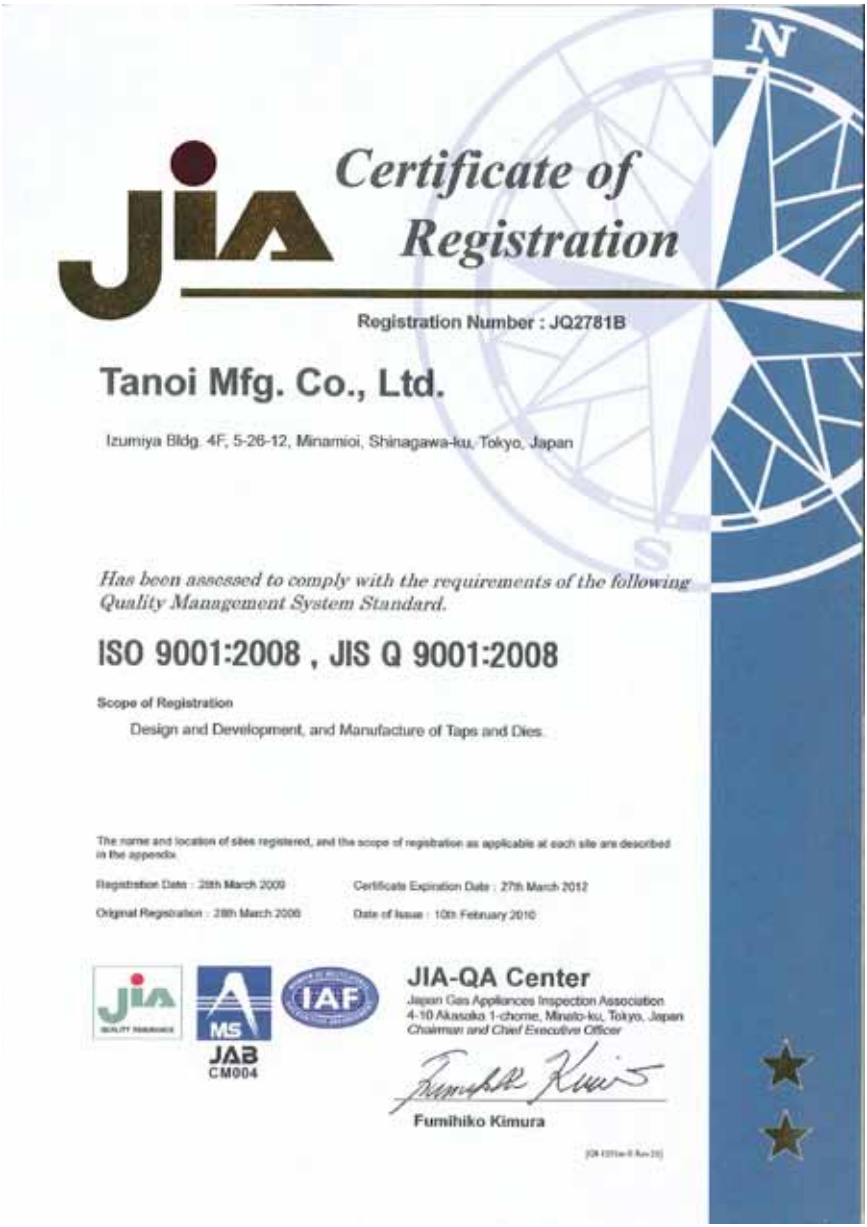
TANOI







Taps E11



Certificate of Registration

Registration Number : JQ2781B

Tanoi Mfg. Co., Ltd.

Izumiya Bldg. 4F, 5-26-12, Minamioi, Shinagawa-ku, Tokyo, Japan

Has been assessed to comply with the requirements of the following Quality Management System Standard.

ISO 9001:2008 , JIS Q 9001:2008

Scope of Registration

Design and Development, and Manufacture of Taps and Dies.

The name and location of sites registered, and the scope of registration as applicable at each site are described in the appendix.

Registration Date : 28th March 2009 — Certificate Expiration Date : 27th March 2012

Original Registration : 28th March 2006 — Date of Issue : 10th February 2010

JAB
CM004

JIA-QA Center
Japan Gas Appliances Inspection Association
4-10 Akasaka 1-chome, Minato-ku, Tokyo, Japan
Chairman and Chief Executive Officer

Fumihiko Kimura

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Tokyo Head Office



Saitama Factory



Miyagi Factory

Ultimate precision is our tradition since 1923

TANOI Manufacturing Company was established in 1923 by Jyonosuke Tanoi. First located in Tokyo it rapidly grew to satisfy the increasing demand for high precision threading tools in Japan.
In 1945 the factory was moved to Saitama to increase production capacity and in 1987 the new Miyagi plant was opened to double the overall productivity of the company.

During all of its history TANOI has dedicated its efforts to the development of very high precision products, especially taps and dies. Always aiming for improving the productivity of its discriminating customers, TANOI has developed a series of unique products such as T-Spiral taps with DAT technology (1990), SL-TF seamless forming taps (1998) and MLT multifunctional Taps for high volume die cast machining (2003). All of these products are patented in Japan, the USA and Europe.



MLT-TAP

Today TANOI is more than ever dedicated to improve the productivity of its customers.
We are constantly developing new products and improving existing ones to make tapping and thread rolling more efficient.

We are looking forward to a bright, successful future together with our customers.



IT-TAFLET

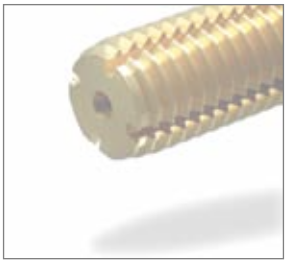


Tokyo Factory 1923



SL-TAFLET





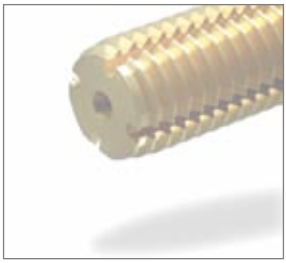


MULTI-FUNCTION-TAPS











Technical Features

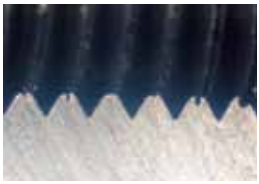
- SL-Taflet forming taps feature a unique combination of thread forming and removing the seams typical for thread forming.
- After forming the threads (Pictures 1.1/1.2) SL-Taflet's side reamer cuts the crests of the formed thread thus partially or fully removing the two seams created during the forming process (Pictures 2.1/2.2).
- Compared to conventional forming taps the forming torque is reduced by approximately 20%.

Advantages in Production

- By removing the seams on the thread a smooth thread crest is created.
- The internal thread diameter is constant according to the diameter of the side reamer. This process also achieves improved concentricity of the hole and the thread.
- Since the seams are removed plating or other fluids cannot remain between the seams thus avoiding rust or other problems.
- No burrs or chips from the thread seams remain in the thread making it safe for applications in the hydraulic or medical fields.

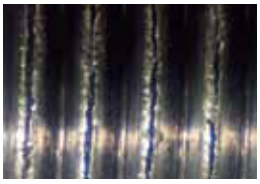
SL-Taps are patented:
Japan patent no. 2880122
US patent no. 5797710
Europa patent no. 0767024

Conventional forming tap



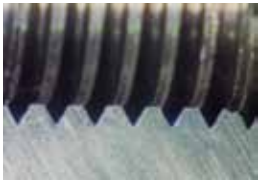
1.1

Conventional forming tap



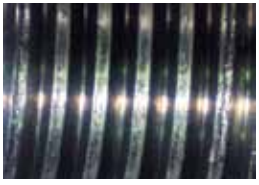
1.2

SL-TAFLET



2.1

SL-TAFLET



2.2

Application

- SL-Taflets require special consideration when choosing the drill hole diameters depending on the degree of thread engagement SL-Taflets can only remove the thread crest if a minimum of thread engagement is reached.
- Therefore the drill hole diameter should be chosen to be at least 95% of thread engagement. This ensures full removal of the thread seams by the side reamer. Please refer to the table 3.1 to choose the appropriate drill hole diameter.
- It is possible to choose lower thread engagements than 95%. In such a case some thread seams may remain on the threads crest because they are lower than the internal diameter of the required thread. However, choosing low thread engagements reduces tapping torque and increases tool life.
- Choosing thread engagements above 95% increases cutting torque but also creates better compacted threads making the produced thread stronger.

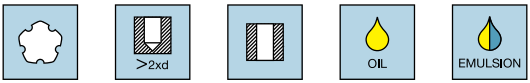
Size	Pitch	Reamer diameter D_i	Hole diameter [mm] by % of thread engagement			
			105%	100%	95%	90%
M2	0.40	1.62	1.76	1.77	**1.78**	1.80
M2.2	0.45	1.77	1.93	1.94	**1.96**	1.97
M2.5	0.45	2.07	2.23	2.24	**2.26**	2.27
M2.6	0.45	2.17	2.33	2.34	**2.36**	2.37
M3	0.50	2.53	2.70	2.72	**2.73**	2.74
M3.5	0.60	2.93	3.14	3.16	**3.18**	3.19
M4	0.70	3.34	3.58	3.60	**3.62**	3.64
M5	0.80	4.24	4.52	4.55	**4.57**	4.59
M6	1.00	5.05	5.40	5.43	**5.46**	5.49
M8	1.25	6.82	7.26	7.29	**7.33**	7.36
M10	1.50	8.58	9.11	9.15	**9.19**	9.23

Table 3.1

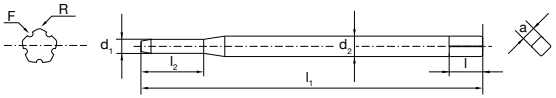


ALU | ALU Si <10% | ALU Si >10% | CU

M | 60° P | FORM C 2-3 xP | TiCN HSSE V3



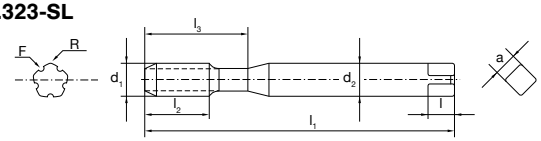
1.153.323-SL



5HX | TANOI

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	0.40	45	8	10	2.8	5	2.1	3 / 4	810.065	
M2.2	0.45	45	9	11	2.8	5	2.1	3 / 4	810.070	
M2.5	0.45	50	9	12.5	2.8	5	2.1	3 / 4	810.080	
M2.6	0.45	50	9	12.5	2.8	5	2.1	3 / 4	810.085	

1.153.323-SL

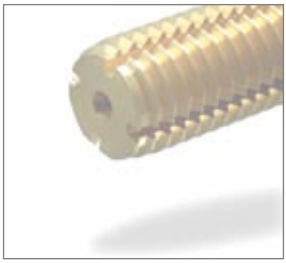


6HX | DIN 2174

M3	0.50	56	11	18	3.5	6	2.7	3 / 4	810.090	
M3.5	0.60	56	12	20	4.0	6	3.0	3 / 4	810.095	
M4	0.70	63	13	21	4.5	6	3.4	3 / 4	810.100	
M5	0.80	70	16	25	6.0	8	4.9	3 / 4	810.110	
M6	1.00	80	19	30	6.0	8	4.9	3 / 4	810.115	
M8	1.25	90	22	35	8.0	9	6.2	5 / 6	810.125	
M10	1.50	100	24	39	10.0	11	8.0	5 / 6	810.135	

- SL-Taflets are available in standard sizes from M2 to M10. Upon request sizes up to M20 are possible. The side reamer can be made to manufacture different minor diameters of internal threads.







Technical Features

- MLT Taps are designed for working die cast parts such as motor housings, carburator housings, and the like.
- They combine three functions into one single operation (Pictures 1.1/1.2) :
  1. Removing the cast surface from the die cast hole.
  2. Tapping the thread.
  3. Reaming the minor diameter of the thread to the required one.
- To achieve this the cutting section of the MLT tap has been combined with a special drilling/milling face and a side reamer (Picture 2.1).
- MLT Taps can be used in blind holes and through holes. In through holes with thin film bottoms, these bottoms are removed by MLT taps creating a clean, burr-less exit of the hole.
- From size M6 on MLT Taps are designed with internal cooling.

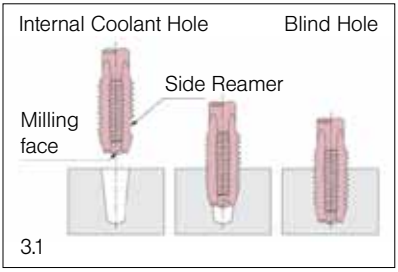

1.1


1.2

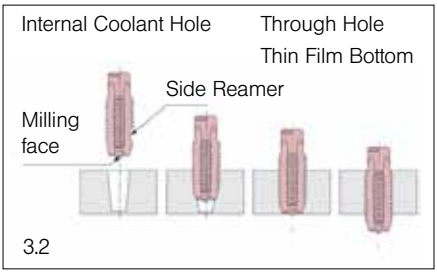


2.1

MLT-Taps are patented:
Japan patent no. 3457178
US patent no. 6499920
Europa patent no. 0953396



3.1



3.2

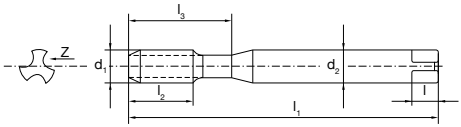


ALU | ALU Si <10% | ALU Si >10% | CU SHORT | ZDC | GG/G CAST

M | 60° P | FORM C 2-3 xP | 0° | TiCN HSSE V3 | SYNCHRO

THIN FILM | OIL | EMULSION

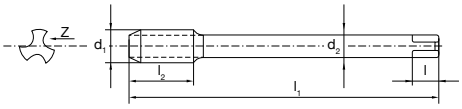
1.113.923 MLT



6HX | DIN 371

d_1	P	d_i	l_1	l_2	l_3	d_2	l	a	z	Code	
M4	0.70	3.30	63	13	21	4.5	6	3.4	3	951.095	
M5	0.80	4.20	70	16	25	6.0	8	4.9	3	951.120	
• **M6**	1.00	5.00	80	19	30	6.0	8	4.9	3	951.130	

1.113.923 MLT



6HX | DIN 376

d_1	P	d_i	l_1	l_2	l_3	d_2	l	a	z	Code	
• **M8**	1.25	6.75	90	13	35	8.0	9	6.2	4	951.155	
• **M10**	1.50	8.50	100	15	39	10.0	11	8.0	4	951.185	

d_i = diameter of reamer / core.

• With internal cooling.

