 3 - M10	919	26	152
●	●		○	○			~DIN 371	N	C	6HX	HSS-E-PM	S	M 3 - M10	1266	27	155
●	●		○	○			~DIN 371	N	C	6GX	HSS-E	S	M 3 - M10	918	26	153
●	●		○				~DIN 371	N	C	6HX	HSS-E-PM	S	M 1 - M10	1255	26	149
●	●		○				~DIN 371	N	C	6GX	HSS-E-PM	S	M 1 - M10	903	26	149
●	●		○				~DIN 371	N	C	6GX	HSS-E	S	M 2 - M10	920	26	150
●	●		○				~DIN 371	N	C	6HX	HSS-E	S	M 1 - M10	921	26	149

Maschi a macchina a rullare per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
•	•		○	○			~DIN 376	N	C	6HX	HSS-E	S	M 6 - M39	923	26	152
•	•		○	○			~DIN 376	N	C	6GX	HSS-E	S	M 6 - M39	922	26	153
•	•		○				~DIN 376	N	C	6HX	HSS-E	S	M12 - M20	925	26	149
•	•		○				~DIN 376	N	C	6HX	HSS-E-PM	S	M12 - M20	1256	26	149
•	•		○				~DIN 376	N	C	6GX	HSS-E-PM	S	M12 - M20	952	26	149
•	•		○	○			~DIN 376	N	C	6HX	HSS-E-PM	S	M12 - M20	1267	27	155
•	•		≥ 7	•			~DIN 371	N	C	6HX	HSS-E-PM	C	M 3 - M10	1270	27	159
•	•		≥ 7	•			~DIN 371	N	C	6GX	HSS-E-PM	C	M 5 - M10	1713	27	160
•	•		≥ 7	○			~DIN 376	N	C	6HX	HSS-E-PM	C	M12 - M20	1271	27	159
			•				~DIN 371	N	C	6HX	HSS-E-PM	Cb	M 1 - M10	1347	466	506
			•				~DIN 371	N	C	6GX	HSS-E-PM	Cb	M 2 - M10	1565	466	508
			•				~DIN 376	N	C	6HX	HSS-E-PM	Cb	M12 - M20	1566	466	506
			•				~DIN 376	N	C	6GX	HSS-E-PM	Cb	M12 - M20	1567	466	508
•	•		≥ 7	•			~DIN 376	N	C	6HX	VHM	C	M12 - M20	1931	27	163
•							~DIN 371	N	C	6HX	HSS-E	P	M 3 - M10	1587	26	152
•							~DIN 371	N	C	6HX	HSS-E-PM	P	M 3 - M10	1599	27	155
•							~DIN 371	N	C	6GX	HSS-E	P	M 3 - M10	1588	26	153
•							~DIN 371	N	C	6GX	HSS-E-PM	P	M 3 - M10	1705	27	153
•							~DIN 376	N	C	6HX	HSS-E	P	M 6 - M39	1589	26	152
•							~DIN 376	N	C	6HX	HSS-E-PM	P	M12 - M20	1707	27	155
•							~DIN 376	N	C	6GX	HSS-E	P	M 6 - M20	1590	26	153
•							~DIN 376	N	C	6GX	HSS-E-PM	P	M 6 - M20	1708	27	153
•	•			•			~DIN 371	N	C	6HX	HSS-E-PM	A	M 3 - M10	1717	27	159
•	•			•			~DIN 371	N	C	6GX	HSS-E-PM	A	M 3 - M10	1718	27	161

Maschi a macchina a rullare per fil. metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
•	•			•			~DIN 376	N	C	6HX	HSS-E-PM	A	M12 - M20	1719	27	159
•	•			•			~DIN 376	N	C	6GX	HSS-E-PM	A	M12 - M20	1720	27	161
•	•		○	○			~DIN 371	N	C	6HX	HSS-E	S	M 5 - M10	2442	27	156
•	•		○	○			~DIN 371	N	C	6GX	HSS-E	S	M 5 - M10	2443	27	156
•	•		○	○			~DIN 371	N	E	6HX	HSS-E-PM	S	M 3 - M10	1725	27	159
•	•		○	○			~DIN 371	N	E	6GX	HSS-E-PM	S	M 3 - M10	1726	27	161
•	•		○	○			~DIN 376	N	C	6HX	HSS-E	S	M12 - M16	2444	27	156
•	•		○	○			~DIN 376	N	C	6GX	HSS-E	S	M12 - M16	2445	27	156
•	•		○	○			~DIN 376	N	E	6HX	HSS-E-PM	S	M12 - M20	1727	27	159
•	•		○	○			~DIN 376	N	E	6GX	HSS-E-PM	S	M12 - M20	1728	27	161
•	•		≥ 7	•			~DIN 371	N	E	6HX	VHM	C	M 3 - M10	1927	27	164
•	•		≥ 7	•			~DIN 371	N	C	6HX	VHM	C	M 3 - M10	1972	27	163
•	•		≥ 7	○			~DIN 376	N	C	6HX	HSS-E	C	M 6 - M39	2013	26	152
•	•		≥ 7	○			~DIN 371	N	C	6HX	HSS-E	C	M 3 - M10	2012	26	152
•	•		≥ 7	○			~DIN 371	N	C	6HX	HSS-E	C	M 5 - M10	2446	27	156
•	•		≥ 7	○			~DIN 371	N	C	6GX	HSS-E	C	M 5 - M10	2447	27	157
•	•		≥ 7	○			~DIN 376	N	C	6HX	HSS-E	C	M12 - M16	2448	27	156
			•				~DIN 371/376	N	C	6HX	HSS-E	Cb	M 5 - M20	2515	467	517
•	•		≥ 7	○			~DIN 371/376	N	C	6HX	VHM	S	M 5 - M16	2518	26	151
•	•		○	○		≤M5		N	C	6HX	HSS-E-PM	S	M 3 - M20	4143	27	162
			•				~DIN 371/376	N	C	6GX	HSS-E	Cb	M 5 - M20	4146	467	520

Maschi a macc. a rullare per fil. metr. ISO fine

•	•		○	○			~DIN 374	N	C	6HX	HSS-E-PM	S	M 8 X1 - M20 X1,5	333	27	173
•	•		○	○			~DIN 374	N	C	6HX	HSS-E-PM	S	M 8 X1 - M16 X1,5	338	27	177

Maschi a macc. a rullare per fil. metr. ISO fine

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
•	•		○	○			~DIN 371	N	C	6HX	HSS-E	S	M 6 X0,75 - M10 X1,25	1275	26	169
•	•		○	○			~DIN 371	N	C	6GX	HSS-E	S	M 8 X1 - M10 X1	1277	26	172
•	•		○				~DIN 371	N	C	6HX	HSS-E-PM	S	M 8 X1 - M10 X1	1257	26	166
•	•		○				~DIN 371	N	C	6GX	HSS-E-PM	S	M 8 X1 - M10 X1,25	1740	26	167
•	•		○	○			~DIN 374	N	C	6HX	HSS-E	S	M 6 X0,75 - M24 X1,5	927	26	169
•	•		○	○			~DIN 374	N	C	6GX	HSS-E	S	M 8 X1 - M20 X1,5	926	26	172
•	•		○				~DIN 374	N	C	6HX	HSS-E	S	M 8 X1 - M20 X1,5	929	26	165
•	•		○				~DIN 374	N	C	6HX	HSS-E-PM	S	M12 X1 - M24 X2	1258	26	166
•	•		○				~DIN 374	N	C	6GX	HSS-E	S	M 8 X1 - M18 X1,5	928	26	168
•	•		○	○			~DIN 374	N	C	6HX	HSS-E-PM	S	M12 X1,25 - M24 X2	1269	27	174
•	•		○	○			~DIN 371	N	C	6HX	HSS-E-PM	S	M 8 X1 - M10 X1	1268	27	174
•	•		≥ 7	•			~DIN 371	N	C	6HX	HSS-E-PM	C	M 8 X1 - M10 X1,25	1272	27	178
•	•		≥ 7	•			~DIN 371	N	C	6GX	HSS-E-PM	C	M 8 X1 - M10 X1,25	1715	27	179
•	•		≥ 7	•			~DIN 374	N	C	6HX	HSS-E-PM	C	M12 X1 - M24 X1,5	1273	27	178
			•				~DIN 371	N	C	6HX	HSS-E-PM	Cb	M 8 X1 - M10 X1	1568	466	526
			•				~DIN 371	N	C	6GX	HSS-E-PM	Cb	M 8 X1 - M10 X1	1569	466	529
			•				~DIN 374	N	C	6GX	HSS-E-PM	Cb	M12 X1 - M24 X1,5	1580	466	529
•	•		≥ 7	•			~DIN 371/376	N	C	6HX	VHM	C	M10 X1 - M24 X1,5	1581	27	181
•							~DIN 374	N	C	6HX	HSS-E	P	M 6 X0,75 - M24 X1,5	1593	26	169
•							~DIN 374	N	C	6HX	HSS-E-PM	P	M12 X1 - M24 X1,5	1711	27	175
•							~DIN 374	N	C	6GX	HSS-E-PM	P	M12 X1 - M24 X1,5	1712	27	176
•							~DIN 371	N	C	6HX	HSS-E	P	M 6 X0,75 - M10 X1,25	1591	26	169
•							~DIN 371	N	C	6GX	HSS-E	P	M 8 X1 - M10 X1	1592	26	171
•							~DIN 371	N	C	6GX	HSS-E-PM	P	M 8 X1 - M10 X1	1710	27	176

