

The Art of Cutting

Universal performance tap

UPTAP

**The solution
that you've been
waiting for**

**One for all
all with one**

by **H.S.G.**



Maschi universali di alta prestazione

CAT. & LIST 1 - 2014



High Speed Steel (WX6)

Carbon	1.5%
Chromium	3.75%
Vanadium	3.1%
Tungsten	9.75%
Molybdenum	5.25%
Cobalt	8.5%
Sulfur	0.07(0.22%)*



The solution you've been waiting for.
La soluzione che stavi aspettando

HSG is redefining Tapping Stability with UP-TAP.
HSG ridefinisce stabilità in maschiatura con UP-TAP.

One for all, all with one
Uno per tutti, tutti con uno

UNIVERSAL PERFORMANCE TAP

UNIVERSAL PERFORMANCE TAP

M
MF
UNC
UNF
G

ISO-METRIC
THREADS
TOP GEOMETRIES

LONG
TOOL

TOP GEOMETRIES

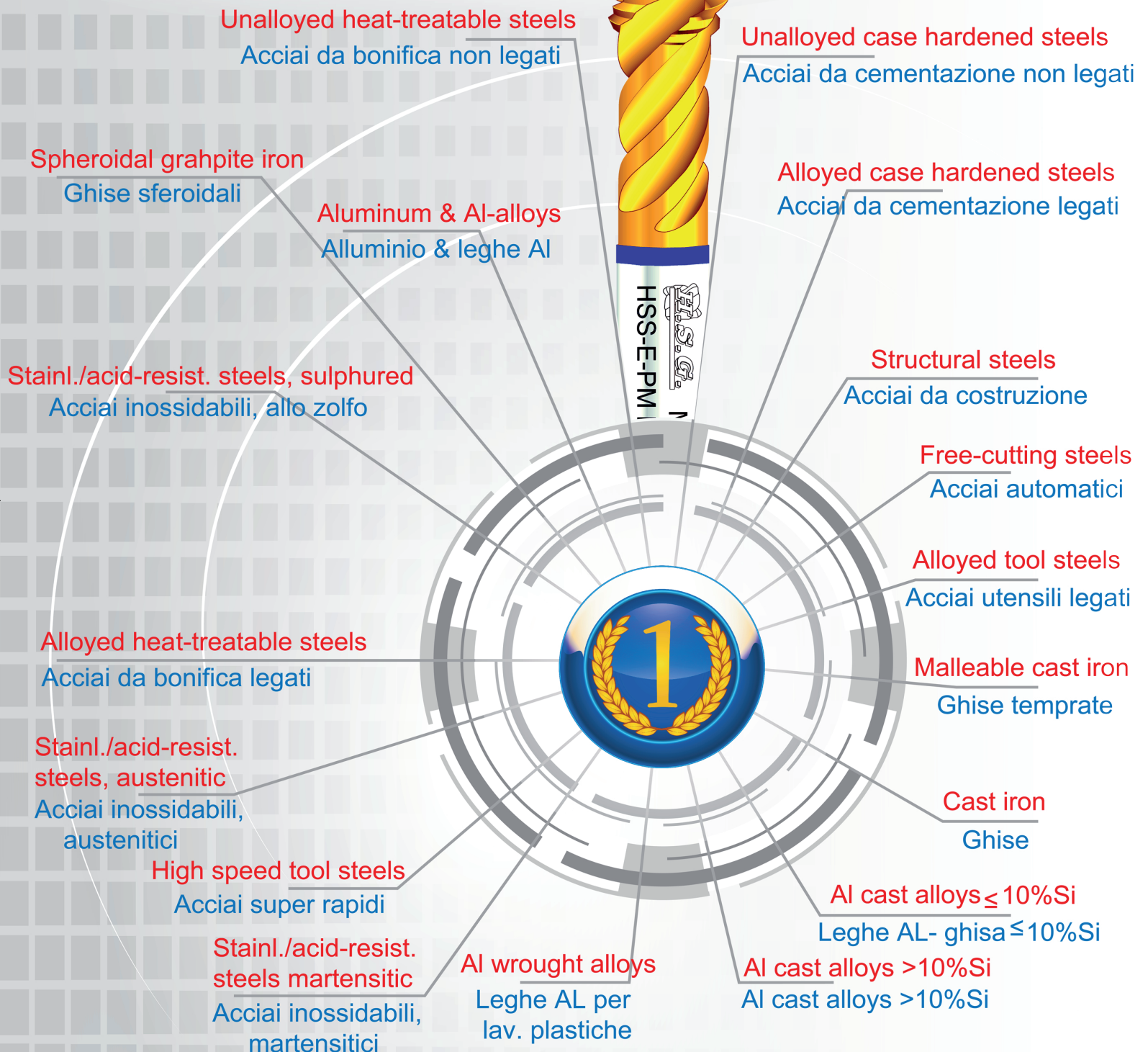
PERFECT CHOISE
FOR ALL MATERIAL
QUALITY

QUALITY

TOP GEOMETRIES



UPTAP



The solution you've been waiting for !
La soluzione che stavi aspettando !

Universal performance tap

Maschi universali di alta prestazione

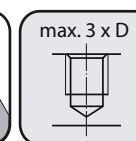
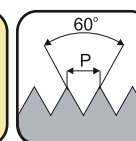
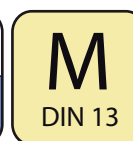
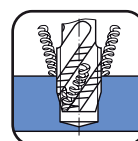
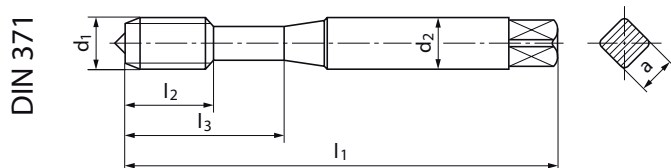
Materiale / Tool material			HSS-E	HSS-E	HSS-E-WX6	HSS-E	HSS-E-WX6	HSS-E	HSS-E-WX6			
Tipo/Forma – Type/form			NR40/C	NR40/C	NR40/C	NR40/E	NR50/C	N/B	N/B			
Ricoertura / Surface finish												
Tipo foro / Blind holes												
			Filetto Thread type	Tolleranza Tolerance zone	Norma Dim. To DIN2184-1	Codice / Pagina / Ø dimensione – No. / Page / Ø – range						
M	ISO 2	DIN	MRNE	MRNR		MRTO	MRTT	MRNN	MRNA			
	6H	371	M3 M10	M2 M10		M3 M10	M3 M10	M3 M10	M2 M10			
			p. 6	p. 7		p. 11	p. 12	p. 14	p. 17			
M	ISO 3	DIN	MRTG					MROI				
	6G	371	M3 M10					M3 M10				
			p. 9					p. 16				
M	6HX	HSG Norm		MROU								
				M3 M20								
				p. 13								
M	ISO 2	DIN	MROR				MRTT	MROA	MRNA			
	6H	376	M3 M20				M12 M20	M3 M20	M12 M20			
			p. 8				p. 12	p. 15	p. 17			
M	6HX	DIN		MRNU								
		376		M3 M24								
				p. 10								
MF	ISO 2	DIN	MRTE		MREG			MRTN	MRNI			
	6H	374	M4x0,5 M20x1,5		M8x1 M24x2			M4x0,5 M20x1,5	M8x1 M24x2			
			p. 18		p. 19			p.20	p. 21			
UNC	2B	-DIN	MRTA					MRTM				
		371/376	Nr. 4-40 3/4-10					Nr. 4-40 3/4-10				
			p. 22					p. 23				
UNF	2B	-DIN	MRTU					MRTR				
		374	Nr. 4-48 5/8-18					Nr. 4-48 5/8-18				
			p. 24					p. 25				
G BSP		-DIN	MRNT					MRNO				
		5156	G 1/8 G 1					G 1/8 G 1				
			p. 26					p. 27				