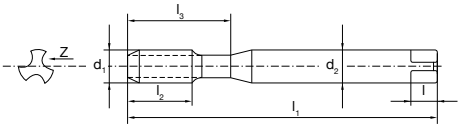


ALU | ALU Si <10% | ALU Si >10% | CU SHORT | ZDC | GG/G CAST

M | 60° P | FORM C 2-3 xP | 15° | TiCN HSSE V3 | SYNCHRO

THIN FILM | OIL | EMULSION

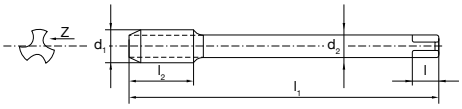
1.114.923
MLT



6HX | DIN 371

d_1	P	d_i	l_1	l_2	l_3	d_2	l	a	z	Code	
M4	0.70	3.30	63	13	21	4.5	6	3.4	3	953.095	
M5	0.80	4.20	70	16	25	6.0	8	4.9	3	953.120	
• **M6**	1.00	5.00	80	19	30	6.0	8	4.9	3	953.130	

1.114.923
MLT



6HX | DIN 376

d_1	P	d_i	l_1	l_2	l_3	d_2	l	a	z	Code	
• **M8**	1.25	6.75	90	22	35	8.0	9	6.2	4	953.155	
• **M10**	1.50	8.50	100	24	39	10.0	11	8.0	4	953.185	

d_i = diameter of reamer / core.

• With internal cooling.

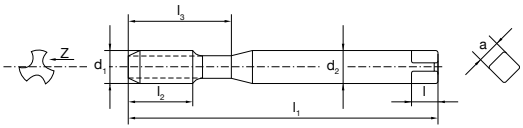


ALU | ALU Si <10% | ALU Si >10% | CU SHORT | ZDC | GG/G CAST

M | 60° P | FORM C 2-3 xP | 0° | MG CARBIDE | SYNCHRO

THIN FILM | OIL | EMULSION

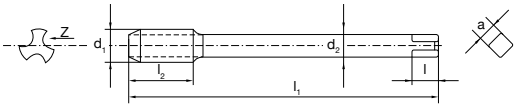
1.113.980
MLT



6HX | DIN 371

d_1	P	d_i	l_1	l_2	l_3	d_2	l	a	z	Code	
M4	0.70	3.30	63	13	21	4.5	6	3.4	3	952.095	
M5	0.80	4.20	70	16	25	6.0	8	4.9	3	952.120	
• **M6**	1.00	5.00	80	19	30	6.0	8	4.9	3	952.130	

1.113.980
MLT



6HX | DIN 376

d_1	P	d_i	l_1	l_2	l_3	d_2	l	a	z	Code	
• **M8**	1.25	6.75	90	22	35	8.0	9	6.2	4	952.155	
• **M10**	1.50	8.50	100	24	39	10.0	11	8.0	4	952.185	

d_i = diameter of reamer / core.

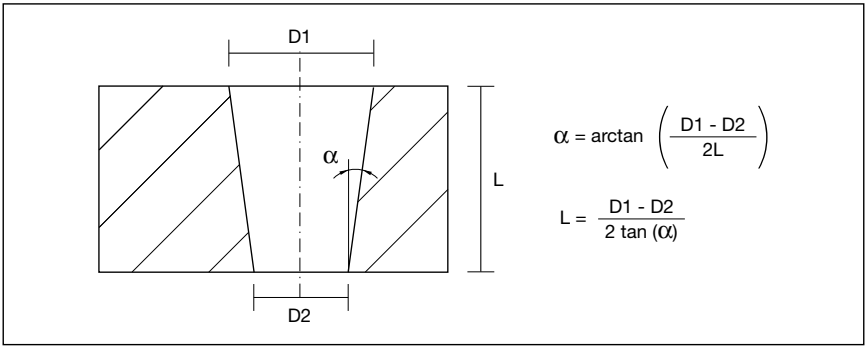
• With internal cooling.

Advantages in Production

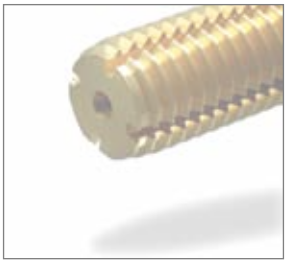
- The operations, drilling, chamfering and tapping are combined into one tool. This reduces production time, tool cost and reduces overall production cost.
- The combination of mill, reamer and tap creates best cutting conditions for the tapping process and avoids problems with cast surfaces since these are completely removed.
- As the hole is created in one operation with the tapping, deformations and location errors in molded holes are corrected in the process.
- The side reamer reduces the thread crests to the required internal diameter of the thread. This guarantees perfect concentricity of the hole and the thread.

Application

- All MLT taps should be used with synchronized tapping spindles only.
- Rigid tool holders without compensation should be used.
- Because MLT taps generate more chips than conventional taps internal cooling is recommended. From size M6 all MLT taps feature centre cooling through the shank. For smaller sizes the TANOI „Side-Through-System“ is strongly recommended for cooling.
- The molded holes need to meet the minimum requirements for use of MLT taps.
  - The diameter of the hole at the entry should be according to the normal drill diameter for cutting taps. This is approximately the nominal diameter minus the pitch. For a tap M6 the hole's diameter should therefore be 5.0 mm.
  - The minimum diameter of the hole should be 0.6 x the nominal diameter of the thread. For a tap M6 it should therefore be 0.6 x 6 mm = 3.6 mm.
  - From these two values the incline of the molded hole may be calculated as shown in the picture below.









MACHINE TAPS *CUTTING*



MACHINE TAPS CUTTING

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For Cast Iron

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 0.113.126	DIN 371	FORM C 2-3 xP	0°	6HX	Ni OX HSSE V3	48
≤2xd	 0.113.626	DIN 376	FORM C 2-3 xP	0°	6HX	Ni OX HSSE V3	49
≤2xd	 0.113.123	DIN 371	FORM C 2-3 xP	0°	6HX	TiCN HSSE V3	46
≤2xd	 0.113.623	DIN 376	FORM C 2-3 xP	0°	6HX	TiCN HSSE V3	47

For Aluminium

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	1.113.923-MLT	TANOI	FORM C - 2-3 - xP	0°	6HX	TiCN HSSE V3	14
	1.113.980-MLT	TANOI	FORM C - 2-3 - xP	0°	6HX	MG CARBIDE	16
	1.114.923-MLT	TANOI	FORM C - 2-3 - xP	15°	6HX	TiCN HSSE V3	15
	1.112.120	DIN 371	FORM B - 3.5-5 - xP	B	ISO 2 (6H)	HSSE V3	54
	1.112.620	DIN 376	FORM B - 3.5-5 - xP	B	ISO 2 (6H)	HSSE V3	55
	1.112.123	DIN 371	FORM B - 3.5-5 - xP	B	ISO 2 (6H)	TiCN HSSE V3	56
	1.112.623	DIN 376	FORM B - 3.5-5 - xP	B	ISO 2 (6H)	TiCN HSSE V3	57
>2xd	1.116.120	DIN 371	FORM C - 2-3 - xP	45°	ISO 2 (6H)	HSSE V3	58
>2xd	1.116.620	DIN 376	FORM C - 2-3 - xP	45°	ISO 2 (6H)	HSSE V3	59
>2xd	1.116.123	DIN 371	FORM C - 2-3 - xP	45°	ISO 2 (6H)	TiCN HSSE V3	60
>2xd	1.116.623	DIN 376	FORM C - 2-3 - xP	45°	ISO 2 (6H)	TiCN HSSE V3	61

For Mild Steels < 500 N/mm²

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	2.112.121	DIN 371	FORM B 3.5-5 xP	B	ISO 2 (6H)	OX HSSE V3	62
	2.112.621	DIN 376	FORM B 3.5-5 xP	B	ISO 2 (6H)	OX HSSE V3	63
>2xd	2.115.121	DIN 371	FORM C 2-3 xP	40°	ISO 2 (6H)	OX HSSE V3	64
>2xd	2.115.621	DIN 376	FORM C 2-3 xP	40°	ISO 2 (6H)	OX HSSE V3	65

For Steels < 800 N/mm² — M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 3.112.126-WF	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	Ni OX HSSE V3	82
	 3.112.626-WF	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	Ni OX HSSE V3	83
	 3.112.129	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	C-COAT HSSE V3	80
	 3.112.220	DIN 352	FORM B -3.5-5-xP	B	ISO 2 (6H)	HSSE V3	71
	 3.112.120	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	HSSE V3	72
	 3.112.620	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	HSSE V3	73
	3.112.920-LS	TANOI LS	FORM B -3.5-5-xP	B	ISO 2 (6H)	HSSE V3	75
	 3.112.120-LH	DIN 371	FORM B -3.5-5-xP	B-LH	ISO 2 (6H)	HSSE V3	76
	 3.112.620-LH	DIN 376	FORM B -3.5-5-xP	B-LH	ISO 2 (6H)	HSSE V3	77
	 3.112.122	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	C-COAT HSSE V3	78
	 3.112.622	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	C-COAT HSSE V3	79
	 3.122.120	DIN 371	FORM B -3.5-5-xP	B	ISO 3 (6G)	HSSE V3	104

For Steels < 800 N/mm² — M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	3.122.620	DIN 376	FORM B -3.5-5-xP	B	ISO 3 (6G)	HSSE V3	105
	3.142.120	DIN 371	FORM B -3.5-5-xP	B	7G	HSSE V3	108
	3.142.620	DIN 376	FORM B -3.5-5-xP	B	7G	HSSE V3	109
	3.117.120-LSP	DIN 371	FORM D -3.5-5-xP	15°	ISO 2 (6H)	HSSE V3	98
	3.117.620-LSP	DIN 376	FORM D -3.5-5-xP	15°	ISO 2 (6H)	HSSE V3	99
	3.119.952-SYNCHRO	TANOI	FORM D -3.5-5-xP	17°	6HX	C-COAT PM 38	102
≤2xd	3.114.220	DIN 352	FORM C - 2-3 -xP	15°	ISO 2 (6H)	HSSE V3	84
≤2xd	3.113.120	DIN 371	FORM C - 2-3 -xP	0°	ISO 2 (6H)	HSSE V3	68
≤2xd	3.113.620	DIN 376	FORM C - 2-3 -xP	0°	ISO 2 (6H)	HSSE V3	69
≤2xd	3.114.120	DIN 371	FORM C - 2-3 -xP	15°	ISO 2 (6H)	HSSE V3	86
≤2xd	3.114.620	DIN 376	FORM C - 2-3 -xP	15°	ISO 2 (6H)	HSSE V3	87
≤2xd	3.114.920-LS	TANOI LS	FORM C - 2-3 -xP	15°	ISO 2 (6H)	HSSE V3	88

For Steels < 800 N/mm² — M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
>2xd	 3.115.220	DIN 352	FORM C - 2-3 - xP	40°	ISO 2 (6H)	HSSE V3	89
>2xd	 3.115.120	DIN 371	FORM C - 2-3 - xP	40°	ISO 2 (6H)	HSSE V3	90
>2xd	 3.115.620	DIN 376	FORM C - 2-3 - xP	40°	ISO 2 (6H)	HSSE V3	91
>2xd	 3.115.920-LS	TANOI LS	FORM C - 2-3 - xP	40°	ISO 2 (6H)	HSSE V3	92
>2xd	 3.115.120-LH	DIN 371	FORM C - 2-3 - xP	40°	ISO 2 (6H)	HSSE V3	94
>2xd	 3.115.620-LH	DIN 376	FORM C - 2-3 - xP	40°	ISO 2 (6H)	HSSE V3	95
>2xd	 3.116.122	DIN 371	FORM C - 2-3 - xP	45°	ISO 2 (6H)	C-COAT HSSE V3	96
>2xd	 3.116.622	DIN 376	FORM C - 2-3 - xP	45°	ISO 2 (6H)	C-COAT HSSE V3	97
>2xd	 3.115.952-SYNCHRO	TANOI	FORM C - 2-3 - xP	40°	6HX	C-COAT PM 38	103
>2xd	 3.125.120	DIN 371	FORM C - 2-3 - xP	40°	ISO 3 (6G)	HSSE V3	106
>2xd	 3.125.620	DIN 376	FORM C - 2-3 - xP	40°	ISO 3 (6G)	HSSE V3	107
>2xd	 3.145.120	DIN 371	FORM C - 2-3 - xP	40°	7G	HSSE V3	110

For Steels < 800 N/mm²

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
>2xd	3.145.620	DIN 376	FORM C 2-3 xP	40°	7G	HSSE V3	111
>2xd	3.118.120	DIN 371	FORM E 1.5-2 xP	40°	ISO 2 (6H)	HSSE V3	100
>2xd	3.118.620	DIN 376	FORM E 1.5-2 xP	40°	ISO 2 (6H)	HSSE V3	101
≤2xd	3.111.120	DIN 371	FORM A 6-8 xP	0°	ISO 2 (6H)	HSSE V3	66
≤2xd	3.111.620	DIN 376	FORM A 6-8 xP	0°	ISO 2 (6H)	HSSE V3	67

For Steels < 1300 N/mm²

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	5.112.150	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	PM 38	142
	5.112.650	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	PM 38	143
	5.112.153	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	TiCN PM 38	144
	5.112.653	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	TiCN PM 38	145
≤2xd	5.114.150	DIN 371	FORM C - 2-3 -xP	15°	ISO 2 (6H)	PM 38	146
≤2xd	5.114.650	DIN 376	FORM C - 2-3 -xP	15°	ISO 2 (6H)	PM 38	147
≤2xd	5.114.153	DIN 371	FORM C - 2-3 -xP	15°	ISO 2 (6H)	TiCN PM 38	148
≤2xd	5.114.653	DIN 376	FORM C - 2-3 -xP	15°	ISO 2 (6H)	TiCN PM 38	149

For Stainless Steels < 1200 N/mm² — M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	6.112.120-AT	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	HSSE V3	152
	6.112.620-AT	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	HSSE V3	153
	6.112.121	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	OX HSSE V3	154
	6.112.621	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	OX HSSE V3	155
	6.112.122	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	C-COAT HSSE V3	156
	6.112.622	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	C-COAT HSSE V3	157
	6.112.123	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	TiCN HSSE V3	158
	6.112.623	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	TiCN HSSE V3	159
	6.112.153	DIN 371	FORM B -3.5-5-xP	B	ISO 2 (6H)	TiCN PM 38	160
	6.112.653	DIN 376	FORM B -3.5-5-xP	B	ISO 2 (6H)	TiCN HSSE V3	161
	6.122.121	DIN 371	FORM B -3.5-5-xP	B	ISO 3 (6G)	OX HSSE V3	184
	6.122.621	DIN 376	FORM B -3.5-5-xP	B	ISO 3 (6G)	OX HSSE V3	185

