VERGNANO

General Catalogue

Taps and Dies **51-GB**

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TOOL CODE LIST

A

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A6 B	NPT	142
A6 BZ	NPT	143
A6 F	NPTF	144
A6 FZ	NPTF	145
A7	UNC	111
A8	UNF	119
A9	M	77
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A15 VAP	M	49
A15 TiN	M	49
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A15 6G	M	50
A15 6G VAP	M	50
A15 6G TiN	M	50
A15 6G TiCN	M	50
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A15 4H TiCN	M	51
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A15 AZ TiH1	M	52
A15 L	M	53
A15 L TiN	M	53
A15 L TiCN	M	53
A15 S	M	54
A15 S VAP	M	54
A15 S TiN	M	54
A15 S TiCN	M	54
A15 S 6G	M	55
A15 S 6G TiN	M	55
A15 S 6G TiCN	M	55
A15 S 7G	M	56
A15 S 7G TiN	M	56
A15 S 7G TiCN	M	56
A16 S	M	57
A16 S TiN	M	57
A16 S TiCN	M	57
A17	MF	94
A17 VAP	MF	94
A17 TiN	MF	94
A17 TiCN	MF	94
A17 S	MF	96
A17 S VAP	MF	96
A17 S TiN	MF	96
A17 S TiCN	MF	96
A17 S 6G	MF	98
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A17 S 6G TiCN	MF	98
A18 S	G	132
A18 S VAP	G	132
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A19 S TiCN	UNC	114
A19 S 3B	UNC	114
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A21 FP LH	M	38
A22 FC	M	39
A22 FC TiN	M	39
A22 FP	M	40
A22 FP TiN	M	40
A23 FC	MF	86
A23 FC TiN	MF	86
A23 FC LH	MF	86
A23 FP	MF	89
A23 FP TiN	MF	89
A23 FP LH	MF	89
A24 FC	BSW	139
A24 FP	BSW	139
A26 FC	G	130
A26 FP	G	130
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A27 FP	UNC	112
A27 FP TiN	UNC	112
A28 FC	UNF	120
A28 FC TiN	UNF	120
A28 FP	UNF	120
A28 FP TiN	UNF	120
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A29 TiN	M	60
A29 TiCN	M	60
A29 6G	M	61
A29 6G TiN	M	61
A29 6G TiCN	M	61
A29 L	M	62
A29 L TiN	M	62
A29 L TiCN	M	62
A29 DIN 376	M	63
A29 DIN 376 TiN	M	63
A29 DIN 376 TiCN	M	63
A29 K	M	64
A29 K TiN	M	64
A29 K TiCN	M	64
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A30 TiN	MF	99
A30 TiCN	MF	99
A30 K	MF	101
A30 K TiN	MF	101
A30 K TiCN	MF	101
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B30 K TiCN	MF	102
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A32 TiCN	G	133
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A33 TiN	UNC	115
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A34 3B	UNF	123
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B43 K TiCN	M	43
B43 K ACE	M	43
A44 NITR.	M	44
A44 TiCN	M	44
A44 ACE	M	44
A45 NITR.	MF	92
A45 TiCN	MF	92
A45 ACE	MF	92
A45 K NITR.	MF	93
A45 K TiCN	MF	93
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A49 TiCN	UNC	113
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A50 TiCN	UNF	121
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A59 TiN	G	134
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A59 S	G	135
A59 S VAP	G	135
A59 S TiN	G	135
A59 S TiCN	G	135
A59 S TiX2	G	136
A60	UNC	116
A60 TiN	UNC	116
A60 TiCN	UNC	116
A60 S	UNC	117
A60 S TiN	UNC	117
A60 S TiCN	UNC	117
A60 S TiX2	UNC	117
A61	UNF	124
A61 TiN	UNF	124
A61 TiCN	UNF	124
A61 S	UNF	125
A61 S TiN	UNF	125
A61 S TiCN	UNF	125
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A65	UNC	118
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A67	M	45
A67 TiH1	M	45
A70	M	65
A70 VAP	M	65
A70 TiN	M	65
A70 TiCN	M	65
A70 6G	M	66
A70 6G VAP	M	66
A70 6G TiN	M	66
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A70 4H TiN	M	67
A70 4H TiCN	M	67
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A70 S VAP	M	70
A70 S TiN	M	70
A70 S TiCN	M	70
A70 S 6G	M	71
A70 S 6G TiN	M	71
A70 S 7G	M	71
A70 S 7G TiN	M	71
A70 SE	M	72
A70 SE TiN	M	72
A70 SE TiCN	M	72
A71	MF	103
A71 TiN	MF	103
A71 TiCN	MF	103
A71 S	MF	104
A71 S VAP	MF	104
A71 S TiN	MF	104
A71 S TiCN	MF	104
A71 S 6G	MF	105
A71 S 6G TiN	MF	105
A71 S 6G TiCN	MF	105
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A76 S TiN	M	73
A80 VAP	M	78
A80 TiN	M	78
A80 TiCN	M	78
A80 6GX VAP	M	79
A80 6GX TiN	M	79
A80 6GX TiCN	M	79
A80 N VAP	M	80
A80 N TiN	M	80
A80 N TiCN	M	80
A80 N 6GX VAP	M	81
A80 N 6GX TiN	M	81
A80 N 6GX TiCN	M	81
A81 VAP	MF	107
A81 TiN	MF	107
A81 TiCN	MF	107
A81 6GX VAP	MF	108
A81 6GX TiN	MF	108
A81 6GX TiCN	MF	108
A81 N VAP	MF	109
A81 N TiN	MF	109
A81 N TiCN	MF	109
A81 N 6GX VAP	MF	110
A81 N 6GX TiN	MF	110
A81 N 6GX TiCN	MF	110
A82 N VAP	G	137
A82 N TiN	G	137
A82 N TiCN	G	137
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A130	M	47
A130 TiCN	M	47
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A150 TiX2	M	58
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BP15 TiH1	M	148
P17 TiN	MF	156
P17 TiH1	MF	156
P17 6GX TiN	MF	156
P17 6GX TiH1	MF	156
P18 TiN	G	159
P18 TiH1	G	159
P29	M	149
P29 TiN	M	149
P29 TiH1	M	149
BP29 TiH1	M	149
P59 TiN	G	160
P59 TiH1	G	160
P70 TiN	M	150
P70 TiH1	M	150
P70 6GX TiN	M	150
BP70 TiH1	M	150
P70 E TiN	M	151
P70 E TiH1	M	151
P71 TiN	MF	157
P71 TiH1	MF	157
P71 6GX TiN	MF	157
P71 6GX TiH1	MF	157
P80 TiN	M	152
P80 6GX TiN	M	152
P80 7GX TiN	M	152
P80 N TiN	M	153
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P80 N 7GX TiN	M	153
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P80 N E TiN	M	154
P80 N E 6GX TiN	M	154
BP80 N TiN	M	155
BP80 NR TiN	M	155
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P81 6GX TiN	MF	158
P81 N TiN	MF	158
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HB29	M	173
HB29 TiCN	M	173
HB43	M	172
HB43 TiAlN	M	172
HB45	MF	176
HB45 TiAlN	MF	176
HB80 NR TiCN	M	175
H130	M	174
H130 TiCN	M	174
HP900 TiAlN	-	177

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A15 K TiCN	M	181
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A16 TiN	M	180
A16 TiCN	M	180
A17 K	MF	189
A17 K TiN	MF	189
A17 K TiCN	MF	189
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A18 TiN	G	195
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A19	UNC	193
A19 TiN	UNC	193
A19 TiCN	UNC	193
A19 3B	UNC	193
A20	UNF	194
A20 TiN	UNF	194
A20 TiCN	UNF	194
A20 3B	UNF	194
B29K	M	185
B29K TiN	M	185
B29K TiCN	M	185
A35	M	183
A35 TiN	M	183
A36	M	184
A36 TiN	M	184
A37	MF	190
A70 KS	M	186
A70 KS TiN	M	186
A70 KS TiCN	M	186
A71 K	MF	191
A71 K TiN	MF	191
A71 K TiCN	MF	191
A71 KS	MF	192
A71 KS TiN	MF	192
A71 KS TiCN	MF	192
A115	M	182
A115 TiN	M	182
A115 TiCN	M	182
A120	M	187
A120 VAP	M	187
A120 TiN	M	187
A120 TiCN	M	187
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A125 TiN	M	188
A125 TiCN	M	188

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S15 TiH1	M	165
BS15 TiH1	M	165
S17 TiN	MF	169
S43 ACE	M	164
BS43 ACE	M	164
S43 E ACE	M	164
BS43 E ACE	M	164
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S70 TiN	M	166
S70 TiH1	M	166
BS70 TiH1	M	166
S71 TiN	MF	170
S80 N TiN	M	167
S80 N 6GX TiN	M	167
BS80 NR TiN	M	167

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SERIES

MATERIAL

CHAMFER FORM

TYPES OF HOLE

ARTICLE LEGEND

A... Standard taps
P... High performance taps
S... Synchronous/Rigid tapping taps
H... Solide Carbide Taps
B... Taps with internal coolant supply

...**FC** Taps for blind holes
...**FP** Taps for through holes
...**K** Taps in HSSK

...**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** / **BZ** / **FZ** Taps with interrupted thread

TAP MATERIAL

HSS / **HSSE**: Conventional high speed steel
HSSK / **HSSZ** / **HSSP**: Powder metallurgy high speed steel

LUBRICATION

E Emulsion
O Oil
MQL Minimum quantity lubrication
S Dry

S71 | 15 Product code / page

A16 S New product

● 25-30 Ideal tap / cutting speed m/min

❑ 20-25 Suitable tap / cutting speed m/min

M	4H
	6H / 6HX
	6G / 6GX
	7G / 7GX
MF	6H / 6HX
	6G / 6GX
UNC	2B / 2BX
	3B
UNF	2B / 2BX
	3B
UN 8	2B
G	
BSW	
RC (BSPT)	
NPT	
NPTF	
COOLANT	
COATING	

Material*	Group	Description	T.S. N/mm²	Lubrication
Steel	1.1	Mild / magnetic steel	200 - 400	E, O, MQL
	1.2	Construction steel, case hardening steel	350 - 700	E, O, MQL
	1.3	Carbon steel	350 - 850	E, O, MQL
	1.4	Alloyed steel / tempered steel	500 - 850	E, O, MQL
	1.5	Alloyed steel / tempered steel	850 - 1200	O, MQL
	1.6	Alloyed steel / high strength steel	1200 - 1600	O, MQL
Heat-treated Steel	1.7	Alloyed steel, Hardness HRC 44-55	-	O, MQL
	1.8	Alloyed steel, Hardness HRC 56-62	-	O, MQL
Stainless steel	2.1	Ferritic	< 850	E, O, MQL
	2.2	Austenitic	< 850	O, MQL
	2.3	Ferritic+austenitic, martensitic, precipitation hardening	< 1000	O, MQL
Cast iron	3.1	Grey cast iron	< 1000	O, MQL, S
	3.2	Nodular cast iron, malleable cast iron, tempered cast iron	< 1000	E, O, MQL
Aluminium Aluminium alloys	4.1	Pure aluminium	< 300	E, O, MQL
	4.2	Aluminium wrought and die cast alloys with Si<0,5% (long chipping)	< 500	E, O, MQL
	4.3	Aluminium wrought and die cast alloys with Si<10% (mean chipping)	< 500	E, O, MQL
	4.4	Aluminium die cast alloys with Si>10% (short chipping)	< 600	E, O, MQL
Copper Copper Alloys Brass Bronze	5.1	Pure copper	250 - 350	E, O, MQL
	5.2	Copper alloys (long chipping), soft brass	< 700	E, O, MQL
	5.3	Copper alloys (short chipping), hard brass	< 700	E, O, MQL
	5.4	High strength bronze	700 - 1500	E, O, MQL
Magnesium Magnesium alloys	6.1	Pure magnesium, magnesium alloys	120 - 300	E, O, MQL
	6.2	High strength magnesium alloys	240 - 400	E, O, MQL
Titanium Titanium alloys	7.1	Pure titanium	400 - 600	E, O, MQL
	7.2	Titanium alloys	600 - 1000	O, MQL
Nickel Nickel alloys	8.1	Pure nickel	400 - 600	E, O, MQL
	8.2	Nickel alloys	600 - 1000	O, MQL
Plastic materials	9.1	Thermoplastic		O, MQL
	9.2	Thermosetting		S

**For specific material examples see "Technical Information" section on page 217*

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General Catalogue

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Catalogue Presentation 14
Table of materials and applications 22

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MF ISO Metric fine thread - DIN 13 82
UNC Unified coarse thread - ASME B1.1 111
UNF Unified fine thread - ASME B1.1 119
8-UN Unified constant pitch series thread - ASME B1.1 127
G Gas Whitworth thread - EN ISO 228 129
BSW Whitworth thread - BS 84 138
Rc Conical gas thread (BSPT), taper 1:16 - BS 21 and DIN EN 10226-2 141
NPT National pipe thread, taper 1:16 - ASME/ANSI B1.20.1 142
NPTF Dryseal National pipe thread, taper 1:16 - ASME/ANSI B1.20.3 144

High Performance "P" Series Taps

M ISO Metric coarse thread - DIN 13 148
MF ISO Metric fine thread - DIN 13 156
G Gas Whitworth thread - EN ISO 228 159

Synchronous Tapping "S" Series Taps

M ISO Metric coarse thread - DIN 13 164
MF ISO Metric fine thread - DIN 13 168

Solid Carbide "H" Series Taps

M ISO Metric coarse thread - DIN 13 172
MF ISO Metric fine thread - DIN 13 176
Twist drill for hardened steel up to HRC 62 177

Discontinued Taps

M ISO Metric coarse thread - DIN 13 180
MF ISO Metric fine thread - DIN 13 189
UNC Unified coarse thread - ASME B1.1 193
UNF Unified fine thread - ASME B1.1 194
G Gas Whitworth thread - EN ISO 228 195

Dies "F"

M ISO Metric coarse thread - DIN 13 198
MF ISO Metric fine thread - DIN 13 199
UNC Unified coarse thread - ASME B1.1 201
UNF Unified fine thread - ASME B1.1 202
G Gas Whitworth thread - EN ISO 228 203
BSW Whitworth thread - BS 84 204
NPT National pipe thread, taper 1:16 - ASME/ANSI B1.20.1 205

Technical Information

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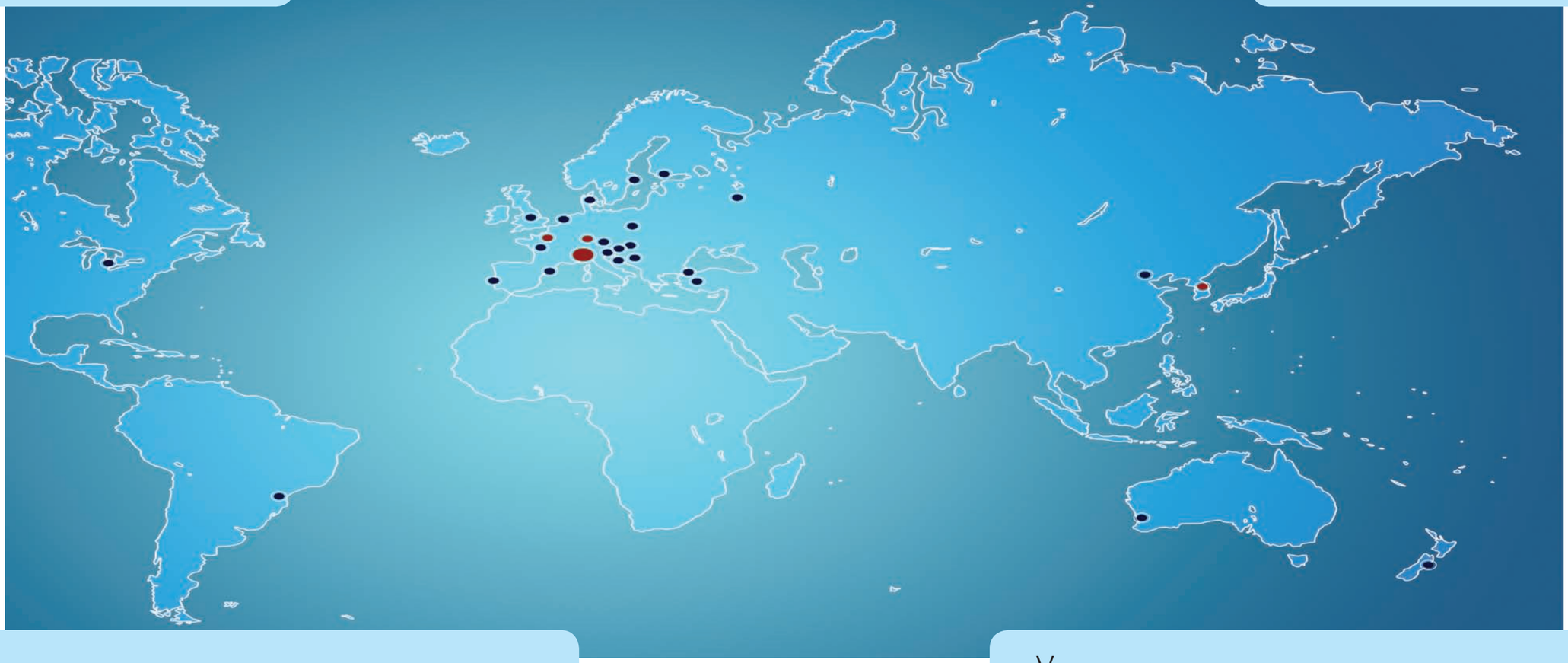
VERGNANO

HISTORY

For more than 60 years Fratelli Vergnano S.r.l. has designed and produced high quality precision cutting tools.
Founded in 1944 by Luigi Vergnano in Chieri near Turin (Italy), the company has always been owned by the Vergnano family.
From 2002 the company occupies a new and modern production facility which extends over a surface of 34000 square meters, about a third of which are dedicated to production and offices.
The present workforce is 125 persons strong.

COMMERCIAL NETWORK

CUSTOMERS



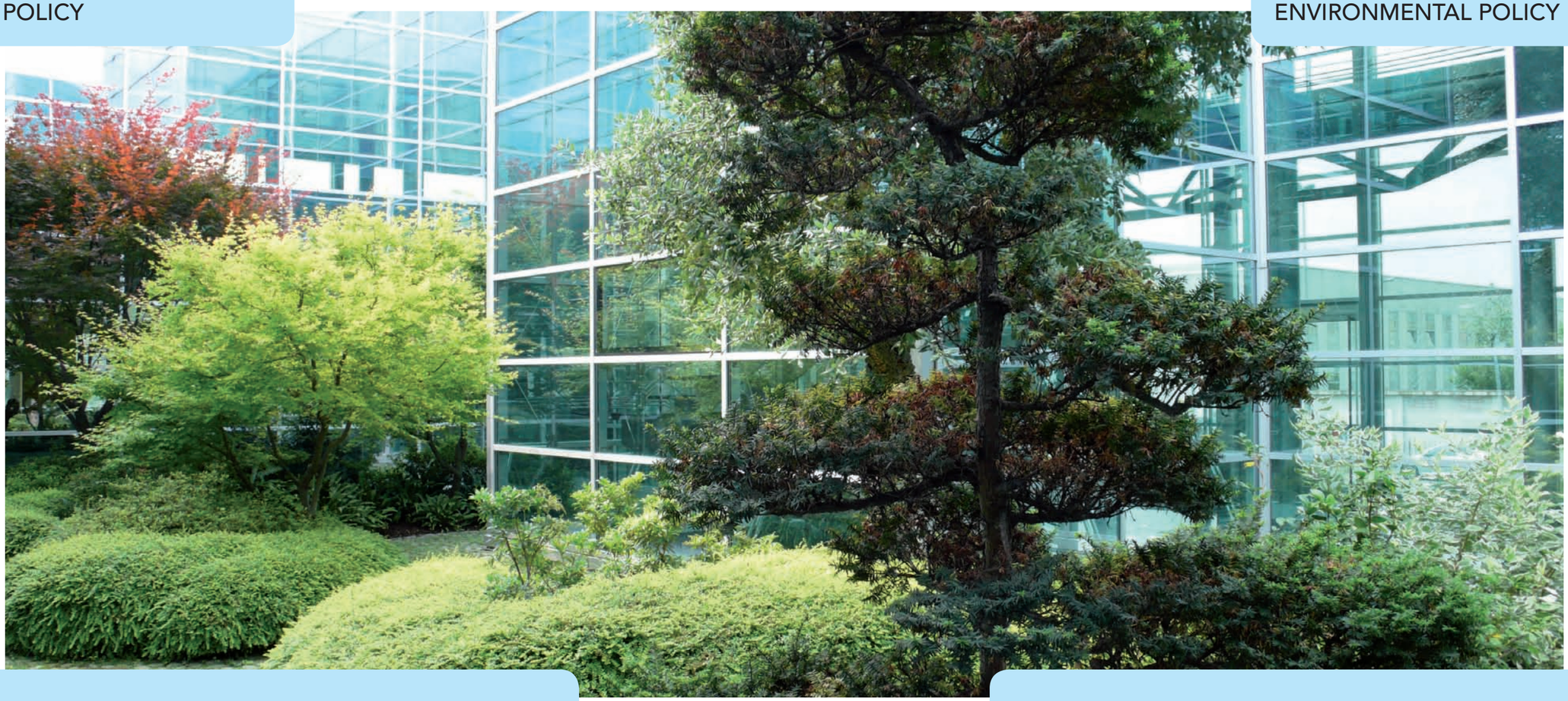
In the recent past, Vergnano has reinforced its presence on the Italian market and established itself internationally thanks to a capillary distribution network and the opening of commercial subsidiaries in Germany, France and South Korea. The German commercial subsidiary, Vergnano GmbH, was inaugurated as early as 1992. Vergnano-Vebro France was opened in 2007, closely followed by the South Korean commercial subsidiary, Vergnano Korea, in 2008.
Each subsidiary is equipped by an autonomous stock along with commercial and technical services.

Vergnano can boast among its customers the most important companies in different industrial branches: automobile, aerospace, fasteners, tool machines, transmissions and mechanical components.
Thanks to close collaboration with customers, Vergnano has constantly innovated its products to meet the demands of a continuously evolving market while keeping a firm foothold in the honoured tradition of the Vergnano brand.

VERGNANO

COMPANY POLICY

ENVIRONMENTAL POLICY



The declared objective of Vergnano is complete customer satisfaction.
The quality of Vergnano tools is the consequence of strict controls of processes and products, constant research in new technical solutions and continuous investments both in technology and human resources.
In order to enable and promote continuous improvement in all company aspects, Vergnano has a Certified Quality System according to ISO 9001.

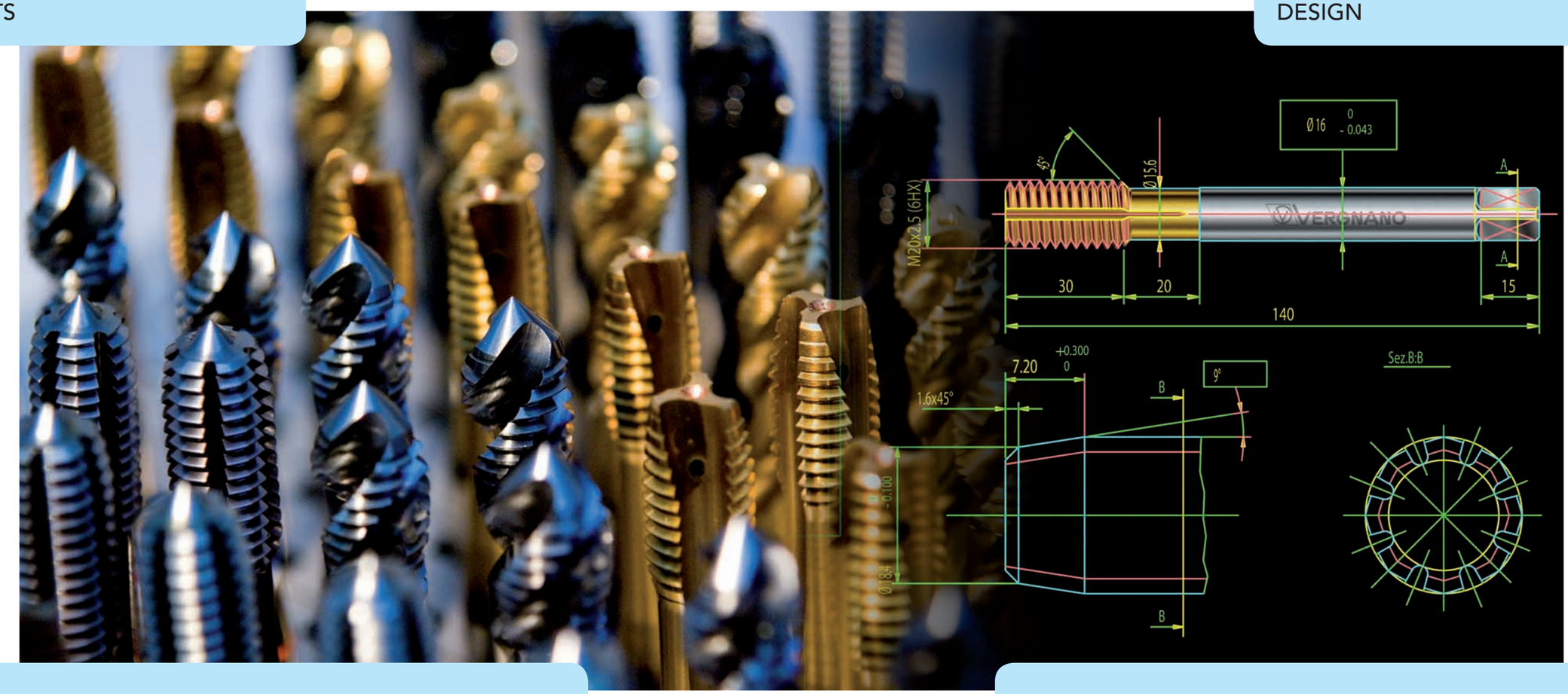
The protection of the environment and safety at work are basic principles of Vergnano company policy. For this reason, we commit ourselves to:

- respect laws and standards regarding environmental protection, safety and health at work;
- to consider environmental compatibility and safety at work in all products, processes and technologies, starting from the design phase;
- to promote products and processes compatible with the environment;
- to encourage our customers to use our products ecologically (working conditions, recycling and end-of-life disposal).

VERGNANO

PRODUCTS

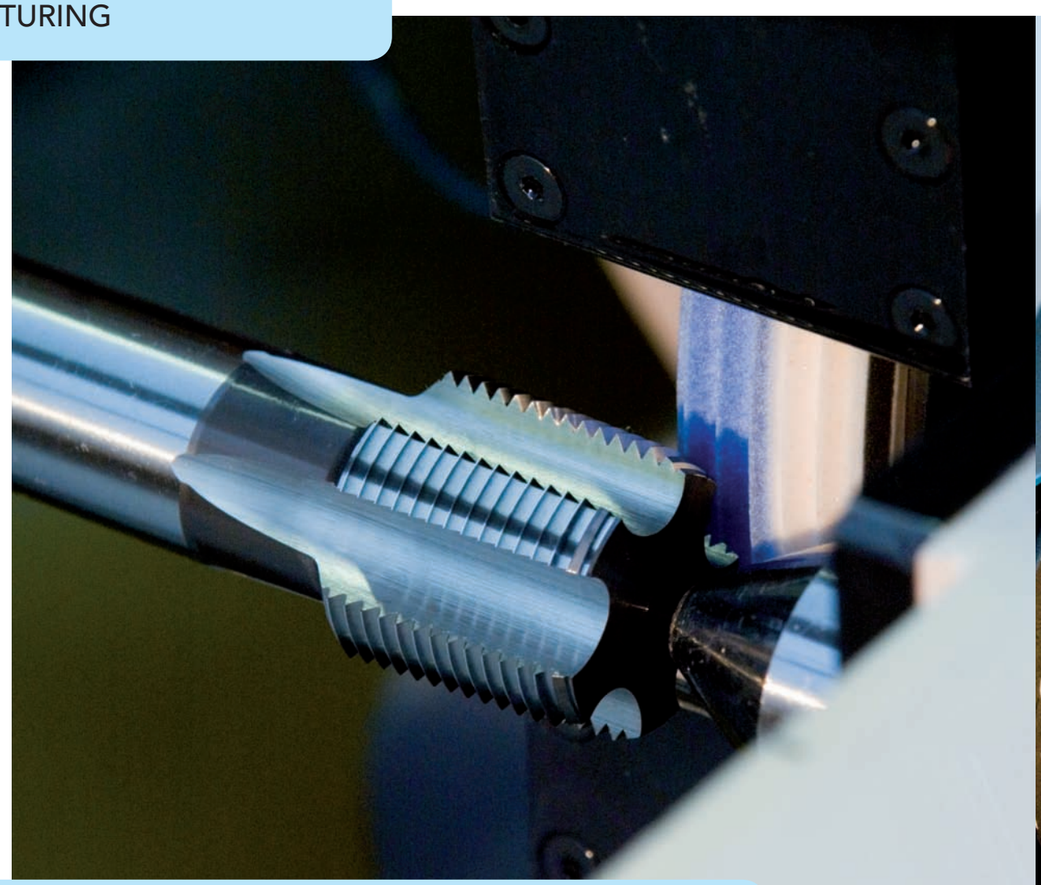
DESIGN



Vergnano designs, produces and commercialises high quality precision tools: threading taps, hobs, end mills, reamers and threading dies.
The tools are produced in high speed steel and solid carbide.
This catalogue includes threading taps and dies.

At Vergnano design is one of the key aspects in the manufacturing of high quality tools.
In order to offer a better and highly specialised service, the technical department is divided in three separate teams which are responsible for taps, hobs and end mills respectively.
In particular, Vergnano is capable of designing taps according to certified international standards or tailored special taps according to customer specification.
In addition, the technical department is capable of designing tools starting from the mechanical component which needs to be machined and to suggest appropriate machining parameters for specific applications.

MANUFACTURING



The production facility has been designed and built to meet modern ergonomic and environmental criteria.
All manufacturing phases are accomplished only in Vergnano starting from the steel bar to the final coating process of the finished tool. The finest quality high speed steels and solid carbide are bought from market-leading suppliers.
Machining and grinding operations are executed on modern numeric control machines which guarantee process reliability and repeatability.
PVD tool surface coatings are performed in the in-house "Oerlikon-Balzers" centre, used exclusively for Vergnano products.

VERGNANO

QUALITY CONTROL

A metallurgical laboratory, equipped with modern analytical instruments, permits quality control on every heat-treated steel batch.
Highly specialised workers perform in-line quality control and a final quality control checks every production batch. Traceability is guaranteed for all produced tools.
Continuous investments in new and modern metrological equipment enable the analysis of the complex geometrical characteristics of tools during manufacturing.

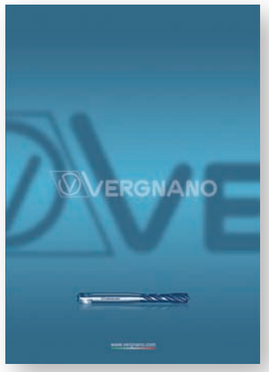
THE NEW CATALOGUE

Vergnano presents the new edition of the general catalogue for threading taps and dies, nr. 51.
The catalogue contains numerous novelties compared to the previous 2007 edition, nr. 42.

THE GRAPHICAL LAYOUT

This catalogue is presented with a new graphical layout which maintains the renown sobriety of the Vergnano style but is enriched by numerous new aspects.
Firstly, the new product identification through icons. These intuitive and coloured pictograms permit immediate and easy recognition of product characteristics. Each article is accompanied by a series of icons which describe its type, material, dimensional standard and application. A textual description has been kept in order to facilitate comprehension.
Additional technical information has been included in the article pages such as usable length L3 for reinforced shank taps, number of flutes and dimensional tolerances for overall length, shank diameter and square size.
A complete index of all icons can be found in the technical information section.

2002

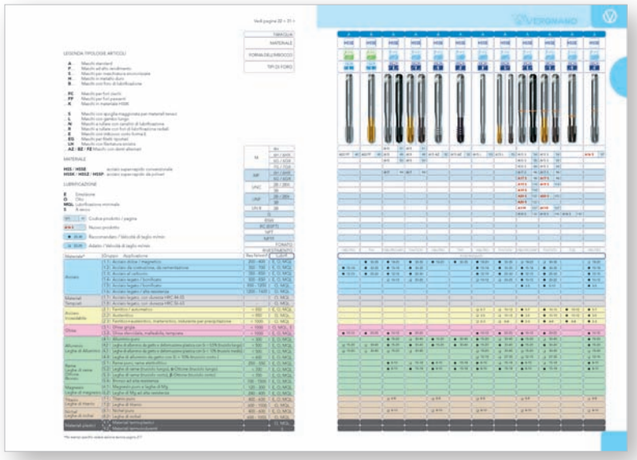


2007

2011

THE NEW MATERIAL GROUP (M.G.) TABLE

The material group table has been revised in terms of colour codes. Although no international standard yet exists which disciplines a colour-code system for machined materials, the new M.G. table follows the colour coding adopted by most tool manufacturers.
The nine material groups have been merged and revised in six main groups with different colours compared to those used by Vergnano in past catalogue editions.
In order to choose the ideal tap for each application, from page 22 of the catalogue it is possible to find the material and applications table containing the complete Vergnano product range with the recommended machining parameters.

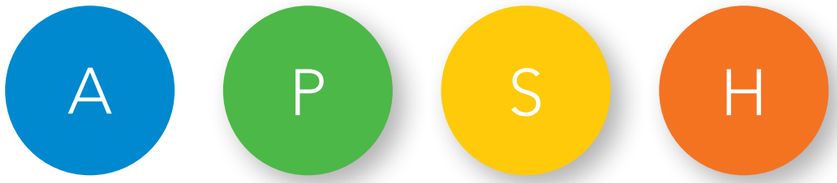


THE NEW ARTICLE SUBDIVISION

The product range has been enriched with numerous new articles. To facilitate consultation the products have been grouped in 4 series, characterised by different performance levels:

- Standard "A" Series taps
- High performance "P" Series taps
- Synchronous Tapping "S" Series taps
- Solid Carbide "H" Series taps

In turn, each series is subdivided in thread type.



TAP GEOMETRY

TAPS WITH STRAIGHT FLUTES FOR BLIND AND THROUGH HOLES

Taps with straight flutes are the most common type, for generic applications, since they can be used to thread both blind and through holes. Nevertheless, their main application is on materials with short or interrupted chips, as in cast iron or bronze, having low or medium resistance.
Taps for blind holes have a short chamfer, form C, in order to obtain a complete thread almost to the bottom of the hole.
Taps for through holes, where more room is available, have a longer chamfer, form A, which reduces the cutting force on each thread, increasing the tool life.

TAPS FOR THROUGH HOLES

TAPS WITH SPIRAL POINT
These taps, with straight flutes, have a spiral correction, which forms an angle with the tap axis along the whole length of the chamfer. The spiral correction causes the chips to be evacuated in the direction of the tap feed. These kinds of taps are suitable for tapping through holes in long chipping materials. The spiral point geometry permits high threading depths, up to 2,5 x d_1.

TAPS WITH LEFT HAND SPIRAL
The left hand spiral collects and pushes the chips in the feed direction. These kinds of taps are suitable for tapping through holes, up to 1,5 x d_1.
The same effect is obtained on taps with left hand thread but with a right hand spiral.

SPIRAL TAPS FOR BLIND HOLES

Spiral flutes convey the chips and push them in the opposite direction of the tap feed. Taps with this kind of geometry are suitable for tapping blind holes.
The higher the spiral flute angle, the higher the maximum threadable depth, owing to the larger flute volume available for chip formation and to the larger evacuation force acting on the chips.
Certain kinds of taps, with high spiral flute angle (≥ 40°), have a back tapering on the thread which improves chip evacuation and reduces the torque during the inversion of the tap. This feature permits high threadable depths, up to 3 x d_1.

FORMING TAPS

MAIN FEATURES AND ADVANTAGES OF FORMING TAPS:
- Thread obtained by plastic deformation instead of material removal
- No chip formation, therefore:
  - More reliable tapping process
  - Possibility to thread both blind and through holes with the same tap
  - High tapping depth also on blind holes
  - High tool life
- Higher cutting speed compared to cutting taps
- Better surface quality on thread obtained by forming
- More resistant tap geometry, with lower risk of breakage, thanks to larger core diameter
- Higher tensile strength on threaded part obtained by forming, thanks to material work-hardening during plastic deformation.

REQUIREMENTS:
- Larger and more precise drilled hole diameter compared to cutting taps
- Workpiece material with minimum elongation coefficient A_5 = 10% and maximum resistance =1200 N/mm^2
- Good lubrication
- Higher power requirement (100 - 150%) as compared to cutting taps.