Trattati a vapore / Steam tempered
 TiNIT / TiNIT



Universal performance tap

Maschi universali di alta prestazione



Item code / Codice								MRNE	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								ISO 2 / 6 H	
Chamfer / Imbocco								C/ 2-3	
Standard / Norma								DIN 371 / 2184-1	
Typ / Tipo								N R40	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right - Hand	
d _r (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 3	0.5	56	6	18	3.5	2.7	2.5	0030	16,24
M 4	0.7	63	7.5	21	4.5	3.4	3.3	0040	16,24
M 5	0.8	70	8.5	25	6	4.9	4.2	0050	17,08
M 6	1	80	11	30	6	4.9	5	0060	17,64
M 8	1.25	90	14	35	8	6.2	6.8	0080	20,72
M 10	1.5	100	16	39	10	8	8.5	0100	23,80

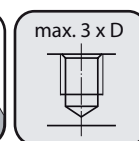
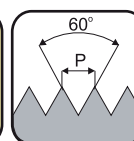
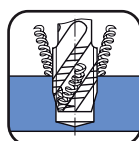
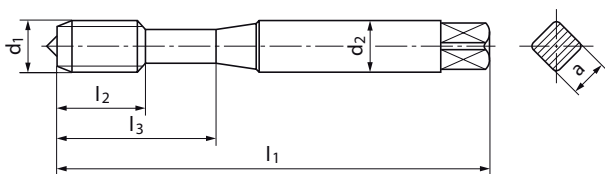
Universal performance tap

Maschi universali di alta prestazione

M



DIN 371



Item code / Codice

MRNR

Surface finish / Rivestimento



Tolerance / Tolleranza

ISO 2 / 6 H

Chamfer / Imbocco



C/ 2-3

Standard / Norma

DIN 371 / 2184-1

Typ / Tipo

N R40

Quality / Qualità

HSS-E

Direzione taglio / Cutting direction

Destro / Right – Hand

d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 2	0.4	45	4.5	13.5	2.8	2.1	1.6	0020	17,92
M 3	0.5	56	6	18	3.5	2.7	2.5	0030	20,72
M 4	0.7	63	7.5	21	4.5	3.4	3.3	0040	22,12
M 5	0.8	70	8.5	25	6	4.9	4.2	0050	22,40
M 6	1	80	11	30	6	4.9	5	0060	28,00
M 8	1.25	90	14	35	8	6.2	6.8	0080	30,10
M 10	1.5	100	16	39	10	8	8.5	0100	38,50

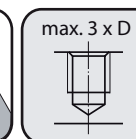
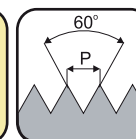
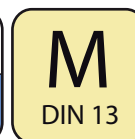
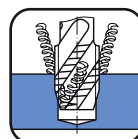
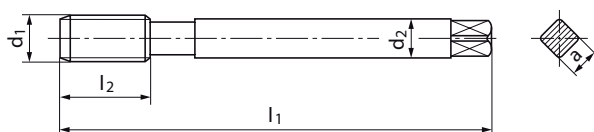
M


Universal performance tap

Maschi universali di alta prestazione



DIN 376



Item code / Codice								MROR	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								ISO 2 / 6 H	
Chamfer / Imbocco								C/ 2-3	
Standard / Norma								DIN 376 / 2184-1	
Typ / Tipo								N R40	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d, (mm)	P (mm)	l1	l2	l3	Ø d2	a		Code Codice	€
M 3	0.5	56	6	18	2.2	2.5	2.5	0030	19,88
M 4	0.7	63	7.5	21	2.8	2.1	3.3	0040	17,92
M 5	0.8	70	8.5	25	3.5	2.7	4.2	0050	17,64
M 6	1	80	11	30	4.5	3.4	5	0060	17,36
M 8	1.25	90	14	35	6	4.9	6.8	0080	18,20
M 10	1.5	100	16	39	7	5.5	8.5	0100	24,64
M 12	1.75	110	18.5	49	9	7	10.2	0112	27,16
M 16	2	110	20	54	12	9	14	0116	39,90
M 20	2.5	140	25	62	16	12	17.5	0120	60,20

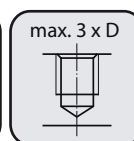
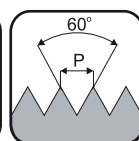
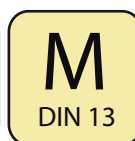
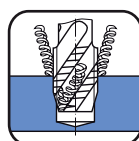
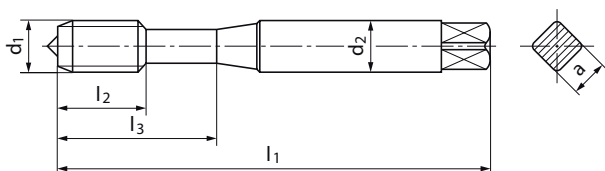
Universal performance tap

Maschi universali di alta prestazione

M



DIN 371



Item code / Codice

MRTG

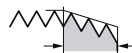
Surface finish / Rivestimento



Tolerance / Tolleranza

ISO 3 / 6 G

Chamfer / Imbocco



C/ 2-3

Standard / Norma

DIN 371 / 2184-1

Typ / Tipo


N R40

Quality / Qualità

HSS-E

Direzione taglio / Cutting direction

Destro / Right – Hand

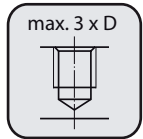
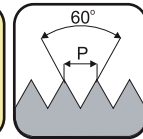
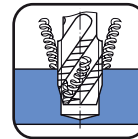
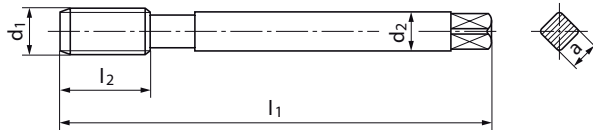
d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 3	0.5	56	6	18	3.5	2.7	2.5	0030	18,76
M 4	0.7	63	7.5	21	4.5	3.4	3.3	0040	17,08
M 5	0.8	70	8.5	25	6	4.9	4.2	0050	19,32
M 6	1	80	11	30	6	4.9	5	0060	18,48
M 8	1.25	90	14	35	8	6.2	6.8	0080	21,84
M 10	1.5	100	16	39	10	8	8.5	0100	28,70

Universal performance tap

Maschi universali di alta prestazione



DIN 376



Item code / Codice								MRNU	
Surface finish / Rivestimento									
Tolerance / Tolleranza								6 HX	
Chamfer / Imbocco								C/ 2-3	
Standard / Norma								DIN 376 / 2184-1	
Typ / Tipo								N R40	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d, (mm)	P (mm)	l1	l2	l3	Ø d2	a		Code Codice	€
M 3	0.5	56	6	18	2.2	2.5	2.5	0030	35,00
M 4	0.7	63	7.5	21	2.8	2.1	3.3	0040	35,00
M 5	0.8	70	8.5	25	3.5	2.7	4.2	0050	32,90
M 6	1	80	11	30	4.5	3.4	5	0060	32,90
M 8	1.25	90	14	35	6	4.9	6.8	0080	32,90
M 10	1.5	100	16	39	7	5.5	8.5	0100	41,30
M 12	1.75	110	18.5	49	9	7	10.2	0112	46,20
M 14	2	110	20	53	11	9	12	0114	69,30
M 16	2	110	20	54	12	9	14	0116	64,40
M 20	2.5	140	25	62	16	12	17.5	0120	95,20
M 24	3	160	30	73	18	14.5	21	0124	134,40

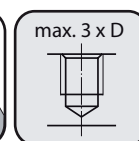
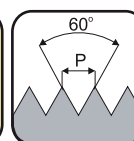
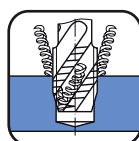
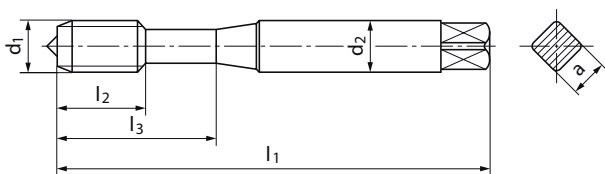
Universal performance tap