Maschi a macc. a rullare per fil. metr. ISO fine

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
•	•		≥ 7	•			~DIN 374	N	C	6GX	HSS-E-PM	C	M12 X1 - M24 X1,5	1716	27	179
•	•			•			~DIN 371	N	C	6HX	HSS-E-PM	A	M 8 X1 - M10 X1,25	1721	27	178
•	•			•			~DIN 374	N	C	6HX	HSS-E-PM	A	M12 X1 - M24 X1,5	1723	27	178
•	•		○	○			~DIN 371	N	E	6HX	HSS-E-PM	S	M 8 X1 - M10 X1,25	1729	27	178
•	•		○	○			~DIN 371	N	E	6GX	HSS-E-PM	S	M 8 X1 - M10 X1,25	1730	27	179
•	•		○	○			~DIN 374	N	E	6HX	HSS-E-PM	S	M12 X1 - M24 X1,5	1731	27	178
•	•		○	○			~DIN 374	N	E	6GX	HSS-E-PM	S	M12 X1 - M24 X1,5	1732	27	179
•	•		≥ 7	○			~DIN 374	N	C	6HX	HSS-E	C	M 6 X0,75 - M20 X1,5	2008	26	170
•	•		○	○				N	C	6HX	HSS-E-PM	S	M 8 X1 - M16 X1,5	4145	27	180
			•				~DIN 371-374	N	C	6HX	HSS-E	Cb	M 8 X1 - M16 X1,5	4147	467	537
			•				~DIN 371-374	N	C	6GX	HSS-E	Cb	M 8 X1 - M16 X1,5	4151	467	539

Maschi a macchina a rullare per filettatura UNC

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
•	•		○	○			~DIN 371	N	C	2BX	HSS-E	S	4 - 40 - 3/8 - 16	1582	26	182
•	•		○				~DIN 371	N	C	2BX	HSS-E	S	4 - 40 - 3/8 - 16	2273	26	182
•	•		○	○			~DIN 376	N	C	2BX	HSS-E	S	7/16 - 14 - 7/8 - 9	1583	26	182
•	•		○				~DIN 376	N	C	2BX	HSS-E	S	7/16 - 14 - 7/8 - 9	2274	26	182

Maschi a macchina a rullare per filettatura UNF

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
•	•		○	○			~DIN 374	N	C	2BX	HSS-E	S	10 - 32 - 1 - 12	1585	26	183
•	•		○				~DIN 374	N	C	2BX	HSS-E	S	10 - 32 - 1 - 12	2275	26	183
•	•		○				~DIN 371	N	C	2BX	HSS-E	S	4 - 48 - 3/8 - 24	1283	26	183
•	•		○	○			~DIN 371	N	C	2BX	HSS-E	S	4 - 48 - 3/8 - 24	1584	26	183

Maschi a macc. a rullare per fil. Whitworth BSP

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
•	•		○				DIN 2189	N	C		HSS-E	S	G 1/16 - G1 1/4	966	26	184
•	•		○	○			DIN 2189	N	C		HSS-E	S	G 1/16 - G 3/4	1586	26	184
			•				DIN 2189	N	C		HSS-E	Cb	G 1/16 - G1	4152	467	546

Frese a filettare senza fase di svasatura per filettatura metrica ISO

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
○	○	●	●				WN	TM SP			VHM	○	M 6 - M20 X1,5	3734	468	548
●	○	●	●	○	≤55		WN	TM SP			VHM	C	M 6 - M20	3735	28	187
●	○	●	●	○	≤55		WN	TM SP			VHM	C	M 6 - M20 X1,5	3737	28	186
●	○	●	●	○	≤55		WN	TM SP			VHM	C	M 6 - M20	3740	28	187
●	○	●	●	○	≤55		WN	TM SP			VHM	C	M 6 - M20 X1,5	3743	28	186
●	○	●	●	○	≤55		WN	TM SP			VHM	C	M 6 - M20	4132	28	186
●	○	●	●	○	≤55		WN	TM SP			VHM	C	M 6 - M20	4133	28	186
○	○	●	●	○			WN	TMC SP			VHM	○	M 3 - M20	3510	469	551
○	○	●	●	○			WN	TMC SP			VHM	○	M 3 - M20	3511	469	552
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 3 - M20	3525	28	188
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 3 - M20	3526	29	189
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 3 - M20	3543	28	188
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 3 - M20	3544	29	189
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 3 - M20	3759	29	190
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 3 - M20	3760	29	190

Frese a filettare con fase di svasatura per fil. metr. ISO passo fine

○	○	●	●	○			WN	TMC SP			VHM	○	M 4 X0,5 - M16 X1,5	3512	469	554
○		●	●				WN	TMC SP			VHM	○	M 4 X0,5 - M16 X1,5	3513	469	555
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 4 X0,5 - M16 X1,5	3527	28	191
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 4 X0,5 - M16 X1,5	3528	29	192
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 4 X0,5 - M16 X1,5	3545	28	191
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 4 X0,5 - M16 X1,5	3546	29	192
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 4 X0,5 - M16 X1,5	3762	29	193
●	●	●	●	●	≤55		WN	TMC SP			VHM	C	M 4 X0,5 - M16 X1,5	3763	29	193

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina

Frese a filettare senza fase di svasatura per filettatura UNC

•	○	•	•	○	≤55		WN	TM SP			VHM	C	10 - 24 - 5/8 - 11	4134	28	194
•	○	•	•	○	≤55		WN	TM SP			VHM	C	10 - 24 - 5/8 - 11	4135	28	194
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 20 - 1/2 - 13	3516	28	195
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 20 - 1/2 - 13	3517	29	196
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 20 - 1/2 - 13	3534	28	195
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 20 - 1/2 - 13	3535	29	196

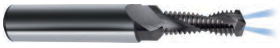
Frese a filettare senza fase di svasatura per filettatura UNF

•	○	•	•	○	≤55		WN	TM SP			VHM	C	10 - 32 - 5/8 - 18	4136	28	197
•	○	•	•	○	≤55		WN	TM SP			VHM	C	10 - 32 - 5/8 - 18	4137	28	197
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 28 - 1/2 - 20	3518	28	198
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 28 - 1/2 - 20	3519	29	199
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 28 - 1/2 - 20	3536	28	198
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/4 - 28 - 1/2 - 20	3537	29	199

Frese a filettare senza fase di svasatura per filettatura Whitworth BSP

•	○	•	•	○	≤55		WN	TM SP			VHM	C	G 1/8 - G 3/8	3745	28	200
•	○	•	•	○	≤55		WN	TM SP			VHM	C	G 1/8 - G 3/8	3746	28	201
•	○	•	•	○	≤55		WN	TM SP			VHM	C	G 1/8 - G 3/8	3748	28	200
•	○	•	•	○	≤55		WN	TM SP			VHM	C	G 1/8 - G 3/8	3750	28	201
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	G 1/8 - G 3/8	3514	28	202
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	G 1/8 - G 3/8	3515	29	203
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	G 1/8 - G 3/8	3529	28	202
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	G 1/8 - G 3/8	3533	29	203
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	G 1/8 - G 3/8	3765	29	204
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	G 1/8 - G 3/8	3766	29	204

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
Frese a filettare senza fase di svasatura per filettatura NPT																
•	•	•	•	•	≤55		WN	TM SP			VHM	C	1/16 - 3/8	3753	28	205
•	•	•	•	•	≤55		WN	TM SP			VHM	C	1/16 - 3/8	3754	28	205
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/8 - 3/8	3520	28	206
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/8 - 3/8	3538	28	206
Frese a filettare senza fase di svasatura per filettatura NPTF																
•	•	•	•	•	≤55		WN	TM SP			VHM	C	1/16 - 3/8	3756	28	207
•	•	•	•	•	≤55		WN	TM SP			VHM	C	1/16 - 3/8	3757	28	207
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/8 - 3/8	3521	28	208
•	•	•	•	•	≤55		WN	TMC SP			VHM	C	1/8 - 3/8	3539	28	208
Fresa a filettare per impieghi multipli per filettatura Whitworth BSP																
○	○	•	•	○			WN	TMU SP	BSP		VHM	○	≥ 1/4 - ≥ 1	3524	470	575
•	•	•	•	•	≤55		WN	TMU SP	BSP		VHM	C	≥ 1/4 - ≥ 1	3542	29	212
•	•	•	•	•	≤55		WN	TMU SP	BSP		VHM	C	≥ 1/4 - ≥ 1	3557	29	212
•	•	•	•	•	≤55		WN	TM SP	NPT		VHM	C	≥ 1/2 - ≥ 1	3768	69	213
•	•	•	•	•	≤55		WN	TM SP	NPT		VHM	C	≥ 1/2 - ≥ 1	3769	69	213
•	•	•	•	•	≤55		WN	TM SP	NPTF		VHM	C	≥ 1/2 - ≥ 1	3772	29	214
•	•	•	•	•	≤55		WN	TM SP	NPTF		VHM	C	≥ 1/2 - ≥ 1	3773	29	214
○	○	•	•	○			WN	TMU SP	M		VHM	○	≥ 10 - ≥ 30	3523	470	572
•	•	•	•	•	≤55		WN	TMU SP	M		VHM	C	≥ 10 - ≥ 30	3541	29	209
•	•	•	•	•	≤55		WN	TMU SP	M		VHM	C	≥ 10 - ≥ 30	3556	29	209
•	•	•	•	•	≤55		WN	TMU SP	M		VHM	C	≥ 3 - ≥ 24	4162	29	210
•	•	•	•	•	≤55		WN	TMU SP	M		VHM	C	≥ 3 - ≥ 24	4163	29	210
•	•	•	•	•	≤55		WN	TMU UN	UN		VHM	C	≥ 1/2 - ≥ 1	3595	29	211
•	•	•	•	•	≤55		WN	TMU UN	UN		VHM	C	≥ 1/2 - ≥ 1	3596	29	211