For Stainless Steels < 1200 N/mm² — M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 6.122.123	DIN 371	FORM B 3.5-5 xP	B	ISO 3 (6G)	TiCN HSSE V3	186
	 6.122.623	DIN 371	FORM B 3.5-5 xP	B	ISO 3 (6G)	TiCN HSSE V3	187
≤2xd	 6.113.121	DIN 371	FORM C 2-3 xP	0°	ISO 2 (6H)	OX HSSE V3	150
≤2xd	 6.113.621	DIN 376	FORM C 2-3 xP	0°	ISO 2 (6H)	OX HSSE V3	151
≤2xd	 6.114.121	DIN 371	FORM C 2-3 xP	15°	ISO 2 (6H)	OX HSSE V3	162
≤2xd	 6.114.621	DIN 376	FORM C 2-3 xP	15°	ISO 2 (6H)	OX HSSE V3	163
>2xd	 6.115.120-AT	DIN 371	FORM C 2-3 xP	40°	ISO 2 (6H)	HSSE V3	164
>2xd	 6.115.620-AT	DIN 376	FORM C 2-3 xP	40°	ISO 2 (6H)	HSSE V3	165
>2xd	 6.115.121	DIN 371	FORM C 2-3 xP	40°	ISO 2 (6H)	OX HSSE V3	166
>2xd	 6.115.621	DIN 376	FORM C 2-3 xP	40°	ISO 2 (6H)	OX HSSE V3	167
>2xd	 6.115.121-BT	DIN 371	FORM C 2-3 xP	40°	ISO 2 (6H)	OX HSSE V3	168
>2xd	 6.115.621-BT	DIN 376	FORM C 2-3 xP	40°	ISO 2 (6H)	OX HSSE V3	169

For Stainless Steels < 1200 N/mm² — M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
>2xd	6.115.122	DIN 371	FORM C - 2-3 - xP	40°	ISO 2 (6H)	C-COAT / HSSE V3	170
>2xd	6.115.622	DIN 376	FORM C - 2-3 - xP	40°	ISO 2 (6H)	C-COAT / HSSE V3	171
>2xd	6.115.123	DIN 371	FORM C - 2-3 - xP	40°	ISO 2 (6H)	TiCN / HSSE V3	172
>2xd	6.115.623	DIN 376	FORM C - 2-3 - xP	40°	ISO 2 (6H)	TiCN / HSSE V3	173
>2xd	6.125.121	DIN 371	FORM C - 2-3 - xP	40°	ISO 3 (6G)	OX / HSSE V3	188
>2xd	6.125.621	DIN 376	FORM C - 2-3 - xP	40°	ISO 3 (6G)	OX / HSSE V3	189
>2xd	6.125.123	DIN 371	FORM C - 2-3 - xP	40°	ISO 3 (6G)	TiCN / HSSE V3	190
>2xd	6.125.623	DIN 376	FORM C - 2-3 - xP	40°	ISO 3 (6G)	TiCN / HSSE V3	191
>2xd	6.116.221	DIN 352	FORM C - 2-3 - xP	45°	ISO 2 (6H)	OX / HSSE V3	174
>2xd	6.116.121	DIN 371	FORM C - 2-3 - xP	45°	ISO 2 (6H)	OX / HSSE V3	176
>2xd	6.116.621	DIN 376	FORM C - 2-3 - xP	45°	ISO 2 (6H)	OX / HSSE V3	177

For Stainless Steels < 1200 N/mm² — M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
>2xd	 6.116.153	DIN 371	FORM C - 2-3 - xP	50°	ISO 2 (6H)	TiCN HSSE V3	178
>2xd	 6.116.653	DIN 376	FORM C - 2-3 - xP	50°	ISO 2 (6H)	TiCN PM 38	179
>2xd	 6.116.153-OH	DIN 371	FORM C - 2-3 - xP	OIL HOLE 45°	ISO 2 (6H)	TiCN HSSE V3	180
>2xd	 6.116.653-OH	DIN 376	FORM C - 2-3 - xP	OIL HOLE 45°	ISO 2 (6H)	TiCN PM 38	181
>2xd	 6.118.121	DIN 371	FORM E - 1.5-2 - xP	40°	ISO 2 (6H)	OX HSSE V3	182
>2xd	 6.118.621	DIN 376	FORM E - 1.5-2 - xP	40°	ISO 2 (6H)	OX HSSE V3	183

For Tempered Steels < 62 HRC

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 9.113.983	TANOI	FORM C 2-3 xP	0°	6HX	TiCN CARBIDE	216
≤2xd	 9.117.983	TANOI	FORM D 3.5-5 xP	0°	6HX	TiCN CARBIDE	218

For Titanium and Nickel Alloys

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	7.112.150	DIN 371	FORM B 3.5-5 xP	B	ISO 2 (6H)	PM 38	209
	7.112.650	DIN 376	FORM B 3.5-5 xP	B	ISO 2 (6H)	PM 38	209
	7.112.151	DIN 371	FORM B 3.5-5 xP	B	ISO 2 (6H)	OX PM 38	210
	7.112.651	DIN 376	FORM B 3.5-5 xP	B	ISO 2 (6H)	OX PM 38	211
≤2xd	7.114.150	DIN 371	FORM C 2-3 xP	10°	ISO 2 (6H)	PM 38	213
≤2xd	7.114.650	DIN 376	FORM C 2-3 xP	10°	ISO 2 (6H)	PM 38	213
≤2xd	7.114.151	DIN 371	FORM C 2-3 xP	15°	ISO 2 (6H)	OX PM 38	214
≤2xd	7.114.651	DIN 376	FORM C 2-3 xP	15°	ISO 2 (6H)	OX PM 38	215

For General Use

Cast Iron, Aluminium,
Steels and Stainless Steels < 1200 N/mm²

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 9.112.155	DIN 371	FORM B -3.5-5-xP	B	6HX	HARD LUBE PM 38	220
	 9.112.655	DIN 376	FORM B -3.5-5-xP	B	6HX	HARD LUBE PM 38	221
	 9.112.155-OH	DIN 371	FORM B -3.5-5-xP	OIL HOLE B	6HX	HARD LUBE PM 38	222
	 9.112.655-OH	DIN 376	FORM B -3.5-5-xP	OIL HOLE B	6HX	HARD LUBE PM 38	223
>2xd	 9.116.155	DIN 371	FORM C - 2-3 -xP	50°	6HX	HARD LUBE PM 38	224
>2xd	 9.116.655	DIN 376	FORM C - 2-3 -xP	50°	6HX	HARD LUBE PM 38	225
>2xd	 9.116.155-OH	DIN 371	FORM C - 2-3 -xP	OIL HOLE 50°	6HX	HARD LUBE PM 38	226
>2xd	 9.116.655-OH	DIN 376	FORM C - 2-3 -xP	OIL HOLE 50°	6HX	HARD LUBE PM 38	227
>2xd	 9.116.159	DIN 371	FORM C - 2-3 -xP	45°	ISO 2 (6H)	C-COAT PM 38	228
>2xd	 9.116.659	DIN 376	FORM C - 2-3 -xP	45°	ISO 2 (6H)	C-COAT PM 38	229

For Cast Iron

MF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 0.213.423	DIN 374	FORM C 2-3 xP	0°	6HX	TiCN HSSE V3	50
≤2xd	 0.213.426	DIN 374	FORM C 2-3 xP	0°	6HX	Ni OX HSSE V3	51

For Steels < 800 N/mm² — MF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	3.212.420	DIN 374	FORM B -3.5-5-xP	B	ISO 2 (6H)	HSSE V3	115
≤2xd	3.213.420	DIN 374	FORM C - 2-3 -xP	0°	ISO 2 (6H)	HSSE V3	112
	3.212.422	DIN 374	FORM B -3.5-5-xP	B	ISO 2 (6H)	C-COAT HSSE V3	118
	3.222.420	DIN 374	FORM B -3.5-5-xP	B	ISO 3 (6G)	HSSE V3	125
≤2xd	3.214.420	DIN 374	FORM C - 2-3 -xP	15°	ISO 2 (6H)	HSSE V3	120
>2xd	3.215.420	DIN 374	FORM C - 2-3 -xP	40°	ISO 2 (6H)	HSSE V3	122
>2xd	3.216.422	DIN 374	FORM C - 2-3 -xP	45°	ISO 2 (6H)	C-COAT HSSE V3	124
>2xd	3.225.420	DIN 374	FORM C - 2-3 -xP	40°	ISO 3 (6G)	HSSE V3	126

For Tempered Steels < 62 HRC

≤2xd	9.113.983	TANOI	FORM C - 2-3 -xP	0°	6HX	TiCN CARBIDE	216
≤2xd	9.117.983	TANOI	FORM D -3.5-5-xP	0°	6HX	TiCN CARBIDE	218

For Stainless Steels < 1200 N/mm² — MF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 6.212.421	DIN 374	FORM B -3.5-5-xP	B	ISO 2 (6H)	OX HSSE V3	192
	 6.212.423	DIN 374	FORM B -3.5-5-xP	B	ISO 2 (6H)	TiCN HSSE V3	193
	 6.222.421	DIN 374	FORM B -3.5-5-xP	B	ISO 3 (6G)	OX HSSE V3	196
	 6.222.423	DIN 374	FORM B -3.5-5-xP	B	ISO 3 (6G)	TiCN HSSE V3	197
>2xd	 6.215.421	DIN 374	FORM C - 2-3 -xP	40°	ISO 2 (6H)	OX HSSE V3	194
>2xd	 6.215.423	DIN 374	FORM C - 2-3 -xP	40°	ISO 2 (6H)	TiCN HSSE V3	195
>2xd	 6.225.421	DIN 374	FORM C - 2-3 -xP	40°	ISO 3 (6G)	OX HSSE V3	198
>2xd	 6.225.423	DIN 374	FORM C - 2-3 -xP	40°	ISO 3 (6G)	TiCN HSSE V3	199

For General Use — MF

Cast Iron, Aluminium,
Steels and Stainless Steels < 1200 N/mm²

	 9.212.455	DIN 374	FORM B -3.5-5-xP	B	6HX	HARD LUBE PM 38	230
>2xd	 9.216.455	DIN 374	FORM C - 2-3 -xP	50°	6HX	HARD LUBE PM 38	231

For Steels < 800 N/mm² — UNC

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	3.392.120	DIN 2182	FORM B 3.5-5 xP	B	2B B1,1	HSSE V3	128
	3.392.620	DIN 2183	FORM B 3.5-5 xP	B	2B B1,1	HSSE V3	129
>2xd	3.395.120	DIN 2182	FORM C 2-3 xP	40°	2B B1,1	HSSE V3	130
>2xd	3.395.620	DIN 2183	FORM C 2-3 xP	40°	2B B1,1	HSSE V3	131

For Stainless Steels < 1200 N/mm² — UNC

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	6.392.121	DIN 2182	FORM B 3.5-5 xP	B	2B B1,1	OX HSSE V3	200
	6.392.621	DIN 2182	FORM B 3.5-5 xP	B	2B B1,1	OX HSSE V3	201
>2xd	6.395.121	DIN 2182	FORM C 2-3 xP	40°	2B B1,1	OX HSSE V3	202
>2xd	6.395.621	DIN 2183	FORM C 2-3 xP	40°	2B B1,1	OX HSSE V3	203

For Steels < 800 N/mm² — UNF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 3.492.620	DIN 2183	FORM B 3.5-5 xP	B	2B B1,1	HSSE V3	132
>2xd	 3.495.620	DIN 2183	FORM C 2-3 xP	40°	2B B1,1	HSSE V3	134

For Stainless Steels < 1200 N/mm² — UNF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 6.492.621	DIN 2183	FORM B 3.5-5 xP	B	2B B1,1	OX HSSE V3	204
>2xd	 6.495.621	DIN 2183	FORM C 2-3 xP	40°	2B B1,1	OX HSSE V3	205

For Cast Iron — G

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 0.693.526	DIN 5156	FORM C 2-3 xP	0°	ISO 228	OX HSSE V3	52

For Tempered Steels < 62 HRC — G

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 9.113.983	TANOI	FORM C 2-3 xP	0°	6HX	TiCN CARBIDE	217
≤2xd	 9.117.983	TANOI	FORM D 3.5-5 xP	0°	6HX	TiCN CARBIDE	219

For Steels < 800 N/mm² — G

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	3.693.520	DIN 5156	FORM C 2-3 xP	0°	ISO 228	HSSE V3	135
	3.692.520	DIN 5156	FORM B 3.5-5 xP	B	ISO 228	HSSE V3	136
≤2xd	3.694.520	DIN 5156	FORM C 2-3 xP	15°	ISO 228	HSSE V3	137
>2xd	3.695.520	DIN 5156	FORM C 2-3 xP	40°	ISO 228	HSSE V3	138

For Stainless Steels < 1200 N/mm² — G

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	6.692.521	DIN 5156	FORM B 3.5-5 xP	B	ISO 228	OX HSSE V3	206
>2xd	6.695.521	DIN 5156	FORM C 2-3 xP	40°	ISO 228	OX HSSE V3	207

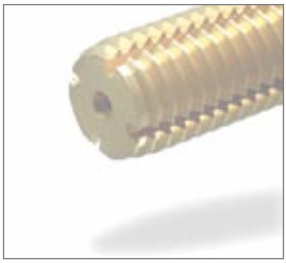
For Steels < 800 N/mm² — NPT

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 3.793.920	DIN 40432	FORM C 2-3 xP	0°	ANSI B1.1	HSSE V3	139

For Steels < 800 N/mm² — PG

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 3.893.920	DIN 40432	FORM C 2-3 xP	0°	DIN 40430	HSSE V3	140







MACHINE TAPS CUTTING





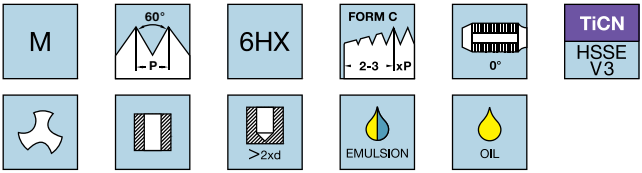


GG/G CAST

CU 200-300 HB

CU SHORT

MACHINE TAP



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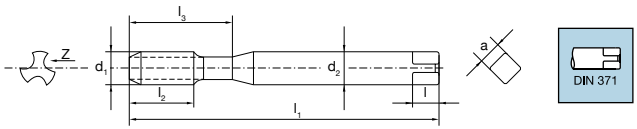


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M4	0.70	63	13	21	4.5	6	3.4	3	225.075	
M5	0.80	70	16	25	6.0	8	4.9	3	225.085	
M6	1.00	80	19	30	6.0	8	4.9	3	225.090	
M8	1.25	90	22	35	8.0	9	6.2	4	225.100	
M10	1.50	100	24	39	10.0	11	8	4	225.110	

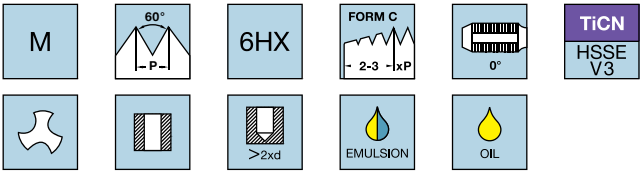


GG/G CAST

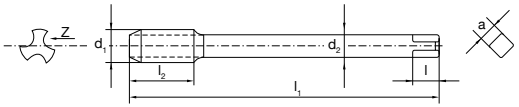
CU 200-300 HB

CU SHORT

MACHINE TAP



0.113.623



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M5	0.80	70	16		3.5	6	2.7	3	425.025	
M6	1.00	80	19		4.5	6	3.4	3	425.030	
M8	1.25	90	22		6.0	8	4.9	4	425.040	
M10	1.50	100	24		7.0	8	5.5	4	425.050	
M12	1.75	110	28		9.0	10	7	4	425.060	
M14	2.00	110	30		11.0	12	9	4	425.065	
M16	2.00	110	32		12.0	12	9	4	425.070	