NEW PRODUCTS

The constant improvement of machining conditions in terms of process control and reliability of machine tools as well as an increasing demand for higher productivity, have pushed Vergnano to broaden its high performance product range.
The following novelty products, presented in the present catalogue, are part of this strategy:

ORANGE RING TAPS

The range of Orange-Ring taps, for tough materials, has been notably extended. These articles are identified by an "S" suffix after the article number.
In detail, the new articles are:

SERIES	THREAD	ITEM	TYPE
A	M	A16 S	Straight flutes with spiral point
A	MF	A17 S 6G	Straight flutes with spiral point
A	UNC	A19 S 2B A19 S 3B	Straight flutes with spiral point
A	UNF	A20 S 2B A20 S 3B	Straight flutes with spiral point
A	UNF	A61 S	High spiral flutes
A	MF	A71 S 6G	High spiral flutes
A	M	A76 S	High spiral flutes

In addition, also the existing range of Orange Ring taps has been widened with additional sizes:

SERIES	THREAD	ITEM	TYPE
A	M	A15 S	Straight flutes with spiral point
A	MF	A17 S	Straight flutes with spiral point
A	G	A59 S	High spiral flutes
A	UNC	A60 S	High spiral flutes
A	M	A70 S	High spiral flutes
A	MF	A71 S	High spiral flutes

HIGH PERFORMANCE "P" SERIES TAPS

These taps are characterised by high performance and tool life to meet the most stringent demands in terms of productivity. The "P" series can be used on a wide range of materials both as cutting taps and as forming taps.

At a glance the main characteristics for cutting taps are:
- Top quality powder metallurgy high speed steel HSSZ and HSSP
- Advanced wear resistant PVD surface coatings
- Tailored geometries for improved chip evacuation and load reduction on the tool cutting edge.

The range of "P" series taps has been enriched with the new P29 and BP29, specifically designed for difficult-to-machine materials, namely die steels and super-alloys.
The "P" series has now been extended to Gas Whitworth threads with the new P18 spiral point for through holes and P59 high spiral flute for blind holes.

The P80 forming tap is manufactured in powder metallurgy high speed steel HSSK which confers high wear resistance. This steel is an excellent substrate for the special TiN coating, specifically designed for cold forming, used in all "P" series forming taps.

The new articles in the "P" series are:

SERIES	THREAD	ITEM	TYPE
P	MF	P17 6GX	Straight flutes with spiral point
P	G	P18	Straight flutes with spiral point
P	M	P29	Low spiral flutes
P	M	BP29	Low spiral flutes, through coolant
P	G	P59	High spiral flutes
P	M	P70 E TiH1	High spiral flutes, form E chamfer
P	MF	P71 6GX	High spiral flutes
P	M	P80 7GX	Forming
P	M	P80 N E	Forming, form E chamfer
P	M	P80 N E 6GX	Forming, form E chamfer

SYNCHRONOUS TAPPING "S" SERIES TAPS

"S" Series taps are designed exclusively for synchronous or rigid tapping with specific geometries for high speed machining.
The taps are manufactured in powder metallurgy high speed steel. On request, they can be delivered with a flat on the shank according to DIN 1835B to be used with traditional rigid tapping attachments. All "S" series shanks have an h6 tolerance, more precise compared to the h9 tolerance normally used on shanks, necessary for DIN 1835B flats but which also permits use with heat shrinking attachments.
The reduced thread length compared to standard taps permits tapping of deep holes. This reduction is possible since the tap is guided by the machine and not by the tap itself.
"S" Series taps can be used only for rigid tapping. If used with compensated tapping attachments, which allow the tap to free float, the aggressive cutting geometry can generate high axial forces. This may cause the tap to advance more than the requested pitch resulting in oversized threads.
"S" Series taps offer the advantage of higher productivity due to both higher cutting speeds and longer tool life.

This catalogue includes several new articles which complete the "S" Series range:

SERIES	THREAD	ITEM	TYPE
S	M	S15 TiH1	Straight flutes with spiral point
S	MF	S17	Straight flutes with spiral point
S	M	S43	Straight flutes
S	M	S43 E	Straight flutes, form E chamfer
S	M	BS43	Straight flutes, through coolant
S	M	BS43 E	Straight flutes, through coolant, form E chamfer
S	MF	S45	Straight flutes
S	M	S70 TiH1	High spiral flutes
S	MF	S71	High spiral flutes
S	M	S80 N	Forming
S	M	S80 N 6GX	Forming
S	M	BS80 N R	Forming, through coolant

SOLID CARBIDE "H" SERIES TAPS

The use of carbide tools has increased significantly in the last few years. Nowadays turning, drilling and milling operations are done, for the most part, with these kinds of tools. The development of carbide tools, with better wear resistance and higher toughness compared to HSS tools, has been pushed forward by the evolution of CNC machines and the request for higher cutting speeds.

More specifically, in certain tapping applications, the use of carbide is either indispensable, such as in heat-treated steels or very competitive, such as in abrasive materials.

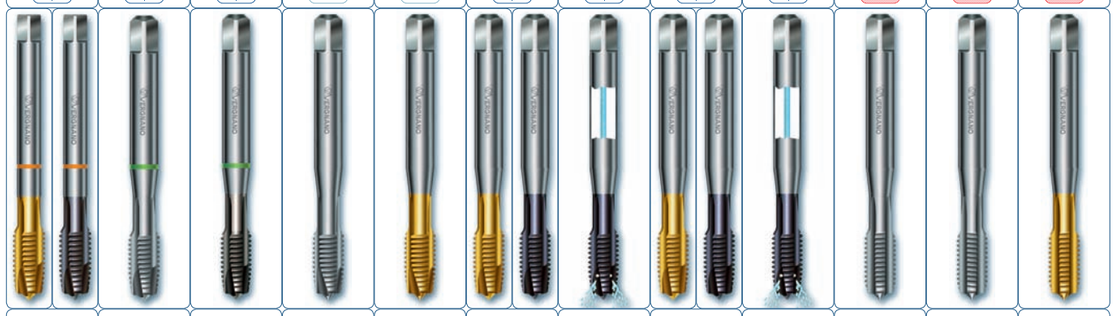
It is important to use carbide taps in combination with quality tapping attachments with micro-compensation and no axial or radial play.The best solution is the use of tapping attachments for synchronised tapping, such as the new Vergnano Sincro attachment series.

All "H" Series taps have h6 tolerance shanks, compared to h9 tolerance normally used for taps. This allows use with heat shrinking tapping attachments.
Furthermore, the taps are manufactured in grade K20 and K40 solid carbide with ultra fine structure which confers excellent hardness and toughness.

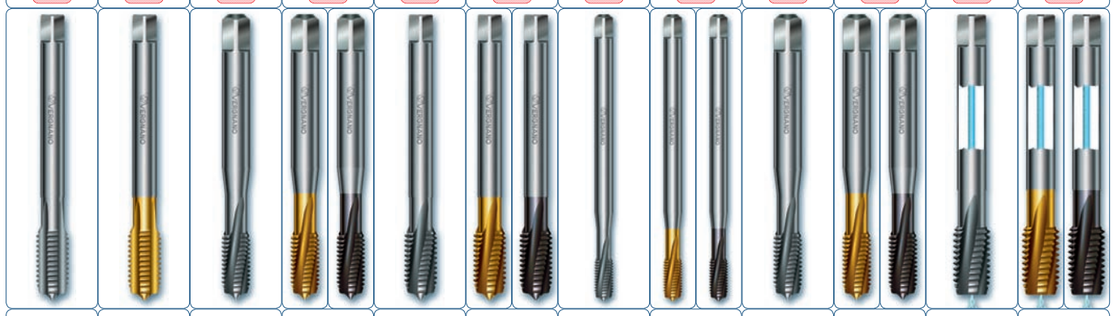
SERIES	THREAD	ITEM	TYPE
H	M	HB29	Low spiral flutes, through coolant
H	M	HB43	Straight flutes, through coolant
H	MF	HB45	Straight flutes, through coolant
H	M	HB80 N R	Forming, through coolant
H	M	H130	Straight flutes

A	A	A	A	A	A	A	A	A	A	A
HSS	HSS	HSSE	HSS	HSS	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)	—	A (5-6)	A (5-6)	A (5-6)
2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D				1,5 x D	1,5 x D	1,5 x D
A1 34	A1 LH 35	A100 36					A9 77	A21 FP 38	A21 FP LH 38	A21 FP 38
			A2 82	A2 LH 85			A10 106	A23 FP 89	A23 FP LH 89	A23 FP 89
A7 111								A27 FP 112		A27 FP 112
			A8 119					A28 FP 120		A28 FP 120
			A5 129					A26 FP 130		
A4 138								A24 FP 139		
					A6 141					
					A6 B 142	A6 BZ 143				
					A6 F 144	A6 FZ 145				
BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	TiN
HAND TAPS FOR BLIND AND THROUGH HOLES					TAPERED HOLES		NUT TAPS	FOR THROUGH HOLES		
●	●	●	●	●	❑ 12-15	● 12-15	● 18-20			● 30-35
●	●	●	●	●	● 10-15		● 15-18	● 15-18	● 15-18	● 30-35
●	●	●	●	●	● 10-12		● 12-15	● 12-15	● 12-15	● 25-30
●	●	●	●	●	● 8-10		❑ 10-12			
		●			❑ 3-5					
●	●	●	●	●	❑ 4-6	● 4-6				
❑	❑	●	❑	❑	❑ 2-3	● 2-3				
❑	❑	●	❑	❑	❑ 2-3	❑ 2-3				
❑	❑	●	❑	❑	❑ 10-12					
●	●	●	●	●	● 8-10			● 10-12	● 10-12	● 20-25
●	●	●	●	●		● 12-15				
●	●	●	●	●	❑ 12-15	● 12-15		❑ 15-20	❑ 15-20	❑ 30-40
●	●	●	●	●	❑ 12-15			❑ 15-20	❑ 15-20	❑ 30-40
❑	❑	●	●	●	❑ 10-12					
●	●	●	●	●	❑ 9-8	● 6-8				
●	●	●	●	●	❑ 6-8	● 6-8				
●	●	●	●	●	❑ 12-16					
❑	❑	●	❑	❑	❑ 3-5					
		●								
		●								
		●				❑ 5-8				
		●								
		●				❑ 6-8				
		❑								
		■								
		●								

A	A	A	A	A	A	A	A	A	A	A	A
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE
A (5-6)	A (5-6)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)
1,5 x D	1,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D
		A15 51	A15 51								
A22 FP 40	A22 FP 40	A15 49	A15 49	A15 AZ 52	A15 AZ 52	A15 L 53	A15 L 53	A15 S 54	A15 S 54		A16 S 57
		A15 50	A15 50					A15 S 55	A15 S 55		
								A15 S 56	A15 S 56		
		A17 94	A17 94					A17 S 96	A17 S 96		
								A17 S 98	A17 S 98		
								A19 S 114	A19 S 114		
								A19 S 114			
								A20 S 122	A20 S 122		
								A20 S 122			
								A119 127	A119 127		
								A18 S 132	A18 S 132	A18 S 132	
BRIGHT	TiN	BRIGHT/VAP	TiN/TiCN	BRIGHT	TiH1	BRIGHT	TiN/TiCN	BRIGHT/VAP	TiN/TiCN	TiX2	BRIGHT
FOR THROUGH HOLES											
	● 30-35	● 18-20	● 30-35	● 18-20	● 30-35	● 18-20	● 30-35	❑ 18-20	❑ 30-35		❑ 18-20
● 15-18	● 30-35	● 15-18	● 30-35			● 15-18	● 30-35	● 15-18	● 30-35		● 15-18
● 12-15	● 25-30	● 12-15	● 25-30			● 12-15	● 25-30	● 12-15	● 25-30		● 12-15
		❑ 10-12	❑ 20-25			❑ 10-12	❑ 20-25	● 10-12	● 20-25		● 10-12
								● 3-5	● 5-10		● 3-5
						❑ 5-7	❑ 10-12	● 5-7	● 10-12	● 10-12	● 5-7
						❑ 3-5	❑ 10-12	● 3-5	● 10-12	● 10-12	● 3-5
						❑ 2-3	❑ 6-8	● 2-3	● 6-8	● 6-8	● 2-3
● 10-12	● 20-25	● 10-12	● 20-25			● 10-12	● 20-25	● 10-12	● 20-25		● 10-12
		● 15-20	❑ 30-40	● 15-20	● 30-40	● 15-20	❑ 30-40	● 15-20	❑ 30-40		● 15-20
❑ 15-20	❑ 30-40	● 15-20	● 30-40	● 15-20	● 30-40	● 15-20	● 30-40	● 15-20	● 30-40		● 15-20
❑ 15-20	❑ 30-40	❑ 15-20	❑ 30-40			❑ 15-20	❑ 30-40	❑ 15-20	❑ 30-40		❑ 15-20
						❑ 12-15	❑ 27-30	❑ 12-15	❑ 27-30		❑ 12-15
		● 8-10	❑ 15-18	● 8-10	● 15-18	● 8-10	❑ 15-18	● 8-10	❑ 15-18		● 8-10
		● 8-10	● 15-18	● 8-10	● 15-18	● 8-10	● 15-18	● 8-10	● 15-18		● 8-10
		❑ 6-8		❑ 6-8		❑ 6-8		❑ 6-8			❑ 6-8
		❑ 8-10		❑ 8-10		❑ 8-10		❑ 8-10			❑ 8-10



A		A		A		A		A		A		A		P		P		S		S		A	
HSSE		HSSE		HSSE		HSSE		HSSE		HSSP		HSSP		HSSK		HSSK		HSSE		HSSE		HSSE	
B (4-5)		B (4-5)		B (4-5)		B (4-5)		B (4-5)		B (4-5)		B (4-5)		B (4-5)		B (4-5)		C (2-3)		C (2-3)		C (2-3)	
2,5 x D		2,5 x D		2,5 x D		1 x D		1 x D		2,5 x D		2,5 x D		2,5 x D		2,5 x D		1,5 x D		1,5 x D		1,5 x D	
A16 S	57	A150	58	A150	58	A51	59	A51	59	P15	148	BP15	148	S15	165	BS15	165	A21 FC	37	A21 FC LH	37	A21 FC	37
										P15	148												
										P17	156			S17	169			A23 FC	86	A23 FC LH	86	A23 FC	86
										P17	156												
																		A27 FC	112			A27 FC	112
																		A28 FC	120			A28 FC	120
										P18	159							A26 FC	130				
																		A24 FC	139				
												IKZ-R				IKZ-R							
TiN/TiCN		BRIGHT		TiX2		BRIGHT		TiN		TiN/TiH1		TiH1		TiN/TiH1		TiH1		BRIGHT		BRIGHT		TiN	
FOR THROUGH HOLES																		FOR BLIND HOLES					
❑	30-35					❑	18-20	●	30-35					●	40-45	●	40-45					●	25-30
●	30-35					●	15-18	●	30-35	❑	30-35	❑	30-35	●	40-45	●	40-45	●	10-15	●	10-15	●	25-30
●	25-30					●	12-15	●	25-30	●	25-30	●	25-30	●	35-40	●	35-40	●	10-12	●	10-12	●	20-25
●	20-25									●	20-25	●	20-25	●	25-30	●	25-30						
●	5-10									●	5-10	●	5-10	●	10-15	●	10-15						
										❑	5-8	❑	5-8										
●	10-12	●	5-7	●	10-12	❑	5-7	❑	10-12	●	10-12	●	10-12	●	16-18	●	16-18						
●	10-12	●	3-5	●	10-12	❑	3-5	❑	10-12	●	10-12	●	10-12	●	12-15	●	12-15						
●	6-8	●	2-3	●	6-8					●	6-8	●	6-8	●	10-12	●	10-12						
●	20-25									●	20-25	●	20-25	●	25-30	●	25-30	●	8-10	●	8-10	●	15-20
❑	30-40					❑	15-20	●	30-40					●	45-50	●	45-50						
●	30-40									●	30-40	●	30-40	●	45-50	●	45-50	❑	12-15	❑	12-15	❑	25-30
❑	30-40									❑	30-40	❑	30-40	●	45-50	●	45-50	❑	12-15	❑	12-15	❑	25-30
❑	27-30																						
❑	15-18					❑	8-10	●	15-18					●	18-20	●	18-20						
●	15-18					●	8-10	●	15-18	●	15-18	●	15-18	●	18-20	●	18-20						
										❑	25-30	❑	25-30	●	35-40	●	35-40						
														●	40-45	●	40-45						
										❑	20-25	❑	20-25	●	30-35	●	30-35						
		●	8-10	●	12-15									●	15-20	●	15-20						
										❑	6-8	❑	6-8	❑	10-15	❑	10-15						
										●	12-15	●	12-15										



A		A		A		A		A		A		A		A		A		A		A		A	
HSSE		HSSE		HSSE		HSSE		HSSE		HSSE		HSSE		HSSE		HSSE		HSSK		HSSK		HSSK	
C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)		C (2-3)	
1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D		1,5 x D	
A22 FC	39	A22 FC	39	A29	60	A29	60	A29 376	63	A29 376	63	A29 L	62	A29 L	62	A29 K	64	A29 K	64				
				A29	61	A29	61																
				A30	99	A30	99									A30 K	101	A30 K	101	B30 K	102	B30 K	102
				A33	115	A33	115																
				A33	115																		
				A34	123	A34	123																
				A34	123																		
				A32	133	A32	133																
				A31	140	A31	140																
																						IKZ		IKZ	
BRIGHT		TiN		BRIGHT		TiN/TiCN		BRIGHT		TiN/TiCN		BRIGHT		TiN/TiCN		BRIGHT		TiN/TiCN		BRIGHT		TiN/TiCN	
FOR BLIND HOLES																							
		●	25-30	●	12-15	●	25-30	●	12-15	●	25-30	●	12-15	●	25-30	●	12-15	●	25-30	●	12-15	●	25-30
●	10-15	●	25-30	●	10-15	●	25-30	●	10-15	●	25-30	●	10-15	●	25-30	●	10-15	●	25-30	●	10-15	●	25-30
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				❑	3-5	●	5-10	❑	3-5	●	5-10	❑	3-5	●	5-10	●	3-5	●	5-10	●	3-5	●	5-10
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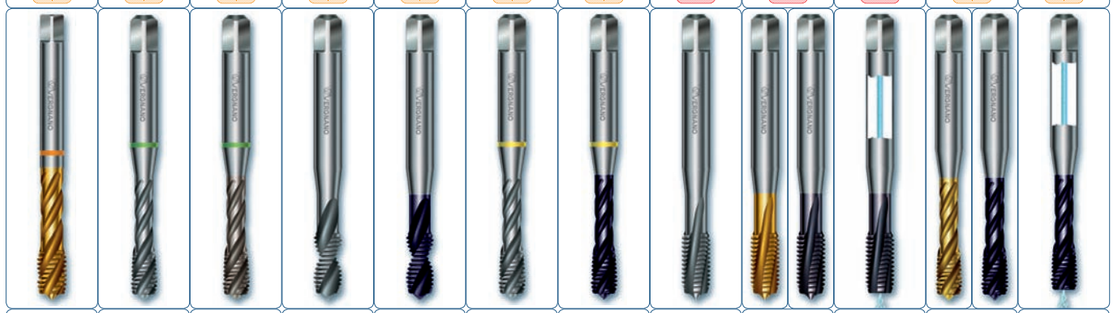
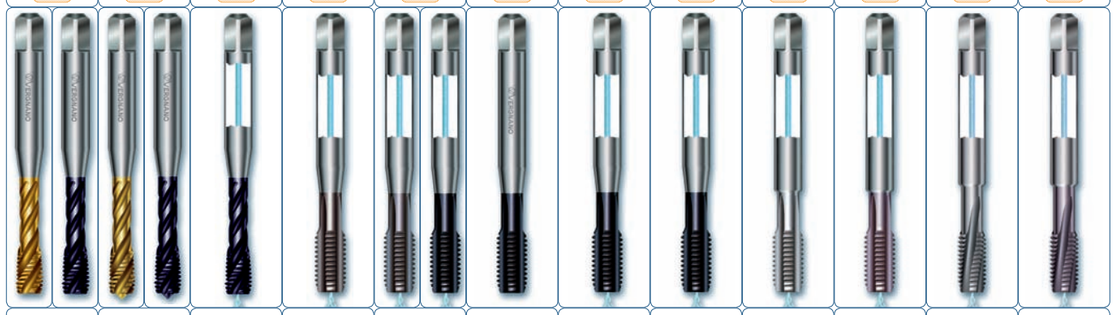
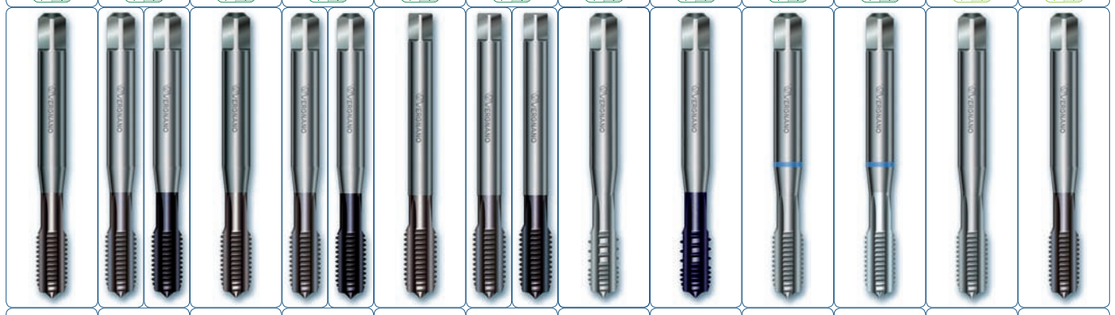
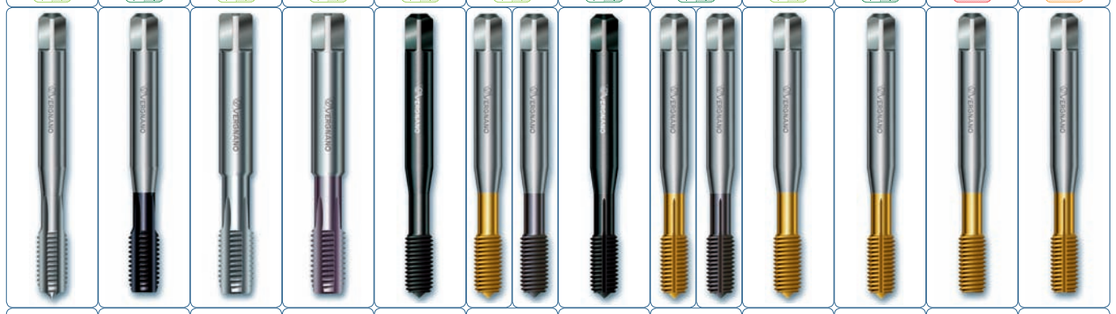
❑	12-15	❑	25-30	●	12-15	●	25-30	●	12-15	●	25-30	●	12-15	●	25-30	●	12-15	●	25-30	●	12-15	●	25-30
❑	12-15	❑	25-30	❑	12-15	❑	25-30	❑	12-15	❑	25-30	❑	12-15	❑	25-30	❑	12-15	❑	25-30	❑	12-15	❑	25-30
				●	6-8	❑	12-15	●	6-8	❑	12-15	●	6-8	❑	12-15	●	6-8	❑	12-15	●	6-8	❑	12-15
				●	6-8	●	12-15	●	6-8	●	12-15	●	6-8	●	12-15	●	6-8	●	12-15	●	6-8	●	12-15
				❑	5-8			❑	5-8			❑	5-8			❑	5-8						
				❑	6-8			❑	6-8			❑	6-8			●	6-8						

A	A	A	A	A	A	A	A	A	A	A	A
HSSE	HSSE	HSSE	HSSE	HSSK	HSSK	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)	C (2-3)	C (2-3)	E (1,5-2)	E (1,5-2)	C (2-3)
2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D
A70 67	A70 67										
A70 65	A70 65	A70 L 68	A70 L 68	A70 K 69	A70 K 69	A70 S 70	A70 S 70		A70 SE 72	A70 SE 72	**A76 S** 73
A70 66	A70 66					A70 S 71	A70 S 71				
						A70 S 71	A70 S 71				
A71 103	A71 103					A71 S 104	A71 S 104				
						A71 S 105	**A71 S** 105				
A60 116	A60 116					A60 S 117	A60 S 117	A60 S 117			
A61 124	A61 124					**A61 S** 125	**A61 S** 125				
						A160 128	**A160** 128				
A59 134	A59 134					A59 S 135	A59 S 135	A59 S 136			
BRIGHT/VAP	TiN/TiCN	BRIGHT	TiN/TiCN	BRIGHT	TiN/TiCN	BRIGHT/VAP	TiN/TiCN	TiX2	BRIGHT	TiN/TiCN	BRIGHT
FOR BLIND HOLES											
● 12-15	● 25-30	● 12-15	● 25-30	● 12-15	● 25-30						
● 10-15	● 25-30	● 10-15	● 25-30	● 10-15	● 25-30						
● 10-12	● 20-25	● 10-12	● 20-25	● 10-12	● 20-25						
❑ 8-10	❑ 15-20	❑ 8-10	❑ 15-20	● 8-10	● 15-20	● 8-10	● 15-20		● 8-10	● 15-20	● 8-10
						● 3-5	● 5-10		● 3-5	● 5-10	● 3-5
						❑ 4-6	❑ 8-10	● 8-10	❑ 4-6	❑ 8-10	❑ 4-6
						❑ 2-3	❑ 8-10	● 8-10	❑ 2-3	❑ 8-10	❑ 2-3
						● 2-3	● 5-7	● 5-7	● 2-3	● 5-7	● 2-3
● 8-10	● 15-20	● 8-10	● 15-20	● 8-10	● 15-20	● 8-10	● 15-20		● 8-10	● 15-20	● 8-10
● 12-15	❑ 25-30	● 12-15	❑ 25-30	● 12-15	❑ 25-30						
● 12-15	● 25-30	● 12-15	● 25-30	● 12-15	● 25-30						
❑ 12-15	❑ 25-30	❑ 12-15	❑ 25-30	❑ 12-15	❑ 25-30						
● 6-8	❑ 12-15	● 6-8	❑ 12-15	● 6-8	❑ 12-15						
● 6-8	● 12-15	● 6-8	● 12-15	● 6-8	● 12-15						
● 12-18	❑ 20-25	● 12-18	❑ 20-25	● 12-18	❑ 20-25						
						❑ 5-8			❑ 5-8		❑ 5-8
						❑ 6-8			❑ 6-8		❑ 6-8

A	A	A	A	A	A	A	P	P	P	P	P
HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSP	HSSP	HSSP	HSSZ	HSSZ
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	1,5 x D	1,5 x D	1,5 x D	2,5 x D	2,5 x D
											
A76 S 73	A170 74	A170 74	A62 75	A62 75	A72 76	A72 76	**P29** 149	**P29** 149	**BP29** 149	P70 150	BP70 150
										P70 150	
										P71 157	
										P71 157	
			A65 118								
			A66 126								
										P59 160	
									IKZ		IKZ
TiN	BRIGHT	TiX2	BRIGHT	TiH1	BRIGHT	TiH1	BRIGHT	TiN/TiH1	TiH1	TiN/TiH1	TiH1
FOR BLIND HOLES											
					● 12-15	● 25-30					
										❑ 25-30	❑ 25-30
										● 20-25	● 20-25
● 15-20							● 8-10	● 15-20	● 15-20	● 15-20	● 15-20
● 5-10							● 3-5	● 5-10	● 5-10	● 5-10	● 5-10
							● 2-3	● 5-8	● 5-8		
❑ 8-10	● 4-6	● 8-10								● 8-10	● 8-10
❑ 8-10	● 2-3	● 8-10								● 8-10	● 8-10
● 5-7	● 2-3	● 5-7					● 2-3	● 5-7	● 5-7	● 5-7	● 5-7
● 15-20							● 8-10	● 15-20	● 15-20	● 15-20	● 15-20
			● 12-15	● 25-30	● 12-15	● 25-30					
			● 12-15	● 25-30	● 12-15	● 25-30		● 25-30	● 25-30	● 25-30	● 25-30
					❑ 12-15	❑ 25-30				❑ 25-30	❑ 25-30
			● 6-8	● 12-15	❑ 6-8	❑ 12-15					
			● 6-8	● 12-15	❑ 6-8	❑ 12-15	● 6-8	● 12-15	● 12-15	● 12-15	● 12-15
							● 12-16			❑ 20-25	❑ 20-25
							● 3-5				
			● 12-18	● 20-25							
										❑ 15-20	❑ 15-20
	❑ 5-8										
							● 2-3				
			❑ 6-8	❑ 10-12							
							● 3-5	● 4-6	● 4-6	❑ 4-6	❑ 4-6
	● 6-8	● 10-12									

P	S	S	A	A	S	S	S	H	H	H	H
HSSZ	HSSK	HSSK	HSSK	HSSK	HSSK	HSSK	HSSK	HM	HM	HM	HM
E (1,5-2)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	E (1,5-2)	C (2-3)	E (1,5-2)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D
											
P70 E 151	S70 166	BS70 166	B43 K 43	B43 K 43	S43 E 164	BS43 164	BS43 E 164	HB43 172	HB43 172	HB29 173	HB29 173
	S71 170							HB45 176	HB45 176		
		IKZ	IKZ	IKZ		IKZ	IKZ	IKZ	IKZ	IKZ	IKZ
TiN/TiH1	TiN/TiH1	TiH1	NITRIDED	TiCN/ACE	ACE	ACE	ACE	BRIGHT	TiAlN	BRIGHT	TiCN
FOR BLIND HOLES											
❑ 25-30	● 35-40	● 35-40									
● 20-25	● 25-30	● 25-30									
● 15-20	● 20-25	● 20-25									
● 5-10	● 10-15	● 10-15									
● 8-10	● 12-15	● 12-15									
● 8-10	● 10-12	● 10-12									
● 5-7	● 8-10	● 8-10									
			● 12-15	● 40-45	● 60-65	● 60-65	● 60-65	● 15-40	● 40-80	❑ 15-40	❑ 40-80
● 15-20	● 20-25	● 20-25						● 10-20	● 15-40	❑ 10-20	❑ 15-40
										● 15-30	● 25-50
● 25-30	● 35-40	● 35-40								● 15-30	● 25-50
❑ 25-30	● 35-40	● 35-40	❑ 15-20	❑ 30-40	❑ 45-50	❑ 45-50	❑ 45-50	● 20-30	● 30-50	● 20-30	● 30-50
			● 12-15	● 27-30	● 35-40	● 35-40	● 35-40	● 15-20	● 25-40	● 15-20	● 25-40
● 12-15	● 15-18	● 15-18									
❑ 20-25	● 30-35	● 30-35	● 18-20	● 25-30	● 35-40	● 35-40	● 35-40	❑ 20-25	❑ 30-40	● 20-25	● 30-40
❑ 15-20	● 25-30	● 25-30									
❑ 4-6	❑ 8-12	❑ 8-12									
										● 5-10	● 10-15
								■ 10-12	■ 15-20		

A	A	A	A	A	A	A	A	A	A	A	A
HSSE	HSSE	HSSK	HSSK	HSSE	HSSE	HSSE	HSSE	HSSK	HSSK	HSSE	HSSE
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	A (5-6)	A (5-6)
2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D	1,5 x D	1,5 x D
											
A43 41	A43 41	A43 K 42	A43 K 42	A44 44	A44 44	A67 45	A67 45	A110 46	A110 46	A130 47	A130 47
A45 92	A45 92	A45 K 93	A45 K 93								
A49 113	A49 113										
A50 121	A50 121										
A48 131	A48 131										
NITRIDED	TiCN/ACE	NITRIDED	TiCN/ACE	NITRIDED	TiCN/ACE	BRIGHT	TiH1	BRIGHT	CrN	BRIGHT	TICN
FOR BLIND AND THROUGH HOLES											
						● 18-20	● 30-35				
										● 2-3	● 5-8
● 12-15	● 40-45	● 12-15	● 40-45	● 12-15	● 40-45						
						● 15-20	● 30-40				
						● 15-20	● 30-40				
❑ 15-20	❑ 30-40	❑ 15-20	❑ 30-40	❑ 15-20	❑ 30-40						
● 12-15	● 27-30	● 12-15	● 27-30	● 12-15	● 27-30						
						● 8-10	● 15-18				
						● 8-10	● 15-18				
● 18-20	● 25-30	● 18-20	● 25-30	● 18-20	● 25-30						
										● 3-5	● 8-10
								● 6-8	● 10-12		
								● 3-5	● 6-8		

A	S	H	H	A	A	A	A	P	P	P	P
HSSE	HSSK	HM	HM	HSSE	HSSE	HSSE	HSSE	HSSK	HSSK	HSSK	HSSK
C (2-3)	C (2-3)	D (4-5)	D (4-5)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	E (1,5-2)	E (1,5-2)
1,5 x D	2,5 x D	1,5 x D	1,5 x D	1,5 x D	1,5 x D	2,5 x D	2,5 x D	1,5 x D	2,5 x D	1,5 x D	2,5 x D
											
A190-EG 48	S43 164	H130 174	H130 174	A80 78	A80 78	A80 N 80	A80 N 80	P80 152	P80 N 153	P80 E 154	**P80 N E** 154
				A80 79	A80 79	A80 N 81	A80 N 81	P80 152	P80 N 153		**P80 N E** 154
								P80 152	P80 N 153		
	S45 168			A81 107	A81 107	A81 N 109	A81 N 109	P81 158	P81 N 158		
				A81 108	A81 108	A81 N 110	A81 N 110	P81 158	P81 N 158		
						A82 N 137	A82 N 137		P82 N 161		
BRIGHT	ACE	BRIGHT	TiCN	VAP	TiN/TiCN	VAP	TiN/TiCN	TiN	TiN	TiN	TiN
FOR BLIND AND THROUGH HOLES				FORMING TAPS							
					● 35-40		● 35-40	● 35-40	● 35-40	● 35-40	● 35-40
● 15-18				● 18-22	● 35-40	● 18-22	● 35-40	● 35-40	● 35-40	● 35-40	● 35-40
● 12-15				● 15-18	● 30-35	● 15-18	● 30-35	● 30-35	● 30-35	● 30-35	● 30-35
								● 25-30	● 25-30	● 25-30	● 25-30
								● 10-15	● 10-15	● 10-15	● 10-15
		❑ 2-5	❑ 5-10								
		● 2-3	● 3-6								
		● 1-2	● 2-4								
					● 10-15		● 10-15	● 10-15	● 10-15	● 10-15	● 10-15
					● 10-15		● 10-15	● 10-15	● 10-15	● 10-15	● 10-15
								❑ 8-10	❑ 8-10	❑ 8-10	❑ 8-10
	● 60-65										
● 10-12											
					● 40-45		● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
❑ 15-20					● 40-45		● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
❑ 15-20	❑ 45-50				● 40-45		● 40-45	● 40-45	● 40-45	● 40-45	● 40-45
	● 35-40										
								❑ 15-20	❑ 15-20	❑ 15-20	❑ 15-20
					● 15-20		● 15-20	● 15-20	● 15-20	● 15-20	● 15-20
	● 35-40										
								❑ 15-20	❑ 15-20	❑ 15-20	❑ 15-20

P	P	S	S	H
HSSK	HSSK	HSSK	HSSK	HM
C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)
2,5 x D	2,5 x D	2,5 x D	2,5 x D	2,5 x D
BP80 N 155	BP80 NR 155	S80 N 167	BS80 NR 167	HB80 NR 175
		S80 N 167		
IKZ	IKZ-R		IKZ-R	IKZ-R
TiN	TiN	TiN	TiN	TiCN
FORMING TAPS				
● 35-40	● 35-40	● 45-50	● 45-50	● 35-50
● 35-40	● 35-40	● 45-50	● 45-50	● 35-50
● 30-35	● 30-35	● 40-45	● 40-45	● 30-45
● 25-30	● 25-30	● 30-35	● 30-35	● 25-40
● 10-15	● 10-15	● 15-20	● 15-20	● 15-30
● 10-15	● 10-15	● 15-20	● 15-20	● 10-25
● 10-15	● 10-15	● 15-20	● 15-20	● 10-25
❑ 8-10	❑ 8-10	❑ 10-15	❑ 10-15	
● 40-45	● 40-45	● 55-60	● 55-60	● 40-50
● 40-45	● 40-45	● 55-60	● 55-60	● 40-50
● 40-45	● 40-45	● 55-60	● 55-60	● 40-50
❑ 15-20	❑ 15-20	❑ 20-25	❑ 20-25	● 15-40
● 15-20	● 15-20	● 20-25	● 20-25	● 15-30
❑ 15-20	❑ 15-20	❑ 25-30	❑ 25-30	❑ 15-20

H
HM
DIN 6535HA
3 x D
HP900 177
TiAlN
* Vc-f
● 40-f1
● 30-f2
● 30-f2

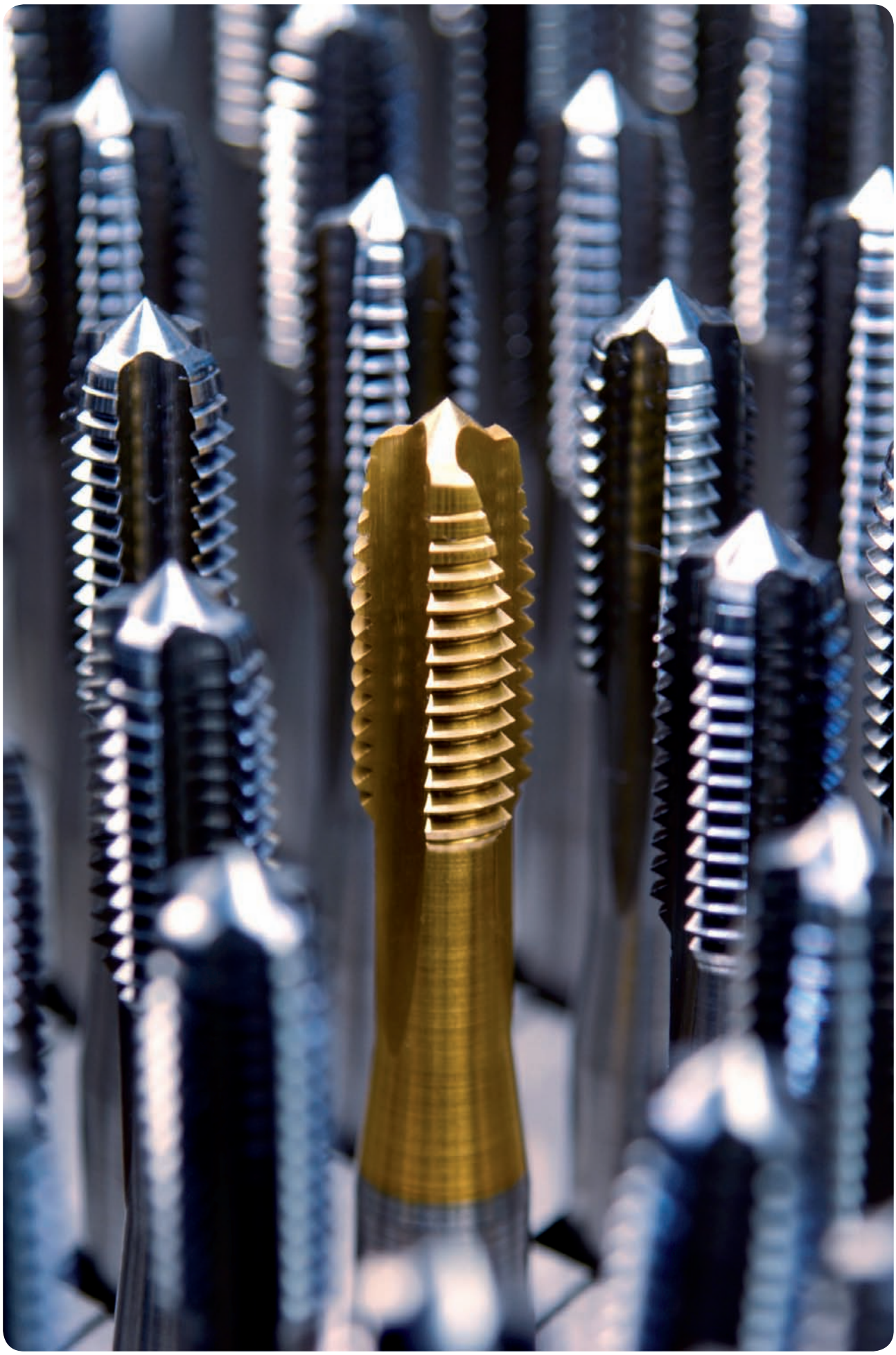
Cutting parameters for twist drill HP900

$$N[rev/min] = \frac{\text{Cutting speed [m/min] x 1000}}{3{,}14 \times d_1 \text{ [mm]}}$$

f [mm/min] = f [mm/rev] x N [rev/min]

*Feed rate for drill HP900 [mm/rev]

Diameter	f1	f2
2,6	0,032	0,025
3,4	0,040	0,032
4,3	0,050	0,040
5,1	0,050	0,040
6,9	0,070	0,055
8,6	0,090	0,070
10,4	0,110	0,090



VERGNANO

Standard "A" Series Taps

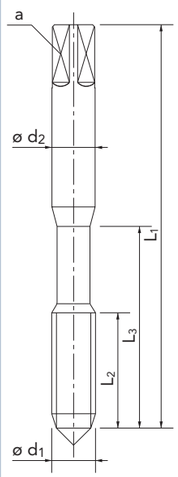
This section includes the vast range of taps for general applications. These taps are manufactured in quality high speed steels and coatings, for use in most types of applications.
"A" Series are both hand and machine taps, cutting and forming and are available in most types of threads and tolerances.