Maschi universali di alta prestazione

M



DIN 371



Item code / Codice

MRTO

Surface finish / Rivestimento



Tolerance / Tolleranza

ISO 2 / 6 H

Chamfer / Imbocco



E / 1.5-2

Standard / Norma

DIN 371 / 2184-1

Typ / Tipo


N R40

Quality / Qualità

HSS-E

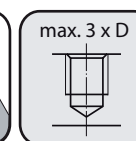
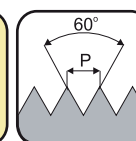
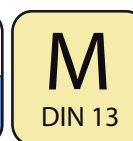
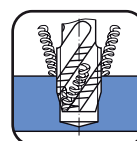
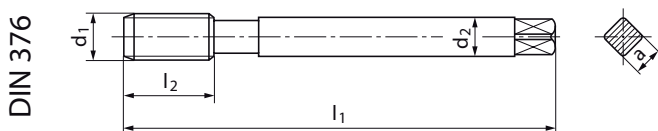
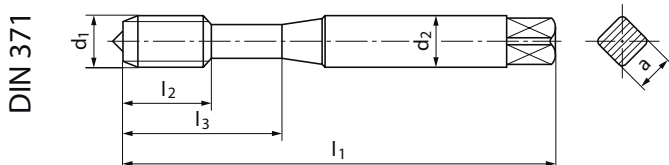
Direzione taglio / Cutting direction

Destro / Right - Hand

d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 3	0.5	56	6	18	3.5	2.7	2.5	0030	17,08
M 4	0.7	63	7.5	21	4.5	3.4	3.3	0040	18,76
M 5	0.8	70	8.5	25	6	4.9	4.2	0050	17,08
M 6	1	80	11	30	6	4.9	5	0060	17,36
M 8	1.25	90	14	35	8	6.2	6.8	0080	21,00
M 10	1.5	100	16	39	10	8	8.5	0100	27,44

Universal performance tap

Maschi universali di alta prestazione



Item code / Codice	MRTT
Surface finish / Rivestimento	
Tolerance / Tolleranza	ISO 2 / 6 H
Chamfer / Imbocco	C/ 2-3
Standard / Norma	DIN 371/376/2184-1
Typ /Tipo	N R50
Quality /Qualità	HSS-E-WX6
Direzione taglio / Cutting direction	Destro / Right – Hand

d , (mm)	P (mm)	l1	l2	l3	Ø d2	a		Code Codice	€
M 3	0.5	56	6	18	3.5	2.7	2.5	0030	27,44
M 4	0.7	63	7.5	21	4.5	3.4	3.3	0040	27,44
M 5	0.8	70	8.5	25	6	4.9	4.2	0050	29,40
M 6	1	80	11	30	6	4.9	5	0060	34,30
M 8	1.25	90	14	35	8	6.2	6.8	0080	40,60
M 10	1.5	100	16	39	10	8	8.5	0100	51,10
M 12	1.75	110	18.5	49	9	7	10.2	0112	60,20
M 14	2	110	20	53	11	9	12	0114	86,80
M 16	2	110	20	54	12	9	14	0116	86,80
M 20	2.5	140	25	62	16	12	17.5	0120	99,40

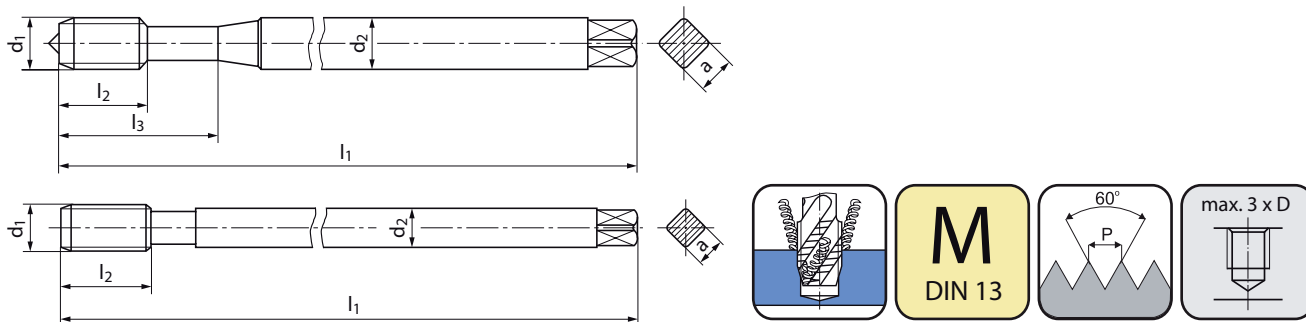
Universal performance tap

Maschi universali di alta prestazione

M



With extra long shank
Con gambo extra lungo



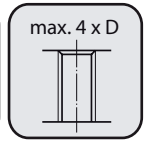
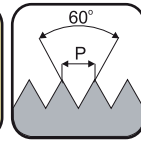
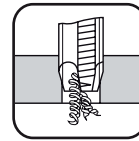
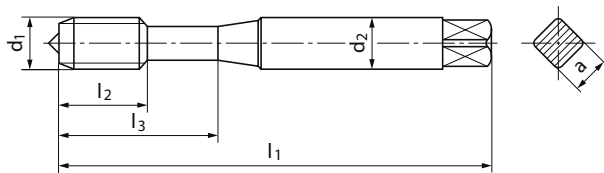
Item code / Codice								MROU	
Surface finish / Rivestimento									
Tolerance / Tolleranza								6 HX	
Chamfer / Imbocco								C/ 2-3	
Standard / Norma								HSG	
Typ / Tipo								N R40	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 3	0.5	112	6	18	3.5	2.7	2.5	0030	58,10
M 4	0.7	112	7.5	77	2.8	2.1	3.3	0040	51,80
M 5	0.8	125	8.5	90	3.5	2.7	4.2	0050	51,80
M 6	1	125	11	90	4.5	3.4	5	0060	51,80
M 8	1.25	140	14	97	6	4.9	6.8	0080	53,20
M 10	1.5	160	16	117	7	5.5	8.5	0100	64,40
M 12	1.75	180	18.5	133	9	7	10.2	0112	74,20
M 16	2	220	20	168	12	9	14	0116	102,20
M 20	2.5	280	25	225	16	12	17.5	0120	152,60


Universal performance tap

Maschi universali di alta prestazione



DIN 371



Item code / Codice								MRNN	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								ISO 2 / 6 H	
Chamfer / Imbocco								B/ 4-5	
Standard / Norma								DIN 371 / 2184-1	
Typ / Tipo								N	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d,	P	l1	l2	l3	Ø d2	a		Code Codice	€
(mm)	(mm)								
M 3	0.5	56	6	18	3.5	2.7	2.5	0030	15,40
M 4	0.7	63	7.5	21	4.5	3.4	3.3	0040	15,68
M 5	0.8	70	8.5	25	6	4.9	4.2	0050	15,68
M 6	1	80	11	30	6	4.9	5	0060	15,96
M 8	1.25	90	14	35	8	6.2	6.8	0080	18,48
M 10	1.5	100	16	39	10	8	8.5	0100	22,12

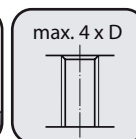
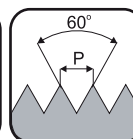
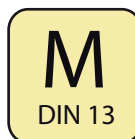
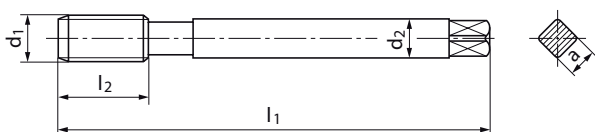
Universal performance tap

