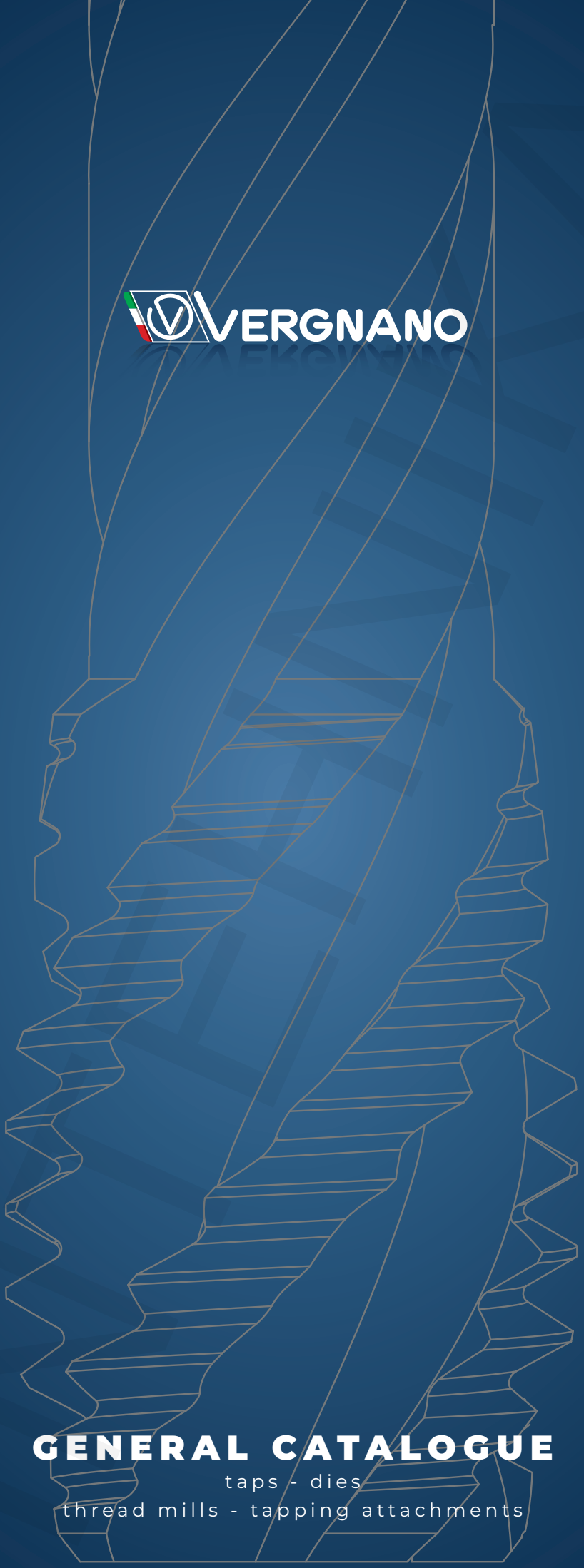
VERGNANO



ANNIVERSARY 75th 1944 - 2019

GENERAL CATALOGUE

taps - dies
thread mills - tapping attachments

#75 EN

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A15 AZ	M	52
A15 AZ TiH1	M	52
A15 L	M	53
A15 L TiN	M	53
A15 S	M	45
A15 S VAP	M	45
A15 S TiN	M	45
A15 S TiCN	M	45
A15 S 4H	M	47
A15 S 4H TiN	M	47
A15 S 6G	M	48
A15 S 6G TiN	M	48
A15 S 7G	M	49
A15 S 7G TiN	M	49
A15 S LH	M	50
A15 S LH TiN	M	50
A16 S	M	51
A16 S TiN	M	51
A17 S	MF	87
A17 S VAP	MF	87
A17 S TiN	MF	87
A17 S TiCN	MF	87
A17 S TiX2	MF	90
A17 S 6G	MF	91
A17 S 6G TiN	MF	91
A18 S	G	124
A18 S VAP	G	124
A18 S TiCN	G	124
A18 S TiX2	G	124
A19 S	UNC	106
A19 S TiN	UNC	106
A19 S TiCN	UNC	106
A19 S 3B	UNC	106
A19 S TiX2	UNC	107
A20 S	UNF	114
A20 S TiN	UNF	114
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A20 S 3B	UNF	114
A20 S TiX2	UNF	115
A21 FC	M	38
A21 FC TiN	M	38
A22 FC	M	40
A22 FC TiN	M	40
A23 FC	MF	83
A23 FC TiN	MF	83
A23 FC LH	MF	83
A24 FC	BSW	132
A24 FP	BSW	132
A26 FC	G	122
A26 FP	G	122
A27 FC	UNC	104
A27 FC TiN	UNC	104
A27 FP	UNC	104
A27 FP TiN	UNC	104
A28 FC	UNF	112
A28 FC TiN	UNF	112
A28 FP	UNF	112
A28 FP TiN	UNF	112
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A29 DIN 376	M	58
A29 DIN 376 TiN	M	58
A29 L	M	59
A29 L TiN	M	59
A30	MF	92
A30 TiN	MF	92
A31	BSW	133
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A32	G	125
A32 TiN	G	125
A33	UNC	108
A33 TiN	UNC	108
A33 3B	UNC	108
A34	UNF	116
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A49 NITR.	UNC	105
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A59 S TiN	G	126
A59 S TiCN	G	126
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A60 S	UNC	109
A60 S TiN	UNC	109
A60 S TiCN	UNC	109
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A61 S TiN	UNF	117
A61 S TiCN	UNF	117
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A62 TiH1	M	71
A65	UNC	110
A66	UNF	118
A67	M	43
A67 TiH1	M	43
A70 L	M	68
A70 L TiN	M	68
A70 S	M	60
A70 S VAP	M	60
A70 S TiN	M	60
A70 S TiCN	M	60
A70 S 4H	M	61
A70 S 4H TiN	M	61
A70 S 6G	M	62
A70 S 6G TiN	M	62
A70 S 7G	M	63
A70 S 7G TiN	M	63
A70 SE	M	65
A70 SE TiN	M	65
A70 S LH	M	66
A70 S LH TiN	M	66
A71 S	MF	95
A71 S VAP	MF	95
A71 S TiN	MF	95
A71 S TiCN	MF	95
A71 S TiX2	MF	96
A71 S 6G	MF	97
A71 S 6G TiN	MF	97
A72	M	72
A72 TiH1	M	72
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A76 S TiN	M	67
A80 TiN	M	74
A80 TiCN	M	74

A SERIES

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A80 6GX TiCN	M	75
A80 N TiN	M	76
A80 N TiCN	M	76
A80 N 6GX TiN	M	77
A80 N 6GX TiCN	M	77
A81 TiN	MF	99
A81 TiCN	MF	99
A81 6GX TiN	MF	100
A81 6GX TiCN	MF	100
A81 N TiN	MF	101
A81 N TiCN	MF	101
A81 N 6GX TiN	MF	102
A81 N 6GX TiCN	MF	102
A82 N TiN	G	128
A82 N TiCN	G	128
A100	M	37
A110 VAP	M	44
A110 CrN	M	44
A119	8-UN	119
A119 TiN	8-UN	119
A120	M	69
A120 VAP	M	69
A120 TiN	M	69
A150 VAP	M	54
A150 TiX2	M	54
A159 S	Rp (BSPP)	129
A159 S TiN	Rp (BSPP)	129
A160	8-UN	120
A160 TiN	8-UN	120
A170 VAP	M	70
A170 TiX2	M	70
A190	EG-M	78
A701 S	M	64
A701 S TiN	M	64

TOOL CODE LIST

P SERIES

TOOL CODE	Thread	Page
P15 TiN	M	143
P15 TiH1	M	143
P15 6GX TiH1	M	143
BP15 TiH1	M	143
P17 TiN	MF	158
P17 TiH1	MF	158
P17 6GX TiH1	MF	158
BP17 TiH1	MF	158
P18 TiN	G	164
P18 TiH1	G	164
P29	M	144
P29 TiN	M	144
P29 TiH1	M	144
BP29 TiH1	M	144
P29 E TiH1	M	145
P30	MF	159
P30 TiN	MF	159
P30 TiH1	MF	159
BP30 TiH1	MF	159
P43 V-MAXX	M	140
BP43 V-MAXX	M	140
P43 E V-MAXX	M	141
BP43 E V-MAXX	M	141
P45 V-MAXX	MF	157
BP45 V-MAXX	MF	157
P45 E V-MAXX	MF	157
BP45 E V-MAXX	MF	157
P59 TiN	G	165
P59 TiH1	G	165
P59 E TiH1	G	165
P70 TiN	M	146
P70 TiH1	M	146
BP70 TiH1	M	147
P70 6GX TiH1	M	146
P70 7GX TiH1	M	146
P70 E TiN	M	148
P70 E TiH1	M	148
P70 E 6GX TiH1	M	148
P71 TiN	MF	160
P71 TiH1	MF	160
P71 6GX TiH1	MF	160
BP71 TiH1	MF	160
P71 E TiH1	MF	161
P76 L TiH1	M	149
P80 TiN	M	150
P80 V-MAXX	M	150
P80 6GX TiN	M	150
P80 7GX TiN	M	150
P80 N TiN	M	151
P80 N V-MAXX	M	151
P80 N 6GX TiN	M	151
P80 N 7GX TiN	M	151
P80 E TiN	M	152
P80 N E TiN	M	152
P80 N E V-MAXX	M	152
P80 N E 6GX TiN	M	152
P80 N L TiN	M	155
P80 N LH TiN	M	154
BP80 N TiN	M	153
BP80 N R TiN	M	153
BP80 N R V-MAXX	M	153
BP80 N E V-MAXX	M	153
P81 TiN	MF	162
P81 V-MAXX	MF	162
P81 6GX TiN	MF	162
P81 N TiN	MF	163
P81 N V-MAXX	MF	163
P81 N 6GX TiN	MF	163
P82 N TiN	G	166
P82 N V-MAXX	G	166
P130	M	142
P130 V-MAXX	M	142
P180 N TiN	M	156
P180 N V-MAXX	M	156

S SERIES

TOOL CODE	Thread	Page
S15 TiN	M	169
S15 TiH1	M	169
BS15 TiH1	M	169
S17 TiN	MF	173
S43 V-MAXX	M	168
BS43 V-MAXX	M	168
S43 E V-MAXX	M	168
BS43 E V-MAXX	M	168
S45 V-MAXX	MF	172
BS45 V-MAXX	MF	172
S70 TiN	M	170
S70 TiH1	M	170
BS70 TiH1	M	170
S71 TiN	MF	174
S80 N TiN	M	171
S80 N V-MAXX	M	171
S80 N 6GX TiN	M	171
BS80 N R TiN	M	171

H SERIES

TOOL CODE	Thread	Page
HB29	M	177
HB29 V-MAXX	M	177
HB43	M	176
HB43 V-MAXX	M	176
HB43 E V-MAXX	M	176
HB45	MF	180
HB45 V-MAXX	MF	180
HB45 E V-MAXX	MF	180
HB80 N R V-MAXX	M	179
HB81 N R E V-MAXX	M	181
H130	M	178
H130 V-MAXX	M	178

F SERIES

TOOL CODE	Thread	Page
X200	M	204
X200 LH	M	204
X201	MF	205
X202	BSW	211
X203	G	210
X204	UNC	208
X205	UNF	209
X206	NPT	212

VR SERIES

TOOL CODE	Thread	Page
VR10 TiAlN	ISO	217
VR20 TiAlN	ISO	217
VR30 TiAlN	ISO	217
VR40 TiAlN	ISO	218
VR45 TiAlN	ISO	218
VR50 TiAlN	ISO	219
VR55 TiAlN	ISO	219
VR10 TiAlN	UN	220
VR20 TiAlN	UN	220
VR40 TiAlN	UN	221
VR45 TiAlN	UN	221
VR50 TiAlN	UN	222
VR55 TiAlN	UN	222
VR10 TiAlN	G	223
VR20 TiAlN	G	223

VA SERIES

TOOL CODE	Page
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SK DIN 69871 AD	229
SK DIN 69871 AD+B	229
MAS 403 BT	230
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Extended Quick-Change Tap Adaptor	232
ER Collet	233
Assembly Support	234
Wrench	234

See pages 14 ÷ 32 >

ARTICLE LEGEND

A… Taps for Generic Applications
P… High Performance Taps
S… Synchronous Taps
H… Solid Carbide Taps
B… Taps with internal coolant supply

… **FC** Taps for blind holes
… **FP** Taps for through holes

… **S** Taps with increased relief
… **L** Taps with long shank
… **N** Forming taps with oil grooves
… **R** Forming taps with internal coolant supply and radial outlet
… **E** Taps with short chamfer (Form E)
… **EG** Taps for wire thread inserts
… **LH** Taps with left hand thread
… **AZ** Taps with interrupted thread

TAP MATERIAL

HSS Conventional high speed steel
HSSE Conventional high speed steel
HSSK Powder metallurgy high speed steel
HSSZ Powder metallurgy high speed steel
HSSP Powder metallurgy high speed steel
HM Solid Carbide

LUBRICATION

E Emulsion
O Oil
MQL Minimum quantity lubrication

TAP APPLICATION TABLE LEGEND

A1 34 Product code / page
● **20-25** Ideal tap / cutting speed m/min
❍ 15-20 Suitable tap / cutting speed m/min

SERIES
MATERIAL
CHAMFER FORM
TYPE OF HOLE
COATING
LUBRICATION

M	4H
	6H/6HX
	6G/6GX
	7G/7GX
	6H +0,1
MF	6H/6HX
	6G/6GX
UNC	2B/2BX
	3B
UNF	2B/2BX
	3B
8-UN	2B
G	ISO 5969/X
Rp (BSPP)	--
Rc (BSPT)	--
BSW	mc
NPT	--
NPTF	--

ISO 513	Material	Group	Application	R. N/mm²	Lubrication
P	Steel	P.1	Mild / magnetic steel	200 - 400	E, O, MQL
		P.2	Construction steel, case hardening steel	350 - 700	E, O, MQL
		P.3	Carbon steel	350 - 850	E, O, MQL
		P.4	Alloyed steel / tempered steel	500 - 850	E, O, MQL
		P.5	Alloyed steel / tempered steel	850 - 1200	E, O, MQL
		P.6	Alloyed steel / high strength steel	1200 - 1600	O
		P.7	Ferritic stainless steel, martensitic stainless steel, precipitation hardening	< 1000	E, O, MQL
M	Stainless steel	M.1	Austenitic stainless steel	< 850	E, O, MQL
		M.2	Ferritic+austenitic (Duplex)	< 1000	O, MQL
K	Cast iron	K.1	Grey cast iron	< 1000	E, O, MQL
		K.2	Nodular cast iron, malleable cast iron, tempered cast iron	< 1000	E, O, MQL
		K.3	Austempered ductile iron (ADI)	< 1400	O, MQL
N	Aluminium Aluminium alloys	N.1	Pure aluminium	< 300	E, O, MQL
		N.2	Aluminium wrought and die cast alloys with Si < 0,5% (long chipping)	< 500	E, O, MQL
		N.3	Aluminium wrought and die cast alloys with Si < 10% (medium chipping)	< 500	E, O, MQL
		N.4	Aluminium die cast alloys with Si > 10% (short chipping)	< 600	E, O, MQL
	Copper Copper alloys Brass Bronze	N.5	Pure copper	250 - 350	E, O, MQL
		N.6	Copper alloys (long chipping), soft brass	< 700	E, O, MQL
		N.7	Copper alloys (short chipping), hard brass	< 700	E, O, MQL
		N.8	High strength bronze	700 - 1500	O
	Magnesium Magnesium alloys	N.9	Pure magnesium, magnesium alloys	120 - 300	E, O, MQL
		N.10	High strength magnesium alloys	240 - 400	E, O, MQL
S	Titanium Titanium alloys	S.1	Pure titanium	400 - 600	E, O, MQL
		S.2	Titanium alloys	600 - 1000	O, MQL
	Nickel Nickel alloys	S.3	Pure nickel	400 - 600	E, O, MQL
		S.4	Nickel alloys	600 - 1000	O, MQL
H	Hardened materials	H.1	Alloyed steel, hardness HRC 44-55	-	O
		H.2	Alloyed steel, hardness HRC 56-63	-	O

**For specific material examples see "Technical Information" section on page 248*

With over 75 years of experience in the cutting tool industry, Vergnano is one of the world's leading manufacturers of high quality precision threading taps, hobs, end mills and threading dies.

While keeping a firm foothold in the honoured tradition of the Vergnano brand, Vergnano has established itself internationally and is renowned for quality, reliability, flexibility, innovation and commitment.

1944

Company foundation.
Production of end mills

1949

Production of taps
commences

1950

Construction and transfer to new
production plant in Corso Torino, Chieri

1960

Enlargement of
Corso Torino plant

1.000.000

1980

Production reaches 1 million taps per year

2002

Transfer to newly built production plant in Corso Olia, Chieri

2016

New office of German subsidiary opens in Achern

1992

German subsidiary opens, Vergnano GmbH

2008

South Korean subsidiary opens, Vergnano Korea

2019

75th Anniversary of company foundation

M DIN 13

P SERIES

P29E

New P29 version with chamfer form E for blind holes

R15 | 2xD | HSSP

P K N S

M DIN 13

P SERIES

P70 7GX TiH1

New P70 version with tolerance 7GX for blind holes

R45 | 3xD | HSSP

P M K N S

M DIN 13

P SERIES

P76L TiH1

Long P70 version with long through shank for blind holes

R40 | 3xD | HSSP

P M K N S

M DIN 13

P SERIES

P80N LH TiN

New high performance forming taps for lefthand threads

3xD | HSSK | LH

P M N S

M
DIN 13

P
SERIES

P80N L TiN

New high performance forming taps with long shank

3xD | HSSK

P M N S

M
DIN 13

H
SERIES

HB43E V-MAXX

New HB43 version with chamfer form E for blind holes

2,5xD | HM

K N

MF
DIN 13

H
SERIES

HB45E V-MAXX

New HB45 version with chamfer form E for blind holes

2,5xD | HM

K N

MF
DIN 13

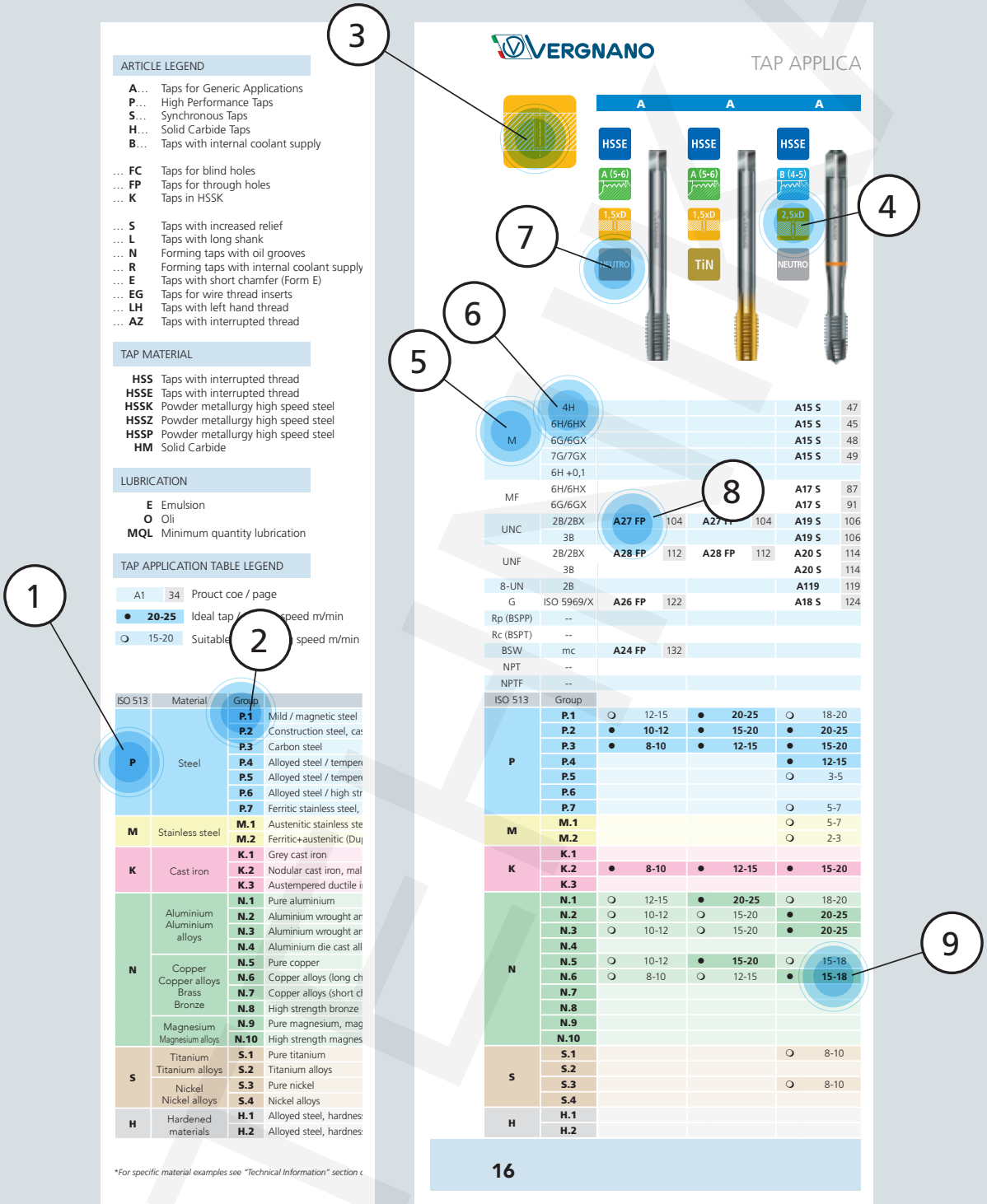
H
SERIES

HB81NRE V-MAXX

New solid carbide forming taps with chamfer form E and internal radial coolant

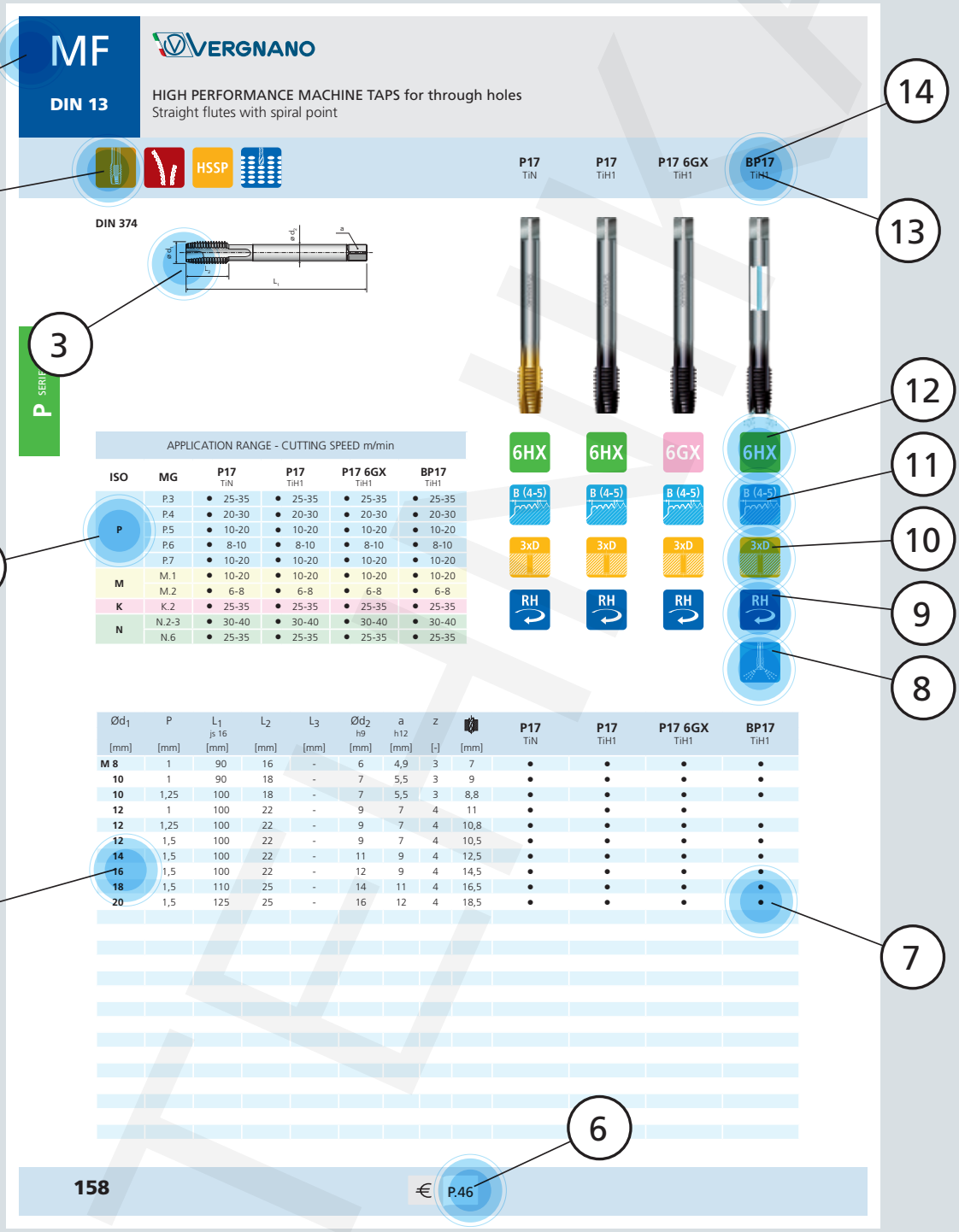
2,5xD | HM

P M N S



In order to select the correct tap, follow steps 1 to 9.

1 *Material*
2 *Material subgroup*
3 *Hole type*
4 *Thread depth*
5 *Thread type*
6 *Tolerance*
7 *Coating*
8 *Tool code (page)*
9 *Cutting parameters*



1 *Thread type*
2 *Application characteristics*
3 *Dimensional standard*
4 *Recommended application range*
5 *Sizes*
6 *Price list page reference*
7 *(•) Standard execution*
8 *Through coolant*
9 *Direction of cut*
10 *Hole type*
11 *Chamfer form*
12 *Tolerance*
13 *Coating*
14 *Tool code*

ISO
DIN 13

VERGNANO

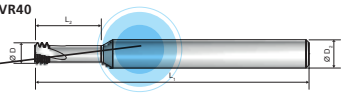
SOLID CARBIDE THREAD MILLS
Spiral flutes

INT HM

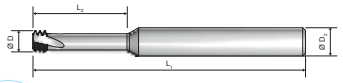
VR40 TiAlN

VR45 TiAlN

VR40



VR45



APPLICATION RANGE

ISO	VR40 TiAlN	VR45 TiAlN	
P	•	•	
M	•	•	
K	•	•	
N	•	•	
S	•	•	

For cutting data see page 215

INT INT

2xD 3xD

RH RH

P [mm]	M	$ØD_2$ h6 [mm]	ØD [mm]	z [-]	L_2 [mm]	L_1 [mm]	VR40 TiAlN	VR45 TiAlN
0,3	M1,4	3	1,05	3	4	39		VR45010I0300400
0,35	M1,6	3	1,2	3	4,8	39		VR45012I0350400
0,4	M2	6	1,53	3	4,5	58	VR40015I0400400	
0,4	M2	3	1,53	3	6	39		VR45015I0400600
0,5	M3	6	2,37	3	6,5	58	VR40023I0500600	
0,5	M3	6	2,37	3	9,5	58		VR45023I0500900
0,5	M3	6	2,37	3	9,5	105		VR45023I050090L
0,7	M4	6	3,1	3	9	58	VR40031I0700900	
0,7	M4	6	3,1	3	12,5	58		VR45031I0701200
0,7	M4	6	3,1	3	12,5	105		VR45031I070120L
0,8	M5	6	3,8	3	12,5	58	VR40038I0801200	
0,8	M5	6	3,8	3	16	58		VR45038I0801600
0,8	M5	6	3,8	3	16	105		VR45038I080160L
1	M6	6	4,65	3	14	58	VR40046I1001400	
1	M6	6	4,65	3	20	58		VR45046I1002000
1	M6	6	4,65	3	20	105		VR45046I100200L
1,25	M8	6	5,95	3	18	58	VR40059I1251800	
1,25	M8	6	6	3	24	58		VR45060I1252400
1,5	M10	8	7,8	3	23	64	VR40078I1502300	
1,75	M12	10	9	3	26	73	VR40090I1752600	
2	M16	12	11,8	4	35	84	VR40118I2003500	

VR SERIES

218

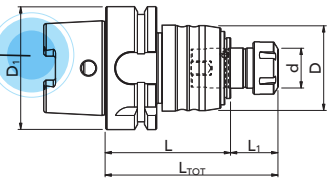
€ P.64

1 Thread type
2 Application characteristics
3 Technical Drawing
4 Application range
5 Sizes
6 Price list page reference
7 Tool code
8 Direction of cut
9 Hole type
10 Thread
11 Coating
12 Tool code

VERGNANO

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

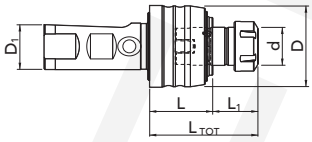
DIN 69893 HSK A



Article Code	Attachment ø D_1 [mm]	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01A06302CH160	HSK-A63	M3 - M8	64	43	20	ER 16	20,5	84,5
VA01A06302CH250	HSK-A63	M6 - M20	97	60	32	ER 25	23,5	120,5
VA01A10002CH400	HSK-A100	M14 - M33	115	87	50	ER 40	28,5	143,5

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

DIN 1835 B+E



VA SERIES

Article Code	Attachment ø D_1 [mm]	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01C02502CH160	25	M3 - M8	34	43	20	ER 16	20,5	54,5
VA01C02502CH250	25	M6 - M20	56	60	32	ER 25	23,5	79,5
VA01C04002CH400	40	M14 - M33	80	87	50	ER 40	28,5	108,5

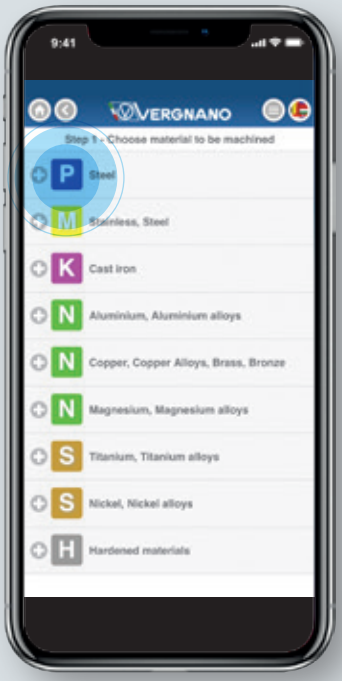
(1) For coolant pressure above 50 bars a special nut screw is available on request

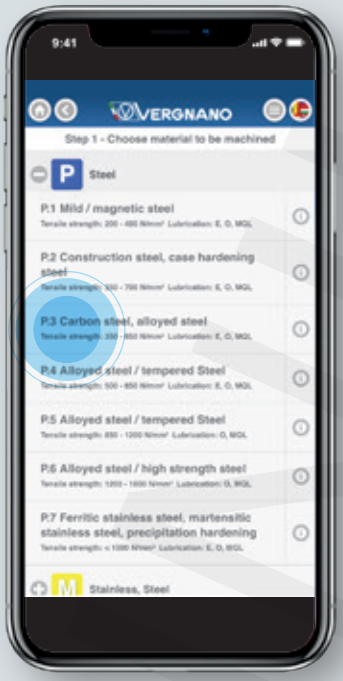
228

€ P.67

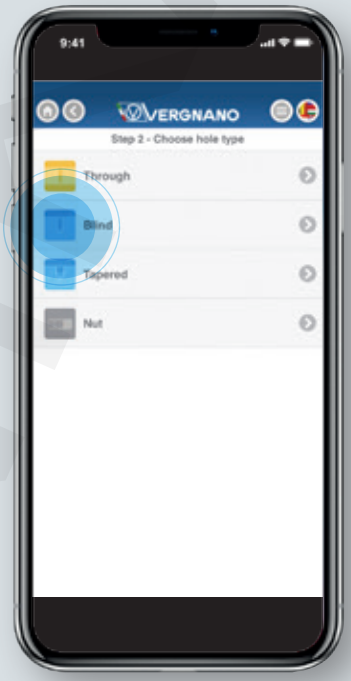
1 *Application characteristics*
2 *Technical Drawing*
3 *Size*
4 *Tool code*
5 *Price list page reference*

Download TAppFinder for iOS or Andriod

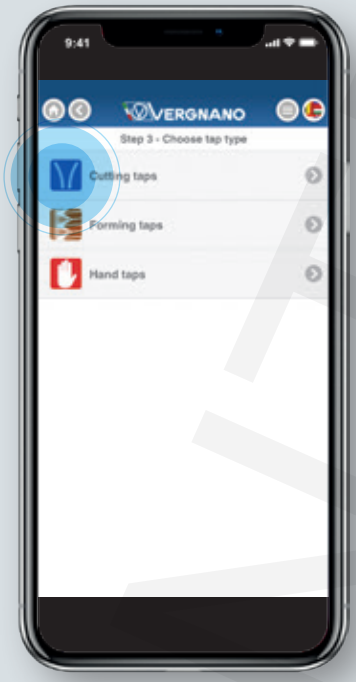




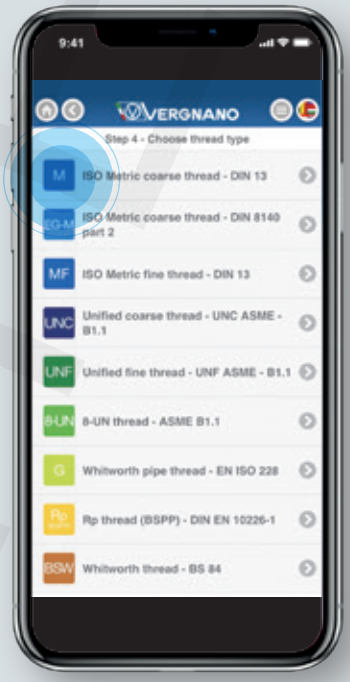
1-2
Select material to machine



3
Select type of hole

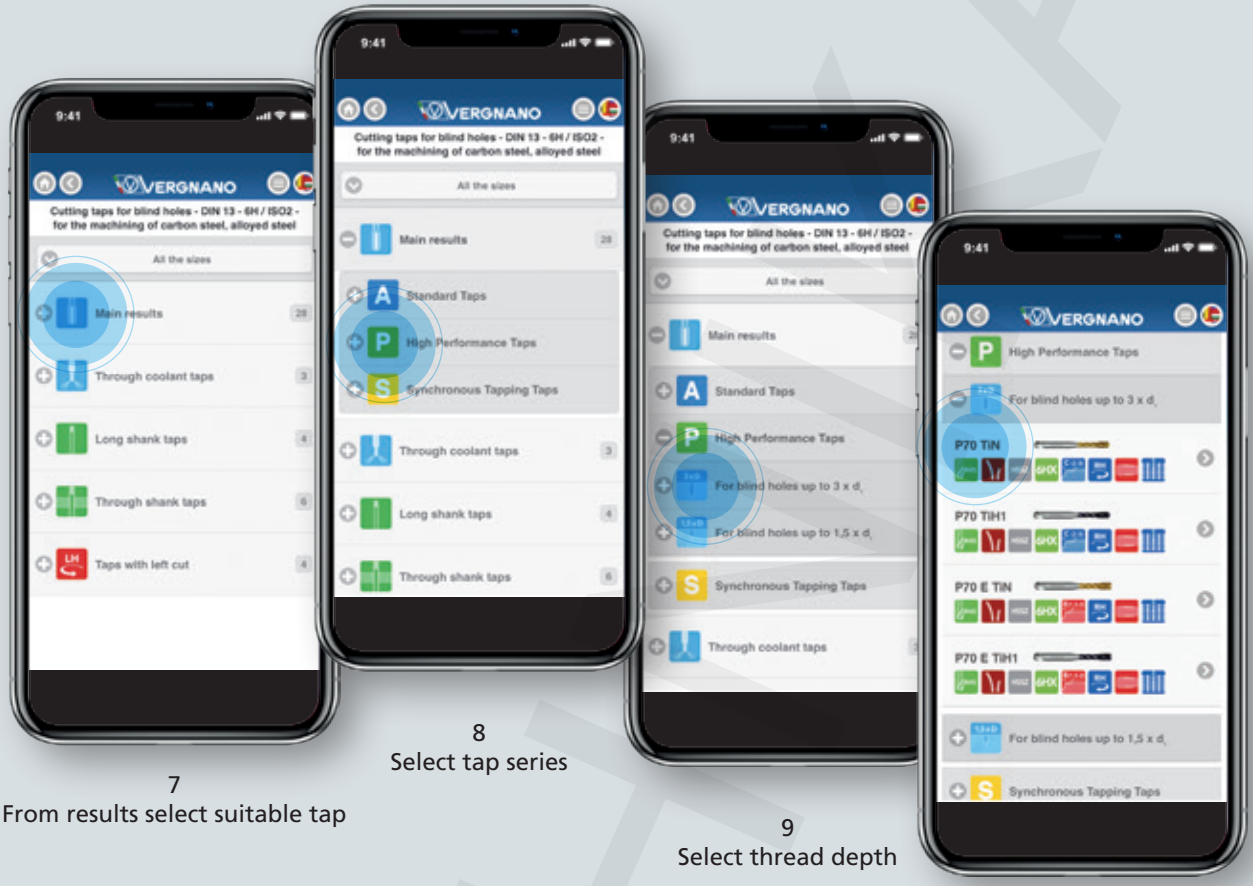


4
Select cutting or forming tap



5
Select thread type

6
Select thread tolerance

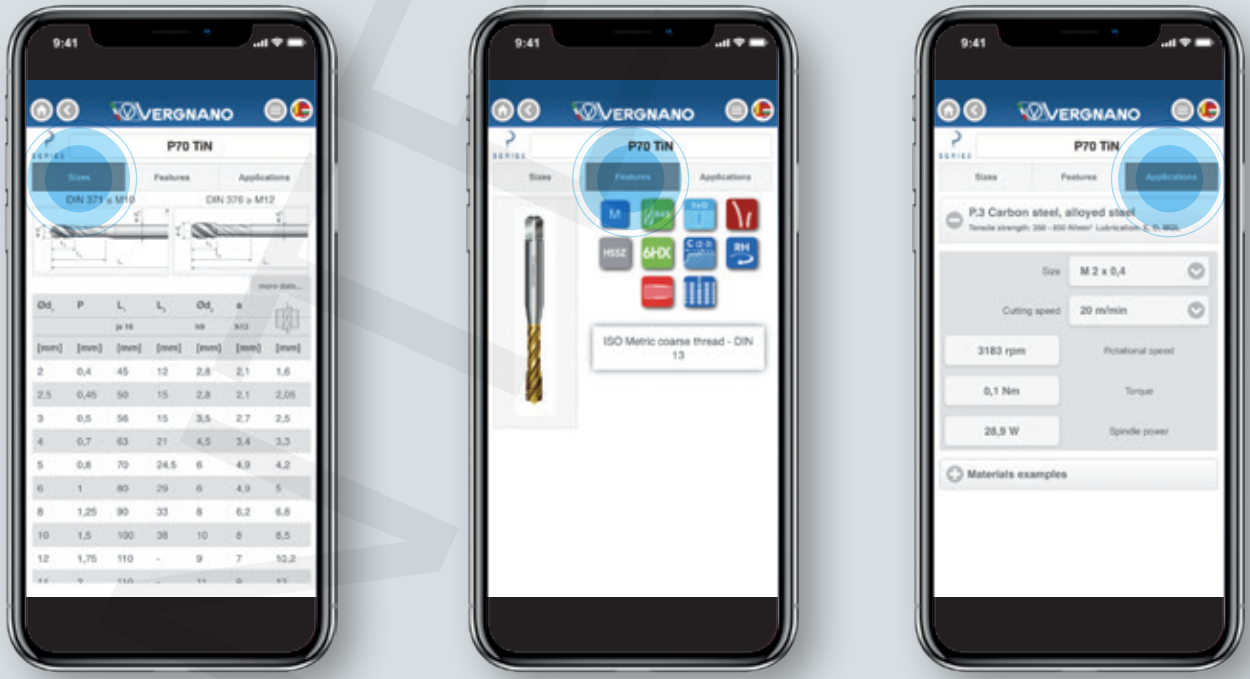


7
From results select suitable tap

8
Select tap series

9
Select thread depth

10
Select tap

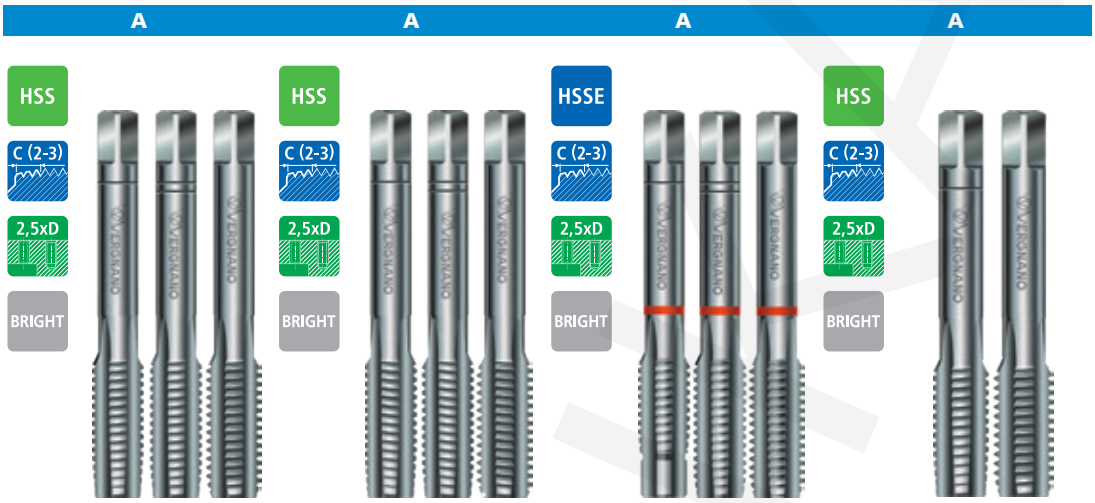


11
Browse available sizes

12
Browse technical properties

13
Browse working parameters

TAP APPLICATION TABLE



M	4H								
	6H/6HX	**A1**	34	**A1 LH**	36	**A100**	37		
	6G/6GX								
	7G/7GX								
	6H +0,1								
MF	6H/6HX							**A2**	79
	6G/6GX								
UNC	2B/2BX	**A7**	103						
	3B								
UNF	2B/2BX							**A8**	111
	3B								
8-UN	2B								
G	ISO 5969/X							**A5**	121
Rp (BSPP)	--								
Rc (BSPT)	--								
BSW	mc	**A4**	131						
NPT	--								
NPTF	--								
ISO 513	Group								
P	**P.1**	●		●		●		●	
	P.2	●		●		●		●	
	P.3	●		●		●		●	
	P.4	●		●		●		●	
	P.5					●			
	P.6								
	P.7	●		●		●		●	
M	**M.1**	❍		❍		●		❍	
	M.2	❍		❍		●		❍	
K	**K.1**	❍		❍		●		❍	
	K.2	●		●		●		●	
	K.3					●			
N	**N.1**	●		●		●		●	
	N.2	●		●		●		●	
	N.3	●		●		●		●	
	N.4	❍		❍		●		❍	
	N.5	●		●		●		●	
	N.6	●		●		●		●	
	N.7	●		●		●		●	
	N.8					●			
	N.9					●			
	N.10					●			
S	**S.1**	❍		❍		●		❍	
	S.2					❍			
	S.3	❍		❍		●		❍	
	S.4					❍			
H	**H.1**								
	H.2								

TAP APPLICATION TABLE

A		A	A	A
HSS C (2-3) 2,5xD BRIGHT		HSSE BRIGHT		HSSE C (2-3) BRIGHT 	HSSE C (2-3) BRIGHT 
		A9 73			
A2 LH 82		A10 98			
				A6 130	
				A6 B 134	A6 BZ 135
				A6 F 136	A6 FZ 137
●		● **18-20**		❍ 12-15	● **12-15**
●		● **15-18**		● **10-15**	
●		● **12-15**		● **10-12**	
●		❍ 10-12		● **8-10**	
				❍ 3-5	
●				❍ 2-3	● **2-3**
❍				❍ 2-3	● **2-3**
❍					❍ 2-3
❍				❍ 10-12	
●				● **10-12**	
●					● **12-15**
●				❍ 12-15	● **12-15**
●				❍ 10-12	
❍				❍ 10-12	
●					● **10-12**
●				❍ 6-8	● **6-8**
●				❍ 10-12	
				❍ 2-3	
				❍ 6-8	
				❍ 2-3	
❍					❍ 5-8
❍					❍ 5-8

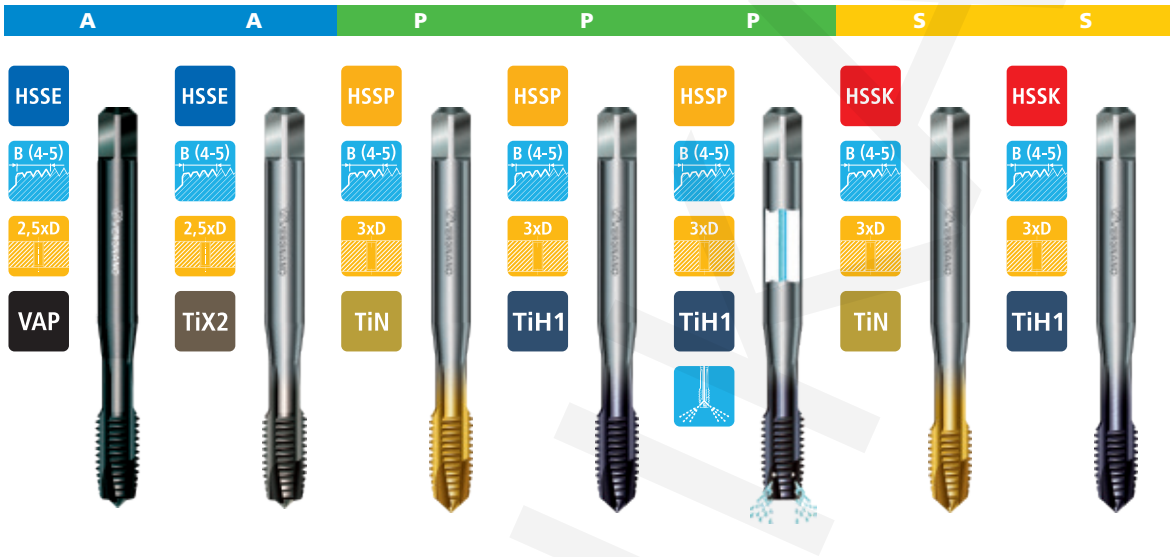
TAP APPLICATION TABLE

M	4H					**A15 S**	47			**A15 S**	47				
	6H/6HX					**A15 S**	45	**A15 S**	45	**A15 S**	45	**A15 S**	45		
	6G/6GX					**A15 S**	48			**A15 S**	48				
	7G/7GX					**A15 S**	49			**A15 S**	49				
	6H +0,1														
MF	6H/6HX					**A17 S**	87	**A17 S**	87	**A17 S**	87	**A17 S**	87	**A17 S**	90
	6G/6GX					**A17 S**	91			**A17 S**	91				
UNC	2B/2BX	**A27 FP**	104	**A27 FP**	104	**A19 S**	106			**A19 S**	106	**A19 S**	106	**A19 S**	107
	3B					**A19 S**	106								
UNF	2B/2BX	**A28 FP**	112	**A28 FP**	112	**A20 S**	114			**A20 S**	114	**A20 S**	114	**A20 S**	115
	3B					**A20 S**	114								
8-UN	2B					**A119**	119			**A119**	119				
G	ISO 5969/X	**A26 FP**	122			**A18 S**	124	**A18 S**	124			**A18 S**	124	**A18 S**	124
Rp (BSPP)	--														
Rc (BSPT)	--														
BSW	mc	**A24 FP**	132												
NPT	--														
NPTF	--														
ISO 513	Group														
P	**P.1**	❍	12-15	●	**20-25**	❍	18-20	❍	18-20	❍	30-35	❍	30-35		
	P.2	●	**10-12**	●	**15-20**	●	**20-25**	●	**20-25**	●	**30-35**	●	**30-35**		
	P.3	●	**8-10**	●	**12-15**	●	**15-20**	●	**15-20**	●	**25-30**	●	**25-30**		
	P.4					●	**12-15**	●	**12-15**	●	**20-25**	●	**20-25**		
	P.5					❍	3-5	❍	3-5	●	**10-15**	●	**10-15**		
	P.6														
	P.7					❍	5-7	❍	5-7	●	**10-15**	●	**10-15**	●	**10-15**
M	**M.1**					❍	5-7	❍	5-7	●	**10-15**	●	**10-15**	●	**10-15**
	M.2					❍	2-3	❍	2-3	❍	6-8	❍	6-8	❍	6-8
K	**K.1**														
	K.2	●	**8-10**	●	**12-15**	●	**15-20**	●	**15-20**	●	**25-30**	●	**25-30**		
	K.3														
N	**N.1**	❍	12-15	●	**20-25**	❍	18-20	❍	18-20	❍	30-35	❍	30-35		
	N.2	❍	10-12	❍	15-20	●	**20-25**	●	**20-25**	●	**30-35**	●	**30-35**		
	N.3	❍	10-12	❍	15-20	●	**20-25**	●	**20-25**	●	**30-35**	●	**30-35**		
	N.4														
	N.5	❍	10-12	●	**15-20**	❍	15-18	❍	15-18	❍	25-30	❍	25-30		
	N.6	❍	8-10	❍	12-15	●	**15-18**	●	**15-18**	●	**25-30**	●	**25-30**		
	N.7														
	N.8														
	N.9														
	N.10														
S	**S.1**					❍	8-10	❍	8-10						
	S.2														
	S.3					❍	8-10	❍	8-10	❍	12-15	❍	12-15		
	S.4														
H	**H.1**														
	H.2														

TAP APPLICATION TABLE

A	A	A	A	A	A	A	A
HSSE B (4-5) 2,5xD BRIGHT	HSSE B (4-5) 2,5xD TiN	HSSE B (4-5) 2,5xD BRIGHT	HSSE B (4-5) 2,5xD TiN	HSSE B (4-5) 2,5xD BRIGHT	HSSE B (4-5) 2,5xD TiH1	HSSE B (4-5) 2,5xD BRIGHT	HSSE B (4-5) 2,5xD TiN
A15 S LH 50	**A15 S LH** 50	**A16 S** 51	**A16 S** 51	**A15 AZ** 52	**A15 AZ** 52	**A15 L** 53	**A15 L** 53
❍ 18-20	❍ 30-35	❍ 18-20	❍ 30-35	● **18-20**	● **30-35**	● **18-20**	● **30-35**
● **20-25**	● **30-35**	● **20-25**	● **30-35**			● **15-18**	● **25-30**
● **15-20**	● **25-30**	● **15-20**	● **25-30**			● **12-15**	● **20-25**
● **12-15**	● **20-25**	● **12-15**	● **20-25**			❍ 10-12	❍ 15-20
❍ 3-5	● **10-15**	❍ 3-5	● **10-15**				
❍ 5-7	● **10-15**	❍ 5-7	● **10-15**			❍ 3-5	❍ 6-8
❍ 5-7	● **10-15**	❍ 5-7	● **10-15**			❍ 3-5	❍ 6-8
❍ 2-3	❍ 6-8	❍ 2-3	❍ 6-8			❍ 2-3	❍ 3-5
● **15-20**	● **25-30**	● **15-20**	● **25-30**			❍ 12-15	❍ 20-25
❍ 18-20	❍ 30-35	❍ 18-20	❍ 30-35	● **18-20**	● **30-40**	● **18-20**	❍ 30-35
● **20-25**	● **30-35**	● **20-25**	● **30-35**	● **15-18**	● **30-40**	● **15-18**	● **25-30**
● **20-25**	● **30-35**	● **20-25**	● **30-35**			❍ 15-18	❍ 25-30
❍ 15-18	❍ 25-30	❍ 15-18	❍ 25-30	● **15-18**	● **30-35**	● **15-18**	❍ 25-30
● **15-18**	● **25-30**	● **15-18**	● **25-30**	● **12-15**	● **30-35**	● **12-15**	● **20-25**
❍ 8-10		❍ 8-10		❍ 6-8		❍ 6-8	
❍ 8-10	❍ 12-15	❍ 8-10	❍ 12-15	❍ 6-8		❍ 8-10	

TAP APPLICATION TABLE



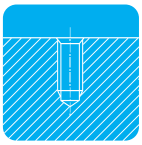
M	4H														
	6H/6HX	**A150**	54	**A150**	54	**P15**	143	**P15**	143	**BP15**	143	**S15**	169	**S15**	169
	6G/6GX							**P15**	143						
	7G/7GX														
	6H +0,1														
MF	6H/6HX					**P17**	158	**P17**	158	**BP17**	158	**S17**	173		
	6G/6GX							**P17**	158						
UNC	2B/2BX														
	3B														
UNF	2B/2BX														
	3B														
8-UN	2B														
G	ISO 5969/X					**P18**	164	**P18**	164						
Rp (BSPP)	--														
Rc (BSPT)	--														
BSW	mc														
NPT	--														
NPTF	--														
ISO 513	Group														
P	**P.1**											●	**50-60**	●	**50-60**
	P.2					❍	30-40	❍	30-40	❍	30-40	●	**50-60**	●	**50-60**
	P.3					●	**25-35**	●	**25-35**	●	**25-30**	●	**45-55**	●	**45-55**
	P.4					●	**20-30**	●	**20-30**	●	**20-30**	●	**40-50**	●	**40-50**
	P.5					●	**10-20**	●	**10-20**	●	**10-20**	●	**15-25**	●	**15-25**
	P.6					●	**8-10**	●	**8-10**	●	**8-10**				
	P.7	●	**10-12**	●	**18-20**	●	**10-20**	●	**10-20**	●	**10-20**	●	**15-25**	●	**15-25**
M	**M.1**	●	**10-12**	●	**18-20**	●	**10-20**	●	**10-20**	●	**10-20**	●	**15-25**	●	**15-25**
	M.2	●	**8-10**	●	**10-12**	●	**6-8**	●	**6-8**	●	**6-8**	●	**10-20**	●	**10-20**
K	**K.1**														
	K.2					●	**25-35**	●	**25-35**	●	**25-35**	●	**45-55**	●	**45-55**
	K.3														
N	**N.1**											●	**50-60**	●	**50-60**
	N.2					●	**30-40**	●	**30-40**	●	**30-40**	●	**45-55**	●	**45-55**
	N.3					●	**30-40**	●	**30-40**	●	**30-40**	●	**45-55**	●	**45-55**
	N.4														
	N.5											●	**40-50**	●	**40-50**
	N.6					●	**25-30**	●	**25-30**	●	**25-30**	●	**35-45**	●	**35-45**
	N.7														
	N.8														
	N.9														
	N.10														
S	**S.1**													●	**15-25**
	S.2							❍	12-18	❍	12-18			❍	10-20
	S.3											●	**15-25**	●	**15-25**
	S.4					❍	12-18	❍	12-18	❍	12-18	❍	10-20	❍	10-20
H	**H.1**														
	H.2														

TAP APPLICATION TABLE

S		A	A	A	A	A	A
HSSK B (4-5) 3xD TiH1		HSSE C (2-3) 1,5xD BRIGHT	HSSE C (2-3) 1,5xD BRIGHT	HSSE C (2-3) 1,5xD TiN	HSSE C (2-3) 1,5xD BRIGHT	HSSE C (2-3) 1,5xD TiN	HSSE C (2-3) 1,5xD BRIGHT
							
BS15 169		A21 FC 38		A21 FC 38	A22 FC 40	A22 FC 40	A29 55
							A29 57
		A23 FC 83	A23 FC LH 83	A23 FC 83			A30 92
		A27 FC 104		A27 FC 104			A33 108
							A33 108
		A28 FC 112		A28 FC 112			A34 116
							A34 116
		A26 FC 122					A32 125
		A24 FC 132					A31 133
● 50-60		❍ 12-15	❍ 12-15	● **20-25**	❍ 12-15	● **20-25**	● **18-20**
● 50-60		● **10-12**	● **10-12**	● **15-20**	● **10-12**	● **15-20**	● **15-18**
● 45-55		● **8-10**	● **8-10**	● **12-15**	● **8-10**	● **12-15**	● **12-15**
● 40-50							● **10-12**
● 15-25							
● 15-25							
● 15-25							
● 10-20							
● 45-55		● **8-10**	● **8-10**	● **12-15**	● **8-10**	● **12-15**	● **12-15**
● 50-60		❍ 12-15	❍ 12-15	● **20-25**	❍ 12-15	● **20-25**	● **18-20**
● 45-55		❍ 10-12	❍ 10-12	❍ 15-20	❍ 10-12	❍ 15-20	● **15-18**
● 45-55		❍ 10-12	❍ 10-12	❍ 15-20	❍ 10-12	❍ 15-20	● **15-18**
● 40-50		❍ 10-12	❍ 10-12	● **15-20**	❍ 10-12	● **15-20**	● **15-18**
● 35-45		❍ 8-10	❍ 8-10	❍ 12-15	❍ 8-10	❍ 12-15	● **12-15**
● 15-25							❍ 6-8
❍ 10-20							
● 15-25							❍ 6-8
❍ 10-20							

VERGNANO

TAP APPLICATION TABLE



		A		A		A		A		A		A		A	
		HSSE		HSSE		HSSE		HSSE		HSSE		HSSE		HSSE	
		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)	
		1,5xD		1,5xD		1,5xD		1,5xD		1,5xD		1,5xD		2,5xD	
		VAP		TiN		BRIGHT		TiN		BRIGHT		TiN		BRIGHT	
M	4H													A70 S	61
	6H/6HX	A29	55	A29	55	A29 376	58	A29 376	58	A29 L	59	A29 L	59	A70 S	60
	6G/6GX			A29	57									A70 S	62
	7G/7GX													A70 S	63
	6H +0,1													A701 S	64
MF	6H/6HX			A30	92									A71 S	95
	6G/6GX													A71 S	97
UNC	2B/2BX			A33	108									A60 S	109
	3B														
UNF	2B/2BX			A34	116									A61 S	117
	3B														
8-UN	2B													A160	120
G	ISO 5969/X			A32	125									A59 S	126
Rp (BSPP)	--													A159 S	129
Rc (BSPT)	--														
BSW	mc			A31	133										
NPT	--														
NPTF	--														

ISO 513	Group														
P	P.1	●	18-20	●	30-35	●	18-20	●	30-35	●	18-20	●	30-35		
	P.2	●	15-18	●	25-30	●	15-18	●	25-30	●	15-18	●	25-30	●	15-20
	P.3	●	12-15	●	20-25	●	12-15	●	20-25	●	12-15	●	20-25	●	12-15
	P.4	●	10-12	●	15-20	●	10-12	●	15-20	●	10-12	●	15-20	●	10-12
	P.5			●	5-10			●	5-10			●	5-10	❍	6-8
	P.6														
	P.7													❍	6-8
M	M.1													❍	6-8
	M.2														
K	K.1														
	K.2	●	12-15	●	20-25	●	12-15	●	20-25	●	12-15	●	20-25	●	12-15
	K.3														
N	N.1	●	18-20	❍	30-35	●	18-20	❍	30-35	●	18-20	❍	30-35		
	N.2	●	15-18	●	25-30	●	15-18	●	25-30	●	15-18	●	25-30	❍	18-20
	N.3	●	15-18	●	25-30	●	15-18	●	25-30	●	15-18	●	25-30	●	15-18
	N.4														
	N.5	●	15-18	❍	25-30	●	15-18	❍	25-30	●	15-18	❍	25-30		
	N.6	●	12-15	●	20-25	●	12-15	●	20-25	●	12-15	●	20-25	●	15-18
	N.7														
	N.8														
	N.9														
	N.10														
S	S.1	❍	6-8			❍	6-8			❍	6-8			❍	6-8
	S.2														
	S.3	❍	6-8	❍	8-10	❍	6-8	❍	8-10	❍	6-8	❍	8-10	❍	6-8
	S.4														
H	H.1														
	H.2														

TAP APPLICATION TABLE

A	A	A	A	A	A	A	A
HSSE C (2-3) 2,5xD VAP	HSSE C (2-3) 2,5xD TiN	HSSE C (2-3) 2,5xD TiCN	HSSE C (2-3) 2,5xD TiX2	HSSE E (1,5-2) 2,5xD BRIGHT	HSSE E (1,5-2) 2,5xD TiN	HSSE C (2-3) 2,5xD BRIGHT	HSSE C (2-3) 2,5xD TiN
							
	A70 S 61						
A70 S 60	A70 S 60	A70 S 60		A70 SE 65	A70 SE 65	A70 S LH 66	A70 S LH 66
	A70 S 62						
	A70 S 63						
	A701 S 64						
A71 S 95	A71 S 95	A71 S 95	A71 S 96				
	A71 S 97						
	A60 S 109	A60 S 109	A60 S 109				
	A61 S 117	A61 S 117	A61 S 117				
	A160 120						
A59 S 126	A59 S 126	A59 S 126	A59 S 127				
	A159 S 129						
● 15-20	● 25-30	● 25-30		● 15-20	● 25-30	● 15-20	● 25-30
● 12-15	● 20-25	● 20-25		● 12-15	● 20-25	● 12-15	● 20-25
● 10-12	● 15-20	● 15-20		● 10-12	● 15-20	● 10-12	● 15-20
❍ 6-8	● 5-10	● 5-10		❍ 6-8	● 5-10	❍ 6-8	● 5-10
❍ 6-8	● 8-10	● 8-10	● 8-10	❍ 6-8	● 8-10	❍ 6-8	● 8-10
❍ 6-8	● 8-10	● 8-10	● 8-10	❍ 6-8	● 8-10	❍ 6-8	● 8-10
	❍ 3-5	❍ 3-5	● 5-7		❍ 3-5		❍ 3-5
● 12-15	● 20-25	● 20-25		● 12-15	● 20-25	● 12-15	● 20-25
❍ 18-20	❍ 30-35	❍ 30-35		❍ 18-20	❍ 30-35	❍ 18-20	❍ 30-35
● 15-18	● 25-30	● 25-30		● 15-18	● 25-30	● 15-18	● 25-30
● 15-18	● 25-30	● 25-30		● 15-18	● 25-30	● 15-18	● 25-30
❍ 6-8				❍ 6-8		❍ 6-8	
❍ 6-8	❍ 8-10	❍ 8-10		❍ 6-8	❍ 8-10	❍ 6-8	❍ 8-10

TAP APPLICATION TABLE

		A76 S	67	A76 S	67	A70 L	68	A70 L	68	A120	69	A120	69	A120	69
M	4H														
	6H/6HX														
	6G/6GX														
	7G/7GX														
	6H +0,1														
MF	6H/6HX														
	6G/6GX														
UNC	2B/2BX														
	3B														
UNF	2B/2BX														
	3B														
8-UN	2B														
G	ISO 5969/X														
Rp (BSPP)	--														
Rc (BSPT)	--														
BSW	mc														
NPT	--														
NPTF	--														
ISO 513	Group														
P	**P.1**					●	**12-15**	●	**25-30**	●	**12-15**	●	**12-15**	●	**25-30**
	P.2	●	**15-20**	●	**25-30**	●	**10-15**	●	**20-25**	●	**10-15**	●	**10-15**	●	**20-25**
	P.3	●	**12-15**	●	**20-25**	❍	8-10	❍	15-20	❍	8-10	❍	8-10	❍	15-20
	P.4	●	**10-12**	●	**15-20**										
	P.5	❍	6-8	●	**5-10**										
	P.6														
	P.7	❍	6-8	●	**8-10**										
M	**M.1**	❍	6-8	●	**8-10**										
	M.2			❍	3-5										
K	**K.1**														
	K.2	●	**12-15**	●	**20-25**	❍	8-10	❍	15-20	❍	8-10	❍	8-10	❍	15-20
	K.3														
N	**N.1**					●	**12-15**	❍	25-30	●	**12-15**	●	**12-15**	❍	25-30
	N.2	❍	18-20	❍	30-35	●	**12-15**	●	**25-30**	●	**12-15**	●	**12-15**	●	**25-30**
	N.3	●	**15-18**	●	**25-30**	❍	10-12	❍	20-25	❍	10-12	❍	10-12	❍	20-25
	N.4														
	N.5					●	**10-12**	❍	20-25	●	**10-12**	●	**10-12**	❍	20-25
	N.6	●	**15-18**	●	**25-30**	●	**10-12**	●	**20-25**	●	**10-12**	●	**10-12**	●	**20-25**
	N.7														
	N.8														
	N.9														
	N.10														
S	**S.1**	❍	6-8												
	S.2														
	S.3	❍	6-8	❍	8-10										
	S.4														
H	**H.1**														
	H.2														

TAP APPLICATION TABLE

A	A	A	A	A	A	P	P
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSP	HSSP
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2xD	2xD
VAP	TiX2	BRIGHT	TiH1	BRIGHT	TiH1	BRIGHT	TiN
							
A170 70	A170 70	A62 71	A62 71	A72 72	A72 72	P29 144	P29 144
						P30 159	P30 159
		A65 110					
		A66 118					
				● 12-15	● 25-30		
						● 15-18	● 25-30
						● 12-15	● 20-25
						● 8-10	● 10-15
						● 3-5	● 5-10
● 6-8	● 8-10					● 8-10	● 10-15
● 6-8	● 8-10						
❍ 3-5	● 5-7						
						● 15-18	● 25-30
		● 12-15	● 25-30	● 12-15	● 25-30		
		● 12-15	● 25-30	● 12-15	● 25-30		
		❍ 10-12	❍ 20-25	● 10-12	● 20-25	● 15-18	● 25-30
		● 10-12	● 20-25	● 10-12	● 20-25		
		● 10-12	● 20-25	● 10-12	● 20-25	● 15-18	● 25-30
						● 12-15	● 20-25
		● 6-8	● 10-12				
						● 2-3	
		● 6-8	● 10-12				
						● 2-3	● 2-3