2,5 x D | DIN 13 | HSS

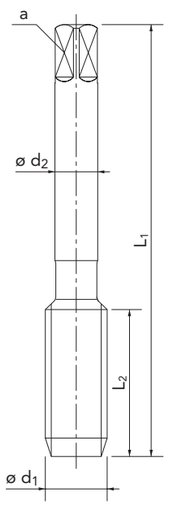
VERGNANO

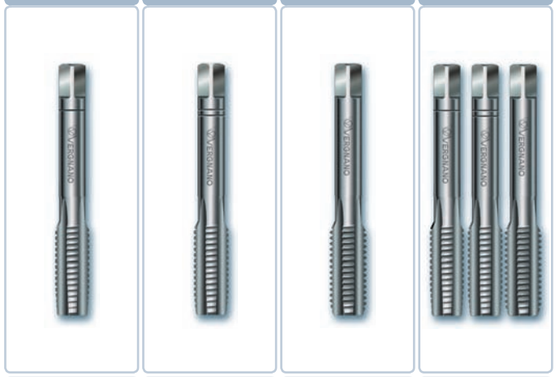
HAND TAPS in sets of three pieces
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 352 ≤ M6



DIN 352 ≥ M7



Tool code	A1 ROUGHING	A1 SECOND	A1 FINISHING	A1 SET
				
Tolerance	—	—	ISO2 6H	ISO2 6H
Chamfer form	A (5-6)	D (4-5)	C (2-3)	C (2-3)
Application range	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•
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	•	•	•	•

• = standard execution

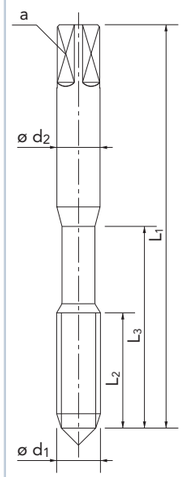
See price list on page 4 4 4 4

2,5 x D | DIN 13 | HSS | LH

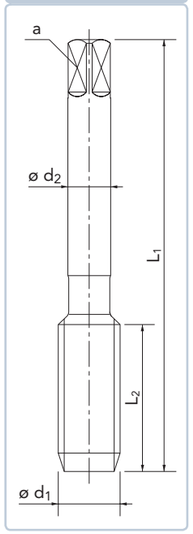
VERGNANO

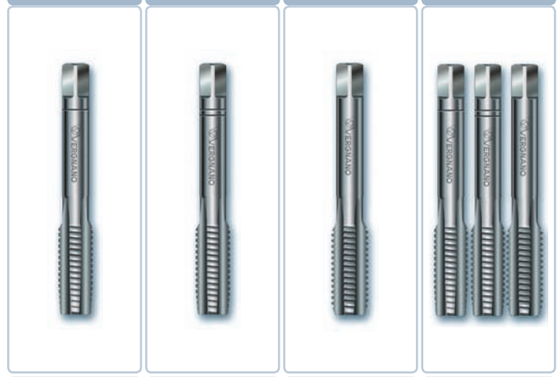
HAND TAPS in sets of three pieces
For blind and through holes
ISO Metric coarse left hand thread - DIN 13

DIN 352 ≤ M6



DIN 352 ≥ M8



Tool code	A1 LH ROUGHING	A1 LH SECOND	A1 LH FINISHING	A1 LH SET
				
Tolerance	—	—	ISO2 6H	ISO2 6H
Chamfer form	A (5-6)	D (4-5)	C (2-3)	C (2-3)
Application range	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	LH	LH	LH	LH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•

• = standard execution

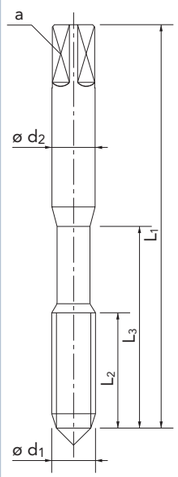
See price list on page 4 4 4 4

2,5 x D | DIN 13 | HSSE

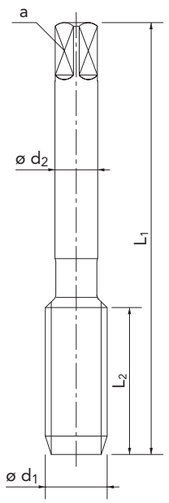
VERGNANO

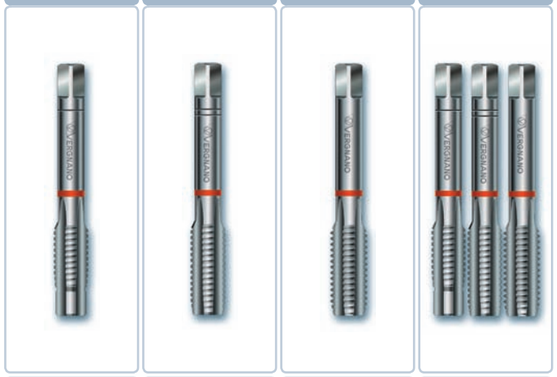
HAND TAPS in sets of three pieces - Red ring
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 352 ≤ M6



DIN 352 ≥ M8



Tool code	A100 ROUGHING	A100 SECOND	A100 FINISHING	A100 SET
				
Tolerance	—	—	ISO2 6H	ISO2 6H
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.1-5 2.1-3 3.1-2 4.1-4 5.1-4 6.1-2 7.1-2 8.1 9.2	1.1-5 2.1-3 3.1-2 4.1-4 5.1-4 6.1-2 7.1-2 8.1 9.2	1.1-5 2.1-3 3.1-2 4.1-4 5.1-4 6.1-2 7.1-2 8.1 9.2	1.1-5 2.1-3 3.1-2 4.1-4 5.1-4 6.1-2 7.1-2 8.1 9.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

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	8	13,5	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	•	•	•	•

• = standard execution

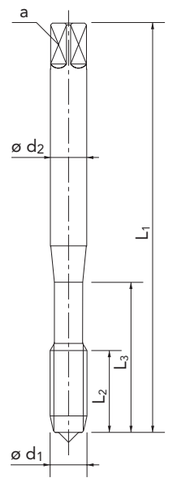
See price list on page 4 4 4 4

1,5 x D | DIN 13 | HSSE

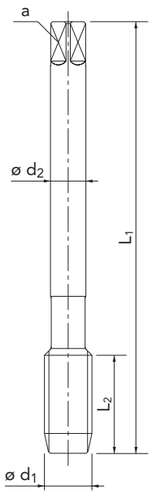
VERGNANO

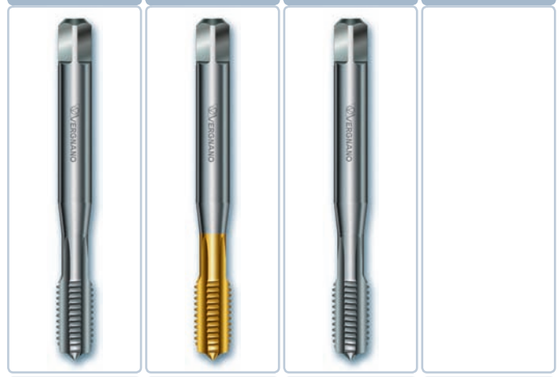
MACHINE TAPS - Straight flutes
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 11



Tool code	A21 FC	A21 FC TiN	A21 FC LH	
				
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	LH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A21 FC	A21 FC TiN	A21 FC LH	
M 2	0,4	45	7	11	2,8	2,1	3	1,6	•	•		
2,2	0,45	45	9	13	2,8	2,1	3	1,75	•	•		
2,3	0,4	45	9	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	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	•	•	•	
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	•			
48	5	250	70	-	36	29	4	43	•			
52	5	250	70	-	40	32	4	47	•			

• = standard execution

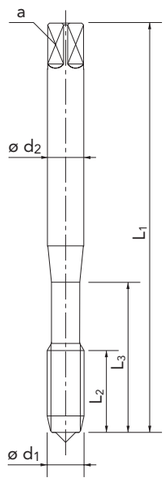
See price list on page 5 5 5

1,5 x D | DIN 13 | HSSE

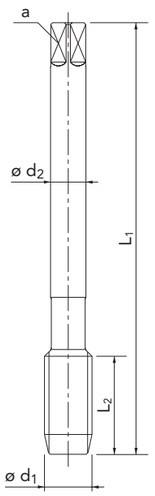
VERGNANO

MACHINE TAPS - Straight flutes
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 11



Tool code	A21 FP	A21 FP TiN	A21 FP LH	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	A (5-6)	A (5-6)	A (5-6)	
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	LH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 2	0,4	45	7	11	2,8	2,1	3	1,6	•	•		
2,2	0,45	45	9	13	2,8	2,1	3	1,75	•	•		
2,3	0,4	45	9	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	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	•	•	•	
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	•			
48	5	250	70	-	36	29	4	43	•			
52	5	250	70	-	40	32	4	47	•			

• = standard execution

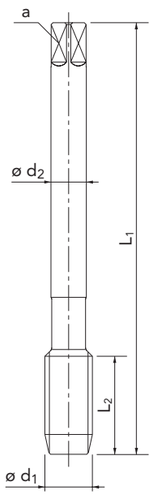
See price list on page 5 5 5

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For blind holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A22 FC	A22 FC TiN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.2-3 3.2	1.1-3 3.2		
Hole type	1,5 x D	1,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

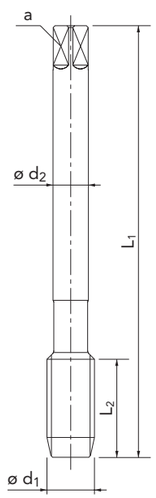
See price list on page 5 5

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For through holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A22 FP	A22 FP TiN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	A (5-6)	A (5-6)		
Application range	1.2-3 3.2	1.1-3 3.2		
Hole type	1,5 x D	1,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

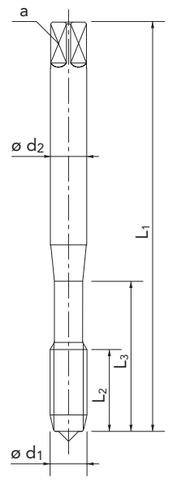
See price list on page 5 5

2,5 x D | DIN 13 | HSSE

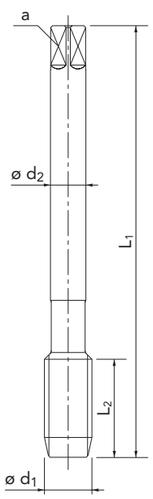
VERGNANO

MACHINE TAPS for cast iron - Straight flutes
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ø 10



DIN 376 ≥ø 11



Tool code	A43 NITRIDED	A43 TiCN	A43 ACE	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	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	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	•	•	•	

• = standard execution

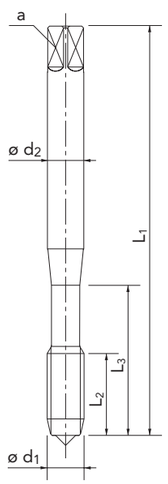
See price list on page 6 6 6

2,5 x D | DIN 13 | HSSK

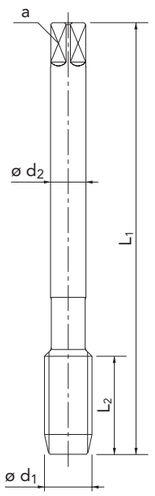
VERGNANO

MACHINE TAPS for cast iron - Straight flutes
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A43 K NITRIDED	A43 K TiCN	A43 K ACE	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	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	•	•	•	

• = standard execution

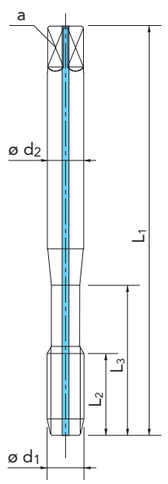
See price list on page 6 6 6

2,5 x D | DIN 13 | HSSK

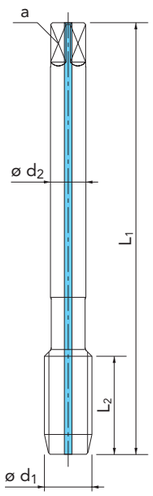
VERGNANO

MACHINE TAPS for cast iron - Straight flutes - Internal axial coolant
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	B43 K NITRIDED	B43 K TiCN	B43 K ACE	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•	•	•	

• = standard execution

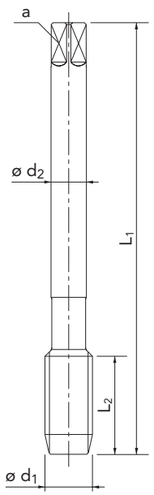
See price list on page 6 6 6

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS for cast iron - Straight flutes
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A44 NITRIDED	A44 TiCN	A44 ACE	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

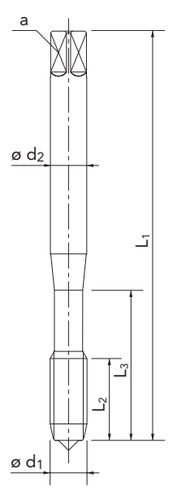
See price list on page 6 6 6

2,5 x D | DIN 13 | HSSE

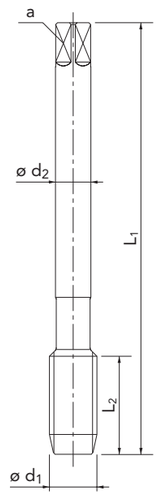
VERGNANO

MACHINE TAPS for light alloys - Straight flutes - Interrupted thread
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ø 10



DIN 376 ≥ø 12



Tool code	A67	A67 TiH1		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.1 4.1-2 5.1-2	1.1 4.1-2 5.1-2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

See price list on page 6 6

2,5 x D | DIN 13 | HSSK

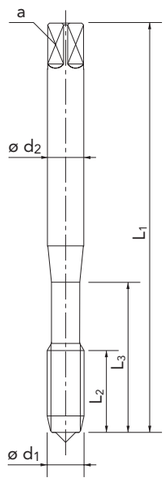
VERGNANO

MACHINE TAPS for titanium alloys - Straight flutes - Blue ring

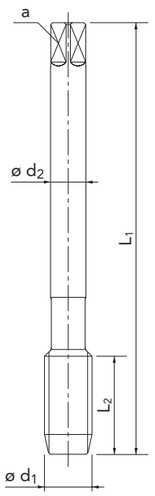
For blind and through holes

ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A110	A110 CrN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	C (2-3)	C (2-3)		
Application range	7.1-2	7.1-2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

See price list on page 7 7

1,5 x D | DIN 13 | HSSE

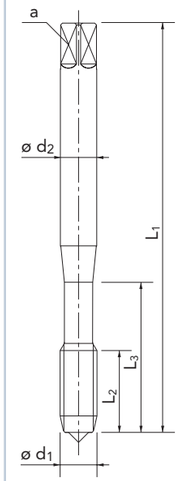
VERGNANO

MACHINE TAPS for high resistance materials - Straight flutes

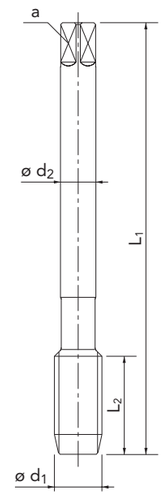
For blind and through holes

ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A130	A130 TiCN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	A (5-6)	A (5-6)		
Application range	1.6 5.4	1.6 5.4		
Hole type	1,5 x D	1,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 4	0,7	63	8	17	4,5	3,4	3	3,3	•	•		
5	0,8	70	10	20	6	4,9	3	4,2	•	•		
6	1	80	12	25	6	4,9	3	5	•	•		
8	1,25	90	15	33	8	6,2	3	6,8	•	•		
10	1,5	100	15,5	38	10	8	3	8,5	•	•		
12	1,75	110	22	-	9	7	4	10,2	•	•		
14	2	110	24	-	11	9	4	12	•	•		
16	2	110	25	-	12	9	4	14	•	•		

• = standard execution

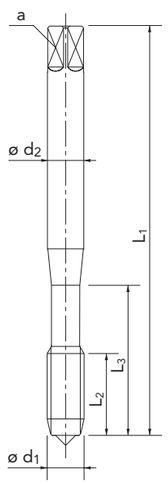
See price list on page 7 7

1,5 x D | DIN 8140 part 2 | HSSE

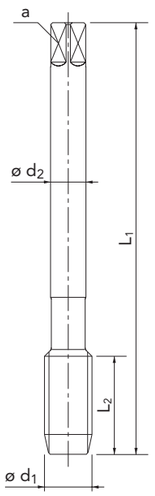
VERGNANO

MACHINE TAPS for wire thread inserts - Straight flutes
For blind and through holes
ISO Metric coarse thread - DIN 8140 part 2

DIN 40435 ≤ ø 8



DIN 40435 ≥ ø 10



Tool code	A190			
Tolerance	6H MOD			
Chamfer form	C (2-3)			
Application range	1.2-3 3.2			
Hole type	1,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	10,4	•			
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	•			

• = standard execution

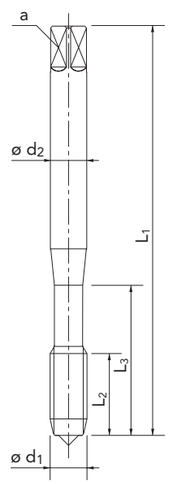
See price list on page 7

2,5 x D | DIN 13 | HSSE

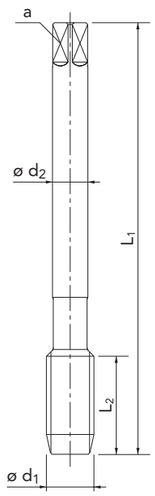
VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A15	A15 VAP	A15 TiN	A15 TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•

• = standard execution

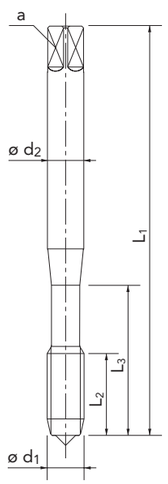
See price list on page 8 8 8 8

2,5 x D | DIN 13 | HSSE

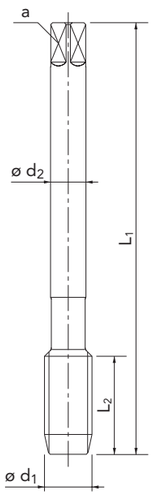
VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A15 6G	A15 6G VAP	A15 6G TiN	A15 6G TiCN
Tolerance	ISO3 6G	ISO3 6G	ISO3 6G	ISO3 6G
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•

• = standard execution

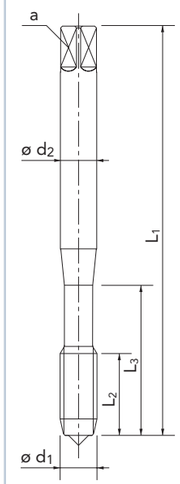
See price list on page 8 8 8 8

2,5 x D | DIN 13 | HSSE

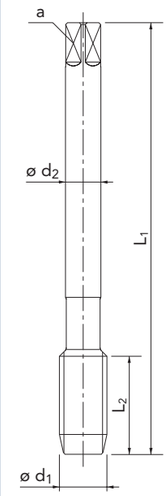
VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A15 4H	A15 4H TiN	A15 4H TiCN	
Tolerance	ISO1 4H	ISO1 4H	ISO1 4H	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

See price list on page 8 8 8

2,5 x D | DIN 13 | HSSE

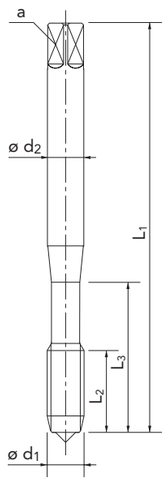
VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Interrupted thread

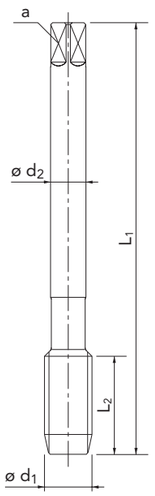
For through holes

ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A15 AZ	A15 AZ TiH1		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	B (4-5)	B (4-5)		
Application range	1.1 4.1-2 5.1-2	1.1 4.1-2 5.1-2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

See price list on page 8 8

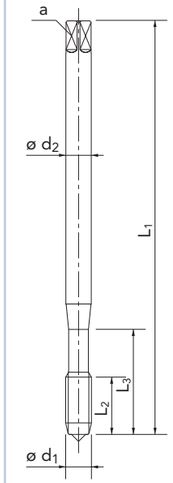
2,5 x D | DIN 13 | HSSE

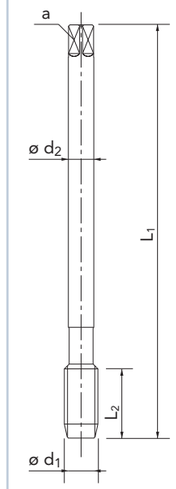
VERGNANO

MACHINE TAPS with long shank - Straight flutes with spiral point

For through holes

ISO Metric coarse thread - DIN 13





Tool code	A15 L	A15 L TiN	A15 L TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

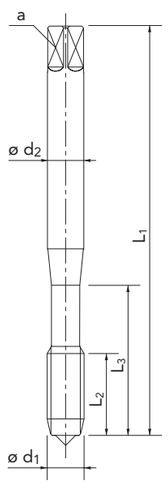
See price list on page 9 9 9

2,5 x D | DIN 13 | HSSE

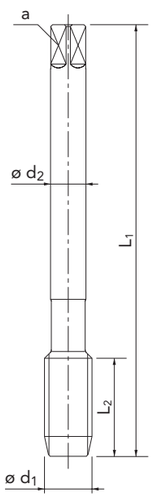
VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 11



Tool code	A15 S	A15 S VAP	A15 S TiN	A15 S TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

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

• = standard execution

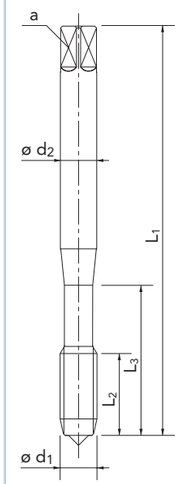
See price list on page 9 9 9 9

2,5 x D | DIN 13 | HSSE

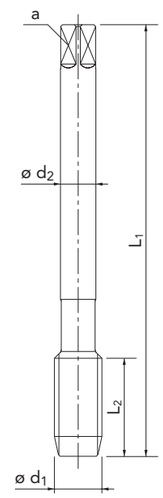
VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A15 S 6G	A15 S 6G TiN	A15 S 6G TiCN	
Tolerance	ISO3 6G	ISO3 6G	ISO3 6G	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

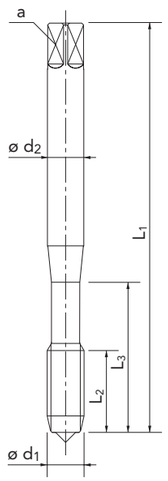
See price list on page 9 9 9

2,5 x D | DIN 13 | HSSE

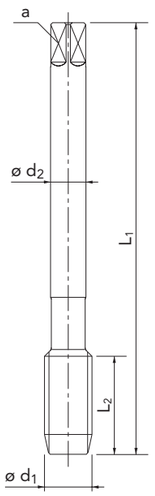
VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A15 S 7G	A15 S 7G TiN	A15 S 7G TiCN	
Tolerance	7G	7G	7G	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

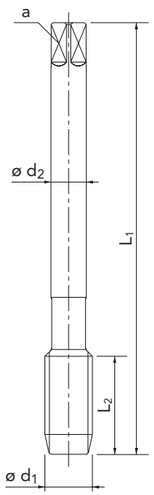
See price list on page 10 10 10

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring
For through holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A16 S	A16 S TiN	A16 S TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

See price list on page 10 10 10

2,5 x D | DIN 13 | HSSE

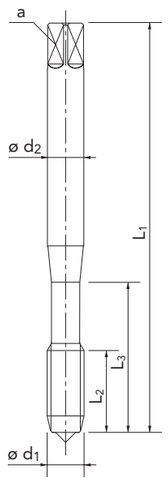
VERGNANO

MACHINE TAPS for stainless steel - Straight flutes with spiral point - Green ring

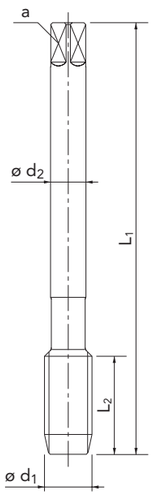
For through holes

ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A150	A150 TiX2		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	B (4-5)	B (4-5)		
Application range	2.1-3 9.1	2.1-3 9.1		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

See price list on page 10 10

1 x D | DIN 13 | HSSE

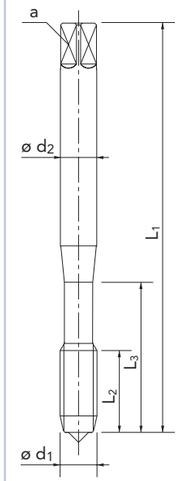
VERGNANO

MACHINE TAPS - Straight lubrication grooves with spiral point

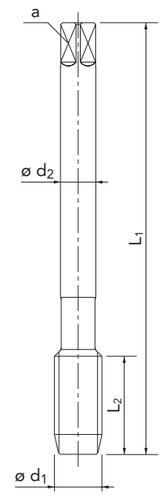
For through holes

ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A51	A51 TiN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	B (4-5)	B (4-5)		
Application range	1.2-3 5.2	1.1-3 4.1 5.1-2		
Hole type	1 x D	1 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	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	•	•		

• = standard execution

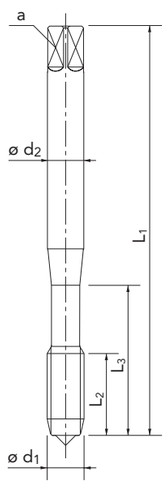
See price list on page 10 10

R15 | 1,5 x D | DIN 13 | HSSE

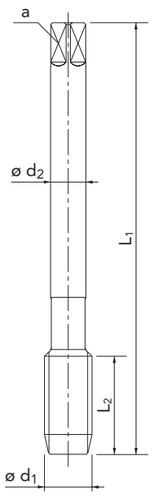
VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 11



Tool code	A29	A29 TiN	A29 TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	4	29,5	•	•	•	
36	4	200	56	-	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	•			
48	5	250	70	-	36	29	4	43	•			
52	5	250	70	-	40	32	4	47	•			

• = standard execution

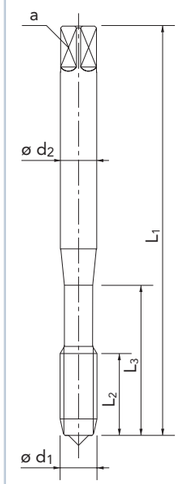
See price list on page 11 11 11

R15 | 1,5 x D | DIN 13 | HSSE

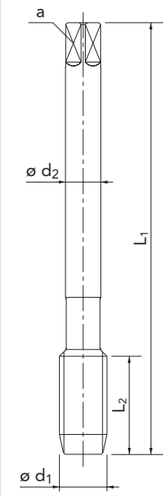
VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A29 6G	A29 6G TiN	A29 6G TiCN	
Tolerance	ISO3 6G	ISO3 6G	ISO3 6G	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

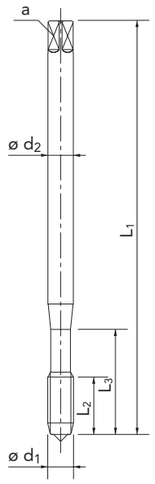
• = standard execution

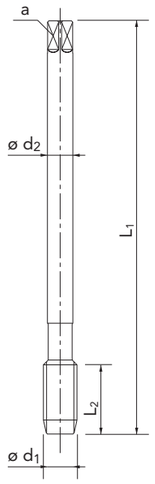
See price list on page 11 11 11

R15 | 1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS with long shank - Spiral flutes with 15° angle
For blind holes
ISO Metric coarse thread - DIN 13





Tool code	A29 L	A29 L TiN	A29 L TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

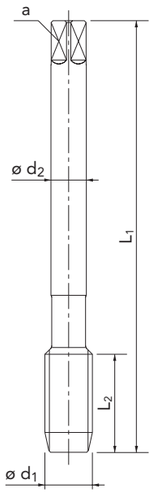
See price list on page 11 11 11

R15 | 1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A29 DIN 376	A29 DIN 376 TiN	A29 DIN 376 TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

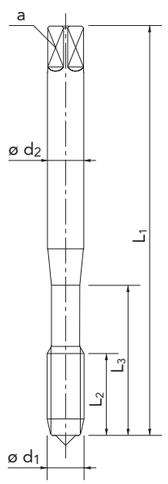
See price list on page 11 11 11

R15 | 1,5 x D | DIN 13 | HSSK

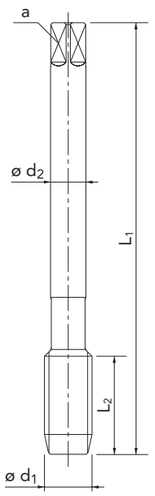
VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A29 K	A29 K TiN	A29 K TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 3.2 4.1-2 5.1-2 8.1	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

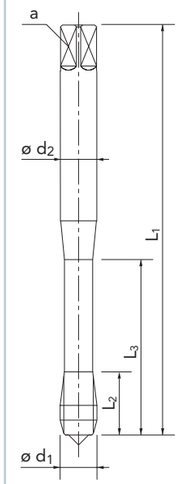
See price list on page 12 12 12

R40 | 2,5 x D | DIN 13 | HSSE

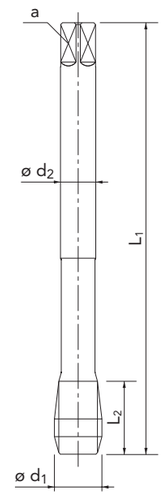
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A70	A70 VAP	A70 TiN	A70 TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•

• = standard execution

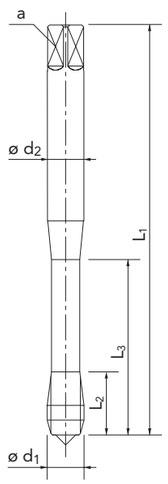
See price list on page 12 12 12 12

R40 | 2,5 x D | DIN 13 | HSSE

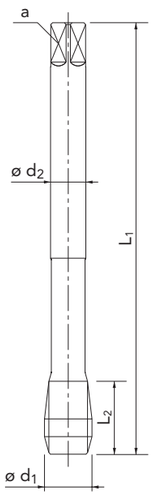
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A70 6G	A70 6G VAP	A70 6G TiN	A70 6G TiCN
Tolerance	ISO3 6G	ISO3 6G	ISO3 6G	ISO3 6G
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•

• = standard execution

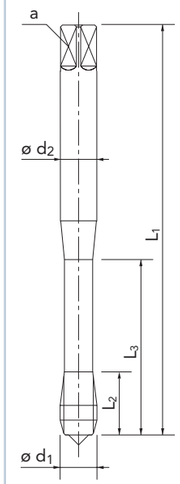
See price list on page 12 12 12 12

R40 | 2,5 x D | DIN 13 | HSSE

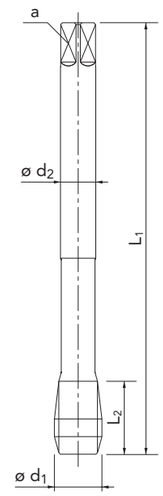
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A70 4H	A70 4H TiN	A70 4H TiCN	
Tolerance	ISO1 4H	ISO1 4H	ISO1 4H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

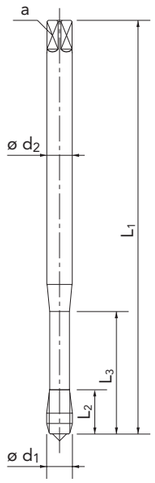
• = standard execution

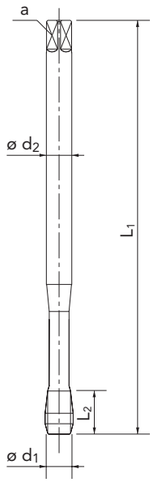
See price list on page 12 12 12

R 40 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS with long shank - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric coarse thread - DIN 13





Tool code	A70 L	A70 L TiN	A70 L TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

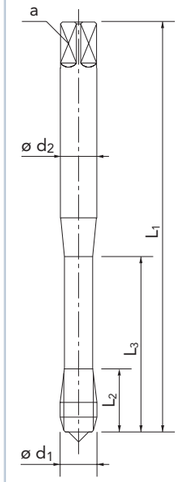
See price list on page 13 13 13

R 40 | 2,5 x D | DIN 13 | HSSK

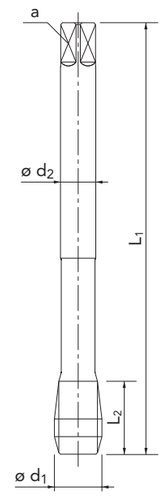
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ø 10



DIN 376 ≥ø 12



Tool code	A70 K	A70 K TiN	A70 K TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2 6.1	1.1-4 3.2 4.2 5.2	1.1-4 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	
18	2,5	125	25,5	-	14	11	4	15,5	•	•	•	
20	2,5	140	29,5	-	16	12	4	17,5	•	•	•	

• = standard execution

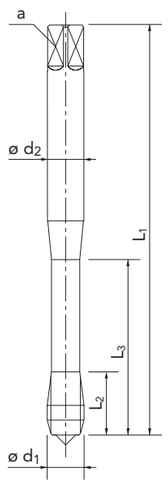
See price list on page 12 12 12

R40 | 2,5 x D | DIN 13 | HSSE

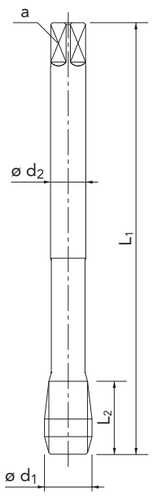
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ø 10