Maschi universali di alta prestazione

M



DIN 376

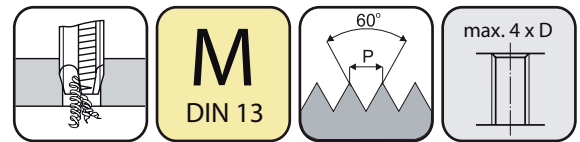
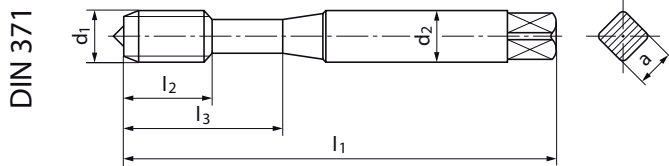


Item code / Codice								MROA
Surface finish / Rivestimento								●
Tolerance / Tolleranza								ISO 2 / 6 H
Chamfer / Imbocco								B/ 4-5
Standard / Norma								DIN 376 / 2184-1
Typ / Tipo								N
Quality / Qualità								HSS-E
Direzione taglio / Cutting direction								Destro / Right – Hand
d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a	Code Codice	€
M 3	0.5	56	10	18	2.2	2.5	0030	17,08
M 4	0.7	63	12	21	2.8	2.1	0040	16,80
M 5	0.8	70	14	25	3.5	2.7	0050	16,80
M 6	1	80	16	30	4.5	3.4	0060	17,64
M 8	1.25	90	17	35	6	4.9	0080	20,72
M 10	1.5	100	20	39	7	5.5	0100	23,80
M 12	1.75	110	24	49	9	7	0112	28,00
M 14	2	110	26	53	11	9	0114	41,30
M 16	2	110	26	54	12	9	0116	41,30
M 20	2.5	140	32	62	16	12	0120	65,80

M

Universal performance tap

Maschi universali di alta prestazione



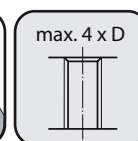
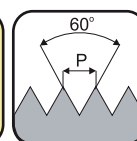
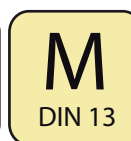
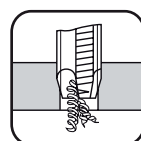
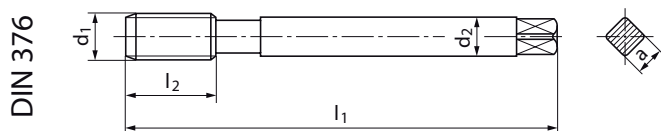
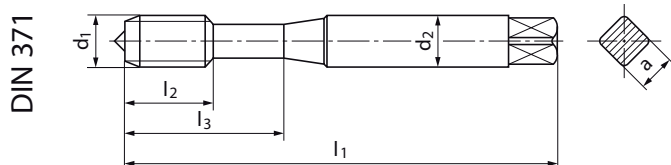
Item code / Codice	MROI
Surface finish / Rivestimento	
Tolerance / Tolleranza	ISO 3 / 6 G
Chamfer / Imbocco	B/ 4-5
Standard / Norma	DIN 371 / 2184-1
Typ / Tipo	N
Quality / Qualità	HSS-E
Direzione taglio / Cutting direction	Destro / Right – Hand

d, (mm)	P (mm)	l1	l2	l3	Ø d2	a		Code Codice	€
M 3	0.5	56	6	18	3.5	2.7	2.5	0030	17,92
M 4	0.7	63	7.5	21	4.5	3.4	3.3	0040	17,92
M 5	0.8	70	8.5	25	6	4.9	4.2	0050	18,48
M 6	1	80	11	30	6	4.9	5	0060	16,52
M 8	1.25	90	14	35	8	6.2	6.8	0080	19,04
M 10	1.5	100	16	39	10	8	8.5	0100	26,88

Universal performance tap

Maschi universali di alta prestazione

M



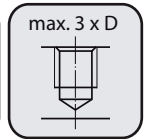
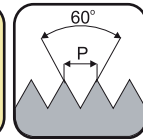
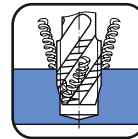
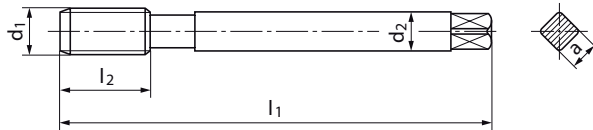
Item code / Codice								MRNA	
Surface finish / Rivestimento									
Tolerance / Tolleranza								ISO 2 / 6 H	
Chamfer / Imbocco								B/ 4-5	
Standard / Norma								DIN 371/376/2184-1	
Typ / Tipo								N	
Quality / Qualità								HSS-E-WX6	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 2	0.4	45	8	13.5	2.8	2.1	1.6	0020	19,32
M 3	0.5	56	10	18	3.5	2.7	2.5	0030	24,08
M 4	0.7	63	12	21	4.5	3.4	3.3	0040	22,12
M 5	0.8	70	14	25	6	4.9	4.2	0050	24,64
M 6	1	80	16	30	6	4.9	5	0060	29,40
M 8	1.25	90	17	35	8	6.2	6.8	0080	32,90
M 10	1.5	100	20	39	10	8	8.5	0100	43,40
M 12	1.75	110	24	49	9	7	10.2	0112	51,80
M 14	2	110	26	53	11	9	12	0114	78,40
M 16	2	110	26	54	12	9	14	0116	72,80
M 18	2.5	125	30	62	14	11	15.5	0118	127,40
M 20	2.5	140	32	62	16	12	17.5	0120	131,60


Universal performance tap

Maschi universali di alta prestazione



DIN 374



Item code / Codice								MRTE	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								ISO 2 / 6 H	
Chamfer / Imbocco								C/ 2-3	
Standard / Norma								DIN 374 / 2184-1	
Typ / Tipo								N R40	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 4	0.5	63	5	21	2.8	2.1	3.5	0210	29,40
M 5	0.5	70	5	25	3.5	2.7	4.5	0218	29,40
M 6	0.75	80	8	30	4.5	3.4	5.2	0229	31,50
M 8	1	90	11	35	6	4.9	7	0251	25,48
M 10	1	90	11	35	7	5.5	9	0276	26,60
M 10	1.25	100	14	39	7	5.5	8.8	0277	29,40
M 12	1	100	11	40	9	7	11	0301	35,70
M 12	1.25	100	16	40	9	7	10.8	0302	42,00
M 12	1.5	100	16	40	9	7	10.5	0303	31,50
M 14	1	100	11	40	11	9	13	0329	46,90
M 14	1.5	100	15	40	11	9	12.5	0331	42,70
M 16	1	100	11	44	12	9	15	0357	50,40
M 16	1.5	100	15	44	12	9	14.5	0359	49,00
M 20	1.5	125	16	44	16	12	18.5	0422	62,30
M 22	1.5	125	16	44	16	14.5	20.5	0438	
M 24	1.5	140	16	48	18	14.5	22.5	0452	
M 24	2	140	22	48	18	14.5	22.0	0453	

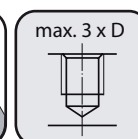
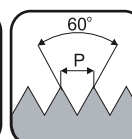
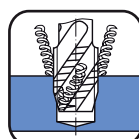
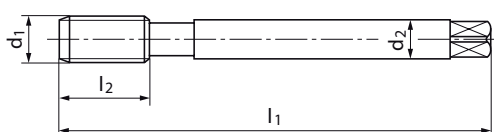
Universal performance tap