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
Micro-thread milling cutters																
•	•	•	•	•			WN	SP G	BSP		VHM	C	G 1/8 - G2	4228	29	216
•	•	•	•	•			WN	SP M	M		VHM	C	M 1,6 - M16	4226	29	215
				○	•		WN	SP M	M		VHM	A	M 2 - M12	4227	679	703
•	•	•	•	•			WN	SP M/MF	M		VHM	C	M1,4 - M1,8 - M8 - M10	4225	29	217
Frese a filettare e forare per filettatura metrica ISO																
		○	•				WN	DTMC SP	M		VHM	○	M3 - M16	3774	471	581
		○	•				WN	DTMC SP	M		VHM	○	M3 - M16	3775	471	581
		•	•				WN	DTMC SP	M		VHM	C	M3 - M16	3776	471	581
		•	•				WN	DTMC SP	M		VHM	C	M3 - M16	3777	471	581
		○	•				WN	DTMC SP	M		VHM	○	M3 - M16	3778	471	582
		○	•				WN	DTMC SP	M		VHM	○	M3 - M16	3779	471	582
		•	•				WN	DTMC SP	M		VHM	C	M3 - M16	3780	471	582
		•	•				WN	DTMC SP	M		VHM	C	M3 - M16	3781	471	582
		○	•				WN	DTMC SP	M		VHM	○	M3 - M16	3782	471	583
		○	•				WN	DTMC SP	M		VHM	○	M3 - M16	3783	471	583
		•	•				WN	DTMC SP	M		VHM	C	M3 - M16	3784	471	583
		•	•				WN	DTMC SP	M		VHM	C	M3 - M16	3785	471	583
		○	•				WN	DTMC SP	MF		VHM	○	M4 x 0,5 - M16 x 1,5	3787	471	584
		•	•				WN	DTMC SP	MF		VHM	C	M4 x 0,5 - M16 x 1,5	3788	471	584
		•	•				WN	DTMC SP	MF		VHM	C	M4 x 0,5 - M16 x 1,5	3789	471	584
		○	•				WN	DTMC SP	MF		VHM	○	M4 x 0,5 - M16 x 1,5	3790	471	585
		○	•				WN	DTMC SP	MF		VHM	○	M4 x 0,5 - M16 x 1,5	3791	471	585
		•	•				WN	DTMC SP	MF		VHM	C	M4 x 0,5 - M16 x 1,5	3792	471	585
		•	•				WN	DTMC SP	MF		VHM	C	M4 x 0,5 - M16 x 1,5	3793	471	585

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
Frese a filettare e forare per filettatura metrica ISO																
		•	•				WN	DTMC SP	UNC		VHM	○	1/4 - 20 - 5/8 - 11	4138	471	586
		•	•				WN	DTMC SP	UNC		VHM	C	1/4 - 20 - 5/8 - 11	4139	471	586
		•	•				WN	DTMC SP	UNF		VHM	○	1/4 - 28 - 5/8 - 18	4140	471	587
		•	•				WN	DTMC SP	UNF		VHM	C	1/4 - 28 - 5/8 - 18	4141	471	587
Filiere automatiche per filettatura metrica ISO																
VI 1000		•	•				WN		B	6g	HSS	○	M 3 - M12	121	706	707
VI 1000		•	•				WN		B	6g	HSS	○	M 2 - M10	125	706	708
Filiere per filettatura metrica ISO																
VI 1000		•	•				DIN EN 22568		B	6g	HSS	○	M 1 - M30	151	706	710
VI 1000		•	•				DIN EN 22568		B	6g	HSS	○	M 3 - M30	152	706	711
VI 1000		•	•				DIN EN 22568		B	6g	HSS	○	M 1 - M30	153	706	710
VI 1000		•	•				DIN EN 22568		B	6g	HSS	○	M 3 - M20	156	706	713
VI 1000		•	•				DIN 382			6g	HSS	○	M 5 - M52	139	706	709
VI 1200	•						DIN EN 22568		B	6g	HSS-E	●	M 2 - M20	130	706	712
Filiere per filettatura metrica ISO passo fine																
VI 1000		•	•				DIN EN 22568		B	6g	HSS	○	M 3 X0,35 - M30 X2	161	706	714
VI 1000		•	•				DIN EN 22568		B	6g	HSS	○	M 3 X0,35 - M30 X2	162	706	714
Filiere per filettatura UNC																
VI 1000		•	•				DIN EN 22568		B	2a	HSS	○	8 -32 - 3/4 -10	182	706	716
Filiere per filettatura UNF																
VI 1000		•	•				DIN EN 22568		B	2a	HSS	○	10 - 32 - 7/8 - 14	185	706	717
Filiere per filettatura BSP																
VI 1000		•	•				DIN EN 24231		B		HSS	○	G 1/8 - G1 1/2	175	706	718
VI 1000		•	•				DIN EN 24231		B		HSS	○	G 1/8 - G1 1/2	176	706	718
Filiere per filettatura BSPT																
VI 1000		•	•				DIN EN 24230		B		HSS	○	R 1/8 - R 1/2	198	706	719

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
Filiere per filettatura NPT																
□ 1000		•	•				DIN EN 22568		B		HSS	○	1/8 - 3/4	191	706	720
Maschi a mano per filettatura metrica ISO																
≤ 800			○				DIN 352	N		ISO2/6H	HSS	○	M 1 - M68	861		721
≤ 800			○				DIN 352	N	A	ISO2/6H	HSS	○	M 1 - M68	862		721
≤ 800			○				DIN 352	N	D	ISO2/6H	HSS	○	M 1 - M68	863		721
≤ 800			○				DIN 352	N	C	ISO2/6H	HSS	○	M 1 - M45	864		721
≤ 800			○				DIN 352	N		ISO2/6H	HSS	○	M 1 - M45	882		723
≤ 800			○				DIN 352	N	D	ISO2/6H	HSS	○	M 1 - M45	883		723
≤ 800			○				DIN 352	N		ISO2/6H	HSS	○	M 2 - M18	904		724
≤ 800			○				DIN 352	N-LH	A	ISO2/6H	HSS	○	M 2 - M18	905		724
≤ 800			○				DIN 352	N-LH	D	ISO2/6H	HSS	○	M 2 - M18	906		724
≤ 800			○				DIN 352	N-LH	C	ISO2/6H	HSS	○	M 2 - M18	907		724
•	•	•	•				DIN 352	H		ISO2/6H	HSS-E	●	M 2 - M20	857		726
•	•	•	•				DIN 352	H	A	ISO2/6H	HSS-E	●	M 2 - M20	858		726
•	•	•	•				DIN 352	H	D	ISO2/6H	HSS-E	●	M 2 - M20	859		726
•	•	•	•				DIN 352	H	C	ISO2/6H	HSS-E	●	M 2 - M20	860		726
≤ 1000	•	•	•				DIN 352	VA		ISO2/6H	HSS-E	○	M 2 - M20	853		725
≤ 1000	•	•	•				DIN 352	VA	A	ISO2/6H	HSS-E	○	M 2 - M20	854		725
≤ 1000	•	•	•				DIN 352	VA	D	ISO2/6H	HSS-E	○	M 2 - M20	855		725
≤ 1000	•	•	•				DIN 352	VA	C	ISO2/6H	HSS-E	○	M 2 - M20	856		725
•	•	•	•				DIN 352	H		ISO2/6H	HSS-E-PM	●	M 3 - M12	1818		727
•	•	•	•				DIN 352	H	A	ISO2/6H	HSS-E-PM	●	M 3 - M12	1819		727
•	•	•	•				DIN 352	H	D	ISO2/6H	HSS-E-PM	●	M 3 - M12	1820		727
•	•	•	•				DIN 352	H	C	ISO2/6H	HSS-E-PM	●	M 3 - M12	1821		727