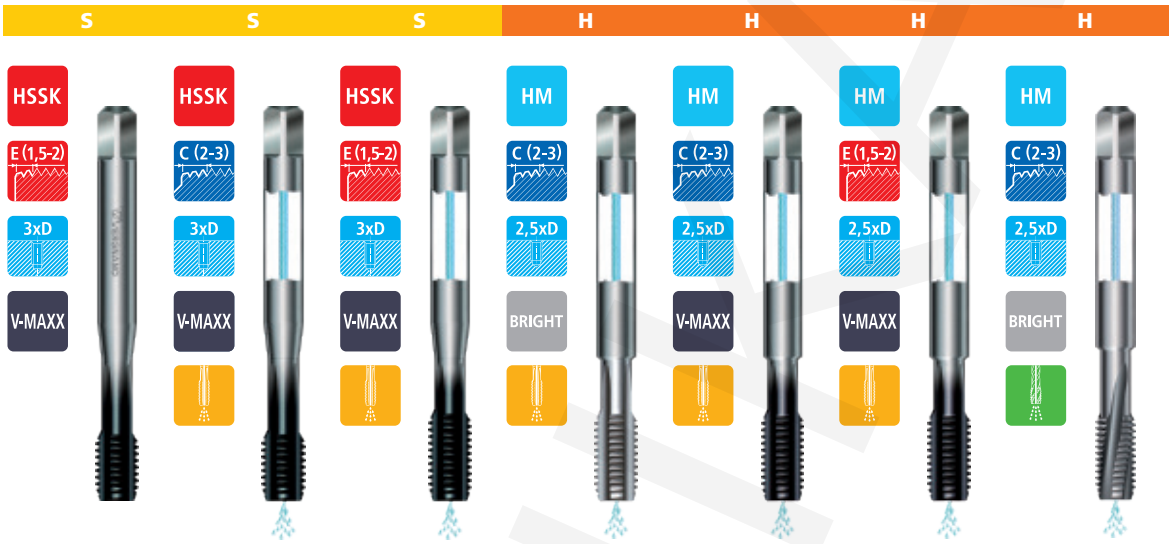
TAP APPLICATION TABLE

M	4H																		
	6H/6HX	**P29**	144	**BP29**	144	**P29 E**	145	**P70**	146	**P70**	146	**BP70**	147	**P70 E**	148				
	6G/6GX									**P70**	146								
	7G/7GX									**P70**	146								
	6H +0,1																		
MF	6H/6HX	**P30**	159	**BP30**	159			**P71**	160	**P71**	160	**BP71**	160						
	6G/6GX									**P71**	160								
UNC	2B/2BX																		
	3B																		
UNF	2B/2BX																		
	3B																		
8-UN	2B																		
G	ISO 5969/X							**P59**	165	**P59**	165								
Rp (BSPP)	--																		
Rc (BSPT)	--																		
BSW	mc																		
NPT	--																		
NPTF	--																		
ISO 513	Group																		
P	**P.1**																		
	P.2							❍	25-35	❍	25-35	❍	25-35	❍	25-35				
	P.3	●	**25-30**	●	**25-30**	●	**25-30**	●	**20-30**	●	**20-30**	●	**20-30**	●	**20-30**				
	P.4	●	**20-25**	●	**20-25**	●	**20-25**	●	**15-25**	●	**15-25**	●	**15-25**	●	**15-25**				
	P.5	●	**10-15**	●	**10-15**	●	**10-15**	●	**5-15**	●	**5-15**	●	**5-15**	●	**5-15**				
	P.6	●	**5-10**	●	**5-10**	●	**5-10**	❍	5-8	❍	5-8	❍	5-8	❍	5-8				
	P.7	●	**10-15**	●	**10-15**	●	**10-15**	●	**10-15**	●	**10-15**	●	**10-15**	●	**10-15**				
M	**M.1**							●	**10-15**	●	**10-15**	●	**10-15**	●	**10-15**				
	M.2							●	**5-7**	●	**5-7**	●	**5-7**	●	**5-7**				
K	**K.1**																		
	K.2	●	**25-30**	●	**25-30**	●	**25-30**	●	**20-30**	●	**20-30**	●	**20-30**	●	**20-30**				
	K.3																		
N	**N.1**																		
	N.2							❍	30-40	❍	30-40	❍	30-40	❍	30-40				
	N.3	●	**25-30**	●	**25-30**	●	**25-30**	●	**25-35**	●	**25-35**	●	**25-35**	●	**25-35**				
	N.4																		
	N.5																		
	N.6	●	**25-30**	●	**25-30**	●	**25-30**	●	**25-35**	●	**25-35**	●	**25-35**	●	**25-35**				
	N.7	●	**20-25**	●	**20-25**	●	**20-25**												
	N.8																		
	N.9																		
	N.10																		
S	**S.1**									●	**10-15**	●	**10-15**						
	S.2	●	**2-3**	●	**2-3**	●	**2-3**												
	S.3							●	**10-15**	●	**10-15**	●	**10-15**	●	**10-15**				
	S.4	●	**2-3**	●	**2-3**	●	**2-3**												
H	**H.1**																		
	H.2																		

TAP APPLICATION TABLE

P	P	S	S	S	P	P	P
HSSZ E (1,5-2) 3xD TiH1	HSSK C (2-3) 3xD TiH1	HSSK C (2-3) 3xD TiN	HSSK C (2-3) 3xD TiH1	HSSK C (2-3) 3xD TiH1	HSSP C (2-3) 3xD V-MAXX	HSSP E (1,5-2) 3xD V-MAXX	HSSP E (1,5-2) 3xD V-MAXX
							
P70 E 148	**P76 L** 149	**S70** 170	**S70** 170	**BS70** 170	**BP43** 140	**P43 E** 141	**BP43 E** 141
P70 E 148							
P71 E 161		**S71** 174			**BP45** 157	**P45 E** 157	**BP45 E** 157
P59 E 165							
		● **45-55**	● **45-55**	● **45-55**			
❍ 25-35	❍ 25-35	● **45-55**	● **45-55**	● **45-55**			
● **20-30**	● **20-30**	● **40-50**	● **40-50**	● **40-50**			
● **15-25**	● **15-25**	● **35-45**	● **35-45**	● **35-45**			
● **5-15**	● **5-15**	● **15-20**	● **15-20**	● **15-20**			
❍ 5-8	❍ 5-8						
● **10-15**	● **10-15**	● **15-20**	● **15-20**	● **15-20**			
● **10-15**	● **10-15**	● **15-20**	● **15-20**	● **15-20**			
● **5-7**	● **5-7**						
					● **40-50**	● **40-50**	● **40-50**
● **20-30**	● **20-30**	● **40-50**	● **40-50**	● **40-50**			
					❍ 10-20	❍ 10-20	❍ 10-20
		● **45-55**	● **45-55**	● **45-55**			
❍ 30-40	❍ 30-40	● **40-50**	● **40-50**	● **40-50**			
● **25-35**	● **25-35**	● **40-50**	● **40-50**	● **40-50**			
					● **40-50**	● **40-50**	● **40-50**
		● **35-45**	● **35-45**	● **35-45**			
● **25-35**	● **25-35**	● **30-40**	● **30-40**	● **30-40**			
					● **40-50**	● **40-50**	● **40-50**
					● **45-55**	● **45-55**	● **45-55**
					● **45-55**	● **45-55**	● **45-55**
● **10-15**	● **10-15**		● **15-20**	● **15-20**			
			❍ 5-15	❍ 5-15			
● **10-15**	● **10-15**	● **15-20**	● **15-20**	● **15-20**			
		❍ 5-15	❍ 5-15	❍ 5-15			

TAP APPLICATION TABLE

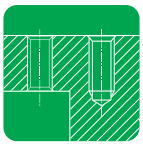


M	4H																	
	6H/6HX	**S43 E**	168	**BS43**	168	**BS43 E**	168	**HB43**	176	**HB43**	176	**HB43 E**	176	**HB29**	177			
	6G/6GX																	
	7G/7GX																	
	6H +0,1																	
MF	6H/6HX			**BS45**	172			**HB45**	180	**HB45**	180	**HB45 E**	180					
	6G/6GX																	
UNC	2B/2BX																	
	3B																	
UNF	2B/2BX																	
	3B																	
8-UN	2B																	
G	ISO 5969/X																	
Rp (BSPP)	--																	
Rc (BSPT)	--																	
BSW	mc																	
NPT	--																	
NPTF	--																	
ISO 513	Group																	
P	**P.1**																	
	P.2																	
	P.3																	
	P.4																	
	P.5																	
	P.6																	
	P.7																	
M	**M.1**																	
	M.2																	
K	**K.1**	●	**55-65**	●	**55-65**	●	**55-65**	●	**40-50**	●	**55-65**	●	**55-65**	❍	15-40			
	K.2													❍	10-20			
	K.3	❍	20-30	❍	20-30	❍	20-30	❍	10-20	❍	20-30	❍	20-30					
N	**N.1**													●	**15-30**			
	N.2													●	**15-30**			
	N.3													●	**20-30**			
	N.4	●	**55-65**	●	**55-65**	●	**55-65**	●	**40-50**	●	**55-65**	●	**55-65**	●	**15-20**			
	N.5																	
	N.6																	
	N.7	●	**55-65**	●	**55-65**	●	**55-65**	●	**40-50**	●	**55-65**	●	**55-65**	●	**20-25**			
	N.8																	
	N.9	●	**55-65**	●	**55-65**	●	**55-65**	●	**45-55**	●	**55-65**	●	**55-65**					
	N.10	●	**55-65**	●	**55-65**	●	**55-65**	●	**45-55**	●	**55-65**	●	**55-65**					
S	**S.1**																	
	S.2																	
	S.3																	
	S.4																	
H	**H.1**																	
	H.2																	

TAP APPLICATION TABLE

H		A	A	A	A	A	A
HM C (2-3) 2,5xD V-MAXX		HSSE C (2-3) 2,5xD NITR	HSSE C (2-3) 2,5xD TiCN	HSSE C (2-3) 2,5xD NITR	HSSE C (2-3) 2,5xD TiCN	HSSE C (2-3) 2,5xD BRIGHT	HSSE C (2-3) 2,5xD TiH1
HB29 177		A43 41	A43 41	A44 42	A44 42	A67 43	A67 43
		A45 86	A45 86				
		A49 105	A49 105				
		A50 113	A50 113				
		A48 123	A48 123				
						● 12-15	● 20-25
❍ 40-80		● 15-20	● 40-45	● 15-20	● 40-45		
❍ 15-40							
● 25-50						● 12-15	● 20-25
● 25-50						● 10-12	● 15-20
● 30-50							
● 25-40		● 15-20	● 40-45	● 15-20	● 40-45		
						● 10-12	● 15-20
						● 8-10	● 12-15
● 30-40		● 15-20	● 40-45	● 15-20	● 40-45		
		● 20-25	● 45-50	● 20-25	● 45-50		
		● 20-25	● 45-50	● 20-25	● 45-50		

TAP APPLICATION TABLE



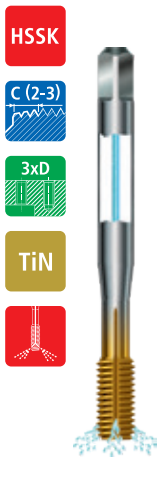
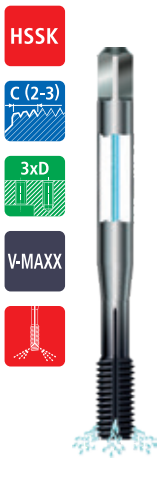
M	4H																		
	6H/6HX	**A110**	44	**A110**	44	**A190-EG**	78	**P43**	140	**P130**	142	**P130**	142	**S43**	168
	6G/6GX														
	7G/7GX														
	6H +0,1														
MF	6H/6HX							**P45**	157					**S45**	172
	6G/6GX														
UNC	2B/2BX														
	3B														
UNF	2B/2BX														
	3B														
8-UN	2B														
G	ISO 5969/X														
Rp (BSPP)	--														
Rc (BSPT)	--														
BSW	mc														
NPT	--														
NPTF	--														
ISO 513	Group														
P	**P.1**					❍	12-15								
	P.2					●	**10-12**								
	P.3					●	**8-10**								
	P.4														
	P.5														
	P.6									●	**2-3**	●	**5-8**		
	P.7														
M	**M.1**														
	M.2														
K	**K.1**							●	**40-50**					●	**55-65**
	K.2					●	**8-10**								
	K.3							❍	10-20					❍	20-30
N	**N.1**					❍	12-15								
	N.2					❍	10-12								
	N.3					❍	10-12								
	N.4							●	**40-50**					●	**55-65**
	N.5					❍	10-12								
	N.6					❍	8-10								
	N.7							●	**40-50**					●	**55-65**
	N.8									●	**3-5**	●	**8-10**		
	N.9							●	**45-55**					●	**55-65**
	N.10							●	**45-55**					●	**55-65**
S	**S.1**	●	**6-8**	●	**10-12**										
	S.2	●	**3-5**	●	**6-8**										
	S.3														
	S.4														
H	**H.1**														
	H.2														

TAP APPLICATION TABLE

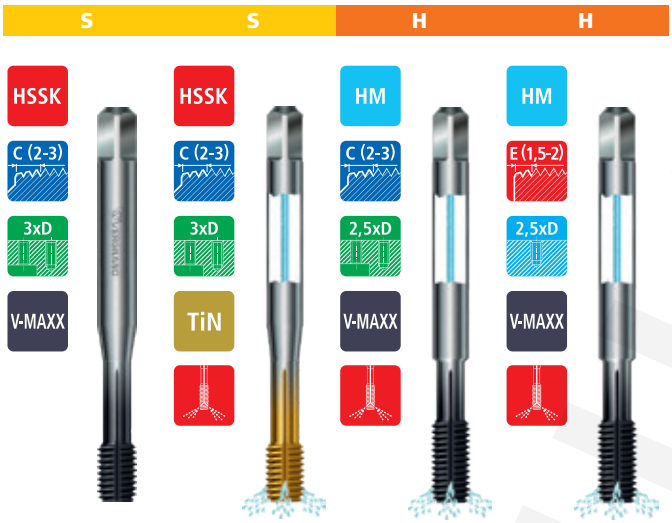
H	H		A	A	A	A	P
HM	HM		HSSE	HSSE	HSSE	HSSE	HSSK
D (4-5)	D (4-5)		C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
1,5xD	1,5xD		1,5xD	1,5xD	2,5xD	2,5xD	1,5xD
BRIGHT	V-MAXX		TiN	TiCN	TiN	TiCN	TiN
							
H130 178	H130 178		A80 74	A80 74	A80N 76	A80N 76	P80 150
			A80 75	A80 75	A80N 77	A80N 77	P80 150
							P80 150
			A81 99	A81 99	A81N 101	A81N 101	P81 162
			A81 100	A81 100	A81N 102	A81N 102	P81 162
					A82N 128	A82N 128	
			● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
			● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
			● 35-40	● 35-40	● 35-40	● 35-40	● 35-40
							● 30-35
							● 15-20
❍ 2-5	❍ 5-10		❍ 15-20	❍ 15-20	❍ 15-20	❍ 15-20	● 15-20
			❍ 15-20	❍ 15-20	❍ 15-20	❍ 15-20	● 15-20
			● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
			● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
			● 35-40	● 35-40	● 35-40	● 35-40	● 35-40
			● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
			● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
							● 10-15
							❍ 5-10
● 2-3	● 3-6						
● 1-2	● 2-4						

		P	P	P	P	P	P	P
M	4H							
	6H/6HX	P80 150	P80 N 151	P80 N 151	P80 E 152	P80 N E 152	P80 N E 152	BP80 N 153
	6G/6GX		P80 N 151			P80 N E 152		
	7G/7GX		P80 N 151					
	6H +0,1							
MF	6H/6HX	P81 162	P81 N 163	P81 N 163				
	6G/6GX		P81 N 163					
UNC	2B/2BX							
	3B							
UNF	2B/2BX							
	3B							
8-UN	2B							
G	ISO 5969/X		P82 N 166	P82 N 166				
Rp (BSPP)	--							
Rc (BSPT)	--							
BSW	mc							
NPT	--							
NPTF	--							
ISO 513	Group							
P	**P.1**	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
	P.2	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
	P.3	● 35-40	● 35-40	● 35-40	● 35-40	● 35-40	● 35-40	● 35-40
	P.4	● 30-35	● 30-35	● 30-35	● 30-35	● 30-35	● 30-35	● 30-35
	P.5	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20
	P.6							
	P.7	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20
M	**M.1**	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20
	M.2							
K	**K.1**							
	K.2							
	K.3							
N	**N.1**	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
	N.2	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
	N.3	● 35-40	● 35-40	● 35-40	● 35-40	● 35-40	● 35-40	● 35-40
	N.4							
	N.5	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
	N.6	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
	N.7							
	N.8							
	N.9							
	N.10							
S	**S.1**							
	S.2							
	S.3	● 10-15	● 10-15	● 10-15	● 10-15	● 10-15	● 10-15	● 10-15
	S.4	❍ 5-10	❍ 5-10	❍ 5-10	❍ 5-10	❍ 5-10	❍ 5-10	❍ 5-10
H	**H.1**							
	H.2							

TAP APPLICATION TABLE

P	P	P	P	P	P	P	S
							
BP80 N R 153	**BP80 N R** 153	**BP80 N E** 153	**P80 N LH** 154	**P80 N L** 155	**P180 N** 156	**P180 N** 156	**S80 N** 171 **S80 N** 171
● 40-45	● 40-45	● 40-45	● 40-45	● 40-45			● 50-60
● 40-45	● 40-45	● 40-45	● 40-45	● 40-45			● 50-60
● 35-40	● 35-40	● 35-40	● 35-40	● 35-40			● 45-55
● 30-35	● 30-35	● 30-35	● 30-35	● 30-35			● 40-50
● 15-20	● 15-20	● 15-20	● 15-20	● 15-20			● 20-30
● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 25-35
● 15-20	● 15-20	● 15-20	● 15-20	● 15-20	● 10-15	● 10-15	● 25-35
					● 8-10	● 8-10	● 15-25
● 40-45	● 40-45	● 40-45	● 40-45	● 40-45			● 50-60
● 40-45	● 40-45	● 40-45	● 40-45	● 40-45			● 50-60
● 35-40	● 35-40	● 35-40	● 35-40	● 35-40			● 45-55
● 40-45	● 40-45	● 40-45	● 40-45	● 40-45			● 50-60
● 40-45	● 40-45	● 40-45	● 40-45	● 40-45			● 50-60
● 10-15	● 10-15	● 10-15	● 10-15	● 10-15			● 10-20
❍ 5-10	❍ 5-10	❍ 5-10	❍ 5-10	❍ 5-10			❍ 5-15

TAP APPLICATION TABLE



TAPPING OIL

M	4H								
	6H/6HX	**S80 N**	171	**BS80 N R**	171	**HB80 N R**	179		
	6G/6GX								
	7G/7GX								
	6H +0,1								
MF	6H/6HX							**HB81 N R E**	181
	6G/6GX								
UNC	2B/2BX								
	3B								
UNF	2B/2BX								
	3B								
8-UN	2B								
G	ISO 5969/X								
Rp (BSPP)	--								
Rc (BSPT)	--								
BSW	mc								
NPT	--								
NPTF	--								
ISO 513	Group								
P	**P.1**	●	50-60	●	50-60	●	40-50	●	40-50
	P.2	●	50-60	●	50-60	●	40-50	●	40-50
	P.3	●	45-55	●	45-55	●	35-45	●	35-45
	P.4	●	40-50	●	40-50	●	30-40	●	30-40
	P.5	●	20-30	●	20-30	●	15-25	●	15-25
	P.6								
	P.7	●	25-35	●	25-35	●	15-25	●	15-25
M	**M.1**	●	25-35	●	25-35	●	15-25	●	15-25
	M.2	●	15-25	●	15-25				
K	**K.1**								
	K.2								
	K.3								
N	**N.1**	●	50-60	●	50-60	●	40-50	●	40-50
	N.2	●	50-60	●	50-60	●	40-50	●	40-50
	N.3	●	45-55	●	45-55	●	35-45	●	35-45
	N.4								
	N.5	●	50-60	●	50-60	●	40-50	●	40-50
	N.6	●	50-60	●	50-60	●	40-50	●	40-50
	N.7								
	N.8								
	N.9								
	N.10								
S	**S.1**								
	S.2								
	S.3	●	10-20	●	10-20	●	10-20	●	10-20
	S.4	❍	5-15	❍	5-15	❍	5-15	❍	5-15
H	**H.1**								
	H.2								

VTO-100

Suitable for tapping with cutting or forming taps on all materials. Available only in EU countries

€ P.69

A
SERIES

Taps for Generic Applications

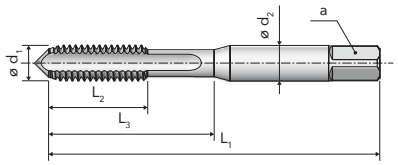
VERGNANO

HAND TAPS for blind and through holes
In sets of three pieces

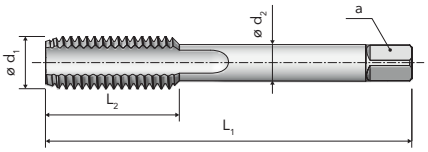
HSS

A1 ROUGHING	A1 SECOND	A1 FINISHING	A1 SET

DIN 352
≤ M6



DIN 352
≥ M7



APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A1** ROUGHING	**A1** SECOND	**A1** FINISHING	**A1** SET
P	P.1-4	●	●	●	●
	P.7	●	●	●	●
K	K.2	●	●	●	●
N	N.1-3	●	●	●	●
	N.5-7	●	●	●	●

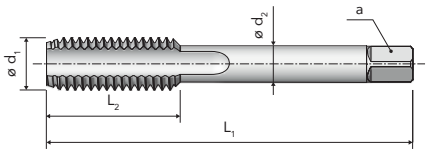
		ISO2 6H	ISO2 6H
A (5-6)	D (4-5)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD	2,5xD
RH	RH	RH	RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A1 ROUGHING	A1 SECOND	A1 FINISHING	A1 SET
M 2	0,4	36	7,5	12	2,8	2,1	3	1,6	●	●	●	●
2,2	0,45	36	8,5	13,5	2,8	2,1	3	1,75	●	●	●	●
2,3	0,4	36	8,5	13,5	2,8	2,1	3	1,9	●	●	●	●
2,5	0,45	40	8,5	14,5	2,8	2,1	3	2,05	●	●	●	●
2,6	0,45	40	8,5	14,5	2,8	2,1	3	2,1	●	●	●	●
3	0,5	40	10	18	3,5	2,7	3	2,5	●	●	●	●
3,5	0,6	45	11	20	4	3	3	2,9	●	●	●	●
4	0,7	45	12	21	4,5	3,4	3	3,3	●	●	●	●
4,5	0,75	50	13	23	6	4,9	3	3,7	●	●	●	●
5	0,8	50	14	24	6	4,9	3	4,2	●	●	●	●
6	1	56	16	28	6	4,9	3	5	●	●	●	●
7	1	56	19	-	6	4,9	3	6	●	●	●	●
8	1,25	63	22	-	6	4,9	3	6,8	●	●	●	●
9	1,25	63	22	-	7	5,5	3	7,8	●	●	●	●
10	1,5	70	24	-	7	5,5	3	8,5	●	●	●	●
11	1,5	70	24	-	8	6,2	3	9,5	●	●	●	●
12	1,75	75	28	-	9	7	4	10,2	●	●	●	●
14	2	80	30	-	11	9	4	12	●	●	●	●
16	2	80	32	-	12	9	4	14	●	●	●	●
18	2,5	95	34	-	14	11	4	15,5	●	●	●	●
20	2,5	95	34	-	16	12	4	17,5	●	●	●	●
22	2,5	100	34	-	18	14,5	4	19,5	●	●	●	●
24	3	110	38	-	18	14,5	4	21	●	●	●	●
27	3	110	38	-	20	16	4	24	●	●	●	●
30	3,5	125	45	-	22	18	4	26,5	●	●	●	●
33	3,5	125	50	-	25	20	4	29,5	●	●	●	●

HSS

A1 ROUGHING	A1 SECOND	A1 FINISHING	A1 SET

DIN 352



APPLICATION RANGE - CUTTING SPEED m/min					
ISO	MG	A1 ROUGHING	A1 SECOND	A1 FINISHING	A1 SET
P	P.1-4	•	•	•	•
	P.7	•	•	•	•
K	K.2	•	•	•	•
N	N.1-3	•	•	•	•
	N.5-7	•	•	•	•

		ISO2 6H	ISO2 6H
A (5-6)	D (4-5)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD	2,5xD
RH	RH	RH	RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A1 ROUGHING	A1 SECOND	A1 FINISHING	A1 SET
M 36	4	150	56	-	28	22	4	32	•	•	•	•
39	4	150	60	-	32	24	4	35	•	•	•	•
42	4,5	150	60	-	32	24	4	37,5	•	•	•	•
45	4,5	160	65	-	36	29	4	40,5	•	•	•	•
48	5	180	70	-	36	29	4	43	•	•	•	•
52	5	180	70	-	40	32	5	47	•	•	•	•
56	5,5	180	70	-	40	32	5	50,5	•	•	•	•

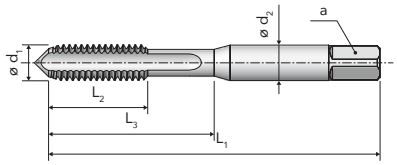
VERGNANO

HAND TAPS for blind and through holes
In sets of three pieces

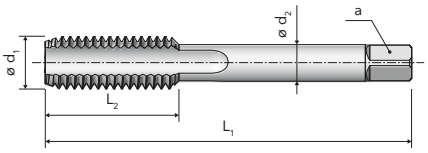
HSS

A1 LH ROUGHING	A1 LH SECOND	A1 LH FINISHING	A1 LH SET

DIN 352
≤ M6



DIN 352
≥ M8



—	—	ISO2 6H	ISO2 6H		
A (5-6)	D (4-5)	C (2-3)	C (2-3)		
2,5xD	2,5xD	2,5xD	2,5xD		
LH	LH	LH	LH		

APPLICATION RANGE - CUTTING SPEED m/min

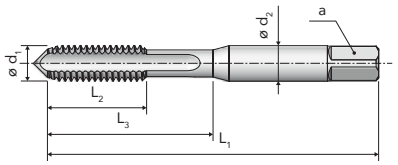
ISO	MG	A1 LH ROUGHING	A1 LH SECOND	A1 LH FINISHING	A1 LH SET
P	P.1-4	•	•	•	•
	P.7	•	•	•	•
K	K.2	•	•	•	•
N	N.1-3	•	•	•	•
	N.5-7	•	•	•	•

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A1 LH ROUGHING	A1 LH SECOND	A1 LH FINISHING	A1 LH SET
M 2,6	0,45	40	8,5	14,5	2,8	2,1	3	2,1	•	•	•	•
3	0,5	40	10	18	3,5	2,7	3	2,5	•	•	•	•
3,5	0,6	45	11	20	4	3	3	2,9	•	•	•	•
4	0,7	45	12	21	4,5	3,4	3	3,3	•	•	•	•
5	0,8	50	14	24	6	4,9	3	4,2	•	•	•	•
6	1	56	16	28	6	4,9	3	5	•	•	•	•
8	1,25	63	22	-	6	4,9	3	6,8	•	•	•	•
10	1,5	70	24	-	7	5,5	3	8,5	•	•	•	•
12	1,75	75	28	-	9	7	4	10,2	•	•	•	•
14	2	80	30	-	11	9	4	12	•	•	•	•
16	2	80	32	-	12	9	4	14	•	•	•	•
18	2,5	95	34	-	14	11	4	15,5	•	•	•	•
20	2,5	95	34	-	16	12	4	17,5	•	•	•	•
22	2,5	100	34	-	18	14,5	4	19,5	•	•	•	•
24	3	110	38	-	18	14,5	4	21	•	•	•	•
27	3	110	38	-	20	16	4	24	•	•	•	•
30	3,5	125	45	-	22	18	4	26,5	•	•	•	•

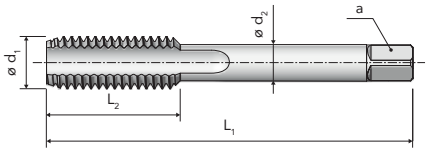
HSSE

A100 ROUGHING | A100 SECOND | A100 FINISHING | A100 SET

DIN 352
≤ M6



DIN 352
≥ M8



APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A100** ROUGHING	**A100** SECOND	**A100** FINISHING	**A100** SET
P	P.1-5	●	●	●	●
	P.7	●	●	●	●
M	M.1-2	●	●	●	●
K	K.1-3	●	●	●	●
N	N.1-10	●	●	●	●
S	S.1	●	●	●	●
	S.3	●	●	●	●

		ISO2 6H	ISO2 6H
C (2-3)	C (2-3)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD	2,5xD
RH	RH	RH	RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A100 ROUGHING	A100 SECOND	A100 FINISHING	A100 SET
M 2	0,4	36	7,5	13	2,8	2,1	3	1,6	●	●	●	●
2,5	0,45	40	9	15	2,8	2,1	3	2,05	●	●	●	●
3	0,5	40	10	18	3,5	2,7	3	2,5	●	●	●	●
3,5	0,6	45	11	18	4	3	3	2,9	●	●	●	●
4	0,7	45	12	21	4,5	3,4	3	3,3	●	●	●	●
5	0,8	50	14	24	6	4,9	3	4,2	●	●	●	●
6	1	56	16	28	6	4,9	3	5	●	●	●	●
8	1,25	63	22	-	6	4,9	4	6,8	●	●	●	●
10	1,5	70	24	-	7	5,5	4	8,5	●	●	●	●
12	1,75	75	28	-	9	7	4	10,2	●	●	●	●
14	2	80	30	-	11	9	4	12	●	●	●	●
16	2	80	32	-	12	9	4	14	●	●	●	●
18	2,5	95	34	-	14	11	4	15,5	●	●	●	●
20	2,5	95	34	-	16	12	4	17,5	●	●	●	●

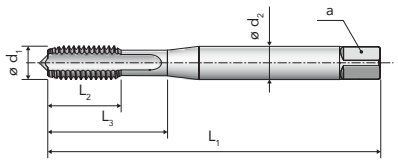
VERGNANO

MACHINE TAPS for blind holes
Straight flutes

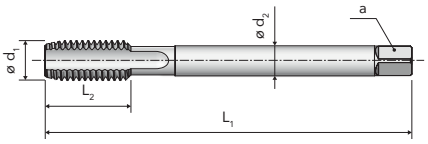
HSSE

A21 FC BRIGHT | **A21 FC** TiN

DIN 371
≤ M10

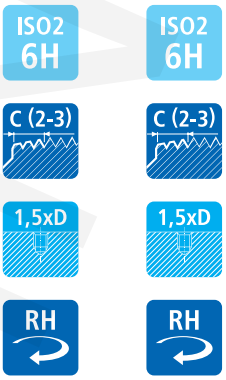


DIN 376
≥ M11



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A21 FC BRIGHT	A21 FC TiN
P	P.1		• 20-25
	P.2	• 10-12	• 15-20
	P.3	• 8-10	• 12-15
K	K.2	• 8-10	• 12-15
N	N.1		• 20-25
	N.5		• 15-20

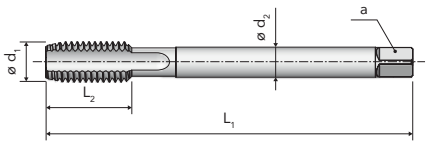


Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A21 FC BRIGHT	A21 FC TiN
M 2	0,4	45	7	11	2,8	2,1	3	1,6	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
3,5	0,6	56	11	20	4	3	3	2,9	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
7	1	80	16	29	7	5,5	3	6	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
9	1,25	90	18	33	9	7	3	7,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
11	1,5	100	22	-	8	6,2	3	9,5	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•
14	2	110	25	-	11	9	3	12	•	•
16	2	110	28	-	12	9	3	14	•	•
18	2,5	125	32	-	14	11	3	15,5	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•
22	2,5	140	32	-	18	14,5	4	19,5	•	•
24	3	160	36	-	18	14,5	4	21	•	•
27	3	160	36	-	20	16	4	24	•	•
30	3,5	180	40	-	22	18	4	26,5	•	•
33	3,5	180	40	-	25	20	4	29,5	•	•
36	4	200	55	-	28	22	4	32	•	•
39	4	200	60	-	32	24	4	35	•	
42	4,5	200	60	-	32	24	4	37,5	•	
45	4,5	220	65	-	36	29	4	40,5	•	

HSSE

A21 FC
BRIGHT

DIN 376



ISO2 6H

C (2-3)

1,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A21 FC** BRIGHT				
P	P.2	● 10-12				
	P.3	● 8-10				
K	K.2	● 8-10				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A21 FC BRIGHT
M 48	5	250	70	-	36	29	4	43	●
52	5	250	70	-	40	32	4	47	●

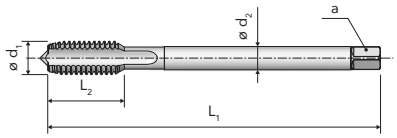
VERGNANO

MACHINE TAPS for blind holes
Straight flutes / through shank

HSSE

A22 FC BRIGHT | **A22 FC** TiN

DIN 376



ISO2 6H | C (2-3) | 1,5xD | RH

ISO2 6H | C (2-3) | 1,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

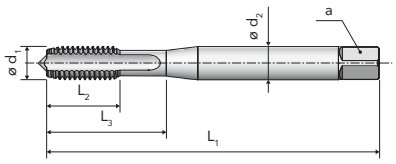
ISO	MG	A22 FC BRIGHT	A22 FC TiN
P	P.1		• 20-25
	P.2	• 10-12	• 15-20
	P.3	• 8-10	• 12-15
K	K.2	• 8-10	• 12-15
N	N.1		• 20-25
	N.5		• 15-20

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A22 FC BRIGHT	A22 FC TiN
M 4	0,7	63	12	-	2,8	2,1	3	3,3	•	•
5	0,8	70	14	-	3,5	2,7	3	4,2	•	•
6	1	80	16	-	4,5	3,4	3	5	•	•
7	1	80	16	-	5,5	4,3	3	6	•	•
8	1,25	90	18	-	6	4,9	3	6,8	•	•
9	1,25	90	18	-	7	5,5	3	7,8	•	•
10	1,5	100	20	-	7	5,5	3	8,5	•	•

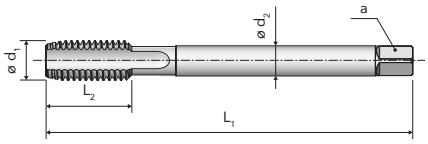
HSSE

A43 NITRIDED | **A43** TiCN

DIN 371
≤ M10



DIN 376
≥ M11



6HX | 6HX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A43 NITRIDED	A43 TiCN
K	K.1	• 15-20	• 40-45
N	N.4	• 15-20	• 40-45
	N.7	• 15-20	• 40-45
	N.9-10	• 20-25	• 45-50

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A43 NITRIDED	A43 TiCN
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
3,5	0,6	56	11	20	4	3	3	2,9	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	4	5	•	•
7	1	80	16	29	7	5,5	4	6	•	•
8	1,25	90	18	33	8	6,2	4	6,8	•	•
9	1,25	90	18	33	9	7	4	7,8	•	•
10	1,5	100	20	36	10	8	4	8,5	•	•
11	1,5	100	22	-	8	6,2	4	9,5	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•
22	2,5	140	32	-	18	14,5	4	19,5	•	•
24	3	160	36	-	18	14,5	5	21	•	•
27	3	160	36	-	20	16	5	24	•	•
30	3,5	180	40	-	22	18	5	26,5	•	•
33	3,5	180	40	-	25	20	5	29,5	•	•
36	4	200	55	-	28	22	5	32	•	•

VERGNANO

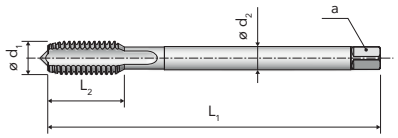
MACHINE TAPS for blind and through holes

Straight flutes / for cast iron / through shank

HSSE

A44 NITRIDED | **A44** TiCN

DIN 376



6HX | 6HX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

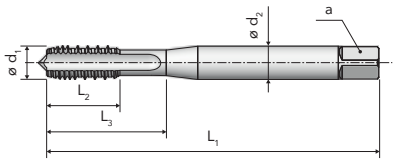
ISO	MG	A44 NITRIDED	A44 TiCN
K	K.1	• 15-20	• 40-45
N	N.4	• 15-20	• 40-45
	N.7	• 15-20	• 40-45
	N.9-10	• 20-25	• 45-50

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A44 NITRIDED	A44 TiCN
M 4	0,7	63	12	-	2,8	2,1	3	3,3	•	•
5	0,8	70	14	-	3,5	2,7	3	4,2	•	•
6	1	80	16	-	4,5	3,4	4	5	•	•
8	1,25	90	18	-	6	4,9	4	6,8	•	•
10	1,5	100	20	-	7	5,5	4	8,5	•	•

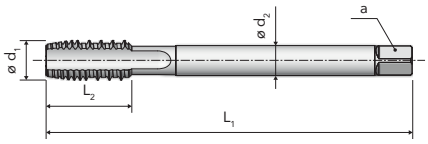
HSSE

A67 BRIGHT | **A67** TiH1

DIN 371
≤ M10



DIN 376
≥ M12



ISO2 6H | C (2-3) | 2,5xD | RH

ISO2 6H | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A67 BRIGHT	A67 TiH1
P	P.1	• 12-15	• 20-25
N	N.1	• 12-15	• 20-25
	N.2	• 10-12	• 15-20
	N.5	• 10-12	• 15-20
	N.6	• 8-10	• 12-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A67 BRIGHT	A67 TiH1
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•
14	2	110	25	-	11	9	3	12	•	•
16	2	110	28	-	12	9	3	14	•	•
18	2,5	125	32	-	14	11	3	15,5	•	•
20	2,5	140	32	-	16	12	3	17,5	•	•

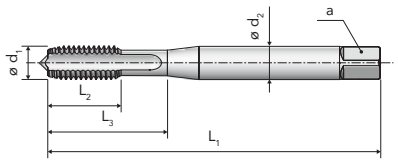
VERGNANO

MACHINE TAPS for blind and through holes
Straight flutes / for titanium and titanium alloys

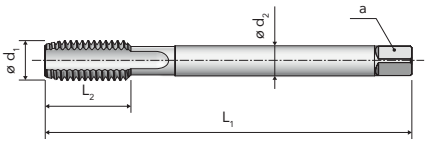
HSSK

A110 VAP | **A110** CrN

DIN 371
≤ M10



DIN 376
≥ M12



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A110 VAP	A110 CrN
S	S.1	• 6-8	• 10-12
	S.2	• 3-5	• 6-8

ISO2 6H | ISO2 6H

C (2-3) | C (2-3)

2,5xD | 2,5xD

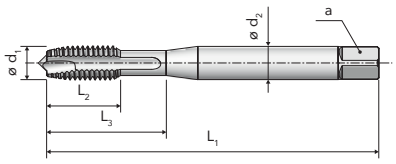
RH | RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A110 VAP	A110 CrN
M 2	0,4	45	7	11	2,8	2,1	3	1,6	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	4	5	•	•
8	1,25	90	18	33	8	6,2	4	6,8	•	•
10	1,5	100	20	36	10	8	4	8,5	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•

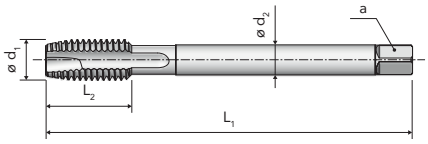
HSSE

A15 S BRIGHT | **A15 S** VAP | **A15 S** TiN | **A15 S** TiCN

DIN 371
≤ M10



DIN 376
≥ M11



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A15 S BRIGHT	A15 S VAP	A15 S TiN	A15 S TiCN
P	P.2	• 20-25	• 20-25	• 30-35	• 30-35
	P.3	• 15-20	• 15-20	• 25-30	• 25-30
	P.4	• 12-15	• 12-15	• 20-25	• 20-25
	P.5			• 10-15	• 10-15
	P.7			• 10-15	• 10-15
M	M.1			• 10-15	• 10-15
K	K.2	• 15-20	• 15-20	• 25-30	• 25-30
N	N.2-3	• 20-25	• 20-25	• 30-35	• 30-35
	N.6	• 15-18	• 15-18	• 25-30	• 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 S BRIGHT	A15 S VAP	A15 S TiN	A15 S TiCN
M 2	0,4	45	7	11	2,8	2,1	2	1,6	•	•	•	•
2,2	0,45	45	8	13	2,8	2,1	2	1,75	•	•	•	
2,3	0,4	45	8	13	2,8	2,1	2	1,9	•	•	•	
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•	•	•
2,6	0,45	50	9	15	2,8	2,1	3	2,1	•	•	•	
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•	•	•
3,5	0,6	56	11	20	4	3	3	2,9	•	•	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•	•	•
6	1	80	16	29	6	4,9	3	5	•	•	•	•
7	1	80	16	29	7	5,5	3	6	•	•	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•	•	•
9	1,25	90	18	33	9	7	3	7,8	•	•	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•	•	•
11	1,5	100	22	-	8	6,2	3	9,5	•	•	•	
12	1,75	110	24	-	9	7	4	10,2	•	•	•	•
14	2	110	25	-	11	9	4	12	•	•	•	•
16	2	110	28	-	12	9	4	14	•	•	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•	•	•
22	2,5	140	32	-	18	14,5	4	19,5	•	•	•	•
24	3	160	36	-	18	14,5	4	21	•	•	•	•
27	3	160	36	-	20	16	4	24	•	•	•	•
30	3,5	180	40	-	22	18	4	26,5	•	•	•	•
33	3,5	180	40	-	25	20	5	29,5	•		•	
36	4	200	55	-	28	22	5	32	•		•	

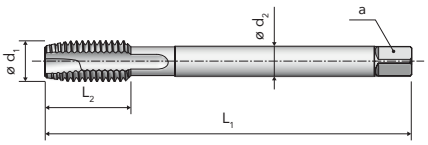
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

HSSE

A15 S
BRIGHT

DIN 376



APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A15 S** BRIGHT				
P	P.2	● 20-25				
	P.3	● 15-20				
	P.4	● 12-15				
K	K.2	● 15-20				
N	N.2-3	● 20-25				
	N.6	● 15-18				

ISO2 6H

B (4-5)

2,5xD

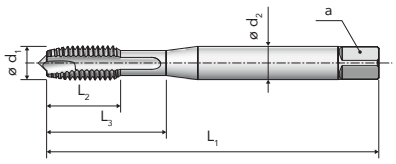
RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 S BRIGHT
M 39	4	200	60	-	32	24	5	35	●
42	4,5	200	60	-	32	24	5	37,5	●
45	4,5	220	65	-	36	29	5	40,5	●
48	5	250	70	-	36	29	5	43	●
52	5	250	70	-	40	32	5	47	●

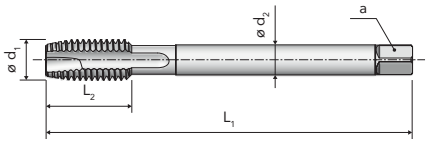
HSSE

A15 S 4H BRIGHT | **A15 S 4H** TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO1 4H | B (4-5) | 2,5xD | RH

ISO1 4H | B (4-5) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A15 S 4H BRIGHT	A15 S 4H TiN
P	P.2	• 20-25	• 30-35
	P.3	• 15-20	• 25-30
	P.4	• 12-15	• 20-25
	P.5		• 10-15
	P.7		• 10-15
M	M.1		• 10-15
K	K.2	• 15-20	• 25-30
N	N.2-3	• 20-25	• 30-35
	N.6	• 15-18	• 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 S 4H BRIGHT	A15 S 4H TiN
M 2	0,4	45	7	11	2,8	2,1	2	1,6	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•

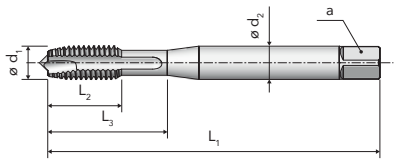
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

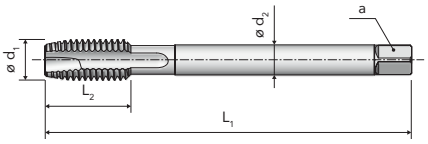
HSSE

A15 S 6G BRIGHT | **A15 S 6G** TiN

DIN 371
≤ M10



DIN 376
≥ M12



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A15 S 6G BRIGHT	A15 S 6G TiN
P	P.2	• 20-25	• 30-35
	P.3	• 15-20	• 25-30
	P.4	• 12-15	• 20-25
	P.5		• 10-15
	P.7		• 10-15
M	M.1		• 10-15
K	K.2	• 15-20	• 25-30
N	N.2-3	• 20-25	• 30-35
	N.6	• 15-18	• 25-30

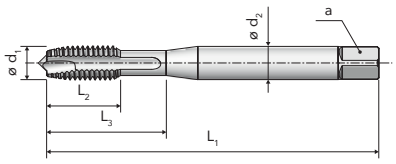
ISO3 6G | ISO3 6G
B (4-5) | B (4-5)
2,5xD | 2,5xD
RH | RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 S 6G BRIGHT	A15 S 6G TiN
M 2	0,4	45	7	11	2,8	2,1	2	1,6	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•

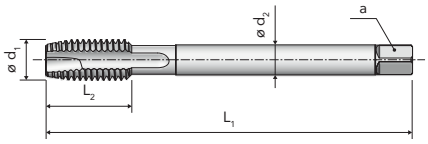
HSSE

A15 S 7G BRIGHT | **A15 S 7G** TiN

DIN 371
≤ M10



DIN 376
≥ M12



7G | 7G

B (4-5) | B (4-5)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A15 S 7G BRIGHT	A15 S 7G TiN
P	P.2	• 20-25	• 30-35
	P.3	• 15-20	• 25-30
	P.4	• 12-15	• 20-25
	P.5		• 10-15
	P.7		• 10-15
M	M.1		• 10-15
K	K.2	• 15-20	• 25-30
N	N.2-3	• 20-25	• 30-35
	N.6	• 15-18	• 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 S 7G BRIGHT	A15 S 7G TiN
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•

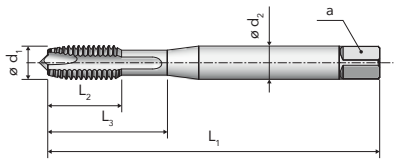
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

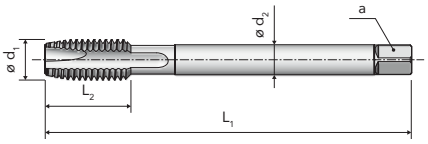
HSSE

A15 S LH BRIGHT | **A15 S LH** TiN

DIN 371
≤ M10

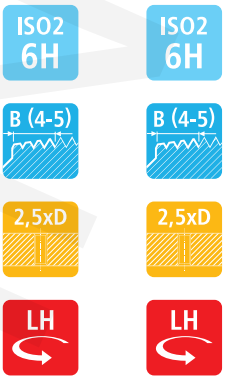


DIN 376
≥ M12



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A15 S LH BRIGHT	A15 S LH TiN
P	P.2	• 20-25	• 30-35
	P.3	• 15-20	• 25-30
	P.4	• 12-15	• 20-25
	P.5		• 10-15
	P.7		• 10-15
M	M.1		• 10-15
K	K.2	• 15-20	• 25-30
N	N.2-3	• 20-25	• 30-35
	N.6	• 15-18	• 25-30

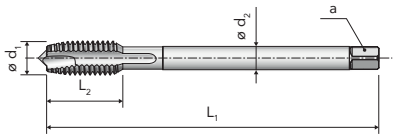


Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 S LH BRIGHT	A15 S LH TiN
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•

HSSE

A16 S BRIGHT | **A16 S** TiN

DIN 376



ISO2 6H | B (4-5) | 2,5xD | RH

ISO2 6H | B (4-5) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A16 S BRIGHT	A16 S TiN
P	P.2	● 20-25	● 30-35
	P.3	● 15-20	● 25-30
	P.4	● 12-15	● 20-25
	P.5		● 10-15
	P.7		● 10-15
M	M.1		● 10-15
K	K.2	● 15-20	● 25-30
N	N.2-3	● 20-25	● 30-35
	N.6	● 15-18	● 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A16 S BRIGHT	A16 S TiN
M 4	0,7	63	12	-	2,8	2,1	3	3,3	●	●
5	0,8	70	14	-	3,5	2,7	3	4,2	●	●
6	1	80	16	-	4,5	3,4	3	5	●	●
7	1	80	16	-	5,5	4,3	3	6	●	●
8	1,25	90	18	-	6	4,9	3	6,8	●	●
9	1,25	90	18	-	7	5,5	3	7,8	●	●
10	1,5	100	20	-	7	5,5	3	8,5	●	●

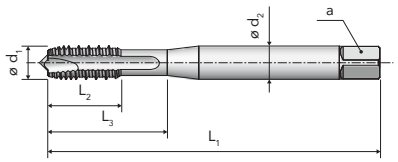
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point / interrupted thread

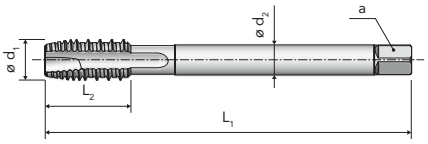
HSSE

A15 AZ BRIGHT | **A15 AZ** TiH1

DIN 371
≤ M10



DIN 376
≥ M12



ISO2 6H | B (4-5) | 2,5xD | RH

ISO2 6H | B (4-5) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

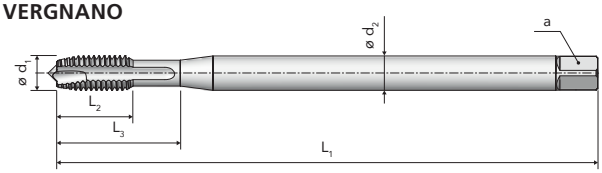
ISO	MG	A15 AZ BRIGHT	A15 AZ TiH1
P	P.1	• 18-20	• 30-35
N	N.1	• 18-20	• 30-40
	N.2	• 15-18	• 30-40
	N.5	• 15-18	• 30-35
	N.6	• 12-15	• 30-35

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 AZ BRIGHT	A15 AZ TiH1		
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	•		
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•		
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•		
6	1	80	16	29	6	4,9	3	5	•	•		
8	1,25	90	18	33	8	6,2	3	6,8	•	•		
10	1,5	100	20	36	10	8	3	8,5	•	•		
12	1,75	110	24	-	9	7	3	10,2	•	•		
14	2	110	25	-	11	9	3	12	•	•		
16	2	110	28	-	12	9	3	14	•	•		

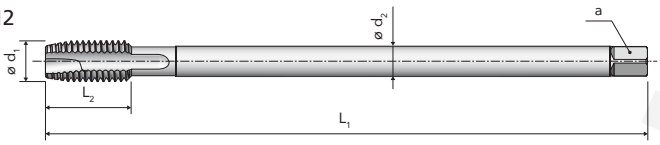
€ P.08

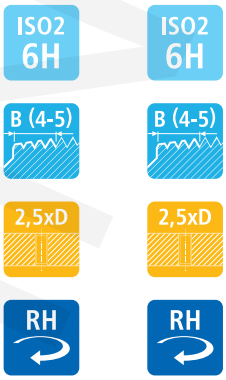
A15 L BRIGHT | **A15 L** TiN

NORM VERGNANO
≤ M10



NORM VERGNANO
≥ M12





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A15 L BRIGHT	A15 L TiN
P	P.1	● 18-20	● 30-35
	P.2	● 15-18	● 25-30
	P.3	● 12-15	● 20-25
N	N.1	● 18-20	
	N.2	● 15-18	● 25-30
	N.5	● 15-18	
	N.6	● 12-15	● 20-25

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 L BRIGHT	A15 L TiN
M 3	0,5	112	10	18	3,5	2,7	3	2,5	●	●
4	0,7	112	12	21	4,5	3,4	3	3,3	●	●
5	0,8	125	14	24,5	6	4,9	3	4,2	●	●
6	1	125	16	29	6	4,9	3	5	●	●
8	1,25	140	18	33	8	6,2	3	6,8	●	●
10	1,5	160	20	36	10	8	3	8,5	●	●
12	1,75	180	24	-	9	7	3	10,2	●	●
16	2	200	28	-	12	9	3	14	●	●
20	2,5	225	32	-	16	12	4	17,5	●	●

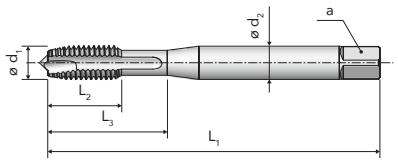
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point / for stainless steel

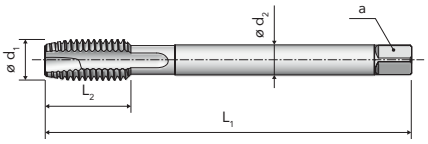
HSSE

A150 VAP | **A150** TiX2

DIN 371
≤ M10



DIN 376
≥ M12



6HX | B (4-5) | 2,5xD | RH

6HX | B (4-5) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

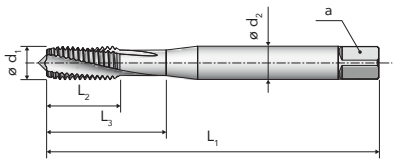
ISO	MG	A150 VAP	A150 TiX2
P	P.7	• 10-12	• 18-20
M	M.1	• 10-12	• 18-20
	M.2	• 8-10	• 10-20

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A150 VAP	A150 TiX2
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
3,5	0,6	56	11	16	4	3	3	2,9	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•
14	2	110	25	-	11	9	3	12	•	•
16	2	110	28	-	12	9	3	14	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•

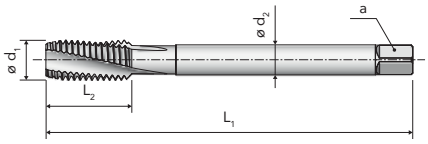
R15 | HSSE

A29 BRIGHT | **A29** VAP | **A29** TiN

DIN 371
≤ M10



DIN 376
≥ M11



ISO2 6H | C (2-3) | 1,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A29 BRIGHT	A29 VAP	A29 TiN
P	P.1	• 18-20	• 18-20	• 30-35
	P.2	• 15-18	• 15-18	• 25-30
	P.3	• 12-15	• 12-15	• 20-25
	P.4	• 10-12	• 10-12	• 15-20
	P.5			• 5-10
K	K.2	• 12-15	• 12-15	• 20-25
N	N.1	• 18-20	• 18-20	
	N.2-3	• 15-18	• 15-18	• 25-30
	N.5	• 15-18	• 15-18	
	N.6	• 12-15	• 12-15	• 20-25

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A29 BRIGHT	A29 VAP	A29 TiN
M 2	0,4	45	7	11	2,8	2,1	3	1,6	•	•	•
2,2	0,45	45	8	13	2,8	2,1	3	1,75	•		
2,3	0,4	45	8	13	2,8	2,1	3	1,9	•		
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•	•
2,6	0,45	50	9	15	2,8	2,1	3	2,1	•		
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•	•
3,5	0,6	56	11	20	4	3	3	2,9	•	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•	•
4,5	0,75	70	14	24,5	6	4,9	3	3,7	•		
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•	•
6	1	80	16	29	6	4,9	3	5	•	•	•
7	1	80	16	29	7	5,5	3	6	•	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•	•
9	1,25	90	18	33	9	7	3	7,8	•	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•	•
11	1,5	100	22	-	8	6,2	3	9,5	•		
12	1,75	110	24	-	9	7	3	10,2	•	•	•
14	2	110	25	-	11	9	3	12	•	•	•
16	2	110	28	-	12	9	3	14	•	•	•
18	2,5	125	32	-	14	11	3	15,5	•	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•	•
22	2,5	140	32	-	18	14,5	4	19,5	•	•	•
24	3	160	36	-	18	14,5	4	21	•	•	•
27	3	160	36	-	20	16	4	24	•	•	•
30	3,5	180	40	-	22	18	4	26,5	•	•	•
33	3,5	180	40	-	25	20	5	29,5	•	•	•

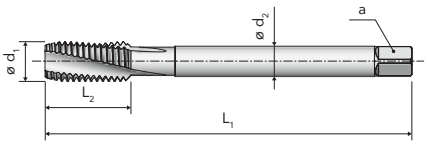
VERGNANO

MACHINE TAPS for blind holes
15° spiral flutes

R15 | HSSE

A29
BRIGHT

DIN 376



ISO2 6H

C (2-3)

1,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A29** BRIGHT				
P	P.1	• 18-20				
	P.2	• 15-18				
	P.3	• 12-15				
	P.4	• 10-12				
K	K.2	• 12-15				
N	N.1	• 18-20				
	N.2-3	• 15-18				
	N.5	• 15-18				
	N.6	• 12-15				

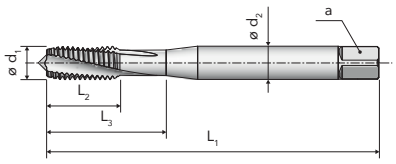
«

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A29** BRIGHT
M 36	4	200	56	-	28	22	5	32	•
39	4	200	60	-	32	24	5	35	•
42	4,5	200	60	-	32	24	5	37,5	•
45	4,5	220	65	-	36	29	5	40,5	•
48	5	250	70	-	36	29	5	43	•
52	5	250	70	-	40	32	5	47	•

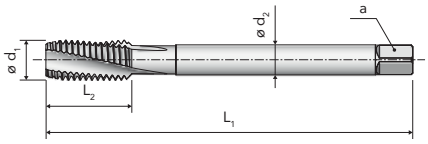
R15 | HSSE

A29 6G BRIGHT | **A29 6G** TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO3 6G | C (2-3) | 1,5xD | RH

ISO3 6G | C (2-3) | 1,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A29 6G BRIGHT	A29 6G TiN
P	P.1	• 18-20	• 30-35
	P.2	• 15-18	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
K	K.2	• 12-15	• 20-25
N	N.1	• 18-20	
	N.2-3	• 15-18	• 25-30
	N.5	• 15-18	
	N.6	• 12-15	• 20-25

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A29 6G BRIGHT	A29 6G TiN
M 2	0,4	45	7	11	2,8	2,1	3	1,6	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•
14	2	110	25	-	11	9	3	12	•	•

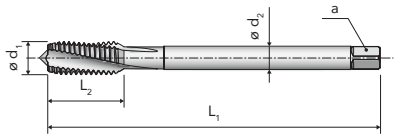
VERGNANO

MACHINE TAPS for blind holes
15° spiral flutes / through shank

R15 | HSSE

A29 DIN 376 BRIGHT | **A29 DIN 376** TiN

DIN 376



ISO2 6H | C (2-3) | 1,5xD | RH

ISO2 6H | C (2-3) | 1,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A29 DIN 376 BRIGHT	A29 DIN 376 TiN
P	P.1	• 18-20	• 30-35
	P.2	• 15-18	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
K	K.2	• 12-15	• 20-25
N	N.1	• 18-20	
	N.2-3	• 15-18	• 25-30
	N.5	• 15-18	
	N.6	• 12-15	• 20-25

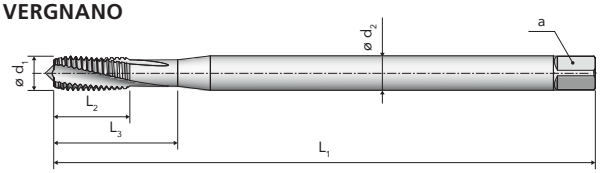
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A29 DIN 376 BRIGHT	A29 DIN 376 TiN
M 5	0,8	70	14	-	3,5	2,7	3	4,2	•	•
6	1	80	16	-	4,5	3,4	3	5	•	•
8	1,25	90	18	-	6	4,9	3	6,8	•	•
10	1,5	100	20	-	7	5,5	3	8,5	•	•

€ P.10

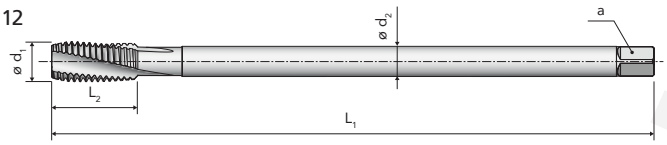
R15 | HSSE

A29 L BRIGHT | **A29 L** TiN

NORM VERGNANO
≤ M10



NORM VERGNANO
≥ M12



ISO2 6H | C (2-3) | 1,5xD | RH

ISO2 6H | C (2-3) | 1,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A29 L BRIGHT	A29 L TiN
P	P.1	• 18-20	• 30-35
	P.2	• 15-18	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
K	K.2	• 12-15	• 20-25
N	N.1	• 18-20	
	N.2-3	• 15-18	• 25-30
	N.5	• 15-18	
	N.6	• 12-15	• 20-25

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A29 L BRIGHT	A29 L TiN
M 4	0,7	112	12	21	4,5	3,4	3	3,3	•	•
5	0,8	125	14	24,5	6	4,9	3	4,2	•	•
6	1	125	16	29	6	4,9	3	5	•	•
8	1,25	140	18	33	8	6,2	3	6,8	•	•
10	1,5	160	20	36	10	8	3	8,5	•	•
12	1,75	180	24	-	9	7	3	10,2	•	•

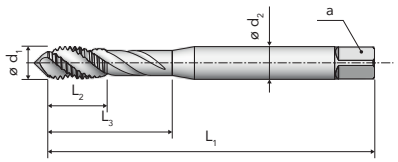
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

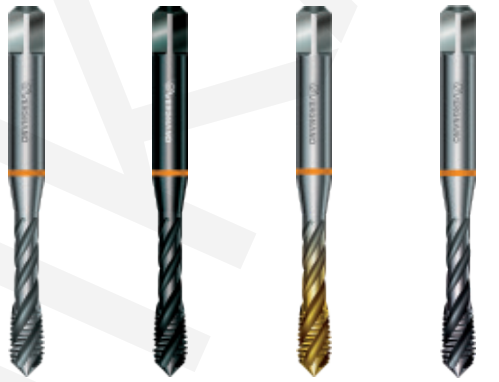
R40 | HSSE

A70 S BRIGHT	A70 S VAP	A70 S TiN	A70 S TiCN

DIN 371
≤ M10



DIN 376
≥ M11



ISO2 6H | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A70 S BRIGHT	A70 S VAP	A70 S TiN	A70 S TiCN
P	P.2	• 15-20	• 15-20	• 25-30	• 25-30
	P.3	• 12-15	• 12-15	• 20-25	• 20-25
	P.4	• 10-12	• 10-12	• 15-20	• 15-20
	P.5			• 5-10	• 5-10
	P.7			• 8-10	• 8-10
M	M.1			• 8-10	• 8-10
K	K2	• 12-15	• 12-15	• 20-25	• 20-25
N	N.3	• 15-18	• 15-18	• 25-30	• 25-30
	N.6	• 15-18	• 15-18	• 25-30	• 25-30

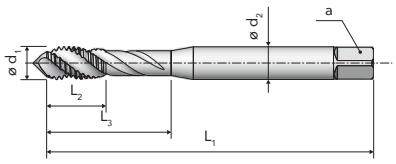
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 S BRIGHT	A70 S VAP	A70 S TiN	A70 S TiCN
M 2	0,4	45	6	12	2,8	2,1	3	1,6	•	•	•	•
2,5	0,45	50	6,5	15	2,8	2,1	3	2,05	•	•	•	•
3	0,5	56	7	15	3,5	2,7	3	2,5	•	•	•	•
3,5	0,6	56	8	18,5	4	3	3	2,9	•	•	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•	•	•
6	1	80	12	29	6	4,9	3	5	•	•	•	•
7	1	80	12	29	7	5,5	3	6	•	•	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•	•	•
9	1,25	90	15	33	9	7	3	7,8	•	•	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•	•	•
11	1,5	100	17,5	-	8	6,2	3	9,5	•	•	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•	•	•
14	2	110	20,5	-	11	9	4	12	•	•	•	•
16	2	110	20,5	-	12	9	4	14	•	•	•	•
18	2,5	125	25,5	-	14	11	4	15,5	•	•	•	•
20	2,5	140	29,5	-	16	12	4	17,5	•	•	•	•
22	2,5	140	29,5	-	18	14,5	4	19,5	•	•	•	•
24	3	160	35,5	-	18	14,5	4	21	•	•	•	•
27	3	160	37,5	-	20	16	5	24	•	•	•	•
30	3,5	180	42	-	22	18	5	26,5	•	•	•	•
33	3,5	180	43,5	-	25	20	5	29,5	•	•	•	
36	4	200	47	-	28	22	5	32	•	•	•	
42	4,5	200	55	-	32	24	6	37,5	•			
48	5	250	59,5	-	36	29	6	43	•			
52	5	250	59,5	-	40	32	6	47	•			

€ P.10

R40 | HSSE

A70 S 4H BRIGHT | **A70 S 4H** TiN

DIN 371
≤ M10



DIN 376
≥ M12

ISO1 4H | C (2-3) | 2,5xD | RH

ISO1 4H | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A70 S 4H BRIGHT	A70 S 4H TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 S 4H BRIGHT	A70 S 4H TiN
M 2	0,4	45	6	12	2,8	2,1	3	1,6	•	•
2,5	0,45	50	6,5	15	2,8	2,1	3	2,05	•	•
3	0,5	56	7	15	3,5	2,7	3	2,5	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•
6	1	80	12	29	6	4,9	3	5	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•