Maschi universali di alta prestazione

MF



DIN 374



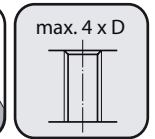
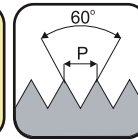
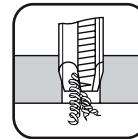
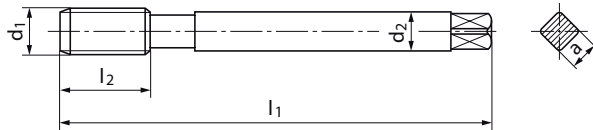
Item code / Codice		MREG							
Surface finish / Rivestimento									
Tolerance / Tolleranza		ISO 2 / 6 H							
Chamfer / Imbocco									
Standard / Norma		DIN 374							
Typ / Tipo		N R40							
Quality / Qualità		HSS-E-WX6							
Direzione taglio / Cutting direction		Destro / Right – Hand							
d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 4	0.5	63	5	21	2.8	2.1	3.5	0210	
M 5	0.5	70	5	25	3.5	2.7	4.5	0218	
M 6	0.75	80	8	30	4.5	3.4	5.2	0229	
M 8	1	90	11	35	6	4.9	7	0251	42,00
M 10	1	90	11	35	7	5.5	9	0276	54,60
M 10	1.25	100	14	39	7	5.5	8.8	0277	53,20
M 12	1	100	11	40	9	7	11	0301	62,30
M 12	1.25	100	16	40	9	7	10.8	0302	67,90
M 12	1.5	100	16	40	9	7	10.5	0303	60,20
M 14	1.25	100	11	40	11	9	13	0330	72,80
M 14	1.5	100	15	40	11	9	12.5	0331	71,40
M 16	1	100	11	44	12	9	15	0357	
M 16	1.5	100	15	44	12	9	14.5	0359	92,40
M 18	1.5	110	16	44	14	11	16.5	0390	120,40
M 20	1.5	125	16	44	16	12	18.5	0422	137,20
M 22	1.5	125	16	44	16	14.5	20.5	0438	151,20
M 24	1.5	140	16	48	18	14.5	22.5	0452	154,00
M 24	2	140	22	48	18	14.5	22	0453	179,20


Universal performance tap

Maschi universali di alta prestazione



DIN 374



Item code / Codice								MRTN	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								ISO 2 / 6 H	
Chamfer / Imbocco								B/ 4-5	
Standard / Norma								DIN 374 / 2184-1	
Typ / Tipo								N	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d, (mm)	P (mm)	l1	l2	l3	Ø d2	a		Code Codice	€
M 4	0.5	63	8	21	2.8	2.1	3.5	0210	29,40
M 5	0.5	70	10	25	3.5	2.7	4.5	0218	29,40
M 6	0.75	80	13	30	4.5	3.4	5.2	0229	29,40
M 8	1	90	17	35	6	4.9	7	0251	26,32
M 10	1	90	17	35	7	5.5	9	0276	27,16
M 10	1.25	100	20	39	7	5.5	8.8	0277	
M 12	1	100	20	40	9	7	11	0301	35,00
M 12	1.25	100	20	40	9	7	10.8	0302	
M 12	1.5	100	20	40	9	7	10.5	0303	30,80
M 14	1	100	20	40	11	9	13	0329	
M 14	1.5	100	20	40	11	9	12.5	0331	44,10
M 16	1	100	22	44	12	9	15	0357	
M 16	1.5	100	22	44	12	9	14.5	0359	45,50
M 20	1.5	125	25	44	16	12	18.5	0422	70,00
M 22	1.5	125	25	44	16	14.5	20.5	0438	
M 24	1.5	140	28	48	18	14.5	22.5	0452	
M 24	2	140	28	48	18	14.5	22	0453	

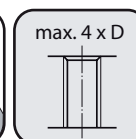
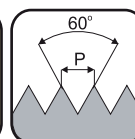
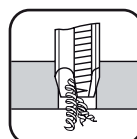
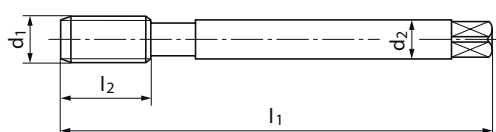
Universal performance tap

Maschi universali di alta prestazione

MF



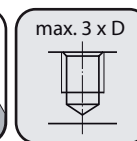
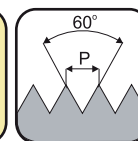
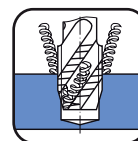
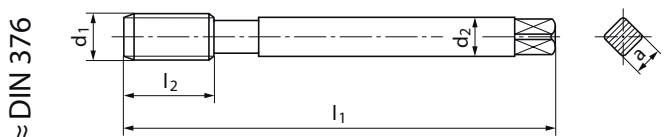
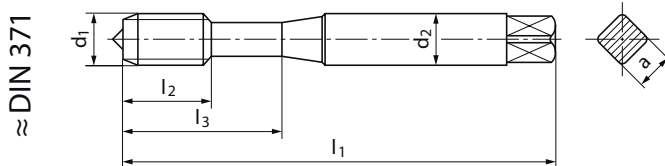
DIN 374

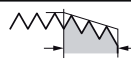



Item code / Codice									MRNI
Surface finish / Rivestimento									
Tolerance / Tolleranza									ISO 2 / 6 H
Chamfer / Imbocco									B/ 4-5
Standard / Norma									DIN 374 / 2184-1
Typ / Tipo									N
Quality / Qualità									HSS-E-WX6
Direzione taglio / Cutting direction									Destro / Right – Hand
d ₁ (mm)	P (mm)	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
M 4	0.5	63	8	21	2.8	2.1	3.5	0210	
M 5	0.5	70	10	25	3.5	2.7	4.5	0218	
M 6	0.75	80	13	30	4.5	3.4	5.2	0229	
M 8	1	90	17	35	6	4.9	7	0251	42,70
M 10	1	90	17	35	7	5.5	9	0276	49,00
M 10	1.25	100	20	39	7	5.5	8.8	0277	52,50
M 12	1	100	20	40	9	7	11	0301	60,20
M 12	1.25	100	20	40	9	7	10.8	0302	63,00
M 12	1.5	100	20	40	9	7	10.5	0303	56,00
M 14	1	100	20	40	11	9	13	0329	72,80
M 14	1.5	100	20	40	11	9	12.5	0331	69,30
M 16	1	100	22	44	12	9	15	0357	
M 16	1.5	100	22	44	12	9	14.5	0359	78,40
M 18	1.5	110	25	44	14	11	16.5	0390	103,60
M 20	1.5	125	25	44	16	12	18.5	0422	140,00
M 22	1.5	125	25	44	16	14.5	20.5	0438	131,60
M 24	1.5	140	28	48	18	14.5	22.5	0452	151,20
M 24	2	140	28	48	18	14.5	22	0453	172,20

Universal performance tap

Maschi universali di alta prestazione



Item code / Codice	MRTA
Surface finish / Rivestimento	●
Tolerance / Tolleranza	2 B
Chamfer / Imbocco	C/ 2-3 
Standard / Norma	DIN 371/376/2184-1
Typ /Tipo	N R40
Quality /Qualità	HSS-E
Direzione taglio / Cutting direction	Destro / Right – Hand

d ₁ (inch)	P (Gg/1")	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
NR.4	40	56	7	18	3.5	2.7	2.35	5003	30,80
NR.6	32	56	8	20	4	3.0	2.85	5005	26,60
NR.8	32	63	8	21	4.5	3.4	3.5	5006	28,70
NR.10	24	70	11	25	6	4.9	3.9	5007	28,00
1/4	20	80	13	30	7	5.5	5.1	5009	30,10
5/16	18	90	14	35	8	6.2	6.6	5010	29,40
3/8	16	100	16	39	10	8	8	5011	32,20
7/16	14	100	18	42	8	6.2	9.4	5012	51,10
1/2	13	110	20	49	9	7	10.8	5013	46,90
5/8	11	110	24	53	12	9	13.5	5015	59,50
3/4	10	125	25	62	14	11	16.5	5016	81,20