DIN 376 ≥ø 11



Tool code	A70 S	A70 S VAP	A70 S TiN	A70 S TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	7,5	18	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	•	•		

• = standard execution

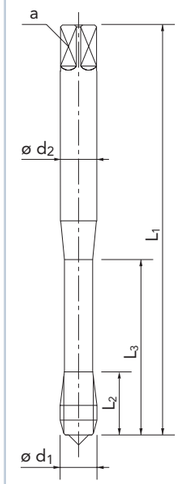
See price list on page 13 13 13 13

R40 | 2,5 x D | DIN 13 | HSSE

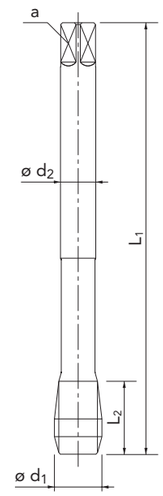
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ø 10



DIN 376 ≥ø 12



Tool code	A70 S 6G	A70 S 6G TiN	A70 S 7G	A70 S 7G TiN
Tolerance	ISO3 6G	ISO3 6G	7G	7G
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•

• = standard execution

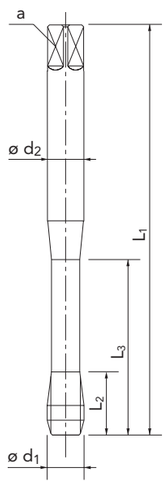
See price list on page 13 13 13 13

R40 | 2,5 x D | DIN 13 | HSSE | E (1,5-2)

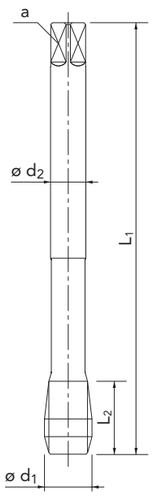
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Short chamfer form "E" - Orange ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A70 SE	A70 SE TiN	A70 SE TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	E (1,5-2)	E (1,5-2)	E (1,5-2)	
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

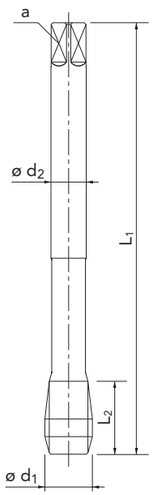
See price list on page 13 13 13

R40 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A76 S	A76 S TiN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

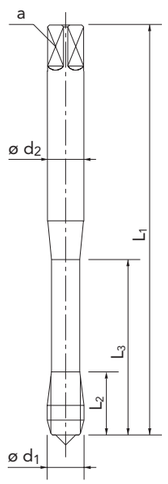
See price list on page 13 13

R40 | 2,5 x D | DIN 13 | HSSE

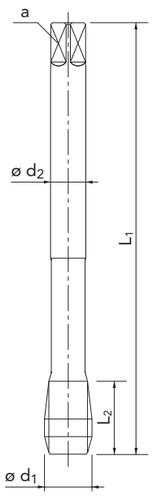
VERGNANO

MACHINE TAPS for stainless steel - Spiral flutes with 40° angle - Back tapered - Green ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A170	A170 TiX2		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	C (2-3)	C (2-3)		
Application range	2.1-3 9.1	2.1-3 9.1		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	4	14	•	•		
18	2,5	125	25,5	-	14	11	4	15,5	•	•		
20	2,5	140	29,5	-	16	12	4	17,5	•	•		

• = standard execution

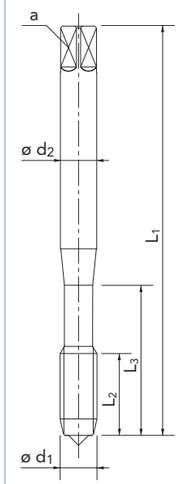
See price list on page 14 14

R40 2 | 2,5 x D | DIN 13 | HSSE

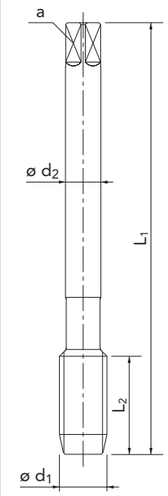
VERGNANO

MACHINE TAPS for light alloys - Two spiral flutes with 40° angle
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 11



Tool code	A62	A62 TiH1		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	C (2-3)	C (2-3)		
Application range	4.1-2 5.1-2 6.1	4.1-2 5.1-2 6.1		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

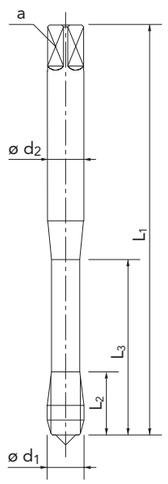
See price list on page 14 14

R40 | 2,5 x D | DIN 13 | HSSE

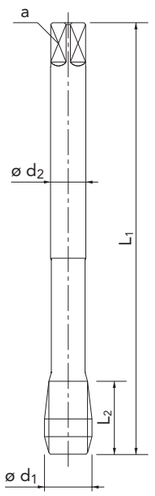
VERGNANO

MACHINE TAPS for light alloys - Spiral flutes with 40° angle - Back tapered - Yellow ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A72	A72 TiH1		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.1 4.1-2	1.1 4.1-2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

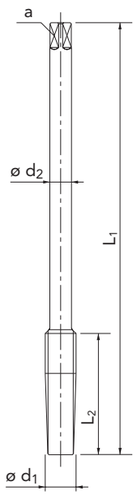
See price list on page 14 14

DIN 13 | HSSE

VERGNANO

MACHINE NUT TAPS - Straight flutes
ISO Metric coarse thread - DIN 13

DIN 357



Tool code	A9			
Tolerance	ISO2 6H			
Chamfer form	—			
Application range	1.1-3			
Hole type				
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			

• = standard execution

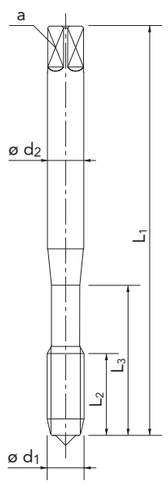
See price list on page 15

1,5 x D | DIN 13 | HSSE

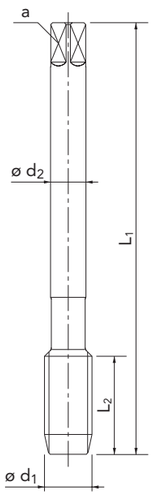
VERGNANO

COLD FORMING TAPS
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 2174 | DIN 371 ≤ø10



DIN 2174 | DIN 376 ≥ø12



Tool code	A80 VAP	A80 TiN	A80 TiCN	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	3	2,8	•	•	•	
3,5	0,6	56	11	20	4	3	3	3,25	•	•	•	
4	0,7	63	12	21	4,5	3,4	4	3,7	•	•	•	
5	0,8	70	14	24,5	6	4,9	4	4,65	•	•	•	
6	1	80	16	29	6	4,9	5	5,55	•	•	•	
8	1,25	90	18	33	8	6,2	5	7,45	•	•	•	
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	•	•	•	

• = standard execution

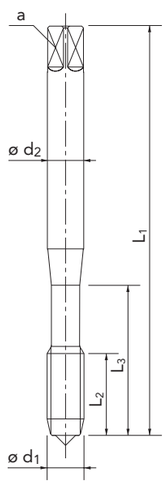
See price list on page 15 15 15

1,5 x D | DIN 13 | HSSE

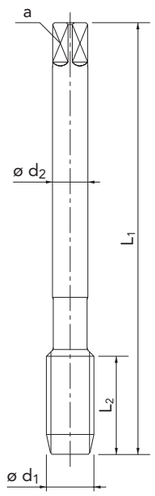
VERGNANO

COLD FORMING TAPS
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 2174 | DIN 371 ≤ø10



DIN 2174 | DIN 376 ≥ø12



Tool code	A80 6GX VAP	A80 6GX TiN	A80 6GX TiCN	
Tolerance	6GX	6GX	6GX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	3	2,8	•	•	•	
3,5	0,6	56	11	20	4	3	3	3,25	•	•	•	
4	0,7	63	12	21	4,5	3,4	4	3,7	•	•	•	
5	0,8	70	14	24,5	6	4,9	4	4,65	•	•	•	
6	1	80	16	29	6	4,9	5	5,55	•	•	•	
8	1,25	90	18	33	8	6,2	5	7,45	•	•	•	
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	•	•	•	

• = standard execution

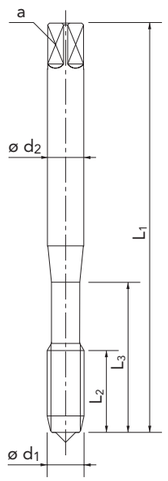
See price list on page 15 15 15

2,5 x D | DIN 13 | HSSE

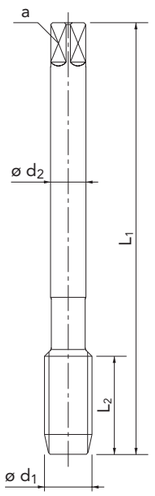
VERGNANO

COLD FORMING TAPS - Oil grooves
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	A80 N VAP	A80 N TiN	A80 N TiCN	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	3	2,8	•	•	•	
3,5	0,6	56	11	20	4	3	3	3,25	•	•	•	
4	0,7	63	12	21	4,5	3,4	4	3,7	•	•	•	
5	0,8	70	14	24,5	6	4,9	4	4,65	•	•	•	
6	1	80	16	29	6	4,9	5	5,55	•	•	•	
8	1,25	90	18	33	8	6,2	5	7,45	•	•	•	
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	•	•	•	

• = standard execution

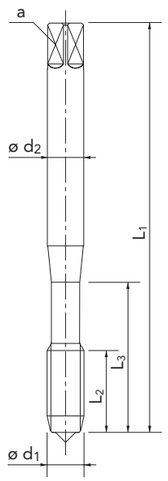
See price list on page 15 15 15

2,5 x D | DIN 13 | HSSE

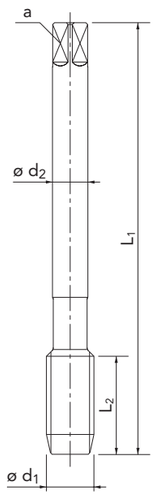
VERGNANO

COLD FORMING TAPS - Oil grooves
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	A80 N 6GX VAP	A80 N 6GX TiN	A80 N 6GX TiCN	
Tolerance	6GX	6GX	6GX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	3	2,8	•	•	•	
3,5	0,6	56	11	20	4	3	3	3,25	•	•	•	
4	0,7	63	12	21	4,5	3,4	4	3,7	•	•	•	
5	0,8	70	14	24,5	6	4,9	4	4,65	•	•	•	
6	1	80	16	29	6	4,9	5	5,55	•	•	•	
8	1,25	90	18	33	8	6,2	5	7,45	•	•	•	
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	•	•	•	

• = standard execution

See price list on page 15 15 15

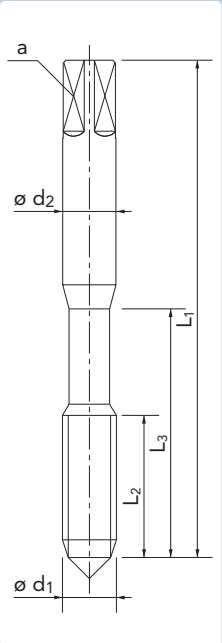
2,5 x D | DIN 13 | HSS

VERGNANO

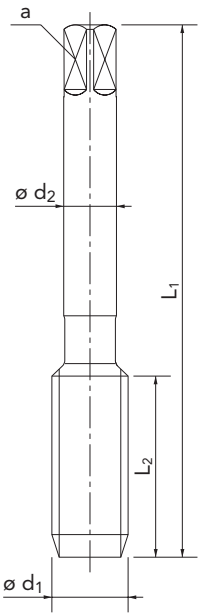
HAND TAPS in sets of two pieces
For blind and through holes
ISO Metric fine thread - DIN 13

A

DIN 2181 ≤ M6



DIN 2181 ≥ M7



Tool code	A2 ROUGHING	A2 FINISHING	A2 SET	
Tolerance	—	ISO2 6H	ISO2 6H	
Chamfer form	A (5-6)	C (2-3)	C (2-3)	
Application range	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	
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	•	•	•	

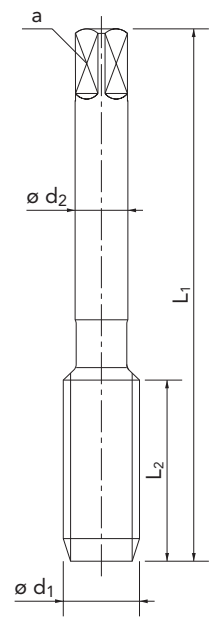
• = standard execution

See price list on page 16 16 16

VERGNANO

HAND TAPS in sets of two pieces
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 2181



Tool code	A2 ROUGHING	A2 FINISHING	A2 SET	
Tolerance	—	ISO2 6H	ISO2 6H	
Chamfer form	A (5-6)	C (2-3)	C (2-3)	
Application range	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•	•	•	
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	•	•	•	

• = standard execution

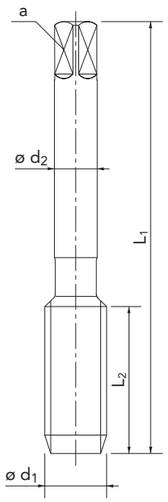
See price list on page 16 16 16

2,5 x D | DIN 13 | HSS

VERGNANO

HAND TAPS in sets of two pieces
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 2181



Tool code	A2 ROUGHING	A2 FINISHING	A2 SET	
Tolerance	—	ISO2 6H	ISO2 6H	
Chamfer form	A (5-6)	C (2-3)	C (2-3)	
Application range	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•	•	•	

• = standard execution

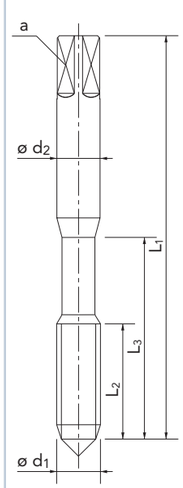
See price list on page 16 16 16

2,5 x D | DIN 13 | HSS | LH

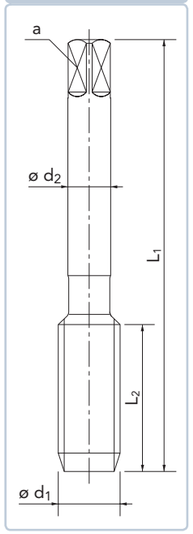
VERGNANO

HAND TAPS in sets of two pieces
For blind and through holes
ISO Metric fine left hand thread - DIN 13

DIN 2181 ≤ M6



DIN 2181 ≥ M8



Tool code	A2 LH ROUGHING	A2 LH FINISHING	A2 LH SET	
Tolerance	—	ISO2 6H	ISO2 6H	
Chamfer form	A (5-6)	C (2-3)	C (2-3)	
Application range	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	LH	LH	LH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

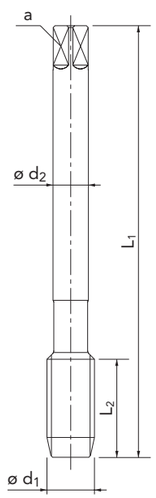
See price list on page 16 16 16

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A23 FC	A23 FC TiN	A23 FC LH	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	LH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		
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	•			

• = standard execution

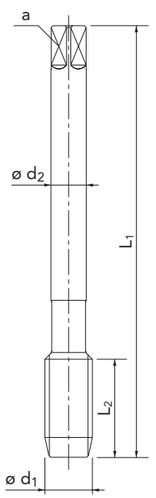
See price list on page 17 17 17

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A23 FC	A23 FC TiN	A23 FC LH	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	LH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			
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	•			

• = standard execution

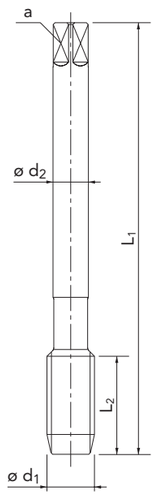
See price list on page 17 17 17

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A23 FC			
Tolerance	ISO2 6H			
Chamfer form	C (2-3)			
Application range	1.2-3 3.2			
Hole type	1,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			

• = standard execution

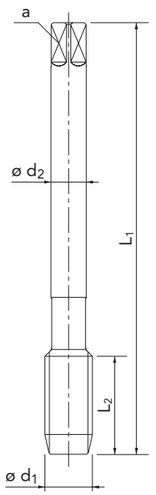
See price list on page 17

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A23 FP	A23 FP TiN	A23 FP LH	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	A (5-6)	A (5-6)	A (5-6)	
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	LH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		
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	•			

• = standard execution

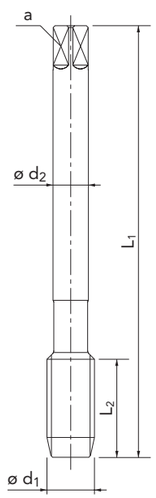
See price list on page 18 18 18

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A23 FP	A23 FP TiN	A23 FP LH	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	A (5-6)	A (5-6)	A (5-6)	
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	LH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			
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	•			

• = standard execution

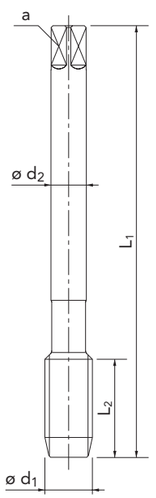
See price list on page 18 18 18

1,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A23 FP			
Tolerance	ISO2 6H			
Chamfer form	A (5-6)			
Application range	1.2-3 3.2			
Hole type	1,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			

• = standard execution

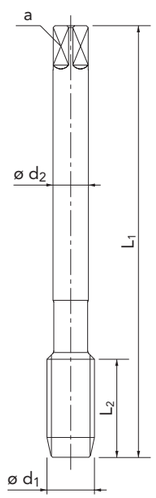
See price list on page 18

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS for cast iron - Straight flutes
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A45 NITRIDED	A45 TiCN	A45 ACE	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	
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	4	22,5	•			
24	2	140	28	-	18	14,5	4	22	•			
27	1,5	140	28	-	20	16	4	25,5	•			
27	2	140	28	-	20	16	4	25	•			
30	1,5	150	28	-	22	18	4	28,5	•			
30	2	150	28	-	22	18	4	28	•			

• = standard execution

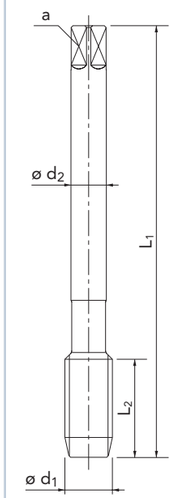
See price list on page 19 19 19

2,5 x D | DIN 13 | HSSK

VERGNANO

MACHINE TAPS for cast iron - Straight flutes
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A45 K NITRIDED	A45 K TiCN	A45 K ACE	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	1,5	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	•	•	•	

• = standard execution

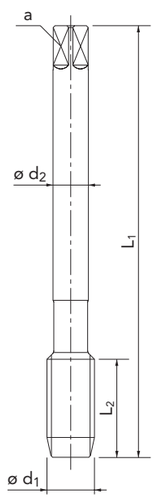
See price list on page 19 19 19

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A17	A17 VAP	A17 TiN	A17 TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			
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	•			

• = standard execution

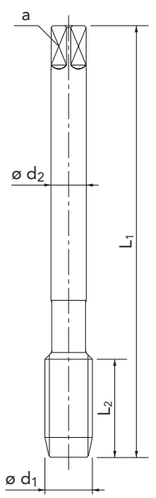
See price list on page 19 19 19 19

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A17			
Tolerance	ISO2 6H			
Chamfer form	B (4-5)			
Application range	1.1-3 3.2 4.1-2 5.1-2			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			
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	•			

• = standard execution

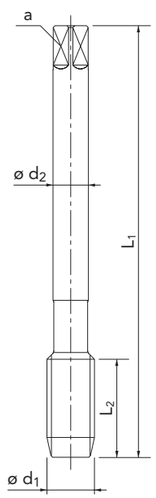
See price list on page 19

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A17 S	A17 S VAP	A17 S TiN	A17 S TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			
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	•			

• = standard execution

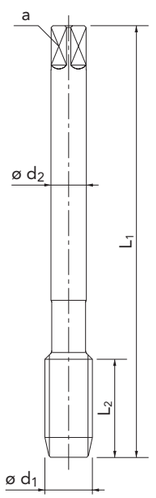
See price list on page 20 20 20 20

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A17 S			
Tolerance	ISO2 6H			
Chamfer form	B (4-5)			
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			
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	•			

• = standard execution

See price list on page 20

2,5 x D | DIN 13 | HSSE

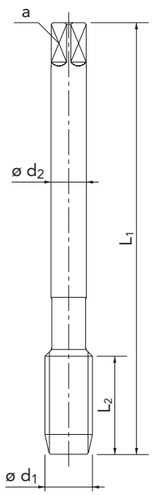
VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring

For through holes

ISO Metric fine thread - DIN 13

DIN 374



Tool code	A17 S 6G	A17 S 6G TiN	A17 S 6G TiCN	
Tolerance	ISO3 6G	ISO3 6G	ISO3 6G	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 6	0,75	80	14	-	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	•	•	•	

• = standard execution

See price list on page 20 20 20

R 15 | 1,5 x D | DIN 13 | HSSE

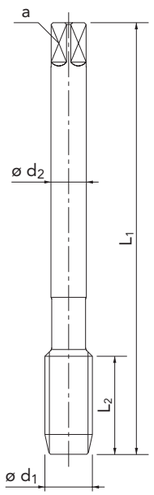
VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle

For blind holes

ISO Metric fine thread - DIN 13

DIN 374



Tool code	A30	A30 TiN	A30 TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	0,75	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	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	3	15,5	•			
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	•			
22	1,5	125	25	-	18	14,5	4	20,5	•			

• = standard execution

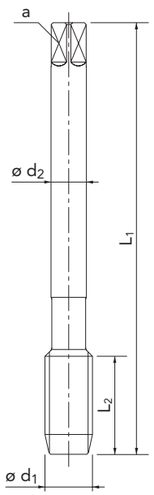
See price list on page 21 21 21

R15 | 1,5xD | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A30			
Tolerance	ISO2 6H			
Chamfer form	C (2-3)			
Application range	1.1-4 3.2 4.1-2 5.1-2			
Hole type	1,5xD			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			
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	•			

• = standard execution

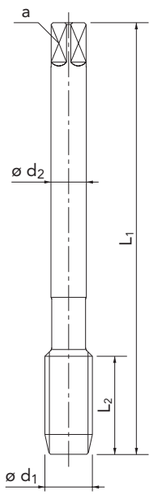
See price list on page 21

R15 | 1,5xD | DIN 13 | HSSK

VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A30 K	A30 K TiN	A30 K TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 3.2 4.1-2 5.1-2 8.1	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5xD	1,5xD	1,5xD	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	1,25	100	22	-	9	7	3	10,8	•	•	•	
12	1,5	100	22	-	9	7	3	10,5	•	•	•	
14	1,5	100	22	-	11	9	3	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	•	•	•	

• = standard execution

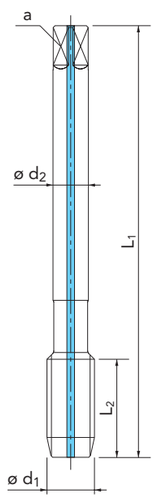
See price list on page 21 21 21

R15 | 1,5 x D | DIN 13 | HSSK

VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle - Internal axial coolant
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	B30 K	B30 K TiN	B30 K TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 10	1,25	100	18	-	7	5,5	3	8,8	•	•	•	
12	1,25	100	22	-	9	7	3	10,8	•	•	•	
12	1,5	100	22	-	9	7	3	10,5	•	•	•	
14	1,5	100	22	-	11	9	3	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	•	•	•	

• = standard execution

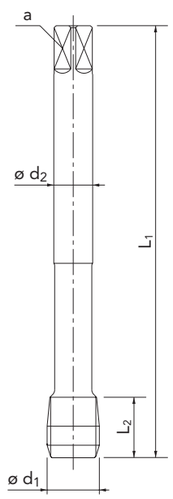
See price list on page 21 21 21

R40 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A71	A71 TiN	A71 TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			

• = standard execution

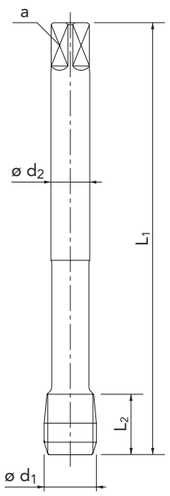
See price list on page 22 22 22

R40 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A71 S	A71 S VAP	A71 S TiN	A71 S TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			

• = standard execution

See price list on page 22 22 22 22

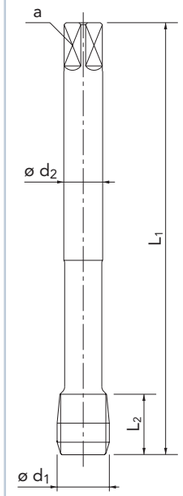
R40 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
ISO Metric fine thread - DIN 13

A

DIN 374



Tool code	A71 S 6G	A71 S 6G TiN	A71 S 6G TiCN	
Tolerance	ISO3 6G	ISO3 6G	ISO3 6G	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

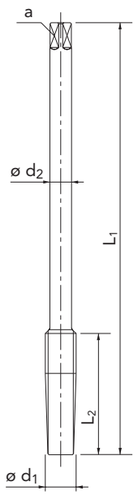
See price list on page 22 22 22

DIN 13 HSSE

VERGNANO

MACHINE NUT TAPS - Straight flutes
ISO Metric fine thread - DIN 13

DIN 357



Tool code	A10			
Tolerance	ISO2 6H			
Chamfer form	—			
Application range	1.1-3			
Hole type				
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	10,5	•			
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	•			

• = standard execution
★= on request

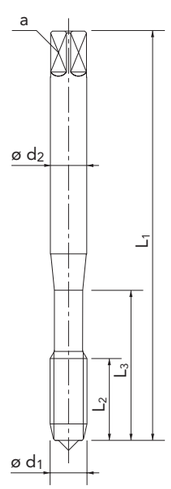
See price list on page 22

1,5xD DIN 13 HSSE

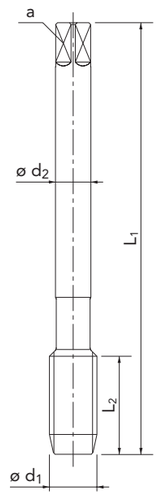
VERGNANO

COLD FORMING TAPS
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	A81 VAP	A81 TiN	A81 TiCN	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	1,5xD	1,5xD	1,5xD	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 3	0,35	56	10	18	3,5	2,7	3	2,85	•	•	•	
4	0,5	63	12	21	4,5	3,4	4	3,8	•	•	•	
5	0,5	70	14	24,5	6	4,9	4	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	9,45	•	•	•	
12	1	100	22	-	9	7	6	11,55	•	•	•	
12	1,25	100	22	-	9	7	6	11,45	•	•	•	
12	1,5	100	22	-	9	7	6	11,3	•	•	•	
14	1,25	100	22	-	11	9	6	13,45	•	•	•	
14	1,5	100	22	-	11	9	6	13,3	•	•	•	
16	1,5	100	22	-	12	9	6	15,3	•	•	•	

• = standard execution

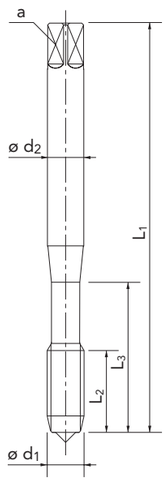
See price list on page 23 23 23

1,5 x D | DIN 13 | HSSE

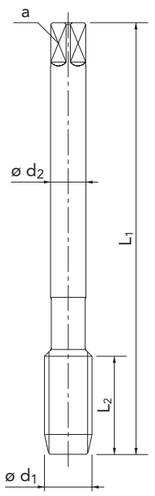
VERGNANO

COLD FORMING TAPS
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 2174 | DIN 371 ≤ø10



DIN 2174 | DIN 376 ≥ø12



Tool code	A81 6GX VAP	A81 6GX TiN	A81 6GX TiCN	
Tolerance	6GX	6GX	6GX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 3	0,35	56	10	18	3,5	2,7	3	2,85	•	•	•	
4	0,5	63	12	21	4,5	3,4	4	3,8	•	•	•	
5	0,5	70	14	24,5	6	4,9	4	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	9,45	•	•	•	
12	1	100	22	-	9	7	6	11,55	•	•	•	
12	1,25	100	22	-	9	7	6	11,45	•	•	•	
12	1,5	100	22	-	9	7	6	11,3	•	•	•	
14	1,25	100	22	-	11	9	6	13,45	•	•	•	
14	1,5	100	22	-	11	9	6	13,3	•	•	•	
16	1,5	100	22	-	12	9	6	15,3	•	•	•	

• = standard execution

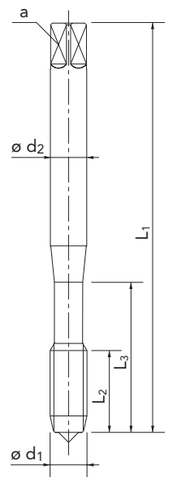
See price list on page 23 23 23

2,5 x D | DIN 13 | HSSE

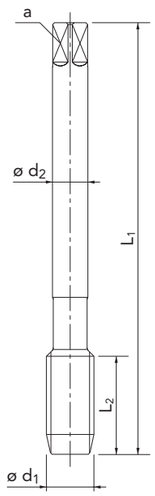
VERGNANO

COLD FORMING TAPS - Oil grooves
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 2174 | DIN 371 ≤ø10



DIN 2174 | DIN 376 ≥ø12



Tool code	A81 N VAP	A81 N TiN	A81 N TiCN	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 3	0,35	56	10	18	3,5	2,7	3	2,85	•	•	•	
4	0,5	63	12	21	4,5	3,4	4	3,8	•	•	•	
5	0,5	70	14	24,5	6	4,9	4	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	9,45	•	•	•	
12	1	100	22	-	9	7	6	11,55	•	•	•	
12	1,25	100	22	-	9	7	6	11,45	•	•	•	
12	1,5	100	22	-	9	7	6	11,3	•	•	•	
14	1,25	100	22	-	11	9	6	13,45	•	•	•	
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	•	•	•	

• = standard execution

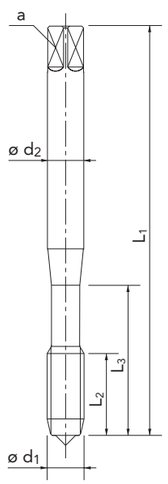
See price list on page 23 23 23

2,5 x D | DIN 13 | HSSE

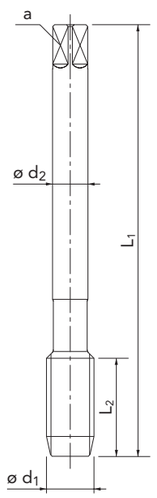
VERGNANO

COLD FORMING TAPS - Oil grooves
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 2174 | DIN 371 ≤ø10



DIN 2174 | DIN 376 ≥ø12



Tool code	A81 N 6GX VAP	A81 N 6GX TiN	A81 N 6GX TiCN	
Tolerance	6GX	6GX	6GX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-3 2.1-2 4.1-3 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 3	0,35	56	10	18	3,5	2,7	3	2,85	•	•	•	
4	0,5	63	12	21	4,5	3,4	4	3,8	•	•	•	
5	0,5	70	14	24,5	6	4,9	4	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	9,45	•	•	•	
12	1	100	22	-	9	7	6	11,55	•	•	•	
12	1,25	100	22	-	9	7	6	11,45	•	•	•	
12	1,5	100	22	-	9	7	6	11,3	•	•	•	
14	1,25	100	22	-	11	9	6	13,45	•	•	•	
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	•	•	•	

• = standard execution

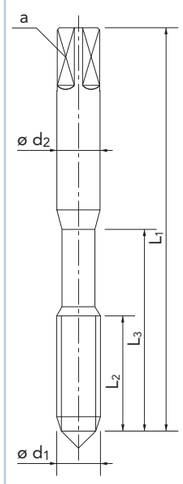
See price list on page 23 23 23

2,5 x D | ASME B1.1 | HSS

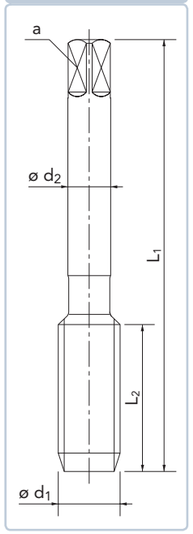
VERGNANO

HAND TAPS in sets of three pieces
For blind and through holes
Unified coarse thread - UNC ASME - B1.1

DIN 2184-2 ≤ ø 1/4"



DIN 2184-2 ≥ ø 5/16"



Tool code	A7 ROUGHING	A7 SECOND	A7 FINISHING	A7 SET
Tolerance	—	—	2B	2B
Chamfer form	A (5-6)	D (4-5)	C (2-3)	C (2-3)
Application range	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	95	32	-	14	11	4	16,5	•	•	•	•
7/8"	9	22,225	100	32	-	18	14,5	4	19,5	•	•	•	•
1"	8	25,400	110	36	-	18	14,5	4	22,25	•	•	•	•
1 1/8"	7	28,575	125	40	-	22	18	4	25	•	•	•	•
1 1/4"	7	31,750	125	40	-	22	18	4	28	•	•	•	•
1 3/8"	6	34,925	150	50	-	28	22	4	30,75	★	★	★	★
1 1/2"	6	38,100	150	50	-	28	22	4	34	★	★	★	★
1 3/4"	5	44,450	160	60	-	36	29	4	39,5	★	★	★	★
2"	4 1/2	50,800	180	63	-	40	32	4	45	★	★	★	★

• = standard execution
★= on request

See price list on page 24 24 24 24

1,5 x D | 1,5 x D | ASME B1.1 | HSSE

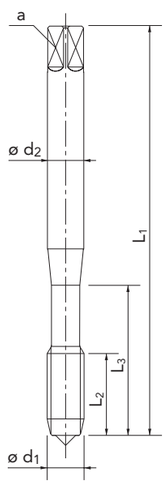
VERGNANO

MACHINE TAPS - Straight flutes

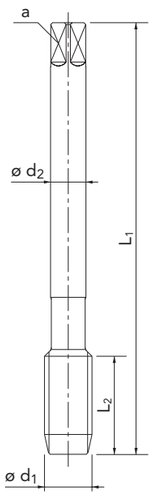
FC = For blind holes FP = For through holes

Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A27 FC	A27 FC TiN	A27 FP	A27 FP TiN
Tolerance	2B	2B	2B	2B
Chamfer form	C (2-3)	C (2-3)	A (5-6)	A (5-6)
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	1.1-3 3.2
Hole type	1,5 x D	1,5 x D	1,5 x D	1,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	125	32	-	14	11	4	16,5	•	•	•	•
7/8"	9	22,225	140	32	-	18	14,5	4	19,5	•	•	•	•
1"	8	25,400	160	36	-	18	14,5	4	22,25	•	•	•	•
1 1/8"	7	28,575	180	40	-	22	18	4	25	•		•	
1 1/4"	7	31,750	180	40	-	22	18	4	28	•		•	
1 3/8"	6	34,925	200	50	-	28	22	4	30,75	•		•	
1 1/2"	6	38,100	200	50	-	28	22	4	34	•		•	
1 3/4"	5	44,450	220	63	-	36	29	5	39,5	★		★	
2"	4 1/2	50,800	250	70	-	40	32	5	45	★		★	

• = standard execution

★= on request

See price list on page 24 24 24 24

2,5 x D | ASME B1.1 | HSSE

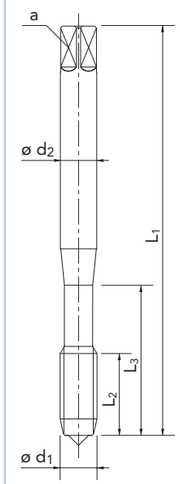
VERGNANO

MACHINE TAPS for cast iron - Straight flutes

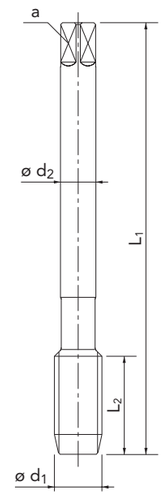
For blind and through holes

Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A49 NITRIDED	A49 TiCN		
Tolerance	2BX	2BX		
Chamfer form	C (2-3)	C (2-3)		
Application range	3.1 4.4 5.3	3.1 4.4 5.3		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	125	32	-	14	11	4	16,5	•	•		
7/8"	9	22,225	140	32	-	18	14,5	4	19,5	•	•		
1"	8	25,400	160	36	-	18	14,5	4	22,25	•	•		
1 1/8"	7	28,575	180	40	-	22	18	4	25	•			
1 1/4"	7	31,750	180	40	-	22	18	4	28	•			
1 3/8"	6	34,925	200	50	-	28	22	4	30,75	•			
1 1/2"	6	38,100	200	50	-	28	22	4	34	•			

• = standard execution

See price list on page 25 25

2,5 x D | ASME B1.1 | HSSE

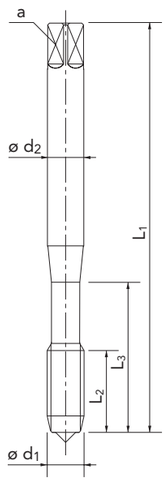
VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring

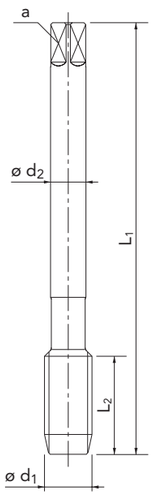
For through holes

Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A19 S	A19 S TiN	A19 S TiCN	A19 S 3B
Tolerance	2B	2B	2B	3B
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.1-2 5.1-2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	125	32	-	14	11	4	16,5	•	•	•	•
7/8"	9	22,225	140	32	-	18	14,5	4	19,5	•	•	•	
1"	8	25,400	160	36	-	18	14,5	4	22,25	•	•	•	
1 1/8"	7	28,575	180	40	-	22	18	4	25	★			
1 1/4"	7	31,750	180	40	-	22	18	4	28	★			
1 3/8"	6	34,925	200	50	-	28	22	4	30,75	★			
1 1/2"	6	38,100	200	50	-	28	22	4	34	★			
1 3/4"	5	44,450	220	63	-	36	29	5	39,5	★			
2"	4 1/2	50,800	250	70	-	40	32	5	45	★			

• = standard execution
★= on request

See price list on page 25 25 25 25

R 15 | 1,5 x D | ASME B1.1 | HSSE

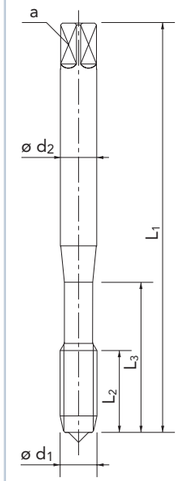
VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle

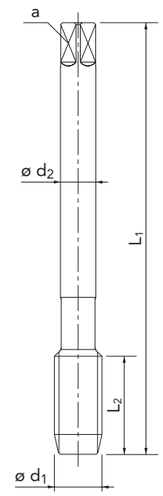
For blind holes

Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A33	A33 TiN	A33 TiCN	A33 3B
Tolerance	2B	2B	2B	3B
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	1.1-4 3.2 4.1-2 5.1-2
Hole type	1,5 x D	1,5 x D	1,5 x D	1,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	125	32	-	14	11	4	16,5	•	•	•	•
7/8"	9	22,225	140	32	-	18	14,5	4	19,5	•	•	•	
1"	8	25,400	160	36	-	18	14,5	4	22,25	•	•	•	
1 1/8"	7	28,575	180	40	-	22	18	4	25	•			
1 1/4"	7	31,750	180	40	-	22	18	4	28	•			
1 3/8"	6	34,925	200	50	-	28	22	4	30,75	•			
1 1/2"	6	38,100	200	50	-	28	22	4	34	•			
1 3/4"	5	44,450	220	63	-	36	29	4	39,5	★			
2"	4 1/2	50,800	250	70	-	40	32	4	45	★			

• = standard execution
★= on request

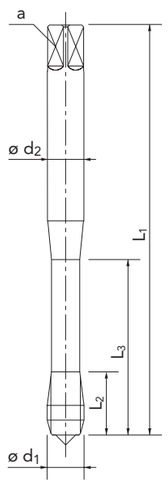
See price list on page 26 26 26 26

R40 | 2,5 x D | ASME B1.1 | HSSE

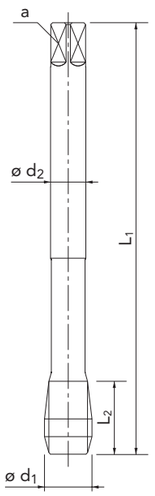
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A60	A60 TiN	A60 TiCN	
Tolerance	2B	2B	2B	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
Nr.2	56	2,184	45	6	12	2,8	2,1	3	1,85	•	•	•	
Nr.3	48	2,515	50	6,5	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	8,5	22,5	4	3	3	2,85	•	•	•	
Nr.8	32	4,166	63	8,5	26	4,5	3,4	3	3,5	•	•	•	
Nr.10	24	4,826	70	10,5	28,5	6	4,9	3	3,9	•	•	•	
Nr.12	24	5,486	80	9	28,5	6	4,9	3	4,5	•	•	•	
1/4"	20	6,350	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	11,112	100	17	-	8	6,2	3	9,4	•	•	•	
1/2"	13	12,700	110	19	-	9	7	3	10,8	•	•	•	
9/16"	12	14,288	110	21	-	11	9	3	12,2	•	•	•	
5/8"	11	15,875	110	22,5	-	12	9	3	13,5	•	•	•	
3/4"	10	19,050	125	26	-	14	11	4	16,5	•	•	•	
7/8"	9	22,225	140	30	-	18	14,5	4	19,5	•	•	•	
1"	8	25,400	160	36,5	-	18	14,5	4	22,25	•	•	•	

• = standard execution

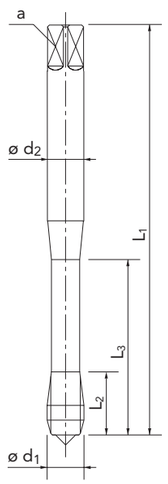
See price list on page 26 26 26

R40 | 2,5 x D | ASME B1.1 | HSSE

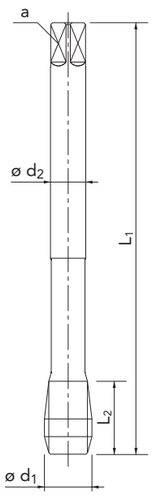
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A60 S	A60 S TiN	A60 S TiCN	A60 S TiX2
Tolerance	2B	2B	2B	2B
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	2.1-3
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
Nr.2	56	2,184	45	6	12	2,8	2,1	3	1,85	•	•	•	•
Nr.3	48	2,515	50	6,5	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	8,5	22,5	4	3	3	2,85	•	•	•	•
Nr.8	32	4,166	63	8,5	26	4,5	3,4	3	3,5	•	•	•	•
Nr.10	24	4,826	70	10,5	28,5	6	4,9	3	3,9	•	•	•	•
Nr.12	24	5,486	80	9	28,5	6	4,9	3	4,5	•	•	•	•
1/4"	20	6,350	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	11,112	100	17	-	8	6,2	3	9,4	•	•	•	•
1/2"	13	12,700	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	19,050	125	26	-	14	11	4	16,5	•	•	•	•
7/8"	9	22,225	140	30	-	18	14,5	4	19,5	•	•	•	•
1"	8	25,400	160	36,5	-	18	14,5	4	22,25	•	•	•	•

• = standard execution

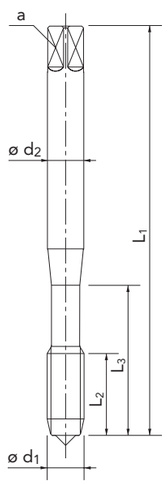
See price list on page 26 26 26 26

R40 2 | 2,5 x D | ASME B1.1 | HSSE

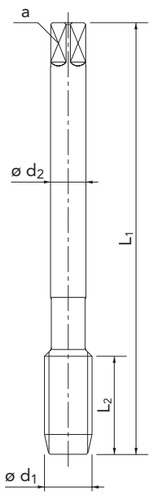
VERGNANO

MACHINE TAPS for light alloys - Two spiral flutes with 40° angle
For blind holes
Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A65			
Tolerance	2B			
Chamfer form	C (2-3)			
Application range	4.1-2 5.1-2 6.1			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	•			

• = standard execution

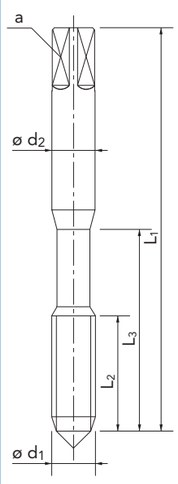
See price list on page 27

2,5 x D | ASME B1.1 | HSS

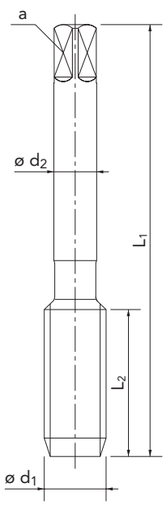
VERGNANO

HAND TAPS in sets of two pieces
For blind and through holes
Unified fine thread - UNF ASME - B1.1

DIN 2184-2 ≤ ø 1/4"



DIN 2184-2 ≥ ø 5/16"



Tool code	A8 ROUGHING	A8 FINISHING	A8 SET	
Tolerance	—	2B	2B	
Chamfer form	A (5-6)	C (2-3)	C (2-3)	
Application range	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
Nr.2	64	2,184	36	8,5	13,5	2,8	2,1	3	1,85	•	•	•	
Nr.3	56	2,515	40	8,5	14,5	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	6,350	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	12,700	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	19,050	80	22	-	14	11	4	17,5	•	•	•	
7/8"	14	22,225	80	22	-	18	14,5	4	20,4	•	•	•	
1"	12	25,400	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	31,750	90	22	-	22	18	4	29,5	•	•	•	
1 3/8"	12	34,925	125	30	-	28	22	4	32,75	★	★	★	
1 1/2"	12	38,100	125	32	-	28	22	5	36	★	★	★	

• = standard execution
★= on request

See price list on page 27 27 27

1,5 x D | 1,5 x D | ASME B1.1 | HSSE

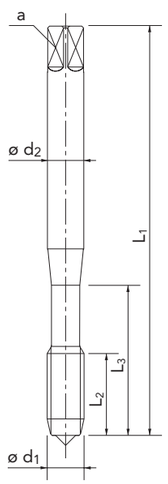
VERGNANO

MACHINE TAPS - Straight flutes

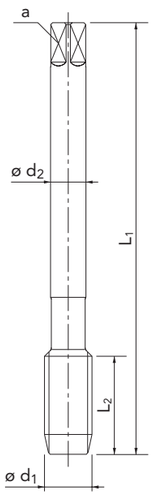
FC = For blind holes FP = For through holes

Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A28 FC	A28 FC TiN	A28 FP	A28 FP TiN
Tolerance	2B	2B	2B	2B
Chamfer form	C (2-3)	C (2-3)	A (5-6)	A (5-6)
Application range	1.2-3 3.2	1.1-3 3.2	1.2-3 3.2	1.1-3 3.2
Hole type	1,5 x D	1,5 x D	1,5 x D	1,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A28 FC	A28 FC TiN	A28 FP	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	6,350	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	12,700	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	19,050	110	25	-	14	11	4	17,5	•	•	•	•
7/8"	14	22,225	125	25	-	18	14,5	4	20,4	•	•	•	•
1"	12	25,400	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	31,750	150	28	-	22	18	4	29,5	•		•	
1 3/8"	12	34,925	170	30	-	28	22	4	32,75	•		•	
1 1/2"	12	38,100	170	30	-	28	22	5	36	•		•	

• = standard execution

See price list on page 28 28 28 28

2,5 x D | ASME B1.1 | HSSE

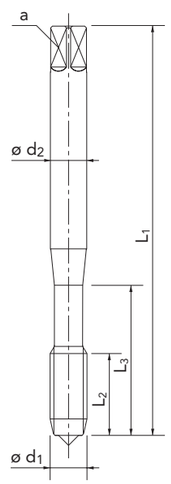
VERGNANO

MACHINE TAPS for cast iron - Straight flutes

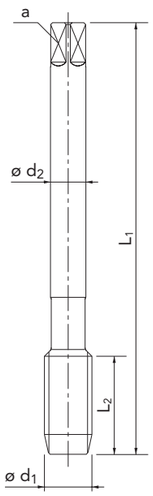
For blind and through holes

Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A50 NITRIDED	A50 TiCN		
Tolerance	2BX	2BX		
Chamfer form	C (2-3)	C (2-3)		
Application range	3.1 4.4 5.3	3.1 4.4 5.3		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A50 NITRIDED	A50 TiCN		
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	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	12,700	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 1/8"	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	•			

• = standard execution

★= on request

See price list on page 28 28

2,5 x D | ASME B1.1 | HSSE

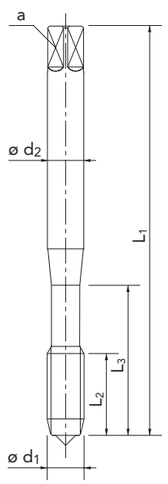
VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring

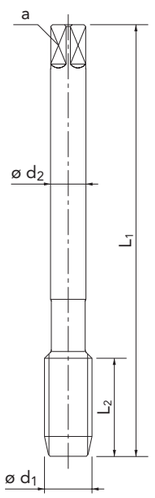
For through holes

Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A20 S	A20 S TiN	A20 S TiCN	A20 S 3B
Tolerance	2B	2B	2B	3B
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.2 5.2	1.2-5 2.1-3 3.2 4.1-2 5.1-2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
Nr.2	64	2,184	45	9	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	6,350	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	12,700	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	19,050	110	25	-	14	11	4	17,5	•	•	•	•
7/8"	14	22,225	125	25	-	18	14,5	4	20,4	•	•	•	
1"	12	25,400	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	31,750	150	28	-	22	18	4	29,5	★			
1 3/8"	12	34,925	170	30	-	28	22	5	32,75	★			
1 1/2"	12	38,100	170	30	-	28	22	5	36	★			

• = standard execution

★= on request

See price list on page 29 29 29 29

R 15 | 1,5 x D | ASME B1.1 | HSSE

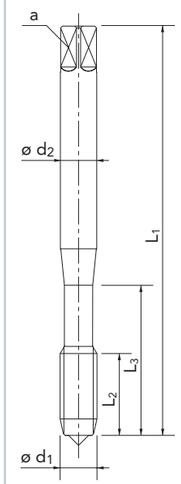
VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle

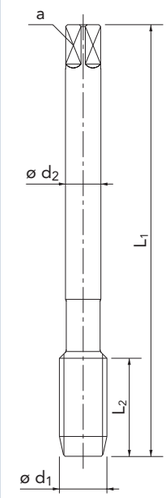
For blind holes

Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A34	A34 TiN	A34 TiCN	A34 3B
Tolerance	2B	2B	2B	3B
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	1.1-4 3.2 4.1-2 5.1-2
Hole type	1,5 x D	1,5 x D	1,5 x D	1,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	110	25	-	14	11	4	17,5	•	•	•	•
7/8"	14	22,225	125	25	-	18	14,5	4	20,4	•	•	•	
1"	12	25,400	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	31,750	150	28	-	22	18	4	29,5	•			
1 3/8"	12	34,925	170	30	-	28	22	5	32,75	•			
1 1/2"	12	38,100	170	30	-	28	22	5	36	•			

• = standard execution

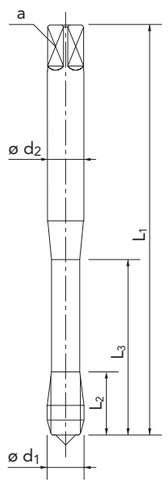
See price list on page 29 29 29 29

R40 | 2,5 x D | ASME B1.1 | HSSE

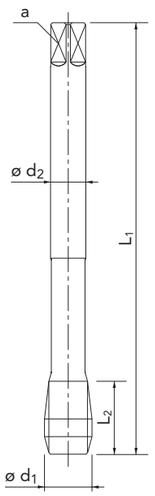
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A61	A61 TiN	A61 TiCN	
Tolerance	2B	2B	2B	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	100	14,5	-	9	7	3	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	19,050	110	18	-	14	11	4	17,5	•	•	•	
7/8"	14	22,225	125	23,5	-	18	14,5	4	20,4	•	•	•	
1"	12	25,400	140	26	-	18	14,5	4	23,25	•	•	•	

• = standard execution

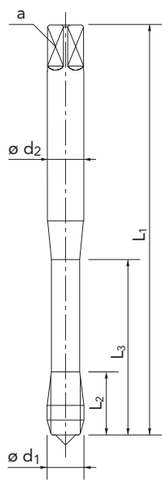
See price list on page 30 30 30

R40 | 2,5 x D | ASME B1.1 | HSSE

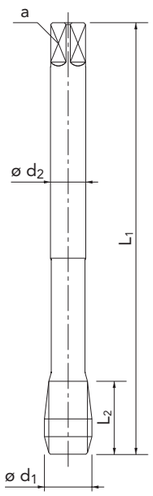
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A61 S	A61 S TiN	A61 S TiCN	
Tolerance	2B	2B	2B	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	100	14,5	-	9	7	3	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	19,050	110	18	-	14	11	4	17,5	•	•	•	
7/8"	14	22,225	125	23,5	-	18	14,5	4	20,4	•	•	•	
1"	12	25,400	140	26	-	18	14,5	4	23,25	•	•	•	

• = standard execution

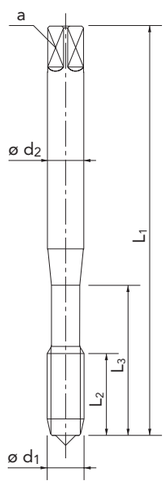
See price list on page 30 30 30

R40 2 | 2,5 x D | ASME B1.1 | HSSE

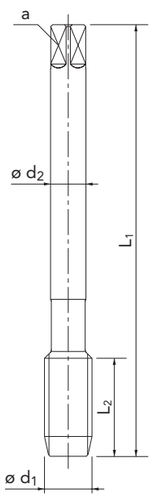
VERGNANO

MACHINE TAPS for light alloys - Two spiral flutes with 40° angle
For blind holes
Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A66			
Tolerance	2B			
Chamfer form	C (2-3)			
Application range	4.1-2 5.1-2 6.1			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
Nr.2	64	2,184	45	9	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	6,350	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	•			

• = standard execution

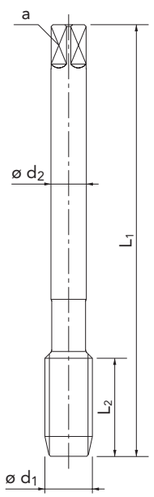
See price list on page 30

2,5 x D | ASME B1.1 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
8-UN thread - ASME B1.1

DIN 2184-1



Tool code	A119	A119 TiN		
Tolerance	2B	2B		
Chamfer form	B (4-5)	B (4-5)		
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

8-UN	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
1 1/8"	8	28,575	180	40	-	22	18	4	25,4	•	•		
1 1/4"	8	31,750	180	40	-	25	20	4	28,6	•	•		
1 3/8"	8	34,925	200	50	-	28	22	4	31,8	•	•		
1 1/2"	8	38,100	200	50	-	32	24	4	35	•	•		
1 5/8"	8	41,275	200	50	-	32	24	5	38,1	•	•		
1 3/4"	8	44,450	200	50	-	36	29	5	41,3	•	•		
1 7/8"	8	47,625	225	60	-	36	29	5	44,5	•	•		
2"	8	50,800	225	60	-	40	32	5	47,7	•	•		

• = standard execution

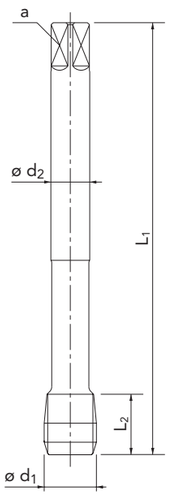
See price list on page 30 30

R40 | 2,5 x D | ASME B1.1 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
8-UN thread - ASME B1.1

DIN 2184-1



Tool code	A160	A160 TiN		
Tolerance	2B	2B		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

8-UN	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
1 1/8"	8	28,575	180	40	-	22	18	4	25,4	•	•		
1 1/4"	8	31,750	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	38,100	200	50	-	32	24	5	35	•	•		
1 5/8"	8	41,275	200	52	-	32	24	5	38,1	•	•		
1 3/4"	8	44,450	200	52	-	36	29	5	41,3	•	•		
1 7/8"	8	47,625	225	53,5	-	36	29	5	44,5	•	•		
2"	8	50,800	225	61,5	-	40	32	5	47,7	•	•		

• = standard execution

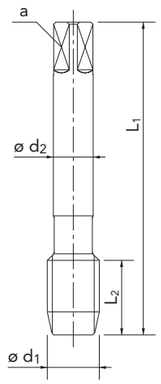
See price list on page 31 31

2,5 x D | EN ISO 228 | HSS

VERGNANO

HAND TAPS in sets of two pieces
For blind and through holes
Whitworth pipe thread - EN ISO 228

DIN 5157



Tool code	A5 ROUGHING	A5 FINISHING	A5 SET	
Tolerance	—	ISO 5969	ISO 5969	
Chamfer form	A (5-6)	C (2-3)	C (2-3)	
Application range	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	1.1-4 2.1 3.2 4.1-4 5.1-3	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	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	•	•	•	
2 1/4"	11	65,710	160	38	-	50	39	8	63,3	★	★	★	
2 1/2"	11	75,184	160	40	-	50	39	8	72,8	★	★	★	
2 3/4"	11	81,534	160	40	-	50	39	8	79,1	★	★	★	
3"	11	87,884	160	40	-	50	39	8	85,5	★	★	★	

• = standard execution
★= on request

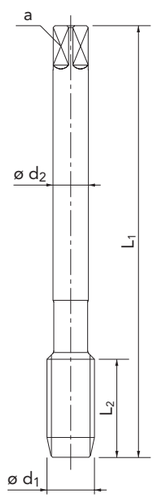
See price list on page 31 31 31

1,5 x D | 1,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
FC = For blind holes FP = For through holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	A26 FC	A26 FP		
Tolerance	ISO 5969	ISO 5969		
Chamfer form	C (2-3)	A (5-6)		
Application range	1.2-3 3.2	1.2-3 3.2		
Hole type	1,5 x D	1,5 x D		
Direction of cut	RH	RH		
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	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	•	•		

• = standard execution

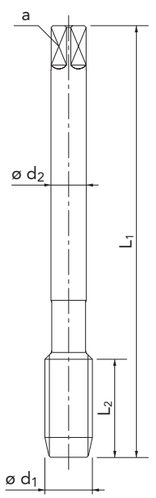
See price list on page 31 31

2,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS for cast iron - Straight flutes
For blind and through holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	A48 NITRIDED	A48 TiCN		
Tolerance	ISO 5969 X	ISO 5969 X		
Chamfer form	C (2-3)	C (2-3)		
Application range	3.1 4.4 5.3	3.1 4.4 5.3		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	170	30	-	32	24	6	39,5	•			
1 1/2"	11	47,803	190	32	-	36	29	6	45,25	•			

• = standard execution

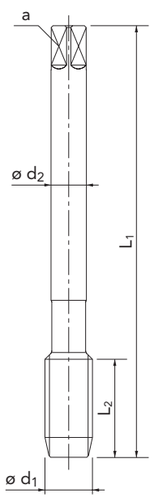
See price list on page 32 32

2,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point - Orange ring
For through holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	A18 S	A18 S VAP	A18 S TiCN	A18 S TiX2
Tolerance	ISO 5969	ISO 5969	ISO 5969	ISO 5969
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.1-2 5.1-2	1.2-5 2.1-3 3.2 4.2 5.2	2.1-3
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	170	30	-	32	24	5	39,5	•			
1 1/2"	11	47,803	190	32	-	36	29	5	45,25	•			

• = standard execution

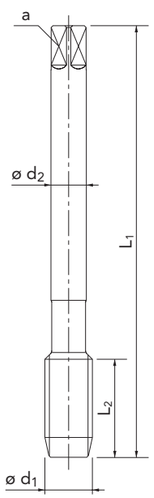
See price list on page 32 32 32 32

R 15 | 1,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	A32	A32 TiN	A32 TiCN	
Tolerance	ISO 5969	ISO 5969	ISO 5969	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	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	•			

• = standard execution

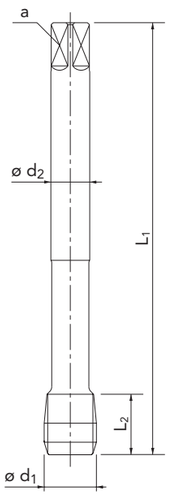
See price list on page 32 32 32

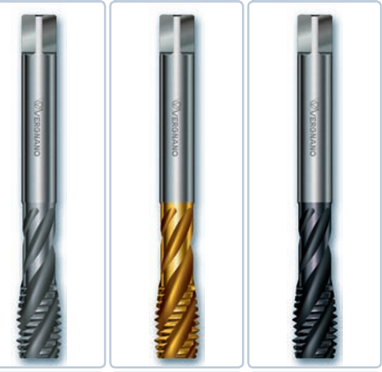
R40 | 2,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
Whitworth pipe thread - EN ISO 228

DIN 5156





Tool code	A59	A59 TiN	A59 TiCN	
Tolerance	ISO 5969	ISO 5969	ISO 5969	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-3 3.2 4.1-2 5.1-2 6.1	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
1/8"	28	9,728	90	17	-	7	5,5	3	8,8	•	•	•	
1/4"	19	13,157	100	23	-	11	9	3	11,8	•	•	•	
3/8"	19	16,662	100	23	-	12	9	3	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	41,910	170	34,5	-	32	24	5	39,5	•			
1 1/2"	11	47,803	190	37,5	-	36	29	6	45,25	•			

• = standard execution

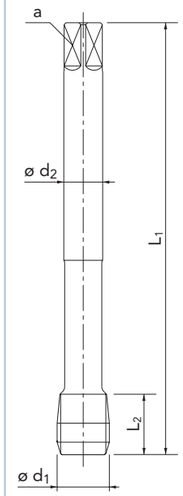
See price list on page 33 33 33

R40 | 2,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	A59 S	A59 S VAP	A59 S TiN	A59 S TiCN
Tolerance	ISO 5969	ISO 5969	ISO 5969	ISO 5969
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	170	34,5	-	32	24	5	39,5	•	•		
1 1/2"	11	47,803	190	37,5	-	36	29	6	45,25	•	•		

• = standard execution

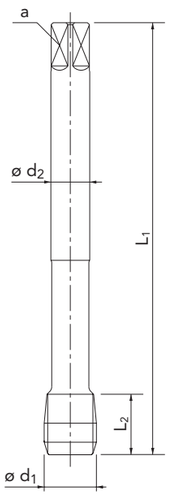
See price list on page 33 33 33 33

R40 | 2,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	A59 S TiX2			
Tolerance	ISO 5969			
Chamfer form	C (2-3)			
Application range	2.1-3			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			

• = standard execution

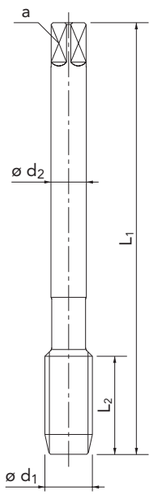
See price list on page 33

2,5 x D | EN ISO 228 | HSSE

VERGNANO

COLD FORMING TAPS - Oil grooves
For blind and through holes
Whitworth pipe thread - EN ISO 228

DIN 2189



Tool code	A82 N VAP	A82 N TiN	A82 N TiCN	
Tolerance	ISO 5969 X	ISO 5969 X	ISO 5969 X	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-3	1.1-3 2.1-2 4.1-3 5.2	1.1-4 2.1-2 4.1-3 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

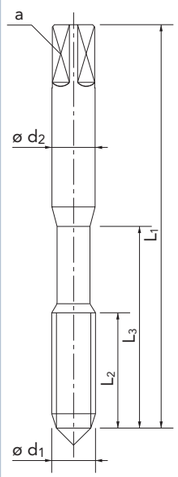
See price list on page 33 33 33

2,5 x D | BS 84 | HSS

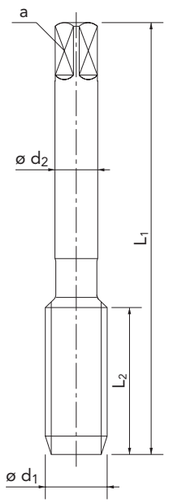
VERGNANO

HAND TAPS in sets of three pieces
For blind and through holes
Whitworth thread - BS 84

DIN 2184-2 ≤ ø 1/4"



DIN 2184-2 ≥ ø 5/16"



Tool code	A4 ROUGHING	A4 SECOND	A4 FINISHING	A4 SET
Tolerance	—	—	mc	mc
Chamfer form	A (5-6)	D (4-5)	C (2-3)	C (2-3)
Application range	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3	1.1-4 2.1 3.2 4.1-3 5.1-3
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

BSW	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	95	32	-	14	11	4	16,4	•	•	•	•
7/8"	9	22,225	100	32	-	18	14,5	4	19,25	•	•	•	•
1"	8	25,400	110	36	-	18	14,5	4	22	•	•	•	•
1 1/8"	7	28,575	125	40	-	22	18	4	24,75	•	•	•	•
1 1/4"	7	31,750	125	40	-	22	18	4	27,75	•	•	•	•

• = standard execution

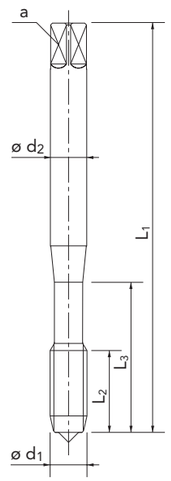
See price list on page 33 33 33 33

1,5 x D | 1,5 x D | BS 84 | HSSE

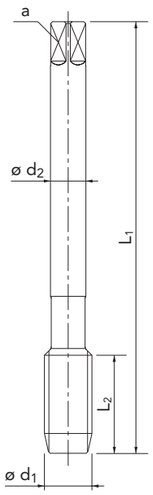
VERGNANO

MACHINE TAPS - Straight flutes
FC = For blind holes FP = For through holes
Whitworth thread - BS 84

DIN 2184-1 ≤ ø 3/8"



DIN 2184-1 ≥ ø 7/16"



Tool code	A24 FC	A24 FP		
Tolerance	mc	mc		
Chamfer form	C (2-3)	A (5-6)		
Application range	1.2-3 3.2	1.2-3 3.2		
Hole type	1,5 x D	1,5 x D		
Direction of cut	RH	RH		
Through coolant				

BSW	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	125	32	-	14	11	4	16,4	•	•		
7/8"	9	22,225	140	32	-	18	14,5	4	19,25	•	•		
1"	8	25,400	160	36	-	18	14,5	4	22	•	•		
1 1/8"	7	28,575	180	40	-	22	18	4	24,75	•	•		
1 1/4"	7	31,750	180	40	-	22	18	4	27,75	•	•		
1 3/8"	6	34,925	200	45	-	28	22	5	30,3	★	★		
1 1/2"	6	38,100	200	45	-	28	22	5	33,5	★	★		

• = standard execution
★= on request

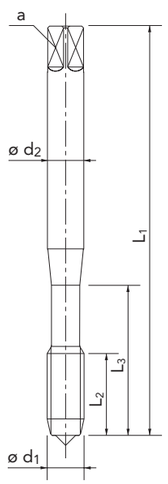
See price list on page 34 34

R 15 | 1,5 x D | BS 84 | HSSE

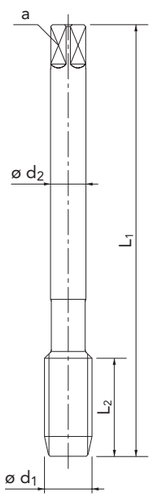
VERGNANO

MACHINE TAPS - Spiral flutes with 15° angle
For blind holes
Whitworth thread - BS 84

DIN 2184-1 ≤ ø 3/8"



DIN 2184-1 ≥ ø 7/16"



Tool code	A31	A31 TiN		
Tolerance	mc	mc		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-5 3.2 4.2 5.2		
Hole type	1,5 x D	1,5 x D		
Direction of cut	RH	RH		
Through coolant				

BSW	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	6,350	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	12,700	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	19,050	125	32	-	14	11	4	16,4	•	•		
7/8"	9	22,225	140	32	-	18	14,5	4	19,25	•	•		
1"	8	25,400	160	36	-	18	14,5	4	22	•	•		
1 1/8"	7	28,575	180	40	-	22	18	4	24,75	•	★		
1 1/4"	7	31,750	180	40	-	22	18	4	27,75	•	★		
1 3/8"	6	34,925	200	45	-	28	22	5	30,3	★	★		
1 1/2"	6	38,100	200	45	-	28	22	5	33,5	★	★		

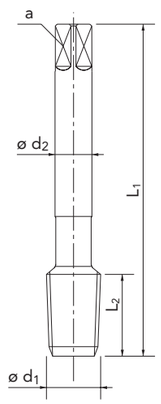
• = standard execution
★= on request

See price list on page 34 34

DIN EN 10226-2 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For blind holes
Conical gas thread Rc (BSPT), taper 1:16 - BS 21 and DIN EN 10226-2



Tool code	A6			
Tolerance	—			
Chamfer form	C (2-3)			
Application range	1.2-4 3.2			
Hole type				
Direction of cut	RH			
Through coolant				

Rc	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	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)	•			

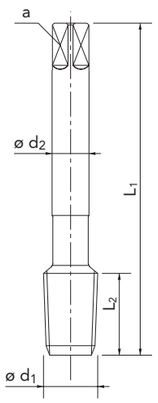
• = standard execution
(a) = cylindrical hole (see page 222)

See price list on page 35

ASME B1.20.1 HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For blind holes
National pipe thread, taper 1:16 - ANSI B1.20.1



Tool code	A6 B
Tolerance	—
Chamfer form	C (2-3)
Application range	1.2-4 3.2
Hole type	
Direction of cut	RH
Through coolant	

NPT	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 B
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	26,670	100	24	-	20	16	5	23,2 (a)	•
1"	11 1/2	33,401	110	30	-	25	20	5	29 (a)	•
1 1/4"	11 1/2	42,164	125	32	-	32	24	5	37,8 (a)	•
1 1/2"	11 1/2	48,260	140	32	-	36	29	6	44 (a)	•
2"	11 1/2	60,325	160	34	-	45	35	6	56 (a)	•

• = standard execution
(a) = cylindrical hole (see page 222)

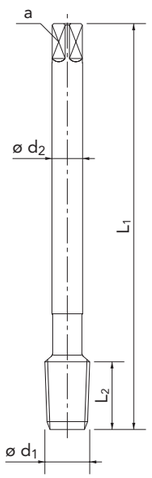
See price list on page 35

ASME B1.20.1 HSSE

VERGNANO

MACHINE TAPS - Straight flutes - Interrupted thread
For blind holes
National pipe thread, taper 1:16 - ANSI B1.20.1

DIN 374



Tool code	A6 BZ
Tolerance	—
Chamfer form	C (2-3)
Application range	1.1 2.1-2 4.1-2 5.1-2
Hole type	
Direction of cut	RH
Through coolant	

NPT	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 BZ
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	26,670	150	24	-	20	16	5	23,2 (a)	•
1"	11 1/2	33,401	170	30	-	25	20	5	29 (a)	•

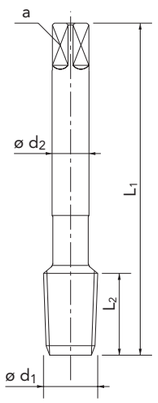
• = standard execution
(a) = cylindrical hole (see page 222)

See price list on page 35

ASME B1.20.3 HSSE

VERGNANO

MACHINE TAPS - Straight flutes
For blind holes
Dryseal National pipe thread, taper 1:16 - ANSI B1.20.3



Tool code	A6 F
Tolerance	—
Chamfer form	C (2-3)
Application range	1.2-4 3.2
Hole type	
Direction of cut	RH
Through coolant	

NPTF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 F
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	26,670	100	24	-	20	16	5	23 (a)	•
1"	11 1/2	33,401	110	30	-	25	20	5	29 (a)	•
1 1/4"	11 1/2	42,164	125	32	-	32	24	5	37,8 (a)	•
1 1/2"	11 1/2	48,260	140	32	-	36	29	6	43,8 (a)	•
2"	11 1/2	60,325	160	34	-	45	35	6	56 (a)	•

• = standard execution
(a) = cylindrical hole (see page 222)

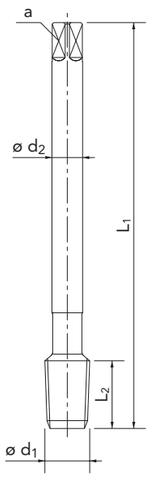
See price list on page 36

ASME B1.20.3 HSSE

VERGNANO

MACHINE TAPS - Straight flutes - Interrupted thread
For blind holes
Dryseal National pipe thread, taper 1:16 - ANSI B1.20.3

DIN 374



Tool code	A6 FZ
Tolerance	—
Chamfer form	C (2-3)
Application range	1.1 2.1-2 4.1-2 5.1-2
Hole type	
Direction of cut	RH
Through coolant	

NPTF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A6 FZ
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	26,670	150	24	-	20	16	5	23 (a)	•
1"	11 1/2	33,401	170	30	-	25	20	5	29 (a)	•

• = standard execution
(a) = cylindrical hole (see page 222)

See price list on page 36

P

VERGNANO

High Performance "P" Series Taps

This section comprises high performance taps for the highest demands in terms of productivity. These taps can be used on a wide range of materials.
"P" Series are available as cutting taps and forming taps.