P	M	K	N	S	H	Descrizione degli utensili	Norma	Tipo	Forma	Tolleranza sul Ø	Materiale tagliente	Superficie	d1/mm	Numero-art.	Dati di taglio a pagina	Pagina
Maschi a mano per fil. metr. ISO passo fine																
800 VI			○				DIN 2180	N		ISO2/6H	HSS	◯	M 2 X0,25 - M52 X1,5	884		728
800 VI			○				DIN 2180	N	D	ISO2/6H	HSS	◯	M 2 X0,25 - M52 X1,5	885		728
800 VI			○				DIN 2180	N	C	ISO2/6H	HSS	◯	M 2 X0,25 - M52 X1,5	886		728
Maschi a mano per filettatura UNC																
800 VI			○				~DIN 352	N		2B	HSS	◯	1 -64 - 2- 4 1/2	981		730
800 VI			○				~DIN 352	N	A	2B	HSS	◯	1 -64 - 2- 4 1/2	982		730
800 VI			○				~DIN 352	N	D	2B	HSS	◯	1 -64 - 2- 4 1/2	983		730
800 VI			○				~DIN 352	N	C	2B	HSS	◯	1 -64 - 2- 4 1/2	984		730
Maschi a mano per filettatura UNF																
800 VI			○				~DIN 2181	N		2B	HSS	◯	1 -72 - 1 -12	985		731
800 VI			○				~DIN 2181	N	D	2B	HSS	◯	1 -72 - 1 -12	986		731
800 VI			○				~DIN 2181	N	C	2B	HSS	◯	1 -72 - 1 -12	987		731
Maschi a mano per filettatura BSW																
800 VI			○				~DIN 352	N			HSS	◯	W 3/32 - W2	954		732
800 VI			○				~DIN 352	N	A		HSS	◯	W 3/32 - W2	955		732
800 VI			○				~DIN 352	N	D		HSS	◯	W 3/32 - W2	956		732
800 VI			○				~DIN 352	N	C		HSS	◯	W 3/32 - W2	957		732
Maschi a mano per filettatura Pg																
800 VI			○				DIN 5157	N			HSS	◯	G 1/8 - G2	958		733
800 VI			○				DIN 5157	N	D		HSS	◯	G 1/8 - G2	959		733
800 VI			○				DIN 5157	N	C		HSS	◯	G 1/8 - G2	960		733

Mandrini syncro con lubrificazione interna

	Descrizione degli utensili	Forma del gambo	Diametri di serraggio (mm)	Articolo nr.	Pagina
	Mandrino idraulico syncro HSK-A con lubrificazione interna	HSK-A	HSK-A 63 - HSK-A 100	**4601**	742
	Mandrino idraulico syncro ISO con lubrificazione interna	SK	SK 30 - SK 40	**4576**	743
	Mandrino idraulico syncro MAS/ BT con lubrificazione interna	BT	BT 30 - BT 40	**4577**	744
	Mandrino idraulico syncro con codolo cilindrico a lubrificazione interna	cyl.	20,000 - 25,000	**4525**	745
	Boccole di riduzione a tenuta stagna per mandrini idraulici syncro		12,000 / 20,000	**4605**	746
	GÜHROJET bussola di riduzione per mandrini sincroni		12,000 / 20,000	**4606**	748
	Viti di regolazione „plan“ per masch. sincro con raffr. interno		ER20 - ER32	**4364**	750
	Mandrini di maschiatura sincrona cil. con raffr. interno	cyl.	25,000	**4326**	751
	Mandrini di maschiatura sincrona HSK-A con raffr. interno	HSK-A	HSK-A 63 - HSK-A 100	**4327**	751
	Pinza di serraggio		ER16 - ER40	**4308**	753
	Attacchi base HSK-A per mas-chiatura	HSK-A	HSK-A 50 - HSK-A 100	**4343**	754
	Mandrini di masch. cambio rapido no refrig. interno		M3 - M20	**4340**	754
	Mandrini a cambio rapido con raffreddamento interno		M3 - M20	**4342**	755
	Mandrini a cambio rapido HSK-A con raffr. interno	HSK-A	HSK-A 63	**4328**	755
	Attacchi intercambiabili per mandrini		M3 - M20	**4206**	756

Mandrini di serraggio di precisione MQL

	Descrizione degli utensili	Forma del gambo	Diametri di serraggio (mm)	Articolo nr.	Pagina
	Mandrino synchro idraulico a 1 canale MMS HSK-A (p. sostituz. auto. dell'utensile)	HSK-A	HSK-A 63 - HSK-A 100	**4602**	760
	Mandrino synchro idraulico a 2 canali MMS HSK-A (p. sostituz. auto. dell'utensile)	HSK-A	HSK-A 63 - HSK-A 100	**4603**	761
	Mandrino idraulico syncro per MMS HSK-A per cambio utensili manuale	HSK-A	HSK-A 63 - HSK-A 100	**4604**	762
	Mandrino idraulico syncro con codolo cilindrico a lubrificazione interna	cyl.	20,000	**4524**	763
	Mandrini per maschiatura sincrona per nebulizzazione MMS HSK-A per cambio automatico	HSK-A	HSK-A 63	**4298**	764
	MMS 1 canale -Mandrini per maschiatura sincrona HSK-A per cambio utensili automatico	HSK-A	HSK-A 63 - HSK-A 100	**4330**	764
	MMS 1 canale -Mandrini per maschiatura sincrona HSK-A per cambio utensili automatico	HSK-A	HSK-A 63 - HSK-A 100	**4341**	765
	Vite di regolazione per nebulizzazione con cono interno per mandrini sincroni MMS		ER20 - ER32	**4305**	766
	Unità adduzione refrigerante per MMS HSK-A sistema ad 1 canale	HSK-A	HSK-A 32 - HSK-A 100	**4508**	767
	Unità adduzione refrigerante per MMS HSK-A sistema a 2 canali	HSK-A	HSK-A 32 - HSK-A 100	**4511**	767
	Unità adduzione refrigerante per MMS HSK-A (monoblocco)	HSK-A	HSK-A 32 - HSK-A 100	**4513**	768
	Dadi di serraggio, sistema DIN ISO 15488		ER16 - ER40	**4306**	769
	Dischi di tenuta		ER16 - ER40	**4335**	769
	Chiave di serraggio		ER16 mini - ER40	**4913**	769

Articolo nr.	Pagina	Profondità di foro	Norma	Descrizione	Materiale tagliente	Tipo	Forma
57	47		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H	B
58	47		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H	B
59	246		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA R40	C
60	246		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA R40	C
121	707			Filiere automatiche per filettatura metrica ISO	HSS		B
125	708			Filiere automatiche per filettatura metrica ISO	HSS		B
130	712			Filiere per filettatura metrica ISO	HSS-E		B
139	709			Filiere per filettatura metrica ISO	HSS		
151	710			Filiere per filettatura metrica ISO	HSS		B
152	711			Filiere per filettatura metrica ISO	HSS		B
153	710			Filiere per filettatura metrica ISO	HSS		B
156	713			Filiere per filettatura metrica ISO	HSS		B
161	714			Filiere per filettatura metrica ISO passo fine	HSS		B
162	714			Filiere per filettatura metrica ISO passo fine	HSS		B
169	365		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	GG	C
174	70		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C(K)
175	718			Filiere per filettatura BSP	HSS		B
176	718			Filiere per filettatura BSP	HSS		B
182	716			Filiere per filettatura UNC	HSS		B
185	717			Filiere per filettatura UNF	HSS		B
191	720			Filiere per filettatura NPT	HSS		B
196	70		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C(K)
198	719			Filiere per filettatura BSPT	HSS		B
273	109		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C(K)
297	78, 359, 479		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	H	C
302	78, 359, 479		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	H	C
313	33		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
315	33		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
316	93		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
318	358		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	GG	C
319	358		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	GG	C
322	154, 275, 380, 511, 620		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
323	158, 279, 384, 515, 622		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
333	173, 294, 399, 533, 629		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
338	177, 295, 400, 535, 631		~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
339	154, 275, 380, 511, 620		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
342	158, 279, 384, 515, 622		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
347	366		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E	GG	C
361	82		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
362	82		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
393	71, 244		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R45	C
394	115, 252		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	VA R45	C
395	139, 267		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	VA R45	C
733	43		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
734	43		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
761	75, 247, 486		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA R50	C
763	75, 247, 486		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA R50	C
764	111, 255, 490		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	VA R50	C
767	74, 245, 485		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N R50	C
778	79, 360, 480		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	H	C
779	80, 361, 481			Maschi a macchina forati per fil. metr. ISO	HSS-E	H	C
783	60		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
784	60		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
785	241		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R15	C
786	62		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N L40-LH	C
787	62		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N L40-LH	C
788	483		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H AZ	C
789	32		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N-LH	B
790	32		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N-LH	B
791	44		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H AZ	B
792	240		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA AZ	B
794	36		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
795	52		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	C
796	56		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
797	56		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
799	52		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
800	482		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	Ms	E
801	49		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	D
802	55		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
803	30		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
804	43		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
805	472		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	Al	B