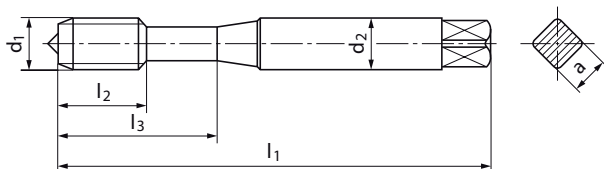
Universal performance tap

Maschi universali di alta prestazione

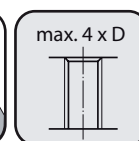
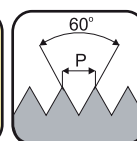
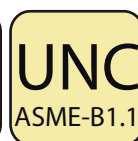
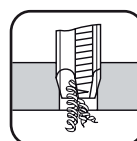
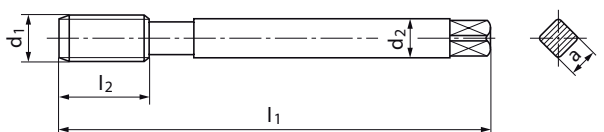
UNC



≈ DIN 371



≈ DIN 376



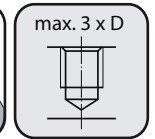
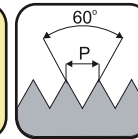
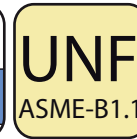
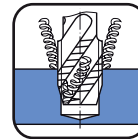
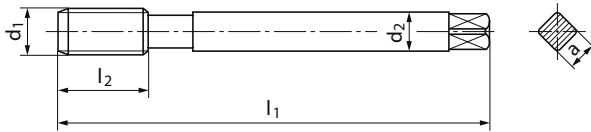
Item code / Codice								MRTM
Surface finish / Rivestimento								●
Tolerance / Tolleranza								2 B
Chamfer / Imbocco								B/ 4-5
Standard / Norma								DIN 371/376/2184-1
Typ / Tipo								N
Quality / Qualità								HSS-E
Direzione taglio / Cutting direction								Destro / Right – Hand
d ₁	P	l ₁	l ₂	l ₃	Ø d ₂	a	Code Codice	€
(inch)	(Gg/1")							
NR.4	40	56	11	18	3.5	2.7	5003	24,36
NR.6	32	56	12	20	4	3.0	5005	21,56
NR.8	32	63	13	21	4.5	3.4	5006	22,12
NR.10	24	70	14	25	6	4.9	5007	29,40
1/4	20	80	16	30	7	5.5	5009	24,08
5/16	18	90	18	35	8	6.2	5010	29,40
3/8	16	100	20	39	10	8	5011	37,80
7/16	14	100	22	42	8	6.2	5012	38,50
1/2	13	110	25	49	9	7	5013	46,90
5/8	11	110	30	53	12	9	5015	59,50
3/4	10	125	33	62	14	11	5016	77,00

Universal performance tap

Maschi universali di alta prestazione



≈ DIN 374



Item code / Codice								MRTU
Surface finish / Rivestimento								●
Tolerance / Tolleranza								2 B
Chamfer / Imbocco								C/ 2-3
Standard / Norma								DIN 374 / 2184-1
Typ / Tipo								N R40
Quality / Qualità								HSS-E
Direzione taglio / Cutting direction								Destro / Right – Hand
d, (inch)	P (Gg/1")	l1	l2	l3	Ø d2	a	Code Codice	€
NR.4	48	56	6	18	2.2	2.4	5037	37,80
NR.6	40	56	6.5	20	2.5	2.95	5039	31,50
NR.10	32	70	8.5	25	3.5	4.1	5041	29,40
1/4	28	80	9	30	4.5	5.5	5043	35,00
3/8	24	90	11	35	7	8.5	5045	37,80
5/8	18	100	15	44	12	14.5	5049	78,40

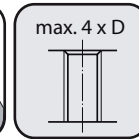
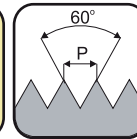
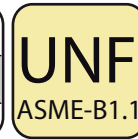
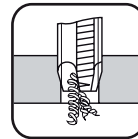
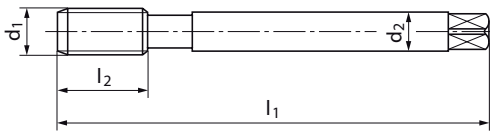
Universal performance tap

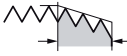

Maschi universali di alta prestazione

UNF



≈ DIN 374



Item code / Codice								MRTR	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								2 B	
Chamfer / Imbocco 								B/ 4-5	
Standard / Norma								DIN 374 / 2184-1	
Typ / Tipo								N	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d ₁ (inch)	P (Gg/1")	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
NR.4	48	56	10	18	2.2		2.4	5037	33,60
NR.6	40	56	11	20	2.5	2.1	2.95	5039	33,60
NR.10	32	70	14	25	3.5	2.7	4.1	5041	33,60
1/4	28	80	16	30	4.5	3.4	5.5	5043	41,30
3/8	24	90	18	35	7	5.5	8.5	5045	44,80
5/8	18	100	22	44	12	9	14.5	5049	75,60

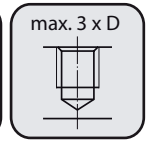
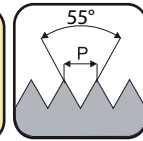
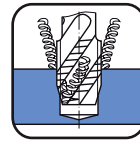
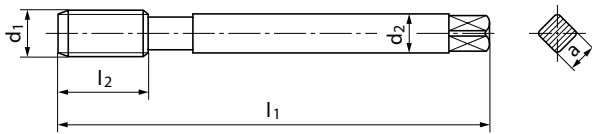
G


Universal performance tap

Maschi universali di alta prestazione



DIN 5156



Item code / Codice								MRNT	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								ISO 228	
Chamfer / Imbocco								C/ 2-3	
Standard / Norma								DIN 5156 / 2184-1	
Typ / Tipo								N R40	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right - Hand	
d ₁ (G)	P (Gg/1")	l ₁	l ₂	l ₃	Ø d ₂	a		Code Codice	€
G 1/8	28	90	11	35	7	5.5	8.8	4035	31,50
G 1/4	19	100	14	40	11	9	11.8	4036	44,80
G 3/8	19	100	14	44	12	9	15.25	4037	65,10
G 1/2	14	125	18	44	16	12	19	4038	84,00
G 3/4	14	140	20	53	20	16	24.5	4040	128,80
G 1	11	160	24	56	25	20	30.75	4042	179,20

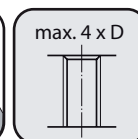
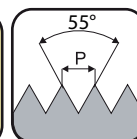
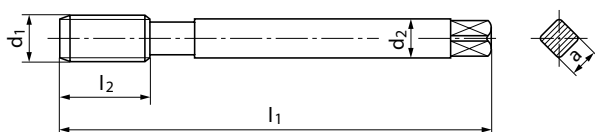
Universal performance tap

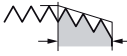

Maschi universali di alta prestazione

G



DIN 5156



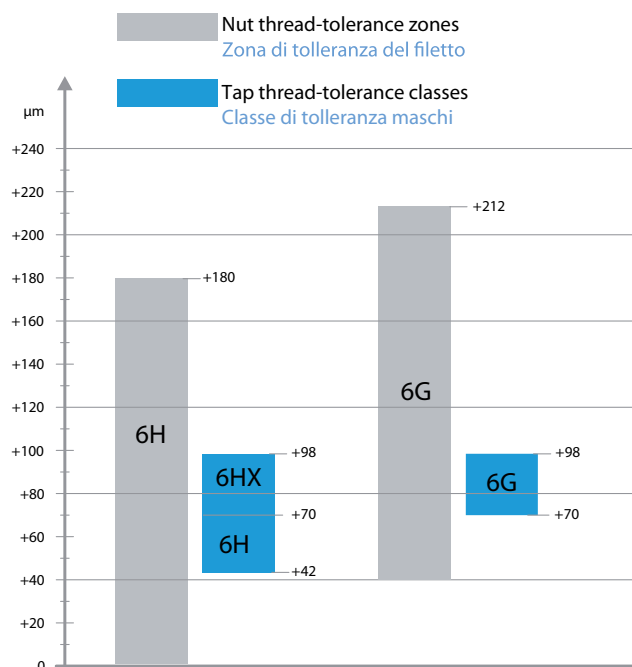
Item code / Codice								MRNO	
Surface finish / Rivestimento								●	
Tolerance / Tolleranza								ISO 228	
Chamfer / Imbocco 								B/ 4-5	
Standard / Norma								DIN 5156 / 2184-1	
Typ / Tipo								N	
Quality / Qualità								HSS-E	
Direzione taglio / Cutting direction								Destro / Right – Hand	
d ₁ (G)	P (Gg/1")	l ₁	l ₂	l ₃	Ø d ₂	a	 Code Codice	€	
G 1/8	28	90	11	35	7	5.5	8.8	4035	30,10
G 1/4	19	100	14	40	11	9	11.8	4036	40,60
G 3/8	19	100	14	44	12	9	15.25	4037	49,70
G 1/2	14	125	18	44	16	12	19	4038	68,60
G 3/4	14	140	20	53	20	16	24.5	4040	134,40
G 1	11	160	24	56	25	20	30.75	4042	148,40