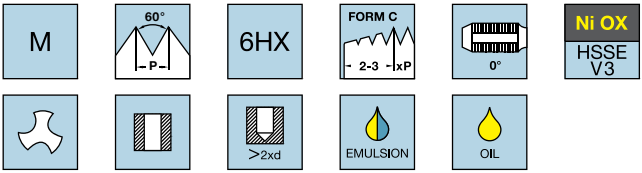


GG/G CAST

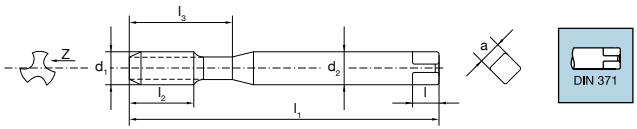
CU 200-300 HB

CU SHORT

MACHINE TAP



0.113.126



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	215.065	
M3.5	0.60	56	12	20	4.0	6	3	3	215.070	
M4	0.70	63	13	21	4.5	6	3.4	3	215.075	
M5	0.80	70	16	25	6.0	8	4.9	3	215.085	
M6	1.00	80	19	30	6.0	8	4.9	3	215.090	
M8	1.25	90	22	35	8.0	9	6.2	4	215.100	
M10	1.50	100	24	39	10.0	11	8	4	215.110	

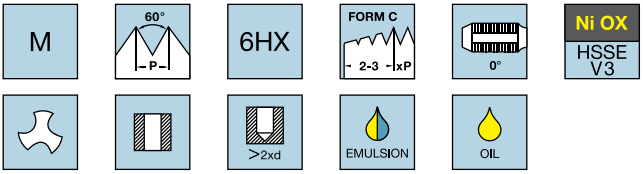


GG/G CAST

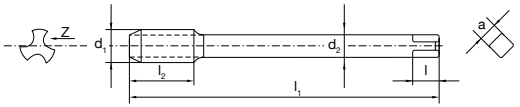
CU 200-300 HB

CU SHORT

MACHINE TAP



0.113.626



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M4	0.70	63	13		2.8	5	2.1	3	415.015	
M5	0.80	70	16		3.5	6	2.7	3	415.025	
M6	1.00	80	19		4.5	6	3.4	3	415.030	
M8	1.25	90	22		6.0	8	4.9	4	415.040	
M10	1.50	100	24		7.0	8	5.5	4	415.050	
M12	1.75	110	28		9.0	10	7	4	415.060	
M14	2.00	110	30		11.0	12	9	4	415.065	
M16	2.00	110	32		12.0	12	9	4	415.070	
M18	2.50	125	34		14.0	14	11	4	415.075	
M20	2.50	140	34		16.0	15	12	4	415.080	
M22	2.50	140	34		18.0	17	14.5	4	415.085	
M24	3.00	160	38		18.0	17	14.5	4	415.090	
M27	3.00	160	38		20.0	19	16	4	415.095	
M30	3.50	180	45		22.0	21	18	4	415.100	

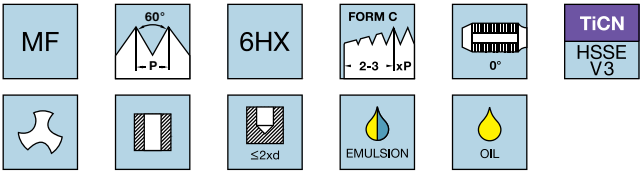


GG/G CAST

CU SHORT

CU 200-300 HB

MACHINE TAP



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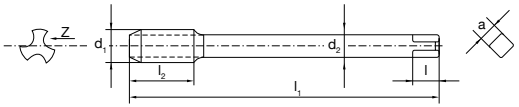


DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M8	1.00	90	22		6.0	8	4.9	4	540.070	
M10	1.00	90	20		7.0	8	5.5	4	540.085	
M12	1.50	100	22		9.0	10	7	4	540.110	
M16	1.50	100	22		12.0	12	9	4	540.150	

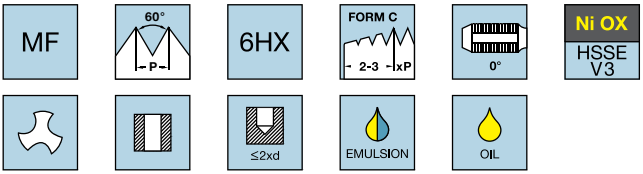


GG/G CAST

CU SHORT

CU 200-300 HB

MACHINE TAP



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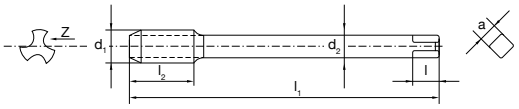


DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.35	56	8		2.2	-	-	3	535.015	
M4	0.50	63	10		2.8	5	2.1	3	535.030	
M5	0.50	70	12		3.5	6	2.7	3	535.040	
M6	0.50	80	14		4.5	6	3.4	3	535.045	
M6	0.75	80	14		4.5	6	3.4	4	535.050	
M8	0.75	80	18		6.0	8	4.9	4	535.065	
M8	1.00	90	22		6.0	8	4.9	4	535.070	
M10	1.00	90	20		7.0	8	5.5	4	535.085	
M12	1.00	100	22		9.0	10	7	4	535.100	
M12	1.50	100	22		9.0	10	7	4	535.110	
M14	1.50	100	22		11.0	12	9	4	535.130	
M16	1.50	100	22		12.0	12	9	4	535.150	
M18	1.50	110	25		14.0	14	11	4	535.160	
M20	1.50	125	25		16.0	15	12	4	535.175	
M22	1.50	125	25		18.0	17	14.5	4	535.190	
M24	1.50	140	28		18.0	17	14.5	4	535.205	

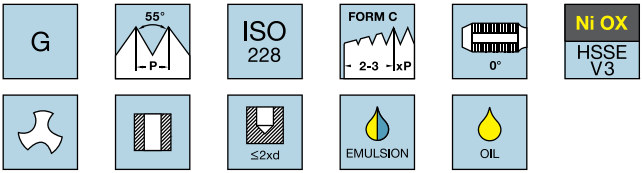


GG/G CAST

CU SHORT

CU 200-300 HB

MACHINE TAP



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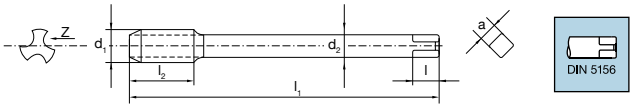
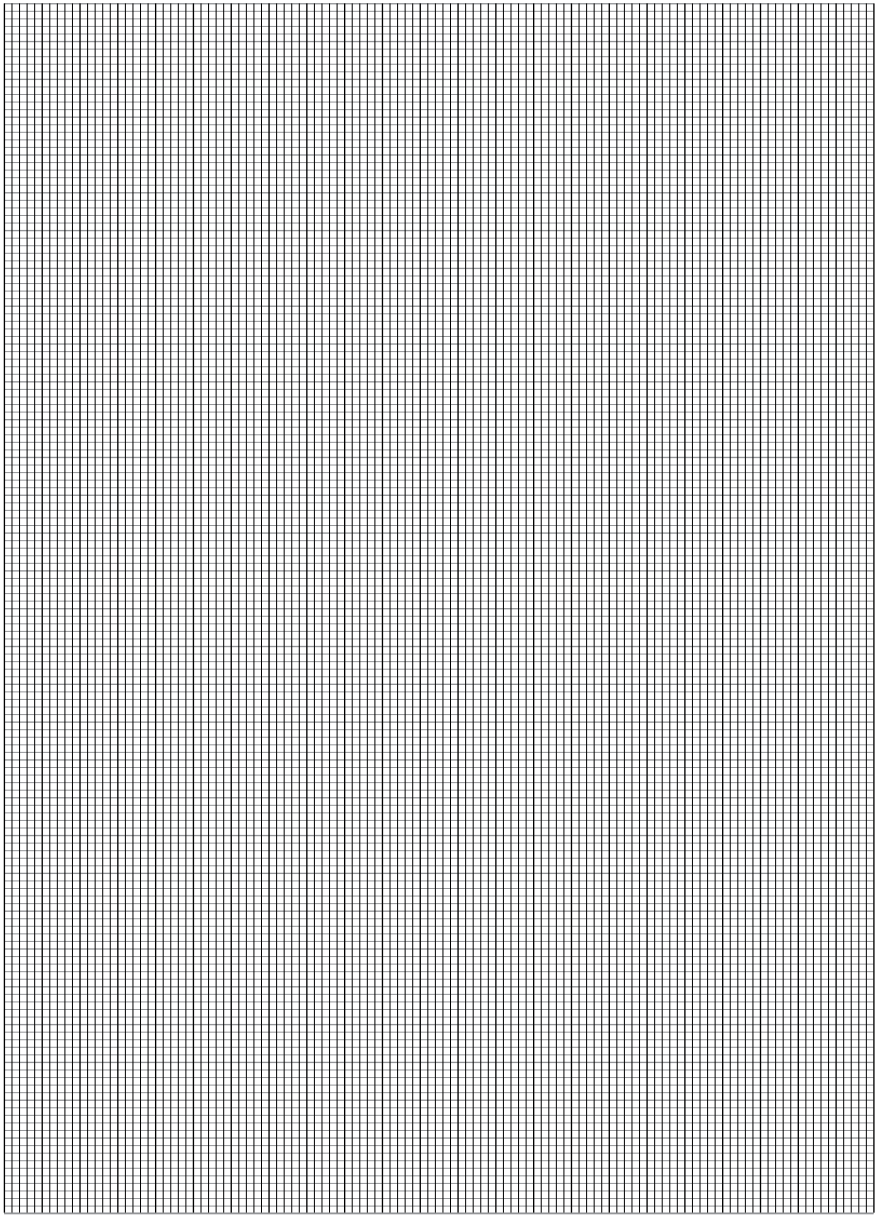


d_1	$P_{(TPI)}$	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	90	20		7	8	5.5	4	575.005	
G1/4	19	100	22		11	12	9	4	575.010	
G3/8	19	100	22		12	12	9	4	575.015	
G1/2	14	125	25		16	15	12	4	575.020	
G5/8	14	125	25		18	17	14.5	4	575.025	
G3/4	14	140	28		20	19	16	4	575.030	
G7/8	14	150	28		22	21	18	4	575.035	
G1	11	160	30		25	23	20	4	575.040	





ALU
Si <10%

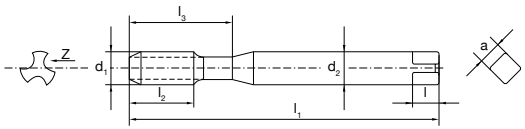
CU
200-300
HB

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

1.112.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	205.065	
M4	0.70	63	13	21	4.5	6	3.4	3	205.075	
M5	0.80	70	16	25	6.0	8	4.9	3	205.085	
M6	1.00	80	19	30	6.0	8	4.9	3	205.090	
M8	1.25	90	22	35	8.0	9	6.2	3	205.100	
M10	1.50	100	24	39	10.0	11	8	3	205.110	



ALU
Si <10%

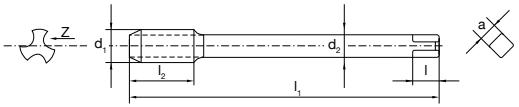
CU
200-300
HB

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

1.112.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	405.060	
M16	2.00	110	32		12.0	12	9	3	405.070	
M20	2.50	140	34		16.0	15	12	3	405.080	

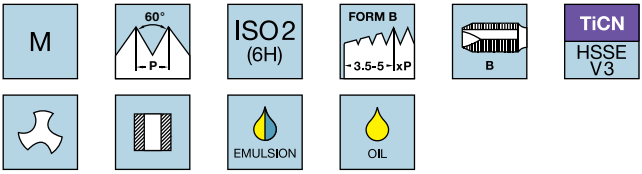


ALU Si >10%

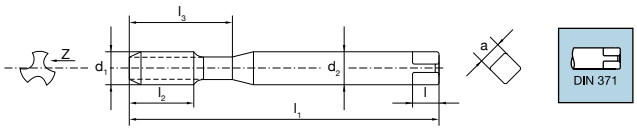
CU 200-300 HB

ALU Si <10%

MACHINE TAP



1.112.123



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	206.065	
M4	0.70	63	13	21	4.5	6	3.4	3	206.075	
M5	0.80	70	16	25	6.0	8	4.9	3	206.085	
M6	1.00	80	19	30	6.0	8	4.9	3	206.090	
M8	1.25	90	22	35	8.0	9	6.2	3	206.100	
M10	1.50	100	24	39	10.0	11	8	3	206.110	

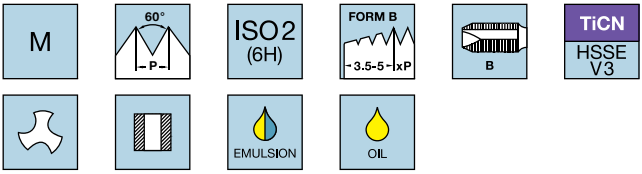


ALU
Si >10%

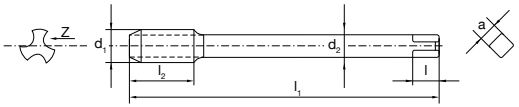
CU
200-300
HB

ALU
Si <10%

MACHINE TAP



1.112.623





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	406.060	
M16	2.00	110	32		12.0	12	9	3	406.070	
M20	2.50	140	34		16.0	15	12	3	406.080	



ALU Si <10%

ALU Si >10%

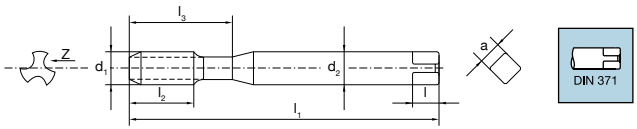
CU 200-300 HB

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | HSSE V3

>2xd | EMULSION | OIL

1.116.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	210.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	210.055	
M3	0.50	56	5	18	3.5	6	2.7	3	210.065	
M3.5	0.60	56	6	20	4.0	6	3	3	210.070	
M4	0.70	63	7	21	4.5	6	3.4	3	210.075	
M5	0.80	70	8	25	6.0	8	4.9	3	210.085	
M6	1.00	80	10	30	6.0	8	4.9	3	210.090	
M8	1.25	90	13	35	8.0	9	6.2	3	210.100	
M10	1.50	100	15	39	10.0	11	8	3	210.110	



ALU Si <10%

ALU Si >10%

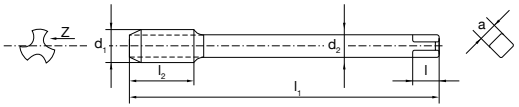
CU 200-300 HB

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | HSSE V3

>2xd | EMULSION | OIL

1.116.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	410.060	
M16	2.00	110	20		12.0	12	9	3	410.070	
M20	2.50	140	25		16.0	15	12	4	410.080	