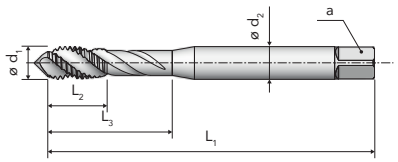
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

R40 | HSSE

A70 S 6G BRIGHT | **A70 S 6G** TiN

DIN 371
≤ M10



DIN 376
≥ M12

ISO3 6G | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A70 S 6G BRIGHT	A70 S 6G TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

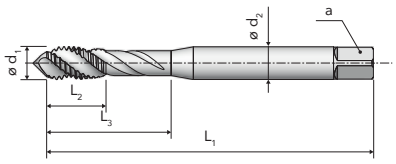
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 S 6G BRIGHT	A70 S 6G TiN
M 3	0,5	56	7	15	3,5	2,7	3	2,5	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•
6	1	80	12	29	6	4,9	3	5	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•
14	2	110	20,5	-	11	9	4	12	•	•
16	2	110	20,5	-	12	9	4	14	•	•

€ P.11

R40 | HSSE

A70 S 7G BRIGHT | **A70 S 7G** TiN

DIN 371
≤ M10



DIN 376
≥ M12

7G | 7G

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A70 S 7G BRIGHT	A70 S 7G TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

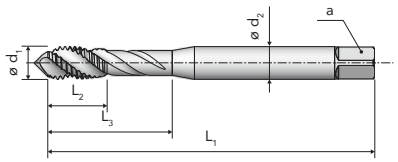
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 S 7G BRIGHT	A70 S 7G TiN
M 3	0,5	56	7	15	3,5	2,7	3	2,5	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•
6	1	80	12	29	6	4,9	3	5	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•
14	2	110	20,5	-	11	9	4	12	•	•
16	2	110	20,5	-	12	9	4	14	•	•

VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

R40 | HSSE

DIN 371
≤ M10



DIN 376
≥ M12

	A701 S BRIGHT	A701 S TiN
		
	6H +0,1mm	6H +0,1mm
	C (2-3)	C (2-3)
	2,5xD	2,5xD
	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A701 S BRIGHT	A701 S TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

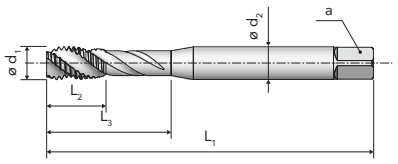
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A701 S BRIGHT	A701 S TiN
M 4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•
6	1	80	12	29	6	4,9	3	5	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•
14	2	110	20,5	-	11	9	4	12	•	•
16	2	110	20,5	-	12	9	4	14	•	•

€ P.11

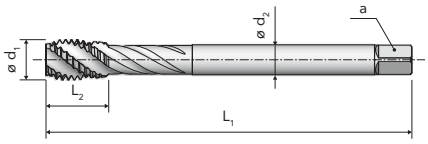
R40 | HSSE

A70 SE BRIGHT | **A70 SE** TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO2 6H | E (1,5-2) | 2,5xD | RH

ISO2 6H | E (1,5-2) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A70 SE BRIGHT	A70 SE TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 SE BRIGHT	A70 SE TiN
M 3	0,5	56	7	15	3,5	2,7	3	2,5	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•
6	1	80	12	29	6	4,9	3	5	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•
16	2	110	20,5	-	12	9	4	14	•	•

€ P.12

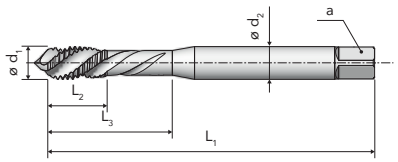
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

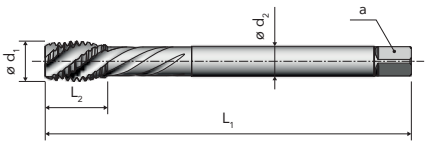
L40 | HSSE

A70 S LH BRIGHT | **A70 S LH** TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO2 6H | C (2-3) | 2,5xD | LH

ISO2 6H | C (2-3) | 2,5xD | LH

APPLICATION RANGE - CUTTING SPEED m/min

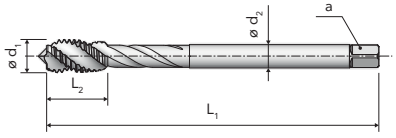
ISO	MG	A70 S LH BRIGHT	A70 S LH TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

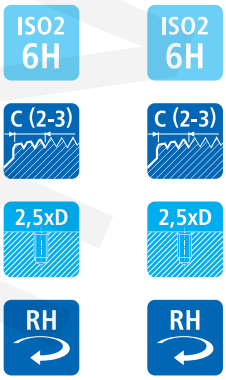
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 S LH BRIGHT	A70 S LH TiN
M 3	0,5	56	7	15	3,5	2,7	3	2,5	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•
6	1	80	12	29	6	4,9	3	5	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•
14	2	110	20,5	-	11	9	4	12	• NEW	• NEW
16	2	110	20,5	-	12	9	4	14	•	•
20	2,5	140	29,5	-	16	12	4	17,5	•	•
22	2,5	140	29,5	-	18	14,5	4	19,5	• NEW	• NEW
24	3	160	35,5	-	18	14,5	4	21	• NEW	• NEW
27	3	160	37,5	-	20	16	5	24	• NEW	• NEW
30	3,5	180	42	-	22	18	5	26,5	• NEW	• NEW

€ P.12

A76 S BRIGHT | **A76 S** TiN

DIN 376





APPLICATION RANGE - CUTTING SPEED m/min			
ISO	**MG**	**A76 S** BRIGHT	**A76 S** TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

Ød$_1$ [mm]	P [mm]	L$_1$ js 16 [mm]	L$_2$ [mm]	L$_3$ [mm]	Ød$_2$ h9 [mm]	a h12 [mm]	z [-]	[mm]	**A76 S** BRIGHT	**A76 S** TiN
M 4	0,7	63	8,5	-	2,8	2,1	3	3,3	•	•
5	0,8	70	10	-	3,5	2,7	3	4,2	•	•
6	1	80	12	-	4,5	3,4	3	5	•	•
8	1,25	90	15	-	6	4,9	3	6,8	•	•
10	1,5	100	17,5	-	7	5,5	3	8,5	•	•

€ P.12

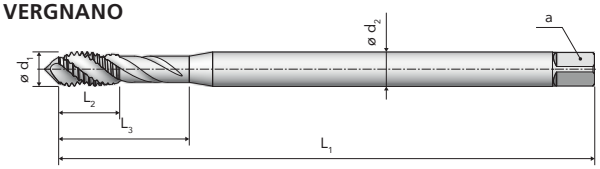
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered / long shank

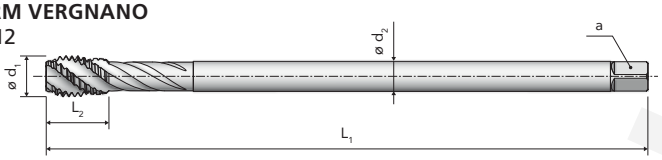
R40 | HSSE

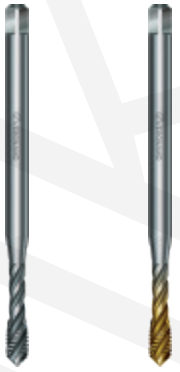
A70 L BRIGHT | **A70 L** TiN

NORM VERGNANO
≤ M10



NORM VERGNANO
≥ M12





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A70 L BRIGHT	A70 L TiN
P	P.1	• 12-15	• 25-30
	P.2	• 10-15	• 20-25
N	N.1	• 12-15	
	N.2	• 12-15	• 25-30
	N.5	• 10-12	
	N.6	• 10-12	• 20-25

ISO2 6H | C (2-3) | 2,5xD | RH

ISO2 6H | C (2-3) | 2,5xD | RH

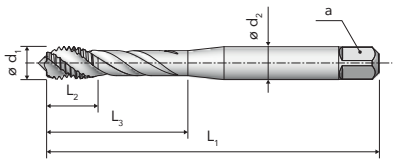
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 L BRIGHT	A70 L TiN
M 3	0,5	112	7	15	3,5	2,7	3	2,5	•	•
4	0,7	112	8,5	21	4,5	3,4	3	3,3	•	•
5	0,8	125	10	24,5	6	4,9	3	4,2	•	•
6	1	125	12	29	6	4,9	3	5	•	•
8	1,25	140	15	33	8	6,2	3	6,8	•	•
10	1,5	160	17,5	38	10	8	3	8,5	•	•
12	1,75	180	18	-	9	7	4	10,2	•	•
16	2	200	20,5	-	12	9	4	14	•	•
20	2,5	225	29,5	-	16	12	4	17,5	•	•

€ P.12

R40 | HSSE

A120 BRIGHT | **A120** VAP | **A120** TiN

DIN 371
≤ M10



DIN 376
≥ M12

ISO2 6H | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min				
ISO	**MG**	**A120** BRIGHT	**A120** VAP	**A120** TiN
P	P.1	• 12-15	• 12-15	• 25-30
	P.2	• 10-15	• 10-15	• 20-25
N	N.1	• 12-15	• 12-15	
	N.2	• 12-15	• 12-15	• 25-30
	N.5	• 10-12	• 10-12	
	N.6	• 10-12	• 10-12	• 20-25

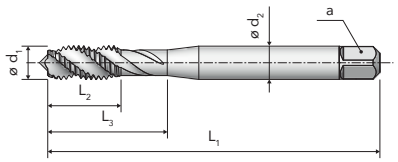
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A120 BRIGHT	A120 VAP	A120 TiN
M 2	0,4	45	5	14	2,8	2,1	3	1,6	•	•	•
2,5	0,45	50	5	18	2,8	2,1	3	2,05	•	•	•
3	0,5	56	5	21	3,5	2,7	3	2,5	•	•	•
4	0,7	63	5	27	4,5	3,4	3	3,3	•	•	•
5	0,8	70	6,5	30	6	4,9	3	4,2	•	•	•
6	1	80	7	34,5	6	4,9	3	5	•	•	•
8	1,25	90	9	38,5	8	6,2	3	6,8	•	•	•
10	1,5	100	11	43	10	8	3	8,5	•	•	•
12	1,75	110	13	-	9	7	3	10,2	•	•	•
14	2	110	16,5	-	11	9	3	12	•	•	•
16	2	110	19,5	-	12	9	3	14	•	•	•
18	2,5	125	24	-	14	11	3	15,5	•	•	•
20	2,5	140	25,5	-	16	12	3	17,5	•	•	•
22	2,5	140	25,5	-	18	14,5	3	19,5	•	•	•
24	3	160	32	-	18	14,5	3	21	•	•	•

VERGNANO

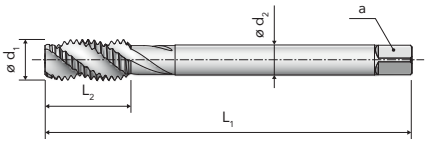
MACHINE TAPS for blind holes
40° spiral flutes / for stainless steel

R40 | HSSE

DIN 371
≤ M10



DIN 376
≥ M12



	A170 VAP	A170 TiX2
		
	6HX	6HX
	C (2-3)	C (2-3)
	2,5xD	2,5xD
	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A170 VAP	A170 TiX2
P	P.7	• 6-8	• 8-10
M	M.1	• 6-8	• 8-10
	M.2		• 5-7

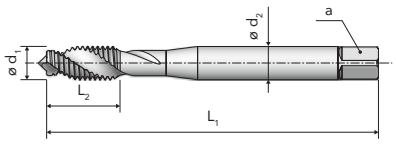
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A170 VAP	A170 TiX2
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•

€ P.13

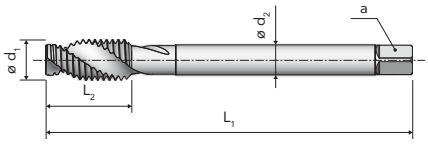
R40 z2 | HSSE

A62 BRIGHT | **A62** TiH1

DIN 371
≤ M10



DIN 376
≥ M11



ISO2 6H | ISO2 6H

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A62 BRIGHT	A62 TiH1
N	N.1-2	● 12-15	● 25-30
	N.5-6	● 10-12	● 20-25
S	S.1	● 6-8	● 10-12
	S.3	● 6-8	● 10-12

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A62 BRIGHT	A62 TiH1
M 2	0,4	45	7	11	2,8	2,1	2	1,6	●	●
2,2	0,45	45	8	13	2,8	2,1	2	1,75	●	●
2,3	0,4	45	8	13	2,8	2,1	2	1,9	●	●
2,5	0,45	50	9	15	2,8	2,1	2	2,05	●	●
2,6	0,45	50	9	15	2,8	2,1	2	2,1	●	●
3	0,5	56	10	18	3,5	2,7	2	2,5	●	●
3,5	0,6	56	11	20	4	3	2	2,9	●	●
4	0,7	63	12	21	4,5	3,4	2	3,3	●	●
5	0,8	70	14	24,5	6	4,9	2	4,2	●	●
6	1	80	16	29	6	4,9	2	5	●	●
7	1	80	16	29	7	5,5	2	6	●	●
8	1,25	90	18	33	8	6,2	2	6,8	●	●
9	1,25	90	18	33	9	7	2	7,8	●	●
10	1,5	100	20	36	10	8	2	8,5	●	●
11	1,5	100	20	-	8	6,2	2	9,5	●	●
12	1,75	110	24	-	9	7	2	10,2	●	●
14	2	110	25	-	11	9	2	12	●	●
16	2	110	28	-	12	9	3	14	●	●

€ P.13

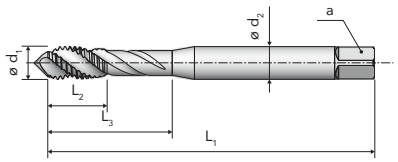
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered / for light alloys

R40 | HSSE

A72 BRIGHT | **A72** TiH1

DIN 371
≤ M10



DIN 376
≥ M12

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A72** BRIGHT	**A72** TiH1		
P	P.1	• 12-15	• 25-30		
N	N.1-2	• 12-15	• 25-30		
	N.3	• 10-12	• 20-25		
	N.5-6	• 10-12	• 20-25		

ISO2 6H | C (2-3) | 2,5xD | RH

ISO2 6H | C (2-3) | 2,5xD | RH

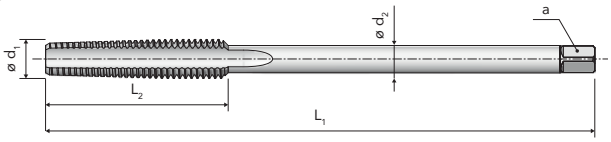
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A72 BRIGHT	A72 TiH1		
M 3	0,5	56	7	15	3,5	2,7	3	2,5	•	•		
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•		
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•		
6	1	80	12	29	6	4,9	3	5	•	•		
8	1,25	90	15	33	8	6,2	3	6,8	•	•		
10	1,5	100	17,5	38	10	8	3	8,5	•	•		
12	1,75	110	18	-	9	7	3	10,2	•	•		
14	2	110	20,5	-	11	9	3	12	•	•		
16	2	110	20,5	-	12	9	3	14	•	•		
18	2,5	125	25,5	-	14	11	3	15,5	•	•		
20	2,5	140	29,5	-	16	12	3	17,5	•	•		

€ P.14

HSSE

A9
BRIGHT

DIN 357



ISO2
6H

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A9** BRIGHT				
P	P.1	● 18-20				
	P.2	● 15-18				
	P.3	● 12-15				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A9** BRIGHT			
M 4	0,7	90	25	-	2,8	2,1	3	3,3	●			
5	0,8	100	28	-	3,5	2,7	3	4,2	●			
6	1	110	32	-	4,5	3,4	3	5	●			
8	1,25	125	40	-	6	4,9	3	6,8	●			
10	1,5	140	45	-	7	5,5	3	8,5	●			
12	1,75	180	50	-	9	7	3	10,2	●			
14	2	200	56	-	11	9	3	12	●			
16	2	200	63	-	12	9	3	14	●			
18	2,5	220	63	-	14	11	3	15,5	●			
20	2,5	250	70	-	16	12	3	17,5	●			
22	2,5	280	80	-	18	14,5	3	19,5	●			
24	3	280	80	-	18	14,5	3	21	●			
27	3	315	90	-	20	16	3	24	●			
30	3,5	315	100	-	22	18	3	26,5	●			

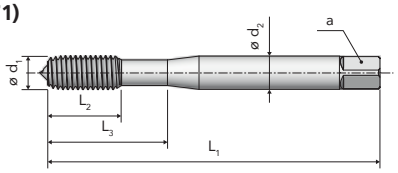
VERGNANO

COLD FORMING TAPS for blind and through holes
Without oil grooves

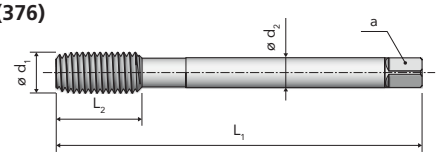
HSSE

A80 TiN | A80 TiCN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12



6HX | 6HX
C (2-3) | C (2-3)
1,5xD | 1,5xD
RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A80 TiN	A80 TiCN
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45

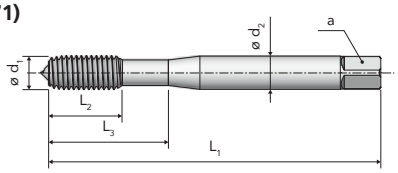
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A80 TiN	A80 TiCN
M 2	0,4	45	7	11	2,8	2,1	3	1,85	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,3	•	•
3	0,5	56	10	18	3,5	2,7	4	2,8	•	•
3,5	0,6	56	11	20	4	3	4	3,25	•	•
4	0,7	63	12	21	4,5	3,4	5	3,7	•	•
5	0,8	70	14	24,5	6	4,9	5	4,65	•	•
6	1	80	16	29	6	4,9	5	5,55	•	•
8	1,25	90	18	33	8	6,2	5	7,4	•	•
10	1,5	100	20	36	10	8	5	9,3	•	•
12	1,75	110	24	-	9	7	5	11,2	•	•
14	2	110	25	-	11	9	6	13,1	•	•
16	2	110	28	-	12	9	6	15,1	•	•

€ P.14

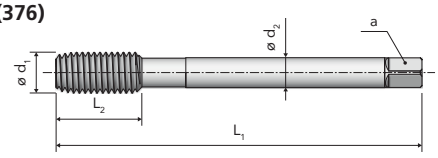
HSSE

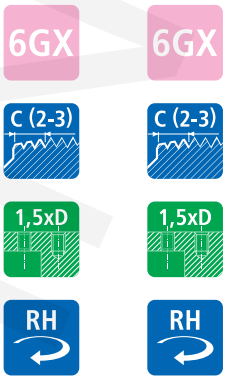
A80 6GX TiN | **A80 6GX** TiCN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A80 6GX TiN	A80 6GX TiCN		
P	P.1-2	• 40-45	• 40-45		
	P.3	• 35-40	• 35-40		
N	N.1-2	• 40-45	• 40-45		
	N.3	• 35-40	• 35-40		
	N.5-6	• 40-45	• 40-45		

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A80 6GX TiN	A80 6GX TiCN		
M 2	0,4	45	7	11	2,8	2,1	3	1,85	•	•		
2,5	0,45	50	9	15	2,8	2,1	3	2,3	•	•		
3	0,5	56	10	18	3,5	2,7	4	2,8	•	•		
3,5	0,6	56	11	20	4	3	4	3,25	•	•		
4	0,7	63	12	21	4,5	3,4	5	3,7	•	•		
5	0,8	70	14	24,5	6	4,9	5	4,65	•	•		
6	1	80	16	29	6	4,9	5	5,55	•	•		
8	1,25	90	18	33	8	6,2	5	7,4	•	•		
10	1,5	100	20	36	10	8	5	9,3	•	•		
12	1,75	110	24	-	9	7	5	11,2	•	•		
14	2	110	25	-	11	9	6	13,1	•	•		
16	2	110	28	-	12	9	6	15,1	•	•		

€ P.15

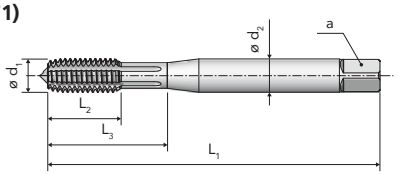
VERGNANO

COLD FORMING TAPS for blind and through holes
With oil grooves

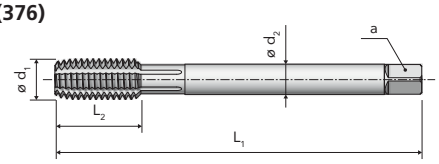
HSSE

A80 N TiN | **A80 N** TiCN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12



6HX | 6HX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A80 N TiN	A80 N TiCN
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45

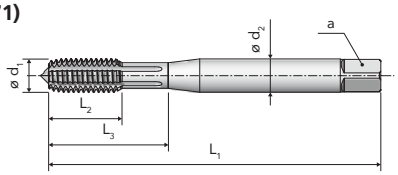
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A80 N TiN	A80 N TiCN
M 2	0,4	45	7	11	2,8	2,1	3	1,85	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,3	•	•
3	0,5	56	10	18	3,5	2,7	4	2,8	•	•
3,5	0,6	56	11	20	4	3	4	3,25	•	•
4	0,7	63	12	21	4,5	3,4	5	3,7	•	•
5	0,8	70	14	24,5	6	4,9	5	4,65	•	•
6	1	80	16	29	6	4,9	5	5,55	•	•
8	1,25	90	18	33	8	6,2	5	7,4	•	•
10	1,5	100	20	36	10	8	5	9,3	•	•
12	1,75	110	24	-	9	7	5	11,2	•	•
14	2	110	25	-	11	9	6	13,1	•	•
16	2	110	28	-	12	9	6	15,1	•	•
18	2,5	125	28	-	14	11	8	16,9	•	•
20	2,5	140	30	-	16	12	8	18,9	•	•

€ P.15

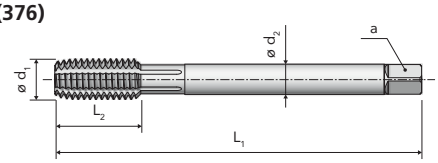
HSSE

A80 N 6GX TiN | **A80 N 6GX** TiCN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12



6GX | 6GX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A80 N 6GX TiN	A80 N 6GX TiCN		
P	P.1-2	● 40-45	● 40-45		
	P.3	● 35-40	● 35-40		
N	N.1-2	● 40-45	● 40-45		
	N.3	● 35-40	● 35-40		
	N.5-6	● 40-45	● 40-45		

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A80 N 6GX TiN	A80 N 6GX TiCN		
M 2	0,4	45	7	11	2,8	2,1	3	1,85	●	●		
2,5	0,45	50	9	15	2,8	2,1	3	2,3	●	●		
3	0,5	56	10	18	3,5	2,7	4	2,8	●	●		
3,5	0,6	56	11	20	4	3	4	3,25	●	●		
4	0,7	63	12	21	4,5	3,4	5	3,7	●	●		
5	0,8	70	14	24,5	6	4,9	5	4,65	●	●		
6	1	80	16	29	6	4,9	5	5,55	●	●		
8	1,25	90	18	33	8	6,2	5	7,4	●	●		
10	1,5	100	20	36	10	8	5	9,3	●	●		
12	1,75	110	24	-	9	7	5	11,2	●	●		
14	2	110	25	-	11	9	6	13,1	●	●		
16	2	110	28	-	12	9	6	15,1	●	●		

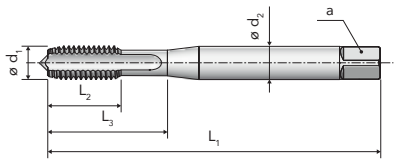
VERGNANO

MACHINE TAPS for blind and through holes
Straight flutes / for wire thread inserts

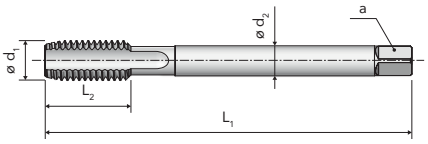
HSSE

A190
BRIGHT

DIN 40435
≤ EG-M8



DIN 40435
≥ EG-M10



6H mod

C (2-3)

1,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A190 BRIGHT			
P	P.2	● 10-12			
	P.3	● 8-10			
K	K.2	● 8-10			

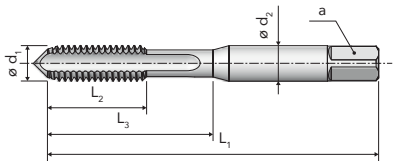
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A190 BRIGHT
EG-M 3	0,5	63	12	17	4,5	3,4	3	3,15	●
4	0,7	70	14	24,5	6	4,9	3	4,2	●
5	0,8	80	16	29	6	4,9	3	5,25	●
6	1	90	18	33	8	6,2	3	6,3	●
8	1,25	100	20	36	10	8	3	8,4	●
10	1,5	100	22	-	9	7	3	10,5	●
12	1,75	110	25	-	11	9	3	12,5	●
14	2	110	28	-	12	9	3	14,5	●
16	2	125	28	-	14	11	4	16,5	●

€ P.16

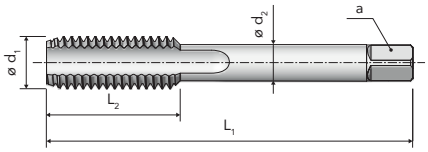
HSS

A2 ROUGHING	A2 FINISHING	A2 SET

DIN 2181
≤ M6



DIN2181
≥ M7



APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A2** ROUGHING	**A2** FINISHING	**A2** SET	
P	P.1-4	●	●	●	
	P.7	●	●	●	
K	K.2	●	●	●	
N	N.1-3	●	●	●	
	N.5-7	●	●	●	

	ISO2 6H	ISO2 6H
A (5-6)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD
RH	RH	RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A2 ROUGHING	A2 FINISHING	A2 SET
M 2	0,25	36	7,5	12	2,8	2,1	3	1,75	●	●	●
2,3	0,25	36	8,5	13,5	2,8	2,1	3	2,05	●	●	●
2,5	0,35	40	8,5	14,5	2,8	2,1	3	2,15	●	●	●
2,6	0,35	40	8,5	14,5	2,8	2,1	3	2,25	●	●	●
3	0,35	40	8	18	3,5	2,7	3	2,65	●	●	●
3,5	0,35	45	9	19	4	3	3	3,15	●	●	●
4	0,5	45	10	21	4,5	3,4	3	3,5	●	●	●
4,5	0,5	50	12	23	6	4,9	3	4	●	●	●
5	0,5	50	12	24	6	4,9	3	4,5	●	●	●
6	0,5	56	14	28	6	4,9	3	5,5	●	●	●
6	0,75	56	14	28	6	4,9	3	5,2	●	●	●
7	0,75	56	14	-	6	4,9	3	6,2	●	●	●
8	0,75	56	18	-	6	4,9	3	7,2	●	●	●
8	1	63	22	-	6	4,9	3	7	●	●	●
9	1	63	22	-	7	5,5	3	8	●	●	●
10	0,75	63	20	-	7	5,5	4	9,2	●	●	●
10	1	63	20	-	7	5,5	4	9	●	●	●
10	1,25	70	24	-	7	5,5	3	8,8	●	●	●
11	1	63	20	-	8	6,2	4	10	●	●	●
12	0,75	70	22	-	9	7	4	11,2	●	●	●
12	1	70	22	-	9	7	4	11	●	●	●
12	1,25	70	22	-	9	7	4	10,8	●	●	●
12	1,5	70	22	-	9	7	4	10,5	●	●	●
14	1	70	22	-	11	9	4	13	●	●	●
14	1,25	70	22	-	11	9	4	12,8	●	●	●
14	1,5	70	22	-	11	9	4	12,5	●	●	●

VERGNANO

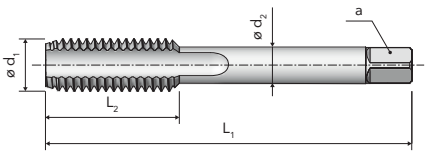
HAND TAPS for blind and through holes
In sets of two pieces

HSS

A2 ROUGHING | A2 FINISHING | A2 SET

A SERIES

DIN 2181



APPLICATION RANGE - CUTTING SPEED m/min				
ISO	MG	A2 ROUGHING	A2 FINISHING	A2 SET
P	P.1-4	●	●	●
	P.7	●	●	●
K	K.2	●	●	●
N	N.1-3	●	●	●
	N.5-7	●	●	●

	A2 ROUGHING	A2 FINISHING	A2 SET
	—	ISO2 6H	ISO2 6H
	A (5-6)	C (2-3)	C (2-3)
	2,5xD	2,5xD	2,5xD
	RH	RH	RH

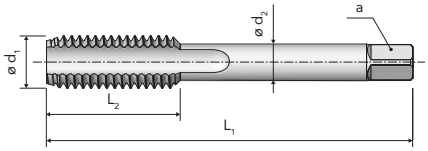
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A2 ROUGHING	A2 FINISHING	A2 SET
M 15	1	70	22	-	12	9	4	14	●	●	●
15	1,5	70	22	-	12	9	4	13,5	●	●	●
16	1	70	22	-	12	9	4	15	●	●	●
16	1,25	70	22	-	12	9	4	14,8	●	●	●
16	1,5	70	22	-	12	9	4	14,5	●	●	●
18	1	80	22	-	14	11	4	17	●	●	●
18	1,5	80	22	-	14	11	4	16,5	●	●	●
18	2	80	22	-	14	11	4	16	●	●	●
20	1	80	22	-	16	12	4	19	●	●	●
20	1,5	80	22	-	16	12	4	18,5	●	●	●
20	2	80	22	-	16	12	4	18	●	●	●
22	1	80	22	-	18	14,5	4	21	●	●	●
22	1,5	80	22	-	18	14,5	4	20,5	●	●	●
22	2	80	22	-	18	14,5	4	20	●	●	●
24	1	90	22	-	18	14,5	4	23	●	●	●
24	1,5	90	22	-	18	14,5	4	22,5	●	●	●
24	2	90	22	-	18	14,5	4	22	●	●	●
25	1,5	90	22	-	18	14,5	4	23,5	●	●	●
25	2	90	22	-	18	14,5	4	23	●	●	●
26	1,5	90	22	-	18	14,5	4	24,5	●	●	●
26	2	90	22	-	18	14,5	4	24	●	●	●
27	1,5	90	22	-	20	16	4	25,5	●	●	●
27	2	90	22	-	20	16	4	25	●	●	●
28	1,5	90	22	-	20	16	4	26,5	●	●	●
28	2	90	22	-	20	16	4	26	●	●	●
30	1,5	90	22	-	22	18	4	28,5	●	●	●

HSS

A2 ROUGHING | A2 FINISHING | A2 SET

A SERIES

DIN 2181



APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A2** ROUGHING	**A2** FINISHING	**A2** SET	
P	P.1-4	●	●	●	
	P.7	●	●	●	
K	K.2	●	●	●	
N	N.1-3	●	●	●	
	N.5-7	●	●	●	

—	ISO2 6H	ISO2 6H	
A (5-6)	C (2-3)	C (2-3)	
2,5xD	2,5xD	2,5xD	
RH	RH	RH	

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A2 ROUGHING	A2 FINISHING	A2 SET
M 30	2	90	22	-	22	18	4	28	●	●	●
32	1,5	90	22	-	22	18	5	30,5	●	●	●
32	2	90	22	-	22	18	4	30	●	●	●
33	2	100	25	-	25	20	4	31	●	●	●
35	1,5	100	25	-	28	22	5	33,5	●	●	●
35	2	125	30	-	28	22	5	33	●	●	●
36	1,5	100	25	-	28	22	5	34,5	●	●	●
36	2	125	30	-	28	22	5	34	●	●	●
36	3	125	40	-	28	22	4	33	●	●	●
38	1,5	100	25	-	28	22	5	36,5	●	●	●
39	2	125	32	-	32	24	5	37	●	●	●
39	3	125	40	-	32	24	4	36	●	●	●
40	1,5	110	25	-	32	24	6	38,5	●	●	●
40	2	125	32	-	32	24	5	38	●	●	●
40	3	125	40	-	32	24	4	37	●	●	●
42	1,5	110	25	-	32	24	6	40,5	●	●	●
42	2	125	32	-	32	24	5	40	●	●	●
42	3	125	40	-	32	24	4	39	●	●	●
45	1,5	110	25	-	36	29	6	43,5	●	●	●
45	2	125	32	-	36	29	5	43	●	●	●
45	3	125	40	-	36	29	5	42	●	●	●
48	1,5	140	25	-	36	29	6	46,5	●	●	●
48	2	140	32	-	36	29	6	46	●	●	●
48	3	140	40	-	36	29	5	45	●	●	●

€ P.16

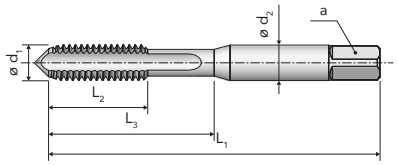
VERGNANO

HAND TAPS for blind and through holes
In sets of two pieces

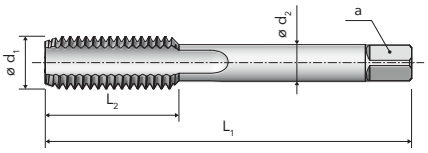
HSS

A2 LH ROUGHING	A2 LH FINISHING	A2 LH SET

DIN 2181
≤ M6



DIN 2181
≥ M8



APPLICATION RANGE - CUTTING SPEED m/min				
ISO	**MG**	**A2 LH** ROUGHING	**A2 LH** FINISHING	**A2 LH** SET
P	P.1-4	●	●	●
	P.7	●	●	●
K	K.2	●	●	●
N	N.1-3	●	●	●
	N.5-7	●	●	●

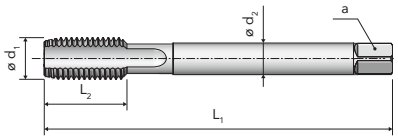
–	ISO2 6H	ISO2 6H
A (5-6)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD
LH	LH	LH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A2 LH ROUGHING	A2 LH FINISHING	A2 LH SET
M 4	0,5	45	10	21	4,5	3,4	3	3,5	●	●	●
5	0,5	50	12	24	6	4,9	3	4,5	●	●	●
6	0,75	56	14	28	6	4,9	3	5,2	●	●	●
8	1	63	22	-	6	4,9	3	7	●	●	●
10	1	63	20	-	7	5,5	4	9	●	●	●
10	1,25	70	24	-	7	5,5	3	8,8	●	●	●
11	1	63	20	-	8	6,2	4	10	●	●	●
12	1	70	22	-	9	7	4	11	●	●	●
12	1,25	70	22	-	9	7	4	10,8	●	●	●
12	1,5	70	22	-	9	7	4	10,5	●	●	●
14	1,5	70	22	-	11	9	4	12,5	●	●	●
16	1,5	70	22	-	12	9	4	14,5	●	●	●
18	1,5	80	22	-	14	11	4	16,5	●	●	●
20	1,5	80	22	-	16	12	4	18,5	●	●	●

€ P.17

HSSE

DIN 374



	A23 FC BRIGHT	A23 FC TiN	A23 FC LH BRIGHT
			
	ISO2 6H	ISO2 6H	ISO2 6H
	C (2-3)	C (2-3)	C (2-3)
	1,5xD	1,5xD	1,5xD
	RH	RH	LH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A23 FC BRIGHT	A23 FC TiN	A23 FC LH BRIGHT	
P	P.1		• 20-25		
	P.2	• 10-12	• 15-20	• 10-12	
	P.3	• 8-10	• 12-15	• 8-10	
K	K.2	• 8-10	• 12-15	• 8-10	
N	N.1		• 20-25		
	N.5		• 15-20		

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A23 FC BRIGHT	A23 FC TiN	A23 FC LH BRIGHT
M 3	0,35	56	8	-	2,2	-	3	2,65	•		
3,5	0,35	56	9	-	2,5	2,1	3	3,15	•		
4	0,5	63	12	-	2,8	2,1	3	3,5	•		
5	0,5	70	14	-	3,5	2,7	3	4,5	•		
6	0,5	80	16	-	4,5	3,4	3	5,5	•	•	
6	0,75	80	16	-	4,5	3,4	3	5,2	•	•	•
7	0,75	80	16	-	5,5	4,3	3	6,2	•	•	
8	0,75	80	16	-	6	4,9	3	7,2	•		
8	1	90	16	-	6	4,9	3	7	•	•	•
9	1	90	16	-	7	5,5	3	8	•		
10	0,5	90	18	-	7	5,5	4	9,5	•	•	
10	0,75	90	18	-	7	5,5	3	9,2	•		
10	1	90	18	-	7	5,5	3	9	•	•	•
10	1,25	100	18	-	7	5,5	3	8,8	•	•	•
11	1	90	20	-	8	6,2	3	10	•		
12	0,75	100	22	-	9	7	4	11,2	•	•	
12	1	100	22	-	9	7	4	11	•	•	
12	1,25	100	22	-	9	7	3	10,8	•	•	•
12	1,5	100	22	-	9	7	3	10,5	•	•	•
14	1	100	22	-	11	9	4	13	•	•	
14	1,25	100	22	-	11	9	3	12,8	•	•	
14	1,5	100	22	-	11	9	3	12,5	•	•	•
15	1	100	22	-	12	9	4	14	•		
15	1,5	100	22	-	12	9	3	13,5	•		
16	1	100	22	-	12	9	4	15	•	•	
16	1,25	100	22	-	12	9	4	14,8	•	•	

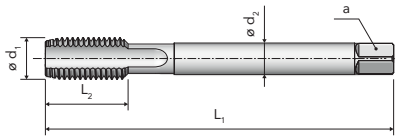
VERGNANO

MACHINE TAPS for blind holes
Straight flutes

HSSE

A23 FC BRIGHT	A23 FC TiN	A23 FC LH BRIGHT

DIN 374



ISO2 6H | C (2-3) | 1,5xD | RH

ISO2 6H | C (2-3) | 1,5xD | RH

ISO2 6H | C (2-3) | 1,5xD | LH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A23 FC BRIGHT	A23 FC TiN	A23 FC LH BRIGHT
P	P.1		• 20-25	
	P.2	• 10-12	• 15-20	• 10-12
	P.3	• 8-10	• 12-15	• 8-10
K	K.2	• 8-10	• 12-15	• 8-10
N	N.1		• 20-25	
	N.5		• 15-20	

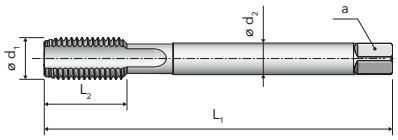
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A23 FC BRIGHT	A23 FC TiN	A23 FC LH BRIGHT
M 16	1,5	100	22	-	12	9	3	14,5	•	•	•
17	1	100	22	-	12	9	4	16	•		
17	1,5	100	22	-	12	9	4	15,5	•		
18	1	110	25	-	14	11	4	17	•		
18	1,5	110	25	-	14	11	4	16,5	•	•	•
18	2	125	28	-	14	11	4	16	•		
20	1	125	25	-	16	12	4	19	•		
20	1,5	125	25	-	16	12	4	18,5	•	•	•
20	2	140	28	-	16	12	4	18	•		
22	1	125	25	-	18	14,5	4	21	•		
22	1,5	125	25	-	18	14,5	4	20,5	•	•	
22	2	140	28	-	18	14,5	4	20	•		
24	1	140	25	-	18	14,5	4	23	•		
24	1,5	140	25	-	18	14,5	4	22,5	•		
24	2	140	28	-	18	14,5	4	22	•		
25	1	140	25	-	18	14,5	4	24	•		
25	1,5	140	25	-	18	14,5	4	23,5	•		
25	2	140	28	-	18	14,5	4	23	•		
26	1	140	25	-	18	14,5	4	25	•		
26	1,5	140	25	-	18	14,5	4	24,5	•		
26	2	140	28	-	18	14,5	4	24	•		
27	1,5	140	28	-	20	16	4	25,5	•		
27	2	140	28	-	20	16	4	25	•		
28	1,5	140	28	-	20	16	4	26,5	•		
28	2	140	28	-	20	16	4	26	•		
30	1	150	25	-	22	18	5	29	•		

€ P.18

HSSE

A23 FC
BRIGHT

DIN 374



ISO2 6H

C (2-3)

1,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A23 FC** BRIGHT			
P	P.2	● 10-12			
	P.3	● 8-10			
K	K.2	● 8-10			

Ød$_1$ [mm]	P [mm]	L$_1$ js 16 [mm]	L$_2$ [mm]	L$_3$ [mm]	Ød$_2$ h9 [mm]	a h12 [mm]	z [-]	[mm]	**A23 FC** BRIGHT
M 30	1,5	150	28	-	22	18	4	28,5	●
30	2	150	28	-	22	18	4	28	●
32	1,5	150	28	-	22	18	5	30,5	●
32	2	150	28	-	22	18	4	30	●
33	1,5	160	30	-	25	20	5	31,5	●
33	2	160	30	-	25	20	4	31	●
35	1,5	170	30	-	28	22	5	33,5	●
35	2	170	30	-	28	22	5	33	●
36	1,5	170	30	-	28	22	5	34,5	●
36	2	170	30	-	28	22	5	34	●
36	3	200	56	-	28	22	4	33	●
39	3	200	60	-	32	24	5	36	●
40	1,5	170	30	-	32	24	5	38,5	●
40	2	170	30	-	32	24	5	38	●
40	3	200	60	-	32	24	5	37	●
42	1,5	170	30	-	32	24	6	40,5	●
42	2	170	30	-	32	24	5	40	●
42	3	200	60	-	32	24	5	39	●
45	1,5	180	32	-	36	29	6	43,5	●
45	2	180	32	-	36	29	5	43	●
45	3	200	50	-	36	29	5	42	●
48	1,5	190	32	-	36	29	6	46,5	●
48	2	190	32	-	36	29	6	46	●
48	3	225	50	-	36	29	5	45	●
52	1,5	190	32	-	40	32	6	50,5	●
52	2	190	32	-	40	32	6	50	●
52	3	225	50	-	40	32	5	49	●

€ P.19

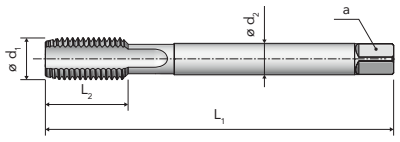
VERGNANO

MACHINE TAPS for blind and through holes
Straight flutes / for cast iron

HSSE

A45 NITRIDED | **A45** TiCN

DIN 374



6HX | 6HX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A45 NITRIDED	A45 TiCN
K	K.1	• 15-20	• 40-45
N	N.4	• 15-20	• 40-45
	N.7	• 15-20	• 40-45
	N.9-10	• 20-25	• 45-50

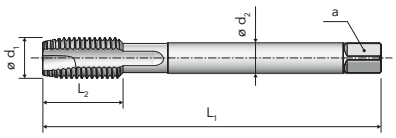
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A45 NITRIDED	A45 TiCN
M 4	0,5	63	10	-	2,8	2,1	3	3,5	•	•
5	0,5	70	12	-	3,5	2,7	3	4,5	•	•
6	0,75	80	14	-	4,5	3,4	3	5,2	•	•
8	1	90	16	-	6	4,9	4	7	•	•
9	1	90	16	-	7	5,5	4	8	•	
10	1	90	18	-	7	5,5	4	9	•	•
10	1,25	100	18	-	7	5,5	4	8,8	•	•
11	1	90	20	-	8	6,2	4	10	•	
12	1	100	22	-	9	7	4	11	•	
12	1,25	100	22	-	9	7	4	10,8	•	•
12	1,5	100	22	-	9	7	4	10,5	•	•
14	1	100	22	-	11	9	4	13	•	
14	1,25	100	22	-	11	9	4	12,8	•	•
14	1,5	100	22	-	11	9	4	12,5	•	•
16	1	100	22	-	12	9	4	15	•	
16	1,5	100	22	-	12	9	4	14,5	•	•
18	1,5	110	25	-	14	11	4	16,5	•	•
20	1,5	125	25	-	16	12	4	18,5	•	•
22	1,5	125	25	-	18	14,5	4	20,5	•	
24	1,5	140	25	-	18	14,5	5	22,5	•	
24	2	140	28	-	18	14,5	5	22	•	
27	1,5	140	28	-	20	16	5	25,5	•	
27	2	140	28	-	20	16	5	25	•	
30	1,5	150	28	-	22	18	5	28,5	•	
30	2	150	28	-	22	18	5	28	•	

€ P.19

HSSE

A17 S BRIGHT | **A17 S** VAP | **A17 S** TiN | **A17 S** TiCN

DIN 374



ISO2 6H | B (4-5) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A17 S** BRIGHT	**A17 S** VAP	**A17 S** TiN	**A17 S** TiCN
P	P.2	• 20-25	• 20-25	• 30-35	• 30-35
	P.3	• 15-20	• 15-20	• 25-30	• 25-30
	P.4	• 12-15	• 12-15	• 20-25	• 20-25
	P.5			• 10-15	• 10-15
	P.7			• 10-15	• 10-15
M	M.1			• 10-15	• 10-15
K	K.2	• 15-20	• 15-20	• 25-30	• 25-30
N	N.2-3	• 20-25	• 20-25	• 30-35	• 30-35
	N.6	• 15-18	• 15-18	• 25-30	• 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A17 S BRIGHT	A17 S VAP	A17 S TiN	A17 S TiCN
M 4	0,5	63	12	-	2,8	2,1	3	3,5	•			
5	0,5	70	14	-	3,5	2,7	3	4,5	•			
6	0,75	80	16	-	4,5	3,4	3	5,2	•	•	•	•
7	0,75	80	16	-	5,5	4,3	3	6,2	•			
8	0,75	80	16	-	6	4,9	3	7,2	•			
8	1	90	16	-	6	4,9	3	7	•	•	•	•
9	1	90	16	-	7	5,5	3	8	•			
10	0,75	90	18	-	7	5,5	4	9,2	•			
10	1	90	18	-	7	5,5	4	9	•	•	•	•
10	1,25	100	18	-	7	5,5	3	8,8	•	•	•	•
11	1	90	20	-	8	6,2	4	10	•			
12	1	100	22	-	9	7	4	11	•	•	•	•
12	1,25	100	22	-	9	7	4	10,8	•	•	•	•
12	1,5	100	22	-	9	7	3	10,5	•	•	•	•
14	1	100	22	-	11	9	4	13	•			
14	1,25	100	22	-	11	9	4	12,8	•	•	•	•
14	1,5	100	22	-	11	9	4	12,5	•	•	•	•
15	1	100	22	-	12	9	4	14	•			
15	1,5	100	22	-	12	9	4	13,5	•			
16	1	100	22	-	12	9	4	15	•			
16	1,5	100	22	-	12	9	4	14,5	•	•	•	•
18	1	110	25	-	14	11	4	17	•			
18	1,5	110	25	-	14	11	4	16,5	•	•	•	•
20	1	125	25	-	16	12	4	19	•			
20	1,5	125	25	-	16	12	4	18,5	•	•	•	•
22	1	125	25	-	18	14,5	4	21	•			

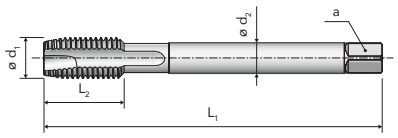
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

HSSE

A17 S BRIGHT | **A17 S** TiN

DIN 374



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A17 S BRIGHT	A17 S TiN
P	P.2	• 20-25	• 30-35
	P.3	• 15-20	• 25-30
	P.4	• 12-15	• 20-25
	P.5		• 10-15
	P.7		• 10-15
M	M.1		• 10-15
K	K.2	• 15-20	• 25-30
N	N.2-3	• 20-25	• 30-35
	N.6	• 15-18	• 25-30

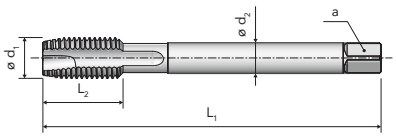
ISO2 6H | ISO2 6H
B (4-5) | B (4-5)
2,5xD | 2,5xD
RH | RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A17 S BRIGHT	A17 S TiN
M 22	1,5	125	25	-	18	14,5	4	20,5	•	•
24	1	140	25	-	18	14,5	5	23	•	
24	1,5	140	25	-	18	14,5	4	22,5	•	•
24	2	140	28	-	18	14,5	4	22	•	
25	1,5	140	25	-	18	14,5	4	23,5	•	
25	2	140	28	-	18	14,5	4	23	•	
26	1,5	140	25	-	18	14,5	4	24,5	•	
26	2	140	28	-	18	14,5	4	24	•	
27	1,5	140	28	-	20	16	4	25,5	•	•
27	2	140	28	-	20	16	4	25	•	
28	1,5	140	28	-	20	16	4	26,5	•	
28	2	140	28	-	20	16	4	26	•	
30	1,5	150	28	-	22	18	4	28,5	•	•
30	2	150	28	-	22	18	4	28	•	
32	1,5	150	28	-	22	18	5	30,5	•	
32	2	150	28	-	22	18	4	30	•	
36	1,5	170	30	-	28	22	5	34,5	•	
36	2	170	30	-	28	22	5	34	•	
36	3	200	56	-	28	22	4	33	•	
40	1,5	170	30	-	32	24	5	38,5	•	
40	2	170	30	-	32	24	5	38	•	
40	3	200	60	-	32	24	4	37	•	
42	1,5	170	30	-	32	24	5	40,5	•	
42	2	170	30	-	32	24	5	40	•	
42	3	200	60	-	32	24	5	39	•	
45	1,5	180	32	-	36	29	6	43,5	•	

HSSE

A17 S
BRIGHT

DIN 374



ISO2 6H

B (4-5)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A17 S** BRIGHT				
P	P.2	● 20-25				
	P.3	● 15-20				
	P.4	● 12-15				
K	K.2	● 15-20				
N	N.2-3	● 20-25				
	N.6	● 15-18				

$Ød_1$ [mm]	P [mm]	L_1 js 16 [mm]	L_2 [mm]	L_3 [mm]	$Ød_2$ h9 [mm]	a h12 [mm]	z [-]	[mm]	**A17 S** BRIGHT
M 45	2	180	32	-	36	29	5	43	●
45	3	200	50	-	36	29	5	42	●
48	1,5	190	32	-	36	29	6	46,5	●
48	2	190	32	-	36	29	5	46	●
48	3	225	50	-	36	29	5	45	●

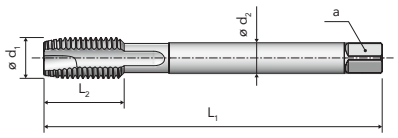
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point / for stainless steel

HSSE

A17 S
TiX2

DIN 374



ISO2 6H

B (4-5)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A17 S** TiX2				
P	P.7	● 10-15				
M	M.1	● 10-15				

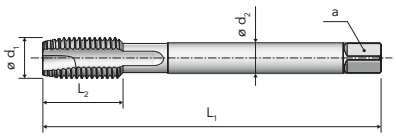
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A17 S** TiX2
M 6	0,75	80	16	-	4,5	3,4	3	5,2	●
8	1	90	16	-	6	4,9	3	7	●
10	1	90	18	-	7	5,5	4	9	●
10	1,25	100	18	-	7	5,5	3	8,8	●
12	1,25	100	22	-	9	7	4	10,8	●
12	1,5	100	22	-	9	7	3	10,5	●
14	1,25	100	22	-	11	9	4	12,8	●
14	1,5	100	22	-	11	9	4	12,5	●
16	1,5	100	22	-	12	9	4	14,5	●
20	1,5	125	25	-	16	12	4	18,5	●

€ P.21

HSSE

A17 S 6G BRIGHT | **A17 S 6G** TiN

DIN 374



ISO3 6G | B (4-5) | 2,5xD | RH

ISO3 6G | B (4-5) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A17 S 6G BRIGHT	A17 S 6G TiN
P	P.2	• 20-25	• 30-35
	P.3	• 15-20	• 25-30
	P.4	• 12-15	• 20-25
	P.5		• 10-15
	P.7		• 10-15
M	M.1		• 10-15
K	K.2	• 15-20	• 25-30
N	N.2-3	• 20-25	• 30-35
	N.6	• 15-18	• 25-30

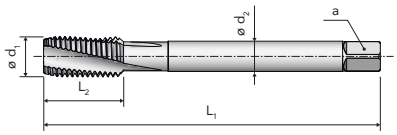
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A17 S 6G BRIGHT	A17 S 6G TiN
M 6	0,75	80	16	-	4,5	3,4	3	5,2	•	•
8	1	90	16	-	6	4,9	3	7	•	•
10	1	90	18	-	7	5,5	4	9	•	•
10	1,25	100	18	-	7	5,5	3	8,8	•	•
12	1,5	100	22	-	9	7	3	10,5	•	•
14	1,5	100	22	-	11	9	4	12,5	•	•

VERGNANO

MACHINE TAPS for blind holes
15° spiral flutes

R15 | HSSE

DIN 374



	A30 BRIGHT	A30 TiN
		
	ISO2 6H	ISO2 6H
	C (2-3)	C (2-3)
	1,5xD	1,5xD
	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

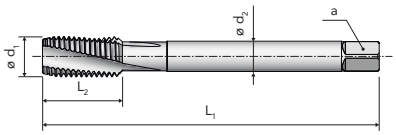
ISO	MG	A30 BRIGHT	A30 TiN
P	P.1	• 18-20	• 30-35
	P.2	• 15-18	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
K	K.2	• 12-15	• 20-25
N	N.1	• 18-20	
	N.2-3	• 15-18	• 25-30
	N.5	• 15-18	
	N.6	• 12-15	• 20-25

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A30 BRIGHT	A30 TiN
M 3	0,35	56	8	-	2,2	-	3	2,65	•	
3,5	0,35	56	9	-	2,5	2,1	3	3,15	•	
4	0,5	63	12	-	2,8	2,1	3	3,5	•	
5	0,5	70	14	-	3,5	2,7	3	4,5	•	
6	0,75	80	16	-	4,5	3,4	3	5,2	•	•
7	0,75	80	16	-	5,5	4,3	3	6,2	•	
8	0,75	80	16	-	6	4,9	3	7,2	•	
8	1	90	16	-	6	4,9	3	7	•	•
9	1	90	16	-	7	5,5	3	8	•	
10	0,75	90	18	-	7	5,5	3	9,2	•	
10	1	90	18	-	7	5,5	3	9	•	•
10	1,25	100	18	-	7	5,5	3	8,8	•	•
11	1	90	20	-	8	6,2	3	10	•	
12	1	100	22	-	9	7	3	11	•	•
12	1,25	100	22	-	9	7	3	10,8	•	•
12	1,5	100	22	-	9	7	3	10,5	•	•
14	1	100	22	-	11	9	3	13	•	
14	1,25	100	22	-	11	9	3	12,8	•	•
14	1,5	100	22	-	11	9	3	12,5	•	•
15	1	100	22	-	12	9	4	14	•	
15	1,5	100	22	-	12	9	3	13,5	•	
16	1	100	22	-	12	9	4	15	•	
16	1,25	100	22	-	12	9	4	14,8	•	
16	1,5	100	22	-	12	9	4	14,5	•	•
17	1	100	22	-	12	9	4	16	•	
17	1,5	100	22	-	12	9	4	15,5	•	

R15 HSSE

A30 BRIGHT | **A30** TiN

DIN 374



ISO2 6H | C (2-3) | 1,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A30** BRIGHT	**A30** TiN		
P	P.1	● 18-20	● 30-35		
	P.2	● 15-18	● 25-30		
	P.3	● 12-15	● 20-25		
	P.4	● 10-12	● 15-20		
	P.5		● 5-10		
K	K.2	● 12-15	● 20-25		
N	N.1	● 18-20			
	N.2-3	● 15-18	● 25-30		
	N.5	● 15-18			
	N.6	● 12-15	● 20-25		

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A30 BRIGHT	A30 TiN
M 18	1	110	25	-	14	11	4	17	●	
18	1,5	110	25	-	14	11	4	16,5	●	●
20	1	125	25	-	16	12	4	19	●	
20	1,5	125	25	-	16	12	4	18,5	●	●
22	1	125	25	-	18	14,5	4	21	●	
22	1,5	125	25	-	18	14,5	4	20,5	●	●
24	1	140	25	-	18	14,5	4	23	●	
24	1,5	140	25	-	18	14,5	4	22,5	●	●
24	2	140	28	-	18	14,5	4	22	●	
25	1	140	25	-	18	14,5	4	24	●	
25	1,5	140	25	-	18	14,5	4	23,5	●	
25	2	140	28	-	18	14,5	4	23	●	
26	1	140	25	-	18	14,5	4	25	●	
26	1,5	140	25	-	18	14,5	4	24,5	●	
26	2	140	28	-	18	14,5	4	24	●	
27	1,5	140	28	-	20	16	4	25,5	●	●
27	2	140	28	-	20	16	4	25	●	
28	1,5	140	28	-	20	16	4	26,5	●	
28	2	140	28	-	20	16	4	26	●	
30	1	150	25	-	22	18	5	29	●	
30	1,5	150	28	-	22	18	4	28,5	●	●
30	2	150	28	-	22	18	4	28	●	
32	1,5	150	28	-	22	18	5	30,5	●	
32	2	150	28	-	22	18	4	30	●	
36	1,5	170	30	-	28	22	5	34,5	●	
36	2	170	30	-	28	22	5	34	●	

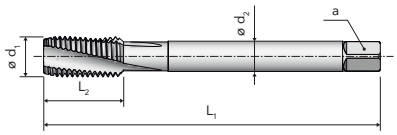
VERGNANO

MACHINE TAPS for blind holes
15° spiral flutes

R15 HSSE

A30
BRIGHT

DIN 374



ISO2 6H
C (2-3)
1,5xD
RH

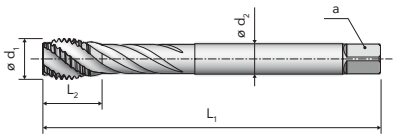
APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A30** BRIGHT				
P	P.1	● 18-20				
	P.2	● 15-18				
	P.3	● 12-15				
	P.4	● 10-12				
K	K.2	● 12-15				
N	N.1	● 18-20				
	N.2-3	● 15-18				
	N.5	● 15-18				
	N.6	● 12-15				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A30** BRIGHT
M 36	3	200	56	-	28	22	4	33	●
40	1,5	170	30	-	32	24	5	38,5	●
40	2	170	30	-	32	24	5	38	●
40	3	200	60	-	32	24	5	37	●
42	1,5	170	30	-	32	24	6	40,5	●
42	2	170	30	-	32	24	5	40	●
42	3	200	60	-	32	24	5	39	●
45	1,5	180	32	-	36	29	6	43,5	●
45	2	180	32	-	36	29	5	43	●
45	3	200	50	-	36	29	5	42	●
48	1,5	190	32	-	36	29	6	46,5	●
48	2	190	32	-	36	29	6	46	●
48	3	225	50	-	36	29	5	45	●

€ P.22

R40 | HSSE

DIN 374



	A71 S BRIGHT	A71 S VAP	A71 S TiN	A71 S TiCN
				
	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
	C (2-3)	C (2-3)	C (2-3)	C (2-3)
	2,5xD	2,5xD	2,5xD	2,5xD
	RH	RH	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A71 S BRIGHT	A71 S VAP	A71 S TiN	A71 S TiCN
P	P.2	• 15-20	• 15-20	• 25-30	• 25-30
	P.3	• 12-15	• 12-15	• 20-25	• 20-25
	P.4	• 10-12	• 10-12	• 15-20	• 15-20
	P.5			• 5-10	• 5-10
	P.7			• 8-10	• 8-10
M	M.1			• 8-10	• 8-10
K	K.2	• 12-15	• 12-15	• 20-25	• 20-25
N	N.3	• 15-18	• 15-18	• 25-30	• 25-30
	N.6	• 15-18	• 15-18	• 25-30	• 25-30

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A71 S BRIGHT	A71 S VAP	A71 S TiN	A71 S TiCN
M 6	0,75	80	7,5	-	4,5	3,4	3	5,2	•	•	•	•
8	1	90	10	-	6	4,9	3	7	•	•	•	•
10	1	90	10	-	7	5,5	3	9	•	•	•	•
10	1,25	100	11,5	-	7	5,5	3	8,8	•	•	•	•
12	1	100	13	-	9	7	4	11	•	•	•	•
12	1,25	100	13,5	-	9	7	4	10,8	•	•	•	•
12	1,5	100	14	-	9	7	4	10,5	•	•	•	•
14	1,5	100	15,5	-	11	9	4	12,5	•	•	•	•
16	1,5	100	15,5	-	12	9	4	14,5	•	•	•	•
18	1,5	110	16	-	14	11	4	16,5	•	•	•	•
20	1	125	15	-	16	12	4	19	•			
20	1,5	125	17	-	16	12	4	18,5	•	•	•	•
22	1,5	125	19	-	18	14,5	4	20,5	•	•	•	•
24	1,5	140	21	-	18	14,5	4	22,5	•		•	
24	2	140	26	-	18	14,5	4	22	•			
26	1,5	140	23	-	18	14,5	4	24,5	•			
27	1,5	140	23	-	20	16	4	25,5	•		•	
27	2	140	28	-	20	16	4	25	•			
28	1,5	140	23	-	20	16	4	26,5	•			
30	1,5	150	25	-	22	18	5	28,5	•		•	
30	2	150	29	-	22	18	5	28	•			
36	3	200	46	-	28	22	5	33	•			
42	3	200	51	-	32	24	6	39	•			

€ P.23

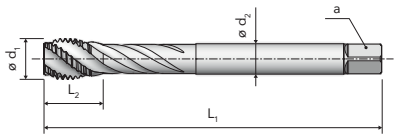
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered / for stainless steel

R40 | HSSE

A71 S
TiX2

DIN 374



ISO2 6H

C (2-3)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A71 S** TiX2				
P	P.7	● 8-10				
M	M.1	● 8-10				
	M.2	● 5-7				

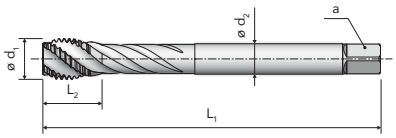
Ød$_1$ [mm]	P [mm]	L$_1$ js 16 [mm]	L$_2$ [mm]	L$_3$ [mm]	Ød$_2$ h9 [mm]	a h12 [mm]	z [-]	[mm]	**A71 S** TiX2
M 6	0,75	80	7,5	-	4,5	3,4	3	5,2	●
8	1	90	10	-	6	4,9	3	7	●
10	1	90	10	-	7	5,5	3	9	●
10	1,25	100	11,5	-	7	5,5	3	8,8	●
12	1,25	100	13,5	-	9	7	4	10,8	●
12	1,5	100	14	-	9	7	4	10,5	●
14	1,5	100	15,5	-	11	9	4	12,5	●
16	1,5	100	15,5	-	12	9	4	14,5	●
20	1,5	125	17	-	16	12	4	18,5	●

€ P.23

R40 | HSSE

A71 S 6G BRIGHT | **A71 S 6G** TiN

DIN 374



ISO3 6G | ISO3 6G

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A71 S 6G** BRIGHT	**A71 S 6G** TiN		
P	P.2	• 15-20	• 25-30		
	P.3	• 12-15	• 20-25		
	P.4	• 10-12	• 15-20		
	P.5		• 5-10		
	P.7		• 8-10		
M	M.1		• 8-10		
K	K.2	• 12-15	• 20-25		
N	N.3	• 15-18	• 25-30		
	N.6	• 15-18	• 25-30		

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A71 S 6G** BRIGHT	**A71 S 6G** TiN
M 6	0,75	80	7,5	-	4,5	3,4	3	5,2	•	•
8	1	90	10	-	6	4,9	3	7	•	•
10	1	90	10	-	7	5,5	3	9	•	•
10	1,25	100	11,5	-	7	5,5	3	8,8	•	•
12	1	100	13	-	9	7	4	11	•	•
12	1,25	100	13,5	-	9	7	4	10,8	•	•
12	1,5	100	14	-	9	7	4	10,5	•	•
14	1,5	100	15,5	-	11	9	4	12,5	•	•

€ P.23

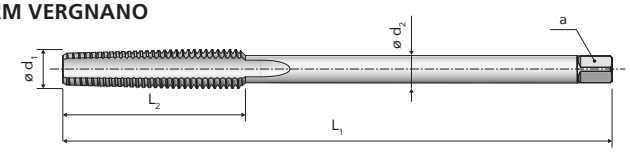
VERGNANO

MACHINE NUT TAPS
Straight flutes

HSSE

A10
BRIGHT

NORM VERGNANO



ISO2
6H

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A10** BRIGHT				
P	P.1	● 18-20				
	P.2	● 15-18				
	P.3	● 12-15				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A10** BRIGHT
M 4	0,5	80	20	-	2,8	2,1	3	3,5	●
5	0,5	85	22	-	3,5	2,7	3	4,5	●
8	1	115	30	-	6	4,9	3	7	●
10	1	130	35	-	7	5,5	3	9	●
10	1,25	140	45	-	7	5,5	3	8,8	●
12	1,25	160	45	-	9	7	3	10,8	●
12	1,5	160	45	-	9	7	3	10,5	●
14	1,5	180	45	-	11	9	3	12,5	●
16	1,5	190	48	-	12	9	3	14,5	●
18	1,5	200	48	-	14	11	3	16,5	●
20	1,5	220	50	-	16	12	3	18,5	●

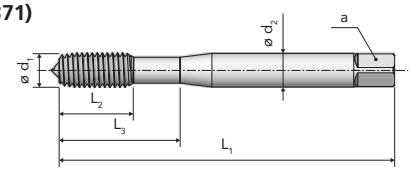
€ P.24

HSSE

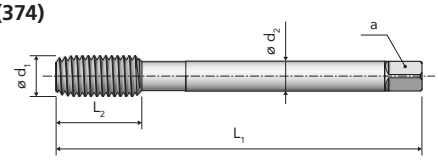
A81 TiN | A81 TiCN

A SERIES

DIN 2174 (371)
≤ M10x1,25



DIN 2174 (374)
≥ M12x1



6HX | 6HX

C (2-3) | C (2-3)