2,5 x D | DIN 13 | HSSP

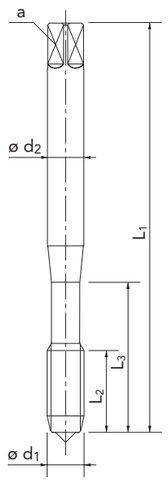
VERGNANO

High Performance MACHINE TAPS - Straight flutes with spiral point

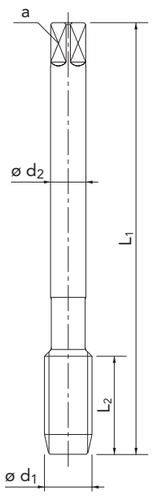
For through holes

ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	P15 TiN	P15 TiH1	P15 6GX TiN	BP15 TiH1
Tolerance	6HX	6HX	6GX	6HX
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.3-5 2.1-3 3.2 4.2 5.2 9.2	1.3-5 2.1-3 3.2 4.2 5.2 9.2	1.3-5 2.1-3 3.2 4.2 5.2 9.2	1.3-5 2.1-3 3.2 4.2 5.2 9.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
(*) 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	4	29,5	•	•		
36	4	200	55	-	28	22	4	32	•	•		

• = standard execution

(*) = Tolerance 5HX and material HSSK

See price list on page 37 37 37 37

R 15 | 1,5 x D | DIN 13 | HSSP

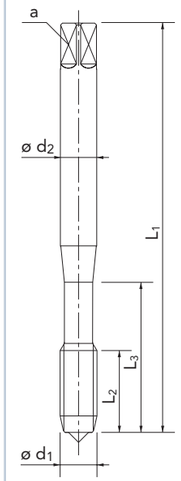
VERGNANO

High Performance MACHINE TAPS - Spiral flutes with 15° angle

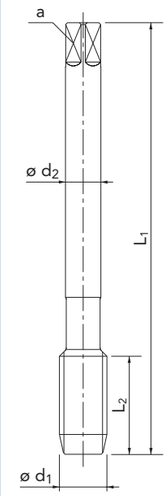
For blind holes

ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	P29	P29 TiN	P29 TiH1	BP29 TiH1
Tolerance	6HX	6HX	6HX	6HX
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.4-6 2.3 3.2 5.2-4 7.2 8.2	1.4-6 2.3 3.2 4.2 5.2 8.2	1.4-6 2.3 3.2 4.2 5.2 8.2	1.4-6 2.3 3.2 4.2 5.2 8.2
Hole type	1,5 x D	1,5 x D	1,5 x D	1,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•	•	•	•

• = standard execution

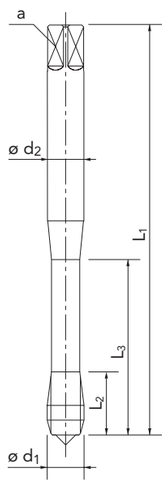
See price list on page 37 37 37 37

R45 | 2,5 x D | DIN 13 | HSSZ

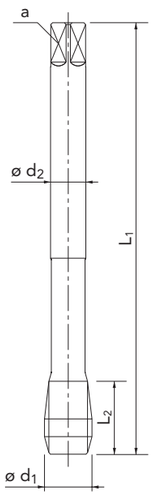
VERGNANO

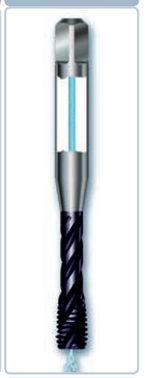
High Performance MACHINE TAPS - Spiral flutes with 45° angle - Back tapered
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	P70 TiN	P70 TiH1	P70 6GX TiN	BP70 TiH1
				
Tolerance	6HX	6HX	6GX	6HX
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	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	•	•	•	•
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	•	•		

• = standard execution

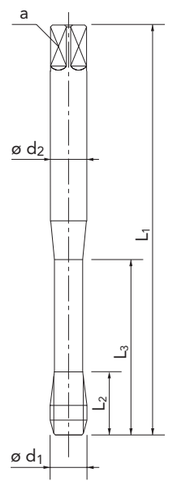
See price list on page 38 38 38 38

R45 | 2,5 x D | DIN 13 | HSSZ | E (1,5-2)

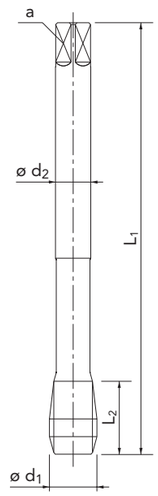
VERGNANO

High Performance MACHINE TAPS - Spiral flutes with 45° angle - Back tapered - Short chamfer form "E"
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	P70 E TiN	P70 E TiH1		
Tolerance	6HX	6HX		
Chamfer form	E (1,5-2)	E (1,5-2)		
Application range	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	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	5	12	•	•		
16	2	110	20,5	-	12	9	5	14	•	•		
20	2,5	140	25,5	-	16	12	5	17,5	•	•		

• = standard execution

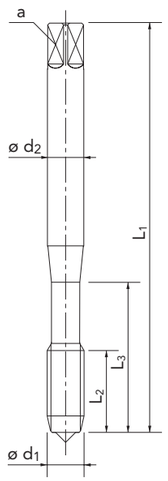
See price list on page 38 38

1,5 x D | DIN 13 | HSSK

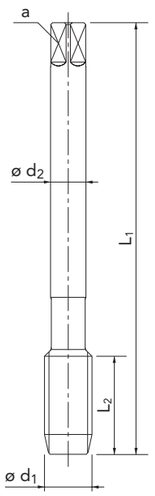
VERGNANO

High Performance COLD FORMING TAPS
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	P80 TiN	P80 6GX TiN	P80 7GX TiN	
Tolerance	6HX	6GX	7GX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	3	2,8	•	•	•	
3,5	0,6	56	11	20	4	3	3	3,25	•	•	•	
4	0,7	63	12	21	4,5	3,4	4	3,7	•	•	•	
5	0,8	70	14	24,5	6	4,9	4	4,65	•	•	•	
6	1	80	16	29	6	4,9	5	5,55	•	•	•	
8	1,25	90	18	33	8	6,2	5	7,45	•	•	•	
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	•	•	•	

• = standard execution

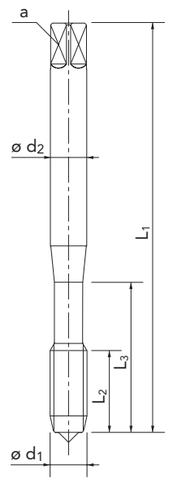
See price list on page 38 38 38

2,5 x D | DIN 13 | HSSK

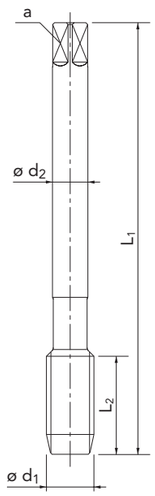
VERGNANO

High Performance COLD FORMING TAPS - Oil grooves
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	P80 N TiN	P80 N 6GX TiN	P80 N 7GX TiN	
Tolerance	6HX	6GX	7GX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	3	2,8	•	•	•	
3,5	0,6	56	11	20	4	3	3	3,25	•	•	•	
4	0,7	63	12	21	4,5	3,4	4	3,7	•	•	•	
5	0,8	70	14	24,5	6	4,9	4	4,65	•	•	•	
6	1	80	16	29	6	4,9	5	5,55	•	•	•	
8	1,25	90	18	33	8	6,2	5	7,45	•	•	•	
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	•	•		

• = standard execution

See price list on page 38 38 38

1,5 x D | 2,5 x D | DIN 13 | HSSK | E (1,5-2)

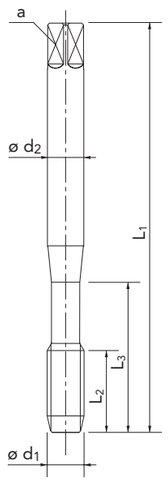
VERGNANO

High Performance COLD FORMING TAPS - Short chamfer form "E"

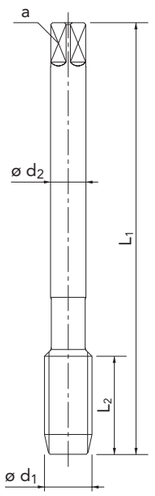
For blind holes

ISO Metric coarse thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	P80 E TiN	P80 N E TiN	P80 N E 6GX TiN	
Tolerance	6HX	6HX	6GX	
Chamfer form	E (1,5-2)	E (1,5-2)	E (1,5-2)	
Application range	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	
Hole type	1,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

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

• = standard execution

See price list on page 39 39 39

2,5 x D | 2,5 x D | DIN 13 | HSSK

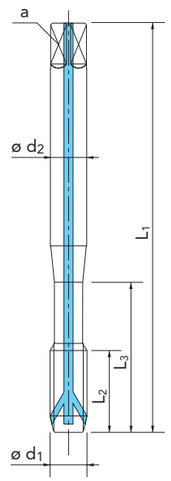
VERGNANO

High Performance COLD FORMING TAPS - Oil grooves - Internal coolant

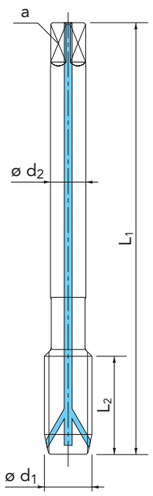
For blind and through holes

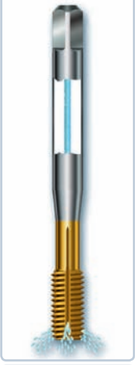
ISO Metric coarse thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	BP80 N TiN	BP80 NR TiN		
				
Tolerance	6HX	6HX		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 5	0,8	70	14	24,5	6	4,9	4	4,65	•	•		
6	1	80	16	29	6	4,9	5	5,55	•	•		
8	1,25	90	18	33	8	6,2	5	7,45	•	•		
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		•		

• = standard execution

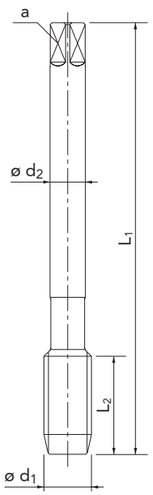
See price list on page 39 39

2,5 x D | DIN 13 | HSSP

VERGNANO

High Performance MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	P17 TiN	P17 TiH1	P17 6GX TiN	P17 6GX TiH1
Tolerance	6HX	6HX	6GX	6GX
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.3-5 2.1-3 3.2 4.2 5.2 9.2	1.3-5 2.1-3 3.2 4.2 5.2 9.2	1.3-5 2.1-3 3.2 4.2 5.2 9.2	1.3-5 2.1-3 3.2 4.2 5.2 9.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

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 TiN	P17 6GX 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	•	•	•	•

• = standard execution

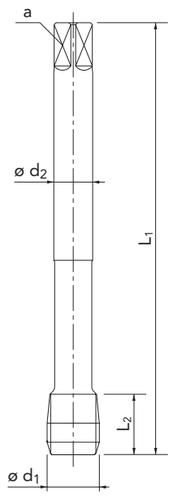
See price list on page 39 39 39 39

R45 | 2,5 x D | DIN 13 | HSSZ

VERGNANO

High Performance MACHINE TAPS - Spiral flutes with 45° angle - Back tapered
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	P71 TiN	P71 TiH1	P71 6GX TiN	P71 6GX TiH1
Tolerance	6HX	6HX	6GX	6GX
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

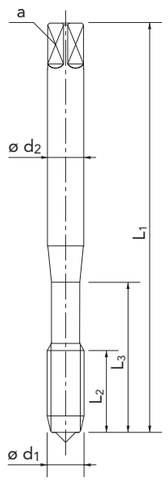
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	P71 TiN	P71 TiH1	P71 6GX TiN	P71 6GX TiH1
M 8	1	90	12	-	6	4,9	3	7	•	•	•	•
10	1	90	12	-	7	5,5	3	9	•	•	•	•
10	1,25	100	14	-	7	5,5	3	8,8	•	•	•	•
12	1	100	14	-	9	7	4	11	•	•	•	•
12	1,25	100	14	-	9	7	4	10,8	•	•	•	•
12	1,5	100	15	-	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	•	•	•	•

• = standard execution

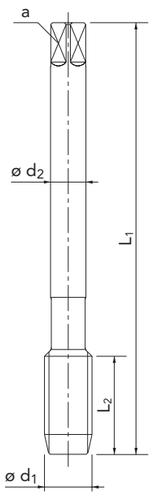
See price list on page 40 40 40 40

High Performance COLD FORMING TAPS
For blind and through holes
ISO Metric fine thread - DIN 13

DIN 2174 DIN 371 ≤ø10



DIN 2174 DIN 376 ≥ø12



Tool code	P81 TiN	P81 6GX TiN	P81 N TiN	P81 N 6GX TiN
Tolerance	6HX	6GX	6HX	6GX
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2
Hole type	1,5 x D	1,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

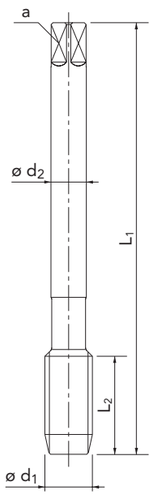
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 4	0,5	63	12	21	4,5	3,4	4	3,8	•	•	•	•
5	0,5	70	14	24,5	6	4,9	4	4,8	•	•	•	•
6	0,75	80	16	29	6	4,9	5	5,65	•	•	•	•
8	1	90	18	33	8	6,2	5	7,55	•	•	•	•
10	1	90	18	34	10	8	6	9,55	•	•	•	•
10	1,25	100	20	36	10	8	6	9,45	•	•	•	•
12	1	100	22	-	9	7	6	11,55	•	•	•	•
12	1,25	100	22	-	9	7	6	11,45	•	•	•	•
12	1,5	100	22	-	9	7	6	11,3	•	•	•	•
14	1,25	100	22	-	11	9	6	13,45	•	•	•	•
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			•	•

• = standard execution

See price list on page 40 40 40 40

High Performance MACHINE TAPS - Straight flutes with spiral point
For through holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	P18 TiN	P18 TiH1		
Tolerance	ISO 5969 X	ISO 5969 X		
Chamfer form	B (4-5)	B (4-5)		
Application range	1.3-5 2.1-3 3.2 4.2 5.2 9.2	1.3-5 2.1-3 3.2 4.2 5.2 9.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

• = standard execution

See price list on page 40 40

R45 | 2,5 x D | EN ISO 228 | HSSZ

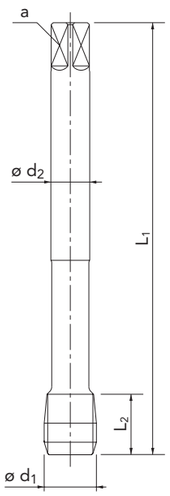
VERGNANO

High Performance MACHINE TAPS - Spiral flutes with 45° angle - Back tapered

For blind holes

Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	P59 TiN	P59 TiH1		
Tolerance	ISO 5969 X	ISO 5969 X		
Chamfer form	C (2-3)	C (2-3)		
Application range	1.3-5 2.1-3 3.2 4.2 5.2	1.3-5 2.1-3 3.2 4.2 5.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	4	19	•	•		
5/8"	14	22,911	125	20,5	-	18	14,5	4	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	•	•		

• = standard execution

See price list on page 41 41

2,5 x D | EN ISO 228 | HSSE

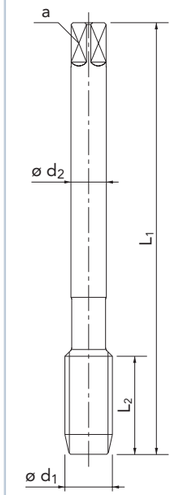
VERGNANO

High Performance COLD FORMING TAPS - Oil grooves

For blind and through holes

Whitworth pipe thread - EN ISO 2288

DIN 2189



Tool code	P82 N TiN			
Tolerance	ISO 5969 X			
Chamfer form	C (2-3)			
Application range	1.1-5 2.1-2 4.1-3 5.2			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			

• = standard execution

See price list on page 41

VERGNANO

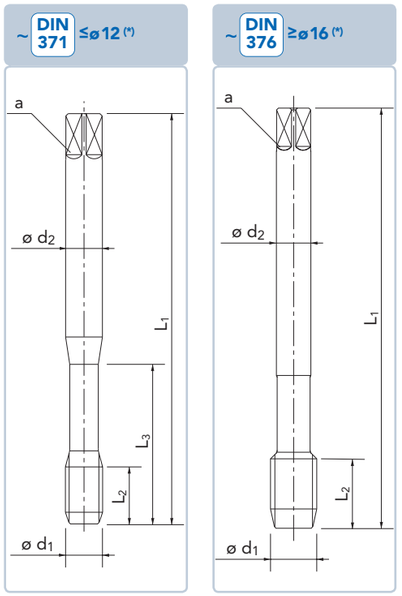
S

Synchronous Tapping "S" Series Taps

This section includes taps for synchronous/rigid tapping and high speed cutting.
These taps can reach high levels of productivity when used with appropriate tapping attachments for synchronous or rigid tapping.
"S" Series are available as cutting taps and forming taps.

VERGNANO

MACHINE TAPS for Synchronous Tapping for cast iron - Straight flutes
For blind and through holes
ISO Metric coarse thread - DIN 13



(*) DIN 1835-B on request

Tool code	S43 ACE	BS43 ACE	S43 E ACE	BS43 E ACE
Tolerance	6HX	6HX	6HX	6HX
Chamfer form	C (2-3)	C (2-3)	E (1,5-2)	E (1,5-2)
Application range	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3	3.1 4.4 5.3
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

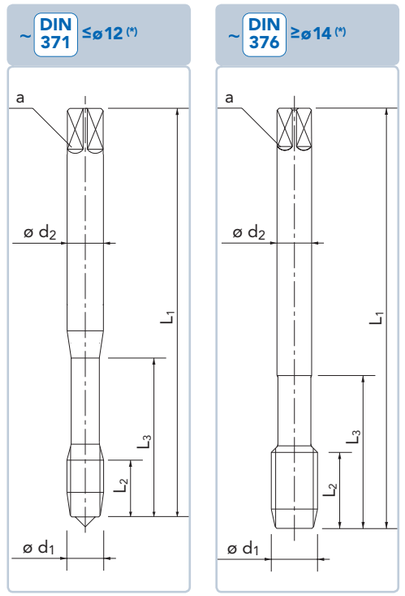
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
M 3	0,5	70	5	15	6	4,9	3	2,5	•			
4	0,7	70	7	18	6	4,9	3	3,3	•		•	
5	0,8	70	8	23	6	4,9	3	4,2	•	•	•	•
6	1	80	10	29	6	4,9	4	5	•	•	•	•
8	1,25	90	11	33	8	6,2	4	6,8	•	•	•	•
10	1,5	100	13	36	10	8	4	8,5	•	•	•	•
12	1,75	110	16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

• = standard execution

See price list on page 42 42 42 42

VERGNANO

MACHINE TAPS for Synchronous Tapping - Straight flutes with spiral point
For through holes
ISO Metric coarse thread - DIN 13



(*) DIN 1835-B on request

Tool code	S15 TiN	S15 TiH1	BS15 TiH1	
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 2.1-3 3.2 4.1-3 5.1-3 6.1-2 8.1 9.1	1.1-5 2.1-3 3.2 4.1-3 5.1-3 6.1-2 8.1 9.1	1.1-5 2.1-3 3.2 4.1-3 5.1-3 6.1-2 8.1 9.1	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

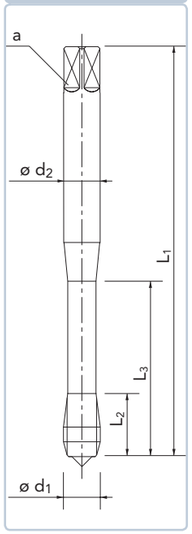
See price list on page 42 42 42

R40 | 2,5 x D | DIN 13 | HSSK | S

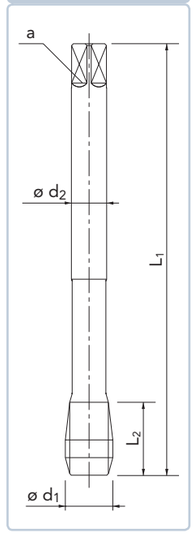
VERGNANO

MACHINE TAPS for Synchronous Tapping - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric coarse thread - DIN 13

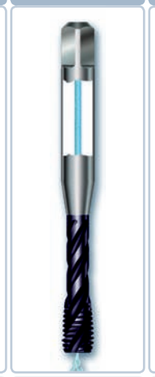
~ DIN 371 ≤ø12 (*)



~ DIN 376 ≥ø14 (*)



(*) DIN 1835-B on request

Tool code	S70 TiN	S70 TiH1	BS70 TiH1	
				
Tolerance	6HX	6HX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.2-5 2.1-3 3.2 4.2-3 5.2-3 6.2	1.2-5 2.1-3 3.2 4.2-3 5.2-3 6.2	1.2-5 2.1-3 3.2 4.2-3 5.2-3 6.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

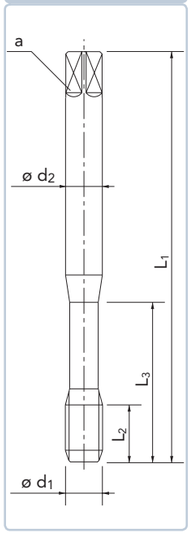
See price list on page 42 42 42

2,5 x D | DIN 13 | HSSK | S

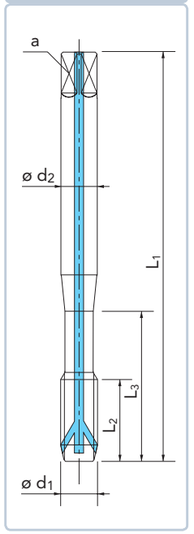
VERGNANO

COLD FORMING TAPS for Synchronous Tapping - Oil grooves
For blind and through holes
ISO Metric coarse thread - DIN 13

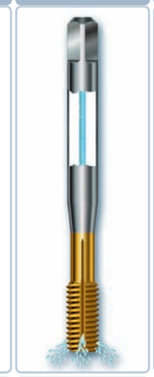
~ DIN 371 ≤ø12 (*)



~ DIN 371 ≤ø12 (*)



(*) DIN 1835-B on request

Tool code	S80 N TiN	S80 N 6GX TiN	BS80 NR TiN	
				
Tolerance	6HX	6GX	6HX	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	1.1-5 2.1-2 4.1-3 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

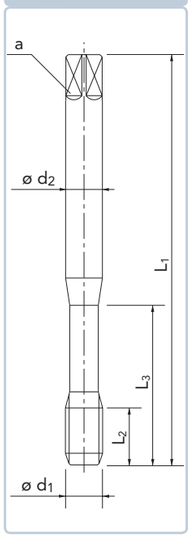
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
M 4	0,7	70	7	18	6	4,9	4	3,7	•	•		
5	0,8	70	8	23	6	4,9	5	4,65	•	•		
6	1	80	10	29	6	4,9	5	5,55	•	•	•	
8	1,25	90	11	33	8	6,2	5	7,45	•	•	•	
10	1,5	100	13	36	10	8	5	9,3	•	•	•	
12	1,75	110	16	42	12	9	5	11,2	•	•	•	

• = standard execution

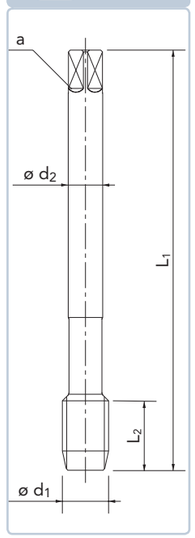
See price list on page 42 42 42

MACHINE TAPS for Synchronous Tapping for cast iron - Straight flutes
For blind and through holes
ISO Metric fine thread - DIN 13

~ DIN 371 ≤ø12 (*)



~ DIN 374 ≥ø14 (*)



(*) DIN 1835-B on request

Tool code	S45 ACE			
Tolerance	6HX			
Chamfer form	C (2-3)			
Application range	3.1 4.4 5.3			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

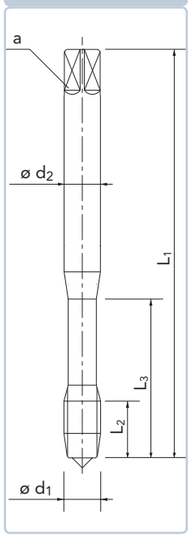
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
M 8	1	90	10	33	8	6,2	4	7	•			
10	1	90	10	33	10	8	4	9	•			
10	1,25	100	12,5	33	10	8	4	8,8	•			
12	1,25	100	12,5	33	12	9	4	10,8	•			
12	1,5	100	15	37	12	9	4	10,5	•			
14	1,5	100	15	-	12	9	4	12,5	•			
16	1,5	100	15	-	12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

• = standard execution

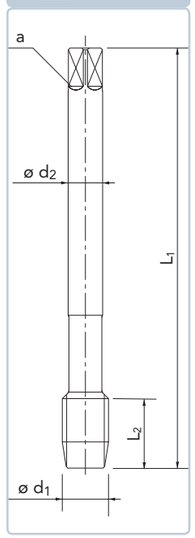
See price list on page 43

MACHINE TAPS for Synchronous Tapping - Straight flutes with spiral point
For through holes
ISO Metric fine thread - DIN 13

~ DIN 371 ≤ø12 (*)



~ DIN 374 ≥ø14 (*)



(*) DIN 1835-B on request

Tool code	S17 TiN			
Tolerance	6HX			
Chamfer form	B (4-5)			
Application range	1.1-5 2.1-3 3.2 4.1-3 5.1-3 6.1-2 8.1 9.1			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			

• = standard execution

See price list on page 43

R40 | 2,5 x D | DIN 13 | HSSK | S

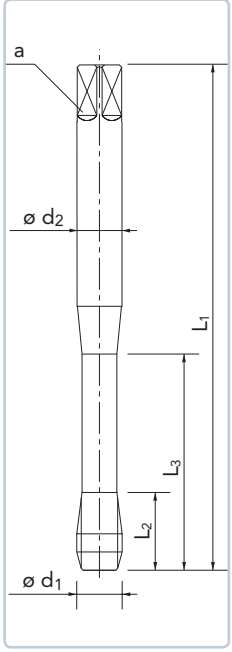
VERGNANO

MACHINE TAPS for Synchronous Tapping - Spiral flutes with 40° angle - Back tapered

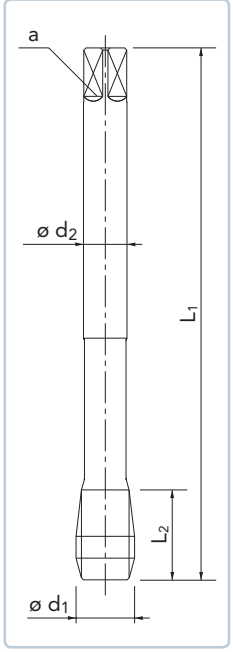
For blind holes

ISO Metric fine thread - DIN 13

~ DIN 371 ≤ø12 (*)



~ DIN 374 ≥ø14 (*)



(*) DIN 1835-B on request

Tool code	S71 TiN			
Tolerance	6HX			
Chamfer form	C (2-3)			
Application range	1.2-5, 2.1-3, 3.2, 4.2-3, 5.2-3, 6.2			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	•			

• = standard execution

See price list on page 43

VERGNANO

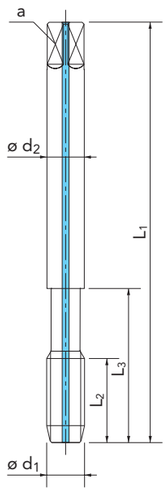
Solid Carbide "H" Series Taps

This section comprises the new solid carbide taps for machining heat-treated steels, grey cast iron and cast aluminium.
"H" Series are available as cutting taps and forming taps.

VERGNANO

SOLID CARBIDE TAPS for cast iron - Straight flutes - Internal axial coolant
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371



Tool code	HB43	HB43 TiAlN		
Tolerance	6HX	6HX		
Chamfer form	C (2-3)	C (2-3)		
Application range	3.1-2 4.3-4	3.1-2 4.3-4		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	4	4,2	•	•		
6	1	80	12	30	6	4,9	4	5	•	•		
8	1,25	90	16	35	8	6,2	4	6,8	•	•		
10	1,5	100	18	39	10	8	4	8,5	•	•		

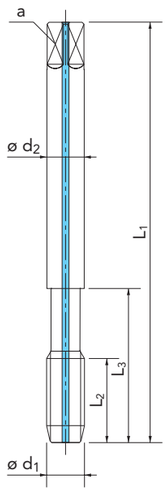
• = standard execution
(*)= Taps without through coolant

See price list on page 44 44

VERGNANO

SOLID CARBIDE TAPS - Spiral flutes with 15° angle - Internal axial coolant
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371



Tool code	HB29	HB29 TiCN		
Tolerance	6HX	6HX		
Chamfer form	C (2-3)	C (2-3)		
Application range	4.1-4 5.3 9.1	4.1-4 5.3 9.1		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•		

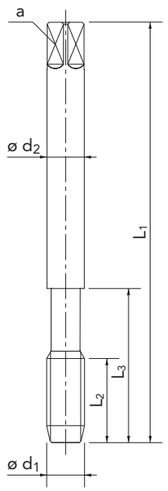
• = standard execution
(*)= Taps without through coolant

See price list on page 44 44

1,5 x D | DIN 13 | HM

VERGNANO

SOLID CARBIDE TAPS for hardened steels - Straight flutes
For blind and through holes
ISO Metric coarse thread - DIN 13



Tool code	H130	H130 TiCN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	D (4-5)	D (4-5)		
Application range	1.7-8	1.7-8		
Hole type	1,5 x D	1,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	22	6	4,9	4	4,3 (*)	•	•		
6	1	80	20	-	6	4,9	4	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 (*)	•	•		

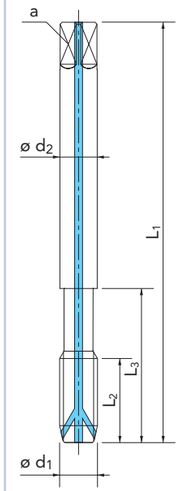
• = standard execution See price list on page 44 44
(*)= The hole diameters are oversized.
For hardened steel it is recommended to use twist drill type HP900 (page 177).

2,5 x D | DIN 13 | HM

VERGNANO

SOLID CARBIDE COLD FORMING TAPS - Oil grooves - Internal coolant
For blind and through holes
ISO Metric coarse thread - DIN 13

DIN 371



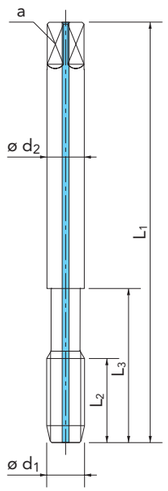
Tool code	HB80 NR TiCN			
Tolerance	6HX			
Chamfer form	C (2-3)			
Application range	1.1-5 2.1-2 4.1-3 5.1-2			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
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	4	3,7	•			
5	0,8	70	8,5	25	6	4,9	4	4,65	•			
6	1	80	11	30	6	4,9	4	5,55	•			
8	1,25	90	14	35	8	6,2	5	7,4	•			
10	1,5	100	16	39	10	8	5	9,25	•			

• = standard execution See price list on page 44
(*)= Taps without through coolant

SOLID CARBIDE TAPS for cast iron - Straight flutes - Internal axial coolant
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	HB45	HB45 TiAlN		
Tolerance	6HX	6HX		
Chamfer form	C (2-3)	C (2-3)		
Application range	3.1-2 4.3-4	3.1-2 4.3-4		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

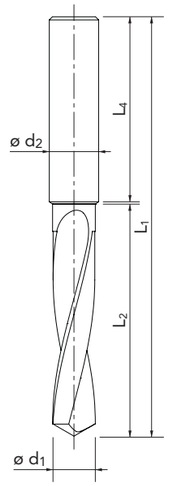
Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h6 [mm]	a h12 [mm]	z [-]	[mm]				
M 12	1,5	100	22	-	9	7	4	10,5	•	•		
14	1,5	100	22	-	11	9	4	12,5	•	•		
16	1,5	100	22	-	12	9	4	14,5	•	•		

• = standard execution

See price list on page 45 45

SOLID CARBIDE TWIST DRILL - Straight shank
For hardened steels

DIN 6537K



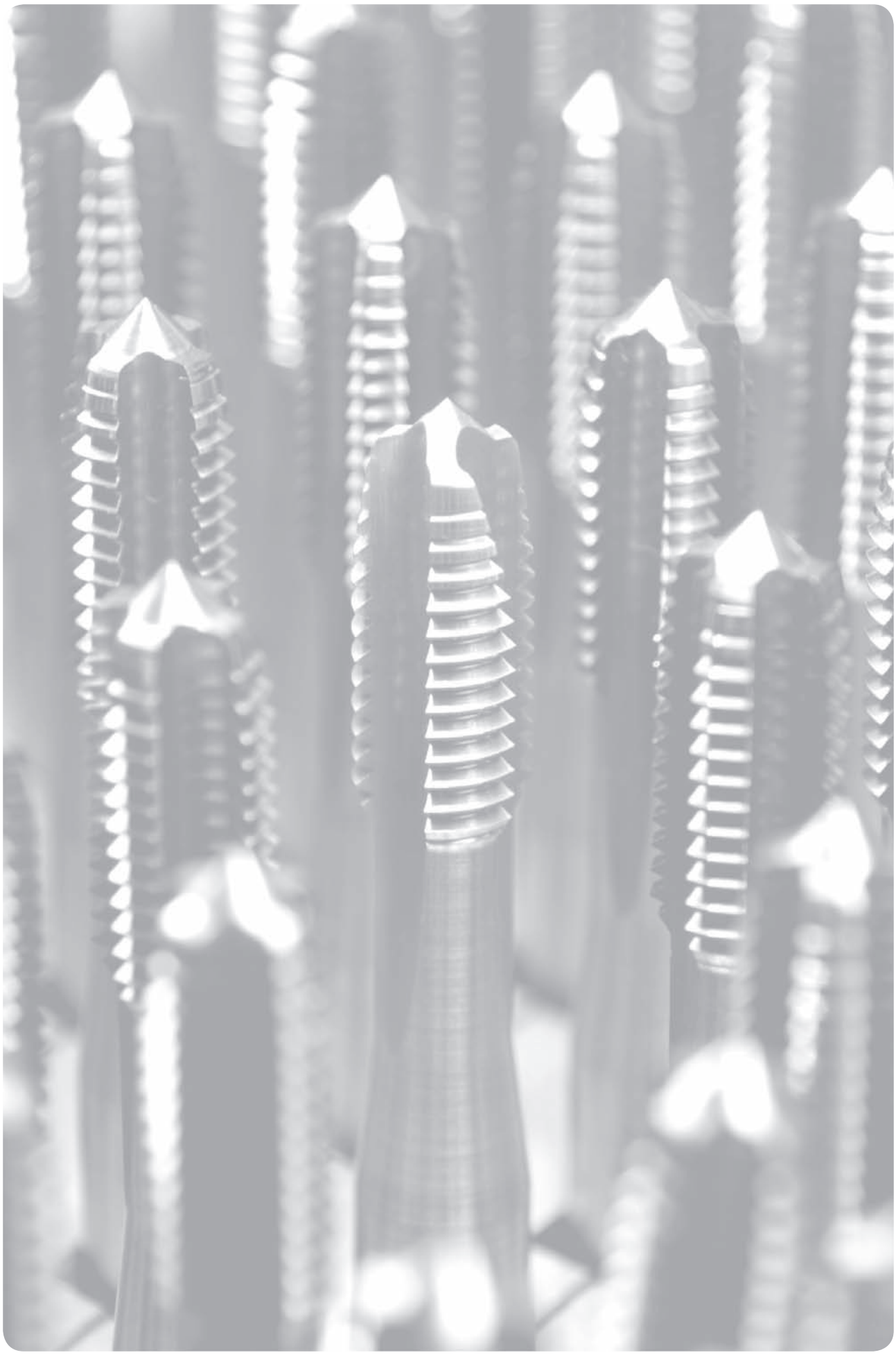
Tool code	HP900 TiAlN			
Tolerance	m7			
Forma del codolo	DIN 6535HA			
Application range	1.6-8			
Hole type	3 x D			
Direction of cut	RH			
Through coolant				

Ød1 m7 [mm]	Ød2 h6 [mm]	L1 [mm]	L2 [mm]	L4 [mm]	z [-]				
2,600	6	62	20	36	2	•			
3,400	6	62	20	36	2	•			
4,300	6	66	24	36	2	•			
5,100	6	66	28	36	2	•			
6,900	8	79	34	36	2	•			
8,600	10	89	47	40	2	•			
10,400	12	102	55	45	2	•			

TWIST DRILL **H**P900 SHOULD BE USED ON HARDENED STEELS FOR THE PREPARATION OF THE DRILL HOLE BEFORE TAPPING WITH TAP **H**130.

• = standard execution

See price list on page 45



VERGNANO

Discontinued Taps

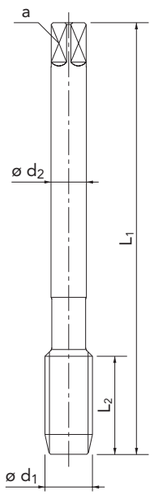
This section includes discontinued taps which have been substituted with new articles having superior performance.