ALU Si <10%

ALU Si >10%

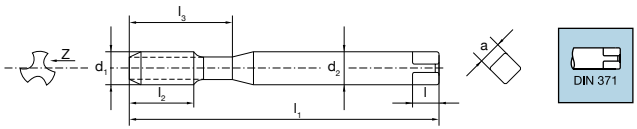
CU 200-300 HB

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | TiCN HSSE V3

>2xd | EMULSION | OIL

1.116.123



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	211.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	211.055	
M3	0.50	56	5	18	3.5	6	2.7	3	211.065	
M3.5	0.60	56	6	20	4.0	6	3	3	211.070	
M4	0.70	63	7	21	4.5	6	3.4	3	211.075	
M5	0.80	70	8	25	6.0	8	4.9	3	211.085	
M6	1.00	80	10	30	6.0	8	4.9	3	211.090	
M8	1.25	90	13	35	8.0	9	6.2	3	211.100	
M10	1.50	100	15	39	10.0	11	8	3	211.110	



ALU Si <10%

ALU Si >10%

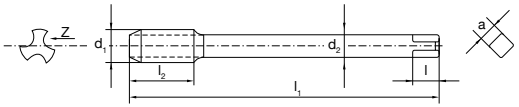
CU 200-300 HB

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | TiCN HSSE V3

>2xd | EMULSION | OIL

1.116.623



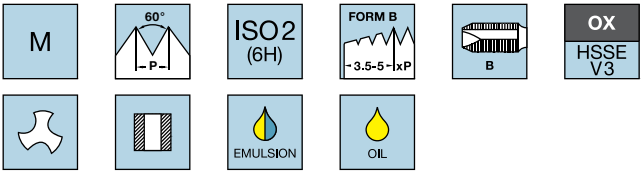
DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	411.060	
M16	2.00	110	20		12.0	12	9	3	411.070	
M20	2.50	140	25		16.0	15	12	4	411.080	

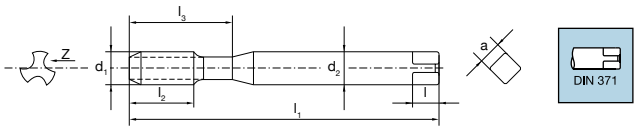


STEEL
≤ 500
N/mm²

MACHINE TAP



2.112.121

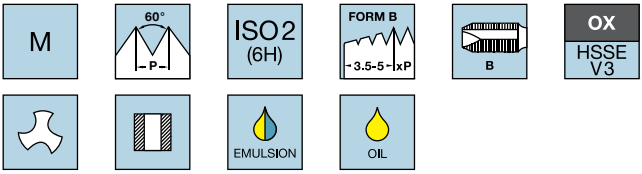


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	040.065	
M4	0.70	63	13	21	4.5	6	3.4	3	040.075	
M5	0.80	70	16	25	6.0	8	4.9	3	040.085	
M6	1.00	80	19	30	6.0	8	4.9	3	040.090	
M8	1.25	90	22	35	8.0	9	6.2	3	040.100	
M10	1.50	100	24	39	10.0	11	8	3	040.110	

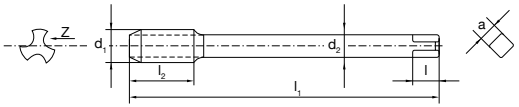


STEEL
≤ 500
N/mm²

MACHINE TAP



2.112.621





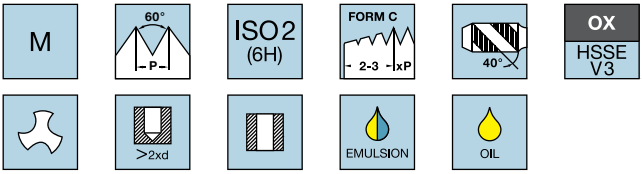
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	240.060	
M14	2.00	110	30		11.0	12	9	3	240.065	
M16	2.00	110	32		12.0	12	9	3	240.070	
M18	2.50	125	34		14.0	14	11	3	240.075	
M20	2.50	140	34		16.0	15	12	3	240.080	
M22	2.50	140	34		18.0	17	14.5	3	240.085	
M24	3.00	160	38		18.0	17	14.5	3	240.090	
M27	3.00	160	38		20.0	19	16	4	240.095	
M30	3.50	180	45		22.0	21	18	4	240.100	
M33	3.50	180	50		25.0	23	20	4	240.105	
M36	4.00	200	56		28.0	25	22	4	240.110	



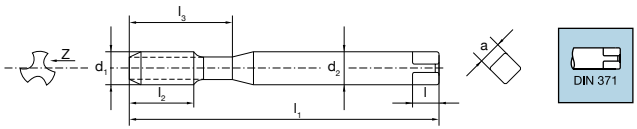
STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

MACHINE TAP



2.115.121



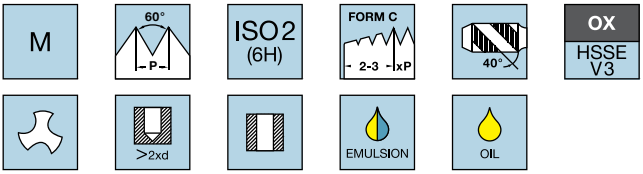
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	090.065	
M3.5	0.60	56	6	20	4.0	6	3	3	090.070	
M4	0.70	63	7	21	4.5	6	3.4	3	090.075	
M5	0.80	70	8	25	6.0	8	4.9	3	090.085	
M6	1.00	80	10	30	6.0	8	4.9	3	090.090	
M8	1.25	90	13	35	8.0	9	6.2	3	090.100	
M10	1.50	100	15	39	10.0	11	8	3	090.110	



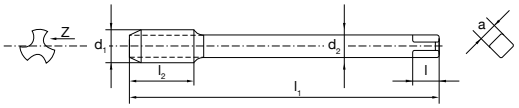
STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

MACHINE TAP



2.115.621





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.5	56	5		2.2			3	290.005	
M4	0.7	63	7		2.8	5	2.1	3	290.015	
M5	0.8	70	8		3.5	6	2.7	3	290.025	
M6	1	80	10		4.5	6	3.4	3	290.030	
M8	1.25	90	13		6	8	4.9	3	290.040	
M10	1.5	100	15		7	8	5.5	3	290.050	
M12	1.75	110	18		9	10	7	3	290.060	
M14	2	110	20		11	12	9	3	290.065	
M16	2	110	20		12	12	9	3	290.070	
M18	2.5	125	25		14	14	11	4	290.075	
M20	2.5	140	25		16	15	12	4	290.080	
M22	2.5	140	25		18	17	14.5	4	290.085	
M24	3	160	30		18	17	14.5	4	290.090	
M27	3	160	30		20	19	16	4	290.095	
M30	3.5	180	35		22	21	18	4	290.100	
M33	3.5	180	35		25	23	20	4	290.105	
M36	4	200	40		28	25	22	4	290.110	

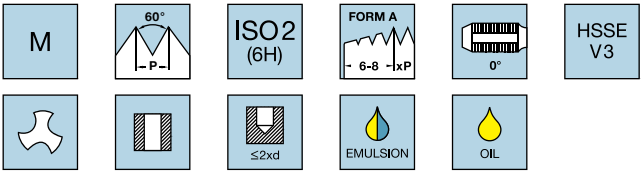


STEEL 500-800 N/mm²

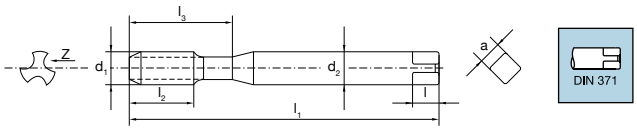
CU

ALU Si <10%

MACHINE TAP



3.111.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	3	070.040	
M3	0.50	56	11	18	3.5	6	2.7	3	070.065	
M4	0.70	63	13	21	4.5	6	3.4	3	070.075	
M5	0.80	70	16	25	6.0	8	4.9	3	070.085	
M6	1.00	80	19	30	6.0	8	4.9	3	070.090	
M8	1.25	90	22	35	8.0	9	6.2	4	070.100	
M10	1.50	100	24	39	10.0	11	8	4	070.110	



STEEL 500-800 N/mm²

CU

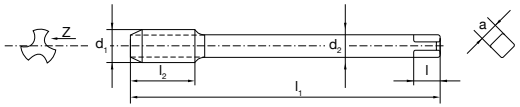
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM A 6-8 xP | 0° | HSSE V3

≤2xd | EMULSION | OIL

3.111.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11		2.2	-	-	3	270.005	
M4	0.70	63	13		2.8	5	2.1	3	270.015	
M5	0.80	70	16		3.5	6	2.7	3	270.025	
M6	1.00	80	19		4.5	6	3.4	3	270.030	
M8	1.25	90	22		6.0	8	4.9	4	270.040	
M10	1.50	100	24		7.0	8	5.5	4	270.050	
M12	1.75	110	28		9.0	10	7.0	4	270.060	
M14	2.00	110	30		11.0	12	9.0	4	270.065	
M16	2.00	110	32		12.0	12	9.0	4	270.070	
M18	2.50	125	34		14.0	14	11.0	4	270.075	
M20	2.50	140	34		16.0	15	12.0	4	270.080	
M22	2.50	140	34		18.0	17	14.5	4	270.085	
M24	3.00	160	38		18.0	17	14.5	4	270.090	
M27	3.00	160	38		20.0	19	16.0	4	270.095	
M30	3.50	180	45		22.0	21	18.0	4	270.100	

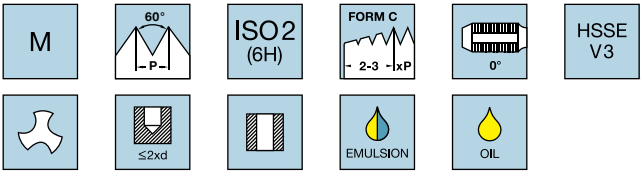


STEEL 500-800 N/mm²

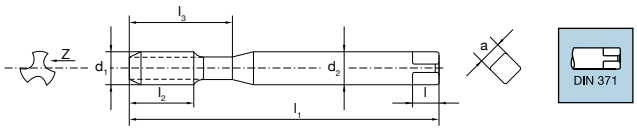
CU

ALU Si <10%

MACHINE TAP



3.113.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M1.4	0.30	40	7	9	2.5	5	2.1	3	065.020	
M1.6	0.35	40	8	9.5	2.5	5	2.1	3	065.025	
M1.7	0.35	40	8	10	2.5	5	2.1	3	065.030	
M1.8	0.35	40	8	10.51	2.5	5	2.1	3	065.035	
M2	0.40	45	8	10	2.8	5	2.1	3	065.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	3	065.055	
M3	0.50	56	11	18	3.5	6	2.7	3	065.065	
M3.5	0.60	56	112	20	4.0	6	3	3	065.070	
M4	0.70	63	13	21	4.5	6	3.4	3	065.075	
M5	0.80	70	16	25	6.0	8	4.9	3	065.085	
M6	1.00	80	19	30	6.0	8	4.9	3	065.090	
M8	1.25	90	22	35	8.0	9	6.2	4	065.100	
M10	1.50	100	24	39	10.0	11	8	4	065.110	



STEEL 500-800 N/mm²

CU

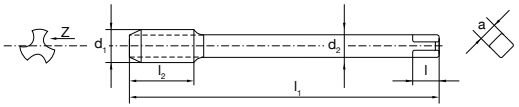
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM C 2-3 xP | 0° | HSSE V3

≤2xd | EMULSION | OIL

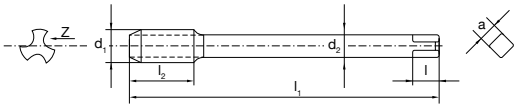
3.113.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11		2.2	-	-	3	956.005	
M4	0.70	63	13		2.8	5	2.1	3	956.015	
M5	0.80	70	16		3.5	6	2.7	3	956.025	
M6	1.00	80	19		4.5	6	3.4	3	956.030	
M8	1.25	90	22		6.0	8	4.9	4	956.040	
M10	1.50	100	24		7.0	8	5.5	4	956.050	
M12	1.75	110	28		9.0	10	7	4	956.060	
M14	2.00	110	30		11.0	12	9	4	956.065	
M16	2.00	110	32		12.0	12	9	4	956.070	
M18	2.50	125	34		14.0	14	11	4	956.075	
M20	2.50	140	34		16.0	15	12	4	956.080	
M22	2.50	140	34		18.0	17	14.5	4	956.085	
M24	3.00	160	38		18.0	17	14.5	4	956.090	
M27	3.00	160	38		20.0	19	16	4	956.095	
									CONTINUED	

3.113.620





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M30	3.50	180	45		22.0	21	18	4	956.100	
M33	3.50	180	50		25.0	23	20	4	956.105	
M36	4.00	200	56		28.0	25	22	4	956.110	
M39	4.00	200	60		32.0	27	24	4	956.115	
M42	4.50	200	60		32.0	27	24	4	956.120	
M45	4.50	220	65		36.0	32	29	4	956.125	
M48	5.00	250	70		36.0	32	29	4	956.130	
M52	5.00	250	70		40.0	35	32	4	956.135	



STEEL 500-800 N/mm²

CU

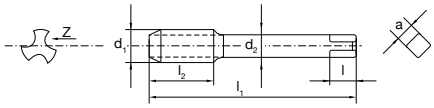
ALU

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

3.112.220



DIN 352

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	36	8		2.8	5	2.1	2	005.040	
M2.5	0.45	40	9		2.8	5	2.1	2	005.055	
M3	0.50	40	11		3.5	6	2.7	3	005.065	
M4	0.70	45	13		4.5	6	3.4	3	005.075	
M5	0.80	50	16		6.0	8	4.9	3	005.085	
M6	1.00	56	19		6.0	8	4.9	3	005.090	
M8	1.25	63	22		6.0	8	4.9	3	005.100	
M10	1.50	70	24		7.0	8	5.5	3	005.110	
M12	1.75	75	28		9.0	10	7	3	005.120	

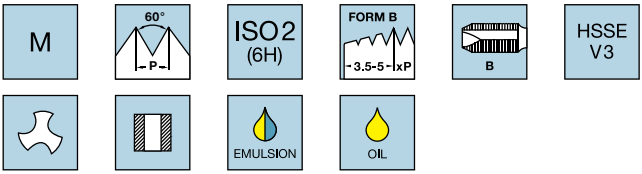


STEEL 500-800 N/mm²

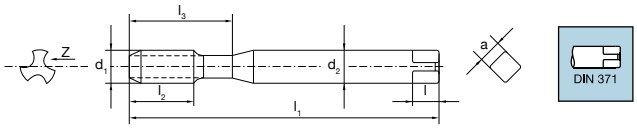
CU

ALU Si <10%

MACHINE TAP



3.112.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M1.4	0.30	40	7	9	2.5	5	2.1	2	035.020	
M1.6	0.35	40	8	9.5	2.5	5	2.1	2	035.025	
M1.7	0.35	40	8	10	2.5	5	2.1	2	035.030	
M1.8	0.35	40	8	10.5	2.5	5	2.1	2	035.035	
M2	0.40	45	8	10	2.8	5	2.1	2	035.040	
M2.2	0.45	45	9	10	2.8	5	2.1	2	035.040	
M2.3	0.40	45	9	11.5	2.8	5	2.1	2	035.050	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	035.055	
M2.6	0.45	50	9	13	2.8	5	2.1	2	035.060	
M3	0.50	56	11	18	3.5	6	2.7	3	035.065	
M3.5	0.60	56	12	20	4.0	6	3.0	3	035.065	
M4	0.70	63	13	21	4.5	6	3.4	3	035.075	
M5	0.80	70	16	25	6.0	8	4.9	3	035.085	
M6	1.00	80	19	30	6.0	8	4.9	3	035.090	
M8	1.25	90	22	35	8.0	9	6.2	3	035.100	
M10	1.50	100	24	39	10.0	11	8.0	3	035.110	
M12	1.75	110	28	45	12.0	12	9.0	3	035.120	