Universal performance tap

Maschi universali di alta prestazione

Thread tolerances and recommended manufacturing tolerances

Tolleranze dei filetti e tolleranze di costruzione raccomandati



DIN EN 22857	
Application class of tap Classe di applicazione del maschio	
Class 2 ISO 2	Class 3 ISO 3
Tolerance zone of internal thread to be cut Tolleranza foro filettato	
6H	6G
DIN 802 part 1 (withdrawn) (Disegno)	
Tolerance class of tap Classe tolleranza del maschio	
6H	6G

Standard fit for a thread corresponds to tolerance class ISO 2/6H. For more precise fits, without allowance on thread flank, to larence class ISO 1/4H must be chosen. ISO 3/6G is used in case of loose fits, with large allowance, which is often required for subsequent coatings.

Between classes 6H and 6G, as well as between classes 6G and 7G, tap manufacturers produce taps with tolerance 6HX and 6GX. These taps are used for tapping abrasive materials, such as cast iron or Al-Si alloys, in order to increase their tool life.

The tolerances described above are collected in the European standard EN 22857.





L'accoppiamento standard di una filettatura è quello corrispondente alla classe ISO 2, 6H. Per accoppiamenti più precisi, senza gioco sui fianchi del filetto, deve essere scelto l'accoppiamento di classe ISO 1, 4H. Le tolleranze di classe superiore, ISO 3, sono utilizzate nel caso di accoppiamenti grossolani, con grande gioco, spesso richiesti per ricoprimenti successivi.

Tra le classi 6H e 6G, così come tra le classi 6G e 7G, i costruttori realizzano maschi con tolleranze intermedie, chiamate per convenzione 6HX e 6GX. Sono utilizzate per maschi che lavorano materiali abrasivi, quali ghisa o leghe di alluminio - silicio, per aumentarne la durata.

Le tolleranze sopra descritte sono raccolte nella norma europea EN 22857.

Universal performance tap

Maschi universali di alta prestazione

Material	Tensile strength	Hardness	Cutting speed vc m/min*			
	MPa (N/mm ²)	HB	Velocità di taglio vc m/min*			
Materiali	Resistenza	Durezza	HSS-E		HSS-E-WX6	
	MPa (N/mm ²)	HB				
Structural steels <i>Acciai da costruzione</i>	≤ 850	—	10 – 15	15 -22	15 – 20	22 – 30
Free-cutting steels <i>Acciai automatici</i>	≤ 1000	—	10 – 20	15 – 30	15 – 25	22 – 37
Unalloyed case hardened steels <i>Acciai da cementazione non legati</i>	≤ 750	—	10 – 15	15 -22	15 – 20	22 – 30
Unalloyed heat-treatable steels <i>Acciai da bonifica non legati</i>	≤ 850	—	10 – 15	15 -22	15 – 20	22 – 30
Alloyed case hardened steels <i>Acciai da cementazione legati</i>	≥ 850 ... 1200	—	8 – 12	12 – 18	10 – 15	15 – 22
Alloyed heat-treatable steels <i>Acciai da bonifica legati</i>	≥ 850 ... 1200	—	8 – 12	12 – 18	10 – 15	15 – 22
Alloyed tool steels <i>Acciai utensili legati</i>	≤ 1000	—	6 – 10	9 – 15	8 – 12	12 – 18
High speed tool steels <i>Acciai super rapidi</i>	≥ 650 ... 1000	—	6 – 10	9 – 15	8 – 12	12 – 18
Stainl./acid-resist. steels, sulphured <i>Acciai inossidabili, allo zolfo</i>	≤ 850	—	6 – 12	9 – 18	8 – 15	12 – 22
Stainl./acid-resist. steels, austenitic <i>Acciai inossidabili, austenitici</i>	≤ 850	—	6 – 12	9 – 18	8 – 15	12 – 22
Stainl./acid-resist. steels, martensitic <i>Acciai inossidabili, martensitici</i>	≤ 850	—	6 – 12	9 – 18	8 – 15	12 – 22
Aluminum and Al-alloys <i>Alluminio e leghe di alu</i>	≤ 400	—	15 – 20	22 – 30	20 – 25	30 – 37
Al wrought alloys <i>Leghe di alu per lav. plastiche</i>	≤ 400	—	15 – 20	22 – 30	20 – 25	30 – 37
Al cast alloys ≤ 10 % Si <i>Leghe di alu-ghisa ≤ 10 % Si</i>	≤ 600	—	15 – 20	22 – 30	20 – 25	30 – 37
Al cast alloys > 10 % Si <i>Al cast alloys > 10 % Si</i>	≤ 600	—	15 – 20	22 – 30	20 – 25	30 – 37
Cast iron <i>Ghise</i>	—	≤ 240	15 – 20	22 – 30	20 – 25	30 – 37
Spheroidal graphite iron <i>Ghise sferoidali</i>	—	≤ 240	15 – 20	22 – 30	20 – 25	30 – 37
Malleable cast iron <i>Ghise temprate</i>	—	< 300	15 – 20	22 – 30	20 – 25	30 – 37