1,5xD | 1,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A81 TiN	A81 TiCN
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A81 TiN	A81 TiCN
M 3	0,35	56	10	18	3,5	2,7	4	2,85	•	•
4	0,5	63	12	21	4,5	3,4	5	3,8	•	•
5	0,5	70	14	24,5	6	4,9	5	4,8	•	•
6	0,75	80	16	29	6	4,9	5	5,65	•	•
8	1	90	18	33	8	6,2	5	7,55	•	•
10	1	90	18	34	10	8	6	9,55	•	•
10	1,25	100	20	36	10	8	6	9,4	•	•
12	1	100	22	-	9	7	6	11,55	•	•
12	1,25	100	22	-	9	7	6	11,4	•	•
12	1,5	100	22	-	9	7	6	11,3	•	•
14	1,25	100	22	-	11	9	6	13,4	•	•
14	1,5	100	22	-	11	9	6	13,3	•	•
16	1,5	100	22	-	12	9	6	15,3	•	•

€ P.24

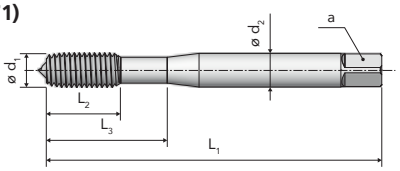
VERGNANO

COLD FORMING TAPS for blind and through holes
Without oil grooves

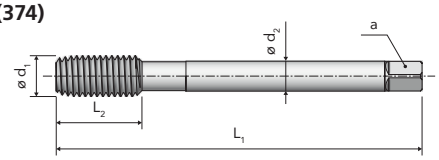
HSSE

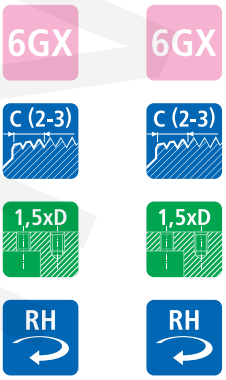
A81 6GX TiN | **A81 6GX** TiCN

DIN 2174 (371)
≤ M10x1,25



DIN 2174 (374)
≥ M12x1





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A81 6GX TiN	A81 6GX TiCN
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45

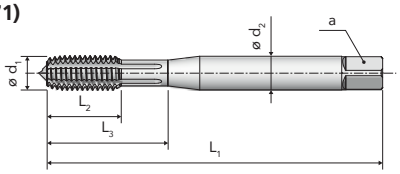
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A81 6GX TiN	A81 6GX TiCN
M 3	0,35	56	10	18	3,5	2,7	4	2,85	•	•
4	0,5	63	12	21	4,5	3,4	5	3,8	•	•
5	0,5	70	14	24,5	6	4,9	5	4,8	•	•
6	0,75	80	16	29	6	4,9	5	5,65	•	•
8	1	90	18	33	8	6,2	5	7,55	•	•
10	1	90	18	34	10	8	6	9,55	•	•
10	1,25	100	20	36	10	8	6	9,4	•	•
12	1	100	22	-	9	7	6	11,55	•	•
12	1,25	100	22	-	9	7	6	11,4	•	•
12	1,5	100	22	-	9	7	6	11,3	•	•
14	1,25	100	22	-	11	9	6	13,4	•	•
14	1,5	100	22	-	11	9	6	13,3	•	•
16	1,5	100	22	-	12	9	6	15,3	•	•

€ P.24

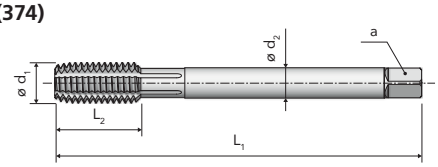
HSSE

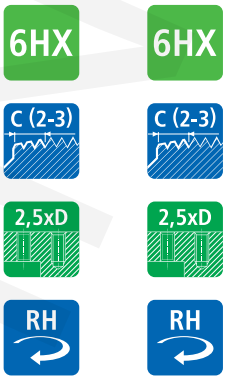
A81 N TiN | **A81 N** TiCN

DIN 2174 (371)
≤ M10x1,25



DIN 2174 (374)
≥ M12x1





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A81 N TiN	A81 N TiCN
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A81 N TiN	A81 N TiCN
M 3	0,35	56	10	18	3,5	2,7	4	2,85	•	•
4	0,5	63	12	21	4,5	3,4	5	3,8	•	•
5	0,5	70	14	24,5	6	4,9	5	4,8	•	•
6	0,75	80	16	29	6	4,9	5	5,65	•	•
8	1	90	18	33	8	6,2	5	7,55	•	•
10	1	90	18	34	10	8	6	9,55	•	•
10	1,25	100	20	36	10	8	6	9,4	•	•
12	1	100	22	-	9	7	6	11,55	•	•
12	1,25	100	22	-	9	7	6	11,4	•	•
12	1,5	100	22	-	9	7	6	11,3	•	•
14	1,25	100	22	-	11	9	6	13,4	•	•
14	1,5	100	22	-	11	9	6	13,3	•	•
16	1,5	100	22	-	12	9	6	15,3	•	•
18	1,5	110	22	-	14	11	8	17,3	•	•
20	1,5	125	25	-	16	12	8	19,3	•	•

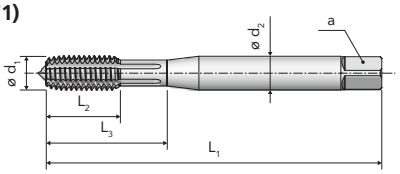
VERGNANO

COLD FORMING TAPS for blind and through holes
With oil grooves

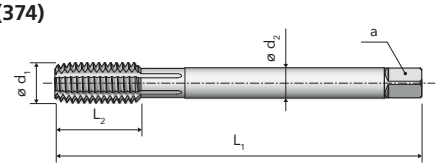
HSSE

A81 N 6GX TiN | **A81 N 6GX** TiCN

DIN 2174 (371)
≤ M10x1,25



DIN 2174 (374)
≥ M12x1



6GX | 6GX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

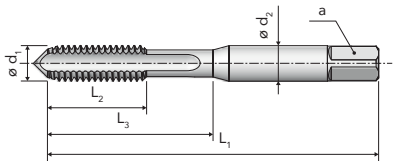
ISO	MG	A81 N 6GX TiN	A81 N 6GX TiCN
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A81 N 6GX TiN	A81 N 6GX TiCN		
M 3	0,35	56	10	18	3,5	2,7	4	2,85	•	•		
4	0,5	63	12	21	4,5	3,4	5	3,8	•	•		
5	0,5	70	14	24,5	6	4,9	5	4,8	•	•		
6	0,75	80	16	29	6	4,9	5	5,65	•	•		
8	1	90	18	33	8	6,2	5	7,55	•	•		
10	1	90	18	34	10	8	6	9,55	•	•		
10	1,25	100	20	36	10	8	6	9,4	•	•		
12	1	100	22	-	9	7	6	11,55	•	•		
12	1,25	100	22	-	9	7	6	11,4	•	•		
12	1,5	100	22	-	9	7	6	11,3	•	•		
14	1,25	100	22	-	11	9	6	13,4	•	•		
14	1,5	100	22	-	11	9	6	13,3	•	•		
16	1,5	100	22	-	12	9	6	15,3	•	•		
18	1,5	110	22	-	14	11	8	17,3	•	•		
20	1,5	125	25	-	16	12	8	19,3	•	•		

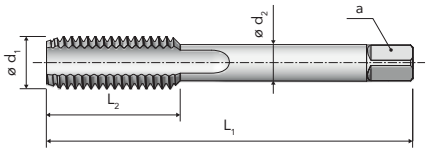
HSS

A7 ROUGHING	A7 SECOND	A7 FINISHING	A7 SET

DIN 2184-2
≤ Ø 1/4”



DIN 2184-2
≥ Ø 5/16”



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A7 ROUGHING	A7 SECOND	A7 FINISHING	A7 SET
P	P.1-4	•	•	•	•
	P.7	•	•	•	•
K	K.2	•	•	•	•
N	N.1-3	•	•	•	•
	N.5-7	•	•	•	•

		2B	2B
A (5-6)	D (4-5)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD	2,5xD
RH	RH	RH	RH

UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A7 ROUGHING	A7 SECOND	A7 FINISHING	A7 SET
Nr.1	64	1,854	36	7,5	12	2,8	2,1	3	1,55	•	•	•	•
Nr.2	56	2,184	36	8,5	13,5	2,8	2,1	3	1,85	•	•	•	•
Nr.3	48	2,515	40	8,5	14,5	2,8	2,1	3	2,1	•	•	•	•
Nr.4	40	2,845	40	10	18	3,5	2,7	3	2,35	•	•	•	•
Nr.5	40	3,175	40	10	18	3,5	2,7	3	2,65	•	•	•	•
Nr.6	32	3,505	45	11	20	4	3	3	2,85	•	•	•	•
Nr.8	32	4,166	45	12	21	4,5	3,4	3	3,5	•	•	•	•
Nr.10	24	4,826	50	14	23	6	4,9	3	3,9	•	•	•	•
Nr.12	24	5,486	56	16	28	6	4,9	3	4,5	•	•	•	•
1/4”	20	6,35	56	16	28	6	4,9	3	5,1	•	•	•	•
5/16”	18	7,938	63	22	-	6	4,9	3	6,6	•	•	•	•
3/8”	16	9,525	70	24	-	7	5,5	3	8	•	•	•	•
7/16”	14	11,113	70	24	-	8	6,2	3	9,4	•	•	•	•
1/2”	13	12,7	75	28	-	9	7	3	10,8	•	•	•	•
9/16”	12	14,288	80	28	-	11	9	4	12,2	•	•	•	•
5/8”	11	15,875	80	30	-	12	9	4	13,5	•	•	•	•
3/4”	10	19,05	95	32	-	14	11	4	16,5	•	•	•	•
7/8”	9	22,225	100	32	-	18	14,5	4	19,5	•	•	•	•
1”	8	25,4	110	36	-	18	14,5	4	22,25	•	•	•	•
1 1/8”	7	28,575	125	40	-	22	18	4	25	•	•	•	•
1 1/4”	7	31,75	125	40	-	22	18	4	28	•	•	•	•

€ P.26

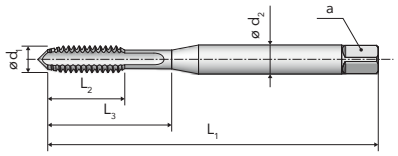
VERGNANO

MACHINE TAPS for blind holes (FC) and for through holes (FP)
Straight flutes

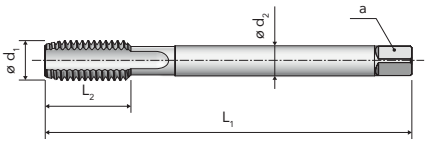
HSSE

A27 FC BRIGHT	A27 FC TiN	A27 FP BRIGHT	A27 FP TiN

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A27 FC BRIGHT	A27 FC TiN	A27 FP BRIGHT	A27 FP TiN
P	P.1		• 20-25		• 20-25
	P.2	• 10-12	• 15-20	• 10-12	• 15-20
	P.3	• 8-10	• 12-15	• 8-10	• 12-15
K	K.2	• 8-10	• 12-15	• 8-10	• 12-15
N	N.1		• 20-25		• 20-25
	N.5		• 15-20		• 15-20

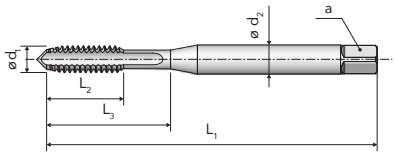
UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A27 FC BRIGHT	A27 FC TiN	A27 FP BRIGHT	A27 FP TiN
Nr.2	56	2,184	45	9	13	2,8	2,1	3	1,85	•	•	•	•
Nr.3	48	2,515	50	9	15	2,8	2,1	3	2,1	•	•	•	•
Nr.4	40	2,845	56	10	18	3,5	2,7	3	2,35	•	•	•	•
Nr.5	40	3,175	56	10	18	3,5	2,7	3	2,65	•	•	•	•
Nr.6	32	3,505	56	11	20	4	3	3	2,85	•	•	•	•
Nr.8	32	4,166	63	13	22	4,5	3,4	3	3,5	•	•	•	•
Nr.10	24	4,826	70	16	26,5	6	4,9	3	3,9	•	•	•	•
Nr.12	24	5,486	80	16	26,5	6	4,9	3	4,5	•	•	•	•
1/4”	20	6,35	80	17	30	7	5,5	3	5,1	•	•	•	•
5/16”	18	7,938	90	18	-	6	4,9	3	6,6	•	•	•	•
3/8”	16	9,525	100	22	-	7	5,5	3	8	•	•	•	•
7/16”	14	11,113	100	24	-	8	6,2	3	9,4	•	•	•	•
1/2”	13	12,7	110	26	-	9	7	3	10,8	•	•	•	•
9/16”	12	14,288	110	28	-	11	9	3	12,2	•	•	•	•
5/8”	11	15,875	110	28	-	12	9	3	13,5	•	•	•	•
3/4”	10	19,05	125	32	-	14	11	4	16,5	•	•	•	•
7/8”	9	22,225	140	32	-	18	14,5	4	19,5	•	•	•	•
1”	8	25,4	160	36	-	18	14,5	4	22,25	•	•	•	•
1 1/8”	7	28,575	180	40	-	22	18	4	25	•		•	
1 1/4”	7	31,75	180	40	-	22	18	4	28	•		•	
1 3/8”	6	34,925	200	50	-	28	22	4	30,75	•		•	
1 1/2”	6	38,1	200	50	-	28	22	4	34	•		•	

€ P.27

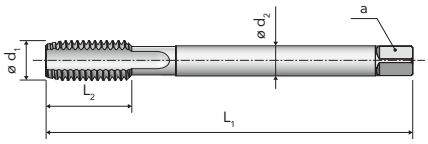
HSSE

A49 NITRIDED | **A49** TiCN

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2BX | 2BX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A49 NITRIDED	A49 TiCN
K	K.1	• 15-20	• 40-45
N	N.4	• 15-20	• 40-45
	N.7	• 15-20	• 40-45
	N.9-10	• 20-25	• 45-50

UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A49 NITRIDED	A49 TiCN
Nr.2	56	2,184	45	9	13	2,8	2,1	3	1,85	•	•
Nr.3	48	2,515	50	9	15	2,8	2,1	3	2,1	•	•
Nr.4	40	2,845	56	10	18	3,5	2,7	3	2,35	•	•
Nr.5	40	3,175	56	10	18	3,5	2,7	3	2,65	•	•
Nr.6	32	3,505	56	11	20	4	3	3	2,85	•	•
Nr.8	32	4,166	63	13	22	4,5	3,4	3	3,5	•	•
Nr.10	24	4,826	70	16	26,5	6	4,9	3	3,9	•	•
Nr.12	24	5,486	80	16	26,5	6	4,9	3	4,5	•	•
1/4”	20	6,35	80	17	30	7	5,5	3	5,1	•	•
5/16”	18	7,938	90	18	-	6	4,9	4	6,6	•	•
3/8”	16	9,525	100	22	-	7	5,5	4	8	•	•
7/16”	14	11,113	100	24	-	8	6,2	4	9,4	•	•
1/2”	13	12,7	110	26	-	9	7	4	10,8	•	•
9/16”	12	14,288	110	28	-	11	9	4	12,2	•	•
5/8”	11	15,875	110	28	-	12	9	4	13,5	•	•
3/4”	10	19,05	125	32	-	14	11	4	16,5	•	•
7/8”	9	22,225	140	32	-	18	14,5	4	19,5	•	•
1”	8	25,4	160	36	-	18	14,5	5	22,25	•	•
1 1/8”	7	28,575	180	40	-	22	18	5	25	•	
1 1/4”	7	31,75	180	40	-	22	18	5	28	•	
1 3/8”	6	34,925	200	50	-	28	22	5	30,75	•	
1 1/2”	6	38,1	200	50	-	28	22	5	34	•	

€ P.27

UNC

ASME B1.1

VERGNANO

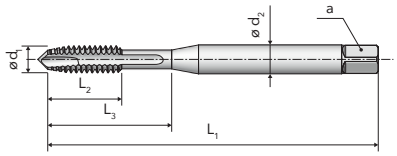
MACHINE TAPS for through holes
Straight flutes with spiral point

HSSE

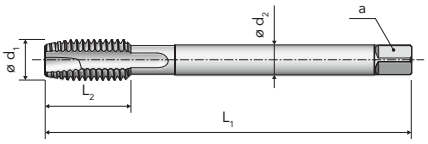
A19 S BRIGHT	A19 S TiN	A19 S TiCN	A19 S 3B BRIGHT

A SERIES

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2B | 2B | 2B | 3B

B (4-5) | B (4-5) | B (4-5) | B (4-5)

2,5xD | 2,5xD | 2,5xD | 2,5xD

RH | RH | RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A19 S BRIGHT	A19 S TiN	A19 S TiCN	A19 S 3B BRIGHT
P	P.2	• 20-25	• 30-35	• 30-35	• 20-25
	P.3	• 15-20	• 25-30	• 25-30	• 15-20
	P.4	• 12-15	• 20-25	• 20-25	• 12-15
	P.5		• 10-15	• 10-15	
	P.7		• 10-15	• 10-15	
M	M.1		• 10-15	• 10-15	
K	K.2	• 15-20	• 25-30	• 25-30	• 15-20
N	N.2-3	• 20-25	• 30-35	• 30-35	• 20-25
	N.6	• 15-18	• 25-30	• 25-30	• 15-18

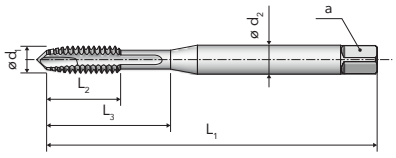
UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A19 S BRIGHT	A19 S TiN	A19 S TiCN	A19 S 3B BRIGHT
Nr.2	56	2,184	45	8	13	2,8	2,1	2	1,85	•	•	•	
Nr.3	48	2,515	50	9	15	2,8	2,1	3	2,1	•	•	•	
Nr.4	40	2,845	56	10	18	3,5	2,7	3	2,35	•	•	•	
Nr.5	40	3,175	56	10	18	3,5	2,7	3	2,65	•	•	•	
Nr.6	32	3,505	56	11	20	4	3	3	2,85	•	•	•	•
Nr.8	32	4,166	63	13	22	4,5	3,4	3	3,5	•	•	•	•
Nr.10	24	4,826	70	16	26,5	6	4,9	3	3,9	•	•	•	•
Nr.12	24	5,486	80	16	26,5	6	4,9	3	4,5	•	•	•	•
1/4”	20	6,35	80	17	30	7	5,5	3	5,1	•	•	•	•
5/16”	18	7,938	90	18	-	6	4,9	3	6,6	•	•	•	•
3/8”	16	9,525	100	22	-	7	5,5	3	8	•	•	•	•
7/16”	14	11,113	100	24	-	8	6,2	3	9,4	•	•	•	•
1/2”	13	12,7	110	26	-	9	7	3	10,8	•	•	•	•
9/16”	12	14,288	110	28	-	11	9	3	12,2	•	•	•	•
5/8”	11	15,875	110	28	-	12	9	3	13,5	•	•	•	•
3/4”	10	19,05	125	32	-	14	11	4	16,5	•	•	•	•
7/8”	9	22,225	140	32	-	18	14,5	4	19,5	•	•	•	
1”	8	25,4	160	36	-	18	14,5	4	22,25	•	•	•	
1 1/4"	7	31,75	180	40	-	22	18	4	28	•			
1 1/2"	6	38,1	200	50	-	28	22	4	34	•			

€ P.28

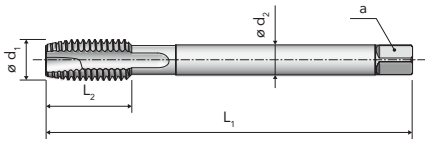
HSSE

A19 S
TiX2

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2B

B (4-5)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A19 S TiX2			
P	P.7	● 10-15			
M	M.1	● 10-15			

UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A19 S TiX2
Nr.6	32	3,505	56	11	20	4	3	3	2,85	●
Nr.8	32	4,166	63	13	22	4,5	3,4	3	3,5	●
Nr.10	24	4,826	70	16	26,5	6	4,9	3	3,9	●
Nr.12	24	5,486	80	16	26,5	6	4,9	3	4,5	●
1/4”	20	6,35	80	17	30	7	5,5	3	5,1	●
5/16”	18	7,938	90	18	-	6	4,9	3	6,6	●
3/8”	16	9,525	100	22	-	7	5,5	3	8	●
7/16”	14	11,113	100	24	-	8	6,2	3	9,4	●
1/2”	13	12,7	110	26	-	9	7	3	10,8	●
9/16”	12	14,288	110	28	-	11	9	3	12,2	●
5/8”	11	15,875	110	28	-	12	9	3	13,5	●
3/4”	10	19,05	125	32	-	14	11	4	16,5	●
7/8”	9	22,225	140	32	-	18	14,5	4	19,5	●
1”	8	25,4	160	36	-	18	14,5	4	22,25	●

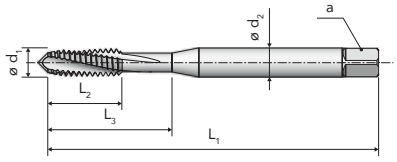
VERGNANO

MACHINE TAPS for blind holes
15° spiral flutes

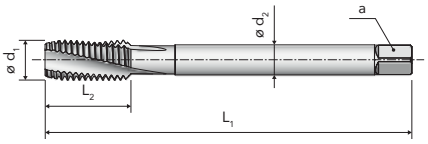
R15 | HSSE

A33 BRIGHT	A33 TiN	A33 3B BRIGHT

DIN 2184-1
≤ Ø 1/4"



DIN 2184-1
≥ Ø 5/16"



2B | 2B | 3B

C (2-3) | C (2-3) | C (2-3)

1,5xD | 1,5xD | 1,5xD

RH | RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

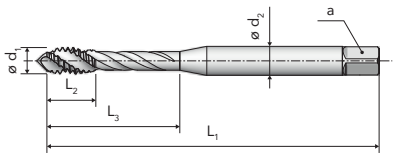
ISO	MG	A33 BRIGHT	A33 TiN	A33 3B BRIGHT
P	P.1	• 18-20	• 30-35	• 18-20
	P.2	• 15-18	• 25-30	• 15-18
	P.3	• 12-15	• 20-25	• 12-15
	P.4	• 10-12	• 15-20	• 10-12
	P.5		• 5-10	
K	K.2	• 12-15	• 20-25	• 12-15
N	N.1	• 18-20		• 18-20
	N.2-3	• 15-18	• 25-30	• 15-18
	N.5	• 15-18		• 15-18
	N.6	• 12-15	• 20-25	• 12-15

UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A33 BRIGHT	A33 TiN	A33 3B BRIGHT
Nr.2	56	2,184	45	8	13	2,8	2,1	3	1,85	•	•	
Nr.3	48	2,515	50	9	15	2,8	2,1	3	2,1	•	•	
Nr.4	40	2,845	56	10	18	3,5	2,7	3	2,35	•	•	
Nr.5	40	3,175	56	10	18	3,5	2,7	3	2,65	•	•	
Nr.6	32	3,505	56	11	20	4	3	3	2,85	•	•	•
Nr.8	32	4,166	63	13	20	4,5	3,4	3	3,5	•	•	•
Nr.10	24	4,826	70	16	26,5	6	4,9	3	3,9	•	•	•
Nr.12	24	5,486	80	16	29	6	4,9	3	4,5	•	•	•
1/4"	20	6,35	80	17	30	7	5,5	3	5,1	•	•	•
5/16"	18	7,938	90	18	-	6	4,9	3	6,6	•	•	•
3/8"	16	9,525	100	22	-	7	5,5	3	8	•	•	•
7/16"	14	11,113	100	24	-	8	6,2	3	9,4	•	•	•
1/2"	13	12,7	110	26	-	9	7	3	10,8	•	•	•
9/16"	12	14,288	110	28	-	11	9	3	12,2	•	•	•
5/8"	11	15,875	110	28	-	12	9	3	13,5	•	•	•
3/4"	10	19,05	125	32	-	14	11	4	16,5	•	•	•
7/8"	9	22,225	140	32	-	18	14,5	4	19,5	•	•	
1"	8	25,4	160	36	-	18	14,5	4	22,25	•	•	
1 1/8"	7	28,575	180	40	-	22	18	4	25	•		
1 1/4"	7	31,75	180	40	-	22	18	4	28	•		
1 3/8"	6	34,925	200	50	-	28	22	4	30,75	•		
1 1/2"	6	38,1	200	50	-	28	22	4	34	•		

R40 | HSSE

A60 S BRIGHT	A60 S TiN	A60 S TiCN	A60 S TiX2

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”

2B | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A60 S** BRIGHT	**A60 S** TiN	**A60 S** TiCN	**A60 S** TiX2
P	P.2	• 15-20	• 25-30	• 25-30	
	P.3	• 12-15	• 20-25	• 20-25	
	P.4	• 10-12	• 15-20	• 15-20	
	P.5		• 5-10	• 5-10	
	P.7		• 8-10	• 8-10	• 8-10
M	M.1		• 8-10	• 8-10	• 8-10
	M.2				• 5-7
K	K.2	• 12-15	• 20-25	• 20-25	
N	N.3	• 15-18	• 25-30	• 25-30	
	N.6	• 15-18	• 25-30	• 25-30	

UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A60 S BRIGHT	A60 S TiN	A60 S TiCN	A60 S TiX2
Nr.2	56	2,184	45	6	13	2,8	2,1	3	1,85	•	•	•	•
Nr.3	48	2,515	50	6	15	2,8	2,1	3	2,1	•	•	•	•
Nr.4	40	2,845	56	6,5	21	3,5	2,7	3	2,35	•	•	•	•
Nr.5	40	3,175	56	6,5	21	3,5	2,7	3	2,65	•	•	•	•
Nr.6	32	3,505	56	7,5	22,5	4	3	3	2,85	•	•	•	•
Nr.8	32	4,166	63	7,5	26	4,5	3,4	3	3,5	•	•	•	•
Nr.10	24	4,826	70	10	28,5	6	4,9	3	3,9	•	•	•	•
Nr.12	24	5,486	80	10	28,5	6	4,9	3	4,5	•	•	•	•
1/4”	20	6,35	80	11,5	32	7	5,5	3	5,1	•	•	•	•
5/16”	18	7,938	90	13	-	6	4,9	3	6,6	•	•	•	•
3/8”	16	9,525	100	14	-	7	5,5	3	8	•	•	•	•
7/16”	14	11,113	100	17	-	8	6,2	3	9,4	•	•	•	•
1/2”	13	12,7	110	19	-	9	7	4	10,8	•	•	•	•
9/16”	12	14,288	110	21	-	11	9	4	12,2	•	•	•	•
5/8”	11	15,875	110	22,5	-	12	9	4	13,5	•	•	•	•
3/4”	10	19,05	125	26	-	14	11	4	16,5	•	•	•	•
7/8”	9	22,225	140	30	-	18	14,5	4	19,5	•	•	•	•
1”	8	25,4	160	36,5	-	18	14,5	4	22,25	•	•	•	•
1 1/4"	7	31,75	180	42	-	22	18	5	28	•			
1 1/2"	6	38,1	200	49	-	28	22	5	34	•			

€ P.29

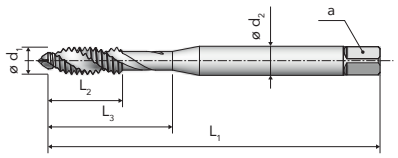
VERGNANO

MACHINE TAPS for blind holes
Two 40° spiral flutes / for light alloys

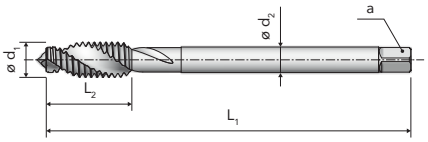
R40 z2 | HSSE

A65
BRIGHT

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2B

C (2-3)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A65 BRIGHT			
N	N.1-2	• 12-15			
	N.5-6	• 10-15			
S	S.1	• 6-8			
	S.3	• 6-8			

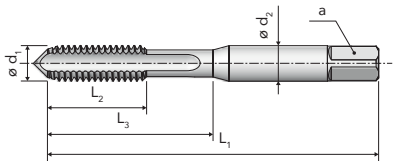
UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A65 BRIGHT
Nr.3	48	2,515	50	9	15	2,8	2,1	2	2,1	•
Nr.4	40	2,845	56	10	18	3,5	2,7	2	2,35	•
Nr.5	40	3,175	56	10	18	3,5	2,7	2	2,65	•
Nr.6	32	3,505	56	11	20	4	3	2	2,85	•
Nr.8	32	4,166	63	13	20	4,5	3,4	2	3,5	•
Nr.10	24	4,826	70	16	26,5	6	4,9	2	3,9	•
Nr.12	24	5,486	80	16	29	6	4,9	2	4,5	•
1/4”	20	6,35	80	17	30	7	5,5	2	5,1	•
5/16”	18	7,938	90	18	-	6	4,9	2	6,6	•
3/8”	16	9,525	100	22	-	7	5,5	2	8	•

€ P.30

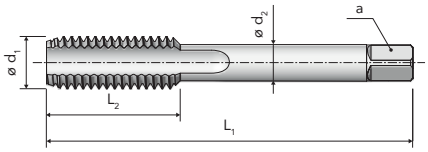
HSS

A8 ROUGHING	A8 FINISHING	A8 SET

DIN 2184-2
≤ Ø 1/4”



DIN 2184-2
≥ Ø 5/16”



—	2B	2B	
A (5-6)	C (2-3)	C (2-3)	
2,5xD	2,5xD	2,5xD	
RH	RH	RH	

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A8 ROUGHING	A8 FINISHING	A8 SET	
P	P.1-4	•	•	•	
	P.7	•	•	•	
K	K.2	•	•	•	
N	N.1-3	•	•	•	
	N.5-7	•	•	•	

UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A8 ROUGHING	A8 FINISHING	A8 SET
Nr.2	64	2,184	36	9	15	2,8	2,1	3	1,85	•	•	•
Nr.3	56	2,515	40	9	15	2,8	2,1	3	2,15	•	•	•
Nr.4	48	2,845	40	10	18	3,5	2,7	3	2,4	•	•	•
Nr.5	44	3,175	40	10	18	3,5	2,7	3	2,7	•	•	•
Nr.6	40	3,505	45	11	20	4	3	3	2,95	•	•	•
Nr.8	36	4,166	45	12	21	4,5	3,4	3	3,5	•	•	•
Nr.10	32	4,826	50	14	23	6	4,9	3	4,1	•	•	•
Nr.12	28	5,486	56	16	28	6	4,9	3	4,6	•	•	•
1/4”	28	6,35	56	16	28	6	4,9	3	5,5	•	•	•
5/16”	24	7,938	63	18	-	6	4,9	3	6,9	•	•	•
3/8”	24	9,525	63	18	-	7	5,5	3	8,5	•	•	•
7/16”	20	11,113	70	20	-	8	6,2	3	9,9	•	•	•
1/2”	20	12,7	70	20	-	9	7	4	11,5	•	•	•
9/16”	18	14,288	70	22	-	11	9	4	12,9	•	•	•
5/8”	18	15,875	70	22	-	12	9	4	14,5	•	•	•
3/4”	16	19,05	80	22	-	14	11	4	17,5	•	•	•
7/8”	14	22,225	80	22	-	18	14,5	4	20,4	•	•	•
1”	12	25,4	90	22	-	18	14,5	4	23,25	•	•	•
1 1/8”	12	28,575	90	22	-	22	18	4	26,5	•	•	•
1 1/4”	12	31,75	90	22	-	22	18	4	29,5	•	•	•

€ P.30

UNF

ASME B1.1

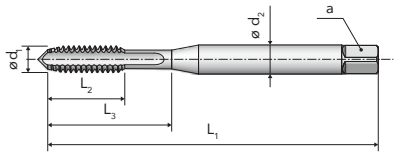
VERGNANO

MACHINE TAPS for blind holes (FC) and for through holes (FP)
Straight flutes

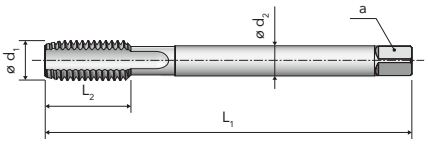
HSSE

A28 FC BRIGHT	A28 FC TiN	A28 FP BRIGHT	A28 FP TiN

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



APPLICATION RANGE - CUTTING SPEED m/min

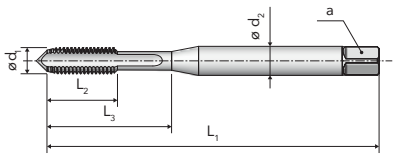
ISO	MG	A28 FC BRIGHT	A28 FC TiN	A28 FP BRIGHT	A28 FP TiN
P	P.1		• 20-25		• 20-25
	P.2	• 10-12	• 15-20	• 10-12	• 15-20
	P.3	• 8-10	• 12-15	• 8-10	• 12-15
K	K.2	• 8-10	• 12-15	• 8-10	• 12-15
N	N.1		• 20-25		• 20-25
	N.5		• 15-20		• 15-20

UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A28 FC BRIGHT	A28 FC TiN	A28 FP BRIGHT	A28 FP TiN
Nr.2	64	2,184	45	9	13	2,8	2,1	3	1,85	•	•	•	•
Nr.3	56	2,515	50	9	15	2,8	2,1	3	2,15	•	•	•	•
Nr.4	48	2,845	56	10	18	3,5	2,7	3	2,4	•	•	•	•
Nr.5	44	3,175	56	10	18	3,5	2,7	3	2,7	•	•	•	•
Nr.6	40	3,505	56	11	20	4	3	3	2,95	•	•	•	•
Nr.8	36	4,166	63	12	21	4,5	3,4	3	3,5	•	•	•	•
Nr.10	32	4,826	70	14	24,5	6	4,9	3	4,1	•	•	•	•
Nr.12	28	5,486	80	16	26,5	6	4,9	3	4,6	•	•	•	•
1/4”	28	6,35	80	16	30	7	5,5	3	5,5	•	•	•	•
5/16”	24	7,938	90	18	-	6	4,9	3	6,9	•	•	•	•
3/8”	24	9,525	90	18	-	7	5,5	3	8,5	•	•	•	•
7/16”	20	11,113	100	20	-	8	6,2	3	9,9	•	•	•	•
1/2”	20	12,7	100	22	-	9	7	3	11,5	•	•	•	•
9/16”	18	14,288	100	22	-	11	9	3	12,9	•	•	•	•
5/8”	18	15,875	100	22	-	12	9	3	14,5	•	•	•	•
3/4”	16	19,05	110	25	-	14	11	4	17,5	•	•	•	•
7/8”	14	22,225	125	25	-	18	14,5	4	20,4	•	•	•	•
1”	12	25,4	140	28	-	18	14,5	4	23,25	•	•	•	•
1 1/8”	12	28,575	150	28	-	22	18	4	26,5	•		•	
1 1/4”	12	31,75	150	28	-	22	18	4	29,5	•		•	
1 3/8”	12	34,925	170	30	-	28	22	4	32,75	•		•	
1 1/2”	12	38,1	170	30	-	28	22	5	36	•		•	

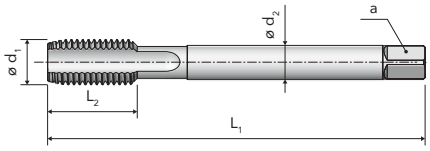
HSSE

A50 NITRIDED | **A50** TiCN

DIN 2184-1
≤ Ø 1/4"



DIN 2184-1
≥ Ø 5/16"



2BX | 2BX

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A50 NITRIDED	A50 TiCN
K	K.1	• 15-20	• 40-45
N	N.4	• 15-20	• 40-45
	N.7	• 15-20	• 40-45
	N.9-10	• 20-25	• 45-50

UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A50 NITRIDED	A50 TiCN
Nr.8	36	4,166	63	12	21	4,5	3,4	3	3,5	•	•
Nr.10	32	4,826	70	14	24,5	6	4,9	3	4,1	•	•
Nr.12	28	5,486	80	16	26,5	6	4,9	3	4,6	•	•
1/4"	28	6,35	80	16	30	7	5,5	3	5,5	•	•
5/16"	24	7,938	90	18	-	6	4,9	4	6,9	•	•
3/8"	24	9,525	90	18	-	7	5,5	4	8,5	•	•
7/16"	20	11,113	100	20	-	8	6,2	4	9,9	•	•
1/2"	20	12,7	100	22	-	9	7	4	11,5	•	•
9/16"	18	14,288	100	22	-	11	9	4	12,9	•	•
5/8"	18	15,875	100	22	-	12	9	4	14,5	•	•
3/4"	16	19,05	110	25	-	14	11	4	17,5	•	•
7/8"	14	22,225	125	25	-	18	14,5	4	20,4	•	•
1"	12	25,4	140	28	-	18	14,5	5	23,25	•	•
1 1/8"	12	28,575	150	28	-	22	18	5	26,5	•	
1 1/4"	12	31,75	150	28	-	22	18	5	29,5	•	
1 3/8"	12	34,925	170	30	-	28	22	5	32,75	•	
1 1/2"	12	38,1	170	30	-	28	22	5	36	•	

€ P.31

UNF

ASME B1.1

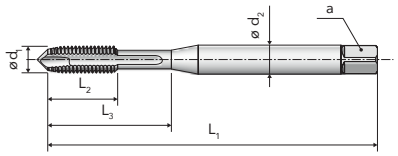
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

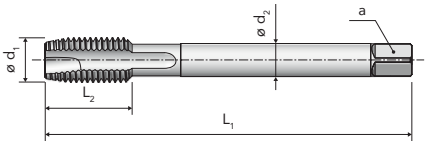
HSSE

A SERIES

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



A20 S BRIGHT	A20 S TiN	A20 S TiCN	A20 S 3B BRIGHT

2B | 2B | 2B | 3B

B (4-5) | B (4-5) | B (4-5) | B (4-5)

2,5xD | 2,5xD | 2,5xD | 2,5xD

RH | RH | RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A20 S BRIGHT	A20 S TiN	A20 S TiCN	A20 S 3B BRIGHT
P	P.2	• 20-25	• 30-35	• 30-35	• 20-25
	P.3	• 15-20	• 25-30	• 25-30	• 15-20
	P.4	• 12-15	• 20-25	• 20-25	• 12-15
	P.5		• 10-15	• 10-15	
	P.7		• 10-15	• 10-15	
M	M.1		• 10-15	• 10-15	
K	K.2	• 15-20	• 25-30	• 25-30	• 15-20
N	N.2-3	• 20-25	• 30-35	• 30-35	• 20-25
	N.6	• 15-18	• 25-30	• 25-30	• 15-18

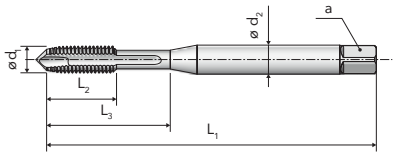
UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A20 S BRIGHT	A20 S TiN	A20 S TiCN	A20 S 3B BRIGHT
Nr.2	64	2,184	45	8	13	2,8	2,1	2	1,85	•	•	•	
Nr.3	56	2,515	50	9	15	2,8	2,1	3	2,15	•	•	•	
Nr.4	48	2,845	56	10	18	3,5	2,7	3	2,4	•	•	•	
Nr.5	44	3,175	56	10	18	3,5	2,7	3	2,7	•	•	•	
Nr.6	40	3,505	56	11	20	4	3	3	2,95	•	•	•	•
Nr.8	36	4,166	63	12	21	4,5	3,4	3	3,5	•	•	•	•
Nr.10	32	4,826	70	14	24,5	6	4,9	3	4,1	•	•	•	•
Nr.12	28	5,486	80	16	26,5	6	4,9	3	4,6	•	•	•	•
1/4”	28	6,35	80	16	30	7	5,5	3	5,5	•	•	•	•
5/16”	24	7,938	90	18	-	6	4,9	3	6,9	•	•	•	•
3/8”	24	9,525	90	18	-	7	5,5	3	8,5	•	•	•	•
7/16”	20	11,113	100	20	-	8	6,2	3	9,9	•	•	•	•
1/2”	20	12,7	100	22	-	9	7	4	11,5	•	•	•	•
9/16”	18	14,288	100	22	-	11	9	4	12,9	•	•	•	•
5/8”	18	15,875	100	22	-	12	9	4	14,5	•	•	•	•
3/4”	16	19,05	110	25	-	14	11	4	17,5	•	•	•	•
7/8”	14	22,225	125	25	-	18	14,5	4	20,4	•	•	•	
1”	12	25,4	140	28	-	18	14,5	4	23,25	•	•	•	
1 1/4"	12	31,75	150	28	-	22	18	4	29,5	•			
1 1/2"	12	38,1	170	30	-	28	22	5	36	•			

€ P.32

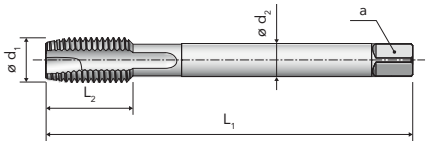
HSSE

A20 S
TiX2

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2B

B (4-5)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A20 S TiX2			
P	P.7	● 10-15			
M	M.1	● 10-15			

UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A20 S TiX2
Nr.6	40	3,505	56	11	20	4	3	3	2,95	●
Nr.8	36	4,166	63	12	21	4,5	3,4	3	3,5	●
Nr.10	32	4,826	70	14	24,5	6	4,9	3	4,1	●
Nr.12	28	5,486	80	16	26,5	6	4,9	3	4,6	●
1/4”	28	6,35	80	16	30	7	5,5	3	5,5	●
5/16”	24	7,938	90	18	-	6	4,9	3	6,9	●
3/8”	24	9,525	90	18	-	7	5,5	3	8,5	●
7/16”	20	11,113	100	20	-	8	6,2	3	9,9	●
1/2”	20	12,7	100	22	-	9	7	4	11,5	●
9/16”	18	14,288	100	22	-	11	9	4	12,9	●
5/8”	18	15,875	100	22	-	12	9	4	14,5	●
3/4”	16	19,05	110	25	-	14	11	4	17,5	●
7/8”	14	22,225	125	25	-	18	14,5	4	20,4	●
1”	12	25,4	140	28	-	18	14,5	4	23,25	●

UNF

ASME B1.1

VERGNANO

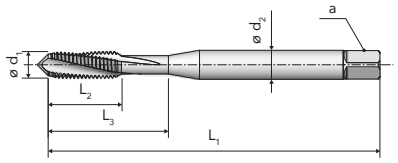
MACHINE TAPS for blind holes
15° spiral flutes

R15 | HSSE

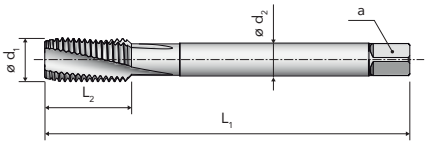
A SERIES

A34 BRIGHT	A34 TiN	A34 3B BRIGHT

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2B | 2B | 3B

C (2-3) | C (2-3) | C (2-3)

1,5xD | 1,5xD | 1,5xD

RH | RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A34 BRIGHT	A34 TiN	A34 3B BRIGHT
P	P.1	• 18-20	• 30-35	• 18-20
	P.2	• 15-18	• 25-30	• 15-18
	P.3	• 12-15	• 20-25	• 12-15
	P.4	• 10-12	• 15-20	• 10-12
	P.5		• 5-10	
K	K.2	• 12-15	• 20-25	• 12-15
N	N.1	• 18-20		• 18-20
	N.2-3	• 15-18	• 25-30	• 15-18
	N.5	• 15-18		• 15-18
	N.6	• 12-15	• 20-25	• 12-15

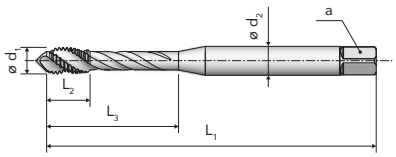
UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A34 BRIGHT	A34 TiN	A34 3B BRIGHT
Nr.2	64	2,184	45	8	13	2,8	2,1	3	1,85	•	•	
Nr.3	56	2,515	50	9	15	2,8	2,1	3	2,15	•	•	
Nr.4	48	2,845	56	10	18	3,5	2,7	3	2,4	•	•	
Nr.5	44	3,175	56	10	18	3,5	2,7	3	2,7	•	•	
Nr.6	40	3,505	56	11	20	4	3	3	2,95	•	•	•
Nr.8	36	4,166	63	12	21	4,5	3,4	3	3,5	•	•	•
Nr.10	32	4,826	70	14	24,5	6	4,9	3	4,1	•	•	•
Nr.12	28	5,486	80	16	26,5	6	4,9	3	4,6	•	•	•
1/4”	28	6,35	80	16	30	7	5,5	3	5,5	•	•	•
5/16”	24	7,938	90	18	-	6	4,9	3	6,9	•	•	•
3/8”	24	9,525	90	18	-	7	5,5	3	8,5	•	•	•
7/16”	20	11,113	100	20	-	8	6,2	3	9,9	•	•	•
1/2”	20	12,7	100	22	-	9	7	3	11,5	•	•	•
9/16”	18	14,288	100	22	-	11	9	3	12,9	•	•	•
5/8”	18	15,875	100	22	-	12	9	3	14,5	•	•	•
3/4”	16	19,05	110	25	-	14	11	4	17,5	•	•	•
7/8”	14	22,225	125	25	-	18	14,5	4	20,4	•	•	
1”	12	25,4	140	28	-	18	14,5	4	23,25	•	•	
1 1/8”	12	28,575	150	28	-	22	18	4	26,5	•		
1 1/4”	12	31,75	150	28	-	22	18	4	29,5	•		
1 3/8”	12	34,925	170	30	-	28	22	5	32,75	•		
1 1/2”	12	38,1	170	30	-	28	22	5	36	•		

€ P.33

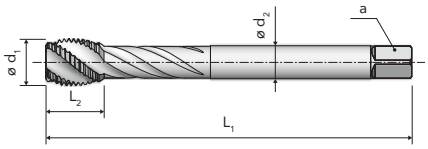
R40 | HSSE

A61 S BRIGHT	A61 S TiN	A61 S TiCN	A61 S TiX2

DIN 2184-1
≤ Ø 1/4"



DIN 2184-1
≥ Ø 5/16"



2B | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A61 S BRIGHT	A61 S TiN	A61 S TiCN	A61 S TiX2
P	P.2	● 15-20	● 25-30	● 25-30	
	P.3	● 12-15	● 20-25	● 20-25	
	P.4	● 10-12	● 15-20	● 15-20	
	P.5		● 5-10	● 5-10	
	P.7		● 8-10	● 8-10	● 8-10
M	M.1		● 8-10	● 8-10	● 8-10
	M.2				● 5-7
K	K.2	● 12-15	● 20-25	● 20-25	
N	N.3	● 15-18	● 25-30	● 25-30	
	N.6	● 15-18	● 25-30	● 25-30	

UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A61 S BRIGHT	A61 S TiN	A61 S TiCN	A61 S TiX2
Nr.2	64	2,184	45	5,5	13	2,8	2,1	3	1,85	●	●	●	
Nr.3	56	2,515	50	6	18	2,8	2,1	3	2,15	●	●	●	
Nr.4	48	2,845	56	6	18	3,5	2,7	3	2,4	●	●	●	
Nr.5	44	3,175	56	6	18	3,5	2,7	3	2,7	●	●	●	
Nr.6	40	3,505	56	6,5	22	4	3	3	2,95	●	●	●	●
Nr.8	36	4,166	63	7	26,5	4,5	3,4	3	3,5	●	●	●	●
Nr.10	32	4,826	70	8	29	6	4,9	3	4,1	●	●	●	●
Nr.12	28	5,486	80	9	29,5	6	4,9	3	4,6	●	●	●	●
1/4"	28	6,35	80	10	32	7	5,5	3	5,5	●	●	●	●
5/16"	24	7,938	90	11	-	6	4,9	3	6,9	●	●	●	●
3/8"	24	9,525	90	12	-	7	5,5	3	8,5	●	●	●	●
7/16"	20	11,113	100	13,5	-	8	6,2	3	9,9	●	●	●	●
1/2"	20	12,7	100	14,5	-	9	7	4	11,5	●	●	●	●
9/16"	18	14,288	100	15,5	-	11	9	4	12,9	●	●	●	●
5/8"	18	15,875	100	16	-	12	9	4	14,5	●	●	●	●
3/4"	16	19,05	110	18	-	14	11	4	17,5	●	●	●	●
7/8"	14	22,225	125	23,5	-	18	14,5	4	20,4	●	●	●	●
1"	12	25,4	140	26	-	18	14,5	4	23,25	●	●	●	●
1 1/4"	12	31,75	150	26	-	22	18	5	29,5	●			
1 1/2"	12	38,1	170	29	-	28	22	5	36	●			

€ P.33

UNF

ASME B1.1

VERGNANO

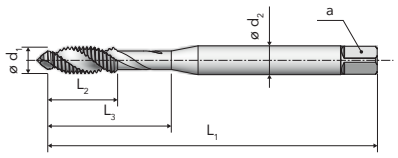
MACHINE TAPS for blind holes
Two 40° spiral flutes / for light alloys

R40 z2 | HSSE

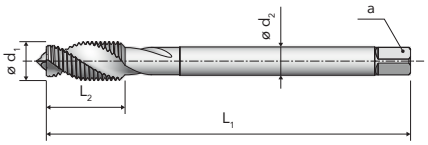
A66
BRIGHT

A SERIES

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2B

C (2-3)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A66 BRIGHT			
N	N.1-2	• 12-15			
	N.5-6	• 10-15			
S	S.1	• 6-8			
	S.3	• 6-8			

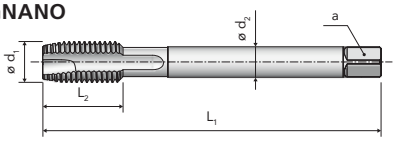
UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A66 BRIGHT
Nr.2	64	2,184	45	8	13	2,8	2,1	2	1,85	•
Nr.3	56	2,515	50	9	15	2,8	2,1	2	2,15	•
Nr.4	48	2,845	56	10	18	3,5	2,7	2	2,4	•
Nr.5	44	3,175	56	10	18	3,5	2,7	2	2,7	•
Nr.6	40	3,505	56	11	20	4	3	2	2,95	•
Nr.8	36	4,166	63	12	21	4,5	3,4	2	3,5	•
Nr.10	32	4,826	70	14	24,5	6	4,9	2	4,1	•
Nr.12	28	5,486	80	16	26,5	6	4,9	2	4,6	•
1/4”	28	6,35	80	16	30	7	5,5	2	5,5	•
5/16”	24	7,938	90	18	-	6	4,9	2	6,9	•
3/8”	24	9,525	90	18	-	7	5,5	2	8,5	•

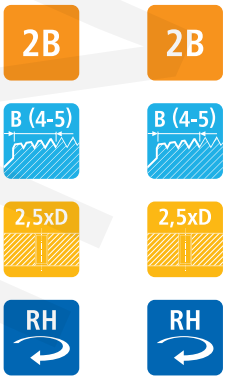
€ P.34

HSSE

A119 BRIGHT | **A119** TiN

NORM VERGNANO





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A119 BRIGHT	A119 TiN
P	P.2	● 20-25	● 30-35
	P.3	● 15-20	● 25-30
	P.4	● 12-15	● 20-25
	P.5		● 10-15
	P.7		● 10-15
M	M.1		● 10-15
K	K.2	● 15-20	● 25-30
N	N.2-3	● 20-25	● 30-35
	N.6	● 15-18	● 25-30

8-UN	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A119 BRIGHT	A119 TiN
1 1/8"	8	28,575	180	40	-	22	18	4	25,4	●	●
1 1/4"	8	31,75	180	40	-	25	20	4	28,6	●	●
1 3/8"	8	34,925	200	50	-	28	22	4	31,8	●	●
1 1/2"	8	38,1	200	50	-	32	24	4	35	●	●
1 5/8"	8	41,275	200	50	-	32	24	5	38,1	●	●
1 3/4"	8	44,45	200	50	-	36	29	5	41,3	●	●
1 7/8"	8	47,625	225	60	-	36	29	5	44,5	●	●
2"	8	50,8	225	60	-	40	32	5	47,7	●	●

VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

R40 | HSSE

NORM VERGNANO

	A160 BRIGHT	A160 TiN
		
	2B	2B
	C (2-3)	C (2-3)
	2,5xD	2,5xD
	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A160 BRIGHT	A160 TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K.2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

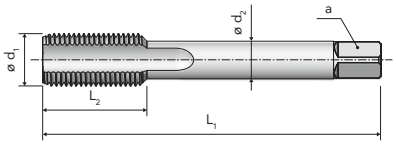
8-UN	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A160 BRIGHT	A160 TiN
1 1/8"	8	28,575	180	40	-	22	18	4	25,4	•	•
1 1/4"	8	31,75	180	41,5	-	25	20	4	28,6	•	•
1 3/8"	8	34,925	200	50	-	28	22	4	31,1	•	•
1 1/2"	8	38,1	200	50	-	32	24	5	35	•	•
1 5/8"	8	41,275	200	52	-	32	24	5	38,1	•	•
1 3/4"	8	44,45	200	52	-	36	29	5	41,3	•	•
1 7/8"	8	47,625	225	53,5	-	36	29	5	44,5	•	•
2"	8	50,8	225	61,5	-	40	32	5	47,7	•	•

€ P.34

HSS

A5 ROUGHING | **A5** FINISHING | **A5** SET

DIN 5157



APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A5** ROUGHING	**A5** FINISHING	**A5** SET	
P	P.1-4	•	•	•	
	P.7	•	•	•	
K	K.2	•	•	•	
N	N.1-3	•	•	•	
	N.5-7	•	•	•	

		ISO 5969	ISO 5969
	A (5-6)	C (2-3)	C (2-3)
	2,5xD	2,5xD	2,5xD
	RH	RH	RH

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A5 ROUGHING	A5 FINISHING	A5 SET
1/8"	28	9,728	63	18	-	7	5,5	3	8,8	•	•	•
1/4"	19	13,157	70	20	-	11	9	4	11,8	•	•	•
3/8"	19	16,662	70	20	-	12	9	4	15,25	•	•	•
1/2"	14	20,955	80	22	-	16	12	4	19	•	•	•
5/8"	14	22,911	80	22	-	18	14,5	4	21	•	•	•
3/4"	14	26,441	90	22	-	20	16	4	24,5	•	•	•
7/8"	14	30,201	90	22	-	22	18	4	28,25	•	•	•
1"	11	33,249	100	25	-	25	20	4	30,75	•	•	•
1 1/8"	11	37,897	125	32	-	28	22	5	35,5	•	•	•
1 1/4"	11	41,91	125	32	-	32	24	5	39,5	•	•	•
1 1/2"	11	47,803	140	32	-	36	29	6	45,25	•	•	•
1 3/4"	11	53,746	140	36	-	40	32	6	51	•	•	•
2"	11	59,614	160	36	-	45	35	6	57	•	•	•

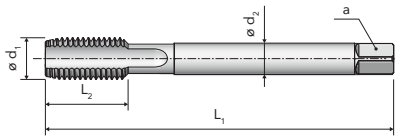
€ P.35

VERGNANO

MACHINE TAPS for blind holes (FC) and for through holes (FP)
Straight flutes

HSSE

DIN 5156



	A26 FC BRIGHT	A26 FP BRIGHT
		
	ISO 5969	ISO 5969
	C (2-3)	A (5-6)
	1,5xD	1,5xD
	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A26 FC BRIGHT	A26 FP BRIGHT
P	P.2	• 10-12	• 10-12
	P.3	• 8-10	• 8-10
K	K.2	• 8-10	• 8-10

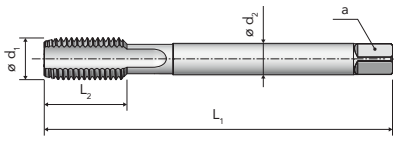
G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A26 FC BRIGHT	A26 FP BRIGHT
1/8"	28	9,728	90	18	-	7	5,5	3	8,8	•	•
1/4"	19	13,157	100	22	-	11	9	3	11,8	•	•
3/8"	19	16,662	100	22	-	12	9	3	15,25	•	•
1/2"	14	20,955	125	25	-	16	12	4	19	•	•
5/8"	14	22,911	125	25	-	18	14,5	4	21	•	•
3/4"	14	26,441	140	28	-	20	16	4	24,5	•	•
7/8"	14	30,201	150	28	-	22	18	4	28,25	•	•
1"	11	33,249	160	30	-	25	20	4	30,75	•	•
1 1/8"	11	37,897	170	30	-	28	22	5	35,5	•	•
1 1/4"	11	41,91	170	30	-	32	24	5	39,5	•	•
1 1/2"	11	47,803	190	32	-	36	29	6	45,25	•	•
1 3/4"	11	53,746	190	32	-	40	32	6	51	•	•
2"	11	59,614	220	40	-	45	35	6	57	•	•
2 1/2"	11	75,184	250	50	-	45	35	8	72,8	•	•

€ P.35

HSSE

A48 NITRIDED | **A48** TiCN

DIN 5156



ISO 5969 X | C (2-3) | 2,5xD | RH

ISO 5969 X | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A48 NITRIDED	A48 TiCN
K	K.1	• 15-20	• 40-45
N	N.4	• 15-20	• 40-45
	N.7	• 15-20	• 40-45
	N.9-10	• 20-25	• 45-50

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A48 NITRIDED	A48 TiCN
1/8"	28	9,728	90	18	-	7	5,5	4	8,8	•	•
1/4"	19	13,157	100	22	-	11	9	4	11,8	•	•
3/8"	19	16,662	100	22	-	12	9	4	15,25	•	•
1/2"	14	20,955	125	25	-	16	12	4	19	•	•
5/8"	14	22,911	125	25	-	18	14,5	4	21	•	•
3/4"	14	26,441	140	28	-	20	16	5	24,5	•	•
7/8"	14	30,201	150	28	-	22	18	5	28,25	•	•
1"	11	33,249	160	30	-	25	20	5	30,75	•	•
1 1/8"	11	37,897	170	30	-	28	22	6	35,5	•	
1 1/4"	11	41,91	170	30	-	32	24	6	39,5	•	
1 1/2"	11	47,803	190	32	-	36	29	6	45,25	•	

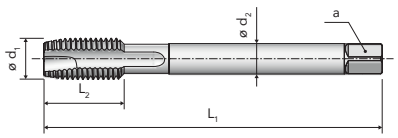
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

HSSE

A18 S BRIGHT	A18 S VAP	A18 S TiCN	A18 S TiX2

DIN 5156



ISO 5969 | B (4-5) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A18 S BRIGHT	A18 S VAP	A18 S TiCN	A18 S TiX2
P	P.2	• 20-25	• 20-25	• 30-35	
	P.3	• 15-20	• 15-20	• 25-30	
	P.4	• 12-15	• 12-15	• 20-25	
	P.5			• 10-15	
	P.7			• 10-15	• 10-15
M	M.1			• 10-15	• 10-15
K	K.2	• 15-20	• 15-20	• 25-30	
N	N.2-3	• 20-25	• 20-25	• 30-35	
	N.6	• 15-18	• 15-18	• 25-30	

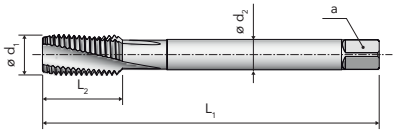
G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A18 S BRIGHT	A18 S VAP	A18 S TiCN	A18 S TiX2
1/8"	28	9,728	90	18	-	7	5,5	4	8,8	•	•	•	•
1/4"	19	13,157	100	22	-	11	9	4	11,8	•	•	•	•
3/8"	19	16,662	100	22	-	12	9	4	15,25	•	•	•	•
1/2"	14	20,955	125	25	-	16	12	4	19	•	•	•	•
5/8"	14	22,911	125	25	-	18	14,5	4	21	•	•	•	•
3/4"	14	26,441	140	28	-	20	16	4	24,5	•	•	•	•
7/8"	14	30,201	150	28	-	22	18	4	28,25	•	•	•	•
1"	11	33,249	160	30	-	25	20	4	30,75	•	•	•	•
1 1/8"	11	37,897	170	30	-	28	22	5	35,5	•			
1 1/4"	11	41,91	170	30	-	32	24	5	39,5	•			
1 1/2"	11	47,803	190	32	-	36	29	5	45,25	•			

€ P.36

R15 | HSSE

A32 BRIGHT | **A32** TiN

DIN 5156



ISO 5969 | C (2-3) | 1,5xD | RH

ISO 5969 | C (2-3) | 1,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A32 BRIGHT	A32 TiN
P	P.1	• 18-20	• 30-35
	P.2	• 15-18	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
K	K.2	• 12-15	• 20-25
N	N.1	• 18-20	
	N.2-3	• 15-18	• 25-30
	N.5	• 15-18	
	N.6	• 12-15	• 20-25

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A32 BRIGHT	A32 TiN
1/8"	28	9,728	90	18	-	7	5,5	3	8,8	•	•
1/4"	19	13,157	100	22	-	11	9	3	11,8	•	•
3/8"	19	16,662	100	22	-	12	9	3	15,25	•	•
1/2"	14	20,955	125	25	-	16	12	4	19	•	•
5/8"	14	22,911	125	25	-	18	14,5	4	21	•	•
3/4"	14	26,441	140	28	-	20	16	4	24,5	•	•
7/8"	14	30,201	150	28	-	22	18	4	28,25	•	•
1"	11	33,249	160	30	-	25	20	4	30,75	•	•
1 1/8"	11	37,897	170	30	-	28	22	5	35,5	•	
1 1/4"	11	41,91	170	30	-	32	24	5	39,5	•	
1 1/2"	11	47,803	190	32	-	36	29	6	45,25	•	
1 3/4"	11	53,746	190	32	-	40	32	6	51	•	
2"	11	59,614	220	40	-	45	35	6	57	•	
2 1/2"	11	75,184	250	50	-	45	35	8	72,8	•	

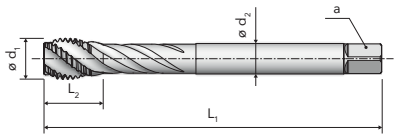
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

R40 | HSSE

A59 S BRIGHT	A59 S VAP	A59 S TiN	A59 S TiCN

DIN 5156



ISO 5969 | C (2-3) | 2,5xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A59 S BRIGHT	A59 S VAP	A59 S TiN	A59 S TiCN
P	P.2	• 15-20	• 15-20	• 25-30	• 25-30
	P.3	• 12-15	• 12-15	• 20-25	• 20-25
	P.4	• 10-12	• 10-12	• 15-20	• 15-20
	P.5			• 5-10	• 5-10
	P.7			• 8-10	• 8-10
M	M.1			• 8-10	• 8-10
K	K.2	• 12-15	• 12-15	• 20-25	• 20-25
N	N.3	• 15-18	• 15-18	• 25-30	• 25-30
	N.6	• 15-18	• 15-18	• 25-30	• 25-30

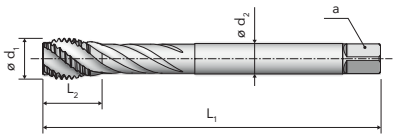
G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A59 S BRIGHT	A59 S VAP	A59 S TiN	A59 S TiCN
1/8"	28	9,728	90	17	-	7	5,5	3	8,8	•	•	•	•
1/4"	19	13,157	100	23	-	11	9	4	11,8	•	•	•	•
3/8"	19	16,662	100	23	-	12	9	4	15,25	•	•	•	•
1/2"	14	20,955	125	29	-	16	12	5	19	•	•	•	•
5/8"	14	22,911	125	29	-	18	14,5	5	21	•	•	•	•
3/4"	14	26,441	140	29	-	20	16	5	24,5	•	•	•	•
7/8"	14	30,201	150	32	-	22	18	5	28,25	•	•	•	•
1"	11	33,249	160	34,5	-	25	20	5	30,75	•	•	•	•
1 1/8"	11	37,897	170	34,5	-	28	22	5	35,5	•	•		
1 1/4"	11	41,91	170	34,5	-	32	24	5	39,5	•	•		
1 1/2"	11	47,803	190	37,5	-	36	29	6	45,25	•	•		

€ P.36

R40 | HSSE

A59 S
TiX2

DIN 5156



ISO 5969

C (2-3)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A59 S** TiX2				
P	P.7	● 8-10				
M	M.1	● 8-10				
	M.2	● 5-7				

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A59 S** TiX2
1/8"	28	9,728	90	17	-	7	5,5	3	8,8	●
1/4"	19	13,157	100	23	-	11	9	4	11,8	●
3/8"	19	16,662	100	23	-	12	9	4	15,25	●
1/2"	14	20,955	125	29	-	16	12	5	19	●
5/8"	14	22,911	125	29	-	18	14,5	5	21	●
3/4"	14	26,441	140	29	-	20	16	5	24,5	●
7/8"	14	30,201	150	32	-	22	18	5	28,25	●
1"	11	33,249	160	34,5	-	25	20	5	30,75	●

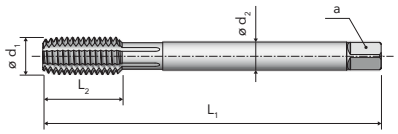
VERGNANO

COLD FORMING TAPS for blind and through holes
With oil grooves

HSSE

A82 N TiN | **A82 N** TiCN

DIN 2189



ISO 5969 X | ISO 5969 X

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

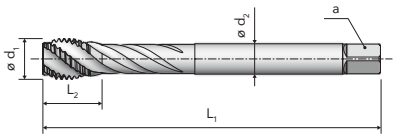
ISO	MG	A82 N TiN	A82 N TiCN
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A82 N TiN	A82 N TiCN
1/8"	28	9,728	90	18	-	7	5,5	6	9,25	•	•
1/4"	19	13,157	100	22	-	11	9	6	12,5	•	•
3/8"	19	16,662	100	22	-	12	9	6	16	•	•
1/2"	14	20,955	125	25	-	16	12	6	20	•	•
3/4"	14	26,441	140	28	-	20	16	6	25,5	•	•
1"	11	33,249	160	30	-	25	20	8	32	•	