Articolo nr.	Pagina	Profondità di foro	Norma	Descrizione	Materiale tagliente	Tipo	Forma
806	50		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	C
807	356		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	GG	C
808	89		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N L15	D
809	57		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
810	60		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
811	81		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
812	474		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	Al R45	C
813	49		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	D
814	243, 475		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R40	C
815	31		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
816	43		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
817	472		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	Al	B
818	51		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	C
819	356		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	GG	C
820	89		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N L15	D
821	57		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
822	60		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
823	81		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
824	474		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	Al R45	C
825	243, 475		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R40	C
826	66		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
827	91		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
828	97		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H	B
829	100		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	C
830	100		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	C
831	365		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	GG	C
832	91		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
833	102		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R15	C
834	105		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
835	114		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H R40	C
836	66		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
837	37		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
838	54		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
839	54		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
843	241		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R15	C
844	61		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
845	37		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
846	54		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
847	54		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
848	61		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
849	44		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H AZ	B
851	85			Maschi a macchina per dadi per fil. metrica ISO	HSS-E	N	
852	105		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
853	725		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	VA	
854	725		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	VA	A
855	725		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	VA	D
856	725		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	VA	C
857	726		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	H	
858	726		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	H	A
859	726		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	H	D
860	726		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E	H	C
861	721		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N	
862	721		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N	A
863	721		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N	D
864	721, 723		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N	C
869	56		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
872	76		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H R15	C
873	117		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N	B
874	112		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	H R15	C
875	46		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H	B
876	122		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
877	237		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA	B
878	117		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N	B
879	237		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA	B
881	122		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
882	723		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N	
883	723		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N	D
884	728		DIN 2181	Maschi a mano per fil. metr. ISO passo fine	HSS	N	
885	728		DIN 2181	Maschi a mano per fil. metr. ISO passo fine	HSS	N	D
886	728		DIN 2181	Maschi a mano per fil. metr. ISO passo fine	HSS	N	C
887	256		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	VA	B
888	88			Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C

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889	66		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
890	66		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
903	149, 271, 376, 508		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
904	724		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N-LH	
905	724		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N-LH	A
906	724		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N-LH	D
907	724		DIN 352	Maschi a mano per filettatura metrica ISO	HSS	N-LH	C
908	125		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N	B
909	246		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA R40	C
910	246		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA R40	C
911	128		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N R40	C
912	30		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
913	57		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
914	60		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
915	31		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
916	57		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
917	60		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
918	153, 274, 379, 510		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
919	152, 274, 379, 510		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
920	150, 272, 377, 507		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
921	149, 271, 376, 506		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
922	153, 274, 379, 510		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
923	152, 274, 379, 510		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
925	149, 271, 376, 506		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
926	172, 292, 397, 532		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
927	169, 288, 395, 530		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
928	168, 290, 393, 528		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
929	165, 286, 391, 524		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
930	356		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	GG	C
931	356		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	GG	C
932	365		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	GG	C
935	76		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H R15	C
936	253, 488		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	VA R40	C
937	141		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R40	C(K)
939	265, 503		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E-PM	VA R40	C
942	42		~DIN 371	Maschi a macchina per filettatura metrica ISO	Int. in MD	N	B
943	95		~DIN 371	Maschi a macchina per fil. metr. ISO passo fine	Int. in MD	N	B
944	96		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	Int. in MD	N	B
945	30		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
946	57		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
947	81		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
948	31		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
949	57		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
950	81		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
952	149, 271, 376, 508		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
954	732		~DIN 352	Maschi a mano per filettatura BSW	HSS	N	
955	732		~DIN 352	Maschi a mano per filettatura BSW	HSS	N	A
956	732		~DIN 352	Maschi a mano per filettatura BSW	HSS	N	D
957	732		~DIN 352	Maschi a mano per filettatura BSW	HSS	N	C
958	733		DIN 5157	Maschi a mano per filettatura **Bsp**	HSS	N	
959	733		DIN 5157	Maschi a mano per filettatura **Bsp**	HSS	N	D
960	733		DIN 5157	Maschi a mano per filettatura **Bsp**	HSS	N	C
961	374		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	GG	C
962	132		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N	B
963	133		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N	C
964	135		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R15	C
965	136		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R40	C
966	184, 302, 407, 544		DIN 2189	Maschi a macc. a rullare per fil. Whitworth BSP	HSS-E	N	C
967	263, 502		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	VA	B
968	265		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	VA R40	C
969	362, 476		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	H	C
971	478		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	N R15	C
972	368, 491		DIN 371	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	H	C
973	146			Maschi a macchina per filettatura NPT	HSS-E	N	C
974	368, 491		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	H	C
975	495		DIN 371	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	N L15	D
976	495		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	N L15	D
977	493		DIN 371	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	N R15	C
978	493		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	N R15	C
979	147		DIN 40432	Maschi a macchina per filettatura Pg	HSS-E	N	C
980	147		DIN 40432	Maschi a macchina per filettatura Pg	HSS-E	N	B
981	730		~DIN 352	Maschi a mano per filettatura UNC	HSS	N	

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982	730		~DIN 352	Maschi a mano per filettatura UNC	HSS	N	A
983	730		~DIN 352	Maschi a mano per filettatura UNC	HSS	N	D
984	730		~DIN 352	Maschi a mano per filettatura UNC	HSS	N	C
985	731		~DIN 2181	Maschi a mano per filettatura UNF	HSS	N	
986	731		~DIN 2181	Maschi a mano per filettatura UNF	HSS	N	D
987	731		~DIN 2181	Maschi a mano per filettatura UNF	HSS	N	C
991	35		DIN 352	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
992	58		DIN 352	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
993	65		DIN 352	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
995	53		DIN 352	Maschi a macchina per filettatura metrica ISO	HSS-E	N	C
998	86			Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
1001	257		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	VA	B
1002	238		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	VA	B
1004	253		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	VA R40	C
1007	113, 367, 497		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E-PM	H	E
1008	364, 477		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	H	E
1009	369, 492		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	H	E
1010	144			Maschi per filettatura EG	HSS-E	N	B
1011	145			Maschi per filettatura EG	HSS-E	N R40	C
1049	108		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
1057	603		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	TiNi	B
1058	607		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	TiNi	B
1059	611		~DIN 371/~DIN 376	Maschi a macchina per filettatura UNC	HSS-E-PM	TiNi	B
1060	615		~DIN 371/~DIN 374	Maschi a macchina per filettatura UNF	HSS-E-PM	TiNi	B
1061	605		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	Ti R15	C
1062	609		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	Ti R15	C
1063	613		~DIN 371/~DIN 376	Maschi a macchina per filettatura UNC	HSS-E-PM	Ti R15	C
1064	618		~DIN 371/~DIN 374	Maschi a macchina per filettatura UNF	HSS-E-PM	Ti R15	C
1065	605		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	Ni R10	C(K)
1066	609		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	Ni R10	C(K)
1067	613		~DIN 371/~DIN 376	Maschi a macchina per filettatura UNC	HSS-E-PM	Ni R10	C(K)
1068	618		~DIN 371/~DIN 374	Maschi a macchina per filettatura UNF	HSS-E-PM	Ni R10	C(K)
1082	373		~DIN 374	Maschi a macchina forati per fil. UNF	HSS-E	GG	C
1084	482		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	Ms	E
1085	371		~DIN 371	Maschi a macchina forati per fil. UNC	HSS-E	GG	C
1086	371		~DIN 376	Maschi a macchina forati per fil. UNC	HSS-E	GG	C
1087	268			Maschi a macchina per filettatura NPT	HSS-E	VA R25	C
1088	268			Maschi a macchina per filettatura NPT	HSS-E	VA R25	C
1090	113, 367, 496		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E-PM	H	C
1091	78, 359, 479		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	H	E
1098	74, 245, 485		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N R50	C
1100	110, 254, 489		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	N R50	C
1139	75, 247, 486		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	VA R50	C
1142	75, 247, 486		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	VA R50	C
1144	111, 255, 490		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E-PM	VA R50	C
1152	74, 245, 485		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	N R50	C
1161	683		~DIN 371	Maschi a macchina per fil. metr. ISO passo fine	Int. in MD	H	D
1188	77		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	H R15	C
1194	77		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	H R15	C
1200	112		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E-PM	H R15	C
1201	680		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H	D
1246	30		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
1249	31		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
1252	60		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
1254	60		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
1255	149, 271, 376, 506		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1256	149, 271, 376, 506		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1257	166, 287, 394, 525		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1258	166, 287, 394, 525		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1266	155, 276, 381, 512, 621		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1267	155, 276, 381, 512, 621		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1268	174, 293, 398, 534, 630		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1269	174, 293, 398, 534, 630		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1270	159, 280, 385, 516, 623		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
1271	159, 280, 385, 516, 623		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
1272	178, 296, 401, 536, 632		~DIN 371	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
1273	178, 296, 401, 536, 632		~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
1275	169, 288, 395, 530		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
1277	172, 292, 397, 532		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
1283	183, 301, 406, 543		~DIN 371	Maschi a macchina a rullare per filettatura UNF	HSS-E	N	C
1285	39		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N	B
1286	39		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N	B