2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A16	A16 TiN	A16 TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

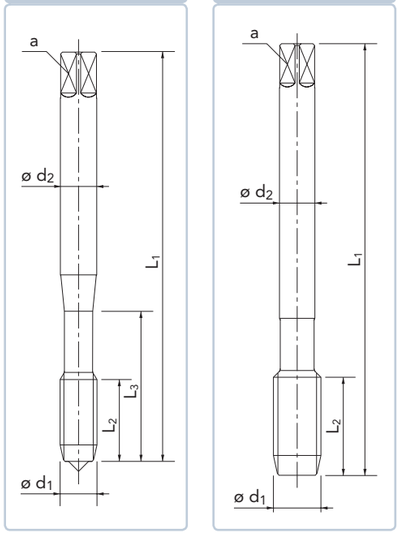
See price list on page 46 46 46

2,5 x D | DIN 13 | HSSK

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ø 10 | DIN 376 ≥ø 12



Tool code	A15 K	A15 K TiN	A15 K TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	4	15,5	•	•	•	
20	2,5	140	32	-	16	12	4	17,5	•	•	•	

• = standard execution

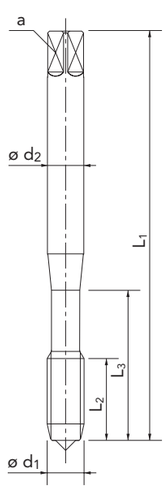
See price list on page 46 46 46

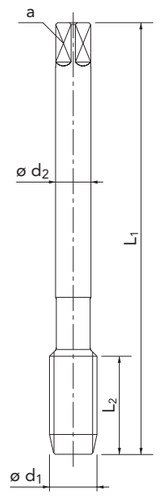
2,5 x D | DIN 13 | HSSZ

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10 | DIN 376 ≥ ø 12





Tool code	A115	A115 TiN	A115 TiCN	
Tolerance	6HX	6HX	6HX	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.4-5 8.2	1.4-5	1.4-5	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	

• = standard execution

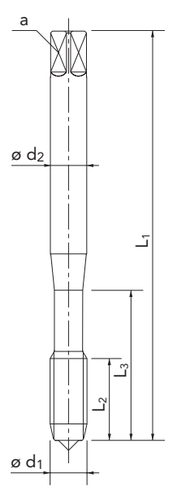
See price list on page 46 46 46

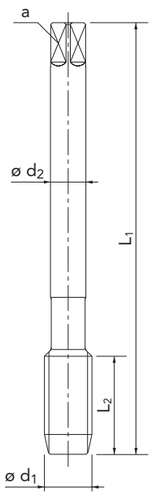
L15 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 15° left hand spiral
For through holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10 | DIN 376 ≥ ø 11





Tool code	A35	A35 TiN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	D (4-5)	D (4-5)		
Application range	1.2-4 3.2	1.2-4 3.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	9	10	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	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	•	•		
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	•	•		

• = standard execution

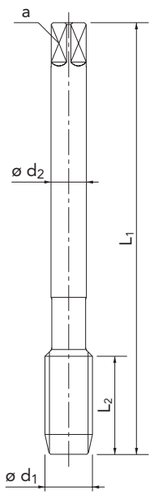
See price list on page 46 46

L 15 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 15° left hand spiral
For through holes
ISO Metric coarse thread - DIN 13

DIN 376



Tool code	A36	A36 TiN		
Tolerance	ISO2 6H	ISO2 6H		
Chamfer form	D (4-5)	D (4-5)		
Application range	1.2-4 3.2	1.2-4 3.2		
Hole type	2,5 x D	2,5 x D		
Direction of cut	RH	RH		
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 4	0,7	63	13	-	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	•	•		

• = standard execution

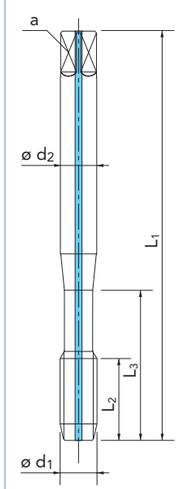
See price list on page 46 46

R 15 | 1,5 x D | DIN 13 | HSSK

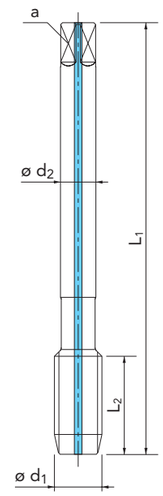
VERGNANO

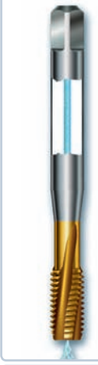
MACHINE TAPS - Spiral flutes with 15° angle - Internal axial coolant
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ø 10



DIN 376 ≥ø 12



Tool code	B29 K	B29 K TiN	B29 K TiCN	
				
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-5 3.2 4.2 5.1-2	1.1-5 3.2 4.2 5.2	1.1-5 3.2 4.2 5.2	
Hole type	1,5 x D	1,5 x D	1,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•	•	•	

• = standard execution

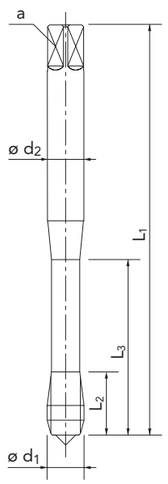
See price list on page 47 47 47

R40 | 2,5 x D | DIN 13 | HSSK

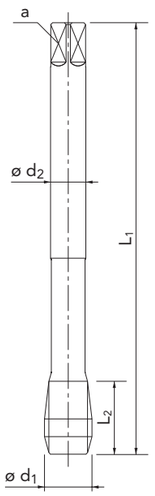
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A70 KS	A70 KS TiN	A70 KS TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	
18	2,5	125	25,5	-	14	11	4	15,5	•	•	•	
20	2,5	140	29,5	-	16	12	4	17,5	•	•	•	

• = standard execution

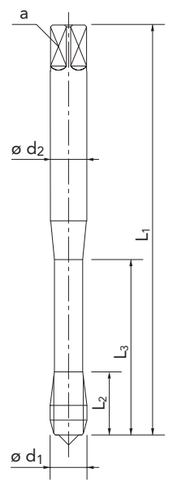
See price list on page 47 47 47

R40 | 2,5 x D | DIN 13 | HSSE

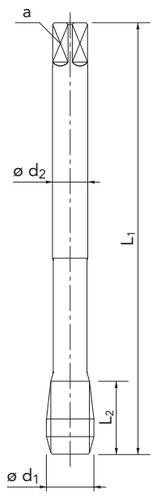
VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Red ring
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A120	A120 VAP	A120 TiN	A120 TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	C (2-3)	C (2-3)	C (2-3)	C (2-3)
Application range	1.1-4 3.2 4.1-2 5.1-2 6.1	1.1-4 3.2 4.1-2 5.1-2 6.1	1.1-4 3.2 4.2 5.2	1.1-4 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	•	•	•	•

• = standard execution

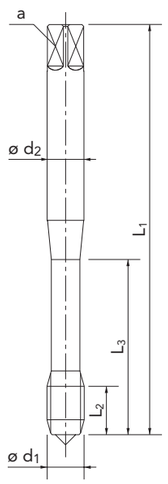
See price list on page 47 47 47 47

R25 | 2,5 x D | DIN 13 | HSSZ

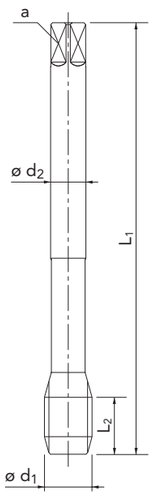
VERGNANO

MACHINE TAPS - Spiral flutes with 25° angle
For blind holes
ISO Metric coarse thread - DIN 13

DIN 371 ≤ ø 10



DIN 376 ≥ ø 12



Tool code	A125	A125 TiN	A125 TiCN
Tolerance	6HX	6HX	6HX
Chamfer form	C (2-3)	C (2-3)	C (2-3)
Application range	1.5 9.2	1.5 9.2	1.5 9.2
Hole type	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH
Through coolant			

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A125	A125 TiN	A125 TiCN	
M 3	0,5	56	6	17	3,5	2,7	3	2,5	•	•	•	
4	0,7	63	7	20	4,5	3,4	3	3,3	•	•	•	
5	0,8	70	8	23	6	4,9	3	4,2	•	•	•	
6	1	80	10	28	6	4,9	3	5	•	•	•	
8	1,25	90	13	34	8	6,2	3	6,8	•	•	•	
10	1,5	100	15	38,5	10	8	4	8,5	•	•	•	
12	1,75	110	18	-	9	7	4	10,2	•	•	•	
14	2	110	20	-	11	9	4	12	•	•	•	
16	2	110	20	-	12	9	4	14	•	•	•	
18	2,5	125	25	-	14	11	4	15,5	•	•	•	
20	2,5	140	25	-	16	12	5	17,5	•	•	•	

• = standard execution

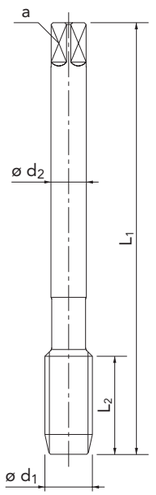
See price list on page 47 47 47

2,5 x D | DIN 13 | HSSK

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A17 K	A17 K TiN	A17 K TiCN
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H
Chamfer form	B (4-5)	B (4-5)	B (4-5)
Application range	1.1-4 3.2 4.1-2 5.1-2	1.1-4 3.2 4.2 5.2	1.1-4 3.2 4.2 5.2
Hole type	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH
Through coolant			

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]	A17 K	A17 K TiN	A17 K TiCN	
M 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	1,5	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	•	•	•	

• = standard execution

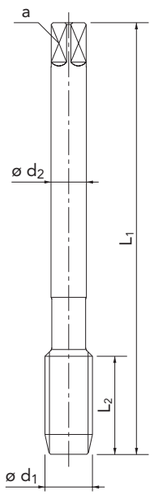
See price list on page 48 48 48

L 15 | 2,5 x D | DIN 13 | HSSE

VERGNANO

MACHINE TAPS - Spiral flutes with 15° left hand spiral
For through holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A37			
Tolerance	ISO2 6H			
Chamfer form	D (4-5)			
Application range	1.2-4 3.2			
Hole type	2,5 x D			
Direction of cut	RH			
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•			
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	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	1,5	100	22	-	11	9	3	12,5	•			
16	1	100	22	-	12	9	4	15	•			
16	1,5	100	22	-	12	9	3	14,5	•			
18	1,5	110	25	-	14	11	3	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	4	22,5	•			
24	2	140	28	-	18	14,5	4	22	•			
27	2	140	28	-	20	16	4	25	•			
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	•			

• = standard execution

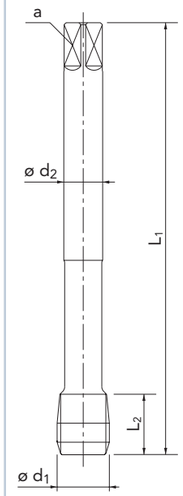
See price list on page 48

R 40 | 2,5 x D | DIN 13 | HSSK

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A71 K	A71 K TiN	A71 K TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.1-4 3.2 4.1-2 5.1-2 6.1	1.1-4 3.2 4.2 5.2	1.1-4 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•	•	•	
18	1,5	110	16	-	14	11	4	16,5	•	•	•	
20	1,5	125	17	-	16	12	4	18,5	•	•	•	

• = standard execution

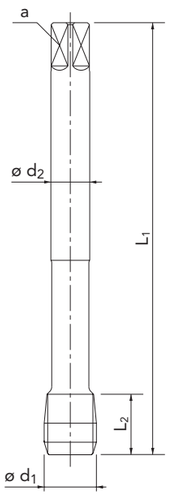
See price list on page 48 48 48

R40 | 2,5 x D | DIN 13 | HSSK

VERGNANO

MACHINE TAPS - Spiral flutes with 40° angle - Back tapered - Orange ring
For blind holes
ISO Metric fine thread - DIN 13

DIN 374



Tool code	A71 KS	A71 KS TiN	A71 KS TiCN	
Tolerance	ISO2 6H	ISO2 6H	ISO2 6H	
Chamfer form	C (2-3)	C (2-3)	C (2-3)	
Application range	1.4-5 2.3 3.2	1.4-5 2.3 3.2	1.4-5 2.3 3.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

Ød1 [mm]	P [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
M 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	•	•	•	
18	1,5	110	16	-	14	11	4	16,5	•	•	•	
20	1,5	125	17	-	16	12	4	18,5	•	•	•	

• = standard execution

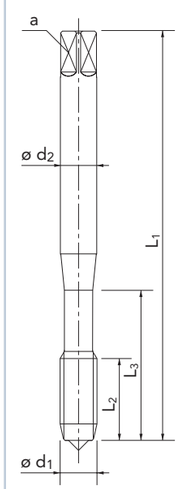
See price list on page 48 48 48

2,5 x D | ASME B1.1 | HSSE

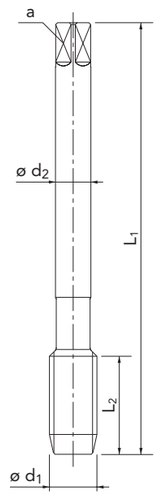
VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
Unified coarse thread - UNC ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A19	A19 TiN	A19 TiCN	A19 3B
Tolerance	2B	2B	2B	3B
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.1-2 5.1-2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNC	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	11	17	3,5	2,7	3	2,65	•	•	•	
Nr.6	32	3,505	56	12	18	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	6,350	80	17	30	7	5,5	3	5,1	•	•	•	•
5/16"	18	7,938	90	20	-	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	12,700	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	19,050	125	32	-	14	11	4	16,5	•	•	•	•
7/8"	9	22,225	140	32	-	18	14,5	4	19,5	•	•	•	
1"	8	25,400	160	36	-	18	14,5	4	22,25	•	•	•	
1 1/8"	7	28,575	180	40	-	22	18	4	25	•			
1 1/4"	7	31,750	180	40	-	22	18	4	28	•			
1 3/8"	6	34,925	200	50	-	28	22	4	30,75	•			
1 1/2"	6	38,100	200	50	-	28	22	4	34	•			

• = standard execution

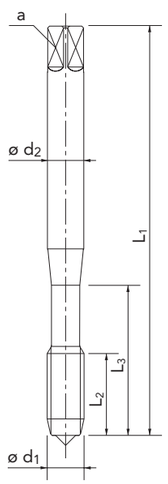
See price list on page 49 49 49 49

2,5 x D | ASME B1.1 | HSSE

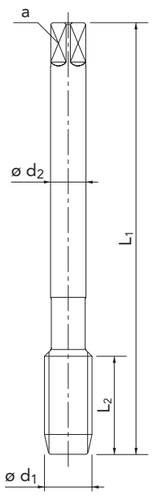
VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
Unified fine thread - UNF ASME - B1.1

DIN 2184-1 ≤ ø 1/4"



DIN 2184-1 ≥ ø 5/16"



Tool code	A20	A20 TiN	A20 TiCN	A20 3B
Tolerance	2B	2B	2B	3B
Chamfer form	B (4-5)	B (4-5)	B (4-5)	B (4-5)
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.1-2 5.1-2
Hole type	2,5 x D	2,5 x D	2,5 x D	2,5 x D
Direction of cut	RH	RH	RH	RH
Through coolant				

UNF	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
Nr. 2	64	2,184	50	10	15,5	2,8	2,1	2	1,85	•	•	•	
Nr. 3	56	2,515	50	10	15	2,8	2,1	3	2,15	•	•	•	
Nr. 4	48	2,845	56	11	17	3,5	2,7	3	2,4	•	•	•	
Nr. 5	44	3,175	56	12	18	3,5	2,7	3	2,7	•	•	•	
Nr. 6	40	3,505	56	12	18	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	6,350	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	12,700	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	19,050	110	25	-	14	11	4	17,5	•	•	•	•
7/8"	14	22,225	125	25	-	18	14,5	4	20,4	•	•	•	
1"	12	25,400	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	31,750	150	28	-	22	18	4	29,5	•			
1 1/2"	12	38,100	170	30	-	28	22	5	36	•			

• = standard execution

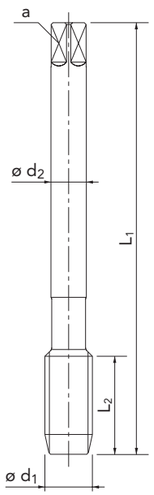
See price list on page 49 49 49 49

2,5 x D | EN ISO 228 | HSSE

VERGNANO

MACHINE TAPS - Straight flutes with spiral point
For through holes
Whitworth pipe thread - EN ISO 228

DIN 5156



Tool code	A18	A18 TiN	A18 TiCN	
Tolerance	ISO 5969	ISO 5969	ISO 5969	
Chamfer form	B (4-5)	B (4-5)	B (4-5)	
Application range	1.1-3 3.2 4.1-2 5.1-2	1.1-3 3.2 4.2 5.2	1.1-3 3.2 4.2 5.2	
Hole type	2,5 x D	2,5 x D	2,5 x D	
Direction of cut	RH	RH	RH	
Through coolant				

G	P [T.P.I.]	Ød1 [mm]	L1 js 16 [mm]	L2 [mm]	L3 [mm]	Ød2 h9 [mm]	a h12 [mm]	z [-]	[mm]				
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	41,910	170	30	-	32	24	5	39,5	•			
1 1/2"	11	47,803	190	32	-	36	29	5	45,25	•			

• = standard execution

See price list on page 50 50 50

HSS

VERGNANO

Dies "F"

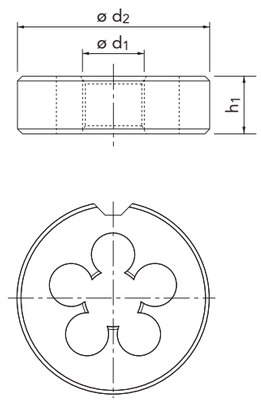
F

DIN 13 HSS

VERGNANO

DIES with spiral point - DIN EN 22568
ISO Metric coarse thread - DIN 13

DIN EN 22568



Tool code	X200	X200 LH
Tolerance	ISO 6g	ISO 6g
Chamfer length	1,75xP	1,75xP
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	1.1-4 2.1-2 3.2 4.1-3 5.1-3
Direction of cut	RH	LH

Ød1 [mm]	P [mm]	Ød2 [mm]	h1 [mm]	X200	X200 LH
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	•	

• = standard execution

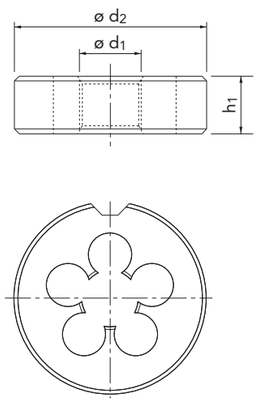
See price list on page 51 51

DIN 13 HSS

VERGNANO

DIES with spiral point - DIN EN 22568
ISO Metric fine thread - DIN 13

DIN EN 22568



Tool code	X201	
Tolerance	ISO 6g	
Chamfer length	1,75xP	
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	
Direction of cut	RH	

Ød1 [mm]	P [mm]	Ød2 [mm]	h1 [mm]	X201	
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	•	
18	1,5	45	14	•	
18	2	45	14	•	
20	1	45	14	•	
20	1,5	45	14	•	
20	2	45	14	•	

• = standard execution

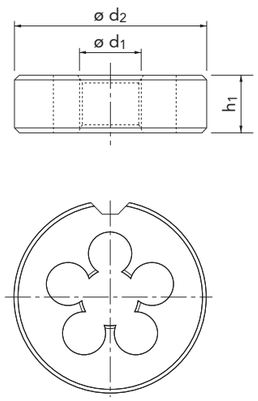
See price list on page 51

DIN 13 HSS

VERGNANO

DIES with spiral point - DIN EN 22568
ISO Metric fine thread - DIN 13

DIN EN 22568



Tool code	X201	
Tolerance	ISO 6g	
Chamfer length	1,75xP	
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	
Direction of cut	RH	

Ød1 [mm]	P [mm]	Ød2 [mm]	h1 [mm]		
M 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	•	
36	1,5	65	18	•	
36	2	65	18	•	
36	3	65	25	•	

• = standard execution

See price list on page 51

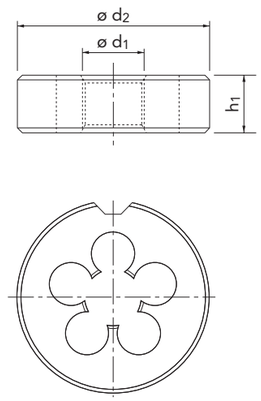
F

ASME B1.1 HSS

VERGNANO

DIES with spiral point - DIN EN 22568
Unified coarse thread - UNC ASME - B1.1

DIN EN 22568



Tool code	X204	
Tolerance	2A	
Chamfer length	1,75xP	
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	
Direction of cut	RH	

UNC	P [T.P.I.]	Ød1 [mm]	Ød2 [mm]	h1 [mm]		
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	6,350	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	12,700	38	14	•	
9/16"	12	14,288	38	14	•	
5/8"	11	15,875	45	18	•	
3/4"	10	19,050	45	18	•	
7/8"	9	22,225	55	22	•	
1"	8	25,400	55	22	•	

• = standard execution

See price list on page 52

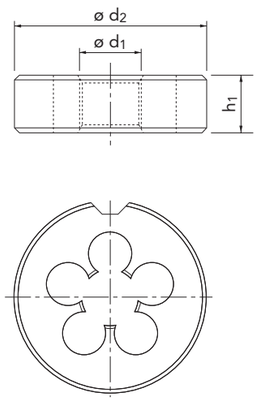
F

ASME B1.1 HSS

VERGNANO

DIES with spiral point - DIN EN 22568
Unified fine thread - UNF ASME - B1.1

DIN EN 22568



Tool code	X205	
Tolerance	2A	
Chamfer length	1,75xP	
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	
Direction of cut	RH	

UNF	P [T.P.I.]	Ød1 [mm]	Ød2 [mm]	h1 [mm]		
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	6,350	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	12,700	38	10	•	
9/16"	18	14,288	38	10	•	
5/8"	18	15,875	45	14	•	
3/4"	16	19,050	45	14	•	
7/8"	14	22,225	55	16	•	
1"	12	25,400	55	16	•	

• = standard execution

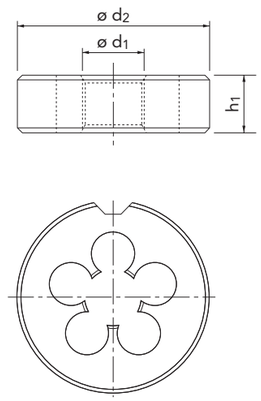
See price list on page 52

EN ISO 228 HSS

VERGNANO

DIES with spiral point - DIN EN 24231
Whitworth pipe thread - EN ISO 228

DIN EN 24231



Tool code	X203	
Tolerance	A	
Chamfer length	1,75xP	
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	
Direction of cut	RH	

G	P [T.P.I.]	Ød1 [mm]	Ød2 [mm]	h1 [mm]		
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	41,910	75	20	•	
1 1/2"	11	47,803	90	22	•	
2"	11	59,614	105	22	•	

• = standard execution

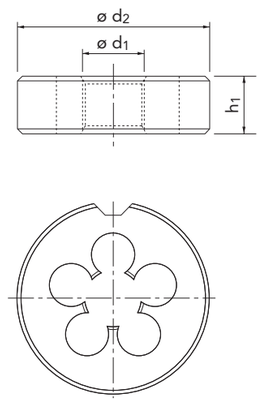
See price list on page 52

BS 84 HSS

VERGNANO

DIES with spiral point - DIN EN 22568
Whitworth thread - BS 84

DIN EN 22568



Tool code	X202	
Tolerance	mc	
Chamfer length	1,75xP	
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	
Direction of cut	RH	

BSW	P [T.P.I.]	Ød1 [mm]	Ød2 [mm]	h1 [mm]		
3/32"	48	2,381	20	5	•	
1/8"	40	3,175	20	5	•	
3/16"	24	4,763	20	7	•	
1/4"	20	6,350	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	12,700	38	14	•	
5/8"	11	15,875	45	18	•	
3/4"	10	19,050	45	18	•	
7/8"	9	22,225	55	22	•	
1"	8	25,400	55	22	•	

• = standard execution

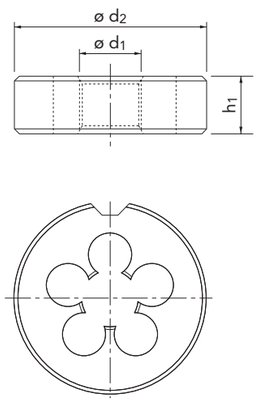
See price list on page 53

ASME B1.20.1 HSS

VERGNANO

DIES with spiral point - DIN EN 22568
National pipe thread, taper 1:16 - ANSI B1.20.1

DIN EN 22568



Tool code	X206	
Tolerance	—	
Chamfer length	1,75xP	
Application range	1.1-4 2.1-2 3.2 4.1-3 5.1-3	
Direction of cut	RH	

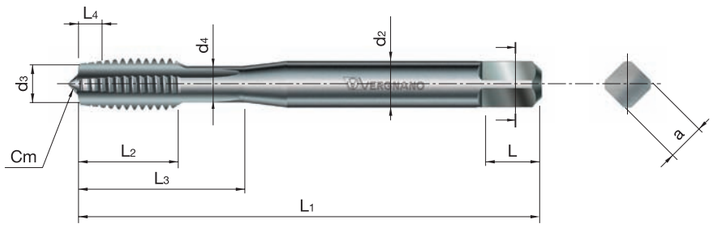
NPT	P [T.P.I.]	Ød1 [mm]	Ød2 [mm]	h1 [mm]		
1/16"	27	7,938	25	10	•	
1/8"	27	10,287	30	10	•	
1/4"	18	13,716	38	15	•	
3/8"	18	17,145	45	15,3	•	
1/2"	14	21,336	45	20	•	
3/4"	14	26,670	55	20,2	•	
1"	11 1/2	33,401	65	25	•	

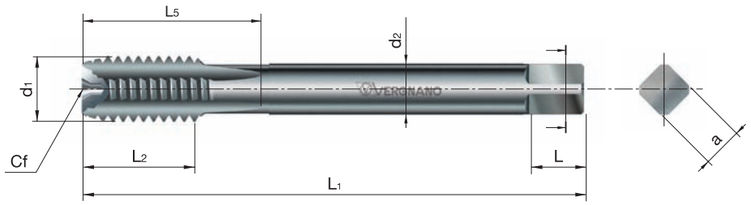
• = standard execution

See price list on page 53

VERGNANO

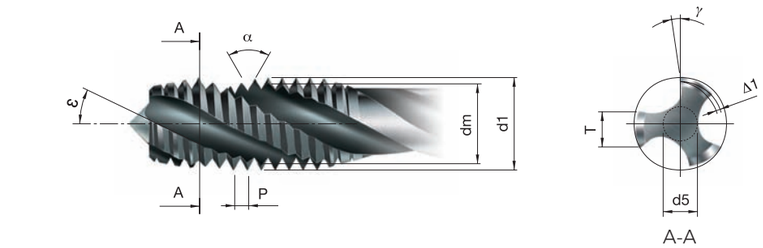
Technical Information

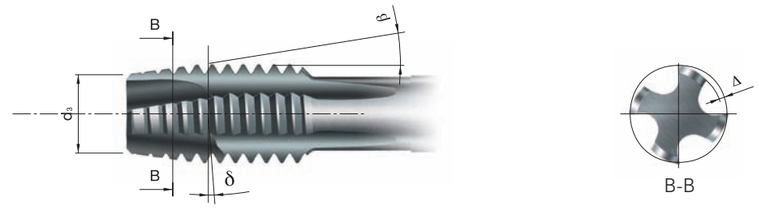




TAP TERMINOLOGY

Nominal diameter (d_1): the diameter used for the purpose of general identification.
Pitch diameter (d_m): the diameter measured where the width of the thread is equal to half the pitch.
Shank diameter (d_2): the diameter of the shank, important for the tapping attachment.
Chamfer diameter (d_3): the diameter at the leading end of the chamfer.
Neck diameter (d_4): the diameter of the reduced section between the thread and shank of the tap.
Core diameter (d_5): the diameter of a circle tangent to the bottom of the flutes.
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.
Square (a): the square with rounded corners formed by four flats parallel to the tap axis. The square serves to drive the tap.
Square length (L): the length of the flats that form the square.
Total length (L_1): the complete length of the tap from end to end, excluding external centres.
Thread length (L_2): the length of the threaded section of the tap.
Usable length (L_3): 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.
Chamfer length (L_4): the length of the chamfer measured parallel to the tap axis, excluding the chamfer bevel.
Flute length (L_5): the axial length of the flute including the cutter sweep.
External center (C_m): the pointed end of the tap.
Internal center (C_f): the countersink in one or both ends of the tap.

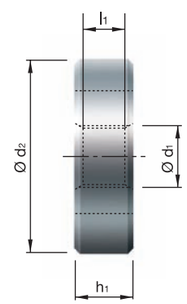


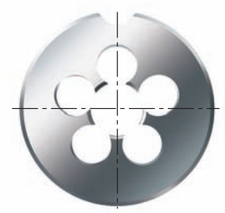


Pitch (P): the distance, measured parallel to the tap axis, between two corresponding and successive points on the thread profile.
Angle of thread (α): the angle between the flanks of the thread (measured in an axial plane).
Thread lead angle (δ): the angle made by the spiral of the thread and a plane perpendicular to the tap axis, measured on the pitch diameter line.
Chamfer angle (β): the angle between the chamfer and the tap axis, measured in an axial plane.
Rake angle (γ): the angle between the cutting face of the tap and a radial line passing through the crest of the tooth at the cutting edge.
Land width (T): the chordal width of material between two successive flutes.
Flute: the longitudinal channels in a tap which create cutting edges. The flutes provide space for chips and passage for coolant/lubricant.
Spiral flute angle (ε): the angle formed by the flutes and the tap axis.
Pitch diameter relief (Δ1): 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.
Chamfer relief (Δ): the radial reduction of the major diameter on the tap chamfer behind the cutting edge. The chamfer relief confers cutting properties to the tap.

DIE TERMINOLOGY

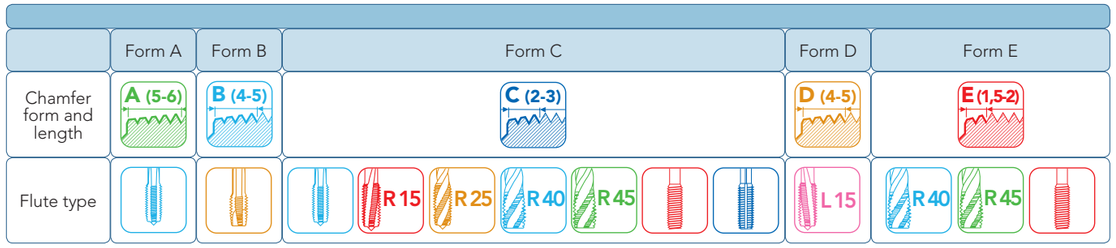
d_1: nominal diameter
d_2: outside diameter
h_1: thickness
l_1: length of full thread



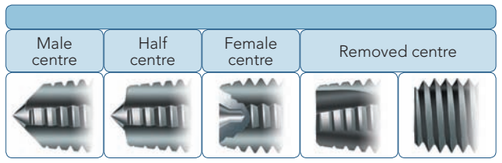


TYPES OF CHAMFER FORMS AND CENTRES

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



The tap manufacturer, according to the diameter and the application, defines the types of centres.
They are classified as in the following table:



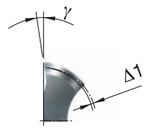
Types of centre and chamfer are generally combined together as in the following table, but for specific applications exceptions are possible.

		Form A	Form B	Form C	Form D	Form E
Male centre	M	2 ≥ Ø ≥ 8	2 ≥ Ø ≥ 8	2 ≥ Ø ≥ 8	2 ≥ Ø ≥ 8	-
	MF	3 ≥ Ø ≥ 6	4 ≥ Ø ≥ 6	3 ≥ Ø ≥ 6	5 ≥ Ø ≥ 6	-
Half centre	M	8 < Ø ≥ 10	8 < Ø ≥ 10	8 < Ø ≥ 10	8 < Ø ≥ 10	-
	MF	6 < Ø ≥ 10	6 < Ø ≥ 10	6 < Ø ≥ 10	6 < Ø ≥ 10	-
Female centre	M	10 < Ø	10 < Ø	10 < Ø	10 < Ø	10 < Ø
	MF					
Removed centre	M	-	-	-	-	10 < Ø
	MF					

COLOURED RINGS

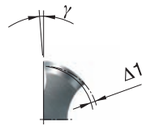
While the chamfer and flutes of the tap depend on the type of hole (blind or through) to machine, other geometrical aspects such as number of flutes, rake angle, and relief of the tap are determined by the material to be machined.
In order to simplify the choice of the correct tap, some Vergnano taps have coloured rings.

MACHINE TAPS for LIGHT ALLOYS
Spiral flutes with 40° right hand spiral for blind holes (Vergnano A72).



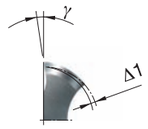
γ = increased
Δ1 = normal

MACHINE TAPS for STEEL WITH TENSILE STRENGTH from 500 N/mm² a 1200 N/mm²
Straight flutes with spiral point for through holes
(Vergnano A15S - A16S - A17S - A18S - A19S - A20S)
Spiral flutes with 40° right hand spiral for blind holes
(Vergnano A59S - A60S - A61S - A70S - A70SE - A71S - A76S).



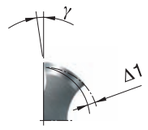
γ = normal
Δ1 = increased

MACHINE TAPS for STAINLESS STEELS
Straight flutes with spiral point for through holes (Vergnano A150)
Spiral flutes with 40° right hand spiral for blind holes (Vergnano A170).



γ = increased
Δ1 = increased

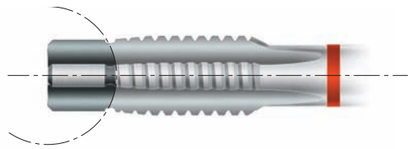
MACHINE TAPS for TITANIUM and TITANIUM ALLOYS
Straight flutes for blind and through holes (Vergnano A110).



γ = normal
Δ1 = highly increased

HAND TAPS in sets of three pieces for STEEL WITH TENSILE STRENGTH up to 1200 N/mm²
A red ring is used for these hand taps which differ from other sets because of the superior base material, HSSE instead of HSS, and the cylindrical guide on the taper tap (Vergnano A100).
These characteristics make this tap particularly suitable for hand tapping high resistance steels.

Cylindrical guide on the roughing tap



HIGH SPEED STEEL AND SOLID CARBIDE FOR TAPS

HIGH SPEED STEEL

The steels used for the construction of taps have primary influence on the productivity of the tapping process. The requested steel properties are often in contrast with one another: high hardness and hot hardness, high wear resistance, excellent cutting properties (cutting edge stability), and high toughness. Therefore, the choice of high quality steel is paramount in order to guarantee optimal tap performance. Vergnano taps are made exclusively in high speed steel. HSS can be produced by conventional metallurgical techniques or by powder metallurgy, with considerable differences in the steel structure and performance. As can be seen from the micrographs in the table, powder metallurgy HSS has a finer structure compared to conventional HSS. The hard carbides, homogeneously distributed throughtout the steel matrix, have small sizes and a rounded shape. These characteristics are responsible for a combination of high hardness and high toughness.

The principle alloying elements and their influence on the HSS can be summarised as follows:

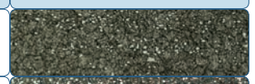
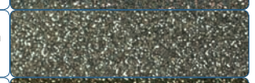
- Carbon: influences the hardness of the matrix and permits the formation of carbides
- Tungsten: forms tungsten carbides, increases hot hardness and wear resistance
- Molybdenum: improves hardenability and toughness
- Vanadium: forms vanadium carbides which increase wear resistance
- Cobalt: not a carbide former but acts positively on hot hardness

In addition to composition and quality, the characteristics of HSS depends markedly on a correct heat treatment. The heat treatment must guarantee a good compromise between hardness, toughness, and other characteristics required by the tap. HSS heat treatment consists in heating the steel to high temperatures (austenitising) followed by a rapid cooling or quenching. The martensitic structure thus obtained has high hardness but is not sufficiently stable and tough to be used in taps. In order to stabilise the structure and increase toughness, a series of tempering cycles are made which also increase the hardness due to the formation of "secondary" carbides.

SOLID CARBIDE

Carbide can be considered a metallic composite material consisting of a mixture of hard carbide particles, mainly tungsten carbide (WC), in a metallic matrix of cobalt (Co). Other commonly used carbides are titanium carbide (TiC), niobiom carbide (NbC) and tantalum carbide (TaC). The carbides, which confer hardness and compressive strength to the structure, are responsible for the wear resistance of the tool.The binding element cobalt confers toughness. The size of the carbide particles is also important since it balances the hardness and the toughness. In general, the mechanical properties of carbides depend on composition (type and concentration of carbides), percentage of binding material, size of carbides and fabrication process. The ISO 513 standard defines 3 groups of carbides: P (blue colour code), M (yellow colour code), K (red colour code). Subgroups are indicated with a two-digit number which increases with increasing percentage of cobalt binder. Vergnano carbide taps are produced in K grade carbide. The carbide grain size is "ultra-fine" (UF) which guarantees excellent hardness and toughness.

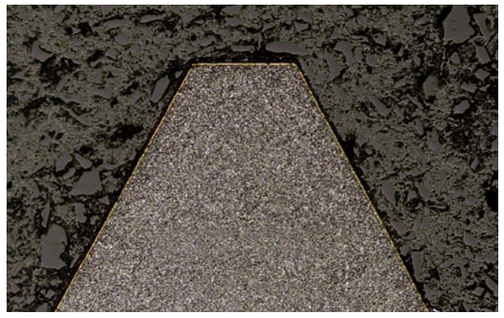
The following table summarises the high speed steels and solid carbide used for fabrication of Vergnano taps with their respective designation.

Vergnano Designation	Properties	Applications	Structure 500 X
HSS	Conventional steel with normal hardness and toughness.	Used exclusively for hand taps (except A100).	
HSSE	Conventional steel with good hardness, toughness and wear resistance.	For general applications.	
HSSK	Powder metallurgy steel with excellent mechanical properties. Excellent substrate for coatings.	Used in applications where a compromise between high hardness and high toughness is needed.	
HSSZ	Powder metallurgy steel with very high hardness and wear resistance. Excellent substrate for advanced coatings.	For applications where extremely high performance and productivity are requested.	
HSSP	Powder metallurgy steel with high alloy content and excellent mechanical properties. Excellent substrate for coatings.	For tough materials and extreme applications.	
HM	Grade K solid carbide with ultra-fine carbide grain size.	For heat-treated steels and abrasive materials.	