€ P.37

R40 | HSSE

DIN 5156



	A159 S BRIGHT	A159 S TiN
		
	—	—
	C (2-3)	C (2-3)
	2,5xD	2,5xD
	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A159 S BRIGHT	A159 S TiN
P	P.2	• 15-20	• 25-30
	P.3	• 12-15	• 20-25
	P.4	• 10-12	• 15-20
	P.5		• 5-10
	P.7		• 8-10
M	M.1		• 8-10
K	K.2	• 12-15	• 20-25
N	N.3	• 15-18	• 25-30
	N.6	• 15-18	• 25-30

Rp	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A159 S BRIGHT	A159 S TiN
1/8"	28	9,728	90	17	-	7	5,5	3	8,6	•	•
1/4"	19	13,157	100	23	-	11	9	4	11,5	•	•
3/8"	19	16,662	100	23	-	12	9	4	15	•	•
1/2"	14	20,955	125	29	-	16	12	5	18,5	•	•
3/4"	14	26,441	140	29	-	20	16	5	24	•	•

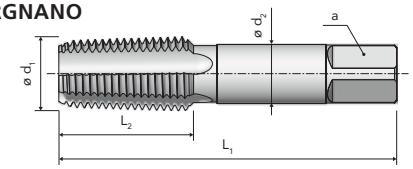
VERGNANO

MACHINE TAPS for conical blind holes
Straight flutes

HSSE

A6
BRIGHT

NORM VERGNANO



C (2-3)

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A6 BRIGHT			
P	P.2	• 10-15			
	P.3	• 10-12			
	P.4	• 8-10			
K	K.2	• 10-12			

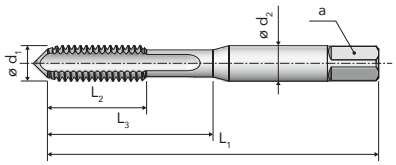
Rc	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 BRIGHT
1/8"	28	9,728	63	17,5	-	7	5,5	4	8,2 (a)	•
1/4"	19	13,157	63	23,5	-	11	9	4	11 (a)	•
3/8"	19	16,662	70	24	-	12	9	4	14,5 (a)	•
1/2"	14	20,955	80	29	-	16	12	4	18 (a)	•
3/4"	14	26,441	100	32	-	20	16	5	23,5 (a)	•
1"	11	33,249	110	36	-	25	20	5	29,5 (a)	•
1 1/4"	11	41,91	125	44	-	32	24	5	38 (a)	•
1 1/2"	11	47,803	140	46	-	36	29	6	44 (a)	•
2"	11	59,614	160	50	-	45	35	6	55,5 (a)	•

(a) = Cylindrical hole (see page 256)

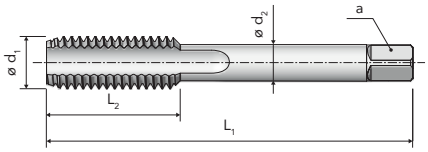
HSS

A4 ROUGHING | A4 SECOND | A4 FINISHING | A4 SET

DIN 2184-2
≤ Ø 1/4"



DIN 2184-2
≥ Ø 5/16"



APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A4** ROUGHING	**A4** SECOND	**A4** FINISHING	**A4** SET
P	P.1-4	●	●	●	●
	P.7	●	●	●	●
K	K.2	●	●	●	●
N	N.1-3	●	●	●	●
	N.5-7	●	●	●	●

—	—	mc	mc
A (5-6)	D (4-5)	C (2-3)	C (2-3)
2,5xD	2,5xD	2,5xD	2,5xD
RH	RH	RH	RH

BSW	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A4 ROUGHING	A4 SECOND	A4 FINISHING	A4 SET
3/32"	48	2,381	40	9	15	2,8	2,1	3	1,9	●	●	●	●
1/8"	40	3,175	40	10	18	3,5	2,7	3	2,55	●	●	●	●
5/32"	32	3,969	45	12	21	4,5	3,4	3	3,2	●	●	●	●
3/16"	24	4,763	50	14	23	6	4,9	3	3,7	●	●	●	●
7/32"	24	5,556	56	16	28	6	4,9	3	4,5	●	●	●	●
1/4"	20	6,35	56	16	28	6	4,9	3	5,1	●	●	●	●
5/16"	18	7,938	63	22	-	6	4,9	3	6,5	●	●	●	●
3/8"	16	9,525	70	24	-	7	5,5	3	7,9	●	●	●	●
7/16"	14	11,113	70	24	-	8	6,2	3	9,25	●	●	●	●
1/2"	12	12,7	75	28	-	9	7	4	10,5	●	●	●	●
9/16"	12	14,288	80	28	-	11	9	4	12	●	●	●	●
5/8"	11	15,875	80	30	-	12	9	4	13,5	●	●	●	●
3/4"	10	19,05	95	32	-	14	11	4	16,4	●	●	●	●
7/8"	9	22,225	100	32	-	18	14,5	4	19,25	●	●	●	●
1"	8	25,4	110	36	-	18	14,5	4	22	●	●	●	●
1 1/8"	7	28,575	125	40	-	22	18	4	24,75	●	●	●	●
1 1/4"	7	31,75	125	40	-	22	18	4	27,75	●	●	●	●

€ P.38

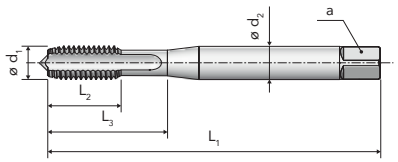
VERGNANO

MACHINE TAPS for blind holes (FC) and for through holes (FP)
Straight flutes

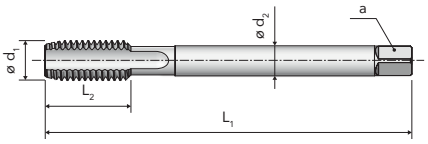
HSSE

A24 FC BRIGHT | **A24 FP** BRIGHT

DIN 2184-1
≤ Ø 3/8”



DIN 2184-1
≥ Ø 7/16”



mc | mc

C (2-3) | A (5-6)

1,5xD | 1,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**A24 FC** BRIGHT	**A24 FP** BRIGHT		
P	P.2	• 10-12	• 10-12		
	P.3	• 8-10	• 8-10		
K	K.2	• 8-10	• 8-10		

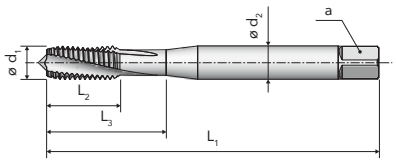
BSW	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A24 FC BRIGHT	A24 FP BRIGHT
3/32”	48	2,381	50	9	15	2,8	2,1	3	1,9	•	•
1/8”	40	3,175	56	11	17	3,5	2,7	3	2,55	•	•
5/32”	32	3,969	63	12	21	4,5	3,4	3	3,2	•	•
3/16”	24	4,763	70	14	24	6	4,9	3	3,7	•	•
7/32”	24	5,556	80	15	28	6	4,9	3	4,5	•	•
1/4”	20	6,35	80	16	29	7	5,5	3	5,1	•	•
5/16”	18	7,938	90	18	33	8	6,2	3	6,5	•	•
3/8”	16	9,525	100	20	36	10	8	3	7,9	•	•
7/16”	14	11,113	100	22	-	8	6,2	3	9,25	•	•
1/2”	12	12,7	110	25	-	9	7	3	10,5	•	•
9/16”	12	14,288	110	27	-	11	9	3	12	•	•
5/8”	11	15,875	110	28	-	12	9	3	13,5	•	•
3/4”	10	19,05	125	32	-	14	11	4	16,4	•	•
7/8”	9	22,225	140	32	-	18	14,5	4	19,25	•	•
1”	8	25,4	160	36	-	18	14,5	4	22	•	•
1 1/8”	7	28,575	180	40	-	22	18	4	24,75	•	•
1 1/4”	7	31,75	180	40	-	22	18	4	27,75	•	•

€ P.38

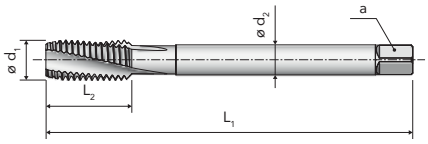
R15 | HSSE

A31 BRIGHT | **A31** TiN

DIN 2184-1
≤ Ø 3/8"



DIN 2184-1
≥ Ø 7/16"



mc | mc

C (2-3) | C (2-3)

1,5xD | 1,5xD

RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A31 BRIGHT	A31 TiN
P	P.1	● 18-20	● 30-35
	P.2	● 15-18	● 25-30
	P.3	● 12-15	● 20-25
	P.4	● 10-12	● 15-20
	P.5		● 5-10
K	K.2	● 12-15	● 20-25
N	N.1	● 18-20	
	N.2-3	● 15-18	● 25-30
	N.5	● 15-18	
	N.6	● 12-15	● 20-25

BSW	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A31 BRIGHT	A31 TiN
3/32"	48	2,381	50	9	15	2,8	2,1	3	1,9	●	●
1/8"	40	3,175	56	11	17	3,5	2,7	3	2,55	●	●
5/32"	32	3,969	63	12	21	4,5	3,4	3	3,2	●	●
3/16"	24	4,763	70	14	24	6	4,9	3	3,7	●	●
7/32"	24	5,556	80	15	28	6	4,9	3	4,5	●	●
1/4"	20	6,35	80	16	29	7	5,5	3	5,1	●	●
5/16"	18	7,938	90	18	33	8	6,2	3	6,5	●	●
3/8"	16	9,525	100	20	36	10	8	3	7,9	●	●
7/16"	14	11,113	100	22	-	8	6,2	3	9,25	●	●
1/2"	12	12,7	110	25	-	9	7	3	10,5	●	●
9/16"	12	14,288	110	27	-	11	9	3	12	●	●
5/8"	11	15,875	110	28	-	12	9	3	13,5	●	●
3/4"	10	19,05	125	32	-	14	11	4	16,4	●	●
7/8"	9	22,225	140	32	-	18	14,5	4	19,25	●	●
1"	8	25,4	160	36	-	18	14,5	4	22	●	●
1 1/8"	7	28,575	180	40	-	22	18	4	24,75	●	
1 1/4"	7	31,75	180	40	-	22	18	4	27,75	●	

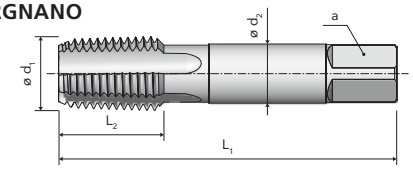
VERGNANO

MACHINE TAPS for conical blind holes
Straight flutes

HSSE

A6 B
BRIGHT

NORM VERGNANO



C (2-3)

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**A6 B** BRIGHT				
P	P.2	• 10-15				
	P.3	• 10-12				
	P.4	• 8-10				
K	K.2	• 10-12				

NPT	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**A6 B** BRIGHT
1/16”	27	7,938	63	12	-	6	4,9	4	6,15 (a)	•
1/8”	27	10,287	63	12	-	7	5,5	4	8,5 (a)	•
1/4”	18	13,716	63	18	-	11	9	4	11 (a)	•
3/8”	18	17,145	70	18	-	12	9	4	14,5 (a)	•
1/2”	14	21,336	80	23	-	16	12	4	17,85 (a)	•
3/4”	14	26,67	100	24	-	20	16	5	23,2 (a)	•
1”	11,5	33,401	110	30	-	25	20	5	29 (a)	•
1 1/4”	11,5	42,164	125	32	-	32	24	5	37,8 (a)	•
1 1/2”	11,5	48,26	140	32	-	36	29	6	44 (a)	•
2”	11,5	60,325	160	34	-	45	35	6	56 (a)	•

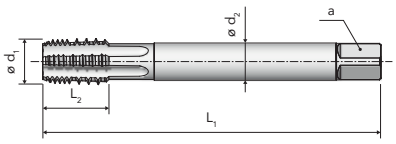
(a) = Cylindrical hole (see page 256)

€ P.39

HSSE

A6 BZ
BRIGHT

DIN 374



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A6 BZ BRIGHT			
P	P.1	● 12-15			
	P.7	● 2-3			
M	M.1	● 2-3			
N	N.1-2	● 12-15			
	N.5	● 10-12			
	N.6	● 6-8			

C (2-3)

RH

NPT	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 BZ BRIGHT
1/16”	27	7,938	90	12	-	6	4,9	3	6,15 (a)	●
1/8”	27	10,287	100	12	-	7	5,5	5	8,5 (a)	●
1/4”	18	13,716	100	18	-	11	9	5	11 (a)	●
3/8”	18	17,145	110	18	-	12	9	5	14,5 (a)	●
1/2”	14	21,336	140	23	-	16	12	5	17,85 (a)	●
3/4”	14	26,67	150	24	-	20	16	5	23,2 (a)	●
1”	11,5	33,401	170	30	-	25	20	5	29 (a)	●

(a) = Cylindrical hole (see page 256)

NPTF

ASME B1.20.3

VERGNANO

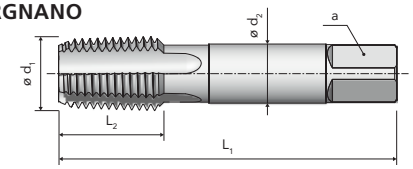
MACHINE TAPS for conical blind holes
Straight flutes

HSSE

A6 F
BRIGHT

A SERIES

NORM VERGNANO



C (2-3)

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A6 F BRIGHT
P	P.2	• 10-15
	P.3	• 10-12
	P.4	• 8-10
K	K.2	• 10-12

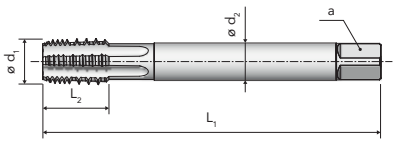
NPTF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 F BRIGHT
1/16”	27	7,938	63	12	-	6	4,9	4	6,15 (a)	•
1/8”	27	10,287	63	12	-	7	5,5	4	8,5 (a)	•
1/4”	18	13,716	63	18	-	11	9	4	11 (a)	•
3/8”	18	17,145	70	18	-	12	9	4	14,5 (a)	•
1/2”	14	21,336	80	23	-	16	12	4	17,8 (a)	•
3/4”	14	26,67	100	24	-	20	16	5	23 (a)	•
1”	11,5	33,401	110	30	-	25	20	5	29 (a)	•
1 1/4”	11,5	42,164	125	32	-	32	24	5	37,8 (a)	•
1 1/2”	11,5	48,26	140	32	-	36	29	6	43,8 (a)	•
2”	11,5	60,325	160	34	-	45	35	6	56 (a)	•

(a) = Cylindrical hole (see page 256)

HSSE

A6 FZ
BRIGHT

DIN 374



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	A6 FZ BRIGHT			
P	P.1	● 12-15			
	P.7	● 2-3			
M	M.1	● 2-3			
N	N.1-2	● 12-15			
	N.5	● 10-12			
	N.6	● 6-8			

C (2-3)

RH

NPTF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 FZ BRIGHT
1/16”	27	7,938	90	12	-	6	4,9	3	6,15 (a)	●
1/8”	27	10,287	100	12	-	7	5,5	5	8,5 (a)	●
1/4”	18	13,716	100	18	-	11	9	5	11 (a)	●
3/8”	18	17,145	110	18	-	12	9	5	14,5 (a)	●
1/2”	14	21,336	140	23	-	16	12	5	17,8 (a)	●
3/4”	14	26,67	150	24	-	20	16	5	23 (a)	●
1”	11,5	33,401	170	30	-	25	20	5	29 (a)	●

(a) = Cylindrical hole (see page 256)

P
SERIES

High Performance Taps

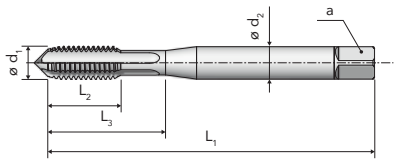
VERGNANO

HIGH PERFORMANCE MACHINE TAPS for blind and through holes

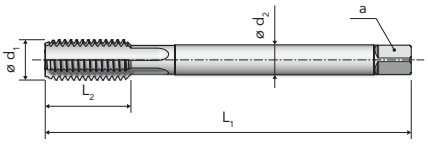
Straight flutes / for cast iron

HSSP

DIN 371
≤ M10



DIN 376
≥ M12



	P43 V-MAXX	BP43 V-MAXX
		
	6HX	6HX
	C (2-3)	C (2-3)
	3xD	3xD
	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P43 V-MAXX	BP43 V-MAXX
K	K.1	• 40-50	• 40-50
N	N.4	• 40-50	• 40-50
	N.7	• 40-50	• 40-50
	N.9-10	• 45-55	• 45-55

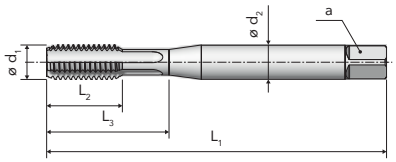
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P43 V-MAXX	BP43 V-MAXX
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•	
4	0,7	63	12	21	4,5	3,4	4	3,3	•	
5	0,8	70	14	24,5	6	4,9	4	4,2	•	•
6	1	80	16	29	6	4,9	4	5	•	•
8	1,25	90	18	33	8	6,2	4	6,8	•	•
10	1,5	100	20	36	10	8	4	8,5	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•
14	2	110	25	-	11	9	4	12	•	•
16	2	110	28	-	12	9	4	14	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•

€ P.41

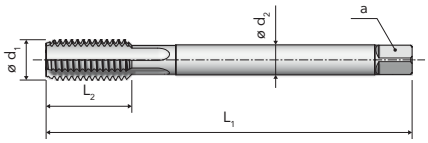
HSSP

P43 E V-MAXX | **BP43 E** V-MAXX

DIN 371
≤ M10



DIN 376
≥ M12



6HX | E (1,5-2) | 3xD | RH

6HX | E (1,5-2) | 3xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P43 E V-MAXX	BP43 E V-MAXX
K	K.1	● 40-50	● 40-50
N	N.4	● 40-50	● 40-50
	N.7	● 40-50	● 40-50
	N.9-10	● 45-55	● 45-55

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P43 E V-MAXX	BP43 E V-MAXX
M 4	0,7	63	12	21	4,5	3,4	4	3,3	●	
5	0,8	70	14	24,5	6	4,9	4	4,2	●	●
6	1	80	16	29	6	4,9	4	5	●	●
8	1,25	90	18	33	8	6,2	4	6,8	●	●
10	1,5	100	20	36	10	8	4	8,5	●	●
12	1,75	110	24	-	9	7	4	10,2	●	●

P SERIES

VERGNANO

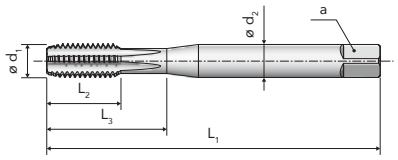
HIGH PERFORMANCE MACHINE TAPS for blind and through holes

Straight flutes / for high strength materials

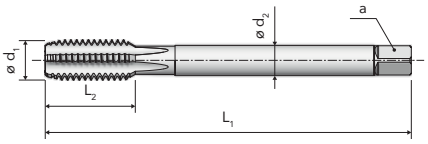
HSSP

P130 BRIGHT | **P130** V-MAXX

DIN 371
≤ M10



DIN 376
≥ M12



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P130 BRIGHT	P130 V-MAXX
P	P.6	• 2-3	• 5-8
N	N.8	• 3-5	• 8-10

6HX | 6HX

C (2-3) | C (2-3)

1,5xD | 1,5xD

RH | RH

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P130 BRIGHT	P130 V-MAXX
M 4	0,7	63	12	21	4,5	3,4	4	3,4 (*)	•	•
5	0,8	70	14	24,5	6	4,9	4	4,3 (*)	•	•
6	1	80	16	29	6	4,9	5	5,1 (*)	•	•
8	1,25	90	18	33	8	6,2	5	6,9 (*)	•	•
10	1,5	100	20	36	10	8	5	8,6 (*)	•	•
12	1,75	110	24	-	9	7	5	10,4 (*)	•	•
14	2	110	25	-	11	9	5	12,2 (*)	•	•
16	2	110	28	-	12	9	5	14,2 (*)	•	•
20	2,5	140	32	-	16	12	5	17,7(*)	•	•

(*) = The hole diameters are oversized

€ P.41

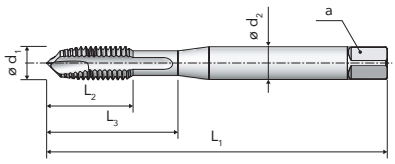
HIGH PERFORMANCE MACHINE TAPS for through holes

Straight flutes with spiral point

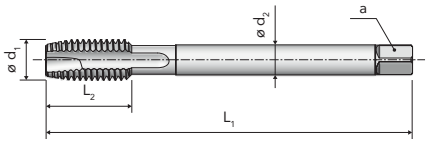
HSSP

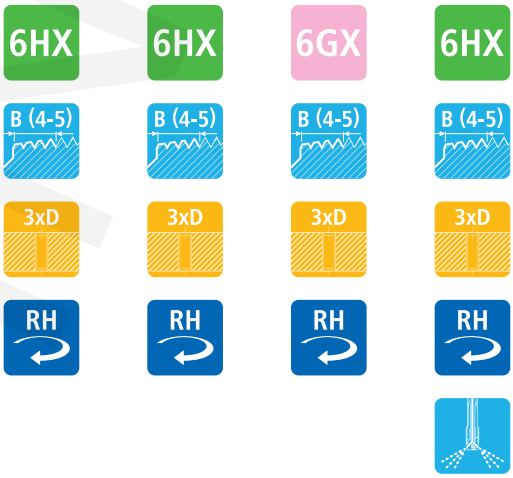
P15 TiN	P15 TiH1	P15 6GX TiH1	BP15 TiH1

DIN 371
≤ M10



DIN 376
≥ M12





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P15 TiN	P15 TiH1	P15 6GX TiH1	BP15 TiH1
P	P.3	• 25-35	• 25-35	• 25-35	• 25-35
	P.4	• 20-30	• 20-30	• 20-30	• 20-30
	P.5	• 10-20	• 10-20	• 10-20	• 10-20
	P.6	• 8-10	• 8-10	• 8-10	• 8-10
	P.7	• 10-20	• 10-20	• 10-20	• 10-20
M	M.1	• 10-20	• 10-20	• 10-20	• 10-20
	M.2	• 6-8	• 6-8	• 6-8	• 6-8
K	K.2	• 25-35	• 25-35	• 25-35	• 25-35
N	N.2-3	• 30-40	• 30-40	• 30-40	• 30-40
	N.6	• 25-35	• 25-35	• 25-35	• 25-35

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P15 TiN	P15 TiH1	P15 6GX TiH1	BP15 TiH1
M 1(*)	0,25	40	5,5	7,5	2,5	2,1	2	0,75	•	•		
1,2(*)	0,25	40	5,5	7,5	2,5	2,1	2	0,95	•	•		
1,4(*)	0,3	40	7	10	2,5	2,1	2	1,1	•	•		
1,6	0,35	40	8	11	2,5	2,1	2	1,25	•	•		
1,7	0,35	40	8	11	2,5	2,1	2	1,35	•	•		
1,8	0,35	40	8	11	2,5	2,1	2	1,45	•	•		
2	0,4	45	7	11	2,8	2,1	3	1,6	•	•		
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•		
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•		
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•	•	
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•	•	•
6	1	80	16	29	6	4,9	3	5	•	•	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•	•	•
12	1,75	110	24	-	9	7	4	10,2	•	•	•	•
14	2	110	25	-	11	9	4	12	•	•	•	•
16	2	110	28	-	12	9	4	14	•	•	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•		
20	2,5	140	32	-	16	12	4	17,5	•	•		
24	3	160	36	-	18	14,5	4	21	•	•		
27	3	160	36	-	20	16	4	24	•	•		
30	3,5	180	40	-	22	18	4	26,5	•	•		
33	3,5	180	40	-	25	20	5	29,5	•	•		
36	4	200	55	-	28	22	5	32	•	•		

(*) = Tolerance 5HX

€ P.41

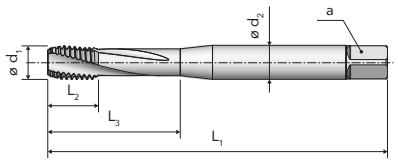
VERGNANO

HIGH PERFORMANCE MACHINE TAPS for blind holes
15° spiral flutes

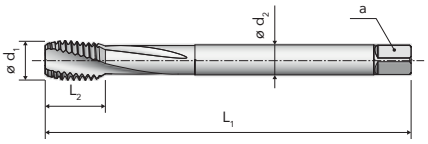
R15 | HSSP

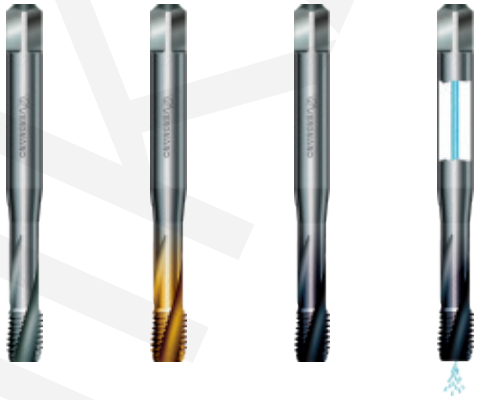
P29 BRIGHT	P29 TiN	P29 TiH1	BP29 TiH1

DIN 371
≤ M10



DIN 376
≥ M12





6HX | C (2-3) | 2xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P29 BRIGHT	P29 TiN	P29 TiH1	BP29 TiH1
P	P.3	• 15-18	• 25-30	• 25-30	• 25-30
	P.4	• 12-15	• 20-25	• 20-25	• 20-25
	P.5	• 8-10	• 10-15	• 10-15	• 10-15
	P.6	• 3-5	• 5-10	• 5-10	• 5-10
	P.7	• 8-10	• 10-15	• 10-15	• 10-15
K	K.2	• 15-18	• 25-30	• 25-30	• 25-30
N	N.3	• 15-18	• 25-30	• 25-30	• 25-30
	N.6	• 15-18	• 25-30	• 25-30	• 25-30
	N.7	• 12-15	• 20-25	• 20-25	• 20-25
S	S.2	• 2-3		• 2-3	• 2-3
	S.4	• 2-3	• 2-3	• 2-3	• 2-3

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P29 BRIGHT	P29 TiN	P29 TiH1	BP29 TiH1
M 2	0,4	45	5	12	2,8	2,1	3	1,6	• NEW	• NEW	• NEW	
2,5	0,45	50	6	15	2,8	2,1	3	2,05	• NEW	• NEW	• NEW	
3	0,5	56	5	18	3,5	2,7	3	2,5	•	•	•	
4	0,7	63	7	21	4,5	3,4	3	3,3	•	•	•	
5	0,8	70	9	25	6	4,9	3	4,2	•	•	•	•
6	1	80	11	30	6	4,9	3	5	•	•	•	•
8	1,25	90	12	35	8	6,2	3	6,8	•	•	•	•
10	1,5	100	13	39	10	8	3	8,5	•	•	•	•
12	1,75	110	15	-	9	7	3	10,2	•	•	•	•
14	2	110	18	-	11	9	3	12	•	•	•	•
16	2	110	18	-	12	9	3	14	•	•	•	•
18	2,5	125	20	-	14	11	4	15,5	•	•	•	•
20	2,5	140	20	-	16	12	4	17,5	•	•	•	•
24	3	160	25	-	18	14,5	4	21	•	•	•	
27	3	160	25	-	20	16	4	24	•	•	•	
30	3,5	180	29	-	22	18	4	26,5	•	•	•	
36	4	200	34	-	28	22	4	32	•	•	•	

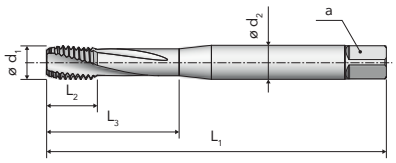
HIGH PERFORMANCE MACHINE TAPS for blind holes

15° spiral flutes / chamfer form E

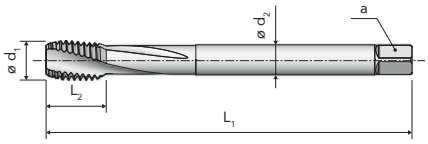
R15 HSSP

P29 E
TiH1

DIN 371
≤ M10



DIN 376
≥ M12



6HX

E (1,5-2)

2xD

RH

P SERIES

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P29 E TiH1			
P	P.3	● 25-30			
	P.4	● 20-25			
	P.5	● 10-15			
	P.6	● 5-10			
	P.7	● 10-15			
K	K.2	● 25-30			
N	N.3	● 25-30			
	N.6	● 25-30			
	N.7	● 20-25			
S	S.2	● 2-3			
	S.4	● 2-3			

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P29 E TiH1
M 3	0,5	56	5	18	3,5	2,7	3	2,5	● NEW
4	0,7	63	7	21	4,5	3,4	3	3,3	● NEW
5	0,8	70	9	25	6	4,9	3	4,2	● NEW
6	1	80	11	30	6	4,9	3	5	● NEW
8	1,25	90	12	35	8	6,2	3	6,8	● NEW
10	1,5	100	13	39	10	8	3	8,5	● NEW
12	1,75	110	15	-	9	7	3	10,2	● NEW

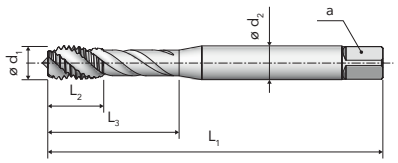
VERGNANO

HIGH PERFORMANCE MACHINE TAPS for blind holes
45° spiral flutes / back tapered

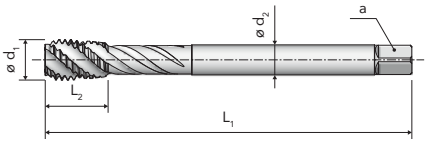
R45 | HSSZ

P70 TiN	P70 TiH1	P70 6GX TiH1	P70 7GX TiH1

DIN 371
≤ M10



DIN 376
≥ M12



6HX | 6HX | 6GX | 7GX

C (2-3) | C (2-3) | C (2-3) | C (2-3)

3xD | 3xD | 3xD | 3xD

RH | RH | RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P70 TiN	P70 TiH1	P70 6GX TiH1	P70 7GX TiH1
P	P.3	• 20-30	• 20-30	• 20-30	• 20-30
	P.4	• 15-25	• 15-25	• 15-25	• 15-25
	P.5	• 5-15	• 5-15	• 5-15	• 5-15
	P.7	• 10-15	• 10-15	• 10-15	• 10-15
M	M.1	• 10-15	• 10-15	• 10-15	• 10-15
	M.2	• 5-7	• 5-7	• 5-7	• 5-7
K	K.2	• 20-30	• 20-30	• 20-30	• 20-30
N	N.3	• 25-35	• 25-35	• 25-35	• 25-35
	N.6	• 25-35	• 25-35	• 25-35	• 25-35
S	S.1		• 10-15	• 10-15	• 10-15
	S.3	• 10-15	• 10-15	• 10-15	• 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P70 TiN	P70 TiH1	P70 6GX TiH1	P70 7GX TiH1
M 2	0,4	45	6	12	2,8	2,1	3	1,6	•	•		
2,5	0,45	50	6,5	15	2,8	2,1	3	2,05	•	•		
3	0,5	56	7	15	3,5	2,7	3	2,5	•	•	•	• NEW
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•	•	• NEW
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•	•	• NEW
6	1	80	12	29	6	4,9	3	5	•	•	•	• NEW
8	1,25	90	14	33	8	6,2	3	6,8	•	•	•	• NEW
10	1,5	100	17	39	10	8	3	8,5	•	•	•	• NEW
12	1,75	110	18	-	9	7	4	10,2	•	•	•	• NEW
14	2	110	20,5	-	11	9	4	12	•	•	•	
16	2	110	20,5	-	12	9	4	14	•	•	•	
18	2,5	125	25,5	-	14	11	4	15,5	•	•	•	
20	2,5	140	25,5	-	16	12	4	17,5	•	•	•	
24	3	160	32	-	18	14,5	4	21	•	•		
27	3	160	32	-	20	16	5	24	•	•		
30	3,5	180	37	-	22	18	5	26,5	•	•		
33	3,5	180	37	-	25	20	5	29,5	•	•		
36	4	200	42	-	28	22	5	32	•	•		
42	4,5	200	45	-	32	24	5	37,5	• NEW	• NEW		

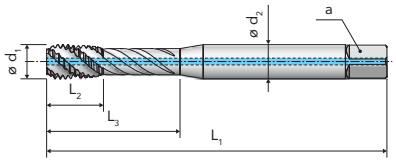
€ P.43

HIGH PERFORMANCE MACHINE TAPS for blind holes
45° spiral flutes / back tapered / internal coolant

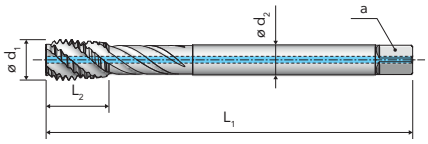
R45 | HSSZ

BP70
TiH1

DIN 371
≤ M10



DIN 376
≥ M12



6HX

C (2-3)

3xD

RH

P SERIES

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	BP70 TiH1			
P	P.3	● 20-30			
	P.4	● 15-25			
	P.5	● 5-15			
	P.7	● 10-15			
M	M.1	● 10-15			
	M.2	● 5-7			
K	K.2	● 20-30			
N	N.3	● 25-35			
	N.6	● 25-35			
S	S.1	● 10-15			
	S.3	● 10-15			

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	BP70 TiH1
M 5	0,8	70	10	24,5	6	4,9	3	4,2	●
6	1	80	12	29	6	4,9	3	5	●
8	1,25	90	14	33	8	6,2	3	6,8	●
10	1,5	100	17	39	10	8	3	8,5	●
12	1,75	110	18	-	9	7	4	10,2	●
14	2	110	20,5	-	11	9	4	12	●
16	2	110	20,5	-	12	9	4	14	●

VERGNANO

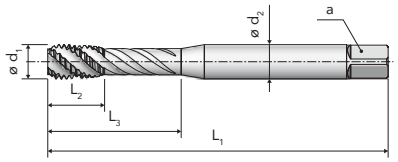
HIGH PERFORMANCE MACHINE TAPS for blind holes

45° spiral flutes / back tapered / chamfer form E

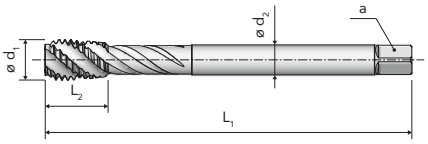
R45 | HSSZ

P70 E TiN	P70 E TiH1	P70 E 6GX TiH1

DIN 371
≤ M10



DIN 376
≥ M12



6HX | 6HX | 6GX

E (1,5-2) | E (1,5-2) | E (1,5-2)

3xD | 3xD | 3xD

RH | RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P70 E TiN	P70 E TiH1	P70 E 6GX TiH1
P	P.3	• 20-30	• 20-30	• 20-30
	P.4	• 15-25	• 15-25	• 15-25
	P.5	• 5-15	• 5-15	• 5-15
	P.7	• 10-15	• 10-15	• 10-15
M	M.1	• 10-15	• 10-15	• 10-15
	M.2	• 5-7	• 5-7	• 5-7
K	K.2	• 20-30	• 20-30	• 20-30
N	N.3	• 25-35	• 25-35	• 25-35
	N.6	• 25-35	• 25-35	• 25-35
S	S.1		• 10-15	• 10-15
	S.3	• 10-15	• 10-15	• 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P70 E TiN	P70 E TiH1	P70 E 6GX TiH1
M 2	0,4	45	6	12	2,8	2,1	3	1,6	• NEW	• NEW	
2,5	0,45	50	6,5	15	2,8	2,1	3	2,05	• NEW	• NEW	
3	0,5	56	7	15	3,5	2,7	3	2,5	•	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•	•
6	1	80	12	29	6	4,9	3	5	•	•	•
8	1,25	90	14	33	8	6,2	4	6,8	•	•	•
10	1,5	100	17	39	10	8	4	8,5	•	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•	•
14	2	110	20,5	-	11	9	5	12	•	•	•
16	2	110	20,5	-	12	9	5	14	•	•	•
20	2,5	140	25,5	-	16	12	5	17,5	•	•	

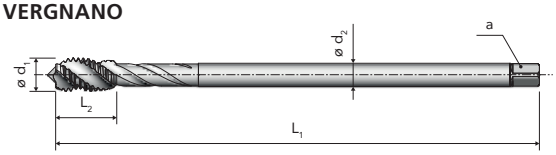
€ P.43

HIGH PERFORMANCE MACHINE TAPS for blind holes
40° spiral flutes / back tapered / long and through shank

R40 | HSSK

P76 L
TiH1

NORM VERGNANO



6HX

C (2-3)

3xD

RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**P76 L** TiH1			
P	P.3	● 20-30			
	P.4	● 15-25			
	P.5	● 5-15			
	P.7	● 10-15			
M	M.1	● 10-15			
	M.2	● 5-7			
K	K.2	● 20-30			
N	N.3	● 25-35			
	N.6	● 25-35			
S	S.1	● 10-15			
	S.3	● 10-15			

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**P76 L** TiH1
M 4	0,7	112	8	-	2,8	2,1	3	3,3	● NEW
5	0,8	125	9	-	3,5	2,7	3	4,2	● NEW
6	1	125	11	-	4,5	3,4	3	5	● NEW
8	1,25	140	14	-	6	4,9	3	6,8	● NEW
10	1,5	160	16	-	7	5,5	3	8,5	● NEW
12	1,75	180	17	-	9	7	3	10,2	● NEW
16	2	220	19,5	-	12	9	4	14	● NEW
20	2,5	280	23	-	16	12	4	17,5	● NEW

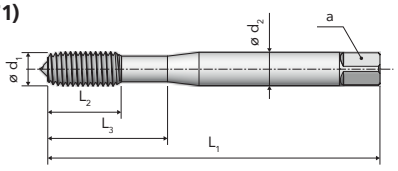
VERGNANO

HIGH PERFORMANCE COLD FORMING TAPS for blind and through holes
Without oil grooves

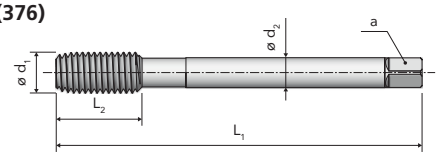
HSSK

P80 TiN	P80 V-MAXX	P80 6GX TiN	P80 7GX TiN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12



P SERIES

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P80 TiN	P80 V-MAXX	P80 6GX TiN	P80 7GX TiN
P	P.1-2	• 40-45	• 40-45	• 40-45	• 40-45
	P.3	• 35-40	• 35-40	• 35-40	• 35-40
	P.4	• 30-35	• 30-35	• 30-35	• 30-35
	P.5	• 15-20	• 15-20	• 15-20	• 15-20
	P.7	• 15-20	• 15-20	• 15-20	• 15-20
M	M.1	• 15-20	• 15-20	• 15-20	• 15-20
N	N.1-2	• 40-45	• 40-45	• 40-45	• 40-45
	N.3	• 35-40	• 35-40	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45	• 40-45	• 40-45
S	S.3	• 10-15	• 10-15	• 10-15	• 10-15

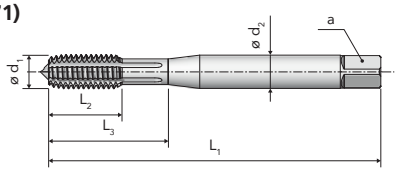
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P80 TiN	P80 V-MAXX	P80 6GX TiN	P80 7GX TiN
M 2	0,4	45	7	11	2,8	2,1	3	1,85	•	•	•	
2,5	0,45	50	9	15	2,8	2,1	3	2,3	•	•	•	
3	0,5	56	10	18	3,5	2,7	4	2,8	•	•	•	•
3,5	0,6	56	11	20	4	3	4	3,25	•	•	•	•
4	0,7	63	12	21	4,5	3,4	5	3,7	•	•	•	•
5	0,8	70	14	24,5	6	4,9	5	4,65	•	•	•	•
6	1	80	16	29	6	4,9	5	5,55	•	•	•	•
8	1,25	90	18	33	8	6,2	5	7,4	•	•	•	•
10	1,5	100	20	36	10	8	5	9,3	•	•	•	•
12	1,75	110	24	-	9	7	5	11,2	•	•	•	•
14	2	110	25	-	11	9	6	13,1	•	•	•	•
16	2	110	28	-	12	9	6	15,1	•	•	•	•

€ P.44

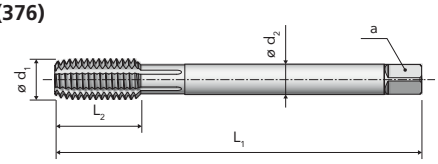
HSSK

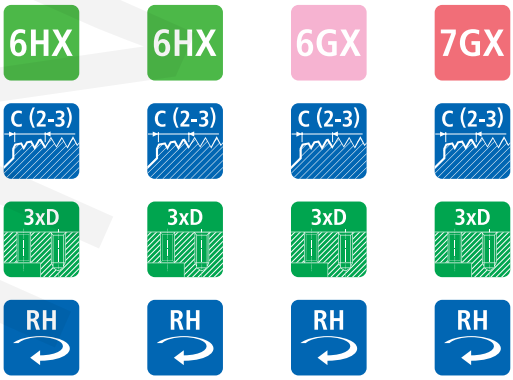
P80 N TiN	P80 N V-MAXX	P80 N 6GX TiN	P80 N 7GX TiN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P80 N TiN	P80 N V-MAXX	P80 N 6GX TiN	P80 N 7GX TiN
P	P.1-2	• 40-45	• 40-45	• 40-45	• 40-45
	P.3	• 35-40	• 35-40	• 35-40	• 35-40
	P.4	• 30-35	• 30-35	• 30-35	• 30-35
	P.5	• 15-20	• 15-20	• 15-20	• 15-20
	P.7	• 15-20	• 15-20	• 15-20	• 15-20
M	M.1	• 15-20	• 15-20	• 15-20	• 15-20
N	N.1-2	• 40-45	• 40-45	• 40-45	• 40-45
	N.3	• 35-40	• 35-40	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45	• 40-45	• 40-45
S	S.3	• 10-15	• 10-15	• 10-15	• 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P80 N TiN	P80 N V-MAXX	P80 N 6GX TiN	P80 N 7GX TiN
M 2	0,4	45	7	11	2,8	2,1	3	1,85	•	•	•	
2,5	0,45	50	9	15	2,8	2,1	3	2,3	•	•	•	
3	0,5	56	10	18	3,5	2,7	4	2,8	•	•	•	•
3,5	0,6	56	11	20	4	3	4	3,25	•	•	•	•
4	0,7	63	12	21	4,5	3,4	5	3,7	•	•	•	•
5	0,8	70	14	24,5	6	4,9	5	4,65	•	•	•	•
6	1	80	16	29	6	4,9	5	5,55	•	•	•	•
8	1,25	90	18	33	8	6,2	5	7,4	•	•	•	•
10	1,5	100	20	36	10	8	5	9,3	•	•	•	•
12	1,75	110	24	-	9	7	5	11,2	•	•	•	•
14	2	110	25	-	11	9	6	13,1	•	•	•	•
16	2	110	28	-	12	9	6	15,1	•	•	•	•
18	2,5	125	28	-	14	11	8	16,9	•	•	•	
20	2,5	140	30	-	16	12	8	18,9	•	•	•	

€ P.44

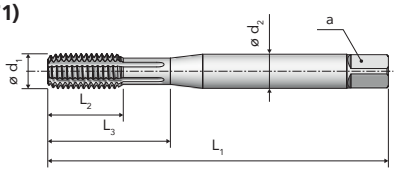
VERGNANO

HIGH PERFORMANCE COLD FORMING TAPS for blind holes
Chamfer form E

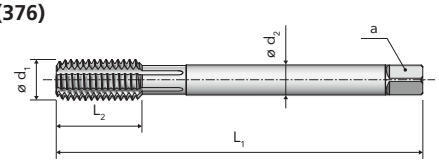
HSSK

P80 E TiN	P80 N E TiN	P80 N E V-MAXX	P80 N E 6GX TiN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P80 E TiN	P80 N E TiN	P80 N E V-MAXX	P80 N E 6GX TiN
P	P.1-2	• 40-45	• 40-45	• 40-45	• 40-45
	P.3	• 35-40	• 35-40	• 35-40	• 35-40
	P.4	• 30-35	• 30-35	• 30-35	• 30-35
	P.5	• 15-20	• 15-20	• 15-20	• 15-20
	P.7	• 15-20	• 15-20	• 15-20	• 15-20
M	M.1	• 15-20	• 15-20	• 15-20	• 15-20
N	N.1-2	• 40-45	• 40-45	• 40-45	• 40-45
	N.3	• 35-40	• 35-40	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45	• 40-45	• 40-45
S	S.3	• 10-15	• 10-15	• 10-15	• 10-15

6HX	6HX	6HX	6GX
E (1,5-2)	E (1,5-2)	E (1,5-2)	E (1,5-2)
1,5xD	3xD	3xD	3xD
RH	RH	RH	RH

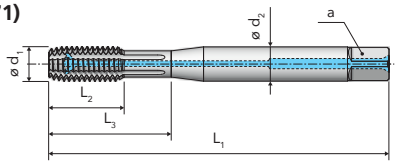
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P80 E TiN	P80 N E TiN	P80 N E V-MAXX	P80 N E 6GX TiN
M 3	0,5	56	10	18	3,5	2,7	4	2,8	•	•	•	•
3,5	0,6	56	11	20	4	3	4	3,25	•	•	•	•
4	0,7	63	12	21	4,5	3,4	5	3,7	•	•	•	•
5	0,8	70	14	24,5	6	4,9	5	4,65	•	•	•	•
6	1	80	16	29	6	4,9	5	5,55	•	•	•	•
8	1,25	90	18	33	8	6,2	5	7,4	•	•	•	•
10	1,5	100	20	36	10	8	5	9,3	•	•	•	•
12	1,75	110	24	-	9	7	5	11,2		•	•	
16	2	110	28	-	12	9	6	15,1		•	•	

€ P.45

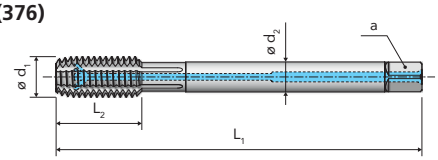
HSSK

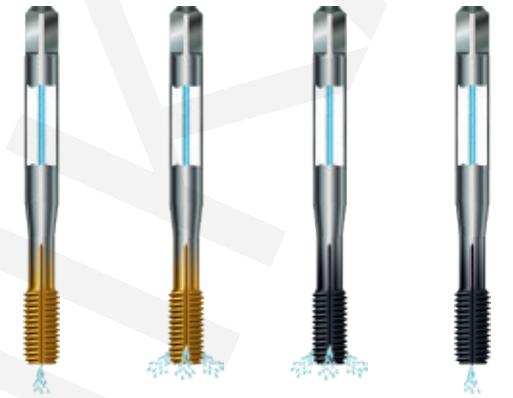
BP80 N	BP80 N R	BP80 N R	BP80 N E
TiN	TiN	V-MAXX	V-MAXX

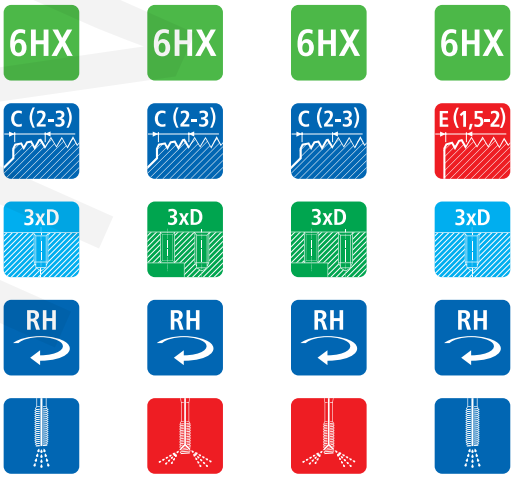
DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12







APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	BP80 N TiN	BP80 N R TiN	BP80 N R V-MAXX	BP80 N E V-MAXX
P	P.1-2	● 40-45	● 40-45	● 40-45	● 40-45
	P.3	● 35-40	● 35-40	● 35-40	● 35-40
	P.4	● 30-35	● 30-35	● 30-35	● 30-35
	P.5	● 15-20	● 15-20	● 15-20	● 15-20
	P.7	● 15-20	● 15-20	● 15-20	● 15-20
M	M.1	● 15-20	● 15-20	● 15-20	● 15-20
N	N.1-2	● 40-45	● 40-45	● 40-45	● 40-45
	N.3	● 35-40	● 35-40	● 35-40	● 35-40
	N.5-6	● 40-45	● 40-45	● 40-45	● 40-45
S	S.3	● 10-15	● 10-15	● 10-15	● 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	BP80 N TiN	BP80 N R TiN	BP80 N R V-MAXX	BP80 N E V-MAXX
M 5	0,8	70	14	24,5	6	4,9	5	4,65	●	●	●	●
6	1	80	16	29	6	4,9	5	5,55	●	●	●	●
8	1,25	90	18	33	8	6,2	5	7,4	●	●	●	●
10	1,5	100	20	36	10	8	5	9,3	●	●	●	●
12	1,75	110	24	-	9	7	5	11,2	●	●	●	●
16	2	110	28	-	12	9	6	15,1	●	●	●	●
20	2,5	140	30	-	16	12	8	18,9		●	●	
24	3	160	35	-	18	14,5	8	22,7		●		
27	3	160	35	-	20	16	8	25,7		●		
30	3,5	180	40	-	22	18	8	28,45		●		

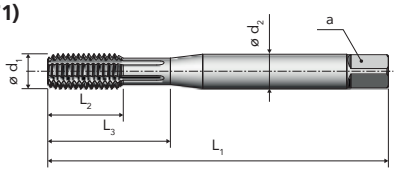
VERGNANO

HIGH PERFORMANCE COLD FORMING TAPS for blind and through holes
With oil grooves

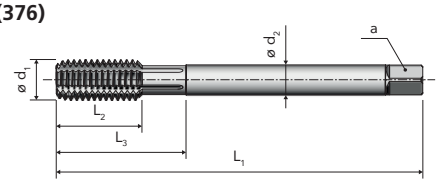
HSSK

P80 N LH
TiN

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12



6HX

C (2-3)

3xD

LH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P80 N LH TiN
P	P.1-2	● 40-45
	P.3	● 35-40
	P.4	● 30-35
	P.5	● 15-20
	P.7	● 15-20
M	M.1	● 15-20
N	N.1-2	● 40-45
	N.3	● 35-40
	N.5-6	● 40-45
S	S.3	● 10-15

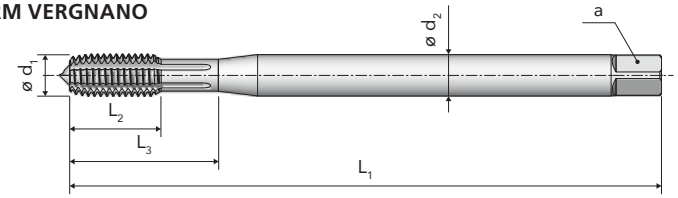
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P80 N LH TiN
M 3	0,5	56	10	18	3,5	2,7	4	2,8	● NEW
4	0,7	63	12	21	4,5	3,4	5	3,7	● NEW
5	0,8	70	14	24,5	6	4,9	5	4,65	● NEW
6	1	80	16	29	6	4,9	5	5,55	● NEW
8	1,25	90	18	33	8	6,2	5	7,4	● NEW
10	1,5	100	20	36	10	8	5	9,3	● NEW
12	1,75	110	24	-	9	7	5	11,2	● NEW

€ P.45

HSSK

P80 N L
TiN

NORM VERGNANO



6HX

C (2-3)

3xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P80 N L TiN
P	P.1-2	● 40-45
	P.3	● 35-40
	P.4	● 30-35
	P.5	● 15-20
	P.7	● 15-20
M	M.1	● 15-20
N	N.1-2	● 40-45
	N.3	● 35-40
	N.5-6	● 40-45
S	S.3	● 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P80 N L TiN
M 3	0,5	115	10	18	3,5	2,7	4	2,8	● NEW
4	0,7	115	12	21	4,5	3,4	5	3,7	● NEW
5	0,8	125	14	24,5	6	4,9	5	4,65	● NEW
6	1	125	16	29	6	4,9	5	5,55	● NEW
8	1,25	140	18	33	8	6,2	5	7,4	● NEW
10	1,5	160	20	36	10	8	5	9,3	● NEW

VERGNANO

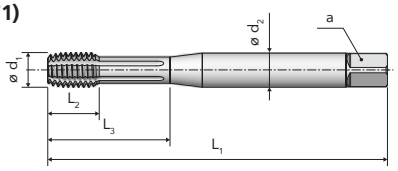
HIGH PERFORMANCE COLD FORMING TAPS for blind and through holes

With oil grooves / for stainless steel

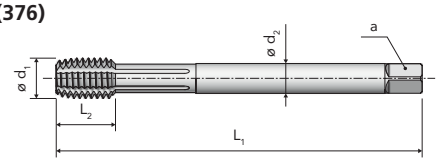
HSSZ

P180 N TiN | **P180 N** V-MAXX

DIN 2174 (371)
≤ M10



DIN 2174 (376)
≥ M12



6HX | C (2-3) | 3xD | RH

6HX | C (2-3) | 3xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

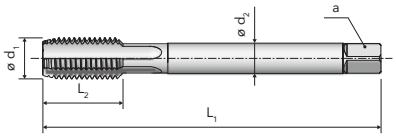
ISO	MG	P180 N TiN	P180 N V-MAXX
P	P.7	• 15-20	• 15-20
M	M.1	• 10-15	• 10-15
	M.2	• 8-10	• 8-10

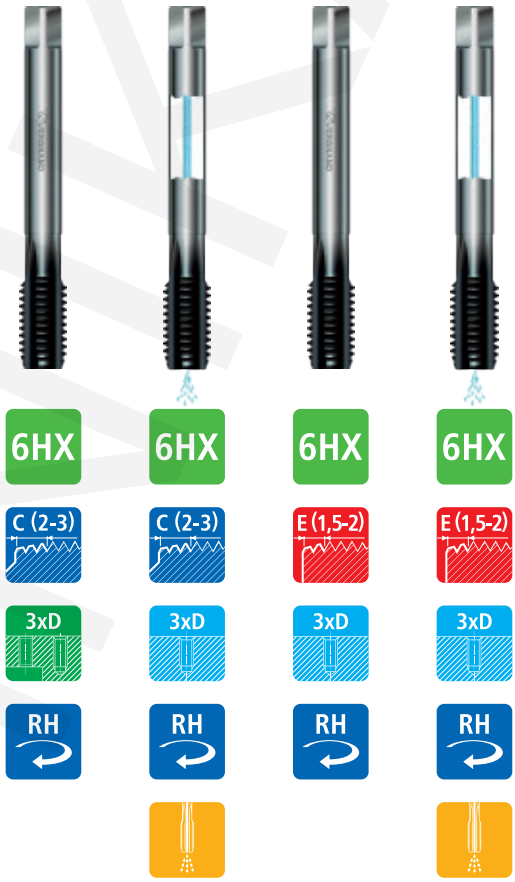
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P180 N TiN	P180 N V-MAXX
M 3	0,5	56	6	18	3,5	2,7	4	2,8	• NEW	• NEW
4	0,7	70	7	18	4,5	3,4	5	3,7	•	•
5	0,8	70	8	23	6	4,9	5	4,65	•	•
6	1	80	10	29	6	4,9	5	5,6	•	•
8	1,25	90	14	33	8	6,2	5	7,45	•	•
10	1,5	100	16	36	10	8	5	9,35	•	•
12	1,75	110	18	-	9	7	5	11,25	•	•
16	2	110	20	-	12	9	6	15,1	•	•

HSSP

P45 V-MAXX	BP45 V-MAXX	P45 E V-MAXX	BP45 E V-MAXX

DIN 374





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P45 V-MAXX	BP45 V-MAXX	P45 E V-MAXX	BP45 E V-MAXX
K	K.1	• 40-50	• 40-50	• 40-50	• 40-50
N	N.4	• 40-50	• 40-50	• 40-50	• 40-50
	N.7	• 40-50	• 40-50	• 40-50	• 40-50
	N.9-10	• 45-55	• 45-55	• 45-55	• 45-55

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P45 V-MAXX	BP45 V-MAXX	P45 E V-MAXX	BP45 E V-MAXX
M 8	1	90	16	-	6	4,9	4	7	•	•	•	•
10	1	90	18	-	7	5,5	4	9	•	•	•	•
10	1,25	100	18	-	7	5,5	4	8,8	•	•	•	•
12	1,25	100	22	-	9	7	4	10,8	•	•	•	•
12	1,5	100	22	-	9	7	4	10,5	•	•	•	•
14	1,25	100	22	-	11	9	4	12,8	•	•		
14	1,5	100	22	-	11	9	4	12,5	•	•	•	•
16	1,5	100	22	-	12	9	4	14,5	•	•	•	•
20	1,5	125	25	-	16	12	4	18,5	•	•		

P SERIES

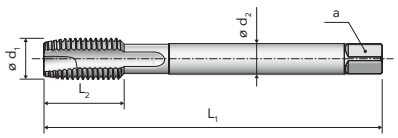
VERGNANO

HIGH PERFORMANCE MACHINE TAPS for through holes
Straight flutes with spiral point

HSSP

P17 TiN	P17 TiH1	P17 6GX TiH1	BP17 TiH1

DIN 374



6HX | 6HX | 6GX | 6HX

B (4-5) | B (4-5) | B (4-5) | B (4-5)

3xD | 3xD | 3xD | 3xD

RH | RH | RH | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P17 TiN	P17 TiH1	P17 6GX TiH1	BP17 TiH1
P	P.3	• 25-35	• 25-35	• 25-35	• 25-35
	P.4	• 20-30	• 20-30	• 20-30	• 20-30
	P.5	• 10-20	• 10-20	• 10-20	• 10-20
	P.6	• 8-10	• 8-10	• 8-10	• 8-10
	P.7	• 10-20	• 10-20	• 10-20	• 10-20
M	M.1	• 10-20	• 10-20	• 10-20	• 10-20
	M.2	• 6-8	• 6-8	• 6-8	• 6-8
K	K.2	• 25-35	• 25-35	• 25-35	• 25-35
N	N.2-3	• 30-40	• 30-40	• 30-40	• 30-40
	N.6	• 25-35	• 25-35	• 25-35	• 25-35

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P17 TiN	P17 TiH1	P17 6GX TiH1	BP17 TiH1
M 8	1	90	16	-	6	4,9	3	7	•	•	•	•
10	1	90	18	-	7	5,5	3	9	•	•	•	•
10	1,25	100	18	-	7	5,5	3	8,8	•	•	•	•
12	1	100	22	-	9	7	4	11	•	•	•	
12	1,25	100	22	-	9	7	4	10,8	•	•	•	•
12	1,5	100	22	-	9	7	4	10,5	•	•	•	•
14	1,5	100	22	-	11	9	4	12,5	•	•	•	•
16	1,5	100	22	-	12	9	4	14,5	•	•	•	•
18	1,5	110	25	-	14	11	4	16,5	•	•	•	•
20	1,5	125	25	-	16	12	4	18,5	•	•	•	•

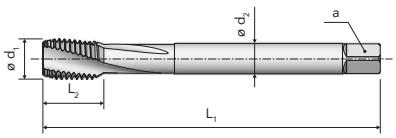
€ P.46

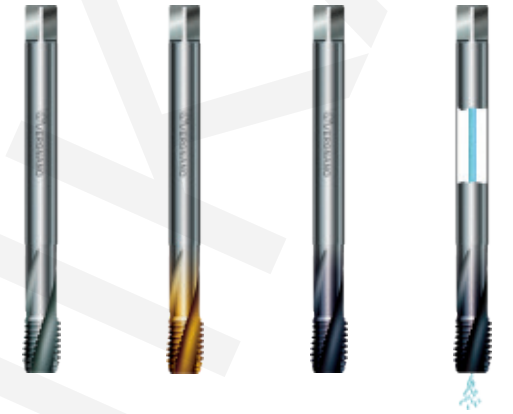
HIGH PERFORMANCE MACHINE TAPS for blind holes
15° spiral flutes

R15 | HSSP

P30 BRIGHT	P30 TiN	P30 TiH1	BP30 TiH1

DIN 374





6HX | C (2-3) | 2xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P30 BRIGHT	P30 TiN	P30 TiH1	BP30 TiH1
P	P.3	● 15-18	● 25-30	● 25-30	● 25-30
	P.4	● 12-15	● 20-25	● 20-25	● 20-25
	P.5	● 8-10	● 10-15	● 10-15	● 10-15
	P.6	● 3-5	● 5-10	● 5-10	● 5-10
	P.7	● 8-10	● 10-15	● 10-15	● 10-15
K	K.2	● 15-18	● 25-30	● 25-30	● 25-30
N	N.3	● 15-18	● 25-30	● 25-30	● 25-30
	N.6	● 15-18	● 25-30	● 25-30	● 25-30
	N.7	● 12-15	● 20-25	● 20-25	● 20-25
S	S.2	● 2-3		● 2-3	● 2-3
	S.4	● 2-3	● 2-3	● 2-3	● 2-3

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P30 BRIGHT	P30 TiN	P30 TiH1	BP30 TiH1
M 8	1	90	10	-	6	4,9	3	7	●	●	●	
10	1	90	11	-	7	5,5	3	9	●	●	●	
10	1,25	100	12	-	7	5,5	3	8,8	●	●	●	●
12	1,25	100	14	-	9	7	3	10,8	●	●	●	●
12	1,5	100	15	-	9	7	3	10,5	●	●	●	●
14	1,5	100	16	-	11	9	3	12,5	●	●	●	●
16	1,5	100	16	-	12	9	3	14,5	●	●	●	●
18	1,5	110	18	-	14	11	4	16,5	●	●	●	●
20	1,5	125	18	-	16	12	4	18,5	●	●	●	●

€ P.46

MF

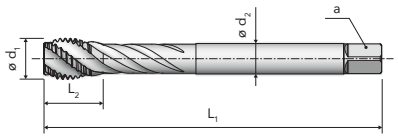
DIN 13

VERGNANO

HIGH PERFORMANCE MACHINE TAPS for blind holes
45° spiral flutes / back tapered

R45 | HSSZ

DIN 374



	P71 TiN	P71 TiH1	P71 6GX TiH1	BP71 TiH1
				
	6HX	6HX	6GX	6HX
	C (2-3)	C (2-3)	C (2-3)	C (2-3)
	3xD	3xD	3xD	3xD
	RH	RH	RH	RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P71 TiN	P71 TiH1	P71 6GX TiH1	BP71 TiH1
P	P.3	• 20-30	• 20-30	• 20-30	• 20-30
	P.4	• 15-25	• 15-25	• 15-25	• 15-25
	P.5	• 5-15	• 5-15	• 5-15	• 5-15
	P.7	• 10-15	• 10-15	• 10-15	• 10-15
M	M.1	• 10-15	• 10-15	• 10-15	• 10-15
	M.2	• 5-7	• 5-7	• 5-7	• 5-7
K	K.2	• 20-30	• 20-30	• 20-30	• 20-30
N	N.3	• 25-35	• 25-35	• 25-35	• 25-35
	N.6	• 25-35	• 25-35	• 25-35	• 25-35
S	S.1		• 10-15	• 10-15	• 10-15
	S.3	• 10-15	• 10-15	• 10-15	• 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P71 TiN	P71 TiH1	P71 6GX TiH1	BP71 TiH1
M 8	1	90	12	-	6	4,9	3	7	•	•	•	•
10	1	90	12	-	7	5,5	3	9	•	•	•	•
10	1,25	100	14	-	7	5,5	3	8,8	•	•	•	•
12	1	100	14	-	9	7	4	11	•	•	•	
12	1,25	100	14	-	9	7	4	10,8	•	•	•	•
12	1,5	100	15	-	9	7	4	10,5	•	•	•	•
14	1,5	100	16	-	11	9	4	12,5	•	•	•	•
16	1,5	100	16	-	12	9	4	14,5	•	•	•	•
18	1,5	110	18	-	14	11	4	16,5	•	•	•	•
20	1,5	125	18	-	16	12	4	18,5	•	•	•	•
22	1,5	125	19	-	18	14,5	4	20,5		• NEW		
24	1,5	140	19	-	18	14,5	4	22,5		• NEW		
27	1,5	140	21	-	20	16	5	25,5		• NEW		
30	1,5	150	22	-	22	18	5	28,5		• NEW		

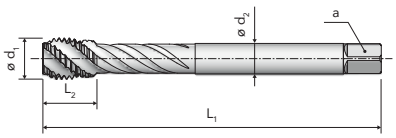
€ P.47

HIGH PERFORMANCE MACHINE TAPS for blind holes
45° spiral flutes / back tapered / chamfer form E

R45 | HSSZ

P71 E
TiH1

DIN 374



6HX | E (1,5-2) | 3xD | RH

P SERIES

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**P71 E** TiH1				
P	P.3	● 20-30				
	P.4	● 15-25				
	P.5	● 5-15				
	P.7	● 10-15				
M	M.1	● 10-15				
	M.2	● 5-7				
K	K.2	● 20-30				
N	N.3	● 25-35				
	N.6	● 25-35				
S	S.1	● 10-15				
	S.3	● 10-15				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	**P71 E** TiH1
M 8	1	90	12	-	6	4,9	4	7	●
10	1	90	12	-	7	5,5	4	9	●
10	1,25	100	14	-	7	5,5	4	8,8	●
12	1	100	14	-	9	7	4	11	●
12	1,25	100	14	-	9	7	4	10,8	●
12	1,5	100	15	-	9	7	4	10,5	●
14	1,5	100	16	-	11	9	5	12,5	●
16	1,5	100	16	-	12	9	5	14,5	●