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1287	40		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N	B
1288	72		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N R40	C
1289	72		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N R40	C
1290	73		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	N R40	C
1291	98, 248		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	N	B
1292	109		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	N R40	C
1293	74, 245, 485		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	N R50	C
1294	110, 254, 489		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E-PM	N R50	C
1347	506		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1565	508		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1566	506		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1567	508		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1568	526		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1569	529		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1575	47		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H	B
1576	47		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H	B
1577	76		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H R15	C
1578	76		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	H R15	C
1580	529		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1581	181, 299, 404, 541, 635		~DIN 371/~DIN 376	Maschi a rullare forati per fil. metrica ISO passo fine	Int. in MD	N	C
1582	182, 300, 405, 542		~DIN 371	Maschi a macchina a rullare per filettatura UNC	HSS-E	N	C
1583	182, 300, 405, 542		~DIN 376	Maschi a macchina a rullare per filettatura UNC	HSS-E	N	C
1584	183, 301, 406, 543		~DIN 371	Maschi a macchina a rullare per filettatura UNF	HSS-E	N	C
1585	183, 301, 406, 543		~DIN 374	Maschi a macchina a rullare per filettatura UNF	HSS-E	N	C
1586	184, 302, 408, 545		DIN 2189	Maschi a macc. a rullare per fil. Whitworth BSP	HSS-E	N	C
1587	152		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
1588	153		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
1589	152		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
1590	153		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
1591	169		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
1592	171		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
1593	169		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
1599	155		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1705	153		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1707	155		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1708	153		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E-PM	N	C
1710	176		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1711	175		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1712	176		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1713	160, 281, 386, 518, 624		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
1715	179, 297, 402, 538, 633		~DIN 371	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
1716	179, 297, 402, 538, 633		~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
1717	159, 280, 385, 623		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
1718	161, 282, 387, 625		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
1719	159, 280, 385, 623		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
1720	161, 282, 387, 625		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
1721	178, 296, 401, 632		~DIN 371	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
1723	178, 296, 401, 632		~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
1725	159, 280, 385, 516, 623		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	E
1726	161, 282, 387, 519, 625		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	E
1727	159, 280, 385, 516, 623		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	E
1728	161, 282, 387, 519, 625		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	E
1729	178, 296, 401, 536, 632		~DIN 371	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	E
1730	179, 297, 402, 538, 633		~DIN 371	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	E
1731	178, 296, 401, 536, 632		~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	E
1732	179, 297, 402, 538, 633		~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	E
1740	167, 289, 392, 527		~DIN 371	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E-PM	N	C
1818	727		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E-PM	H	
1819	727		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E-PM	H	A
1820	727		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E-PM	H	D
1821	727		DIN 352	Maschi a mano per filettatura metrica ISO	HSS-E-PM	H	C
1837	124		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N R40	C(K)
1838	131		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N R40	C(K)
1839	87			Utensili combinati per fil. metrica ISO	HSS-E	N	D
1858	362, 476		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	H	C
1859	362, 476		DIN 376	Maschi a macchina forati per fil. metr. ISO	Int. in MD	H	C
1860	368, 491		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	H	C
1861	368, 491		DIN 371	Maschi a macchina forati per fil. metr. ISO passo fine	Int. in MD	H	C
1870	236, 473		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA	B
1871	240		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA AZ	B
1872	236, 473		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA	B
1873	256, 487		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	VA	B

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1874	249		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	VA R15	C
1875	357		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	GGT	C
1876	357		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	GGT	C
1883	362, 476		DIN 376	Maschi a macchina forati per fil. metr. ISO	Int. in MD	H	C
1890	358		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	GG	C
1891	59		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R15	C
1892	243		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	VA R40	C
1893	63		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R40	C
1894	83		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	H R40	C
1897	358		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	GG	C
1898	59		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R15	C
1899	243		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	VA R40	C
1901	83		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	H R40	C
1904	366		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E	GG	C
1905	104		DIN 374	Maschi a macchina forati per fil. metr. ISO passo fine	HSS-E	N R15	C
1914	43		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
1915	43		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
1916	82		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
1917	82		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
1918	356		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	GG	C
1919	356		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	GG	C
1927	164, 285, 390, 523, 628		~DIN 371	Maschi a rullare forati per fil. metrica ISO	Int. in MD	N	E
1931	163, 284, 389, 522, 627		~DIN 376	Maschi a rullare forati per fil. metrica ISO	Int. in MD	N	C
1970	106		DIN 2181	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
1971	102		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R15	C
1972	163, 284, 389, 522, 627		~DIN 371	Maschi a rullare forati per fil. metrica ISO	Int. in MD	N	C
1977	121		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N	C
1978	119		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N R15	C
1979	370		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	GG	C
1980	258, 498		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	VA	B
1981	259, 499		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	VA R40	C
1984	370		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	GG	C
1985	258, 498		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	VA	B
1986	259, 499		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	VA R40	C
1987	126		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N	C
1988	127		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N R15	C
1989	372		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	GG	C
1990	260, 500		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	VA	B
1991	261		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	VA R15	C
2008	170, 291, 396, 531		~DIN 374	Maschi a macc. a rullare per fil. metr. ISO fine	HSS-E	N	C
2012	152, 274, 379, 510		~DIN 371	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
2013	152, 274, 379, 510		~DIN 376	Maschi a macchina a rullare per fil. metrica ISO	HSS-E	N	C
2086	236		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA	B
2087	236		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA	B
2273	182, 300, 405, 542		~DIN 371	Maschi a macchina a rullare per filettatura UNC	HSS-E	N	C
2274	182, 300, 405, 542		~DIN 376	Maschi a macchina a rullare per filettatura UNC	HSS-E	N	C
2275	183, 301, 406, 543		~DIN 374	Maschi a macchina a rullare per filettatura UNF	HSS-E	N	C
2311	364		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	H	C
2424	107		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
2425	66		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
2426	66		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
2427	33		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
2428	33		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
2436	59		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R15	C
2437	59		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R15	C
2438	64		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R40	C
2439	64		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R40	C
2440	66		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
2441	66		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
2442	156, 277, 382, 513		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2443	156, 277, 382, 513		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2444	156, 277, 382, 513		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2445	156, 277, 382, 513		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2446	156, 277, 382, 513		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2447	157, 278, 383, 514		~DIN 371	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2448	156, 277, 382, 513		~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2465	45		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
2506	363		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	H	C
2510	364		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	N R15	C
2514	68		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	N R40	C
2515	517		~DIN 371/~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
2516	494		DIN 371	Maschi a macchina forati per fil. metr. ISO	Int. in MD	N R15	C

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2517	34		DIN 371	Maschi a macchina forati per fil. metr. ISO	HSS-E	N	B
2518	151, 273, 378, 509		~DIN 371/~DIN 376	Maschi a rullare forati per fil. metrica ISO	Int. in MD	N	C
2710	45		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
2790	69		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	E
2791	69		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	E
2792	107		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	E
2838	102		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R15	C
2839	120		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N R15	C
2840	120		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N R15	C
2841	127		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N R15	C
2842	135		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R15	C
2843	105		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
2844	122		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
2845	122		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
2846	128		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N R40	C
2847	143		~DIN 371	Maschi a macchina per filettatura BSW	HSS-E	N R40	C
2848	143		~DIN 376	Maschi a macchina per filettatura BSW	HSS-E	N R40	C
2849	136		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R40	C
2850	81		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
2851	81		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
2852	114		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H R40	C
2853	107		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
2854	123		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
2855	123		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
2856	123		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
2857	123		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N R40	C
2859	129		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N R40	C
2860	137		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R40	C
2861	137		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R40	C
2862	243		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R40	C
2863	243		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R40	C
2864	251		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	VA R40	C
2865	259		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	VA R40	C
2866	259		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	VA R40	C
2867	262, 501		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	VA R40	C
2868	262		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	VA R40	C
2869	236		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA	B
2870	236		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA	B
2871	257		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	VA	B
2872	258		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	VA	B
2873	258		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	VA	B
2874	260		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	VA	B
2875	263		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	VA	B
2876	33		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
2877	33		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
2878	94		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
2879	94		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
2881	118		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N	B
2883	118		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N	B
2885	130		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N	B
2886	140		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N	B
2887	140		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N	B
2888	91		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
2889	117		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E	N	B
2890	117		~DIN 376	Maschi a macchina per filettatura UNC	HSS-E	N	B
2891	125		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	N	B
2892	142		~DIN 371	Maschi a macchina per filettatura BSW	HSS-E	N	B
2893	142		~DIN 376	Maschi a macchina per filettatura BSW	HSS-E	N	B
2894	132		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N	B
2895	241		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R15	C
2896	241		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	VA R15	C
2897	249		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	VA R15	C
2898	261		~DIN 374	Maschi a macchina per filettatura UNF	HSS-E	VA R15	C
2899	484		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E	N AZ	E
2901	602		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	TiNi	B
2903	606		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	TiNi	B
2905	610		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E-PM	TiNi	B
2909	604		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	Ti R15	C
2910	608		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	Ti R15	C
2912	612		~DIN 371/~DIN 376	Maschi a macchina per filettatura UNC	HSS-E-PM	Ti R15	C
2914	617		~DIN 371/~DIN 374	Maschi a macchina per filettatura UNF	HSS-E-PM	Ti R15	C
2916	602		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	TiNi	B