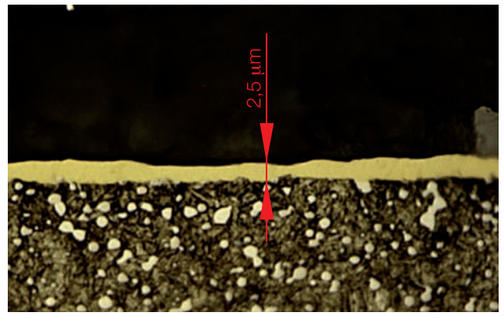
COATINGS

Vergnano taps are available with different surface treatments and PVD coatings.
PVD coatings are obtained from the evaporation of metallic ions, under high vacuum conditions, and their combination with nitrogen. The main features are a very high hardness and a very low friction coefficient. Coatings have micron size thickness and follow the substrate profile. They can be mono-layer or multi-layer, with one or more metallic components.

PVD coatings can improve the performance of cutting tools, both in terms of wear resistance (i.e. tool life), and in terms of increased working parameters.
Some of these coatings are available in the catalogue, combined with standard tools, whereas others can be provided on request.



Section of tap thread, with TiN coating (100X, Nital 2%)

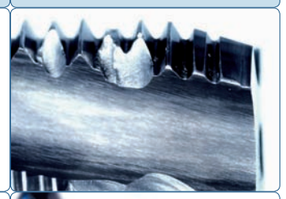
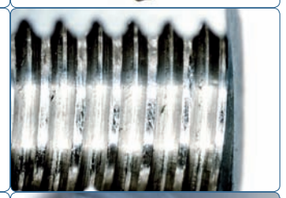


Measurement of TiN coating thickness on thread crest (1500X, Nital 2%)

Type of coating / treatment	Structure	Hardness HV (0,05)	Friction coefficient on steel (dry conditions)	Radial thickness [µm]	Oxidation temperature [°C]	Features	Main applications	Availability
TiN	Mono-layer	2300	0,40	1 ÷ 5	600	Wear resistance	1.1-3 3.2	Standard
TiCN	Mono-layer	3000	0,40	1 ÷ 5	400	Wear resistance	3.1 4.4	Standard
TiX2	Multi-layer	3000	0,20	2 ÷ 6	500	Oxidation and wear resistance, chip evacuation	4.1-3	Standard
TiH1	Multi-layer	3000	0,20	2 ÷ 6	800	Oxidation and wear resistance, chip evacuation	1.2-5 4.1-3	Standard
CrN	Mono-layer	1750	0,50	1 ÷ 4	700	Oxidation and wear resistance	7.1-2	Standard
TiAlN	Nano structured	3300	0,30	1 ÷ 6	900	Oxidation and wear resistance	3.1 4.4	Standard
ACE	Mono-layer	3200	0,35	1 ÷ 5	1100	Oxidation and wear resistance	1.5 1.8 3.1 4.4	Standard
Balinit G	Multi-layer	3000	0,40	1 ÷ 4	400	Wear resistance	1.1-3 3.2	On request
Steam tempering	Surface oxidation	400	-	-	550	Chip evacuation	1.1-2 4.1-2	Standard
Nitriding	Surface hardening	1300	-	-	550	Wear resistance	3.1 5.3	Standard

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.	
Excessive tap wear	• Improve quantity and quality of lubrication. • Use tap with more relief, longer chamfer, higher rake angle and/or coating.	
Chips clogging flutes	• Choose correct tap for specific application (spiral flute angle suitable for depth of hole, rake angle and relief suitable for material). • Increase lubricant pressure.	
Poor finish on threaded workpiece	• Check wear on tap. Resharpen or change. • Improve quantity and quality of lubrication. • Choose suitable tap (rake angle and relief).	
Built-up-edge	• Use appropriate tap with suitable rake angle and/or relief. Choose correct coating. • Increase cutting speed. • Improve quantity and quality of lubrication.	
Tap sticking	• Use appropriate tap with suitable rake angle and/or relief. Choose correct coating. • Improve quantity and quality of lubrication.	

Problem	Solution	
Crater wear	• Choose correct tap, with higher hardness and/or appropriate coating.	
Tap breakage	• Increase drilled hole size. • Check wear on tap. Resharpen or change. • Reduce cutting speed. • Check drilled hole is not too shallow. • Use tapping attachment with safety clutch.	
Oversized thread	• Check tap tolerance is suitable for requested nut tolerance. • Choose appropriate tap for application (rake angle and relief suitable for material). • Reduce feed rate or use tap attachment with compensation. • Reduce cutting speed • Verify tap-hole alignment and workpiece fixture.	
Undersized thread	• Check tap tolerance is suitable for requested nut tolerance. • Increase drilled hole size. • Check wear on tap. Resharpen or change. • Choose appropriate tap (higher rake angle and relief). • Improve quantity and quality of lubrication.	
Excessive power requirement	• Increase drilled hole size. • Check wear on tap. Resharpen or change. • Choose appropriate tap (higher rake angle and relief). • Improve quantity and quality of lubrication.	

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	$p \cdot N$	$\frac{mm}{min}$
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]
1.1	1300
1.2	1400
1.3	1400
1.4	1600
1.5	1700
1.6	2000
2.1	1400
2.2	1600
2.3	1800
3.1	1100
3.2	1500
4.1	600
4.2	800
4.3	900
4.4	1000
5.1	700
5.2	850
5.3	900
5.4	2500
6.1	400
6.2	500
7.1	1200
7.2	1900
8.1	1300
8.2	2400
9.1	400
9.2	600

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

EXAMPLES OF MATERIALS

Type	Application	W.Nr.	DIN	UNI	AFNOR	AISI/SAE/ ASTM	JIS	MG Vergnano
Steel	Mild/ magnetic	1.1015	RFe60					1.1
		1.1014	RFe80					1.1
		1.1013	RFe100					1.1
	Structural	1.0037	St 37-2	Fe360B	E 24-2	1015	STKM12C	1.2
		1.0044	St 44-2	Fe430B	E 28-2	1020	SM400C	1.2
		1.0050	St 50-2	Fe490	A 50-2	A 570 (50)	SS490	1.2
		1.0060	St 60-2	Fe590	A 60-2	A 572 (65)	SM570	1.2
		1.0570	St 52-3	Fe510B	E 36-3	1024		1.2
	Case hardening	1.0301	C10	C10	C10	1010	S10C	1.2
		1.0401	C15	C15	C18	1015	S15C	1.2
		1.7131	16MnCr5	16MnCr5	16 MC 5	5115		1.2
		1.7147	20MnCr5	20MnCr5	20 MC 5	5120	SMnC420H	1.2
		1.7243	18CrMo4	18CrMo4				1.2
		1.5919	15CrNi6	16CrNi4	16 NC 6			1.2
		1.6523	20NiCrMo2	20NiCrMo2	20 NCD 2	8620		1.2
		1.6587	17CrNiMo6	18NiCrMo7	18 NCD 6			1.2
	Nitriding	1.8515	31CrMo12	31CrMo12	30 CD 12			1.4
		1.8519	31CrMoV9	31CrMoV10				1.5
		1.8507	34CrAlMo7	34CrAlMo7	30 CAD 6.12			1.4
		1.8509	41CrAlMo7	41CrAlMo7	40 CAD 6.12		SACM645	1.5
	Free cutting	1.0711	9S20	9S20		1212		1.1
		1.0715	9SMn28	9SMn28	S 250	1213	SUM22	1.1
		1.0718	9SMnPb28	9SMnPb28	S 250 Pb	12 L 13	SUM22L	1.1
		1.0726	35S20	35S20	35 MF 4	1140		1.2
		1.0736	9SMn36	9SMn36	S 300	1215	SUM25	1.1
		1.0737	9SMnPb36	9SMnPb36	S 300 Pb	12 L 14		1.1
	Heat-treatable	1.0406	C25	C25	AF 50 C 30	1025		1.3
		1.0528	C30	C30		1030		1.3
		1.0501	C35	C35	AF 55 C 35	1035	S35C	1.3
		1.0511	C40	C40	AF 60 C 40	1040		1.3
		1.0503	C45	C45	AF 65 C 45	1045	S45C	1.3
		1.0540	C50	C50		1050		1.3
		1.0535	C55	C55	C54	1055	S55C	1.3
		1.0601	C60	C60	C60	1060	S58C	1.3
		1.7035	41Cr4	41Cr4	41C4	5140	SCr440(H)	1.4 (anneal) / 1.5 (Q+T)
		1.8159	51CrV4	51CrV4	50 CV 4	6145	SUP10	1.4 (anneal) / 1.5 (Q+T)
		1.7218	25CrMo4	25CrMo4	25 CD 4	4130	SCM420	1.4 (anneal) / 1.5 (Q+T)
		1.7220	34CrMo4	34CrMo4	35 CD 4	4137	SCM432	1.4 (anneal) / 1.5 (Q+T)
		1.7225	42CrMo4	42CrMo4	42 CD 4		SCM440	1.4 (anneal) / 1.5 (Q+T)
		1.7228	50CrMo4	50CrMo4	50CrMo4	4150	SCM445(H)	1.4 (anneal) / 1.5 (Q+T)
		1.6580	30CrNiMo8	30CrNiMo8	30 NCD 8		SNCM431	1.5 (anneal) / 1.6 (Q+T)
		1.6582	34CrNiMo6	34CrNiMo6	35 NCD 6	4337	SNC447	1.5 (anneal) / 1.6 (Q+T)
		1.6511	36CrNiMo4	36CrNiMo4	40 NCD 3	4340		1.4 (anneal) / 1.5 (Q+T)
		1.6773	36NiCrMo16	36NiCrMo16				1.5 (anneal) / 1.6 (Q+T)
	Ball bearing	1.3505	100Cr6	100Cr6	100C6	52100		1.4 (anneal) / 1.8 (Q+T)
		1.3536	100CrMo7-3	100CrMo7				1.4 (anneal) / 1.8 (Q+T)
	Spring	1.1231	Ck67	C67	XC 68			1.3
		1.1248	Ck75	C75		1078		1.3
		1.1269	Ck85	C85	C90			1.3
		1.1274	Ck101	C100	C100		SUP4	1.3
		1.5021		48Si7				1.4 (anneal) / 1.5 (Q+T)
		1.5026	55Si7	55Si7	56SC7			1.4 (anneal) / 1.5 (Q+T)
		1.5027	60Si7	60Si7				1.4 (anneal) / 1.5 (Q+T)
		1.7108	60SiCr7	60SiCr8				1.4 (anneal) / 1.5 (Q+T)
		1.8159	50CrV4	50CrV4	50 CV 4		SUP10	1.4 (anneal) / 1.6 (Q+T)
		1.7176	55Cr3	55Cr3	55 C 3	5155	SUP9(A)	1.4 (anneal) / 1.6 (Q+T)
		1.7701	51CrMoV4	51CrMoV4				1.4 (anneal) / 1.6 (Q+T)
	Superficial hardening	1.1183	Cf 35	C36	XC 68 H1TS			1.3
		1.1193	Cf 45	C43	XC 42 H1TS			1.3
		1.1213	Cf 53	C53	XC 48 H1TS	1050		1.3
		1.7005	45Cr2	45Cr2				1.4
		1.7043	38Cr4	38Cr4				1.5

EXAMPLES OF MATERIALS

Type	Application	W.Nr.	DIN	UNI	AFNOR	AISI/SAE/ ASTM	JIS	MG Vergnano
Steel	Superficial hardening	1.7034	37Cr4	36CrMn4	38 C 4	5135	SCr435H	1.5
		1.7223	41CrMo4	41CrMo4	42 CD 4 TS	4140	SCM440	1.5
	Hot work	1.2767	45NiCrMo16	40NiCrMoV16 KU	Y35NCD16			1.5 (anneal) / 1.7 (Q+T)
		1.2713	55NiCrMoV7	55NiCrMoV7 KU	55NiCrMoV7			1.4 (anneal) / 1.7 (Q+T)
		1.2311		35CrMo8 KU				1.4 (anneal) / 1.7 (Q+T)
		1.2365	32CrMoV12-28	30CrMoV12-27 KU	32CDV12-28	H10		1.4 (anneal) / 1.7 (Q+T)
		1.2343	X38CrMoV5-1	X37CrMoV5-1 KU	Z38CDV5	H11	SKD2	1.4 (anneal) / 1.7 (Q+T)
		1.2344	X40CrMoV5-1	X40CrMoV5-1-1 KU	Z40CDV5	H13	SKD61	1.4 (anneal) / 1.7 (Q+T)
		1.2567	X30WCrV5-3	X30WCrV5-3 KU	Z32WCV5		SKD4	1.4 (anneal) / 1.7 (Q+T)
		1.2581	X30WCrV9-3	X30WCrV9-3 KU	Z30WCV9	H21	SKD5	1.4 (anneal) / 1.7 (Q+T)
Stainless steel	Ferritic	1.4002	X6CrAl13	X6CrAl13	Z 8 CA 12	405	SUS405	2.1
		1.4512	X2CrTi12	X6CrTi12	Z 3 CT 12	409	SUS409	2.1
		1.4016	X6Cr17	X8Cr17	Z 8 C 17	430	SUS430	2.1
		1.4104	X14CrMoS17	X10CrS17	Z 13 CF 17	430F	SUS430F	2.1
	Austenitic	1.4319	X3CrNiN17-8	X10CrNi1809		302	SUS302	2.2
		1.4305	X8CrNiS18-9	X10CrNiS1809	Z 8 CNF 18-09	303	SUS303	2.2
		1.4301	X5CrNi18-10	X5CrNi1810	Z 4 CN 19-10 FF	304	SUS304	2.2
		1.4306	X2CrNi19-11	X2CrNi1811	Z 1 CN 18-12	304L	SUS304L/SCS19	2.2
		1.4303	X4CrNi18-12	X8CrNi1812	Z 5 CN 18-11 FF	305	SUS305J1	2.2
		1.4828	X15CrNiSi20-12	X16CrNi2314	Z 9 CN 24-13	309	SUH309	2.2
		1.4841	X15CrNiSi25-20	X22CrNiSi2520	Z 15 CNS 25-20	310	SUH310	2.2
		1.4401	X5CrNiMo17-12-2	X5CrNiMo1712	Z 3 CND 17-11-01	316	SUS316	2.2
		1.4404	X2CrNiMo17-12-2	X2CrNiMo1712	Z 2 CND 17-12	316L	SUS316L	2.2
		1.4541	X6CrNiTi18-10	X6CrNiTi1811	Z 6 CNT 18-10	321	SUS321	2.2
		1.4550	X6CrNiNb18-10	X6CrNiNb1811	Z 6 CNNb 18-10	347	SUS347	2.2
	Martensitic	1.4006	X12Cr13	X12Cr13	Z 10 C 13	410	SUS410	2.3
		1.4005	X12CrS13	X12CrS13	Z 11 CF 13	416	SUS416	2.3
		1.4021	X20Cr13	X20Cr13	Z 20 C 13	420	SUS420J1	2.3
		1.4028	X30Cr13	X30Cr13	Z 30 C 13	420F	SUS420J2	2.3
		1.4057	X17CrNi16-2	X16CrNi16	Z 15 CN 16-02	431	SUS431	2.3
		1.4125	X105CrMo17		Z 100 CD 17	440C	SUS440C	2.3
	Duplex	1.4462	X2CrNiMoN22-5-3	X2CrNiMoN22-5-3	Z 3 CND 22-05 Az		SUS329J3L	2.3
		1.4501	X2CrNiMoCuWN25-7-4	X2CrNiMoCuWN25-7-4				2.3
	Precipitation hardening	1.4542	X5CrNiCuNb16-4		Z 7 CNU 15-05	630	SUS630/SCS24	2.3
Cast iron	Grey cast iron	0.6010	GG10	G10	Ft10D	A48-20B	FC10	3.1
		0.6015	GG15	G15	Ft15D	A48-25B	FC15	3.1
		0.6020	GG20	G20	Ft20D	A48-30B	FC20	3.1
		0.6025	GG25	G25	Ft25D	A48-40B	FC25	3.1
		0.6030	GG30	G30	Ft30D	A48-45B	FC30	3.1
		0.6035	GG35	G35	Ft35D	A48-50B	FC35	3.1
		0.6040	GG40	G40	Ft40D	A48-60B		3.1
	Nodular cast iron / tempered	0.7040	GGG40	GS400-15	FGS400-12	60-40-18	FCD40	3.2
		0.7050	GGG50	GS500-7	FGS500-7	65-45-12	FCD50	3.2
		0.7060	GGG60	GS600-3	FGS600-3	80-55-06	FCD60	3.2
		0.7070	GGG70	GS700-2	FGS700-2	100-70-03	FCD70	3.2
	Malleable cast iron	0.8035	GTW35-04					3.2
		0.8055	GTS55-05					3.2
Al and Al alloys	Pure Al	3.0205	Al99				A1200	4.1
		3.0305	Al99.9					4.1
	Al wrought alloys	3.0505	AlMn0.5Mg0.5				A3105	4.2
		3.0915	AlFeSi					4.2
		3.3315	AlMg1				A5005	4.2
		3.3525	AlMg2Mn0.3					4.2
		3.3527	AlMg2Mn0.8					4.2
		3.3545	AlMg4Mn				A5086	4.2
		3.3555	AlMg5				A5056	4.2
		3.0615	AlMgSiPb					4.2
		3.1255	AlCuSiMn				A2014	4.2
		3.1325	AlCuMg1				A2017	4.2

EXAMPLES OF MATERIALS

Type	Application	W.Nr.	DIN	UNI	AFNOR	AISI/SAE/ ASTM	JIS	MG Vergnano
Al and Al alloys	Al wrought alloys	3.1355	AlCuMg2				A2024	4.2
		3.1645	AlCuMgPb					4.2
		3.4335	AlZn4.5Mg1				A7N01	4.2
	Al casting alloys	3.1371	G-AlCu4TiMg				AC1B	4.2
		3.2134	G-AlSi5Cu1Mg				AC4D	4.3
		3.3241	G-AlMg3Si					4.2
		3.3261	G-AlMg5Si					4.2
		3.3541	G-AlMg3					4.2
		3.2373	G-AlSi9Mg				AC4A	4.3
		3.2381	G-AlSi10Mg					4.4
		3.2383	G-AlSi10Mg(Cu)				ADC3	4.4
		3.2581	G-AlSi12				AC3A	4.4
		3.2583	G-AlSi12(Cu)				ADC1	4.4
Cu and Cu alloys	Pure Cu	2.0060	E-Cu57					5.1
		2.0065	E-Cu58					5.1
	Cu wrought alloys	2.1525	CuSi3Mn					5.2
		2.0855	CuNi2Si					5.2
		2.1247	CuBe2					5.2
		2.1285	CuCo2Be					5.2
	Brass	2.0240	CuZn15					5.2
		2.0250	CuZn20					5.2
		2.0265	CuZn30					5.2
		2.0280	CuZn33					5.2
		2.0321	CuZn37					5.2
		2.0360	CuZn40					5.3
		2.0410	CuZn44Pb2					5.3
		2.0550	CuZn40Al2					5.3
	Bronze	2.1016	CuSn4					5.2
		2.1020	CuSn6					5.2
		2.1030	CuSn8					5.2
		2.1086	G-CuSn10Zn					5.3
		2.0978	CuAl11Ni6Fe5					5.4
		2.0940	CuAl10Fe					5.4
		2.0882	CuNi30Mn1Fe					5.4
Mg and Mg alloys		3.5312	MgAl3Zn					6.1
		3.5632	MgAl6Zn3					6.1
		3.5912	MgAl9Zn1					6.1
		3.5161	MgZn6Zr					6.2
Ti and Ti alloys	Pure Ti	3.7024	Ti99.5					7.1
		3.7034	Ti99.7					7.1
	Ti alloys	3.7165	TiAl6V4					7.2
		3.7174	TiAl6V4Sn2					7.2
Ni and Ni alloys	Pure Ni	1.3911	RNi24					8.1
		1.3926	RNi12					8.1
	Ni alloys	2.4858	NiCr21Mo (Incoloy 825)					8.2
		2.4668	NiCr19Fe19NbMo (Inconel 718)					8.2
		2.4630	Ni-Cr20Ti (Nimonic 75)					8.2
		2.4665	NiCr22Fe18Mo (Hastelloy X)					8.2
Plastic materials	Thermoplastic		Polyethylene PE					9.1
			Polypropylene PP					9.1
			Polystyrene PS					9.1
			Polymethylmethacrylate PMMA					9.1
			Polycarbonate PC					9.1
			Polyamide PA					9.1
			Polytetrafluoroethylene PTFE					9.1
	Thermosetting		Bachelite					9.2

ISO Metric coarse thread DIN 13			
M	Pitch [mm]	Maximum core diam. (tol. 6H) [mm]	Drill size [mm]
M1	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	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	0,4	1,938	1,9
2,5	0,45	2,138	2,05
2,6	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	5,5	54,796	54,5
64	6	58,305	58
68	6	62,305	62

(1) Tolerance 5H

ISO Metric fine thread DIN 13			
MF	Pitch [mm]	Maximum core diam. (tol. 6H) [mm]	Drill size [mm]
M2	0,25	1,774 (2)	1,75
2,3	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	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

(2) Tolerance 4H

MF	Pitch [mm]	Maximum core diam. (tol. 6H) [mm]	Drill size [mm]
M25	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	30,675	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

ISO Metric coarse thread DIN 8140 part 2	
EG-M	Drill size [mm]
3	3,15
4	4,2
5	5,25
6	6,3
8	8,4
10	10,4
12	12,5
14	14,5
16	16,5

Unified coarse thread UNC ASME - B1.1			
UNC	T.P.I.	Maximum core diam. (class 3B) [mm]	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

Unified fine thread UNF ASME - B1.1			
UNF	T.P.I.	Maximum core diam. (class 3B) [mm]	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

8-UN thread ASME B1.1			
8-UN	T.P.I.	Maximum core diam. (class 3B) [mm]	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

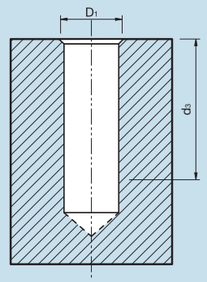
Whitworth thread BSW - BS 84			
BSW	T.P.I.	Maximum core diam. [mm]	Drill size [mm]
3/32"	48	1,912	1,9
1/8"	40	2,591	2,55
5/32"	32	3,214	3,2
3/16"	24	3,744	3,7
7/32"	24	4,539	4,5
1/4"	20	5,156	5,1
5/16"	18	6,589	6,5
3/8"	16	7,988	7,9
7/16"	14	9,332	9,25
1/2"	12	10,589	10,5
9/16"	12	12,177	12
5/8"	11	13,559	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

Whitworth pipe thread EN - ISO 228			
G	T.P.I.	Maximum core diam. [mm]	Drill size [mm]
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

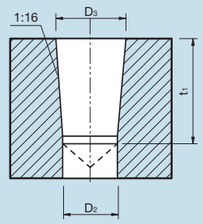
DRILL SIZES CUTTING TAPS

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

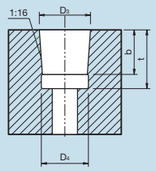
Cylindrical hole, without using a reamer							
Tap size	TPI		D1 [mm]			t1 [mm]	
	NPT NPTF	Rc (BSPT)	NPT	NPTF	Rc (BSPT)	NPT NPTF	Rc (BSPT)
1/16"	27	28	6,15	6,15	6,2	12	11,9
1/8"	27	28	8,5	8,5	8,2	12	11,9
1/4"	18	19	11	11	11	17,5	17,7
3/8"	18	19	14,5	14,5	14,5	17,6	18,1
1/2"	14	14	17,85	17,8	18	22,9	24
3/4"	14	14	23,2	23	23,5	23	25,3
1"	11 1/2	11	29	29	29,5	27,4	30,6
1" 1/4	11 1/2	11	37,8	37,8	38	28,1	32,9
1" 1/2	11 1/2	11	44	43,8	44	28,4	32,9
2"	11 1/2	11	56	56	55,5	28,4	37,2



Cylindrical holes with use of tapered reamer									
Tap size	TPI		D2 [mm]		D3 [mm]			t1 [mm]	
	NPT NPTF	Rc (BSPT)	NPT NPTF	Rc (BSPT)	NPT	NPTF	Rc (BSPT)	NPT NPTF	Rc (BSPT)
1/16	27	28	5,95	6,1	6,39	6,41	6,56	12	11,9
1/8	27	28	8,25	8,1	8,74	8,76	8,57	12	11,9
1/4	18	19	10,75	10,75	11,36	11,4	11,45	17,5	17,7
3/8	18	19	14,1	14,25	14,8	14,84	14,95	17,6	18,1
1/2	14	14	17,5	17,75	18,32	18,33	18,63	22,9	24
3/4	14	14	22,7	23	23,67	23,68	24,12	23	25,3
1"	11 1/2	11	28,6	29	29,69	29,72	30,29	27,4	30,6
1" 1/4	11 1/2	11	37,3	37,5	38,45	38,48	38,95	28,1	32,9
1" 1/2	11 1/2	11	43,4	43,5	44,52	44,55	44,85	28,4	32,9
2"	11 1/2	11	55,5	55	56,56	56,59	56,66	28,4	37,2



Preparation of tapered blind hole														
Tap size	TPI		D3 [mm]			b [mm]			t [mm]			D4 [mm]		
	NPT NPTF	Rc (BSPT)	NPT	NPTF	Rc (BSPT)	NPT	NPTF	Rc (BSPT)	NPT	NPTF	Rc (BSPT)	NPT	NPTF	Rc (BSPT)
1/16	27	27	6,39	6,41	6,56	7	8	5,6	10	11	9,5	7,6	7,4	7,6
1/8	27	27	8,74	8,76	8,57	7	8	5,6	10	11	9,5	10	9,8	9,6
1/4	18	18	11,36	11,4	11,45	10,2	11,6	8,4	14,5	15,5	14	13,1	12,9	13
3/8	18	18	14,8	14,84	14,95	10,6	12	8,8	15	16	14,4	16,5	16,3	16,5
1/2	14	14	18,32	18,33	18,63	13,8	15,6	11,4	19	20,5	19	20,5	20,3	20,6
3/4	14	14	23,67	23,68	24,12	14,2	16	12,7	20	21,5	20,3	25,8	25,6	26
1"	11 1/2	11 1/2	29,69	29,72	30,29	17	19,2	14,5	24	26	24,3	32,2	32	32,8
1" 1/4	11 1/2	11 1/2	38,45	38,48	38,95	17,5	19,7	16,8	24,5	26,5	26,6	41	40,8	40,2
1" 1/2	11 1/2	11 1/2	44,52	44,55	44,85	17,5	19,7	16,8	24,5	26,5	26,6	47,2	47	47,2
2"	11 1/2	11 1/2	56,56	56,59	56,66	18	20,2	21,1	25	27	30,9	59,2	59	58,7



DRILL SIZES FORMING TAPS

ISO Metric coarse thread DIN 13		
M	Pitch	Drill size
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	7,45 ± 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

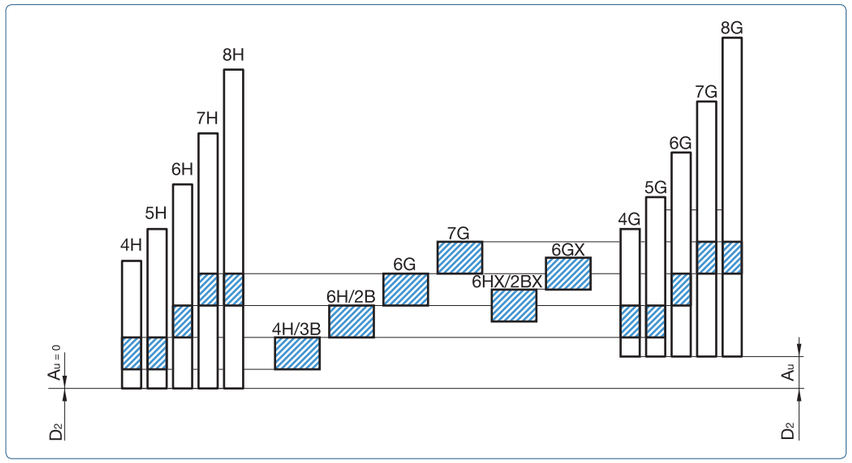
ISO Metric fine thread DIN 13		
MF	Pitch	Drill size
M 3	0,35	2,85 ± 0,03
4	0,5	3,80 ± 0,03
5	0,5	4,80 ± 0,03
6	0,75	5,65 ± 0,03
8	1	7,55 ± 0,05
10	1	9,55 ± 0,05
10	1,25	9,45 ± 0,05
12	1	11,55 ± 0,05
12	1,25	11,45 ± 0,05
12	1,5	11,30 ± 0,05
14	1,25	13,45 ± 0,05
14	1,5	13,30 ± 0,05
16	1,5	15,30 ± 0,05
18	1,5	17,30 ± 0,05
20	1,5	19,30 ± 0,05

Whitworth pipe thread EN - ISO 228		
G	T.P.I.	Drill size
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"	14	32,00 ± 0,05

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.

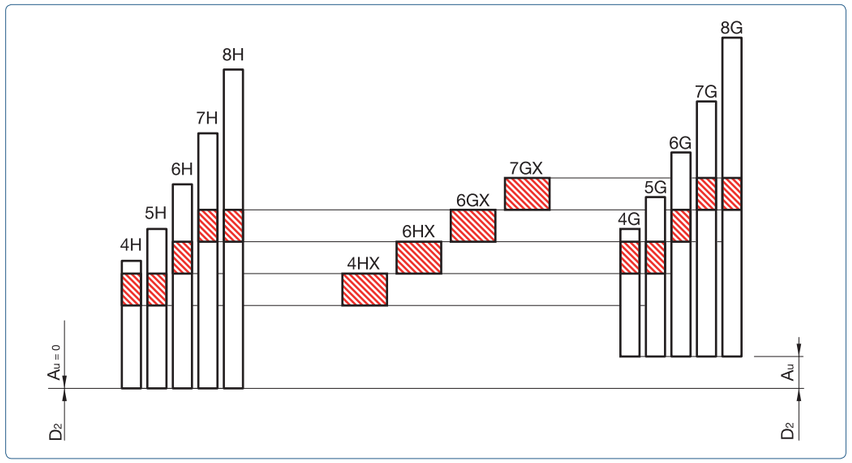
CUTTING TAP TOLERANCE

Internal thread Tolerance class H	Tolerance ranges for cutting taps	Internal thread Tolerance class G



FORMING TAP TOLERANCE

Internal thread Tolerance class H	Tolerance ranges for forming taps	Internal thread Tolerance class G



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.

For American tolerances, according to ASME B1.1 (classes 3B, 2B, 2BX), the positions in the figure are only indicative, since they are a function of tap diameter.

ICON DESCRIPTION

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
- R 15 — Tap with 15° right hand spiral
- L 15 — Tap with 15° left hand spiral
- R 25 — Tap with 25° right hand spiral
- R 40 2 — Tap with 40° right hand spiral and 2 flutes
- R 40 — Tap with 40° right hand spiral
- R 45 — 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
- Die
- Back tapering

HOLE TYPE AND DEPTH

- 1 x D — Through, up to 1 x d_1
- 1,5 x D — Through, up to 1,5 x d_1
- 1,5 x D — Blind, up to 1,5 x d_1
- 1,5 x D — Blind and through, up to 1,5 x d_1
- 2,5 x D — Through, up to 2,5 x d_1
- 2,5 x D — Blind, up to 2,5 x d_1
- 2,5 x D — Blind and through, up to 2,5 x d_1
- 3 x D — Blind and through, up to 3 x d_1
- Tapered hole
- Nut

ICON DESCRIPTION

TAP DIMENSIONS

- DIN 352 — Dimensions according to DIN 352
- DIN 357 — Dimensions according to DIN 357
- DIN 371 — Dimensions according to DIN 371
- DIN 374 — Dimensions according to DIN 374
- DIN 376 — Dimensions according to DIN 376
- DIN 2174 — Dimensions according to DIN 2174
- DIN 2181 — Dimensions according to DIN 2181
- DIN 2184-1 — Dimensions according to DIN 2184-1
- DIN 2184-2 — Dimensions according to DIN 2184-2
- DIN 2189 — Dimensions according to DIN 2189
- DIN 5156 — Dimensions according to DIN 5156
- DIN 5157 — Dimensions according to DIN 5157
- DIN EN 22568 — Dimensions according to DIN EN 22568
- DIN EN 24231 — Dimensions according to DIN EN 24231
- DIN 40435 — Dimensions according to DIN 40435
- Dimensions according to internal Vergnano standard
- Tap with long shank

DIRECTION OF CUT

- RH — Right hand cut
- LH — Left hand cut

TYPE OF CHIPS

- Short chipping
- Medium chipping
- Medium to long chipping
- Long chipping
- Plastic deformation without chip formation

COLOURED RINGS

- Orange ring - Taps for tough materials
- Blue ring - Taps for titanium and titanium alloys
- Yellow ring - Taps for light alloys
- Red ring - Hand taps A100
- Green ring - Taps for stainless steel

ICON DESCRIPTION

TAP AND DIE TOLERANCE

- ISO1 4H — Tolerance 4H / ISO1
- ISO2 6H — Tolerance 6H / ISO2
- ISO3 6G — Tolerance 6G / ISO3
- 7G — Tolerance 7G
- 6HX — Tolerance 6HX
- 6GX — Tolerance 6GX
- 7GX — Tolerance 7GX
- 6H MOD — Modified 6H Tolerance
- 3B — Tolerance 3B
- 2B — Tolerance 2B
- 2BX — Tolerance 2BX
- ISO 5969 — Tolerance ISO 5969
- ISO 5969 X — Tolerance ISO 5969X
- ISO 6g — Tolerance ISO 6g
- 2A — Tolerance 2A
- A — Tolerance Class A
- mc — Medium Tolerance

MATERIAL

- HM — Material: solid carbide
- HSS — Material: conventional high speed steel
- HSSE — Material: conventional high speed steel
- HSSK — Material: powder metallurgy high speed steel
- HSSZ — Material: high performance powder metallurgy high speed steel
- HSSP — Material: high performance powder metallurgy high speed steel

THREAD TYPE

- DIN 13 — Thread type: DIN 13
- DIN 8140 part 2 — Thread type: DIN 8140 part 2
- DIN EN 10226-2 — Thread type: conical gas thread Rc (BSPT)
- EN ISO 228 — Thread type: GAS Whitworth EN ISO 228
- ASME B1.1 — Thread type: ASME - B1.1
- ASME B1.20.1 — Thread type: ASME - B1.20.1
- ASME B1.20.3 — Thread type: ASME - B1.20.3
- BS 84 — Thread type: Whitworth BSW BS 84

ICON DESCRIPTION

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

- 1.1-3 / 3.2 / 4.1-2 — Application range: MG materials groups
- S — Tap only for rigid tapping attachment (synchronous)
- High recommended cutting speed
- High tool life

TWIST DRILL HP900 TiAlN

- Drill geometry
- 120° — Point angle 120°
- DIN 6537K — Dimension according to DIN 6537K
- DIN 6535HA — Shank according to DIN 6535HA
- H — Drill type
- m7 — Tolerance m7

VERGNANO Technical data sheet

Date: _ _ _ _ _

Company: _

Contact person: _ Phone: _ _ _ _ _ _ _ _ _ _ _ _ Fax: _ _ _ _ _ _ _ _ _ _ _ _ _

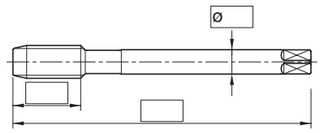
Dealer: _ Mr/Mrs: _ _ _ _ _ _ _ _ _ _ _ _ _ Phone: _ _ _ _ _ _ _ _ _ _ _ _

Tap parameters

ø _ _ _ _ _ _ _ _ _ _ _ _ _ Tol: _ _ _ _ _ _ _ _ Drawing: _ _ _ _ _ _ _ _ _ _ _ _ _

Type: _ _ _ _ _ _ _ _ _ _ _ _

Material: _ _ _ _ _ _ _ _ _ Coating: _ _ _ _ _ _ _ _ _ _



Machining parameters

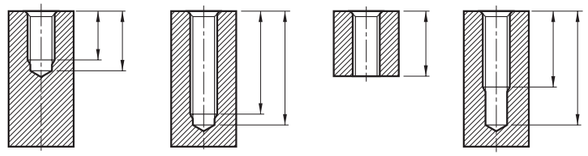
Workpiece: _

Workpiece material: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Designation: _ _ _ _ _ _ _ _ _ _ _ _ _

Resistance N/mm^2: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Hardness: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Type of chip: ☐ short ☐ medium ☐ long

Drill size Ø _ _ _ _ _ _ _



Cutting parameters

Cutting speed: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ m/min Rotational speed: _ _ _ _ _ _ _ _ _ _ _ rpm

Lubrication: _

Tapping direction: ☐ Vertical ☐ Horizontal

Machine type: _

N° _ _ _ _ _ _ Spindles - type _ _ _ _ _ _ _ _ _ _ _ _

Tapping: ☐ rigid ☐ with compensation

Notes:

Notes

Notes

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