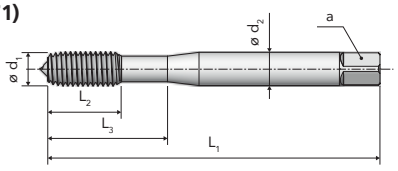
VERGNANO

HIGH PERFORMANCE COLD FORMING TAPS for blind and through holes
Without oil grooves

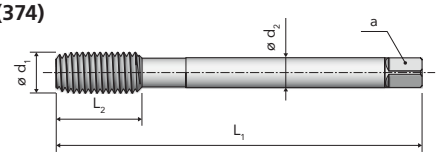
HSSK

P81 TiN	P81 V-MAXX	P81 6GX TiN

DIN 2174 (371)
≤ M10x1,25



DIN 2174 (374)
≥ M12x1



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P81 TiN	P81 V-MAXX	P81 6GX TiN
P	P.1-2	• 40-45	• 40-45	• 40-45
	P.3	• 35-40	• 35-40	• 35-40
	P.4	• 30-35	• 30-35	• 30-35
	P.5	• 15-20	• 15-20	• 15-20
	P.7	• 15-20	• 15-20	• 15-20
M	P.1	• 15-20	• 15-20	• 15-20
N	N.1-2	• 40-45	• 40-45	• 40-45
	N.3	• 35-40	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45	• 40-45
S	S.3	• 10-15	• 10-15	• 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P81 TiN	P81 V-MAXX	P81 6GX TiN
M 4	0,5	63	12	21	4,5	3,4	5	3,8	•	•	•
5	0,5	70	14	24,5	6	4,9	5	4,8	•	•	•
6	0,75	80	16	29	6	4,9	5	5,65	•	•	•
8	1	90	18	33	8	6,2	5	7,55	•	•	•
10	1	90	18	34	10	8	6	9,55	•	•	•
10	1,25	100	20	36	10	8	6	9,4	•	•	•
12	1	100	22	-	9	7	6	11,55	•	•	•
12	1,25	100	22	-	9	7	6	11,4	•	•	•
12	1,5	100	22	-	9	7	6	11,3	•	•	•
14	1,25	100	22	-	11	9	6	13,4	•	•	•
14	1,5	100	22	-	11	9	6	13,3	•	•	•
16	1,5	100	22	-	12	9	6	15,3	•	•	•

P SERIES

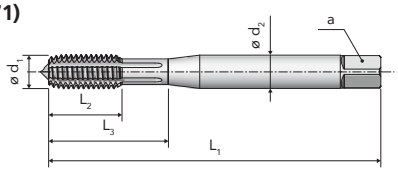
€ P.47

HIGH PERFORMANCE COLD FORMING TAPS for blind and through holes
With oil grooves

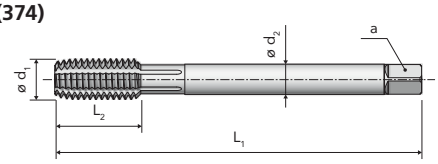
HSSK

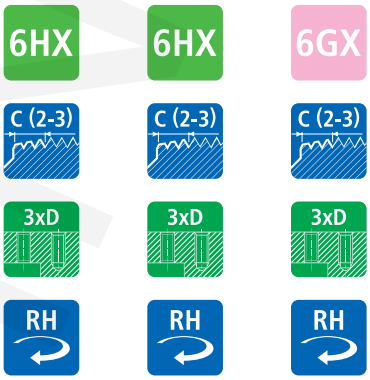
P81 N TiN | **P81 N** V-MAXX | **P81 N 6GX** TiN

DIN 2174 (371)
≤ M10x1,25



DIN 2174 (374)
≥ M12x1





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P81 N TiN	P81 N V-MAXX	P81 N 6GX TiN
P	P.1-2	● 40-45	● 40-45	● 40-45
	P.3	● 35-40	● 35-40	● 35-40
	P.4	● 30-35	● 30-35	● 30-35
	P.5	● 15-20	● 15-20	● 15-20
	P.7	● 15-20	● 15-20	● 15-20
M	P.1	● 15-20	● 15-20	● 15-20
N	N.1-2	● 40-45	● 40-45	● 40-45
	N.3	● 35-40	● 35-40	● 35-40
	N.5-6	● 40-45	● 40-45	● 40-45
S	S.3	● 10-15	● 10-15	● 10-15

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P81 N TiN	P81 N V-MAXX	P81 N 6GX TiN
M 4	0,5	63	12	21	4,5	3,4	5	3,8	●	●	●
5	0,5	70	14	24,5	6	4,9	5	4,8	●	●	●
6	0,75	80	16	29	6	4,9	5	5,65	●	●	●
8	1	90	18	33	8	6,2	5	7,55	●	●	●
10	1	90	18	34	10	8	6	9,55	●	●	●
10	1,25	100	20	36	10	8	6	9,4	●	●	●
12	1	100	22	-	9	7	6	11,55	●	●	●
12	1,25	100	22	-	9	7	6	11,4	●	●	●
12	1,5	100	22	-	9	7	6	11,3	●	●	●
14	1,25	100	22	-	11	9	6	13,4	●	●	●
14	1,5	100	22	-	11	9	6	13,3	●	●	●
16	1,5	100	22	-	12	9	6	15,3	●	●	●
18	1,5	110	22	-	14	11	8	17,3	●	●	●
20	1,5	125	25	-	16	12	8	19,3	●	●	●

€ P.48

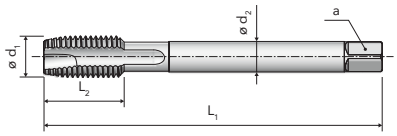
VERGNANO

HIGH PERFORMANCE MACHINE TAPS for through holes
Straight flutes with spiral point

HSSP

P18 TiN | **P18** TiH1

DIN 5156



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P18 TiN	P18 TiH1
P	P.3	• 25-35	• 25-35
	P.4	• 20-30	• 20-30
	P.5	• 10-20	• 10-20
	P.6	• 8-10	• 8-10
	P.7	• 10-20	• 10-20
M	M.1	• 10-20	• 10-20
	M.2	• 6-8	• 6-8
K	K.2	• 25-35	• 25-35
N	N.2-3	• 30-40	• 30-40
	N.6	• 25-35	• 25-35

ISO 5969 X | B (4-5) | 3xD | RH

ISO 5969 X | B (4-5) | 3xD | RH

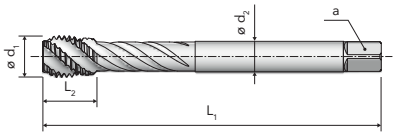
G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P18 TiN	P18 TiH1		
1/8"	28	9,728	90	18	-	7	5,5	3	8,8	•	•		
1/4"	19	13,157	100	22	-	11	9	4	11,8	•	•		
3/8"	19	16,662	100	22	-	12	9	4	15,25	•	•		
1/2"	14	20,955	125	25	-	16	12	4	19	•	•		
5/8"	14	22,911	125	25	-	18	14,5	4	21	•	•		
3/4"	14	26,441	140	28	-	20	16	5	24,5	•	•		
1"	11	33,249	160	30	-	25	20	5	30,75	•	•		

HIGH PERFORMANCE MACHINE TAPS for blind holes
45° spiral flutes / back tapered

R45 | HSSZ

P59 TiN	P59 TiH1	P59 E TiH1

DIN 5156



ISO 5969 X | C (2-3) | 3xD | RH

ISO 5969 X | C (2-3) | 3xD | RH

ISO 5969 X | E (1,5-2) | 3xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P59 TiN	P59 TiH1	P59 E TiH1
P	P.3	• 20-30	• 20-30	• 20-30
	P.4	• 15-25	• 15-25	• 15-25
	P.5	• 5-15	• 5-15	• 5-15
	P.7	• 10-15	• 10-15	• 10-15
M	M.1	• 10-15	• 10-15	• 10-15
	M.2	• 5-7	• 5-7	• 5-7
K	K.2	• 20-30	• 20-30	• 20-30
N	N.3	• 25-35	• 25-35	• 25-35
	N.6	• 25-35	• 25-35	• 25-35
S	S.1		• 10-15	• 10-15
	S.3	• 10-15	• 10-15	• 10-15

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P59 TiN	P59 TiH1	P59 E TiH1
1/8"	28	9,728	90	13	-	7	5,5	3	8,8	•	•	•
1/4"	19	13,157	100	16	-	11	9	4	11,8	•	•	•
3/8"	19	16,662	100	16,5	-	12	9	4	15,25	•	•	•
1/2"	14	20,955	125	20,5	-	16	12	5	19	•	•	•
5/8"	14	22,911	125	20,5	-	18	14,5	5	21	•	•	•
3/4"	14	26,441	140	21,5	-	20	16	5	24,5	•	•	•
1"	11	33,249	160	25,5	-	25	20	5	30,75	•	•	

€ P.48

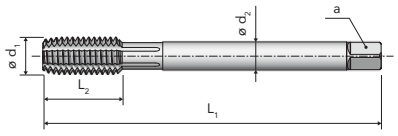
VERGNANO

HIGH PERFORMANCE COLD FORMING TAPS for blind and through holes
With oil grooves

HSSK

P82 N TiN | **P82 N** V-MAXX

DIN 2189



ISO 5969 X | C (2-3) | 3xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	P82 N TiN	P82 N V-MAXX
P	P.1-2	• 40-45	• 40-45
	P.3	• 35-40	• 35-40
	P.4	• 30-35	• 30-35
	P.5	• 15-20	• 15-20
	P.7	• 15-20	• 15-20
M	M.1	• 15-20	• 15-20
N	N.1-2	• 40-45	• 40-45
	N.3	• 35-40	• 35-40
	N.5-6	• 40-45	• 40-45
S	S.3	• 10-15	• 10-15

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P82 N TiN	P82 N V-MAXX
1/8"	28	9,728	90	18	-	7	5,5	6	9,25	•	•
1/4"	19	13,157	100	22	-	11	9	6	12,5	•	•
3/8"	19	16,662	100	22	-	12	9	6	16	•	•
1/2"	14	20,955	125	25	-	16	12	6	20	•	•
3/4"	14	26,441	140	28	-	20	16	6	25,5	•	•

€ P.48

S
SERIES

Synchronous Taps

VERGNANO

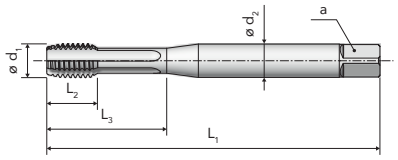
MACHINE TAPS FOR SYNCHRONOUS TAPPING for blind and through holes

Straight flutes / for cast iron

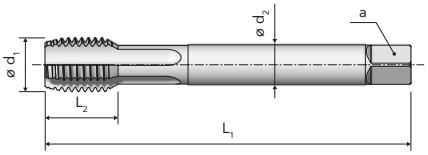
HSSK

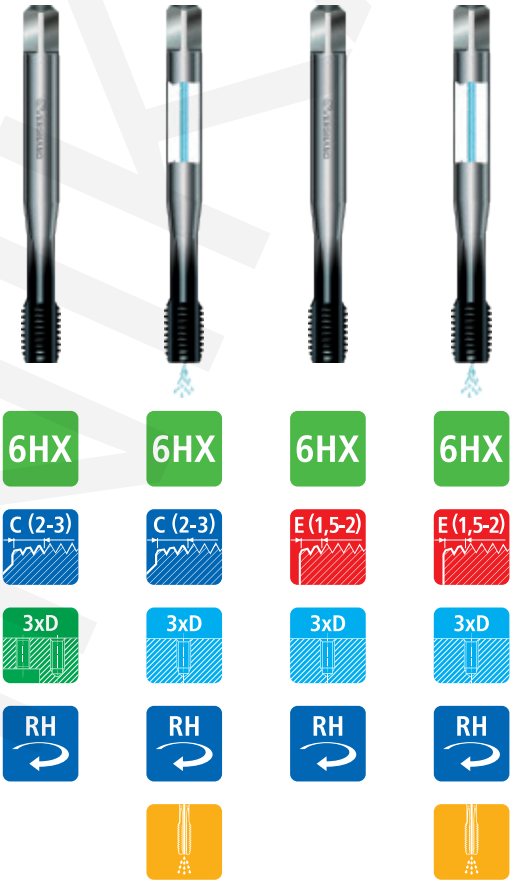
S43 V-MAXX	BS43 V-MAXX	S43 E V-MAXX	BS43 E V-MAXX

~DIN 371
≤ M12 (*)



~DIN 376
≥ M16 (*)





APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	S43 V-MAXX	BS43 V-MAXX	S43 E V-MAXX	BS43 E V-MAXX
K	K.1	• 55-65	• 55-65	• 55-65	• 55-65
N	N.4	• 55-65	• 55-65	• 55-65	• 55-65
	N.7	• 55-65	• 55-65	• 55-65	• 55-65
	N.9-10	• 55-65	• 55-65	• 55-65	• 55-65

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	S43 V-MAXX	BS43 V-MAXX	S43 E V-MAXX	BS43 E V-MAXX
M 3	0,5	70	5	15	6	4,9	3	2,5	•			
4	0,7	70	7	18	6	4,9	3	3,3	•		•	
5	0,8	70	8	23	6	4,9	3	4,2	•	•	•	•
6	1	80	10	29	6	4,9	4	5	•	•	•	•
8	1,25	90	11	33	8	6,2	4	6,8	•	•	•	•
10	1,5	100	13	36	10	8	4	8,5	•	•	•	•
12	1,75	110	16	42	12	9	4	10,2	•	•	•	•
16	2	110	18	-	12	9	4	14	•	•	•	•
20	2,5	140	23	-	16	12	4	17,5	•	•	•	•

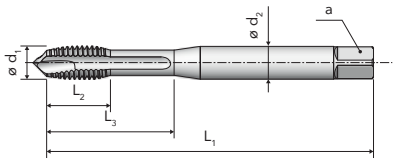
(*) = DIN 1835-B on request

MACHINE TAPS FOR SYNCHRONOUS TAPPING for through holes
Straight flutes with spiral point

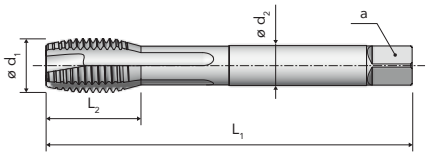
HSSK

S15 TiN	S15 TiH1	BS15 TiH1

~DIN 371
≤ M12 (*)



~DIN 376
≥ M14 (*)



6HX | B (4-5) | 3xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	S15 TiN	S15 TiH1	BS15 TiH1
P	P.1-2	● 50-60	● 50-60	● 50-60
	P.3	● 45-55	● 45-55	● 45-55
	P.4	● 40-50	● 40-50	● 40-50
	P.5	● 15-25	● 15-25	● 15-25
	P.7	● 15-25	● 15-25	● 15-25
M	M.1	● 15-25	● 15-25	● 15-25
	M.2	● 10-20	● 10-20	● 10-20
K	K.2	● 45-55	● 45-55	● 45-55
N	N.1	● 50-60	● 50-60	● 50-60
	N.2-3	● 45-55	● 45-55	● 45-55
	N.5	● 40-50	● 40-50	● 40-50
	N.6	● 35-45	● 35-45	● 35-45
S	S.1		● 15-25	● 15-25
	S.3	● 15-25	● 15-25	● 15-25

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	S15 TiN	S15 TiH1	BS15 TiH1
M 3	0,5	70	5	15	6	4,9	3	2,5	●	●	
4	0,7	70	7	18	6	4,9	3	3,3	●	●	
5	0,8	70	8	25	6	4,9	3	4,2	●	●	●
6	1	80	10	30	6	4,9	3	5	●	●	●
8	1,25	90	12,5	35	8	6,2	3	6,8	●	●	●
10	1,5	100	15	39	10	8	3	8,5	●	●	●
12	1,75	110	17,5	42	12	9	3	10,2	●	●	●
14	2	110	20	-	12	9	3	12	●	●	
16	2	110	20	-	12	9	4	14	●	●	●

(*) = DIN 1835-B on request

S SERIES

€ P.49

VERGNANO

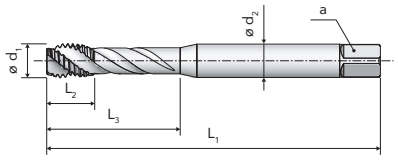
MACHINE TAPS FOR SYNCHRONOUS TAPPING for blind holes

40° spiral flutes / back tapered

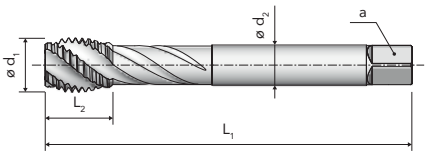
R40 | HSSK | S

S70 TiN	S70 TiH1	BS70 TiH1

~DIN 371
≤ M12 (*)



~DIN 376
≥ M14 (*)



6HX | C (2-3) | 3xD | RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	S70 TiN	S70 TiH1	BS70 TiH1
P	P.1-2	• 45-55	• 45-55	• 45-55
	P.3	• 40-50	• 40-50	• 40-50
	P.4	• 35-45	• 35-45	• 35-45
	P.5	• 15-20	• 15-20	• 15-20
	P.7	• 15-20	• 15-20	• 15-20
M	M.1	• 15-20	• 15-20	• 15-20
K	K.2	• 40-50	• 40-50	• 40-50
N	N.1	• 45-55	• 45-55	• 45-55
	N.2-3	• 40-50	• 40-50	• 40-50
	N.5	• 35-45	• 35-45	• 35-45
	N.6	• 30-40	• 30-40	• 30-40
S	S.1		• 15-20	• 15-20
	S.3	• 15-20	• 15-20	• 15-20

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	S70 TiN	S70 TiH1	BS70 TiH1
M 3	0,5	70	5,5	14	6	4,9	3	2,5	•	•	
4	0,7	70	7,5	18	6	4,9	3	3,3	•	•	
5	0,8	70	8,5	25	6	4,9	3	4,2	•	•	•
6	1	80	10,5	30	6	4,9	3	5	•	•	•
8	1,25	90	11,5	35	8	6,2	3	6,8	•	•	•
10	1,5	100	14	40	10	8	3	8,5	•	•	•
12	1,75	110	16,5	42	12	9	3	10,2	•	•	•
14	2	110	19	-	12	9	3	12	•	•	
16	2	110	19	-	12	9	4	14	•	•	•

(*) = DIN 1835-B on request

COLD FORMING TAPS FOR SYNCHRONOUS TAPPING for blind and through holes

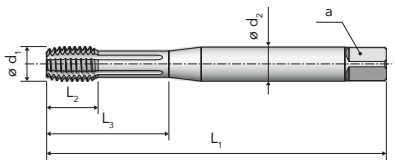
With oil grooves

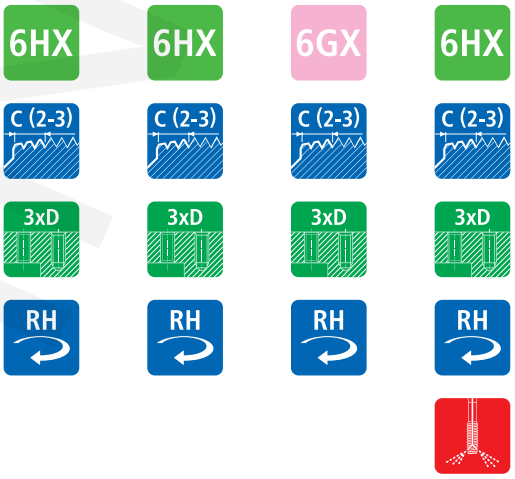
HSSK

S

S80 N TiN	S80 N V-MAXX	S80 N 6GX TiN	BS80 N R TiN

~DIN 371 (*)





APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**S80 N** TiN	**S80 N** V-MAXX	**S80 N 6GX** TiN	**BS80 N R** TiN
P	P.1-2	• 50-60	• 50-60	• 50-60	• 50-60
	P.3	• 45-55	• 45-55	• 45-55	• 45-55
	P.4	• 40-50	• 40-50	• 40-50	• 40-50
	P.5	• 20-30	• 20-30	• 20-30	• 20-30
	P.7	• 25-35	• 25-35	• 25-35	• 25-35
M	M.1	• 25-35	• 25-35	• 25-35	• 25-35
	M.2	• 15-25	• 15-25	• 15-25	• 15-25
N	N.1-2	• 50-60	• 50-60	• 50-60	• 50-60
	N.3	• 45-55	• 45-55	• 45-55	• 45-55
	N.5-6	• 50-60	• 50-60	• 50-60	• 50-60
S	S.3	• 10-20	• 10-20	• 10-20	• 10-20

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	S80 N TiN	S80 N V-MAXX	S80 N 6GX TiN	BS80 N R TiN
M 4	0,7	70	7	18	6	4,9	5	3,7	•	•	•	•
5	0,8	70	8	23	6	4,9	5	4,65	•	•	•	•
6	1	80	10	29	6	4,9	5	5,55	•	•	•	•
8	1,25	90	11	33	8	6,2	5	7,4	•	•	•	•
10	1,5	100	13	36	10	8	5	9,3	•	•	•	•
12	1,75	110	16	42	12	9	5	11,2	•	•	•	•

(*) = DIN 1835-B on request

€ P.49

VERGNANO

MACHINE TAPS FOR SYNCHRONOUS TAPPING for blind and through holes

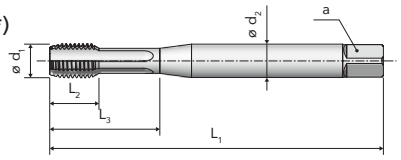
Straight flutes / for cast iron

HSSK

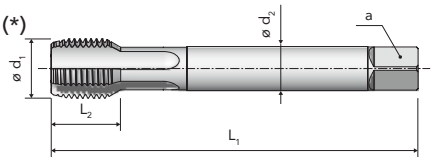
S45 V-MAXX

BS45 V-MAXX

~DIN 371
≤ M12x1,5 (*)



~DIN 376
≥ M14x1,5 (*)



6HX 6HX

C (2-3) C (2-3)

3xD 3xD

RH RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	S45 V-MAXX	BS45 V-MAXX
K	K.1	• 55-65	• 55-65
N	N.4	• 55-65	• 55-65
	N.7	• 55-65	• 55-65
	N.9-10	• 55-65	• 55-65

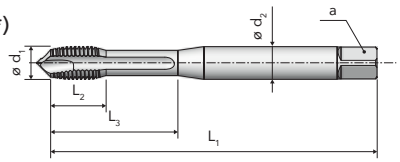
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	S45 V-MAXX	BS45 V-MAXX
M 8	1	90	10	33	8	6,2	4	7	•	•
10	1	90	10	33	10	8	4	9	•	•
10	1,25	100	12,5	33	10	8	4	8,8	•	•
12	1,25	100	12,5	33	12	9	4	10,8	•	•
12	1,5	100	15	37	12	9	4	10,5	•	•
14	1,5	100	15	-	12	9	4	12,5	•	•
16	1,5	100	15	-	12	9	4	14,5	•	•
20	1,5	125	17	-	16	12	4	18,5	•	•

(*) = DIN 1835-B on request

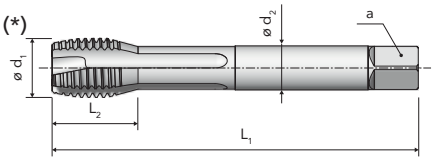
HSSK | S

S17
TiN

~DIN 371
≤ M12x1,5 (*)



~DIN 376
≥ M14x1,5 (*)



6HX

B (4-5)

3xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	S17 TiN
P	P.1-2	● 50-60
	P.3	● 45-55
	P.4	● 40-50
	P.5	● 15-25
	P.7	● 15-25
M	M.1	● 15-25
	M.2	● 10-20
K	K.2	● 45-55
N	N.1	● 50-60
	N.2-3	● 45-55
	N.5	● 40-50
	N.6	● 35-45
	S.3	● 15-25

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	S17 TiN
M 8	1	90	10	35	8	6,2	3	7	●
10	1	90	10	39	10	8	3	9	●
10	1,25	100	12,5	39	10	8	3	8,8	●
12	1,25	100	12,5	42	12	9	3	10,8	●
12	1,5	100	15	42	12	9	3	10,5	●
14	1,5	100	15	-	12	9	3	12,5	●
16	1,5	100	15	-	12	9	4	14,5	●

(*) = DIN 1835-B on request

VERGNANO

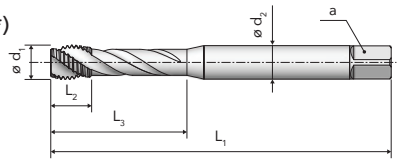
MACHINE TAPS FOR SYNCHRONOUS TAPPING for blind holes

40° spiral flutes / back tapered

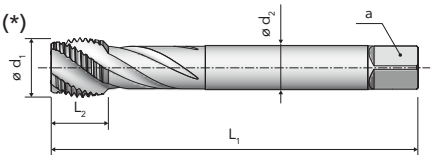
R40 | HSSK | S

S71
TiN

~DIN 371
≤ M12x1,5 (*)



~DIN 376
≥ M14x1,5 (*)



6HX

C (2-3)

3xD

RH

S SERIES

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	S71 TiN
P	P.1-2	● 45-55
	P.3	● 40-50
	P.4	● 35-45
	P.5	● 15-20
	P.7	● 15-20
M	M.1	● 15-20
K	K.2	● 40-50
N	N.1	● 45-55
	N.2-3	● 40-50
	N.5	● 35-45
	N.6	● 30-40
S	S.3	● 15-20

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	S71 TiN
M 8	1	90	10	35	8	6,2	3	7	●
10	1	90	10	40	10	8	3	9	●
10	1,25	100	11,5	40	10	8	3	8,8	●
12	1,25	100	11,5	40	12	9	3	10,8	●
12	1,5	100	14	42	12	9	3	10,5	●
14	1,5	100	14	-	12	9	4	12,5	●
16	1,5	100	14	-	12	9	4	14,5	●

(*) = DIN 1835-B on request

H
SERIES

Solid Carbide Taps

VERGNANO

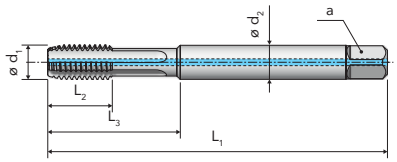
SOLID CARBIDE MACHINE TAPS for blind holes

Straight flutes / internal coolant / for cast iron

HM

HB43 BRIGHT | **HB43** V-MAXX | **HB43 E** V-MAXX

DIN 371



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	HB43 BRIGHT	HB43 V-MAXX	HB43 E V-MAXX
K	K.1	• 40-50	• 55-65	• 55-65
N	N.4	• 40-50	• 55-65	• 55-65
	N.7	• 40-50	• 55-65	• 55-65
	N.9-10	• 45-55	• 55-65	• 55-65

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	HB43 BRIGHT	HB43 V-MAXX	HB43 E V-MAXX
M 3(*)	0,5	56	8	18	3,5	2,7	3	2,5	•	•	
4(*)	0,7	63	10	21	4,5	3,4	4	3,3	•	•	
5	0,8	70	10	25	6	4,9	4	4,2	•	•	• NEW
6	1	80	12	30	6	4,9	4	5	•	•	• NEW
8	1,25	90	16	35	8	6,2	4	6,8	•	•	• NEW
10	1,5	100	18	39	10	8	4	8,5	•	•	• NEW

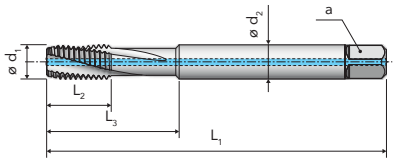
(*) = Taps without through coolant

SOLID CARBIDE MACHINE TAPS for blind holes
15° spiral flutes / internal coolant

R15 HM

HB29 BRIGHT | **HB29** V-MAXX

DIN 371



6HX 6HX

C (2-3) C (2-3)

2,5xD 2,5xD

RH RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**HB29** BRIGHT	**HB29** V-MAXX		
N	N.1-2	• 15-30	• 25-50		
	N.3	• 20-30	• 30-50		
	N.4	• 15-20	• 25-40		
	N.7	• 20-25	• 30-40		

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	HB29 BRIGHT	HB29 V-MAXX		
M 3(*)	0,5	56	8	18	3,5	2,7	3	2,5	•	•		
4(*)	0,7	63	10	21	4,5	3,4	3	3,3	•	•		
5	0,8	70	10	25	6	4,9	3	4,2	•	•		
6	1	80	12	30	6	4,9	3	5	•	•		
8	1,25	90	16	35	8	6,2	3	6,8	•	•		
10	1,5	100	18	39	10	8	3	8,5	•	•		

(*) = Taps without through coolant

SOLID CARBIDE MACHINE TAPS for blind and through holes

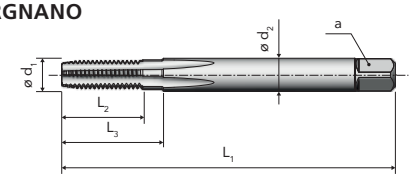
Straight flutes / for high strength materials

HM

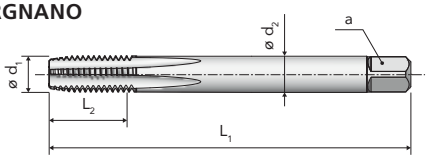
H130 BRIGHT

H130 V-MAXX

NORM VERGNANO
≤ M5



NORM VERGNANO
≥ M6



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	H130 BRIGHT	H130 V-MAXX
H	H.1	• 2-3	• 3-6
	H.2	• 1-2	• 2-4

ISO2 6H | D (4-5) | 1,5xD | RH

ISO2 6H | D (4-5) | 1,5xD | RH

H SERIES

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	H130 BRIGHT	H130 V-MAXX
M 3	0,5	56	12	17	3,5	2,7	3	2,6 (*)	•	•
4	0,7	63	14	19	4,5	3,4	4	3,4 (*)	•	•
5	0,8	70	17,5	22	6	4,9	4	4,3 (*)	•	•
6	1	80	20	-	6	4,9	5	5,1 (*)	•	•
8	1,25	90	20	-	8	6,2	5	6,9 (*)	•	•
10	1,5	100	24	-	10	8	5	8,6 (*)	•	•
12	1,75	110	28	-	12	9	5	10,4 (*)	•	•

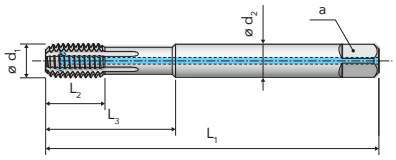
(*) = The hole diameters are oversized

SOLID CARBIDE COLD FORMING TAPS for blind and through holes
With oil grooves / internal coolant

HM

HB80 N R
V-MAXX

DIN 371



6HX

C (2-3)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**HB80 N R** V-MAXX				
P	P.1-2	● 40-50				
	P.3	● 35-45				
	P.4	● 30-40				
	P.5	● 15-25				
	P.7	● 15-25				
M	M.1	● 15-25				
N	N.1-2	● 40-50				
	N.3	● 35-45				
	N.5-6	● 40-50				
S	S.3	● 10-20				

Ød$_1$ [mm]	P [mm]	L$_1$ js 16 [mm]	L$_2$ [mm]	L$_3$ [mm]	Ød$_2$ h6 [mm]	a h12 [mm]	z [-]	[mm]	**HB80 N R** V-MAXX			
M 3(*)	0,5	56	6	18	3,5	2,7	4	2,8	●			
4(*)	0,7	63	7,5	21	4,5	3,4	5	3,7	●			
5	0,8	70	8,5	25	6	4,9	5	4,65	●			
6	1	80	11	30	6	4,9	5	5,55	●			
8	1,25	90	14	35	8	6,2	5	7,4	●			
10	1,5	100	16	39	10	8	5	9,3	●			

(*) = Taps without through coolant

VERGNANO

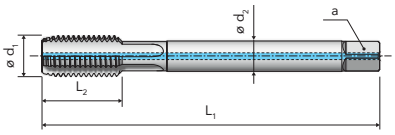
SOLID CARBIDE MACHINE TAPS for blind holes

Straight flutes / internal coolant / for cast iron

HM

HB45 BRIGHT	HB45 V-MAXX	HB45 E V-MAXX

DIN 374



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	HB45 BRIGHT	HB45 V-MAXX	HB45 E V-MAXX
K	K.1	• 40-50	• 55-65	• 55-65
N	N.4	• 40-50	• 55-65	• 55-65
	N.7	• 40-50	• 55-65	• 55-65
	N.9-10	• 45-55	• 55-65	• 55-65

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	HB45 BRIGHT	HB45 V-MAXX	HB45 E V-MAXX
M 10	1	90	18	-	7	5,5	4	9	•	•	• NEW
12	1,25	100	22	-	9	7	4	10,8	•	•	• NEW
12	1,5	100	22	-	9	7	4	10,5	•	•	• NEW
14	1,5	100	22	-	11	9	4	12,5	•	•	• NEW
16	1,5	100	22	-	12	9	4	14,5	•	•	• NEW

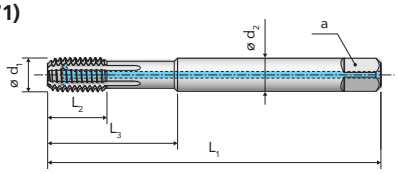
H SERIES

€ P.52

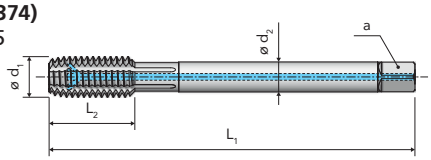
HM

HB81 N R E
V-MAXX

DIN 2174 (371)
≤ M10x1,25



DIN 2174 (374)
≥ M12x1,25



6HX

E (1,5-2)

2,5xD

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	HB81 N R E V-MAXX
P	P.1-2	● 40-50
	P.3	● 35-45
	P.4	● 30-40
	P.5	● 15-25
	P.7	● 15-25
M	M.1	● 15-25
N	N.1-2	● 40-50
	N.3	● 35-45
	N.5-6	● 40-50
S	S.3	● 10-20

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]	HB81 N R E V-MAXX
M 8	1	90	14	35	8	6,2	5	7,55	● NEW
10	1	90	14	35	10	8	6	9,55	● NEW
10	1,25	100	15	39	10	8	6	9,4	● NEW
12	1,25	100	15	-	9	7	6	11,4	● NEW
12	1,5	100	15	-	9	7	6	11,3	● NEW
14	1,5	100	16	-	11	9	6	13,3	● NEW
16	1,5	100	16	-	12	9	6	15,3	● NEW

E

Discontinued Taps

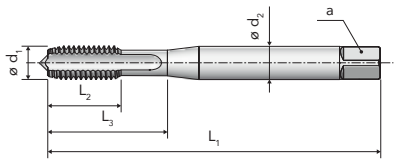
VERGNANO

MACHINE TAPS for blind holes
Straight flutes

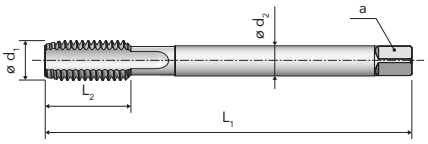
HSSE

A21 FC LH
BRIGHT

DIN 371
≤ M10



DIN 376
≥ M12



ISO2 6H

C (2-3)

1,5xD

LH

ARTICLE SUBSTITUTED WITH

A70S LH
(pp. 66)

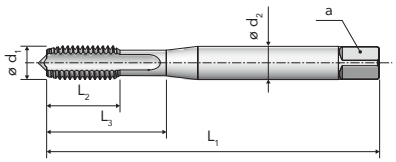
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A21 FC LH BRIGHT
M 3	0,5	56	10	18	3,5	2,7	3	2,5	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•
6	1	80	16	29	6	4,9	3	5	•
8	1,25	90	18	33	8	6,2	3	6,8	•
10	1,5	100	20	36	10	8	3	8,5	•
12	1,75	110	24	-	9	7	3	10,2	•
14	2	110	25	-	11	9	3	12	•
16	2	110	28	-	12	9	3	14	•
18	2,5	125	32	-	14	11	3	15,5	•
20	2,5	140	32	-	16	12	4	17,5	•
22	2,5	140	32	-	18	14,5	4	19,5	•
24	3	160	36	-	18	14,5	4	21	•
27	3	160	36	-	20	16	4	24	•
30	3,5	180	40	-	22	18	4	26,5	•

€ P.53

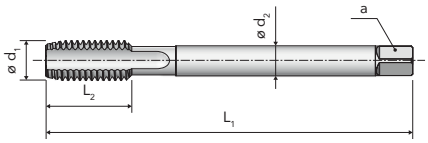
HSSE

A21 FP BRIGHT | **A21 FP** TiN

DIN 371
≤ M10



DIN 376
≥ M11



ISO2 6H | A (5-6) | 1,5xD | RH

ISO2 6H | A (5-6) | 1,5xD | RH

ARTICLE SUBSTITUTED WITH

A15 S
(pp. 45)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A21 FP BRIGHT	A21 FP TiN
M 2	0,4	45	7	11	2,8	2,1	3	1,6	•	•
2,2	0,45	45	8	13	2,8	2,1	3	1,75	•	•
2,3	0,4	45	8	13	2,8	2,1	3	1,9	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•
2,6	0,45	50	9	15	2,8	2,1	3	2,1	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
3,5	0,6	56	11	20	4	3	3	2,9	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
7	1	80	16	29	7	5,5	3	6	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
9	1,25	90	18	33	9	7	3	7,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
11	1,5	100	22	-	8	6,2	3	9,5	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•
14	2	110	25	-	11	9	3	12	•	•
16	2	110	28	-	12	9	3	14	•	•
18	2,5	125	32	-	14	11	3	15,5	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•
22	2,5	140	32	-	18	14,5	4	19,5	•	•
24	3	160	36	-	18	14,5	4	21	•	•
27	3	160	36	-	20	16	4	24	•	•
30	3,5	180	40	-	22	18	4	26,5	•	•
33	3,5	180	40	-	25	20	4	29,5	•	•
36	4	200	55	-	28	22	4	32	•	•

€ P.53

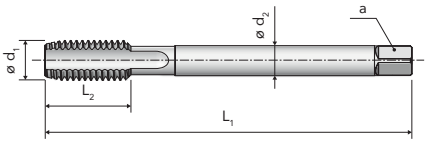
VERGNANO

MACHINE TAPS for through holes
Straight flutes

HSSE

A21 FP
BRIGHT

DIN 376



ARTICLE SUBSTITUTED WITH

A15 S
(pp. 45)

ISO2 6H

A (5-6)

1,5xD

RH

«

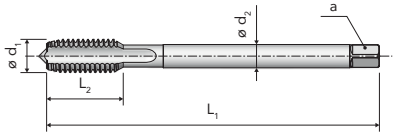
Ød$_1$ [mm]	P [mm]	L_1 js 16 [mm]	L_2 [mm]	L_3 [mm]	Ød$_2$ h9 [mm]	a h12 [mm]	z [-]	[mm]	A21 FP BRIGHT
M 39	4	200	60	-	32	24	4	35	•
42	4,5	200	60	-	32	24	4	37,5	•
45	4,5	220	65	-	36	29	4	40,5	•
48	5	250	70	-	36	29	4	43	•
52	5	250	70	-	40	32	4	47	•

€ P.53

HSSE

A22 FP BRIGHT | **A22 FP** TiN

DIN 376



ISO2 6H | A (5-6) | 1,5xD | RH

ARTICLE SUBSTITUTED WITH
A16 S (pp. 51)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A22 FP BRIGHT	A22 FP TiN
M 4	0,7	63	12	-	2,8	2,1	3	3,3	•	•
5	0,8	70	14	-	3,5	2,7	3	4,2	•	•
6	1	80	16	-	4,5	3,4	3	5	•	•
7	1	80	16	-	5,5	4,3	3	6	•	•
8	1,25	90	18	-	6	4,9	3	6,8	•	•
9	1,25	90	18	-	7	5,5	3	7,8	•	•
10	1,5	100	20	-	7	5,5	3	8,5	•	•

€ P.54

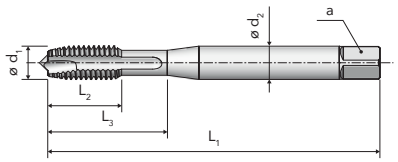
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

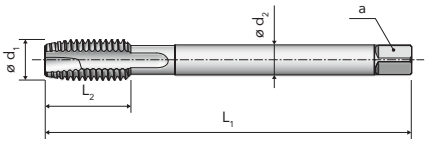
HSSE

A15 BRIGHT | **A15** VAP | **A15** TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO2 6H | B (4-5) | 2,5xD | RH

ARTICLE SUBSTITUTED WITH

A15 S
(pp. 45)

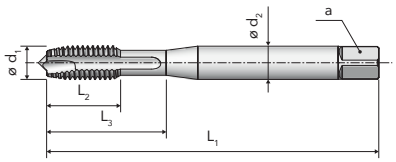
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 BRIGHT	A15 VAP	A15 TiN
M 2	0,4	45	7	11	2,8	2,1	2	1,6	•	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•	•
3,5	0,6	56	11	20	4	3	3	2,9	•	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•	•
6	1	80	16	29	6	4,9	3	5	•	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•	•
14	2	110	25	-	11	9	3	12	•	•	•
16	2	110	28	-	12	9	3	14	•	•	•
18	2,5	125	32	-	14	11	4	15,5	•	•	•
20	2,5	140	32	-	16	12	4	17,5	•	•	•
22	2,5	140	32	-	18	14,5	4	19,5	•	•	•
24	3	160	36	-	18	14,5	4	21	•	•	•
27	3	160	36	-	20	16	4	24	•	•	•
30	3,5	180	40	-	22	18	4	26,5	•	•	•

HSSE

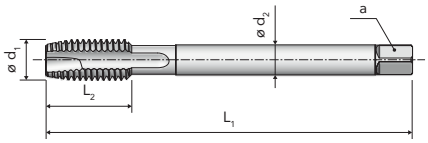
A15 6G BRIGHT

A15 6G TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO3 6G | B (4-5) | 2,5xD | RH

ISO3 6G | B (4-5) | 2,5xD | RH

ARTICLE SUBSTITUTED WITH

A15 S 6G
(pp. 48)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A15 6G BRIGHT	A15 6G TiN
M 2	0,4	45	7	11	2,8	2,1	2	1,6	•	•
2,5	0,45	50	9	15	2,8	2,1	3	2,05	•	•
3	0,5	56	10	18	3,5	2,7	3	2,5	•	•
4	0,7	63	12	21	4,5	3,4	3	3,3	•	•
5	0,8	70	14	24,5	6	4,9	3	4,2	•	•
6	1	80	16	29	6	4,9	3	5	•	•
8	1,25	90	18	33	8	6,2	3	6,8	•	•
10	1,5	100	20	36	10	8	3	8,5	•	•
12	1,75	110	24	-	9	7	3	10,2	•	•
14	2	110	25	-	11	9	3	12	•	•
16	2	110	28	-	12	9	3	14	•	•

E

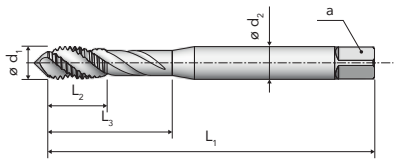
VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

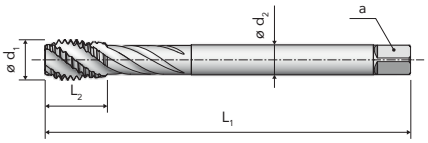
R40 | HSSE

A70 BRIGHT | **A70** VAP | **A70** TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO2 6H | C (2-3) | 2,5xD | RH

ARTICLE SUBSTITUTED WITH

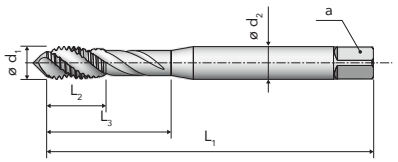
A70 S
(pp. 60)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 BRIGHT	A70 VAP	A70 TiN
M 2	0,4	45	6	12	2,8	2,1	3	1,6	•	•	•
2,5	0,45	50	6,5	15	2,8	2,1	3	2,05	•	•	•
3	0,5	56	7	15	3,5	2,7	3	2,5	•	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•	•
6	1	80	12	29	6	4,9	3	5	•	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•	•
14	2	110	20,5	-	11	9	4	12	•	•	•
16	2	110	20,5	-	12	9	4	14	•	•	•
18	2,5	125	25,5	-	14	11	4	15,5	•	•	•
20	2,5	140	29,5	-	16	12	4	17,5	•	•	•
22	2,5	140	29,5	-	18	14,5	4	19,5	•	•	•
24	3	160	35,5	-	18	14,5	4	21	•	•	•
27	3	160	37,5	-	20	16	4	24	•	•	•
30	3,5	180	42	-	22	18	4	26,5	•	•	•
33	3,5	180	43,5	-	25	20	4	29,5	•	•	•
36	4	200	47	-	28	22	4	32	•	•	•

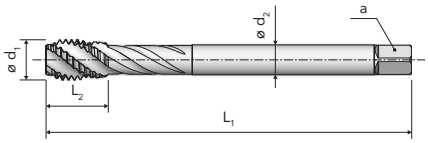
R40 | HSSE

A70 6G BRIGHT | **A70 6G** VAP | **A70 6G** TiN

DIN 371
≤ M10



DIN 376
≥ M12



ISO3 6G | ISO3 6G | ISO3 6G

C (2-3) | C (2-3) | C (2-3)

2,5xD | 2,5xD | 2,5xD

RH | RH | RH

ARTICLE SUBSTITUTED WITH

A70 S 6G
(pp. 62)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A70 6G BRIGHT	A70 6G VAP	A70 6G TiN
M 2	0,4	45	6	12	2,8	2,1	3	1,6	•	•	•
2,5	0,45	50	6,5	15	2,8	2,1	3	2,05	•	•	•
3	0,5	56	7	15	3,5	2,7	3	2,5	•	•	•
4	0,7	63	8,5	21	4,5	3,4	3	3,3	•	•	•
5	0,8	70	10	24,5	6	4,9	3	4,2	•	•	•
6	1	80	12	29	6	4,9	3	5	•	•	•
8	1,25	90	15	33	8	6,2	3	6,8	•	•	•
10	1,5	100	17,5	38	10	8	3	8,5	•	•	•
12	1,75	110	18	-	9	7	4	10,2	•	•	•

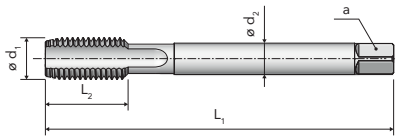
E

VERGNANO

MACHINE TAPS for through holes
Straight flutes

HSSE

DIN 374



A23 FP BRIGHT	A23 FP TiN	A23 FP LH BRIGHT
ARTICLE SUBSTITUTED WITH		
A17 S (pp. 87)	**A17 S** (pp. 87)	**A23 FC LH** (pp. 83)

ISO2 6H | A (5-6) | 1,5xD | RH

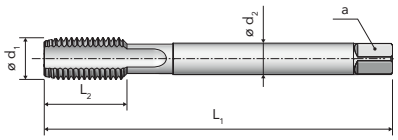
ISO2 6H | A (5-6) | 1,5xD | RH

ISO2 6H | A (5-6) | 1,5xD | LH

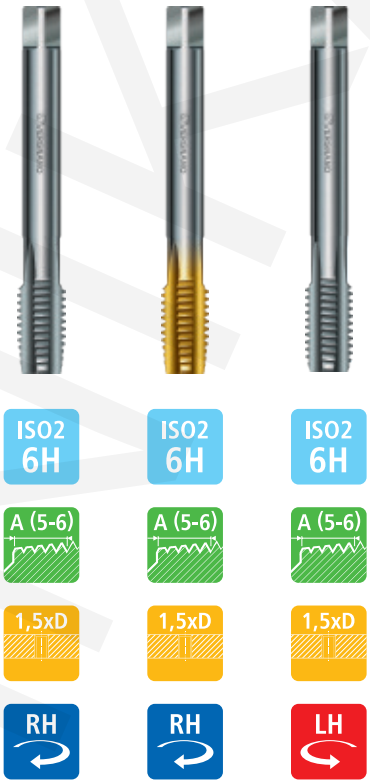
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A23 FP BRIGHT	A23 FP TiN	A23 FP LH BRIGHT
M 3	0,35	56	8	-	2,2	-	3	2,65	•		
3,5	0,35	56	9	-	2,5	2,1	3	3,15	•		
4	0,5	63	10	-	2,8	2,1	3	3,5	•		
5	0,5	70	12	-	3,5	2,7	3	4,5	•		
6	0,5	80	14	-	4,5	3,4	3	5,5	•	•	
6	0,75	80	14	-	4,5	3,4	3	5,2	•	•	•
7	0,75	80	14	-	5,5	4,3	3	6,2	•	•	
8	0,75	80	16	-	6	4,9	3	7,2	•		
8	1	90	16	-	6	4,9	3	7	•	•	•
9	1	90	16	-	7	5,5	3	8	•		
10	0,5	90	18	-	7	5,5	4	9,5	•	•	
10	0,75	90	18	-	7	5,5	3	9,2	•		
10	1	90	18	-	7	5,5	3	9	•	•	•
10	1,25	100	18	-	7	5,5	3	8,8	•	•	•
11	1	90	20	-	8	6,2	3	10	•		
12	0,75	100	22	-	9	7	4	11,2	•	•	
12	1	100	22	-	9	7	4	11	•	•	
12	1,25	100	22	-	9	7	3	10,8	•	•	•
12	1,5	100	22	-	9	7	3	10,5	•	•	•
14	1	100	22	-	11	9	4	13	•	•	
14	1,25	100	22	-	11	9	3	12,8	•	•	
14	1,5	100	22	-	11	9	3	12,5	•	•	•
15	1	100	22	-	12	9	4	14	•		
15	1,5	100	22	-	12	9	3	13,5	•		
16	1	100	22	-	12	9	4	15	•	•	
16	1,25	100	22	-	12	9	4	14,8	•	•	

HSSE

DIN 374



A23 FP BRIGHT	A23 FP TiN	A23 FP LH BRIGHT
ARTICLE SUBSTITUTED WITH		
A17 S (pp. 87)	**A17 S** (pp. 87)	**A23 FC LH** (pp. 84)



Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A23 FP BRIGHT	A23 FP TiN	A23 FP LH BRIGHT
M 16	1,5	100	22	-	12	9	3	14,5	•	•	•
17	1	100	22	-	12	9	4	16	•		
17	1,5	100	22	-	12	9	4	15,5	•		
18	1	110	25	-	14	11	4	17	•		
18	1,5	110	25	-	14	11	4	16,5	•	•	•
18	2	125	28	-	14	11	4	16	•		
20	1	125	25	-	16	12	4	19	•		
20	1,5	125	25	-	16	12	4	18,5	•	•	•
20	2	140	28	-	16	12	4	18	•		
22	1	125	25	-	18	14,5	4	21	•		
22	1,5	125	25	-	18	14,5	4	20,5	•	•	
22	2	140	28	-	18	14,5	4	20	•		
24	1	140	25	-	18	14,5	4	23	•		
24	1,5	140	25	-	18	14,5	4	22,5	•		
24	2	140	28	-	18	14,5	4	22	•		
25	1	140	25	-	18	14,5	4	24	•		
25	1,5	140	25	-	18	14,5	4	23,5	•		
25	2	140	28	-	18	14,5	4	23	•		
26	1	140	25	-	18	14,5	4	25	•		
26	1,5	140	25	-	18	14,5	4	24,5	•		
26	2	140	28	-	18	14,5	4	24	•		
27	1,5	140	28	-	20	16	4	25,5	•		
27	2	140	28	-	20	16	4	25	•		
28	1,5	140	28	-	20	16	4	26,5	•		
28	2	140	28	-	20	16	4	26	•		
30	1	150	25	-	22	18	5	29	•		

€ P.56

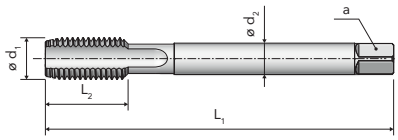
VERGNANO

MACHINE TAPS for through holes
Straight flutes

HSSE

A23 FP
BRIGHT

DIN 374



ISO2 6H

A (5-6)

1,5xD

RH

ARTICLE SUBSTITUTED WITH

A17 S
(pp. 88-89)

E

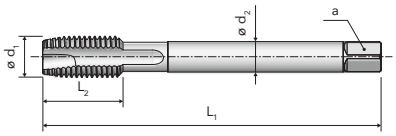
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A23 FP BRIGHT
M 30	1,5	150	28	-	22	18	4	28,5	•
30	2	150	28	-	22	18	4	28	•
32	1,5	150	28	-	22	18	5	30,5	•
32	2	150	28	-	22	18	4	30	•
33	1,5	160	30	-	25	20	5	31,5	•
33	2	160	30	-	25	20	4	31	•
35	1,5	170	30	-	28	22	5	33,5	•
35	2	170	30	-	28	22	5	33	•
36	1,5	170	30	-	28	22	5	34,5	•
36	2	170	30	-	28	22	5	34	•
36	3	200	56	-	28	22	4	33	•
39	3	200	60	-	32	24	5	36	•
40	1,5	170	30	-	32	24	5	38,5	•
40	2	170	30	-	32	24	5	38	•
40	3	200	60	-	32	24	5	37	•
42	1,5	170	30	-	32	24	6	40,5	•
42	2	170	30	-	32	24	5	40	•
42	3	200	60	-	32	24	5	39	•
45	1,5	180	32	-	36	29	6	43,5	•
45	2	180	32	-	36	29	5	43	•
45	3	200	50	-	36	29	5	42	•
48	1,5	190	32	-	36	29	6	46,5	•
48	2	190	32	-	36	29	6	46	•
48	3	225	50	-	36	29	5	45	•
52	1,5	190	32	-	40	32	6	50,5	•
52	2	190	32	-	40	32	6	50	•
52	3	225	50	-	40	32	5	49	•

€ P.56

HSSE

A17 BRIGHT | **A17** VAP | **A17** TiN

DIN 374



ISO2 6H | B (4-5) | 2,5xD | RH

ARTICLE SUBSTITUTED WITH

A17 S
(pp. 87)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A17 BRIGHT	A17 VAP	A17 TiN
M 4	0,5	63	10	-	2,8	2,1	3	3,5	•		
5	0,5	70	12	-	3,5	2,7	3	4,5	•		
6	0,75	80	14	-	4,5	3,4	3	5,2	•	•	•
7	0,75	80	14	-	5,5	4,3	3	6,2	•		
8	0,75	80	16	-	6	4,9	3	7,2	•		
8	1	90	16	-	6	4,9	3	7	•	•	•
9	1	90	16	-	7	5,5	3	8	•		
10	0,75	90	18	-	7	5,5	4	9,2	•		
10	1	90	18	-	7	5,5	4	9	•	•	•
10	1,25	100	18	-	7	5,5	3	8,8	•	•	•
11	1	90	20	-	8	6,2	4	10	•		
12	1	100	22	-	9	7	4	11	•	•	•
12	1,25	100	22	-	9	7	4	10,8	•	•	•
12	1,5	100	22	-	9	7	3	10,5	•	•	•
14	1	100	22	-	11	9	4	13	•		
14	1,25	100	22	-	11	9	4	12,8	•	•	•
14	1,5	100	22	-	11	9	4	12,5	•	•	•
15	1	100	22	-	12	9	4	14	•		
15	1,5	100	22	-	12	9	4	13,5	•		
16	1	100	22	-	12	9	4	15	•		
16	1,5	100	22	-	12	9	4	14,5	•	•	•
18	1	110	25	-	14	11	4	17	•		
18	1,5	110	25	-	14	11	4	16,5	•	•	•
20	1	125	25	-	16	12	4	19	•		
20	1,5	125	25	-	16	12	4	18,5	•	•	•
22	1	125	25	-	18	14,5	4	21	•		

€ P.57

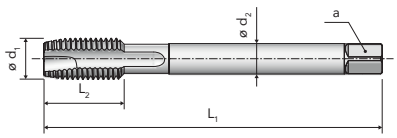
VERGNANO

MACHINE TAPS for through holes
Straight flutes with spiral point

HSSE

A17
BRIGHT

DIN 374



ISO2 6H

B (4-5)

2,5xD

RH

ARTICLE SUBSTITUTED WITH

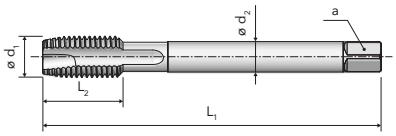
A17 S
(pp. 88)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A17 BRIGHT
M 22	1,5	125	25	-	18	14,5	4	20,5	•
24	1	140	25	-	18	14,5	5	23	•
24	1,5	140	25	-	18	14,5	4	22,5	•
24	2	140	28	-	18	14,5	4	22	•
25	1,5	140	25	-	18	14,5	4	23,5	•
25	2	140	28	-	18	14,5	4	23	•
26	1,5	140	25	-	18	14,5	4	24,5	•
26	2	140	28	-	18	14,5	4	24	•
27	1,5	140	28	-	20	16	4	25,5	•
27	2	140	28	-	20	16	4	25	•
28	1,5	140	28	-	20	16	4	26,5	•
28	2	140	28	-	20	16	4	26	•
30	1,5	150	28	-	22	18	4	28,5	•
30	2	150	28	-	22	18	4	28	•
32	1,5	150	28	-	22	18	5	30,5	•
32	2	150	28	-	22	18	4	30	•
36	1,5	170	30	-	28	22	5	34,5	•
36	2	170	30	-	28	22	5	34	•
36	3	200	56	-	28	22	4	33	•
40	1,5	170	30	-	32	24	5	38,5	•
40	2	170	30	-	32	24	5	38	•
40	3	200	60	-	32	24	4	37	•
42	1,5	170	30	-	32	24	5	40,5	•
42	2	170	30	-	32	24	5	40	•
42	3	200	60	-	32	24	5	39	•
45	1,5	180	32	-	36	29	6	43,5	•

HSSE

A17
BRIGHT

DIN 374



ISO2 6H

B (4-5)

2,5xD

RH

ARTICLE SUBSTITUTED WITH
A17 S (pp. 89)

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A17 BRIGHT
M 45	2	180	32	-	36	29	5	43	●
45	3	200	50	-	36	29	5	42	●
48	1,5	190	32	-	36	29	6	46,5	●
48	2	190	32	-	36	29	5	46	●
48	3	225	50	-	36	29	5	45	●

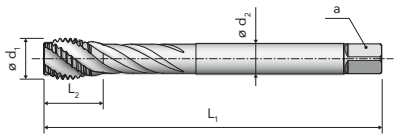
E

VERGNANO

MACHINE TAPS for blind holes
40° spiral flutes / back tapered

R40 | HSSE

DIN 374



A71 BRIGHT	A71 TiN
	
ISO2 6H	ISO2 6H
C (2-3)	C (2-3)
2,5xD	2,5xD
RH	RH

ARTICLE SUBSTITUTED WITH

A71 S
(pp. 95)

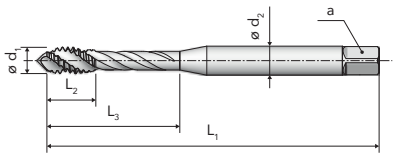
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A71 BRIGHT	A71 TiN		
M 6	0,75	80	7,5	-	4,5	3,4	3	5,2	•	•		
8	1	90	10	-	6	4,9	3	7	•	•		
10	1	90	10	-	7	5,5	3	9	•	•		
10	1,25	100	11,5	-	7	5,5	3	8,8	•	•		
12	1	100	13	-	9	7	4	11	•	•		
12	1,25	100	13,5	-	9	7	4	10,8	•	•		
12	1,5	100	14	-	9	7	4	10,5	•	•		
14	1,5	100	15,5	-	11	9	4	12,5	•	•		
16	1,5	100	15,5	-	12	9	4	14,5	•	•		
18	1,5	110	16	-	14	11	4	16,5	•	•		
20	1	125	15	-	16	12	4	19	•			
20	1,5	125	17	-	16	12	4	18,5	•	•		
22	1,5	125	19	-	18	14,5	4	20,5	•			
24	1,5	140	21	-	18	14,5	4	22,5	•			
24	2	140	26	-	18	14,5	4	22	•			
26	1,5	140	23	-	18	14,5	4	24,5	•			
27	1,5	140	23	-	20	16	4	25,5	•			
27	2	140	28	-	20	16	4	25	•			
28	1,5	140	23	-	20	16	4	26,5	•			
30	1,5	150	25	-	22	18	5	28,5	•			
30	2	150	29	-	22	18	4	28	•			
36	3	200	46	-	28	22	4	33	•			
42	3	200	51	-	32	24	5	39	•			

€ P.58

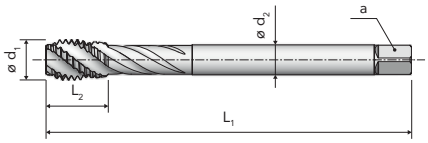
R40 | HSSE

A60 BRIGHT | **A60** TiN

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



2B | 2B

C (2-3) | C (2-3)

2,5xD | 2,5xD

RH | RH

ARTICLE SUBSTITUTED WITH

A60 S
(pp. 109)

UNC	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A60 BRIGHT	A60 TiN
Nr.2	56	2,184	45	6	13	2,8	2,1	3	1,85	•	•
Nr.3	48	2,515	50	6	15	2,8	2,1	3	2,1	•	•
Nr.4	40	2,845	56	6,5	21	3,5	2,7	3	2,35	•	•
Nr.5	40	3,175	56	6,5	21	3,5	2,7	3	2,65	•	•
Nr.6	32	3,505	56	7,5	22,5	4	3	3	2,85	•	•
Nr.8	32	4,166	63	7,5	26	4,5	3,4	3	3,5	•	•
Nr.10	24	4,826	70	10	28,5	6	4,9	3	3,9	•	•
Nr.12	24	5,486	80	10	28,5	6	4,9	3	4,5	•	•
1/4”	20	6,35	80	11,5	32	7	5,5	3	5,1	•	•
5/16”	18	7,938	90	13	-	6	4,9	3	6,6	•	•
3/8”	16	9,525	100	14	-	7	5,5	3	8	•	•
7/16”	14	11,113	100	17	-	8	6,2	3	9,4	•	•
1/2”	13	12,7	110	19	-	9	7	4	10,8	•	•
9/16”	12	14,288	110	21	-	11	9	4	12,2	•	•
5/8”	11	15,875	110	22,5	-	12	9	4	13,5	•	•
3/4”	10	19,05	125	26	-	14	11	4	16,5	•	•
7/8”	9	22,225	140	30	-	18	14,5	4	19,5	•	•
1”	8	25,4	160	36,5	-	18	14,5	4	22,25	•	•

E

UNF

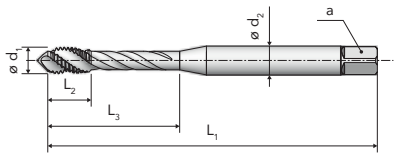
ASME B1.1

VERGNANO

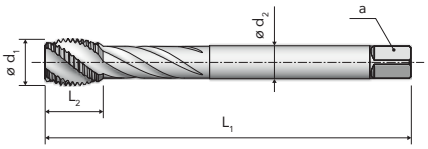
MACHINE TAPS for blind holes
40° spiral flutes / back tapered

R40 | HSSE

DIN 2184-1
≤ Ø 1/4”



DIN 2184-1
≥ Ø 5/16”



A61 BRIGHT	**A61** TiN
	
2B	2B
C (2-3)	C (2-3)
2,5xD	2,5xD
RH	RH

ARTICLE SUBSTITUTED WITH

A61 S
(pp. 117)

UNF	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A61 BRIGHT	A61 TiN
Nr.2	64	2,184	45	5,5	13	2,8	2,1	3	1,85	•	•
Nr.3	56	2,515	50	6	18	2,8	2,1	3	2,15	•	•
Nr.4	48	2,845	56	6	18	3,5	2,7	3	2,4	•	•
Nr.5	44	3,175	56	6	18	3,5	2,7	3	2,7	•	•
Nr.6	40	3,505	56	6,5	22	4	3	3	2,95	•	•
Nr.8	36	4,166	63	7	26,5	4,5	3,4	3	3,5	•	•
Nr.10	32	4,826	70	8	29	6	4,9	3	4,1	•	•
Nr.12	28	5,486	80	9	29,5	6	4,9	3	4,6	•	•
1/4”	28	6,35	80	10	32	7	5,5	3	5,5	•	•
5/16”	24	7,938	90	11	-	6	4,9	3	6,9	•	•
3/8”	24	9,525	90	12	-	7	5,5	3	8,5	•	•
7/16”	20	11,113	100	13,5	-	8	6,2	3	9,9	•	•
1/2”	20	12,7	100	14,5	-	9	7	4	11,5	•	•
9/16”	18	14,288	100	15,5	-	11	9	4	12,9	•	•
5/8”	18	15,875	100	16	-	12	9	4	14,5	•	•
3/4”	16	19,05	110	18	-	14	11	4	17,5	•	•
7/8”	14	22,225	125	23,5	-	18	14,5	4	20,4	•	•
1”	12	25,4	140	26	-	18	14,5	4	23,25	•	•

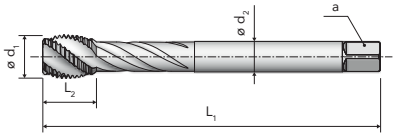
E

€ P.59

R40 | HSSE

A59 BRIGHT | **A59** TiN

DIN 5156



ISO 5969 | C (2-3) | 2,5xD | RH

ISO 5969 | C (2-3) | 2,5xD | RH

ARTICLE SUBSTITUTED WITH

A59 S
(pp. 126)