Articolo nr.	Pagina	Profondità di foro	Norma	Descrizione	Materiale tagliente	Tipo	Forma
2917	606		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	TiNi	B
2918	610		~DIN 371	Maschi a macchina per filettatura UNC	HSS-E-PM	TiNi	B
2919	614		~DIN 371	Maschi a macchina per filettatura UNF	HSS-E-PM	TiNi	B
2920	604		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E-PM	Ni R10	C(K)
2921	608		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	Ni R10	C(K)
2922	612		~DIN 371/~DIN 376	Maschi a macchina per filettatura UNC	HSS-E-PM	Ni R10	C(K)
2923	616		~DIN 371/~DIN 374	Maschi a macchina per filettatura UNF	HSS-E-PM	Ni R10	C(K)
2940	114		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H R40	C
2941	43		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
2942	43		DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	H	B
2943	97		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H	B
2944	681		~DIN 371	Maschi a macchina per filettatura metrica ISO	Int. in MD	H	D
2983	99		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H	B
2985	84		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
2986	84		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	H R40	C
2988	116		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H R40	C
2989	116		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	H R40	C
2990	41		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
2991	41		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
2993	93		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
2994	73		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
2995	73		DIN 371	Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
2998	108		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
2999	108		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R40	C
3510	413, 551, 643	1,5xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3511	414, 552, 644	2xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3512	416, 554, 646	1,5xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3513	417, 555, 647	2xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3514	202, 320, 429, 565, 657, 693	1,5xD		Frese a filettare con fase di svasatura per filettatura Whitworth BSP	Int. in MD	TMC SP	
3515	203, 321, 430, 566, 658, 694	2xD		Frese a filettare con fase di svasatura per filettatura Whitworth BSP	Int. in MD	TMC SP	
3516	195, 313, 420, 558, 650, 689	1,5xD		Frese a filettare con fase di svasatura per filettatura UNC	Int. in MD	TMC SP	
3517	196, 314, 421, 559, 651, 690	2xD		Frese a filettare con fase di svasatura per filettatura UNC	Int. in MD	TMC SP	
3518	198, 316, 423, 561, 653, 691	1,5xD		Frese a filettare con fase di svasatura per filettatura UNF	Int. in MD	TMC SP	
3519	199, 317, 424, 562, 654, 692	2xD		Frese a filettare con fase di svasatura per filettatura UNF	Int. in MD	TMC SP	
3520	206, 324, 426, 569, 661, 695			Frese a filettare con fase di svasatura per filettatura NPT	Int. in MD	TMC SP	
3521	208, 326, 433, 571, 663, 696			Frese a filettare con fase di svasatura per filettatura NPTF	Int. in MD	TMC SP	
3523	434, 572, 664			Fresa a filettare per impieghi multipli per filettatura metrica ISO	Int. in MD	TMU SP	
3524	437, 575, 667			Fresa a filettare per impieghi multipli per filettatura Whitworth BSP	Int. in MD	TMU SP	
3525	188, 306, 413, 551, 643, 685	1,5xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3526	189, 307, 414, 552, 644, 686	2xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3527	191, 309, 416, 554, 646, 687	1,5xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3528	192, 310, 417, 555, 647, 688	2xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3529	202, 320, 429, 565, 657, 693	1,5xD		Frese a filettare con fase di svasatura per filettatura Whitworth BSP	Int. in MD	TMC SP	
3533	203, 321, 430, 566, 658, 694	2xD		Frese a filettare con fase di svasatura per filettatura Whitworth BSP	Int. in MD	TMC SP	
3534	195, 313, 420, 558, 650, 689	1,5xD		Frese a filettare con fase di svasatura per filettatura UNC	Int. in MD	TMC SP	
3535	196, 314, 421, 559, 651, 690	2xD		Frese a filettare con fase di svasatura per filettatura UNC	Int. in MD	TMC SP	
3536	198, 316, 423, 561, 653, 691	1,5xD		Frese a filettare con fase di svasatura per filettatura UNF	Int. in MD	TMC SP	
3537	199, 317, 424, 562, 654, 692	2xD		Frese a filettare con fase di svasatura per filettatura UNF	Int. in MD	TMC SP	
3538	206, 324, 426, 569, 661, 695			Frese a filettare con fase di svasatura per filettatura NPT	Int. in MD	TMC SP	
3539	208, 326, 433, 571, 663, 696			Frese a filettare con fase di svasatura per filettatura NPTF	Int. in MD	TMC SP	
3541	209, 327, 434, 572, 664, 697			Fresa a filettare per impieghi multipli per filettatura metrica ISO	Int. in MD	TMU SP	
3542	212, 330, 437, 575, 667, 700			Fresa a filettare per impieghi multipli per filettatura Whitworth BSP	Int. in MD	TMU SP	
3543	188, 306, 413, 551, 643, 685	1,5xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3544	189, 307, 414, 552, 644, 686	2xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3545	191, 309, 416, 554, 646, 687	1,5xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3546	192, 310, 417, 555, 647, 688	2xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3556	209, 327, 434, 572, 664, 697			Fresa a filettare per impieghi multipli per filettatura metrica ISO	Int. in MD	TMU SP	
3557	212, 330, 437, 575, 667, 700			Fresa a filettare per impieghi multipli per filettatura Whitworth BSP	Int. in MD	TMU SP	
3595	211, 329, 436, 574, 666, 699			Fresa a filettare per impieghi multipli per filettatura UN	Int. in MD	TMU UN	
3596	211, 329, 436, 574, 666, 699			Fresa a filettare per impieghi multipli per filettatura UN	Int. in MD	TMU UN	
3734	410, 548, 640	2xD		Frese a filettare senza fase di svasatura per filettatura metrica ISO	Int. in MD	TM SP	
3735	187, 305, 412, 550, 642	2,5xD		Frese a filettare senza fase di svasatura per filettatura metrica ISO	Int. in MD	TM SP	
3737	186, 304, 410, 548, 640	2xD		Frese a filettare senza fase di svasatura per filettatura metrica ISO	Int. in MD	TM SP	
3740	187, 305, 412, 550, 642	2,5xD		Frese a filettare senza fase di svasatura per filettatura metrica ISO	Int. in MD	TM SP	
3743	186, 304, 410, 548, 640	2xD		Frese a filettare senza fase di svasatura per filettatura metrica ISO	Int. in MD	TM SP	
3745	200, 318, 427, 563, 655	2xD		Frese a filettare senza fase di svasatura per filettatura Whitworth BSP	Int. in MD	TM SP	
3746	201, 319, 428, 564, 656	2,5xD		Frese a filettare senza fase di svasatura per filettatura Whitworth BSP	Int. in MD	TM SP	
3748	200, 318, 427, 563, 655	2xD		Frese a filettare senza fase di svasatura per filettatura Whitworth BSP	Int. in MD	TM SP	
3750	201, 319, 428, 564, 656	2,5xD		Frese a filettare senza fase di svasatura per filettatura Whitworth BSP	Int. in MD	TM SP	
3753	205, 323, 425, 568, 660			Frese a filettare senza fase di svasatura per filettatura NPT	Int. in MD	TM SP	
3754	205, 323, 425, 568, 660			Frese a filettare senza fase di svasatura per filettatura NPT	Int. in MD	TM SP	
3756	207, 325, 432, 570, 662			Frese a filettare senza fase di svasatura per filettatura NPTF	Int. in MD	TM SP	