STEEL 500-800 N/mm²

CU

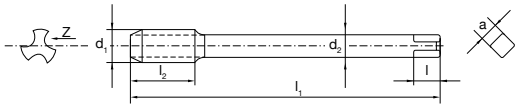
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

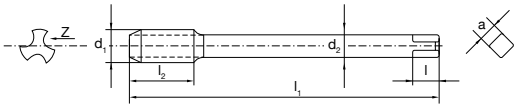
3.112.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11		2.2	-	-	3	235.005	
M4	0.70	63	13		2.8	5	2.7	3	235.015	
M5	0.80	70	16		3.5	6	3.4	3	235.025	
M6	1.00	80	19		4.5	6	4.4	3	235.030	
M8	1.25	90	22		6.0	8	5.9	3	235.040	
M10	1.50	100	24		7.0	8	6.9	3	235.050	
M12	1.75	110	28		9.0	10	8.9	3	235.060	
M14	2.00	110	30		11.0	12	10.8	3	235.065	
M16	2.00	110	32		12.0	12	11.8	3	235.070	
M18	2.50	125	34		14.0	14	13.8	3	235.075	
M20	2.50	140	34		16.0	15	15.8	3	235.080	
M22	2.50	140	34		18.0	17	17.8	3	235.085	
M24	3.00	160	38		18.0	17	17.8	3	235.090	
M27	3.00	160	38		20.0	19	19.7	4	235.095	
								CONTINUED		

3.112.620





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M30	3.50	180	45		22.0	21	21.7	4	235.100	
M33	3.50	180	50		25.0	23	24.7	4	235.105	
M36	4.00	200	56		28.0	25	27.7	4	235.110	
M39	4.00	200	60		32.0	27	31.6	4	235.115	
M42	4.50	200	60		32.0	27	31.6	4	235.120	
M45	4.50	220	65		36.0	32	35.6	4	235.125	
M48	5.00	250	70		36.0	32	35.6	4	235.130	
M52	5.00	250	70		40.0	35	39.6	4	235.135	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

MACHINE TAP

M

60° P

ISO2 (6H)

FORM B 3.5-5-xP

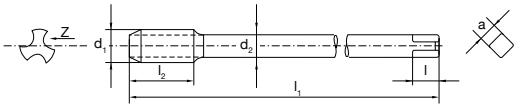
B

HSSE V3

EMULSION

OIL

3.112.920-LS



TANOI LS

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	1.00	160	19		4.5	6	3.4	3	440.020	
M8	1.25	180	22		6.0	8	4.9	3	440.025	
M10	1.50	200	24		7.0	8	5.5	3	440.030	
M12	1.75	220	28		9.0	10	7	3	440.035	
M14	2.00	220	30		11.0	12	9	3	440.040	
M16	2.00	220	32		12.0	12	9	3	440.045	



STEEL 500-800 N/mm²

CU

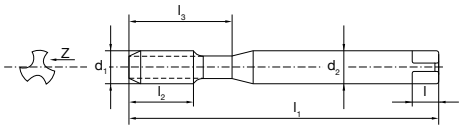
ALU Si <10%

MACHINE TAP

M | LH | 60° P | ISO 2 (6H) | FORM B 3.5-5 xP | B-LH | HSSE V3

EMULSION | OIL

3.112.120-LH



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	050.065	
M4	0.70	63	13	21	4.5	6	3.4	3	050.075	
M5	0.80	70	16	25	6.0	8	4.9	3	050.085	
M6	1.00	80	19	30	6.0	8	4.9	3	050.090	
M8	1.25	90	22	35	8.0	9	6.2	3	050.100	
M10	1.50	100	24	39	10.0	11	8	3	050.110	



STEEL 500-800 N/mm²

CU

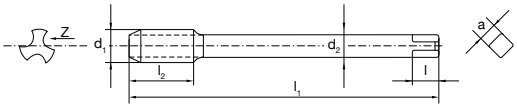
ALU Si <10%

MACHINE TAP

M | LH | 60° P | ISO 2 (6H) | FORM B 3.5-5 xP | B-LH | HSSE V3

EMULSION | OIL

3.112.620-LH



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9	10	7	3	250.060	
M16	2	110	32		12	12	9	3	250.070	
M20	2.5	140	34		16	15	12	3	250.080	

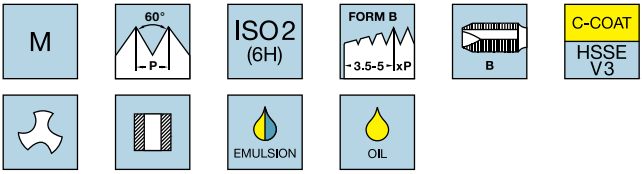


STEEL 500-800 N/mm²

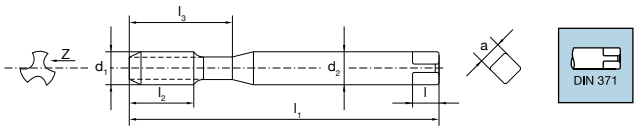
CU

ALU Si <10%

MACHINE TAP



3.112.122



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	045.065	
M4	0.70	63	13	21	4.5	6	3.4	3	045.075	
M5	0.80	70	16	25	6.0	8	4.9	3	045.085	
M6	1.00	80	19	30	6.0	8	4.9	3	045.090	
M8	1.25	90	22	35	8.0	9	6.2	3	045.100	
M10	1.50	100	24	39	10.0	11	8	3	045.110	

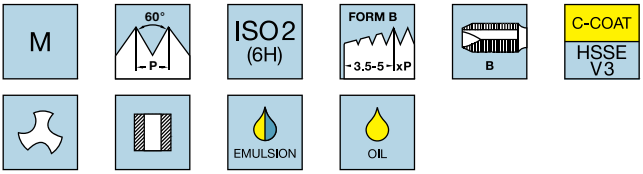


STEEL 500-800 N/mm²

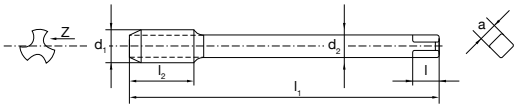
CU

ALU Si <10%

MACHINE TAP



3.112.622



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11		2.2	-	-	3	245.005	
M4	0.70	63	13		2.8	5	2.1	3	245.015	
M5	0.80	70	16		3.5	6	2.7	3	245.025	
M6	1.00	80	19		4.5	6	3.4	3	245.030	
M8	1.25	90	22		6.0	8	4.9	3	245.040	
M10	1.50	100	24		7.0	8	5.5	3	245.050	
M12	1.75	110	28		9.0	10	7	3	245.060	
M14	2.00	110	30		11.0	12	9	3	245.065	
M16	2.00	110	32		12.0	12	9	3	245.070	
M18	2.50	125	34		14.0	14	11	3	245.075	
M20	2.50	140	34		16.0	15	12	3	245.080	
M22	2.50	140	34		18.0	17	14.5	3	245.085	
M24	3.00	160	38		18.0	17	14.5	3	245.090	
M27	3.00	160	38		20.0	19	16	4	245.095	
M30	3.50	180	45		22.0	21	18	4	245.100	
M33	3.50	180	50		25.0	23	20	4	245.105	
M36	4.00	200	56		28.0	25	22	4	245.110	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

ALU

MACHINE TAP

M

60° P

ISO2 (6H)

FORM B 3.5-5 xP

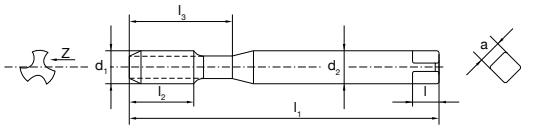
B

C-COAT HSSE V3

EMULSION

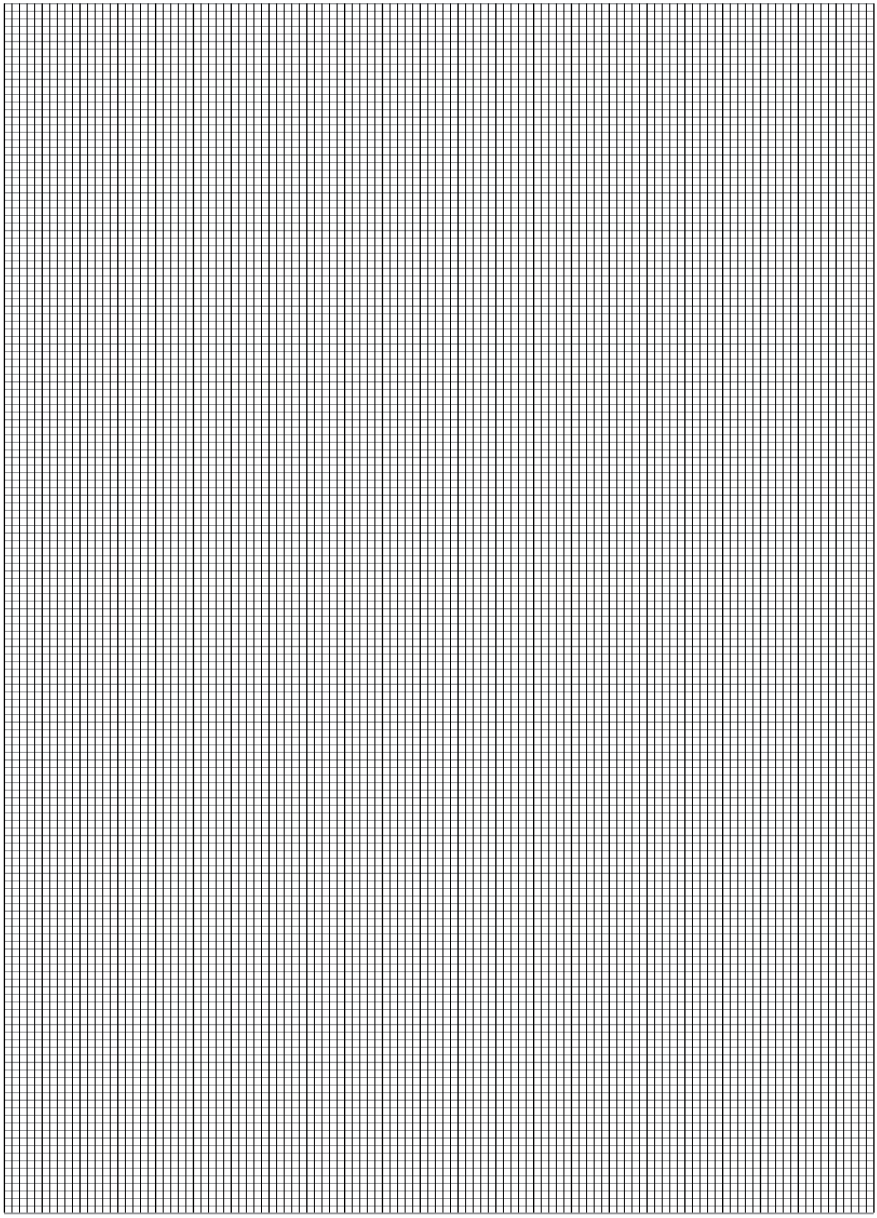
OIL

3.112.129



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	031.040	
M3	0.50	56	11	18	3.5	6	2.7	2	031.065	
M4	0.70	63	13	21	4.5	6	3.4	2	031.075	
M5	0.80	70	16	25	6.0	8	4.9	2	031.085	
M6	1.00	80	19	30	6.0	8	4.9	2	031.090	
M8	1.25	90	22	35	8.0	9	6.2	3	031.100	
M10	1.50	100	24	39	10.0	11	8	3	031.110	





STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

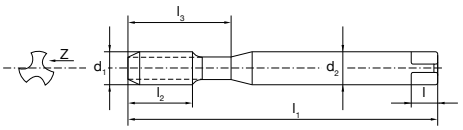
ALU

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5 xP | B | Ni OX HSSE V3

EMULSION | OIL

3.112.126-WF



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8		2.8	5	2.1	2	025.040	
M3	0.50	56	11	18	3.5	6	2.7	2	025.065	
M4	0.70	63	13	21	4.5	6	3.4	2	025.075	
M5	0.80	70	16	25	6.0	8	4.9	2	025.085	
M6	1.00	80	19	30	6.0	8	4.9	3	025.090	
M8	1.25	90	22	35	8.0	9	6.2	3	025.100	
M10	1.50	100	24	39	10.0	11	8	3	025.110	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

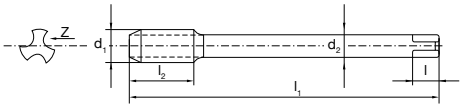
ALU

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5-xP | B | Ni OX HSSE V3

EMULSION | OIL

3.112.626-WF



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	230.060	
M14	2.00	110	30		11.0	12	9	3	230.065	
M16	2.00	110	38		12.0	12	9	3	230.070	
M18	2.50	125	34		14.0	14	11	3	230.075	