G	P [TPI]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A59 BRIGHT	A59 TiN
1/8"	28	9,728	90	17	-	7	5,5	3	8,8	•	•
1/4"	19	13,157	100	23	-	11	9	4	11,8	•	•
3/8"	19	16,662	100	23	-	12	9	4	15,25	•	•
1/2"	14	20,955	125	29	-	16	12	4	19	•	•
5/8"	14	22,911	125	29	-	18	14,5	4	21	•	•
3/4"	14	26,441	140	29	-	20	16	4	24,5	•	•
7/8"	14	30,201	150	32	-	22	18	4	28,25	•	•
1"	11	33,249	160	34,5	-	25	20	4	30,75	•	•
1 1/8"	11	37,897	170	34,5	-	28	22	5	35,5	•	
1 1/4"	11	41,91	170	34,5	-	32	24	5	39,5	•	
1 1/2"	11	47,803	190	37,5	-	36	29	6	45,25	•	

F
SERIES

Dies

VERGNANO

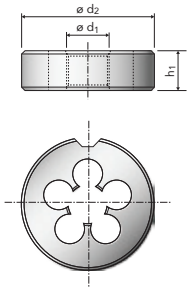
DIES
With spiral point

HSS

X200 BRIGHT

X200 LH BRIGHT

DIN EN 22568



ISO 6g

1,75xP

RH

ISO 6g

1,75xP

LH

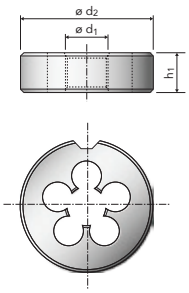
APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**X200** BRIGHT	**X200 LH** BRIGHT		
P	P.1-4	●	●		
	P.7	●	●		
M	M.1	●	●		
K	K.2	●	●		
N	N.1-3	●	●		
	N.5-7	●	●		

Ød1 [mm]	P [mm]	Ød2 [mm]	h1 [mm]	**X200** BRIGHT	**X200 LH** BRIGHT
M 2	0,4	16	5	●	
2,2	0,45	16	5	●	
2,5	0,45	16	5	●	
3	0,5	20	5	●	●
3,5	0,6	20	5	●	
4	0,7	20	5	●	●
5	0,8	20	7	●	●
6	1	20	7	●	●
7	1	25	9	●	
8	1,25	25	9	●	●
9	1,25	25	9	●	
10	1,5	30	11	●	●
11	1,5	30	11	●	
12	1,75	38	14	●	●
14	2	38	14	●	●
16	2	45	18	●	
18	2,5	45	18	●	
20	2,5	45	18	●	
22	2,5	55	22	●	
24	3	55	22	●	
27	3	65	25	●	
30	3,5	65	25	●	
33	3,5	65	25	●	
36	4	65	25	●	
39	4	75	30	●	

HSS

X201
BRIGHT

DIN EN 22568



ISO 6g

1,75xP

RH

APPLICATION RANGE - CUTTING SPEED m/min					
ISO	**MG**	**X201** BRIGHT			
P	P.1-4	•			
	P.7	•			
M	M.1	•			
K	K.2	•			
N	N.1-3	•			
	N.5-7	•			

$Ød_1$ [mm]	P [mm]	$Ød_2$ [mm]	h1 [mm]	**X201** BRIGHT	
M 2	0,25	16	5	•	
2,2	0,25	16	5	•	
2,5	0,35	16	5	•	
3	0,35	20	5	•	
4	0,5	20	5	•	
5	0,5	20	5	•	
6	0,75	20	7	•	
7	0,75	25	9	•	
8	0,75	25	9	•	
8	1	25	9	•	
9	1	25	9	•	
10	0,75	30	11	•	
10	1	30	11	•	
10	1,25	30	11	•	
11	1	30	11	•	
12	1	38	10	•	
12	1,25	38	10	•	
12	1,5	38	10	•	
14	1	38	10	•	
14	1,25	38	10	•	
14	1,5	38	10	•	
15	1	38	10	•	
15	1,5	38	10	•	
16	1	45	14	•	
16	1,5	45	14	•	
18	1	45	14	•	

F SERIES

€ P.61

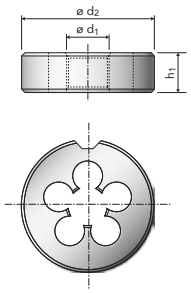
VERGNANO

DIES
With spiral point

HSS

X201
BRIGHT

DIN EN 22568



ISO 6g

1,75xP

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	X201 BRIGHT			
P	P.1-4	●			
	P.7	●			
M	M.1	●			
K	K.2	●			
N	N.1-3	●			
	N.5-7	●			

«

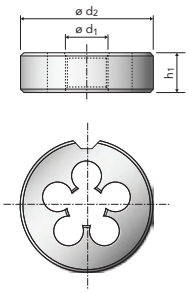
Ød1 [mm]	P [mm]	Ød2 [mm]	h1 [mm]	X201 BRIGHT	
M 18	1,5	45	14	●	
18	2	45	14	●	
20	1	45	14	●	
20	1,5	45	14	●	
20	2	45	14	●	
22	1	55	16	●	
22	1,5	55	16	●	
22	2	55	16	●	
24	1	55	16	●	
24	1,5	55	16	●	
24	2	55	16	●	
25	1	55	16	●	
25	1,5	55	16	●	
25	2	55	16	●	
26	1,5	55	16	●	
27	1,5	65	18	●	
27	2	65	18	●	
28	1,5	65	18	●	
28	2	65	18	●	
30	1	65	18	●	
30	1,5	65	18	●	
30	2	65	18	●	
32	1,5	65	18	●	
32	2	65	18	●	
33	2	65	18	●	
35	1,5	65	18	●	

F SERIES

HSS

X201
BRIGHT

DIN EN 22568



ISO 6g

1,75xP

RH

APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**X201** BRIGHT				
P	P.1-4	●				
	P.7	●				
M	M.1	●				
K	K.2	●				
N	N.1-3	●				
	N.5-7	●				

«

Ød$_1$ [mm]	P [mm]	Ød$_2$ [mm]	h1 [mm]	**X201** BRIGHT	
M 36	1,5	65	18	●	
36	2	65	18	●	
36	3	65	25	●	

F SERIES

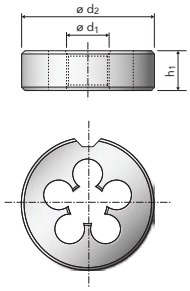
VERGNANO

DIES
With spiral point

HSS

X204
BRIGHT

DIN EN 22568



2A

1,75xP

RH

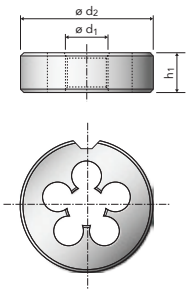
APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**X204** BRIGHT				
P	P.1-4	●				
	P.7	●				
M	M.1	●				
K	K.2	●				
N	N.1-3	●				
	N.5-7	●				

UNC	P [TPI]	Ød$_1$ [mm]	Ød$_2$ [mm]	h1 [mm]	**X204** BRIGHT	
Nr. 2	56	2,184	16	5	●	
Nr. 4	40	2,845	20	5	●	
Nr. 5	40	3,175	20	5	●	
Nr. 6	32	3,505	20	7	●	
Nr. 8	32	4,166	20	7	●	
Nr. 10	24	4,826	20	7	●	
Nr. 12	24	5,486	20	7	●	
1/4”	20	6,35	20	7	●	
5/16”	18	7,938	25	9	●	
3/8”	16	9,525	30	11	●	
7/16”	14	11,113	30	11	●	
1/2”	13	12,7	38	14	●	
9/16”	12	14,288	38	14	●	
5/8”	11	15,875	45	18	●	
3/4”	10	19,05	45	18	●	
7/8”	9	22,225	55	22	●	
1”	8	25,4	55	22	●	

HSS

X205
BRIGHT

DIN EN 22568



2A

1,75xP

RH

APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	X205 BRIGHT			
P	P.1-4	•			
	P.7	•			
M	M.1	•			
K	K.2	•			
N	N.1-3	•			
	N.5-7	•			

UNF	P [TPI]	Ød1 [mm]	Ød2 [mm]	h1 [mm]	X205 BRIGHT	
Nr. 3	56	2,515	16	5	•	
Nr. 4	48	2,845	20	5	•	
Nr. 5	44	3,175	20	5	•	
Nr. 6	40	3,505	20	5	•	
Nr. 8	36	4,166	20	7	•	
Nr. 10	32	4,826	20	7	•	
Nr. 12	28	5,486	20	7	•	
1/4"	28	6,35	20	7	•	
5/16"	24	7,938	25	9	•	
3/8"	24	9,525	30	11	•	
7/16"	20	11,113	30	11	•	
1/2"	20	12,7	38	10	•	
9/16"	18	14,288	38	10	•	
5/8"	18	15,875	45	14	•	
3/4"	16	19,05	45	14	•	
7/8"	14	22,225	55	16	•	
1"	12	25,4	55	16	•	

F SERIES

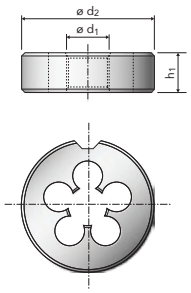
VERGNANO

DIES
With spiral point

HSS

X203
BRIGHT

DIN EN 24231



APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**X203** BRIGHT				
P	P.1-4	●				
	P.7	●				
M	M.1	●				
K	K.2	●				
N	N.1-3	●				
	N.5-7	●				

A

1,75xP

RH

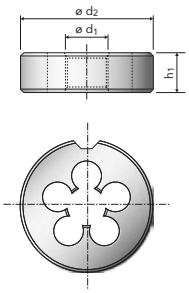
G	P [TPI]	Ød1 [mm]	Ød2 [mm]	h1 [mm]	**X203** BRIGHT	
1/8"	28	9,728	30	11	●	
1/4"	19	13,157	38	10	●	
3/8"	19	16,662	45	14	●	
1/2"	14	20,955	45	14	●	
5/8"	14	22,911	55	16	●	
3/4"	14	26,441	55	16	●	
7/8"	14	30,201	65	18	●	
1"	11	33,249	65	18	●	
1 1/4"	11	41,91	75	20	●	
1 1/2"	11	47,803	90	22	●	
2"	11	59,614	105	22	●	

€ P.63

HSS

X202
BRIGHT

DIN EN 22568



APPLICATION RANGE - CUTTING SPEED m/min

ISO	MG	X202 BRIGHT			
P	P.1-4	•			
	P.7	•			
M	M.1	•			
K	K.2	•			
N	N.1-3	•			
	N.5-7	•			

mc

1,75xP

RH

BSW	P [TPI]	Ød1 [mm]	Ød2 [mm]	h1 [mm]	X202 BRIGHT	
3/32"	48	2,381	20	5	•	
1/8"	40	3,175	20	5	•	
3/16"	24	4,763	20	7	•	
1/4"	20	6,35	25	9	•	
5/16"	18	7,938	25	9	•	
3/8"	16	9,525	30	11	•	
7/16"	14	11,113	30	11	•	
1/2"	12	12,7	38	14	•	
5/8"	11	15,875	45	18	•	
3/4"	10	19,05	45	18	•	
7/8"	9	22,225	55	22	•	
1"	8	25,4	55	22	•	

F SERIES

NPT

ASME B1.20.1

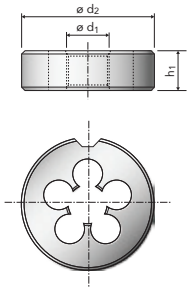
VERGNANO

DIES
With spiral point

HSS

X206
BRIGHT

DIN EN 22568



APPLICATION RANGE - CUTTING SPEED m/min						
ISO	**MG**	**X206** BRIGHT				
P	P.1-4	●				
	P.7	●				
M	M.1	●				
K	K.2	●				
N	N.1-3	●				
	N.5-7	●				

1,75xP

RH

NPT	P [TPI]	Ød$_1$ [mm]	Ød$_2$ [mm]	h1 [mm]	**X206** BRIGHT	
1/16”	27	7,938	25	10	●	
1/8”	27	10,287	30	10	●	
1/4”	18	13,716	38	15	●	
3/8”	18	17,145	45	15,3	●	
1/2”	14	21,336	45	20	●	
3/4”	14	26,67	55	20,2	●	
1”	11,5	33,401	65	25	●	

F SERIES

€ P.63

VR
SERIES

Thread Mills

VR10 - VR20 - VR30															
ISO 513	Material	Group	Application	N/mm²	Vc m/min	Feed (mm/tooth)									
						Ø2	Ø3	Ø4	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20
P	Steel	P.1	Mild / magnetic steel	200 - 400	100-250	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		P.2	Construction steel, case hardening steel	350 - 700	100-250	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		P.3	Carbon steel	350 - 850	100-250	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		P.4	Alloyed steel, tempered steel	500 - 850	110-180	0,02	0,03	0,03	0,05	0,06	0,07	0,08	0,09	0,1	0,12
		P.5	Alloyed steel, tempered steel	850 - 1200	90-160	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,06	0,07	0,08
		P.6	Alloyed steel / high strength steel	1200 - 1600	90-140	0,02	0,02	0,02	0,02	0,03	0,04	0,04	0,05	0,06	0,07
		P.7	Ferritic / martensitic stainless steel	< 1000	110-180	0,02	0,03	0,03	0,05	0,06	0,07	0,08	0,09	0,1	0,12
M	Stainless steel	M.1	Austenitic	< 850	60-120	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,06	0,07	0,08
		M.2	Ferritic-austenitic (Duplex)	< 1000	50-100	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,06	0,07	0,08
K	Cast iron	K.1	Grey cast iron	< 1000	70-150	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		K.2	Nodular cast iron	< 1000	100-250	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		K.3	Austempered ductile iron (ADI)	< 1400	70-120	0,03	0,03	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,1
N	Aluminium alloys	N.1	Pure aluminium	< 300	150-350	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		N.2	Aluminium alloys Si < 0,5% (long chipping)	< 500	150-350	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		N.3	Aluminium alloys Si < 10% (medium chipping)	< 500	150-350	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		N.4	Aluminium alloys Si > 10% (short chipping)	< 600	100-250	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,06	0,07	0,08
	Copper alloys	N.5	Pure copper	250 - 350	150-350	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		N.6	Copper alloys, Brass (long chipping)	< 700	150-350	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		N.7	Copper alloys, Brass (short chipping)	< 700	100-250	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,06	0,07	0,08
		N.8	High strength bronze	700 - 1500	90-140	0,02	0,02	0,02	0,02	0,03	0,04	0,04	0,05	0,06	0,07
	Magnesium alloys	N.9	Pure Magnesium / Magnesium alloys	120 - 300	150-350	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
		N.10	High strength Magnesium alloys	240 - 400	150-350	0,03	0,04	0,04	0,06	0,07	0,08	0,09	0,11	0,12	0,15
S	Titanium alloys	S.1	Pure titanium	400 - 600	20-90	0,02	0,02	0,02	0,03	0,04	0,04	0,04	0,05	0,05	0,05
		S.2	Titanium alloys	600 - 1000	20-80	0,02	0,02	0,02	0,03	0,03	0,03	0,03	0,04	0,04	0,04
	Nickel alloys	S.3	Pure nickel	400 - 600	20-90	0,02	0,02	0,02	0,03	0,04	0,04	0,04	0,05	0,05	0,05
		S.4	Nickel alloys	600 - 1000	20-80	0,02	0,02	0,02	0,03	0,03	0,03	0,03	0,04	0,04	0,04

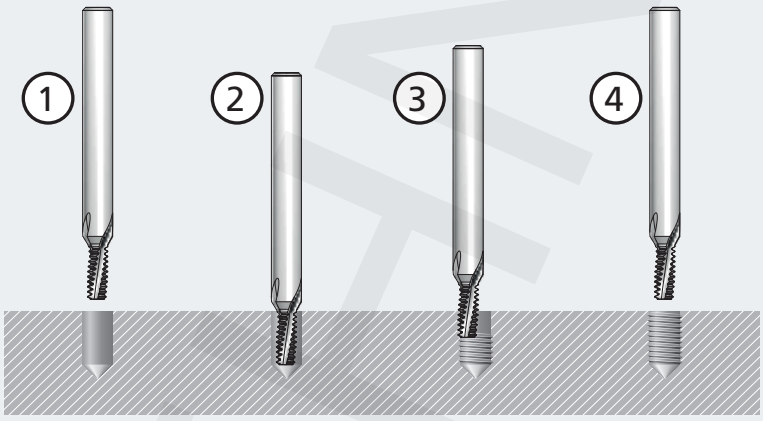
VR40 - VR45																				
ISO 513	Material	Group	Application	N/mm²	Vc m/min	Feed (mm/tooth)														
						Ø1	Ø1,5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø12	Ø14	Ø16
P	Steel	P.1	Mild / magnetic steel	200 - 400	60-120	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		P.2	Construction steel, case hardening steel	350 - 700	60-120	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		P.3	Carbon steel	350 - 850	60-120	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		P.4	Alloyed steel, tempered steel	500 - 850	60-90	0,03	0,04	0,05	0,06	0,08	0,09	0,1	0,12	0,13	0,14	0,14	0,16	0,17	0,18
		P.5	Alloyed steel, tempered steel	850 - 1200	50-80	0,03	0,04	0,04	0,05	0,05	0,06	0,07	0,07	0,08	0,09	0,1	0,12	0,13	0,14
		P.6	Alloyed steel / high strength steel	1200 - 1600	50-70	0,02	0,02	0,02	0,03	0,04	0,05	0,06	0,06	0,07	0,08	0,09	0,1	0,12	0,13
		P.7	Ferritic / martensitic stainless steel	< 1000	60-90	0,03	0,04	0,05	0,06	0,08	0,09	0,1	0,12	0,13	0,14	0,14	0,16	0,17	0,18
M	Stainless steel	M.1	Austenitic	< 850	60-90	0,02	0,03	0,03	0,04	0,05	0,06	0,06	0,07	0,08	0,09	0,1	0,11	0,12	0,13
		M.2	Ferritic-austenitic (Duplex)	< 1000	50-80	0,02	0,03	0,03	0,04	0,05	0,06	0,06	0,07	0,08	0,09	0,1	0,11	0,12	0,13
K	Cast iron	K.1	Grey cast iron	< 1000	40-80	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		K.2	Nodular cast iron	< 1000	60-120	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		K.3	Austempered ductile iron (ADI)	< 1400	40-70	0,04	0,04	0,04	0,05	0,05	0,06	0,07	0,08	0,09	0,1	0,11	0,12	0,12	0,12
N	Aluminium alloys	N.1	Pure aluminium	< 300	100-200	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		N.2	Aluminium alloys Si < 0,5% (long chipping)	< 500	100-200	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		N.3	Aluminium alloys Si < 10% (medium chipping)	< 500	100-200	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		N.4	Aluminium alloys Si > 10% (short chipping)	< 600	60-140	0,03	0,03	0,03	0,04	0,05	0,06	0,06	0,07	0,08	0,09	0,1	0,11	0,13	0,14
	Copper alloys	N.5	Pure copper	250 - 350	100-200	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		N.6	Copper alloys, Brass (long chipping)	< 700	100-200	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		N.7	Copper alloys, Brass (short chipping)	< 700	60-140	0,03	0,03	0,03	0,04	0,05	0,06	0,06	0,07	0,08	0,09	0,1	0,11	0,13	0,14
		N.8	High strength bronze	700 - 1500	60-100	0,03	0,03	0,03	0,03	0,04	0,04	0,05	0,05	0,06	0,08	0,08	0,09	0,09	0,1
	Magnesium alloys	N.9	Pure Magnesium / Magnesium alloys	120 - 300	100-200	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
		N.10	High strength Magnesium alloys	240 - 400	100-200	0,04	0,05	0,05	0,07	0,09	0,11	0,13	0,14	0,15	0,16	0,16	0,17	0,18	0,18
S	Titanium alloys	S.1	Pure titanium	400 - 600	20-50	0,03	0,03	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,08	0,08
		S.2	Titanium alloys	600 - 1000	20-40	0,03	0,03	0,03	0,04	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,07	0,08	0,08
	Nickel alloys	S.3	Pure nickel	400 - 600	20-50	0,03	0,03	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,08	0,08
		S.4	Nickel alloys	600 - 1000	20-40	0,03	0,03	0,03	0,04	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,07	0,08	0,08

APPLICATION AND CUTTING SPEED TABLE

VR50 - VR55																		
ISO 513	Material	Group	Application	N/mm²	Vc m/min	Feed (mm/tooth)												
						Ø1	Ø1,5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø12	Ø14	Ø16
S	Titanium alloys	S.2	Titanium alloys	600 - 1000	20-40	0,03	0,03	0,03	0,04	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,07	0,08	0,08
	Nickel alloys	S.4	Nickel alloys	600 - 1000	20-40	0,03	0,03	0,03	0,04	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,07	0,08	0,08
H	Hardened materials	H.1	Alloyed steel, hardness HRC 44-55	-	50-60	0,02	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
		H.2	Alloyed steel, hardness HRC 56-62	-	40-50	0,01	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,08	0,09

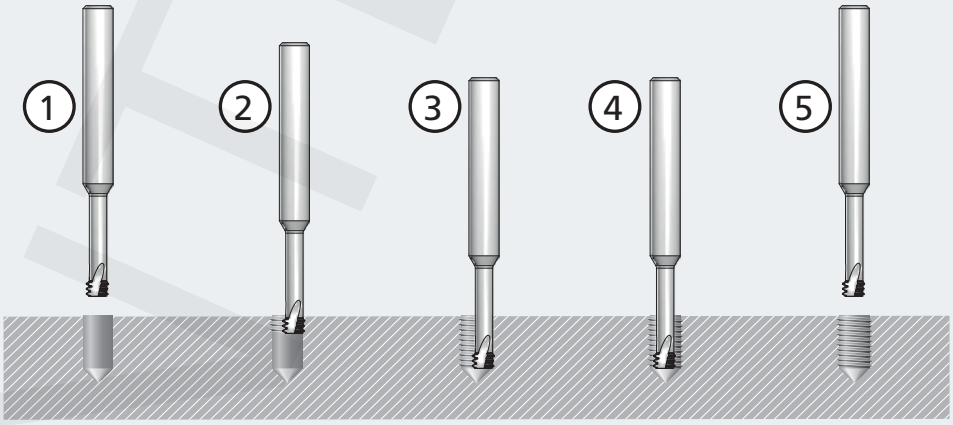
PROCESS DESCRIPTION

VR10 - VR20 - VR30



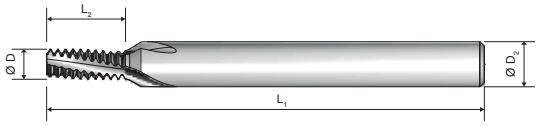
1 Start point - center position
2 Axial movement down to required thread depth, then 45° arc entrance
3 Thread milling (360°)
4 45° arc exit, then axial movement to start point

VR40 - VR45 - VR50 - VR55



1 Start point - center position
2 45° arc entrance
3 Thread milling to required thread depth
4 45° arc exit
5 Axial movement to start point

INT HM



APPLICATION RANGE			
ISO	**VR10** TiAlN	**VR20** TiAlN	**VR30** TiAlN
P	•	•	•
M	•	•	•
K	•	•	•
N	•	•	•
S	•	•	•

For cutting data see page 214

	VR10 TiAlN	**VR20** TiAlN	**VR30** TiAlN
			
	INT	INT	INT
	1,5xD	1,5xD	1,5xD
	RH	RH	RH

P [mm]	M	MF	$ØD_2$ h6 [mm]	ØD [mm]	z [-]	L_2 [mm]	L_1 [mm]	**VR10** TiAlN	**VR20** TiAlN	**VR30** TiAlN
0,5		M5x0,5	6	3,8	3	10,3	58	VR10038I0501000		
0,7	M4		6	3,1	3	7,4	58	VR10031I0700700	VR20031I0700700	
0,75		M6x0,75	6	4,5	3	10,1	58		VR20045I0751000	
0,8	M5		6	3,6	3	9,2	58	VR10036I0800900	VR20038I0800900	
1	M6		6	4	3	10,5	58	VR10040I1001000		
1	M6		6	4	3	14,5	58	VR10040I1001400		
1	M6		6	4,8	3	10,5	58			VR30048I1001000
1	M6	M7x1	6	4,6	3	14,5	58		VR20046I1001400	
1		M10x1	8	8	4	16,5	64	VR10080I1001600	VR20080I1001600	VR30080I1001600
1		M12x1	10	10	4	24,5	73		VR20100I1002400	
1,25	M8	M10x1,25	6	5	3	14,4	58	VR10050I1251400		
1,25	M8	M10x1,25	6	6	3	14,4	58		VR20060I1251400	
1,25	M8	M10x1,25	6	5	3	19,4	58	VR10050I1251900		
1,25	M8	M10x1,25	6	6	3	19,4	58		VR20060I1251900	VR30060I1251900
1,5	M10	M12x1,5	8	7	3	17,3	64	VR10070I1501700		
1,5	M10	M12x1,5	8	7	3	24,8	76	VR10070I1502400		
1,5	M10	M12x1,5	8	7,8	3	17	64		VR20078I1501700	VR30078I1501700
1,5		M14x1,5	10	10	4	21,8	73	VR10100I1502100		VR30100I1502100
1,5		M16x1,5	12	12	4	26,3	84		VR20120I1502600	VR30120I1502600
1,75	M12		8	8	3	20,1	64	VR10080I1752000		
1,75	M12		10	9	3	20,1	73		VR20090I1752000	
2	M16		12	11,8	4	27	84		VR20118I2002700	
2,5	M20		16	15	5	48,8	105		VR20150I2504800	
3	M24		20	18	4	58,5	120		VR20180I3005800	

VERGNANO

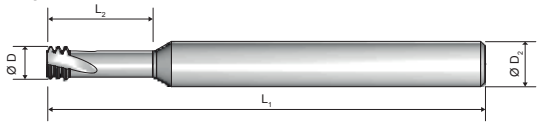
SOLID CARBIDE THREAD MILLS
Spiral flutes

INT HM

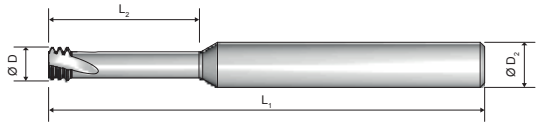
VR40 TiAIN

VR45 TiAIN

VR40



VR45



INT INT

2xD 3xD

RH RH

APPLICATION RANGE			
ISO	**VR40** TiAIN	**VR45** TiAIN	
P	•	•	
M	•	•	
K	•	•	
N	•	•	
S	•	•	

For cutting data see page 215

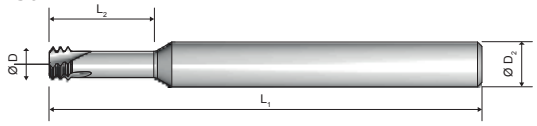
P [mm]	M	$ØD_2$ h6 [mm]	ØD [mm]	z [-]	L_2 [mm]	L_1 [mm]	**VR40** TiAIN	**VR45** TiAIN
0,3	M1,4	3	1,05	3	4	39		VR45010I0300400
0,35	M1,6	3	1,2	3	4,8	39		VR45012I0350400
0,4	M2	6	1,53	3	4,5	58	VR40015I0400400	
0,4	M2	3	1,53	3	6	39		VR45015I0400600
0,5	M3	6	2,37	3	6,5	58	VR40023I0500600	
0,5	M3	6	2,37	3	9,5	58		VR45023I0500900
0,5	M3	6	2,37	3	9,5	105		VR45023I050090L
0,7	M4	6	3,1	3	9	58	VR40031I0700900	
0,7	M4	6	3,1	3	12,5	58		VR45031I0701200
0,7	M4	6	3,1	3	12,5	105		VR45031I070120L
0,8	M5	6	3,8	3	12,5	58	VR40038I0801200	
0,8	M5	6	3,8	3	16	58		VR45038I0801600
0,8	M5	6	3,8	3	16	105		VR45038I080160L
1	M6	6	4,65	3	14	58	VR40046I1001400	
1	M6	6	4,65	3	20	58		VR45046I1002000
1	M6	6	4,65	3	20	105		VR45046I100200L
1,25	M8	6	5,95	3	18	58	VR40059I1251800	
1,25	M8	6	6	3	24	58		VR45060I1252400
1,5	M10	8	7,8	3	23	64	VR40078I1502300	
1,75	M12	10	9	3	26	73	VR40090I1752600	
2	M16	12	11,8	4	35	84	VR40118I2003500	

SOLID CARBIDE THREAD MILLS for hardened materials
Lefthand spiral flutes

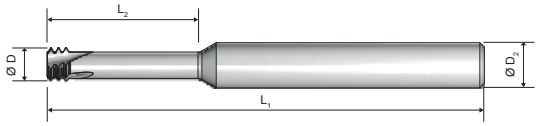
INT HM

VR50 TiAIN | **VR55** TiAIN

VR50



VR55



INT INT

2xD 3xD

LH LH

APPLICATION RANGE			
ISO	**VR50** TiAIN	**VR55** TiAIN	
S	•	•	
H	•	•	

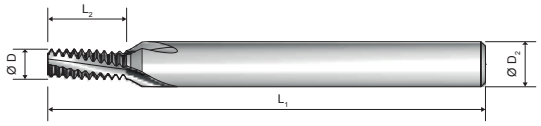
For cutting data see page 216

P [mm]	M	ØD2 h6 [mm]	ØD [mm]	z [-]	L2 [mm]	L1 [mm]	**VR50** TiAIN	**VR55** TiAIN
0,4	M2	6	1,53	3	4,5	58	VR50015I0400400	
0,5	M3	6	2,37	3	6,5	58	VR50023I0500600	
0,7	M4	6	3,1	3	9	58	VR50031I0700900	
0,7	M4	6	3,1	3	12,5	58		VR55031I0701200
0,8	M5	6	3,8	3	12,5	58	VR50038I0801200	
0,8	M5	6	3,8	3	16	58		VR55038I0801600
1	M6	6	4,65	3	14	58	VR50046I1001400	
1	M6	6	4,65	3	20	58		VR55046I1002000
1,25	M8	6	6	3	18	58	VR50060I1251800	
1,25	M8	6	6	3	24	58		VR55060I1252400
1,5	M10	8	7,8	3	23	64	VR50078I1502300	
1,75	M12	10	9	3	26	73	VR50090I1752600	
2	M16	12	11,8	4	35	84	VR50118I2003500	

VERGNANO

SOLID CARBIDE THREAD MILLS
Spiral flutes

INT HM



	VR10 TiAlN	VR20 TiAlN
		
	INT	INT
	1,5xD	1,5xD
	RH	RH

APPLICATION RANGE			
ISO	**VR10** TiAlN	**VR20** TiAlN	
P	●	●	
M	●	●	
K	●	●	
N	●	●	
S	●	●	

For cutting data see page 214

P (TPI)	UNC	UNF	$ØD_2$ h6 [mm]	ØD [mm]	z [-]	L_2 [mm]	L_1 [mm]	**VR10** TiAlN	**VR20** TiAlN
28		1/4"	6	4	3	11,3	58	VR10040U28T1100	
28		1/4"	6	5	3	11,3	58		VR20050U28T1100
24		5/16"	6	5	3	14,3	58	VR10050U24T1400	
24		3/8"	8	7	3	20,6	64	VR10070U24T2000	
24		5/16"	8	6,6	3	14,3	64		VR20066U24T1400
24		3/8"	8	8	4	20,6	64		VR20080U24T2000
20	1/4"		6	4,5	3	12,1	58	VR10045U20T1200	
20		7/16"-1/2"	8	7	3	21	64	VR10070U20T2100	
20	1/4"		6	4,7	3	12,1	58		VR20047U20T1200
20		7/16"	8	8	3	21	64		VR20080U20T2100
20		1/2"	10	10	4	22,3	73		VR20100U20T2200
18	5/16"		6	5	3	14,8	58	VR10050U18T1400	
18	5/16"		6	5,6	3	14,8	58		VR20056U18T1400
16	3/8"		6	6	3	16,7	58	VR10060U16T1600	
16	3/8"		8	6,7	3	16,7	64		VR20067U16T1600
14	7/16"		8	7	3	20,9	64	VR10070U14T2000	
14	7/16"		8	7,7	3	20,9	64		VR20077U14T2000
13	1/2"		8	8	3	22,5	64	VR10080U13T2200	
13	1/2"		10	9,2	3	22,5	73		VR20092U13T2200
11	5/8"		10	10	3	28,9	73	VR10100U11T2800	
11	5/8"		12	11,4	3	28,9	84		VR20114U11T2800

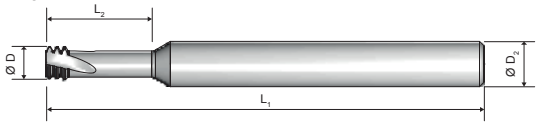
€ P.65

INT HM

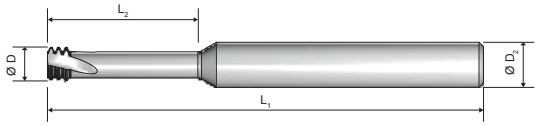
VR40 TiAIN

VR45 TiAIN

VR40



VR45



INT INT

2xD 3xD

RH RH

APPLICATION RANGE			
ISO	**VR40** TiAIN	**VR45** TiAIN	
P	•	•	
M	•	•	
K	•	•	
N	•	•	
S	•	•	

For cutting data see page 215

P (TPI)	UNC	UNF	$ØD_2$ h6 [mm]	ØD [mm]	z [-]	L_2 [mm]	L_1 [mm]	**VR40** TiAIN	**VR45** TiAIN
28		1/4"	6	5	3	14,5	58	VR40050U28T1400	
28		1/4"	6	5	3	19	58		VR45050U28T1900
24		5/16"-3/8"	8	6,6	3	17	64	VR40066U24T1700	
24		5/16"-3/8"	8	6,6	3	24	64		VR45066U24T2400
20	1/4"		6	4,75	3	14	58	VR40047U20T1400	
20		7/16"	8	8	3	25	64	VR40080U20T2500	
20	1/4"		6	4,75	3	19	58		VR45047U20T1900
18	5/16"		6	6	3	17	58	VR40060U18T1700	
18		5/8"	12	12	4	35	84	VR40120U18T3500	
18	5/16"		6	6	3	23	58		VR45060U18T2300
16	3/8"		8	6,7	3	22	64	VR40067U16T2200	
14	7/16"		8	7,7	3	25	64	VR40077U14T2500	
13	1/2"		10	9,2	3	27,5	73	VR40092U13T2700	
11	5/8"		12	11,4	3	34,5	84	VR40114U11T3400	

VR SERIES

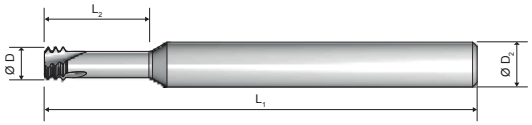
VERGNANO

SOLID CARBIDE THREAD MILLS for hardened materials
Lefthand spiral flutes

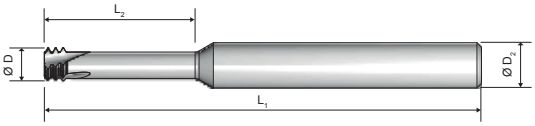
INT HM

VR50 TiAIN | **VR55** TiAIN

VR50



VR55



APPLICATION RANGE			
ISO	**VR50** TiAIN	**VR55** TiAIN	
S	•	•	
H	•	•	

For cutting data see page 216

INT INT

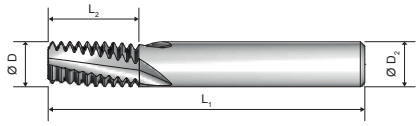
2xD 3xD

LH LH

P (TPI)	UNC	UNF	$ØD_2$ h6 [mm]	ØD [mm]	z [-]	L_2 [mm]	L_1 [mm]	**VR50** TiAIN	**VR55** TiAIN
28		1/4"	6	5	3	14,5	58	VR50050U28T1400	
28		1/4"	6	5	3	19	58		VR55050U28T1900
24		5/16"-3/8"	8	6,6	3	17	64	VR50066U24T1700	
24		5/16"-3/8"	8	6,6	3	24	64		VR55066U24T2400
20	1/4"		6	4,75	3	14	58	VR50047U20T1400	
20		7/16"	8	8	3	25	64	VR50080U20T2500	
20	1/4"		6	4,75	3	19	58		VR55047U20T1900
18	5/16"		6	6	3	17	58	VR50060U18T1700	
18		5/8"	12	12	4	35	84	VR50012U18T3500	
18	5/16"		6	6	3	23	58		VR55060U18T2300
16	3/8"		8	6,7	3	22	64	VR50067U16T2200	
14	7/16"		8	7,7	3	25	64	VR50077U14T2500	
13	1/2"		10	9,2	3	27,5	73	VR50092U13T2700	
11	5/8"		12	11,4	3	34,5	84	VR50114U11T3400	

€ P.66

INT EXT HM



VR10 TiAIN

INT EXT

1,5xD

RH

VR20 TiAIN

INT EXT

1,5xD

RH

APPLICATION RANGE			
ISO	**VR10** TiAIN	**VR20** TiAIN	
P	•	•	
M	•	•	
K	•	•	
N	•	•	
S	•	•	

For cutting data see page 214

P (TPI)	G	$ØD_2$ [mm]	ØD [mm]	z [-]	L_2 [mm]	L_1 [mm]	**VR10** TiAIN	**VR20** TiAIN
28	1/16" - 1/8"	6	6	3	9,5	58	VR10060G28T0900	
28	1/8"	8	7,8	3	14,1	64		VR20078G28T1400
19	1/4" - 3/8"	8	8	3	14	64	VR10080G19T1400	
19	1/4" - 3/8"	10	10	4	16,7	73		VR20100G19T1600
14	1/2" - 7/8"	12	12	4	19	84	VR10120G14T1900	
14	1/2" - 7/8"	16	16	5	26,3	105		VR20160G14T2600
11	1" - 1 1/2"	12	12	3	24,2	84	VR10120G11T2400	
11	1" - 1 1/2"	16	16	4	38,1	105		VR20160G11T3800

VA
SERIES

Synchronous Tapping Attachments

Vergnano Sincro synchronous tapping attachments are specifically designed to enhance the performance of the Vergnano S-Series taps for synchronous tapping processes.

SYNCHRONOUS TAPPING ATTACHMENTS

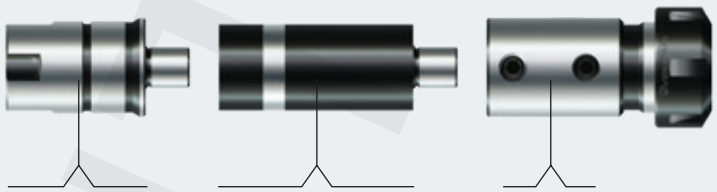
In modern CNC machine tools with synchronous spindles, the rotational and axial movements of the spindle are coordinated by the numeric control of the machine. On these modern machine tools standard compensated tapping attachments are not recommended since the large compensation in extension can negatively influence the performance of the tool. Vergnano Sincro synchronous tapping attachments are specifically designed for synchronous tapping: micro-compensation reduces the axial and radial forces generated during the tapping process and enhances tool life. Since machine, tapping attachment and tool are synchronised it is possible to reach high machining speeds. This advantage, together with increased tool life, leads to improved productivity.

Quick-Change System

Vergnano offers a new system consisting in tapping attachment and quick-change adaptor which allows worn tools to be substituted without changing the entire tapping attachment thereby saving precious machining time.
It is recommended to have a second quick-change adaptor (in addition to that delivered with the tapping attachment) sold separately to exploit this advantage.

Also available are extended quick-change adaptors which permit extension of the tapping attachment in order to reach threads in difficult positions.

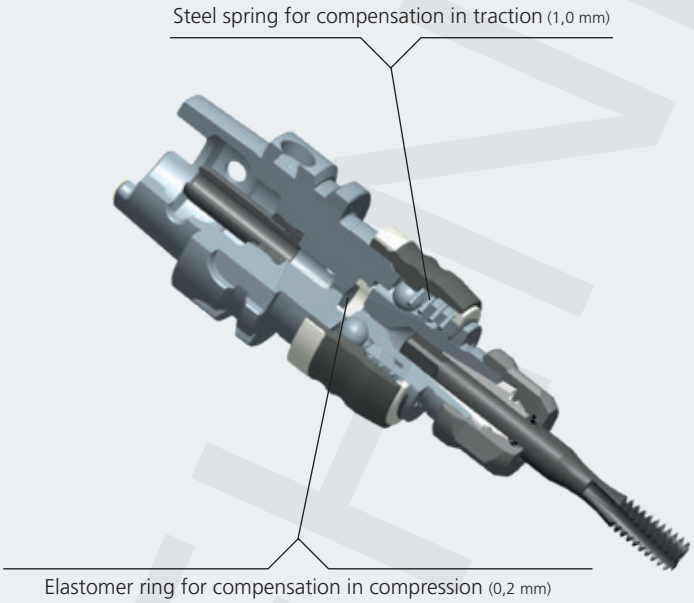
This versatile and cost-saving system covers a wide range of applications with just one tapping attachment.



The extended adapter is sold assembled and consists of two parts (adaptor and terminal adaptor). Further extensions are available on request.

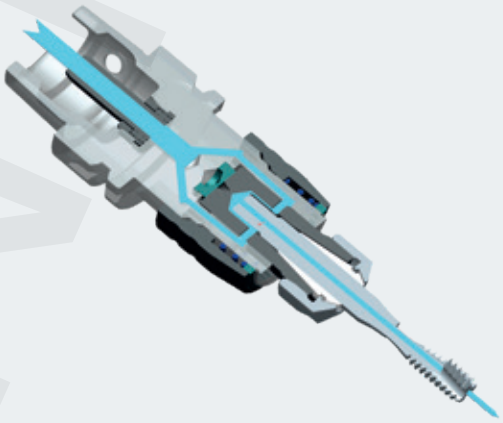
Micro-Compensation

During tap reversal high axial forces are generated on the tap which cause mechanical stresses and micro-wear. This in turn leads to reduced tool life and tool precision. For this reason Vergnano synchronous tapping attachments are designed with differential micro-compensation in traction and compression which compensates the stresses on the tap.
Compensation in traction (1 mm) is obtained by steel springs which guarantee greater reliability while compensation in compression (0,2 mm) is obtained by elastomer rings.



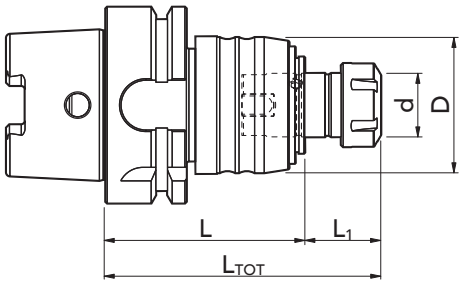
Through Coolant Capability

All Vergnano synchronous tapping attachments are designed for use with internal lubrication up to 50 bars. For higher values a special pressure-tight nut screw is available on request.
The special attachment design forces the through coolant to enter the tap adaptor from the sides without interfering with the compensation length.



SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

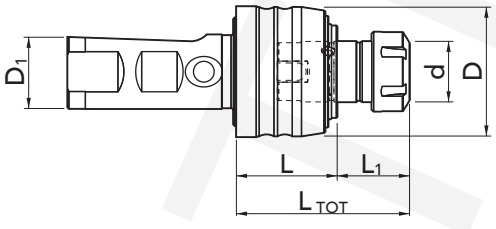
DIN 69893 HSK A



Article Code	Attachment	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01A06302CH160	HSK-A63	M3 - M8	64	43	20	ER 16	20,5	84,5
VA01A06302CH250	HSK-A63	M6 - M20	97	60	32	ER 25	23,5	120,5
VA01A10002CH400	HSK-A100	M14 - M33	115	87	50	ER 40	28,5	143,5

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

DIN 1835 B+E



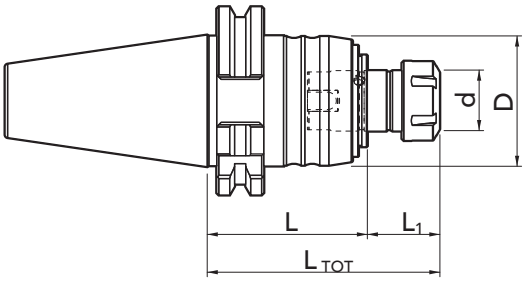
Article Code	Attachment ø D_1 [mm]	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01C02502CH160	25	M3 - M8	34	43	20	ER 16	20,5	54,5
VA01C02502CH250	25	M6 - M20	56	60	32	ER 25	23,5	79,5
VA01C04002CH400	40	M14 - M33	80	87	50	ER 40	28,5	108,5

(1) For coolant pressure above 50 bars a special nut screw is available on request

€ P.67

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

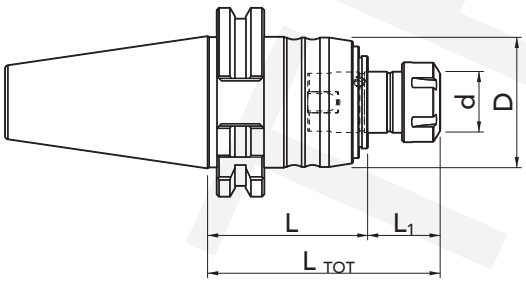
SK DIN 69871 AD



Article Code	Attachment	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01B04002CH160	SK 40 AD	M3 - M8	53	43	20	ER 16	20,5	73,5
VA01B05002CH160	SK 50 AD	M3 - M8	53	43	20	ER 16	20,5	73,5
VA01B04002CH250	SK 40 AD	M6 - M20	90	60	32	ER 25	23,5	113,5
VA01B05002CH250	SK 50 AD	M6 - M20	74	60	32	ER 25	23,5	97,5

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

SK DIN 69871 AD+B

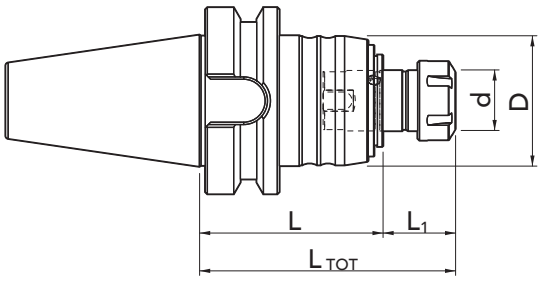


Article Code	Attachment	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01B05002CH400	SK 50 B	M14 - M33	115	87	50	ER 40	28,5	143,5

(1) For coolant pressure above 50 bars a special nut screw is available on request

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

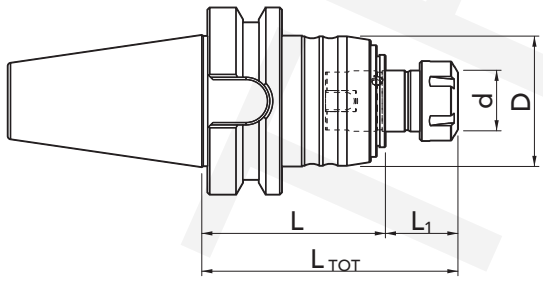
MAS 403 BT



Article Code	Attachment	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01M04002CH160	BT 40	M3 - M8	61	43	20	ER 16	20,5	81,5
VA01M05002CH160	BT 50	M3 - M8	72	43	20	ER 16	20,5	92,5
VA01M04002CH250	BT 40	M6 - M20	82	60	32	ER 25	23,5	105,5
VA01M05002CH250	BT 50	M6 - M20	93	60	32	ER 25	23,5	116,5

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR
With internal through coolant capability (1)

MAS 403 BT - B



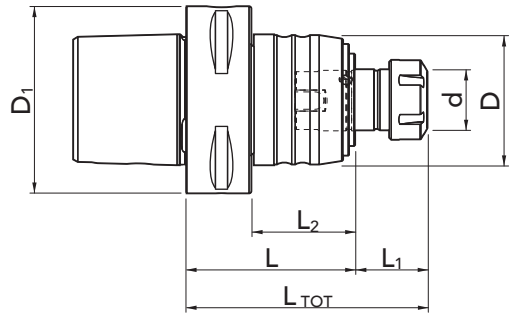
Article Code	Attachment	Tap Size	L [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01M05002CH400	BT 50 B	M14 - M33	124	87	50	ER 40	28,5	152,5

(1) For coolant pressure above 50 bars a special nut screw is available on request

SYNCHRONOUS ER TAPPING ATTACHMENT with QUICK-CHANGE TAP ADAPTOR

With internal through coolant capability (1)

POLIGONAL Attachment ISO 26623-1



Article Code	Attachment ø D_1 [mm]	Tap Size	L [mm]	L_2 [mm]	ø D [mm]	ø d [mm]	ER collet	L_1 [mm]	L_{TOT} [mm]
VA01P04002CH160	C40	M3 - M8	55	35	43	20	ER 16	20,5	75,5
VA01P05002CH160	C50	M3 - M8	55	35	43	20	ER 16	20,5	75,5
VA01P06302CH160	C63	M3 - M8	57	35	43	20	ER 16	20,5	77,5
VA01P08002CH160	C80	M3 - M8	66	36	43	20	ER 16	20,5	86,5
VA01P04002CH250	C40	M6 - M20	75	55	60	32	ER 25	23,5	98,5
VA01P05002CH250	C50	M6 - M20	75	55	60	32	ER 25	23,5	98,5
VA01P06302CH250	C63	M6 - M20	77	55	60	32	ER 25	23,5	100,5
VA01P08002CH250	C80	M6 - M20	86	56	60	32	ER 25	23,5	109,5
VA01P08002CH400	C80	M14 - M33	116	86	87	50	ER 40	28,5	144,5

(1) For coolant pressure above 50 bars a special nut screw is available on request

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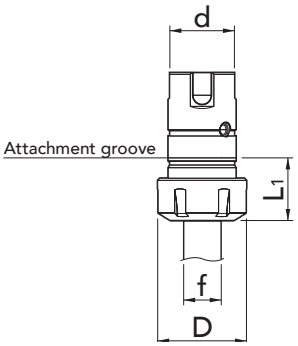
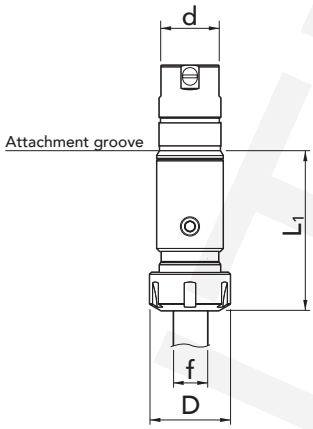
QUICK-CHANGE TAP ADAPTOR



Article Code	Tap Size	Shaft ø f [mm]	ø d [mm]	ø D [mm]	L_1 [mm]	ER collet
*CHADAP160310000	M3 - M8	3 - 8	20	28	20,5	ER 16
CHADAP250316000	M6 - M20	3 - 16	32	42	23,5	ER 25
CHADAP400626000	M14 - M33	6 - 25	50	63	28,5	ER 40

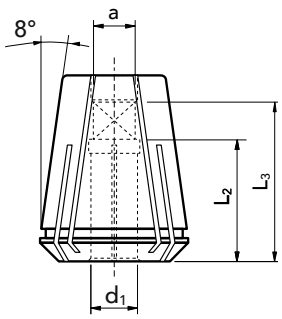
EXTENDED QUICK-CHANGE TAP ADAPTOR



Article Code	Tap Size	Shaft ø f [mm]	ø d [mm]	ø D [mm]	L_1 [mm]	ER collet
*CHEXAD160310000	M3 - M8	3 - 8	20	28	51,5	ER 16
CHEXAD250316000	M6 - M20	3 - 16	32	42	80,5	ER 25
CHEXAD400626000	M14 - M33	6 - 25	50	63	90,5	ER 40

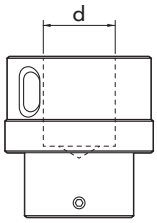
* Hexagonal nut screw

DIN 6499



Article Code	ER collet	ø d_1 [mm]	a [mm]	L_2 [mm]	L_3 [mm]
SLERGB160103500	ER 16	3,5	2,7	18	24
SLERGB160104500	ER 16	4,5	3,4	18	24
SLERGB160105500	ER 16	5,5	4,3	18	25
SLERGB160106000	ER 16	6	4,9	18	26
SLERGB160107000	ER 16	7	5,5	18	26
SLERGB160108000	ER 16	8	6,2	22	31
SLERGB250103500	ER 25	3,5	2,7	18	24
SLERGB250104500	ER 25	4,5	3,4	18	24
SLERGB250105500	ER 25	5,5	4,3	18	25
SLERGB250106000	ER 25	6	4,9	18	26
SLERGB250107000	ER 25	7	5,5	18	26
SLERGB250108000	ER 25	8	6,2	22	31
SLERGB250109000	ER 25	9	7	22	32
SLERGB250110000	ER 25	10	8	25	36
SLERGB250111000	ER 25	11	9	25	37
SLERGB250112000	ER 25	12	9	25	37
SLERGB250114000	ER 25	14	11	25	39
SLERGB250116000	ER 25	16	12	25	40
SLERGB400106000	ER 40	6	4,9	18	26
SLERGB400107000	ER 40	7	5,5	18	26
SLERGB400108000	ER 40	8	6,2	22	31
SLERGB400109000	ER 40	9	7	22	32
SLERGB400110000	ER 40	10	8	25	36
SLERGB400111000	ER 40	11	9	25	37
SLERGB400112000	ER 40	12	9	25	37
SLERGB400114000	ER 40	14	11	25	39
SLERGB400116000	ER 40	16	12	25	40
SLERGB400118000	ER 40	18	14,5	25	42
SLERGB400120000	ER 40	20	16	28	47
SLERGB400122000	ER 40	22	18	28	49
SLERGB400125000	ER 40	25	20	33	56

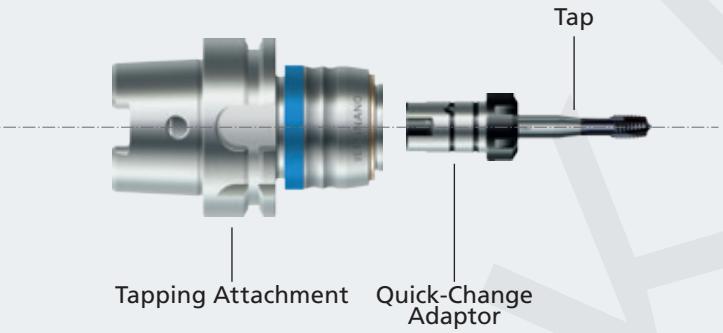
ASSEMBLY SUPPORT

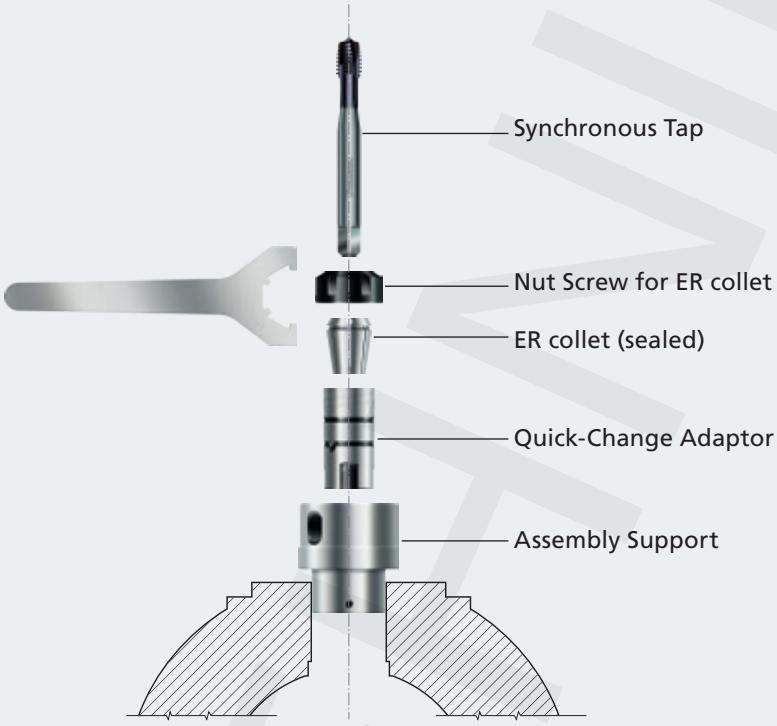


Article Code	ER collet	ø d [mm]
ASCHADAP1620000	ER 16	20
ASCHADAP2532000	ER 25	32
ASCHADAP4050000	ER 40	50

WRENCH for nut screw

Article Code	Nut Screw	ER collet
KE02ER160200000	Hexagonal	ER 16
KE04ER250200000	Standard	ER 25
KE04ER400200000	Standard	ER 40





1 Place the quick-change adaptor in the assembly support
2 Insert the ER collet in the nut screw
3 Partially tighten the nut screw on the quick-change adaptor
4 Insert the tap in the quick-change adaptor until it stops
5 Securely tighten the nut screw with a wrench
6 Insert the quick-change adaptor into the tapping attachment by pulling back the sleeve

TIGHTENING TORQUE TABLE

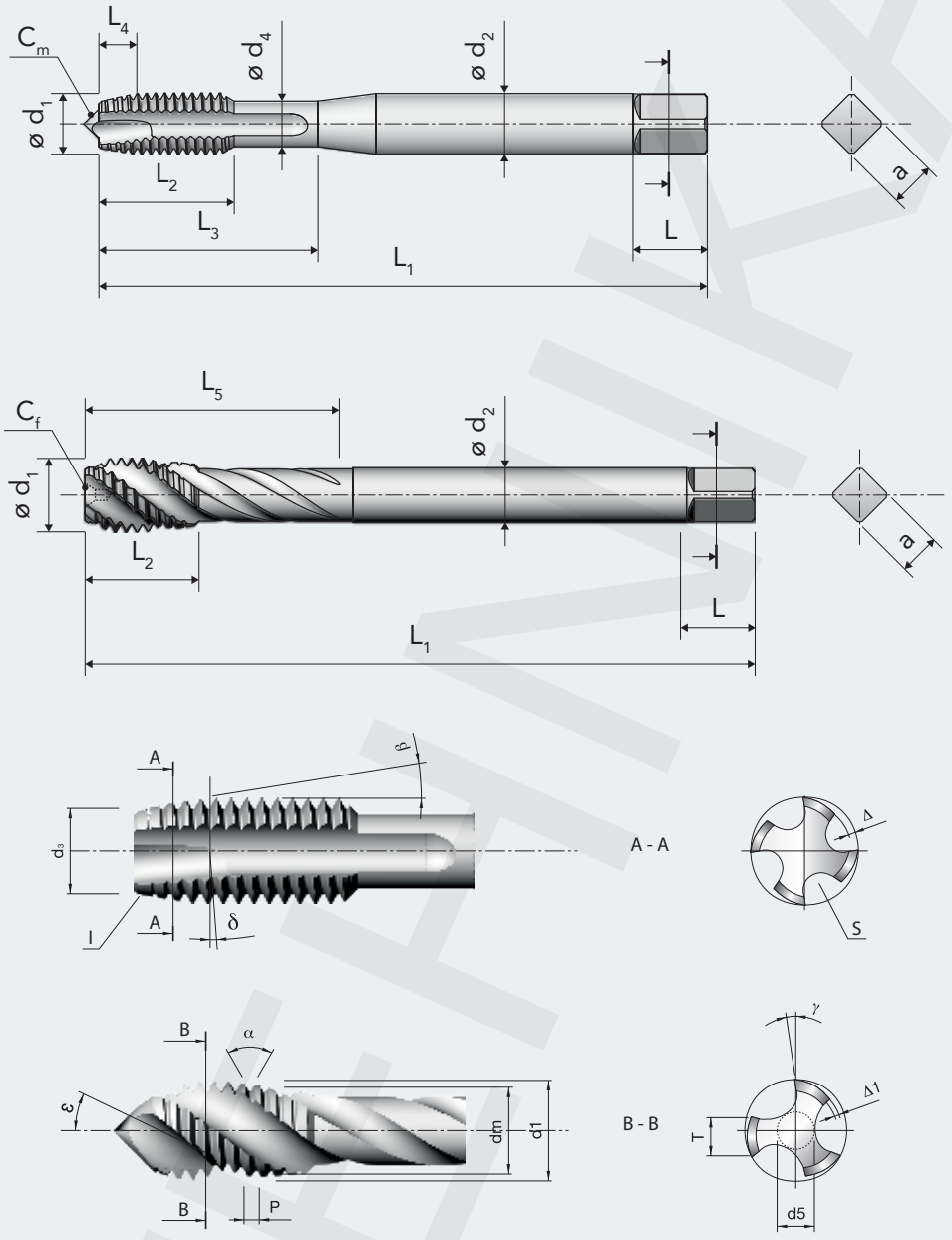
It is recommended to tighten the nut screws with the torque values shown in the table below.

ER Collet	Torque [Nm]
ER 16	45
ER 25	70
ER 40	150

VERGNANO

i

TECHNICAL INFORMATION



d_1
Nominal diameter
the diameter used for the purpose of general identification.

d_m
Pitch diameter
the diameter measured where the width of the thread is equal to half the pitch.

d_2
Shank diameter
the diameter of the shank, important for the tapping attachment.

d_3
Chamfer diameter
the diameter at the leading end of the chamfer.

d_4
Neck diameter
the diameter of the reduced section between the thread and shank of the tap.

d_5
Core diameter
the diameter of a circle tangent to the bottom of the flutes.

l
Chamfer
the taper on the threads at the front end of the tap made by grinding and relieving the crests of the first few teeth.

a
Square
the square with rounded corners formed by four flats parallel to the tap axis. The square serves to drive the tap.

TAP TERMINOLOGY

L
Square length
the length of the flats that form the square.

L_1
Total length
the complete length of the tap from end to end, excluding external centres.

L_2
Thread length
the length of the threaded section of the tap.

L_3
Usable length
the length measured from the front end of the tap to the end of the neck section. This length determines the maximum threadable depth on taps with reinforced shank.

L_4
Chamfer length
the length of the chamfer measured parallel to the tap axis, excluding the chamfer bevel.

L_5
Flute length
the axial length of the flute including the cutter sweep.

C_m
External centre
the pointed end of the tap.

C_f
Internal centre
the countersink in one or both ends of the tap.

P
Pitch
the distance, measured parallel to the tap axis, between two corresponding and successive points on the thread profile.

α
Angle of thread
the angle between the flanks of the thread (measured in an axial plane).

δ
Thread lead angle
the angle made by the spiral of the thread and a plane perpendicular to the tap axis, measured on the pitch diameter line.

β
Chamfer angle
the angle between the chamfer and the tap axis, measured in an axial plane.

γ
Rake angle
the angle between the cutting face of the tap and a radial line passing through the crest of the tooth at the cutting edge.

T
Land width
the chordal width of material between two successive flutes.

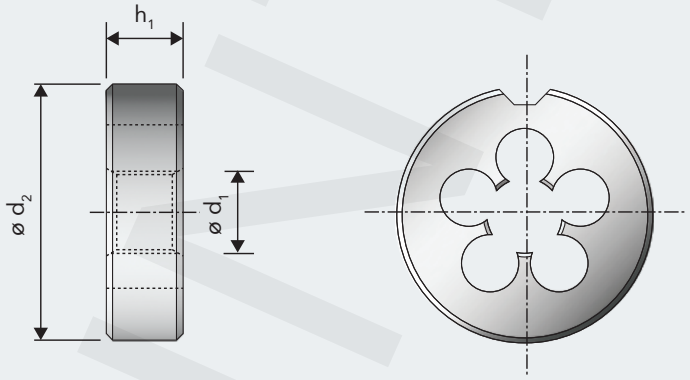
S
Flute
the longitudinal channels in a tap which create cutting edges. The flutes provide space for chips and passage for coolant/ lubricant.

$\Delta 1$
Pitch diameter relief
the radial reduction of the pitch and/ or major diameter behind the cutting edge of the tap. The relief confers cutting properties and provides clearance between the part being threaded and the tap threads.

Δ
Chamfer relief
the radial reduction of the major diameter on the tap chamfer behind the cutting edge. The chamfer relief confers cutting properties to the tap.

ε
Spiral flute angle
the angle formed by the flutes and the tap axis.

DIE TERMINOLOGY



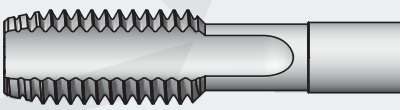
d_1
nominal diameter

d_2
outside diameter

h_1
thickness

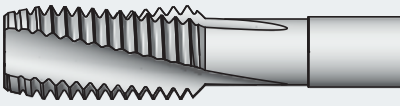
STRAIGHT FLUTES

These taps are used on steels with normal strength and toughness (R=750 N/mm²) as well as on short-chipping abrasive materials (grey cast iron, bronze, etc.).



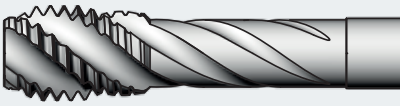
SPIRAL FLUTES, 15° RIGHTHAND SPIRAL

These taps improve chip evacuation and are well suited when tapping blind holes of medium depth on tough materials.



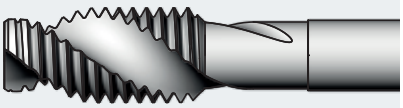
SPIRAL FLUTES, 40° RIGHTHAND SPIRAL

The high helix angle ensures the evacuation of chips from deep blind holes.



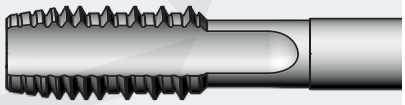
SPIRAL FLUTES, 40° RIGHTHAND SPIRAL, FOR LIGHT ALLOYS

The large flutes and high helix angle ensure efficient chip removal on long-chipping light alloys such as aluminium.



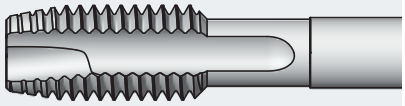
STRAIGHT FLUTES WITH INTERRUPTED THREADS

For tapping soft and mild materials such as iron, aluminium etc. The interrupted threads avoid chips sticking to the thread flanks and consequent damage of the tap.