Universal performance tap

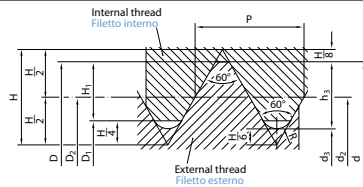
Maschi universali di alta prestazione

Table of threads

Tabella dei filetti

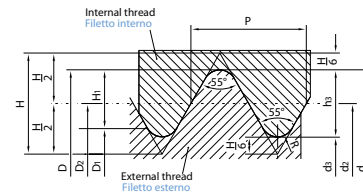
M / MF

ISO metric threads
Filettatura ISO metrica



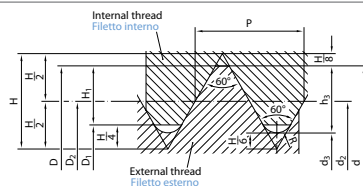
G

Whitworth pipe threads
Filettatura gas Whitworth



UNC / UNF

Unified threads
Filettatura UN



Pitch diameter
Diametro medio

Minor diameter
Diametro del nocciolo

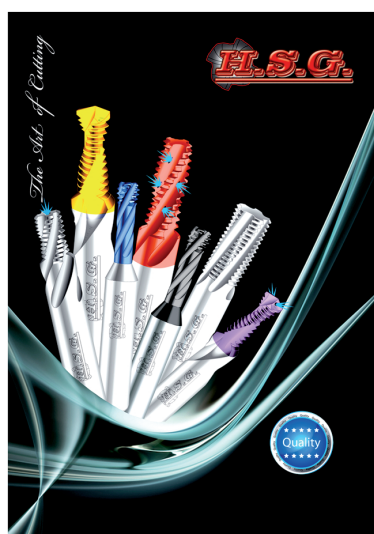
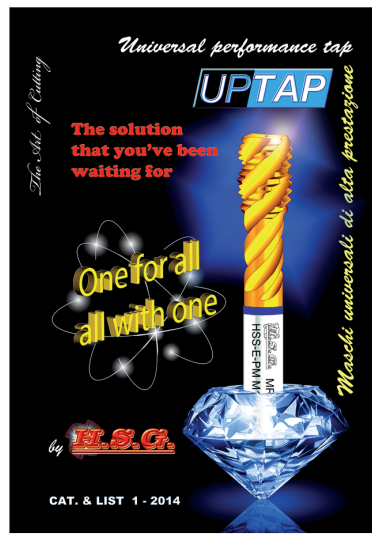
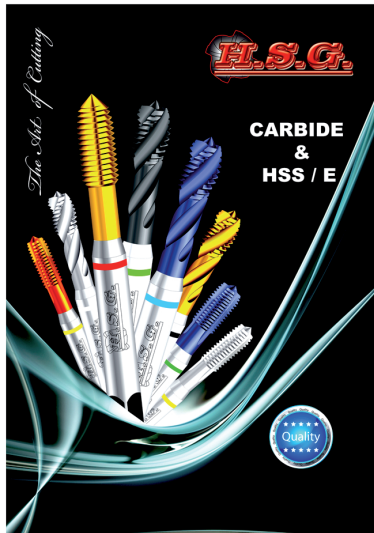
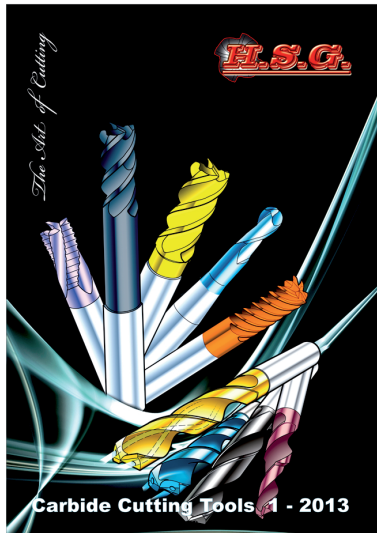
DIN 13	D x P (mm)	P (mm)	Dmin.	D ₂ max.				D ₁ min.	D ₁ max.				
				min.	4H	5H	6H		7H	4H	5H	6H	7H
	M3	0,5	3,000	2,675	-	2,755	2,775	2,800	2,459	-	2,571	2,599	2,639
	M4	0,7	4,000	3,545	-	3,640	3,663	3,695	3,242	-	3,382	3,422	3,466
	M5	0,8	5,000	4,480	-	4,580	4,605	4,640	4,134	-	4,294	4,334	4,384
	M6	1	6,000	5,350	-	5,468	5,500	5,540	4,917	-	5,107	5,153	5,217
	M8	1,25	8,000	7,188	-	7,313	7,348	7,388	6,647	-	6,859	6,912	6,982
	M10	1,5	10,000	9,026	-	9,166	9,206	9,250	8,376	-	8,612	8,676	8,751
	M12	1,75	12,000	10,863	-	11,023	11,063	11,113	10,106	-	10,371	10,441	10,531
	M14	2	14,000	12,701	-	12,871	12,913	12,966	11,835	-	12,135	12,210	12,310
	M16	2	16,000	14,701	-	14,871	14,913	14,966	13,835	-	14,135	14,210	14,310

DIN 13	D x P (mm)	P (mm)	Dmin.	D ₂ min.	D ₂ max.				D ₁ min.	D ₁ max.			
					4H	5H	6H	7H		4H	5H	6H	7H
	M8 x 1	1	8,000	7,350	-	7,468	7,500	7,540	6,917	-	7,107	7,153	7,217
	M10 x 1	1	10,000	9,350	-	9,468	9,500	9,540	8,917	-	9,107	9,153	9,217
	M10 x 1,25	1,25	10,000	9,188	-	9,313	9,348	9,388	8,647	-	8,859	8,912	8,982
	M12 x 1,25	1,25	12,000	11,188	-	11,328	11,368	11,412	10,647	-	10,859	10,912	10,982
	M12 x 1,5	1,5	12,000	11,026	-	11,176	11,216	11,262	10,376	-	10,612	10,676	10,751
	M14 x 1,5	1,5	14,000	13,026	-	13,176	13,216	13,262	13,376	-	12,612	12,676	12,751
	M16 x 1,5	1,5	16,000	15,026	-	15,176	15,216	15,262	14,376	-	14,612	14,676	14,751
	M18 x 1,5	1,5	18,000	17,026	-	17,176	17,216	17,262	16,376	-	16,612	16,676	16,751

ASME-B1.1	D - P (1/16)	P (mm)	Dmin.	D ₂ min.	D ₂ max.		D ₂ min.	D ₂ max.	
					2B	3B		2B	3B
	1/4 - 20	1,270	6,350	5,524	5,648	5,616	4,976	5,258	5,250
	5/16 - 18	1,411	7,938	7,021	7,155	7,120	6,411	6,731	6,680
	3/8 - 16	1,588	9,525	8,494	8,639	8,603	7,805	8,153	8,082
	7/16 - 14	1,814	11,112	9,934	10,089	10,051	9,149	9,550	9,441
	1/2 - 13	1,954	12,700	11,430	11,595	11,552	10,584	11,024	10,881
	5/8 - 11	2,309	15,875	14,376	14,559	14,514	13,376	13,868	13,693
	3/4 - 10	2,540	19,050	17,399	17,595	17,544	16,299	16,840	16,624

ASME-B1.1	D - P (1/16)	P (mm)	Dmin.	D ₂ min.	D ₂ max.		D ₂ min.	D ₂ max.	
					2B	3B		2B	3B
	1/4 - 28	0,907	6,350	5,761	5,870	5,842	5,367	5,588	5,563
	5/16 - 24	1,058	7,938	7,249	7,371	7,341	6,792	7,036	6,995
	3/8 - 24	1,058	9,525	8,837	8,961	8,931	8,379	8,636	8,565
	7/16 - 20	1,270	11,112	10,287	10,424	10,391	9,738	10,033	9,947
	1/2 - 20	1,270	12,700	11,874	12,017	11,981	11,326	11,608	11,524
	5/8 - 18	1,411	15,875	14,958	15,110	15,072	14,348	14,681	14,554
	3/4 - 16	1,588	19,050	18,019	18,184	18,143	17,330	17,678	17,546

DIN-EN-ISO 228	D - P (1/16)	P (mm)	Dmin.	D ₂ min.	D ₂ max.	D ₂ min.	D ₂ max.
	1/8 - 28	0,907	9,728	9,147	9,254	8,566	8,848
	1/4 - 19	1,337	13,157	12,301	12,426	11,445	11,890
	3/8 - 19	1,337	16,662	15,806	15,931	14,950	15,395
	1/2 - 14	1,814	20,955	19,793	19,935	18,631	19,172
	3/4 - 14	1,814	26,441	25,279	25,421	24,117	24,658



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Safe use of cutting tools

- Use safety cover, safety glasses and safety shoes during operation.
- Do not touch cutting edges with bare hands.
- Do not touch cutting chips with bare hands. Chips will be hot after cutting.
- Stop cutting when the tool becomes dull.
- Stop cutting operation immediately if you hear any strange cutting sounds.
- Do not modify tools.
- Please use correct tools for the operation. Check dimensions to ensure proper selection.



安全にお使いいただくために

- 工具を使用する時は、破損する危険があるので、必ずカバー・保護メガネ・安全靴等を使用してください。
- 切れ刃は素手でさわらないで下さい。
- 切りくずは素手でさわらないで下さい。
- 工具の切れ味が悪くなったら使用を中止して下さい。
- 異常音・異常振動が発生したら、直ちに使用を中止して下さい。
- 工具には手を加えないで下さい。
- 加工前に工具の寸法確認を行って下さい。

**advance by
experience**

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