Articolo nr.	Pagina	Profondità di foro	Norma	Descrizione	Materiale tagliente	Tipo	Forma
3757	207, 325, 432, 570, 662			Frese a filettare senza fase di svasatura per filettatura NPTF	Int. in MD	TM SP	
3759	190, 308, 415, 553, 645	2,5xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3760	190, 308, 415, 553, 645	2,5xD		Frese a filettare con fase di svasatura per filettatura metrica ISO	Int. in MD	TMC SP	
3762	193, 311, 418, 556, 648	2,5xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3763	193, 311, 418, 556, 648	2,5xD		Frese a filettare con fase di svasatura per fil. metr. ISO passo fine	Int. in MD	TMC SP	
3765	204, 322, 431, 567, 659	2,5xD		Frese a filettare con fase di svasatura per filettatura Whitworth BSP	Int. in MD	TMC SP	
3766	204, 322, 431, 567, 659	2,5xD	Norma di fab.	Frese a filettare con fase di svasatura per filettatura Whitworth BSP	Int. in MD	TMC SP	
3768	213, 331, 438, 576, 668, 701			Fresa a filettare per impieghi multipli per filettatura NPT	Int. in MD	TMU SP	
3769	213, 331, 438, 576, 668, 701			Fresa a filettare per impieghi multipli per filettatura NPT	Int. in MD	TMU SP	
3772	214, 332, 439, 577, 669, 702			Fresa a filettare per impieghi multipli per filettatura NPTF	Int. in MD	TMU SP	
3773	214, 332, 439, 577, 669, 702			Fresa a filettare per impieghi multipli per filettatura NPTF	Int. in MD	TMU SP	
3774	443, 581	1,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3775	443, 581	1,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3776	443, 581	1,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3777	443, 581	1,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3778	444, 582	2xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3779	444, 582	2xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3780	444, 582	2xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3781	444, 582	2xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3782	445, 583	2,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3783	445, 583	2,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3784	445, 583	2,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3785	445, 583	2,5xD		Frese a filettare e forare per filettatura metrica ISO	Int. in MD	DTMC SP	
3787	446, 584	1,5xD		Frese a filettare e forare per filettatura metrica ISO passo fine	Int. in MD	DTMC SP	
3788	446, 584	1,5xD		Frese a filettare e forare per filettatura metrica ISO passo fine	Int. in MD	DTMC SP	
3789	446, 584	1,5xD		Frese a filettare e forare per filettatura metrica ISO passo fine	Int. in MD	DTMC SP	
3790	447, 585	2xD		Frese a filettare e forare per filettatura metrica ISO passo fine	Int. in MD	DTMC SP	
3791	447, 585	2xD		Frese a filettare e forare per filettatura metrica ISO passo fine	Int. in MD	DTMC SP	
3792	447, 585	2xD		Frese a filettare e forare per filettatura metrica ISO passo fine	Int. in MD	DTMC SP	
3793	447, 585	2xD		Frese a filettare e forare per filettatura metrica ISO passo fine	Int. in MD	DTMC SP	
4127	269			Maschi per filettatura NPTF	HSS-E	VA R25	C
4132	186, 304, 411, 549, 641	2xD		Frese a filettare senza fase di svasatura per filettatura metrica ISO	Int. in MD	TM SP	
4133	186, 304, 411, 549, 641	2xD		Frese a filettare senza fase di svasatura per filettatura metrica ISO	Int. in MD	TM SP	
4134	194, 312, 419, 557, 649	2xD		Frese a filettare senza fase di svasatura per filettatura UNC	Int. in MD	TM SP	
4135	194, 312, 419, 557, 649	2xD		Frese a filettare senza fase di svasatura per filettatura UNC	Int. in MD	TM SP	
4136	197, 315, 422, 560, 652	2xD		Frese a filettare senza fase di svasatura per filettatura UNF	Int. in MD	TM SP	
4137	197, 315, 422, 560, 652	2xD		Frese a filettare senza fase di svasatura per filettatura UNF	Int. in MD	TM SP	
4138	448, 586	2xD		Frese a filettare e forare per filettatura UNC	Int. in MD	DTMC SP	
4139	448, 586	2xD		Frese a filettare e forare per filettatura UNC	Int. in MD	DTMC SP	
4140	449, 587	2xD		Frese a filettare e forare per filettatura UNF	Int. in MD	DTMC SP	
4141	449, 587	2xD		Frese a filettare e forare per filettatura UNF	Int. in MD	DTMC SP	
4143	162, 283, 388, 521, 626			Maschi a rullare forati per fil. metrica ISO	HSS-E-PM	N	C
4145	180, 298, 403, 540, 634			Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E-PM	N	C
4146	520		~DIN 371/~DIN 376	Maschi a rullare forati per fil. metrica ISO	HSS-E	N	C
4147	537		~DIN 371/~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E	N	C
4151	539		~DIN 371/~DIN 374	Maschi a rullare forati per fil. metrica ISO passo fine	HSS-E	N	C
4152	546			Maschi a macc. a rullare forati per fil. Whitworth BSP	HSS-E	N	C
4153	67			Maschi a macchina per filettatura metrica ISO	HSS-E	N R40	C
4154	48, 242		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	C
4155	48, 242		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N R15	E
4156	103, 250		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R15	C
4157	103, 250		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N R15	E
4158	135		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N R15	E
4159	138, 266, 504		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E-PM	VA R40	C
4161	682		DIN 371	Maschi a macchina per fil. metr. ISO passo fine	HSS-E-PM	H	D
4162	210, 328, 435, 573, 665, 698			Fresa esterne a filettare	Int. in MD	TMU SP	
4163	210, 328, 435, 573, 665, 698			Fresa esterne a filettare	Int. in MD	TMU SP	
4165	78, 359, 479		DIN 376	Maschi a macchina forati per fil. metr. ISO	HSS-E-PM	H	E
4218	38, 239		DIN 371/DIN 376	Maschi a macchina per filettatura metrica ISO	HSS-E	N	B
4219	90, 248		DIN 374	Maschi a macchina per fil. metr. ISO passo fine	HSS-E	N	B
4220	134, 264		DIN 5156	Maschi a macchina per filettatura Whitworth BSP	HSS-E	N	B
4225	217, 335, 442, 580, 639	3xD		Micro frese a filettare	Int. in MD	SP M/MF	
4226	215, 333, 440, 578, 637	3xD		Micro frese a filettare	Int. in MD	SP M	
4227	703	3xD		Micro frese a filettare	Int. in MD	SP M	
4228	216, 334, 441, 579, 638	3xD		Micro frese a filettare	Int. in MD	SP G	

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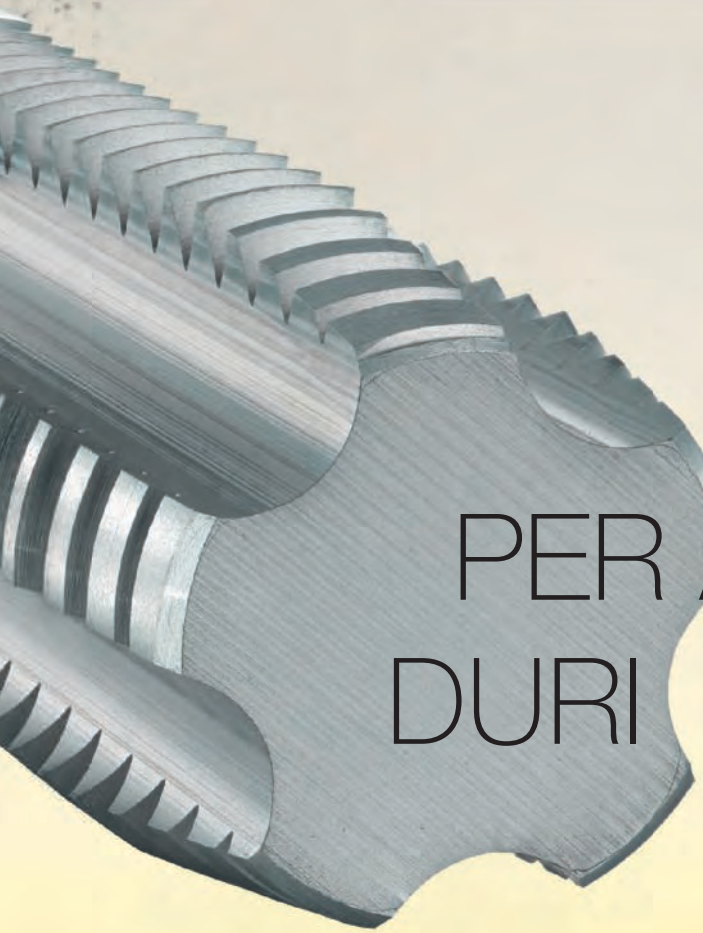

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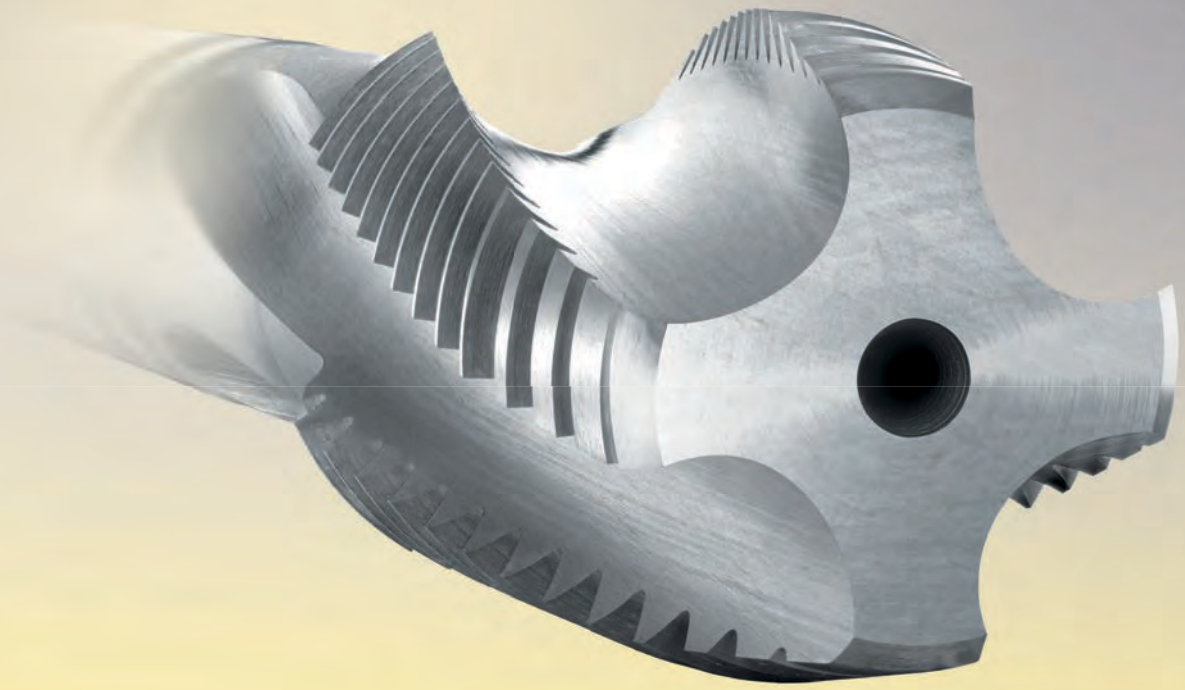

Gühring s.r.l. Unipersonale | Tel: +39 039 59 31 51 | Fax: +39 039 92 41 603
Via 1° Maggio, 15 | 23873 Missaglia (LC) | info@guhring-italy.com | www.guhring-italy.com

Ubiemme Gühring Italia s.r.l. | Tel.: +39 02 32 67 06 1 | Fax: +39 02 93 56 02 08
Via Merendi, 42 | 20010 Cornaredo MI | info@ubiemme.it | www.ubiemme.it

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