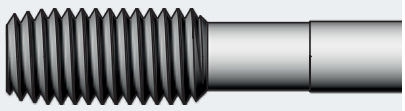
SPIRAL POINT

The spiral point or gun nose is produced by a high helix angle combined with an increased rake angle in the front area of the tap. This design ensures spontaneous chip evacuation in the feed direction.
This geometry is suitable when tapping through holes on materials which produce continuous chips.



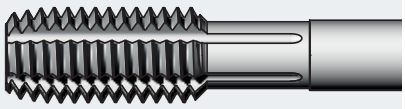
FORMING TAPS WITHOUT OIL GROOVES

These tools produce threads through plastic deformation of the workpiece material. No chips are produced during the tapping process.



FORMING TAPS WITH OIL GROOVES

The oil grooves improve lubrication in the chamfer area making these taps suitable for threading deep holes.



TYPES OF CHAMFER FORMS

The types of chamfer are defined in standards DIN 2175 and DIN 2197 for forming taps and cutting taps, respectively.

	Form A	Form B	Form C	Form D	Form E	Form F
Chamfer form and length						
Flute type						

TYPES OF CENTRES

The tap manufacturer, according to the diameter and the application, defines the types of centres. Types of centre and chamfer are generally combined together as in the following table, but for specific applications exceptions are possible.

		Form A	Form B	Form C	Form D	Form E
Male centre 	M	M2 ≤ Ø ≤ M8	M2 ≤ Ø ≤ M8	M2 ≤ Ø ≤ M8	M2 ≤ Ø ≤ M8	-
	MF	M2 ≤ Ø ≤ M6	M4 ≤ Ø ≤ M6	M2 ≤ Ø ≤ M6	M5 ≤ Ø ≤ M6	-
	UNC	Nr.2-56 ≤ Ø ≤ 1/4"-18	Nr.2-56 ≤ Ø ≤ 1/4"-18	Nr.2-56 ≤ Ø ≤ 1/4"-18	Nr.2-56 ≤ Ø ≤ 1/4"-18	-
	UNF	Nr.2-64 ≤ Ø ≤ 1/4"-28	Nr.2-64 ≤ Ø ≤ 1/4"-28	Nr.2-64 ≤ Ø ≤ 1/4"-28	-	-
	G	-	-	-	-	-
Half centre 	M	M8 < Ø ≤ M10	M8 < Ø ≤ M10	M8 < Ø ≤ M10	M8 < Ø ≤ M10	-
	MF	M6 < Ø ≤ M10	M6 < Ø ≤ M10	M6 < Ø ≤ M10	M6 < Ø ≤ M10	-
	UNC	5/16"-18 ≤ Ø ≤ 3/8"-16	5/16"-18 ≤ Ø ≤ 3/8"-16	5/16"-18 ≤ Ø ≤ 3/8"-16	-	-
	UNF	5/16"-24 ≤ Ø ≤ 3/8"-24	5/16"-24 ≤ Ø ≤ 3/8"-24	5/16"-24 ≤ Ø ≤ 3/8"-24	-	-
	G	Ø = 1/8"-28	Ø = 1/8"-28	Ø = 1/8"-28	-	-
Female centre 	M	Ø > M10	Ø > M10	Ø > M10	Ø > M10	ALL SIZES
	MF	Ø > M10	Ø > M10	Ø > M10	Ø > M10	ALL SIZES
	UNC	Ø ≥ 7/16"-14	Ø ≥ 7/16"-14	Ø ≥ 7/16"-14	Ø ≥ 5/16"-18	-
	UNF	Ø ≥ 7/16"-20	Ø ≥ 7/16"-20	Ø ≥ 7/16"-20	-	-
	G	Ø ≥ 1/4"-19	Ø ≥ 1/4"-19	Ø ≥ 1/4"-19	-	-

FORMULAE

Parameter	Formula	Unit of Measurement
Cutting speed	$V_c = \frac{N \cdot \pi \cdot d_1}{1000}$	$\frac{m}{min}$
Rotational speed	$N = \frac{1000 \cdot V_c}{\pi \cdot d_1}$	rpm
Torque (*)	$M_t = \frac{K_c \cdot p^2 \cdot z^{0,6} \cdot d_1}{10^4}$	N · m
Spindle power	$P = \frac{M_t \cdot 2 \cdot \pi \cdot N}{60}$	W
Nominal diameter	d_1	mm
Feed	p · N	$\frac{mm}{min}$
p	Thread pitch	mm
z	Number of flutes	-
K_c	Cutting force coefficient (function of the material and of tap wear)	$\frac{N}{mm^2}$

(*) The torque value is valid for a new cutting tap.
For worn-out taps, the value can increase up to 2-3 times.
For forming taps, the value must be multiplied by 1,5-2 times.

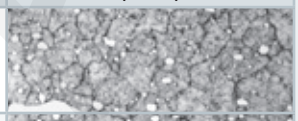
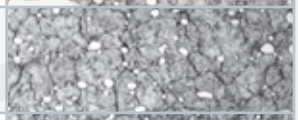
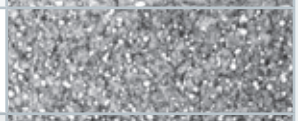
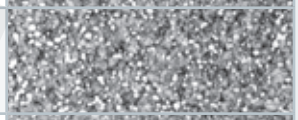
M.G.	Kc [N/mm²]
P.1	1300
P.2	1400
P.3	1400
P.4	1600
P.5	1700
P.6	2000
P.7	1400
M.1	1600
M.2	1800
K.1	1100
K.2	1500
K.3	1600
N.1	600
N.2	800
N.3	900
N.4	1000
N.5	700
N.6	850
N.7	900
N.8	2500
N.9	400
N.10	500
S.1	1200
S.2	1900
S.3	1300
S.4	2400

CONVERSION TABLE HARDNESS VS TENSILE STRENGTH

Tensile Strength	Hardness		
R [N/mm²]	HB Brinell	HRC Rockwell C	HV Vickers
3400	700	68	1008
3120	688	67	955
2960	676	66	920
2890	670	65	885
2770	659	64	850
2240	650	63	826
2190	635	62	797
2140	627	61	772
2100	613	60	746
2050	600	59	720
2010	587	58	693
1970	574	57	666
1930	561	56	646
1890	548	55	623
1850	536	54	604
1810	524	53	585
1780	512	52	567
1730	500	51	549
1680	488	50	528
1630	476	49	513
1590	464	48	497
1560	453	47	482
1520	442	46	468
1480	430	45	453
1440	419	44	440

Tensile Strength	Hardness		
R [N/mm²]	HB Brinell	HRC Rockwell C	HV Vickers
1400	408	43	427
1360	398	42	416
1320	389	41	404
1300	377	40	391
1260	367	39	381
1230	357	38	371
1190	347	37	357
1150	337	36	345
1120	327	35	332
1100	319	34	323
1060	309	33	314
1040	301	32	304
1010	294	31	296
980	286	30	288
960	279	29	280
940	272	28	273
910	265	27	266
890	259	26	259
870	253	25	253
850	247	24	247
830	241	23	241
810	235	22	235
790	230	21	230
770	225	20	225

HIGH SPEED STEEL AND SOLID CARBIDE FOR TAPS

Vergnano Designation	Designation according to ISO 11054	Hardness	Toughness	Applications	Structure (500x)
HSS	HSS	•	•	Used exclusively for hand taps (except A100).	
HSSE	HSS-E	•	••	For general applications.	
HSSK	HSS-E-PM	••	•••	Used in applications where a compromise between high hardness and high toughness is needed.	
HSSZ	HSS-E-PM	••	•••	For applications where extremely high performance and productivity are requested.	
HSSP	HSS-E-PM	•••	••	For tough materials and extreme applications.	
HM	-	•••	-	For heat-treated steels and abrasive materials.	

COATINGS AND SURFACE TREATMENTS - PROPERTIES

Type of coating / treatment	Structure	Hardness	Friction Coefficient	Oxidation Temperature	Features
TiN	Mono-layer	• •	• •	•	Wear resistance
TiCN	Mono-layer	• •	• •	•	Wear resistance
TiX2	Multi-layer	• • •	• • •	• •	Oxidation and wear resistance, chip evacuation
TiH1	Multi-layer	• • •	• • •	• •	Oxidation and wear resistance, chip evacuation
CrN	Mono-layer	•	• •	• •	Oxidation and wear resistance
V-MAXX	Mono-layer	• • •	• •	• • •	Wear resistance, chip evacuation
VAP	Surface oxidation	-	• •	•	Chip evacuation
NiTR	Surface hardening	•	•	•	Wear resistance

Excellent • • •
Very good • •
Good •

COATINGS - APPLICATIONS FOR CUTTINGS TAPS

COATINGS RECOMMENDED FOR CUTTINGS TAPS				TiN	TiCN	TiX2	TiH1	CrN	V-MAXX	VAP	NiTR
ISO	Material	Group	Application	Coating							
P	Steel	P.1	Mild / magnetic steel	❍			❍			●	
		P.2	Construction steel, case hardening steel	●			❍			❍	
		P.3	Carbon steel	●			❍				
		P.4	Alloyed steel / tempered steel	❍	❍		●				
		P.5	Alloyed steel / tempered steel	❍	❍		●				
		P.6	Alloyed steel / high strength steel	❍	❍		●				
		P.7	Ferritic stainless steel, martensitic stainless steel, precipitation hardening	❍		●				❍	
M	Stainless Steel	M.1	Austenitic stainless steel			●	❍			❍	
		M.2	Ferritic+austenitic (Duplex)			●	❍			❍	
K	Cast iron	K.1	Grey cast iron		❍				●		❍
		K.2	Nodular cast iron, malleable cast iron, tempered cast iron	●			❍				
		K.3	Austempered ductile iron (ADI)						●		
N	Aluminium Aluminium alloys	N.1	Pure aluminium				●			❍	
		N.2	Aluminium wrought and die cast alloys with Si < 0,5% (long chipping)	❍			●			❍	
		N.3	Aluminium wrought and die cast alloys with Si > 10% (medium chipping)	❍			●			❍	
		N.4	Aluminium die cast alloys with Si > 10% (short chipping)		❍				●		❍
	Copper Copper alloys Brass Bronze	N.5	Pure copper				●			❍	
		N.6	Copper alloys (long chipping), soft brass	❍			●			❍	
		N.7	Copper alloys (short chipping), hard brass		●						❍
		N.8	High strength bronze		❍				●		❍
	Magnesium Magnesium alloys	N.9	Pure magnesium, magnesium alloys		❍						●
		N.10	High strength magnesium alloys		❍						●
S	Titanium Titanium alloys	S.1	Pure titanium				❍	●			
		S.2	Titanium alloys				❍	●			
	Nickel Nickel alloys	S.3	Pure nickel	❍			●				
		S.4	Nickel alloys	❍			●				
H	Hardened materials	H.1	Alloyed steel, hardness HRC 44-55						❍		
		H.2	Alloyed steel, hardness HRC 56-63						❍		

COATINGS - APPLICATIONS FOR COLD FORMING TAPS

COATINGS RECOMMENDED FOR COLD FORMING TAPS				TiN	TiCN	V-MAXX	VAP
ISO	Material	Group	Application	Coating			
P	Steel	P.1	Mild / magnetic steel	❍			●
		P.2	Construction steel, case hardening steel	●			❍
		P.3	Carbon steel	●	❍	❍	
		P.4	Alloyed steel / tempered steel	●	❍	●	
		P.5	Alloyed steel / tempered steel	●	❍	●	
		P.7	Ferritic stainless steel, martensitic stainless steel, precipitation hardening	❍		●	
M	Stainless Steel	M.1	Austenitic stainless steel	❍		●	
		M.2	Ferritic+austenitic (Duplex)	❍		●	
N	Aluminium Aluminium alloys	N.1	Pure aluminium	❍			●
		N.2	Aluminium wrought and die cast alloys with Si < 0,5% (long chipping)	●	❍	❍	❍
		N.3	Aluminium wrought and die cast alloys with Si < 10 % (medium chipping)	●	❍	❍	❍
	Copper Copper alloys Brass/Bronze	N.5	Pure copper	❍		●	
		N.6	Copper alloys (long chipping), soft brass	●	❍		❍
S	Titanium Titanium alloys	S.1	Pure titanium			●	
		S.2	Titanium alloys			●	
	Nickel Nickel alloys	S.3	Pure nickel	❍		●	
		S.4	Nickel alloys	❍		●	

● Ideal
❍ Suitable

Tapping is a complex process and often the last machining operation performed on the workpiece. Therefore, incorrect or faulty tapping can compromise the quality of the entire workpiece.
Numerous factors influence the process: cutting parameters, drilling parameters, lubrication, machine conditions. The choice of the correct tool is paramount in order to obtain high quality threads.

The following table summarises the most common problems encountered during tapping and their possible solutions.

Problem	Solution
Chipped teeth on tap	• Choose correct tap, with lower rake angle or longer chamfer. • Reduce cutting speed. • Check drilled hole size is not too small. • Check tap alignment and run-out of tap on tapping attachment. • For deep blind holes (≥ 2,5xD) use taps with back-tapering.
Excessive tap wear	• Improve quality (richer emulsion, neat oil) and quantity (higher pressure) of lubrication. • Use correct tap, with more relief or longer chamfer if possible. • Choose coating suitable for specific application. • Use recommended cutting parameters for specific application.
Chips clogging flutes	• Use tap with lower spiral flute angle. • Choose correct tap with suitable rake angle and relief for specific application. • Use tap with sharp cutting edge (bright tap or vapourised tap).
Poor finish on threaded workpiece	• Check wear on tap. If necessary, resharpen or change tap. • Improve quality and quantity of lubrication. • Choose correct tap with suitable rake angle and relief for specific application. • Use recommended cutting parameters for specific application.
Built-up-edge	• Choose correct tap with lower rake angle and/or higher relief. • Choose coating suitable for specific application. • Increase cutting speed. • Improve quality and quantity of lubrication.

Problem	Solution
Tap sticking	• Choose correct tap with lower rake angle and/or higher relief. • Choose coating suitable for specific application. • Increase cutting speed. • Improve quality and quantity of lubrication.
Crater wear	• Choose suitable tap, with base material in HSSE-PM. • Use coated tap. • Improve quality and quantity of lubrication.
Tap breakage	• Check drilled hole size. • Check alignment between tap and drilled hole. • Reduce cutting speed. • On blind holes, check that tapping depth is less than hole depth. • Use tapping attachment with slip clutch. • Use compensated tapping attachment.
Oversized thread	• Check tap tolerance is compatible with requested workpiece (nut) tolerance. • Choose correct tap with suitable rake angle and relief for specific application. • Reduce feed rate (revs x pitch) or use rigid / synchronous tapping attachment. • Reduce cutting speed. • Check tap alignment and that workpiece is fastened steadily. • Remove clogged chips from flutes.
Undersized thread	• Check drilled hole size is not too small. • Check tap tolerance is compatible with requested workpiece (nut) tolerance. • Use coated tap to avoid tap sticking. • On forming taps, use slightly larger drilled hole size. • Check wear on tap. If necessary, resharpen or change tap. • Choose correct tap with higher rake angle and relief. • Use rigid / synchronous tapping attachment. • Improve quality and quantity of lubrication.
Excessive power requirement	• On high strength materials, increase drilled hole size. • Check wear on tap. If necessary, resharpen or change tap. • Choose correct tap with higher rake angle and relief. • Improve quality and quantity of lubrication.

			Germany	Italy	France	United States
ISO 513	Application	W.Nr.	DIN	UNI	AFNOR	AISI/SAE/ASTM
P STEEL	Mild/magnetic	1.1015	RFe60			
		1.1014	RFe80			
		1.1013	RFe100			
	Structural	1.0037	St 37-2	Fe360B	E 24-2	1013
		1.0044	St 44-2	Fe430B	E 28-2	1021
		1.0050	St 50-2	Fe490	A 50-2	A 570 (50)
		1.0060	St 60-2	Fe590	A 60-2	A 572 (65)
		1.0570	St 52-3	Fe510B	E 36-3	1024
	Case hardening	1.0301	C10	C10	C10	1010
		1.0401	C15	C15	C18	1015
		1.7131	16MnCr5	16MnCr5	16 MC 5	5115
		1.7147	20MnCr5	20MnCr5	20 MC 5	5120
		1.7243	18CrMo4	18CrMo4		
		1.5919	15CrNi6	16CrNi4	16 NC 6	4320
		1.6523	21NiCrMo2	20NiCrMo2	20 NCD 2	8620
		1.6587	17CrNiMo1106	18NiCrMo5-7	18 NCD6/18 NCD7	4320
	Nitriding	1.8515	31CrMo12	31CrMo12	30 CD 12	A/B
		1.8519	31CrMoV9	31CrMoV10		
		1.8507	34CrAlMo5	34CrAlMo7	30 CAD 6.12	A355CI.D
		1.8509	41CrAlMo7	41CrAlMo7	40 CAD 6.12	E7140
	Free cutting	1.0711	9S20	9S20		1212
		1.0715	9SMn28	9SMn28	S 250	1213
		1.0718	9SMnPb28	9SMnPb28	S 250 Pb	12 L 13
		1.0726	35S20	35S20	35 MF 4	1140
		1.0736	9SMn36	9SMn36	S 300	1215
		1.0737	9SMnPb36	9SMnPb36	S 300 Pb	12 L 14
	Heat-treatable	1.0406	C25	C25	AF 50 C 30	1025
		1.0528	C30	C30		1030
		1.0501	C35	C35	AF 55 C 35	1035
		1.0511	C40	C40	AF 60 C 40	1040
		1.0503	C45	C45	AF 65 C 45	1045
		1.0540	C50	C50		1050
		1.0535	C55	C55	C54	1055
		1.0601	C60	C60	C60	1060
		1.7035	41Cr4	41Cr4	41Cr4	5140
		1.8159	51CrV4	51CrV4	50 CV 4	6150
		1.7218	25CrMo4	25CrMo4	25 CD 4	4130
		1.7220	34CrMo4	34CrMo4	35 CD 4	4137
		1.7225	42CrMo4	42CrMo4	42 CD 4	4140
		1.7228	50CrMo4	50CrMo4	50CrMo4	4150
		1.6580	30CrNiMo8	30CrNiMo8	30 NCD 8	
		1.6582	34CrNiMo6	34CrNiMo6	35 NCD 6	4337
		1.6511	36CrNiMo4	36CrNiMo4	40 NCD 3	9840
		1.6773	36NiCrMo16	36NiCrMo16		
	Ball bearing	1.3505	100Cr6	100Cr6	100C6	52100
		1.3536	100CrMo7-3	100CrMo7		
	Spring	1.1231	Ck67	C67	XC 68	1070
		1.1248	Ck75	C75		1074
		1.1269	Ck85	C85	C90	1086
		1.1274	Ck101	C100	C100	1095
		1.5021		48Si7		
		1.5026	55Si7	55Si7	56SC7	9255
		1.5027		60Si7	60Si7	9260
		1.7108	60SiCr7	60SiCr8		9262
		1.8159	51CrV4	51CrV4	50 CV 4	6150
		1.7176	55Cr3	55Cr3	55 C 3	5155
		1.7701	51CrMoV4	51CrMoV4		
	Superficial hardening	1.1183	Cf 35	C36	XC 68 H1TS	
		1.1193	Cf 45	C43	XC 42 H1TS	
		1.1213	Cf 53	C53	XC 48 H1TS	1050
		1.7005	45Cr2	45Cr2		
		1.7043	38Cr4	38Cr4		
		1.7034	37Cr4	36CrMn4	38 C 4	5135
		1.7223	41CrMo4	41CrMo4	42 CD 4 TS	4142

Russia	Japan	China	India			
GOST	JIS	GB	IS	MG Vergnano	Application	ISO 513
20860				P.1	Mild/magnetic	P STEEL
20880				P.1		
20895				P.1		
St3kp/St3ps	STKM12C	Q235A		P.2	Structural	
St4ps/St4sp	STK400	Q275B	Fe440	P.2		
St5ps/St5sp	SS490	Q275	Fe490	P.2		
St6ps/St6sp	S45C	45	Fe570	P.2		
17G1S	STK490	16Mn	Fe540	P.2		
10	S10C	10		P.2	Case hardening	
15	S15C	15	14C6	P.2		
18ChG	SCR415	20CrMn	16Mn5Cr4	P.2		
18 ChG	SMnC420H	20CrMn	20Mn5Cr5	P.2		
				P.2		
15ChGN2T	SNCM415M		15Cr6Ni6	P.2		
20ChGNM	SNCM220M	20CrNiMo		P.2		
20ChN2M			16Ni6Cr7Mo3	P.2		
	SBV1A/SBV1B			P.4	Nitriding	
				P.5		
				P.4		
38Ch2MJuA	SACM645	38CrMoAl	40Cr7Al10Mo2	P.5		
A11	SUM21	Y12		P.1	Free cutting	
	SUM22	Y15		P.1		
	SUM22L	Y15Pb		P.1		
A35		Y35		P.2		
	SUM25			P.1		
	SUM24L			P.1		
25	S25C	25	25C4	P.3	Heat-treatable	
30	S30C	30	30C8	P.3		
35	S35C	35	35C8	P.3		
40	S40C	40	40C8	P.3		
45	S45C	45	45C8	P.3		
50	S50C	50	50C8	P.3		
55	S55C	55	55C8	P.3		
60	S58C	60	C604	P.3		
40Ch	SCr440(H)	40Cr	40Cr4	P.4 (norm.) / P.5 (Q+T)		
50Ch	SUP10	50CrVA	50Cr4V2	P.4 (norm.) / P.5 (Q+T)		
30ChM	SCCrM1	30CrMo	21Cr4Mo2	P.4 (norm.) / P.5 (Q+T)		
35ChML	SCM435	35CrMo		P.4 (norm.) / P.5 (Q+T)		
38ChA	SCM440	42CrMo	40CrMoH	P.4 (norm.) / P.5 (Q+T)		
50Ch	SCM445(H)	ZG50Cr1Mo		P.4 (norm.) / P.5 (Q+T)		
	SNCM431			P.5 (norm.) / P.6 (Q+T)		
38Ch2N2MA	SNCM439			P.5 (norm.) / P.6 (Q+T)		
40ChGMN		40CrNiMoA		P.4 (norm.) / P.5 (Q+T)		
				P.5 (norm.) / P.6 (Q+T)		
SChCh15	SUJ2/SUJ4	GCr15		P.4 (norm.)	Ball bearing	
				P.4 (norm.)		
65	S70C-CSP	65	70C6	P.3	Spring	
75A	S75CM	75		P.3		
85A	SK85	85		P.3		
	SK4-CSP	T10A	98C6	P.3		
				P.4 (norm.) / P.5 (Q+T)		
55S2/55S2A		55Si2Mn	55Si7	P.4 (norm.) / P.5 (Q+T)		
60S2	SUP6	60Si2Mn	60Si7	P.4 (norm.) / P.5 (Q+T)		
60S2G		60Si2CrA		P.4 (norm.) / P.5 (Q+T)		
50Ch	SUP10	50CrVA	50Cr4V2	P.4 (norm.) / P.6 (Q+T)		
50ChGA	SUP9(A)	55CrMnA	55Cr3	P.4 (norm.) / P.6 (Q+T)		
				P.4 (norm.) / P.6 (Q+T)		
				P.3	Superficial hardening	
				P.3		
50	S50C			P.3		
				P.4		
		38CrA		P.5		
35Ch	SCr435H	35Cr		P.5		
40ChFA	SNB22	42CrMo	40Cr4Mo3	P.5		

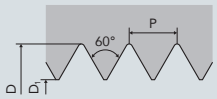
			Germany	Italy	France	United States
ISO 513	Application	W.Nr.	DIN	UNI	AFNOR	AISI/SAE/ASTM
P STEEL	Hot-work	1.2767	45NiCrMo16	40NiCrMoV16 KU	Y35NCD16	
		1.2713	55NiCrMoV7	55NiCrMoV7 KU	55NiCrMoV7	L6
		1.2311		35CrMo8 KU		
		1.2365	32CrMoV12-28	30CrMoV12-27 KU	32CDV12-28	H10
		1.2343	X38CrMoV5-1	X37CrMoV5-1 KU	Z38CDV5	H11
		1.2344	X40CrMoV5-1	X40CrMoV5-1-1 KU	Z40CDV5	H13
		1.2567	X30WCrV5-3	X30WCrV5-3 KU	Z32WCV5	H14
		1.2581	X30WCrV9-3	X30WCrV9-3 KU	Z30WCV9	H21
	Ferritic stainless steel	1.4002	X6CrAl13	X6CrAl13	Z 8 CA 12	405
		1.4512	X2CrTi12	X6CrTi12	Z 3 CT 12	409
		1.4016	X6Cr17	X8Cr17	Z 8 C 17	430
		1.4104	X14CrMoS17	X10CrS17	Z 13 CF 17	430F
	Martensitic stainless steel	1.4006	X12Cr13	X12Cr13	Z 10 C 13	410
		1.4005	X12CrS13	X12CrS13	Z 11 CF 13	416
		1.4021	X20Cr13	X20Cr13	Z 20 C 13	420
		1.4028	X30Cr13	X30Cr13	Z 30 C 13	420
		1.4057	X17CrNi16-2	X16CrNi16	Z 15 CN 16-02	431
		1.4125	X105CrMo17		Z 100 CD 17	440C
	Precipitation hardening	1.4542	X5CrNiCuNb16-4		Z 7 CNU 15-05	630
M STAINLESS STEEL	Austenitic	1.4319	X3CrNiN17-8	X10CrNi1809		302
		1.4305	X8CrNiS18-9	X10CrNiS1809	Z 8 CNF 18-09	303
		1.4301	X5CrNi18-10	X5CrNi1810	Z 4 CN 19-10 FF	304
		1.4306	X2CrNi19-11	X2CrNi1811	Z 1 CN 18-12	304L
		1.4303	X4CrNi18-12	X8CrNi1812	Z 5 CN 18-11 FF	305
		1.4828	X15CrNiSi20-12	X16CrNi2314	Z 9 CN 24-13	309
		1.4841	X15CrNiSi25-20	X22CrNiSi2520	Z 15 CNS 25-20	310
		1.4401	X5CrNiMo17-12-2	X5CrNiMo1712	Z 3 CND 17-11-01	316
		1.4404	X2CrNiMo17-12-2	X2CrNiMo1712	Z 2 CND 17-12	316L
		1.4541	X6CrNiTi18-10	X6CrNiTi1811	Z 6 CNT 18-10	321
		1.4550	X6CrNiNb18-10	X6CrNiNb1811	Z 6 CNNb 18-10	347
	Duplex	1.4462	X2CrNiMoN22-5-3	X2CrNiMoN22-5-3	Z 3 CND 22-05 Az	S31803
		1.4501	X2CrNiMoCuWN25-7-4	X2CrNiMoCuWN25-7-4		S32760
K CAST IRON	Grey cast iron	0.6010	GG10	G10	Ft10D	A48-20B
		0.6015	GG15	G15	Ft15D	A48-25B
		0.6020	GG20	G20	Ft20D	A48-30B
		0.6025	GG25	G25	Ft25D	A48-40B
		0.6030	GG30	G30	Ft30D	A48-45B
		0.6035	GG35	G35	Ft35D	A48-50B
		0.6040	GG40	G40	Ft40D	A48-60B
	Nodular cast iron / tempered	0.7040	GGG40	GS400-12	FGS400-12	60-40-18
		0.7050	GGG50	GS500-7	FGS500-7	65-45-12
		0.7060	GGG60	GS600-3	FGS600-3	80-55-06
		0.7070	GGG70	GS700-2	FGS700-2	100-70-03
	Malleable cast iron	0.8035	GTW35-04			
		0.8055	GTW55			
	Austempered ductile iron		EN-GJS-800-8			
			EN-GJS-1000-5			
			EN-GJS-1200-2			
			EN-GJS-1400-1			
N NON-FERROUS METALS	Pure aluminium	3.0205	Al99	9001/1	1200 (A4)	1200
		3.0305	Al99.9			
	Al wrought alloys	3.0505	AlMn0.5Mg0.5		3105	
		3.0915	AlFeSi	8011	8011	
		3.3315	AlMg1	9005/1	5005 (AlMg1)	5005
		3.3525	AlMg2Mn0.3		5251	5251
		3.3527	AlMg2Mn0.8		5049	5049
		3.3545	AlMg4Mn	9005/4	5086 (AG4MC)	5086
		3.3555	AlMg5			
		3.0615	AlMgSiPb		6012	

Russia	Japan	China	India			
GOST	JIS	GB	IS	MG Vergnano	Application	ISO 513
				P.5 (annealed)	Hot-work	P STEEL
5ChNM	SKT4	5CrNiMo	T55Ni7Cr3Mo3V1	P.4 (annealed)		
				P.4 (annealed)		
3Ch3M3F	SKD7	4Cr3Mo3SiV		P.4 (annealed)		
4Ch5MFS	SKD6	4Cr5MoSiV	XT35Cr5Mo1V3	P.4 (annealed)		
4Ch5MF1S	SKD61	4Cr5MoSiV1	XT35Cr5Mo1V1	P.4 (annealed)		
4Ch2W5MF	SKD4	30W4Cr2VA		P.4 (annealed)		
3Ch3W8F	SKD5	3Cr2W8V	XT33W9Cr3V4	P.4 (annealed)		
	SUS405	0Cr13Al	X04Cr13	P.7	Ferritic stainless steel	
	SUS409TB	022Cr11NbTi		P.7		
	SUS430	1Cr17	X07Cr17	P.7		
	SUS430F	Y1Cr17		P.7		
	SUS410	1Cr13	X12Cr12	P.7	Martensitic stainless steel	
	SUS416	Y1Cr13		P.7		
20Ch13	SUS420J1	2Cr13	X20Cr13	P.7		
30Ch13	SUS420J2	3Cr13	X30Cr13	P.7		
14Ch17N2	SUS431	1Cr17Ni2	X15Cr16Ni2	P.7		
95Ch18	SUS440C	108Cr17	X108Cr17Mo	P.7		
	SUS630/SCS24	0Cr17Ni4Cu4Nb		M.2	Precipitation hardening	
	SUS302			M.1	Austenitic	M STAINLESS STEEL
	SUS303			M.1		
08Ch18N10	SUS304	0Cr18Ni9	X04Cr18Ni10	M.1		
03Ch18N11	SUS304L/SCS19	00Cr19Ni10	X02Cr19Ni10	M.1		
12Ch18N12T	SUS305J1	1Cr18Ni12		M.1		
	SUH309	1Cr20Ni14Si2	X15Cr24Ni13	M.1		
20Ch25N20S2	SUH310	1Cr25Ni20Si2	X20Cr25Ni20	M.1		
08Ch16N11M3	SUS316	0Cr17Ni12Mo2	X04Cr17Ni12Mo2	M.1		
	SUS316L	00Cr17Ni14Mo2	X02Cr17Ni12Mo2	M.1		
08Ch18N10T	SUS321	0Cr18Ni10Ti	X04Cr18Ni10Ti	M.1		
08Ch18N12B	SUS347	0Cr18Ni11Nb	X04Cr18Ni10Nb	M.1		
	SUS329J3L	022Cr22Ni5Mo3N		M.2	Duplex	
		022Cr25Ni7Mo3WCuN		M.2		
Sc10	FC10			K.1	Grey cast iron	K CAST IRON
Sc15	FC15	HT150	FG150	K.1		
Sc20	FC20	HT200	FG200	K.1		
Sc25	FC25	HT250	FG260	K.1		
Sc30	FC30	HT300	FG300	K.1		
Sc35	FC35			K.1		
Sc40				K.1		
VC 42-12	FCD40	QT400-15		K.2	Nodular cast iron / tempered	
VC 50-2	FCD50	QT500-7	SG500/7	K.2		
VC 60-2	FCD60	QT600-3	SG600/3	K.2		
VC 70-2	FCD70	QT700-2	SG700/2	K.2		
				K.2	Malleable cast iron	
				K.2		
				K.3	Austempered ductile iron	
				K.3		
				K.3		
				K.3		
	A1200			N.1	Pure aluminium	N NON-FERROUS METALS
				N.1		
	A3105			N.2	Al wrought alloys	
				N.2		
	A5005			N.2		
				N.2		
				N.2		
	A5086			N.2		
	A5056			N.2		
				N.2		

			Germany	Italy	France	United States
ISO 513	Application	W.Nr.	DIN	UNI	AFNOR	AISI/SAE/ASTM
N NON-FERROUS METALS	Al wrought alloys	3.1255	AlCuSiMn	9002/3	2014	2014
		3.1325	AlCuMg1	9002/2	2017 A (AU4G)	2017A
		3.1355	AlCuMg2	9002/4	2024 (AU4G1)	2024
		3.1645	AlCuMgPb	9002/8	2030 (AU4PB)	2030
		3.4335	AlZn4.5Mg1	9007/1	7020 (AZ5G)	7020
	Al casting alloys	3.1371	G-AlCu4TiMg			
		3.2134	G-AlSi5Cu1Mg			
		3.3241	G-AlMg3Si			
		3.3261	G-AlMg5Si			
		3.3541	G-AlMg3			
		3.2373	G-AlSi9Mg			
		3.2381	G-AlSi10Mg			
		3.2383	G-AlSi10Mg(Cu)			
		3.2581	G-AlSi12			
		3.2583	G-AlSi12(Cu)			
	Pure copper	2.0060	E-Cu57			C11000
		2.0065	E-Cu58	5649	CuA1	C11000
	Cu wrought alloys	2.1525	CuSi3Mn	CuSi3Mn1		C65500
		2.0855	CuNi2Si	CuNi2Si		C64700
		2.1247	CuBe2	Classe IV		C17200
		2.1285	CuCo2Be	Classe III		C17510
	Brass	2.0240	CuZn15			
		2.0250	CuZn20			
		2.0265	CuZn30			C26000
		2.0280	CuZn33			
		2.0321	CuZn37			C27450
		2.0360	CuZn40			C28000
		2.0410	CuZn44Pb2	CuZn43Pb2Al		C38000
		2.0550	CuZn40Al2	CuZn37Mn3Al2PbSi		C67410
	Bronze	2.1016	CuSn4			
		2.1020	CuSn6			
		2.1030	CuSn8			
		2.1086	G-CuSn10Zn	7013	U-E12P7U-E8Z2	C90500
		2.0978	CuAl11Ni6Fe6	CuAl11Fe6Ni6		
		2.0940	CuAl10Fe	5274		C95400
		2.0882	CuNi30Mn1Fe			
		3.5312	MgAl3Zn			
		3.5632	MgAl6Zn3			
		3.5912	MgAl9Zn1			
		3.5161	MgZn6Zr			
S SUPERALLOYS AND TITANIUM	Pure titanium	3.7024	Ti99.5			
		3.7034	Ti99.7			
	Titanium alloys	3.7165	TiAl6V4		T-A6V	
		3.7174	TiAl6V4Sn2			
	Pure Nickel	1.3911	RNi24			
		1.3926	RNi12			
	Nickel alloys	2.4858	NiCr21Mo (Incoloy 825)			
		2.4668	NiCr19Fe19NbMo (Inconel 718)		INCONEL 718	
		2.4630	Ni-Cr20Ti (Nimonic 75)		NIMONIC 75	
		2.4665	NiCr22Fe18Mo (Hastelloy X)			
H HARDENED MATERIALS	Ball bearing	1.3505	100Cr6	100Cr6	100C6	52100
		1.3536	100CrMo6	100CrMo7	100CD7	3
	Hot-work	1.2767	45NiCrMo16	40NiCrMoV16 KU	Y35NCD16	
		1.2713	55NiCrMoV7	55NiCrMoV7 KU	55NiCrMoV7	L6
		1.2311		35CrMo8 KU		
		1.2365	32CrMoV12-28	30CrMoV12-27 KU	32CDV12-28	H10
		1.2343	X38CrMoV5-1	X37CrMoV5-1 KU	Z38CDV5	H11
		1.2344	X40CrMoV5-1	X40CrMoV5-1-1 KU	Z40CDV5	H13
		1.2567	X30WCrV5-3	X30WCrV5-3 KU	Z32WCV5	H14
		1.2581	X30WCrV9-3	X30WCrV9-3 KU	Z30WCV9	H21

Russia	Japan	China	India			
GOST	JIS	GB	IS	MG Vergnano	Application	ISO 513
	A2014			N.2	Al wrought alloys	N NON-FERROUS METALS
	A2017			N.2		
	A2024			N.2		
				N.2		
	A7N01			N.2		
	AC1B			N.2	Al casting alloys	
	AC4D			N.3		
				N.2		
				N.2		
				N.2		
	AC4A			N.3		
				N.4		
	ADC3			N.4		
	AC3A			N.4		
	ADC1			N.4		
	C1100			N.5	Pure copper	
	C1100			N.5		
				N.6	Cu wrought alloys	
				N.6		
				N.6		
				N.6		
				N.6	Brass	
				N.6		
	C2600			N.6		
				N.6		
	C2700			N.6		
	C2800			N.7		
				N.7		
				N.7		
				N.6	Bronze	
				N.6		
				N.6		
	CAC403C (BC3)			N.7		
				N.8		
	CAC702C			N.8		
				N.8		
				N.9		
				N.9		
				N.9		
				N.10		
				S.1	Pure titanium	S SUPERALLOYS AND TITANIUM
				S.1		
				S.2	Titanium alloys	
				S.2		
				S.3	Pure Nickel	
				S.3		
	NCF825			S.4	Nickel alloys	
				S.4		
				S.4		
				S.4		
SChCh15	SUJ2/SUJ4	GCr15		H.2 (Q+T)	Ball bearing	H HARDENED MATERIALS
				H.2 (Q+T)		
	SKT6			H.1 (Q+T)	Hot-work	
5ChNM	SKT4	5CrNiMo	T55Ni7Cr3Mo3V1	H.1 (Q+T)		
				H.1 (Q+T)		
3Ch3M3F	SKD7	4Cr3Mo3SiV		H.1 (Q+T)		
4Ch5MFS	SKD6	4Cr5MoSiV	XT35Cr5Mo1V3	H.1 (Q+T)		
4Ch5MF1S	SKD61	4Cr5MoSiV1	XT35Cr5Mo1V1	H.1 (Q+T)		
4Ch2W5MF	SKD4	30W4Cr2VA		H.1 (Q+T)		
3Ch3W8F	SKD5	3Cr2W8V	XT33W9Cr3V4	H.1 (Q+T)		

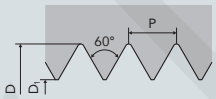
M



ISO Metric coarse thread DIN 13

M	Pitch [mm]	Maximum core diam. (tol. 6H) [mm] D_1	Drill size* [mm]
M 1	0,25	0,785 (1)	0,75
1,1	0,25	0,885 (1)	0,85
1,2	0,25	0,985 (1)	0,95
1,4	0,3	1,142 (1)	1,1
1,6	0,35	1,321	1,25
1,7 (3)	0,35	1,421	1,35
1,8	0,35	1,521	1,45
2	0,4	1,679	1,6
2,2	0,45	1,838	1,75
2,3 (3)	0,4	1,938	1,9
2,5	0,45	2,138	2,05
2,6 (3)	0,45	2,238	2,1
3	0,5	2,599	2,5
3,5	0,6	3,010	2,9
4	0,7	3,422	3,3
4,5	0,75	3,878	3,7
5	0,8	4,334	4,2
6	1	5,153	5
7	1	6,153	6
8	1,25	6,912	6,8
9	1,25	7,912	7,8
10	1,5	8,676	8,5
11	1,5	9,676	9,5
12	1,75	10,441	10,2
14	2	12,210	12
16	2	14,210	14
18	2,5	15,744	15,5
20	2,5	17,744	17,5
22	2,5	19,744	19,5
24	3	21,252	21
27	3	24,252	24
30	3,5	26,771	26,5
33	3,5	29,771	29,5
36	4	32,270	32
39	4	35,270	35
42	4,5	37,799	37,5
45	4,5	40,799	40,5
48	5	43,297	43
52	5	47,297	47
56	5,5	50,796	50,5
60 (3)	5,5	54,796	54,5
64 (3)	6	58,305	58
68 (3)	6	62,305	62

MF



ISO Metric fine thread DIN 13

M	Pitch [mm]	Maximum core diam. (tol. 6H) [mm] D_1	Drill size* [mm]
M 2 (3)	0,25	1,774 (2)	1,75
2,3 (3)	0,25	2,085	2,05
2,5	0,35	2,221	2,15
3	0,35	2,721	2,65
3,5	0,35	3,221	3,15
4	0,5	3,599	3,5
4,5	0,5	4,099	4
5	0,5	4,599	4,5
5,5	0,5	5,099	5
6	0,75	5,378	5,2
7	0,75	6,378	6,2
8	0,75	7,378	7,2
8	1	7,153	7
9	0,75	8,378	8,2
9	1	8,153	8
10	0,75	9,378	9,2
10	1	9,153	9
10	1,25	8,912	8,8
11	0,75	10,378	10,2
11	1	10,153	10
12 (3)	0,75	11,378	11,2
12	1	11,153	11
12	1,25	10,912	10,8
12	1,5	10,676	10,5
14	1	13,153	13
14	1,25	12,912	12,8
14	1,5	12,676	12,5
15	1	14,153	14
15	1,5	13,676	13,5
16	1	15,153	15
16	1,5	14,676	14,5
17	1	16,153	16
17	1,5	15,676	15,5
18	1	17,153	17
18	1,5	16,676	16,5
18	2	16,210	16
20	1	19,153	19
20	1,5	18,676	18,5
20	2	18,210	18
22	1	21,153	21
22	1,5	20,676	20,5
22	2	20,210	20
24	1	23,153	23
24	1,5	22,676	22,5
24	2	22,210	22

M	Pitch [mm]	Maximum core diam. (tol. 6H) [mm] D_1	Drill size* [mm]
M 25	1	24,153	24
25	1,5	23,676	23,5
25	2	23,210	23
26	1,5	24,676	24,5
27	1	26,153	26
27	1,5	25,676	25,5
27	2	25,210	25
28	1	27,153	27
28	1,5	26,676	26,5
28	2	26,210	26
30	1	29,153	29
30	1,5	28,676	28,5
30	2	28,210	28
30	3	27,252	27
32	1,5	30,676	30,5
32	2	30,210	30
33	1,5	31,676	31,5
33	2	31,210	31
33	3	30,252	30
35	1,5	33,676	33,5
36	1,5	34,676	34,5
36	2	34,210	34
36	3	33,252	33
38	1,5	36,676	36,5
39	1,5	37,676	37,5
39	2	37,210	37
39	3	36,252	36
40	1,5	38,676	38,5
40	2	38,210	38
40	3	37,252	37
42	1,5	40,676	40,5
42	2	40,210	40
42	3	39,252	39
45	1,5	43,676	43,5
45	2	43,210	43
45	3	42,252	42
48	1,5	46,676	46,5
48	2	46,210	46
48	3	45,252	45
50	1,5	48,676	48,5
50	2	48,210	48
50	3	47,252	47
52	1,5	50,676	50,5
52	2	50,210	50
52	3	49,252	49

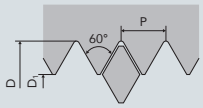
(*) Drill size according to DIN 336

(1) Tolerance 5H

(2) Tolerance 4H

(3) Size not included in DIN 336

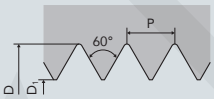
EG-M



ISO Metric coarse thread DIN 8140 Part 2

EG-M	Drill size* [mm]
EG-M 3	3,15
4	4,2
5	5,25
6	6,3
8	8,4
10	10,5
12	12,5
14	14,5
16	16,5

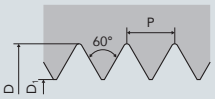
8-UN



8-UN thread ASME B1.1

8-UN	Pitch [TPI]	Maximum core diam. (tol. 3B) [mm] D_1	Drill size* [mm]
1 1/8"	8	25,519	25,4
1 1/4"	8	28,694	28,6
1 3/8"	8	31,869	31,8
1 1/2"	8	35,044	35,0
1 5/8"	8	38,219	38,1
1 3/4"	8	41,394	41,3
1 7/8"	8	44,569	44,5
2"	8	47,744	47,7

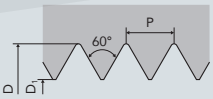
UNC



Unified coarse thread UNC ASME - B1.1

UNC	Pitch [TPI]	Maximum core diam. (tol. 3B) [mm] D_1	Drill size* [mm]
Nr. 1	64	1,582	1,55
Nr. 2	56	1,872	1,85
Nr. 3	48	2,146	2,1
Nr. 4	40	2,385	2,35
Nr. 5	40	2,697	2,65
Nr. 6	32	2,896	2,85
Nr. 8	32	3,528	3,5
Nr. 10	24	3,950	3,9
Nr. 12	24	4,590	4,5
1/4"	20	5,250	5,1
5/16"	18	6,680	6,6
3/8"	16	8,082	8
7/16"	14	9,441	9,4
1/2"	13	10,881	10,8
9/16"	12	12,301	12,2
5/8"	11	13,693	13,5
3/4"	10	16,624	16,5
7/8"	9	19,520	19,5
1"	8	22,344	22,25
1 1/8"	7	25,082	25
1 1/4"	7	28,258	28
1 3/8"	6	30,851	30,75
1 1/2"	6	34,026	34
1 3/4"	5	39,560	39,5
2"	4,5	45,367	45

UNF

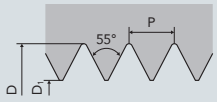


Unified fine thread UNF ASME - B1.1

UNF	Pitch [TPI]	Maximum core diam. (tol. 3B) [mm] D_1	Drill size* [mm]
Nr. 0	80	1,306	1,25
Nr. 1	72	1,613	1,55
Nr. 2	64	1,913	1,85
Nr. 3	56	2,197	2,15
Nr. 4	48	2,459	2,4
Nr. 5	44	2,741	2,7
Nr. 6	40	3,012	2,95
Nr. 8	36	3,597	3,5
Nr. 10	32	4,168	4,1
Nr. 12	28	4,717	4,6
1/4"	28	5,563	5,5
5/16"	24	6,995	6,9
3/8"	24	8,565	8,5
7/16"	20	9,947	9,9
1/2"	20	11,524	11,5
9/16"	18	12,969	12,9
5/8"	18	14,554	14,5
3/4"	16	17,546	17,5
7/8"	14	20,493	20,4
1"	12	23,363	23,25
1 1/8"	12	26,538	26,5
1 1/4"	12	29,713	29,5
1 3/8"	12	32,888	32,75
1 1/2"	12	36,063	36

(*) Drill size according to DIN 336

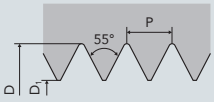
BSW



Whitworth thread BSW - BS 84

BSW	Pitch [TPI]	Maximum core diam. [mm] D_1	Drill size [mm]
3/32"	48	1,912	1,9
1/8"	40	2,591	2,55
5/32"	32	3,214	3,2
3/16"	24	3,744	3,7
7/32"	24	4,539	4,5
1/4"	20	5,156	5,1
5/16"	18	6,589	6,5
3/8"	16	7,988	7,9
7/16"	14	9,332	9,25
1/2"	12	10,589	10,5
9/16"	12	12,177	12
5/8"	11	13,559	13,5
3/4"	10	16,485	16,4
7/8"	9	19,355	19,25
1"	8	22,149	22
1 1/8"	7	24,831	24,75
1 1/4"	7	28,006	27,75
1 3/8"	6	30,528	30,3
1 1/2"	6	33,703	33,5
1 5/8"	5	35,961	35,5
1 3/4"	5	39,136	39
1 7/8"	4,5	41,702	41,5
2"	4,5	44,877	44,5
2 1/4"	4	50,465	50
2 1/2"	4	56,815	56,3
2 3/4"	3,5	62,182	61,5
3"	3,5	68,532	68

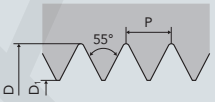
G



Whitworth pipe thread EN - ISO 228

G	Pitch [TPI]	Maximum core diam. [mm] D_1	Drill size* [mm]
G 1/8"	28	8,848	8,8
1/4"	19	11,890	11,8
3/8"	19	15,395	15,25
1/2"	14	19,172	19
5/8"	14	21,128	21
3/4"	14	24,658	24,5
7/8"	14	28,418	28,25
1"	11	30,931	30,75
1 1/8"	11	35,579	35,5
1 1/4"	11	39,592	39,5
1 3/8"	11	42,005	41,9
1 1/2"	11	45,485	45,25
1 3/4"	11	51,428	51
2"	11	57,296	57
2 1/4"	11	63,392	63,3
2 3/8"	11	67,080	67
2 1/2"	11	72,866	72,8
2 3/4"	11	79,216	79,1
3"	11	85,566	85,5
3 1/4"	11	91,662	91,5
3 1/2"	11	98,012	98
3 3/4"	11	104,362	104
4"	11	110,712	110,5

Rp (BSPP)

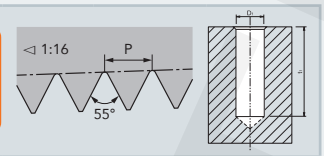


Rp thread (BSPP) DIN EN 10226-1

Rp	Pitch [TPI]	Maximum core diam. [mm] D_1	Drill size* [mm]
1/8"	28	8,637	8,6
1/4"	19	11,549	11,5
3/8"	19	15,054	15,0
1/2"	14	18,773	18,5
3/4"	14	24,259	24,0

(*) Drill size according to DIN 336

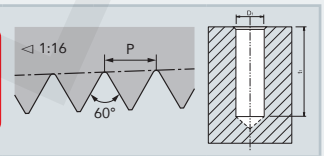
Rc (BSPT)



Conical gas thread Rc (BSPT) - DIN EN 10226-2

Rc	Pitch [TPI]	Drill size** [mm] D_1	t1 [mm]
1/16"	28	6,2	11,9
1/8"	28	8,2	11,9
1/4"	19	11	17,7
3/8"	19	14,5	18,1
1/2"	14	18	24
3/4"	14	23,5	25,3
1"	11	29,5	30,6
1 1/4"	11	38	32,9
1 1/2"	11	44	32,9
2"	11	55,5	37,2

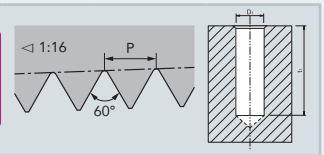
NPT



National pipe thread NPT - ANSI B1.20.1

NPT	Pitch [TPI]	Drill size** [mm] D_1	t1 [mm]
1/16"	27	6,15	12
1/8"	27	8,5	12
1/4"	18	11	17,5
3/8"	18	14,5	17,6
1/2"	14	17,85	22,9
3/4"	14	23,2	23
1"	11,5	29	27,4
1 1/4"	11,5	37,8	28,1
1 1/2"	11,5	44	28,4
2"	11,5	56	28,4

NPTF

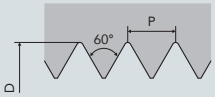


Dryseal national pipe thread NPTF - ANSI B1.20.3

NPTF	Pitch [TPI]	Drill size** [mm] D_1	t1 [mm]
1/16"	27	6,15	12
1/8"	27	8,5	12
1/4"	18	11	17,5
3/8"	18	14,5	17,6
1/2"	14	17,8	22,9
3/4"	14	23	23
1"	11,5	29	27,4
1 1/4"	11,5	37,8	28,1
1 1/2"	11,5	43,8	28,4
2"	11,5	56	28,4

** For conical threads tapered drill holes are preferable.
Please request specific tables.

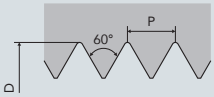
M



ISO Metric coarse thread DIN 13

M	Pitch [mm]	Drill size [mm]
M 2	0,4	1,85 ± 0,03
2,5	0,45	2,30 ± 0,03
3	0,5	2,80 ± 0,03
3,5	0,6	3,25 ± 0,03
4	0,7	3,70 ± 0,03
5	0,8	4,65 ± 0,03
6	1	5,55 ± 0,05
8	1,25	7,40 ± 0,05
10	1,5	9,30 ± 0,05
12	1,75	11,20 ± 0,05
14	2	13,10 ± 0,05
16	2	15,10 ± 0,05
18	2,5	16,90 ± 0,05
20	2,5	18,90 ± 0,05
24	3	22,70 ± 0,05
27	3	25,70 ± 0,05
30	3,5	28,45 ± 0,05

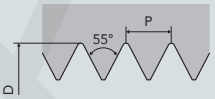
MF



ISO Metric fine thread DIN 13

MF	Pitch [mm]	Drill size [mm]
M 3	0,35	2,85 ± 0,03
4	0,5	3,80 ± 0,03
5	0,5	4,80 ± 0,03
6	0,75	5,65 ± 0,03
8	1	7,55 ± 0,05
10	1	9,55 ± 0,05
10	1,25	9,40 ± 0,05
12	1	11,55 ± 0,05
12	1,25	11,40 ± 0,05
12	1,5	11,30 ± 0,05
14	1,25	13,40 ± 0,05
14	1,5	13,30 ± 0,05
16	1,5	15,30 ± 0,05
18	1,5	17,30 ± 0,05
20	1,5	19,30 ± 0,05

G

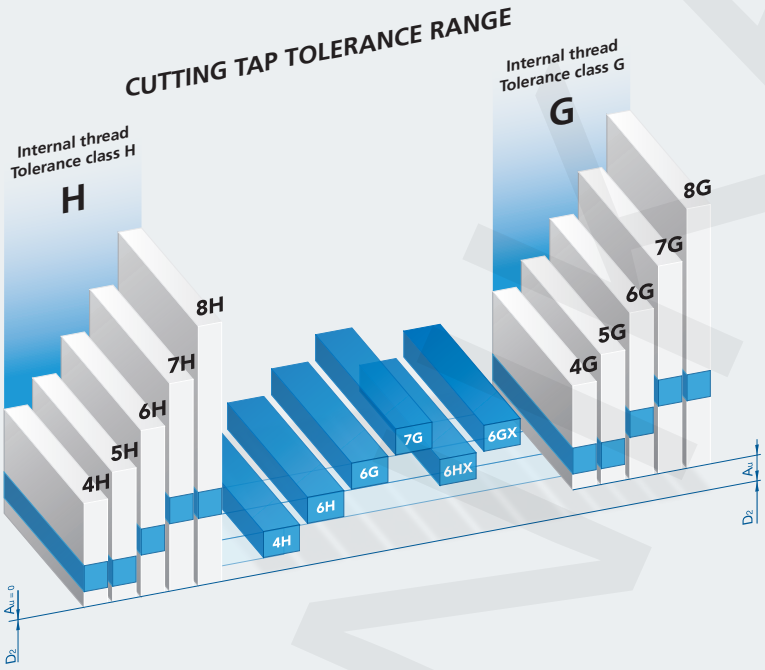


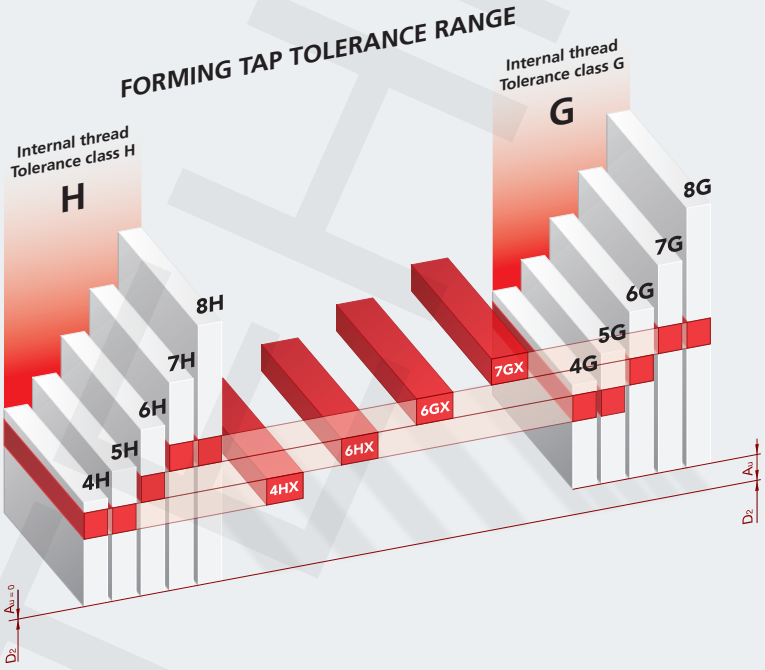
Whitworth pipe thread EN - ISO 228

G	Pitch [TPI]	Drill size [mm]
G 1/8"	28	9,25 ± 0,05
1/4"	19	12,50 ± 0,05
3/8"	19	16,00 ± 0,05
1/2"	14	20,00 ± 0,05
3/4"	14	25,50 ± 0,05
1"	11	32,00 ± 0,05

Other drill sizes = theorical flank diameter + pitch/5

In order to obtain the requested tolerance, the formation of a complete internal thread and guarantee the tap tool life, it is important to respect the drill hole diameters and their tight tolerances.
The core diameter of the internal thread obtained by forming is not only a function of the drill hole diameter but also depends on the workpiece material properties. For this reason the tolerance on the core diameter is 7H compared to 6H for cutting taps. For more detailed information see the DIN 13-50 standard.





Standard fit for a thread corresponds to tolerance class ISO 2/6H. For more precise fits, without allowance on thread flank, tolerance 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. Another important application is on forming taps, which create the thread by plastic deformation and not by cutting. In this case, due to the elastic return of the material, in order to obtain a thread 6H tolerance, a 6HX tap must be used.

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

TOLERANCE TABLE

Nominal diameter (mm)		Pitch (mm)	Limits on pitch diameter (µm)*			
			Class			
>	≤		4H (ISO1)	6H (ISO2)	6G (ISO3)	7G
0,99	1,4	0,2	+ 15	-	-	-
			+ 5	-	-	-
		0,25	+ 17	-	-	-
			+ 6	-	-	-
		0,3	+ 18	+ 30	-	-
			+ 6	+ 18	-	-
1,4	2,8	0,2	+ 16	-	-	-
			+ 5	-	-	-
		0,25	+ 18	-	-	-
			+ 6	-	-	-
		0,35	+ 20	+ 34	-	-
			+ 7	+ 20	-	-
		0,4	+ 21	+ 36	-	-
			+ 7	+ 21	-	-
		0,45	+ 23	+ 38	-	-
			+ 8	+ 23	-	-
2,8	5,6	0,35	+ 21	+ 36	-	-
			+ 7	+ 21	-	-
		0,5	+ 24	+ 40	+ 56	+ 70
			+ 8	+ 24	+ 40	+ 55
		0,6	+ 27	+ 45	+ 63	+ 81
			+ 9	+ 27	+ 45	+ 63
		0,7	+ 29	+ 48	+ 67	+ 86
			+ 10	+ 29	+ 48	+ 67
		0,75	+ 29	+ 48	+ 67	+ 86
			+ 10	+ 29	+ 48	+ 67
		0,8	+ 30	+ 50	+ 70	+ 90
			+ 10	+ 30	+ 50	+ 70
5,6	11,2	0,75	+ 32	+ 53	+ 74	-
			+ 11	+ 32	+ 53	-
		1	+ 35	+ 59	+ 83	+ 107
			+ 12	+ 35	+ 59	+ 83
		1,25	+ 38	+ 63	+ 88	+ 113
			+ 13	+ 38	+ 63	+ 88
		1,5	+ 42	+ 70	+ 98	+ 126
			+ 14	+ 42	+ 70	+ 98
11,2	22,4	1	+ 38	+ 63	+ 88	+ 113
			+ 13	+ 38	+ 63	+ 88
		1,25	+ 42	+ 70	+ 98	+ 126
			+ 14	+ 42	+ 70	+ 98
		1,5	+ 45	+ 75	+ 105	+ 135
			+ 15	+ 45	+ 75	+ 105
		1,75	+ 48	+ 80	+ 112	+ 144
			+ 16	+ 48	+ 80	+ 112
		2	+ 51	+ 85	+ 119	+ 153
			+ 17	+ 51	+ 85	+ 119
		2,5	+ 54	+ 90	+ 126	+ 162
			+ 18	+ 54	+ 90	+ 126
22,4	45	1	+ 40	+ 66	+ 92	+ 118
			+ 13	+ 40	+ 66	+ 92
		1,5	+ 48	+ 80	+ 112	+ 144
			+ 16	+ 48	+ 80	+ 112
		2	+ 54	+ 90	+ 126	+ 162
			+ 18	+ 54	+ 90	+ 126
		3	+ 64	+ 106	+ 148	+ 190
			+ 21	+ 64	+ 106	+ 148
		3,5	+ 67	+ 112	+ 157	+ 202
			+ 22	+ 67	+ 112	+ 157
		4	+ 71	+ 118	+ 165	+ 212
			+ 24	+ 71	+ 118	+ 165
		4,5	+ 75	+ 125	+ 175	+ 225
			+ 25	+ 75	+ 125	+ 125
45	90	1,5	+ 51	+ 85	+ 119	+ 153
			+ 17	+ 51	+ 85	+ 119
		2	+ 57	+ 95	+ 133	+ 171
			+ 19	+ 57	+ 95	+ 133
		3	+ 67	+ 112	+ 157	+ 202
			+ 22	+ 67	+ 112	+ 157
		4	+ 75	+ 125	+ 175	+ 225
			+ 25	+ 75	+ 125	+ 175
		5	+ 80	+ 133	+ 186	+ 239
			+ 27	+ 80	+ 133	+ 186
		5,5	+ 84	+ 140	+ 196	+ 252
			+ 28	+ 84	+ 140	+ 196
		6	+ 90	+ 150	+ 210	+ 270
			+ 30	+ 90	+ 150	+ 210

(*) According to EN 22857

TAP AND DIE GEOMETRY


Hand tap


Tap with straight flutes


Tap with straight flutes and spiral point


Tap with straight flutes with interrupted thread


Tap with straight flutes and spiral point with interrupted thread

Tap with 15° right hand spiral

Tap with 15° left hand spiral

Tap with 40° right hand spiral and 2 flutes

Tap with 40° right hand spiral

Tap with 40° right hand spiral
Left hand cut

Tap with 45° right hand spiral


Forming tap without oil grooves


Forming tap with oil grooves


Through coolant tap with internal axial hole, for blind holes


Through coolant tap with internal axial and radial holes, for through holes


Through coolant tap with internal axial hole, for blind holes


Through coolant forming tap with internal axial hole, for blind holes


Through coolant forming tap with internal axial and radial holes, for through holes


Thread Mills with internal axial coolant


Thread Mills with internal radial coolant


Die


Back tapering


Tap with through shank


Tap with long shank

HOLE TYPE AND DEPTH


Through

Through, up to 1 x d_1

Through, up to 1,5 x d_1

Through, up to 2,5 x d_1

Through, up to 3 x d_1


Blind

Blind, up to 1,5 x d_1

Blind, up to 2 x d_1

Blind, up to 2,5 x d_1

Blind, up to 3 x d_1


Blind and through

Blind and through, up to 1,5 x d_1

Blind and through, up to 2 x d_1

Blind and through, up to 2,5 x d_1

Blind and through, up to 3 x d_1


Tapered hole

ICON DESCRIPTION


Nut

DIRECTION OF CUT

Right hand cut

Left hand cut

TYPE OF CHIP


Short chipping


Medium chipping


Medium to long chipping


Long chipping


Plastic deformation without chip formation

COLOURED RING


Orange ring - Taps for tough materials


Red ring - Hand taps A100 series

TAP AND DIE TOLERANCE

Tolerance 4H / ISO1

Tolerance 6H / ISO2

Tolerance 6G / ISO3

Tolerance 7G

Tolerance 6HX

Tolerance 6GX

Tolerance 7GX

Tolerance 6H + 0,1 mm

Modified 6H Tolerance

Tolerance 3B

Tolerance 2B

Tolerance 2BX

Tolerance ISO 5969

Tolerance ISO 5969X

Medium Tolerance

Tolerance ISO 6g

Tolerance 2A

Tolerance Class A

MATERIAL

Material: solid carbide

Material: conventional high speed steel

Material: conventional high speed steel

Material: powder metallurgy high speed steel

Material: high performance
powder metallurgy high speed steel

Material: high performance
powder metallurgy high speed steel

THREAD TYPE

ISO Metric corse thread

ISO Metric fine thread

UNC Unified coarse thread - UNC ASME B1.1

UNF Unified fine thread - UNF ASME B1.1

8-UN 8-UN thread - ASME B1.1

G Whitworth pipe thread - EN ISO 228

Rp (BSPP) Rp thread (BSPP) - DIN EN 10226-1

Rc (BSPT) Conical gas thread Rc (BSPT) taper 1:16 - BS 21 and DIN EN 10226-2

BSW Whitworth thread - BS 84

NPT National pipe thread, taper 1:16 - ASME/ANSI B1.20.1

NPTF Dryseal National pipe thread, taper 1:16 - ASME/ANSI B1.20.3

EG-M ISO Metric coarse thread - DIN 8140-2

ISO ISO thread DIN 13

UN American Unified Thread ASME B1.1

GAS GAS thread EN ISO 228

CHAMFER FORM

A (5-6) Chamfer form A: 5 - 6 threads for through holes

B (4-5) Chamfer form B: 4 - 5 threads for through holes

C (2-3) Chamfer form C: 2 - 3 threads for blind and through holes

D (4-5) Chamfer form D: 4 - 5 threads for through holes

E (1,5-2) Chamfer form E: 1,5 - 2 threads for blind holes

1,75xP Die chamfer form: 1,75 x P

APPLICATION INFORMATION

Tap only for rigid tapping attachment (synchronous)

High recommended cutting speed

High tool life

THREAD MILLS

INT For internal threads

EXT For external threads

Graphic design by:
StudioAlmayern
Chieri - Torino - Italy

Printed by:
IlTipografo
Riva presso Chieri - Torino - Italy
Printed 08/2019

Printed on Certified Ecological Paper

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