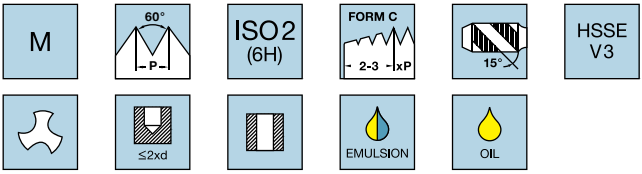


STEEL 500-800 N/mm²

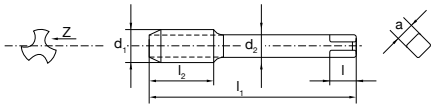
CU

ALU

MACHINE TAP

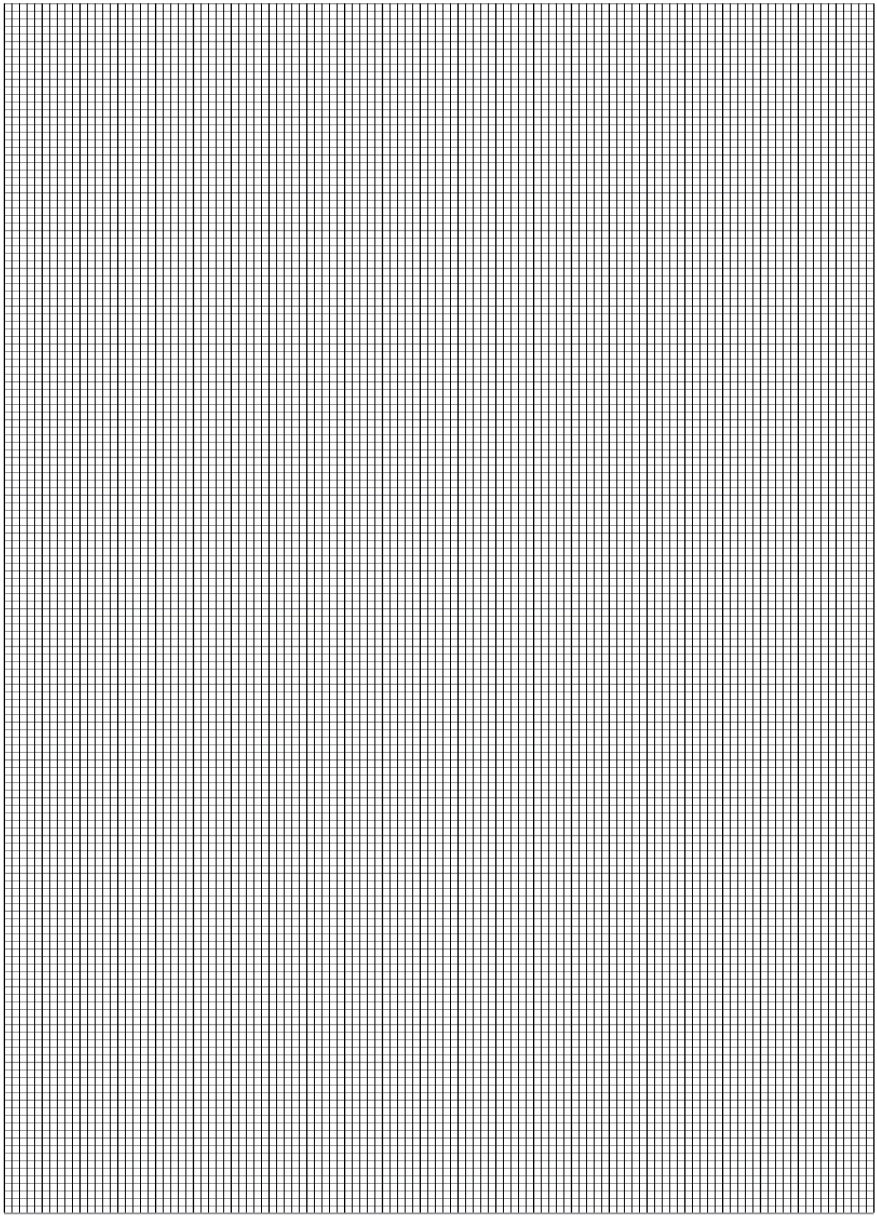


3.114.220





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	40	5		3.5	6	2.7	3	010.065	
M4	0.70	45	7		4.5	6	3.4	3	010.075	
M5	0.80	50	8		6.0	8	4.9	3	010.085	
M6	1.00	56	10		6.0	8	4.9	3	010.090	
M8	1.25	63	13		6.0	8	4.9	3	010.100	
M10	1.50	70	15		7.0	8	5.5	3	010.110	
M12	1.75	75	18		9.0	10	7	3	010.120	
M14	2	80	20		11	11	9	3	010.125	
M16	2	80	20		12	12	9	3	010.130	
M18	2.5	95	25		14	14	11	4	010.135	
M20	2.5	95	25		16	15	12	4	010.140	



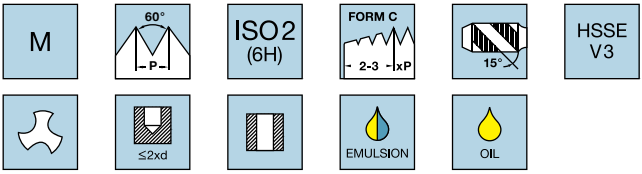


STEEL 500-800 N/mm²

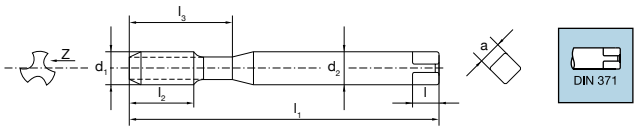
CU

ALU Si <10%

MACHINE TAP



3.114.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	075.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	075.055	
M3	0.50	56	5	18	3.5	6	2.7	3	075.065	
M4	0.70	63	7	21	4.5	6	3.4	3	075.075	
M5	0.80	70	8	25	6.0	8	4.9	3	075.085	
M6	1.00	80	10	30	6.0	8	4.9	3	075.090	
M8	1.25	90	13	35	8.0	9	6.2	3	075.100	
M10	1.50	100	15	39	10.0	11	8	3	075.110	



STEEL 500-800 N/mm²

CU

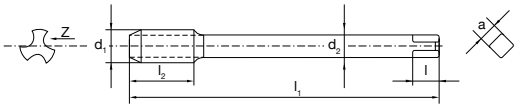
ALU Si <10%

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 15° | HSSE V3

≤2xd | EMULSION | OIL

3.114.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5		2.2	-	-	3	280.005	
M4	0.70	63	7		2.8	5	2.1	3	280.015	
M5	0.80	70	8		3.5	6	2.7	3	280.025	
M6	1.00	80	10		4.5	6	3.4	3	280.030	
M8	1.25	90	13		6.0	8	4.9	3	280.040	
M10	1.50	100	15		7.0	8	5.5	3	280.050	
M12	1.75	110	18		9.0	10	7	3	280.060	
M14	2.00	110	20		11.0	12	9	3	280.065	
M16	2.00	110	20		12.0	12	9	3	280.070	
M18	2.50	125	25		14.0	14	11	4	280.075	
M20	2.50	140	25		16.0	15	12	4	280.080	
M22	2.50	140	25		18.0	17	14.5	4	280.085	
M24	3.00	160	30		18.0	17	14.5	4	280.090	
M27	3.00	160	30		20.0	19	16	4	280.095	
M30	3.50	180	35		22.0	21	18	4	280.100	
M33	3.50	180	35		25.0	23	20	4	280.105	
M36	4.00	200	40		28.0	25	22	4	280.110	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

MACHINE TAP

M

60° P

ISO2 (6H)

FORM C 2-3 xP

15°

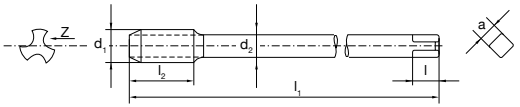
HSSE V3

≤2xd

EMULSION

OIL

3.114.920-LS



TANOI LS

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	1.00	160	10		4.5	6	3.4	3	445.065	
M8	1.25	180	13		6.0	8	4.9	3	445.070	
M10	1.50	200	15		7.0	8	5.5	3	445.075	
M12	1.75	220	18		9.0	10	7	3	445.080	
M14	2.00	220	20		11.0	12	9	3	445.085	
M16	2.00	220	20		12.0	12	9	3	445.090	

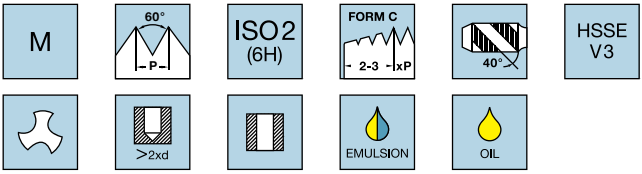


STEEL 500-800 N/mm²

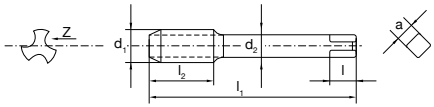
CU

ALU

MACHINE TAP



3.115.220





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	36	8		2.8	5	2.1	2	015.040	
M3	0.50	40	5		3.5	6	2.7	3	015.065	
M4	0.70	45	7		4.5	6	3.4	3	015.075	
M5	0.80	50	8		6.0	8	4.9	3	015.085	
M6	1.00	56	10		6.0	8	4.9	3	015.090	
M8	1.25	63	13		6.0	8	4.9	3	015.100	
M10	1.50	70	15		7.0	8	5.5	3	015.110	
M12	1.75	75	18		9.0	10	7	3	015.120	
M14	2.00	80	20		12.0	12	9	3	015.125	
M16	2.00	80	20		12.0	12	9	3	015.130	
M18	2.50	95	25		14.0	14	11	4	015.135	
M20	2.50	95	25		16.0	15	12	4	015.140	

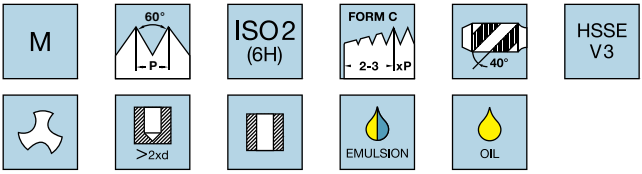


STEEL 500-800 N/mm²

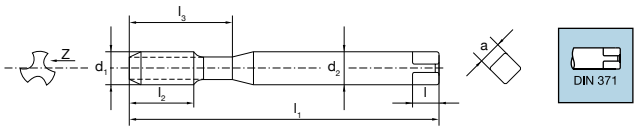
CU

ALU Si <10%

MACHINE TAP



3.115.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	085.040	
M2.2	0.45	45	9	11	2.8	5	2.1	2	085.050	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	085.055	
M2.6	0.45	50	9	13	2.8	5	2.1	2	085.060	
M3	0.50	56	5	18	3.5	6	2.7	3	085.065	
M3.5	0.60	56	6	20	4.0	6	3	3	085.070	
M4	0.70	63	7	21	4.5	6	3.4	3	085.075	
M5	0.80	70	8	25	6.0	8	4.9	3	085.085	
M6	1.00	80	10	30	6.0	8	4.9	3	085.090	
M8	1.25	90	13	35	8.0	9	6.2	3	085.100	
M10	1.50	100	15	39	10.0	11	8	3	085.110	
M12	1.75	110	18	45	12.0	12	9	3	085.120	

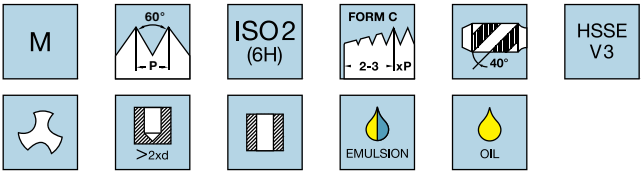


STEEL 500-800 N/mm²

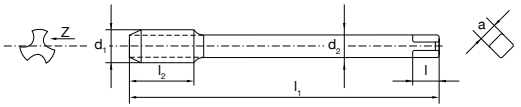
CU

ALU Si <10%

MACHINE TAP



3.115.620





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5		2.2	-	-	3	285.005	
M4	0.70	63	7		2.8	5	2.1	3	285.015	
M5	0.80	70	8		3.5	6	2.7	3	285.025	
M6	1.00	80	10		4.5	6	3.4	3	285.030	
M8	1.25	90	13		6.0	8	4.9	3	285.040	
M10	1.50	100	15		7.0	8	5.5	3	285.050	
M12	1.75	110	18		9.0	10	7	3	285.060	
M14	2.00	110	20		11.0	12	9	3	285.065	
M16	2.00	110	20		12.0	12	9	3	285.070	
M18	2.50	125	25		14.0	14	11	4	285.075	
M20	2.50	140	25		16.0	15	12	4	285.080	
M22	2.50	140	25		18.0	17	14.5	4	285.085	
M24	3.00	160	30		18.0	17	14.5	4	285.090	
M27	3.00	160	30		20.0	19	16	4	285.095	
M30	3.50	180	35		22.0	21	18	4	285.100	
M33	3.50	180	35		25.0	23	20	4	285.105	
M36	4.00	200	40		28.0	25	22	4	285.110	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

MACHINE TAP

M

60° P

ISO2 (6H)

FORM C 2-3 xP

40°

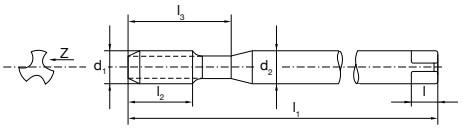
HSSE V3

>2xd

EMULSION

OIL

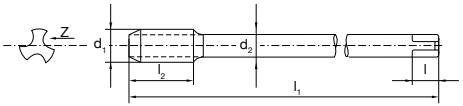
3.115.920-LS



TANOI LS

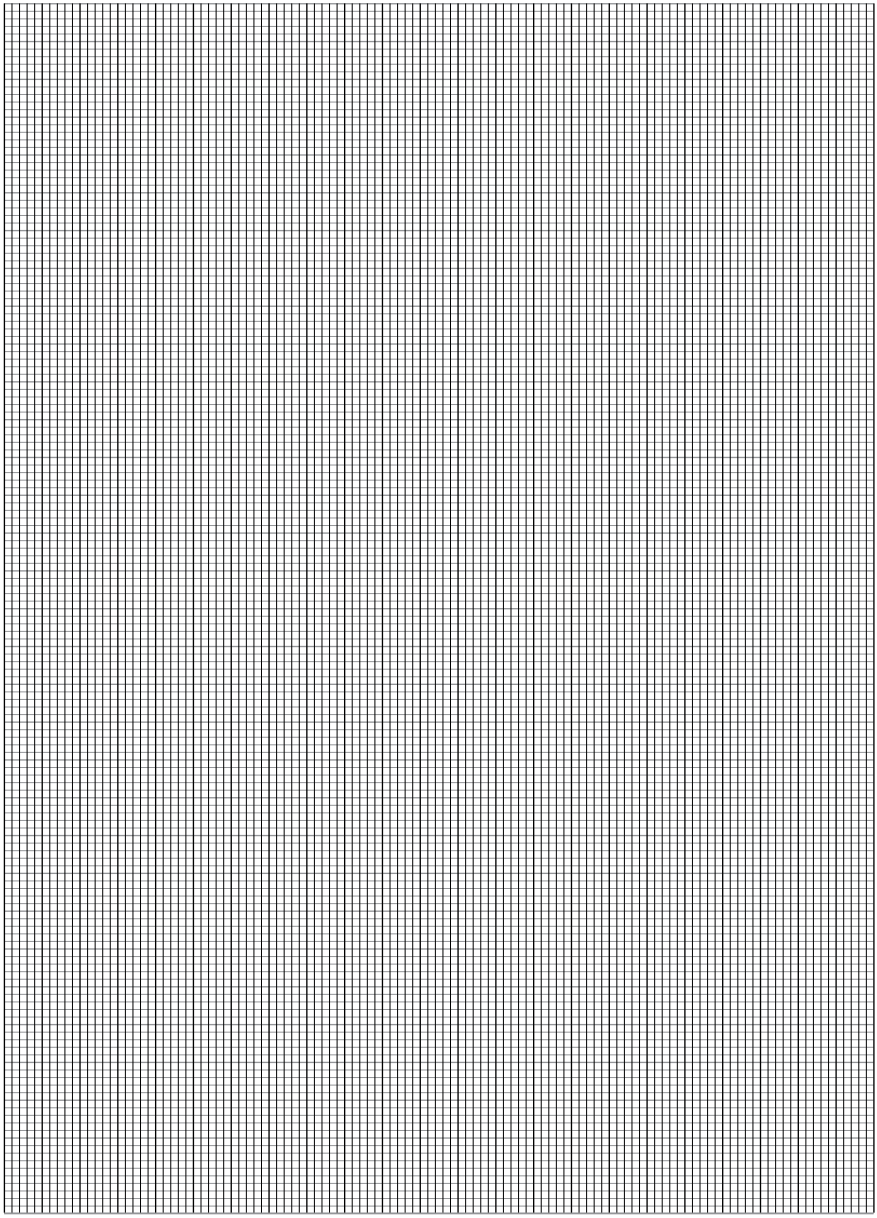
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	1.00	160	10	80	6.0	8	4.7	3	450.110	

3.115.920-LS



TANOI LS

M8	1.25	180	13	90	6.0	8	5.9	3	450.115	
M10	1.50	200	15	100	7.0	8	6.9	3	450.120	
M12	1.75	220	18	110	9.0	10	8.9	3	450.125	
M14	2.00	220	20	110	11.0	12	10.8	3	450.130	
M16	2.00	220	20	110	12.0	12	11.8	3	450.135	





STEEL 500-800 N/mm²

CU

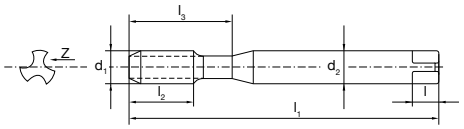
ALU Si <10%

MACHINE TAP

M | 60° P | LH | ISO2 (6H) | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.115.120-LH



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	105.065	
M4	0.70	63	7	21	4.5	6	3.4	3	105.075	
M5	0.80	70	8	25	6.0	8	4.9	3	105.085	
M6	1.00	80	10	30	6.0	8	4.9	3	105.090	
M8	1.25	90	13	35	8.0	9	6.2	3	105.100	
M10	1.50	100	15	39	10.0	11	8	3	105.110	

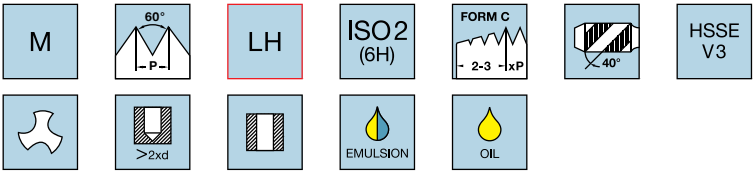


STEEL 500-800 N/mm²

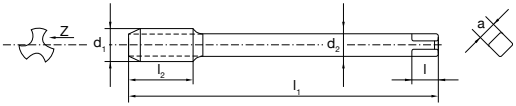
CU

ALU Si <10%

MACHINE TAP



3.115.620-LH



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	305.060	
M16	2.00	110	20		12.0	12	9	3	305.070	
M20	2.50	140	25		16.0	15	12	4	305.080	



STEEL 500-800 N/mm²

CU

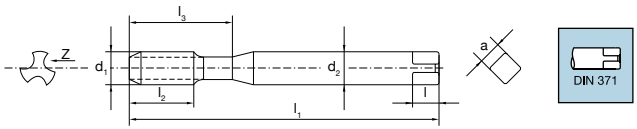
ALU Si <10%

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | C-COAT HSSE V3

>2xd | EMULSION | OIL

3.116.122



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	100.065	
M4	0.70	63	7	21	4.5	6	3.4	3	100.075	
M5	0.80	70	8	25	6.0	8	4.9	3	100.085	
M6	1.00	80	10	30	6.0	8	4.9	3	100.090	
M8	1.25	90	13	35	8.0	9	6.2	3	100.100	
M10	1.50	100	15	39	10.0	11	8	3	100.110	

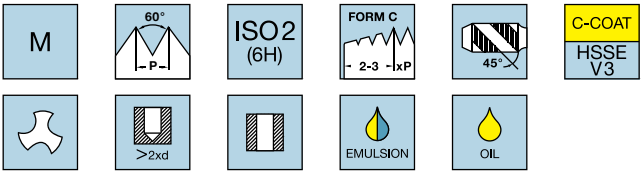


STEEL 500-800 N/mm²

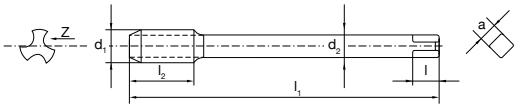
CU

ALU Si <10%

MACHINE TAP



3.116.622





d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5		2.2	-	-	3	300.005	
M4	0.70	63	7		2.8	5	2.1	3	300.015	
M5	0.80	70	8		3.5	6	2.7	3	300.025	
M6	1.00	80	10		4.5	6	3.4	3	300.030	
M8	1.25	90	13		6.0	8	4.9	3	300.040	
M10	1.50	100	15		7.0	8	5.5	3	300.050	
M12	1.75	110	18		9.0	10	7	3	300.060	
M14	2.00	110	20		11.0	12	9	3	300.065	
M16	2.00	110	20		12.0	12	9	3	300.070	
M18	2.50	125	25		14.0	14	11	4	300.075	
M20	2.50	140	25		16.0	15	12	4	300.080	
M22	2.50	140	25		18.0	17	14.5	4	300.085	
M24	3.00	160	30		18.0	17	14.5	4	300.090	
M27	3.00	160	30		20.0	19	16	4	300.095	
M30	3.50	180	35		22.0	21	18	4	300.100	
M33	3.50	180	35		25.0	23	20	4	300.105	
M36	4.00	200	40		28.0	25	22	4	300.110	



STEEL 500-800 N/mm²

CU

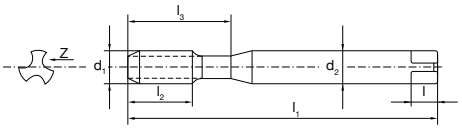
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM D 3.5-5-5 xP | 15° | LSP | HSSE V3

EMULSION | OIL

3.117.120-LSP



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	080.065	
M4	0.70	63	13	21	4.5	6	3.4	3	080.075	
M5	0.80	70	16	25	6.0	8	4.9	3	080.085	
M6	1.00	80	19	30	6.0	8	4.9	3	080.090	
M8	1.25	90	22	35	8.0	9	6.2	3	080.100	
M10	1.50	100	24	39	10.0	11	8	3	080.110	



STEEL 500-800 N/mm²

CU

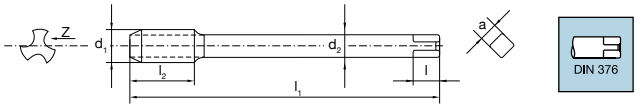
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM D 3.5-5 xP | 15° | LSP | HSSE V3

EMULSION | OIL

3.117.620-LSP



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	275.060	
M16	2.00	110	32		12.0	12	9	3	275.070	



STEEL 500-800 N/mm²

CU

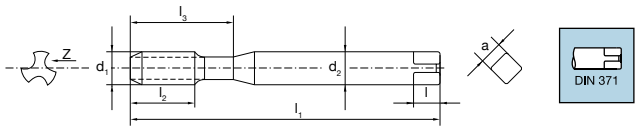
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM E 1.5-2 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.118.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	095.065	
M4	0.70	63	7	21	4.5	6	3.4	3	095.075	
M5	0.80	70	8	25	6.0	8	4.9	3	095.085	
M6	1.00	80	10	30	6.0	8	4.9	3	095.090	
M8	1.25	90	13	35	8.0	9	6.2	3	095.100	
M10	1.50	100	15	39	10.0	11	8	3	095.110	



STEEL 500-800 N/mm²

CU

ALU Si <10%

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM E 1.5-2 xP | 40° | HSSE V3

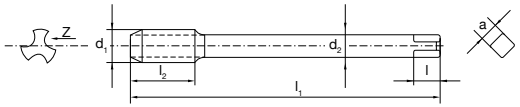








3.118.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	295.060	
M16	2.00	110	20		12.0	12	9	3	295.070	



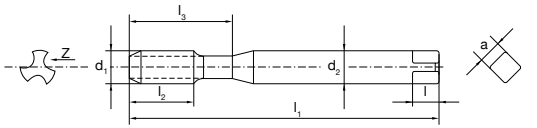
STEEL 500-800 N/mm² | ALU
STEEL ≤ 500 N/mm² | CU
INOX | GG/G CAST

MACHINE TAP

M | 60° P | 6HX | FORM D 3.5-5 xP | OIL HOLE 17° | LSP | SYNCHRO | C-COAT PM 38

EMULSION | OIL

3.119.952
SYNCHRO



DIN 1835B
ISO 3338

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	70	5	18	6	8	4.9	3	975.075	
M4	0.70	70	7	21	6	8	4.9	3	975.095	
M5	0.80	70	8	25	6	8	4.9	3	975.120	
M6	1.00	80	10	30	6	8	4.9	3	975.130	
• **M8**	1.25	90	13	35	8	9	6.2	3	975.155	
• **M10**	1.50	100	15	39	10	11	8	3	975.185	
• **M12**	1.75	110	17	45	12	12	9	3	975.215	

• With internal cooling.

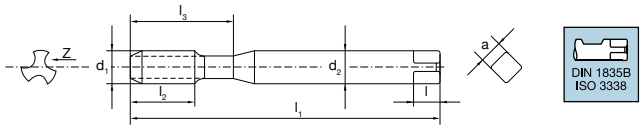


STEEL 500-800 N/mm²
ALU
STEEL ≤ 500 N/mm²
CU
INOX
GG/G CAST

MACHINE TAP

M
60° P
6HX
FORM C 2-3 xP
OIL HOLE 40°
SYNCHRO
C-COAT
PM 38
>2xd
EMULSION
OIL

3.115.952
SYNCHRO



DIN 1835B
ISO 3338

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	70	3	18	6	8	4.9	3	977.075	
M4	0.70	70	4.2	21	6	8	4.9	3	977.095	
M5	0.80	70	4.8	25	6	8	4.9	3	977.120	
M6	1.00	80	6	30	6	8	4.9	3	977.130	
• **M8**	1.25	90	7.5	35	8	9	6.2	3	977.155	
• **M10**	1.50	100	9	39	10	11	8	3	977.185	
• **M12**	1.75	110	11	45	12	12	9	3	977.215	

• With internal cooling.



STEEL 500-800 N/mm²

CU

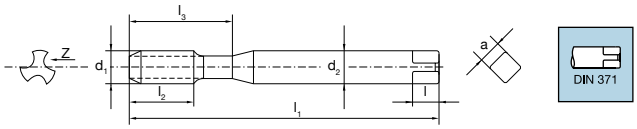
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

3.122.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	055.040	
M2.5	0.45	50	9	12	2.8	5	2.1	2	055.055	
M3	0.50	56	11	18	3.5	6	2.7	3	055.065	
M4	0.70	63	13	21	4.5	6	3.4	3	055.075	
M5	0.80	70	16	25	6.0	8	4.9	3	055.085	
M6	1.00	80	19	30	6.0	8	4.9	3	055.090	
M8	1.25	90	22	35	8.0	9	6.2	3	055.100	
M10	1.50	100	24	39	10.0	11	8	3	055.110	



STEEL 500-800 N/mm²

CU

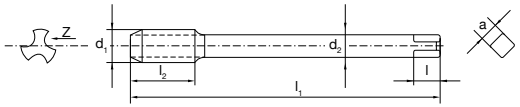
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

3.122.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	255.060	
M16	2.00	110	32		12.0	12	9	3	255.070	
M20	2.50	140	34		16.0	15	12	3	255.080	



STEEL 500-800 N/mm²

CU

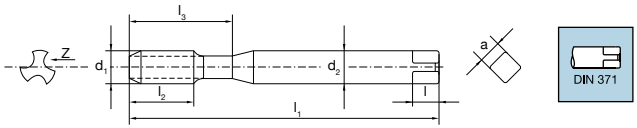
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.125.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	110.065	
M4	0.70	63	7	21	4.5	6	3.4	3	110.075	
M5	0.80	70	8	25	6.0	8	4.9	3	110.085	
M6	1.00	80	10	30	6.0	8	4.9	3	110.090	
M8	1.25	90	13	35	8.0	9	6.2	3	110.100	
M10	1.50	100	15	39	10.0	11	8	3	110.110	
M12	1.75	110	18	45	12.0	12	9	3	110.120	



STEEL 500-800 N/mm²

CU

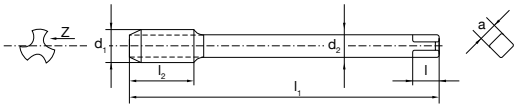
ALU Si <10%

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.125.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	310.060	
M14	2.00	110	20		11.0	12	9	3	310.065	
M16	2.00	110	20		12.0	12	9	3	310.070	
M18	2.50	125	25		14.0	14	11	4	310.075	
M20	2.50	140	25		16.0	15	12	4	310.080	



STEEL 500-800 N/mm²

CU

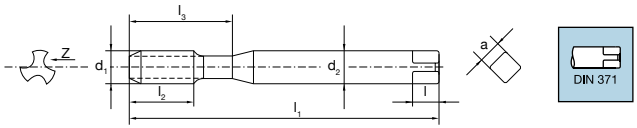
ALU Si <10%

MACHINE TAP

M | 60° P | 7G | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

3.142.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	060.065	
M4	0.70	63	13	21	4.5	6	3.4	3	060.075	
M5	0.80	70	16	25	6.0	8	4.9	3	060.085	
M6	1.00	80	19	30	6.0	8	4.9	3	060.090	
M8	1.25	90	22	35	8.0	9	6.2	3	060.100	
M10	1.50	100	24	39	10.0	11	8	3	060.110	



STEEL 500-800 N/mm²

CU

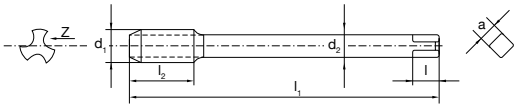
ALU Si <10%

MACHINE TAP

M | 60° P | 7G | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

3.142.620



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	260.060	
M16	2.00	110	32		12.0	12	9	3	260.070	
M20	2.50	140	34		16.0	15	12	3	260.080	



STEEL 500-800 N/mm²

CU

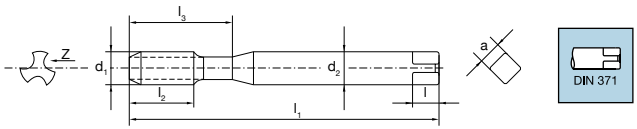
ALU Si <10%

MACHINE TAP

M | 60° P | 7G | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.145.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	115.065	
M4	0.70	63	7	21	4.5	6	3.4	3	115.075	
M5	0.80	70	8	25	6.0	8	4.9	3	115.085	
M6	1.00	80	10	30	6.0	8	4.9	3	115.090	
M8	1.25	90	13	35	8.0	9	6.2	3	115.100	
M10	1.50	100	15	39	10.0	11	8	3	115.110	



STEEL 500-800 N/mm²

CU

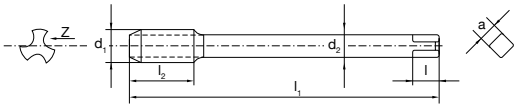
ALU Si <10%

MACHINE TAP

M | 60° P | 7G | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.145.620



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	315.060	
M16	2.00	110	20		12.0	12	9	3	315.070	
M20	2.50	140	25		16.0	15	12	4	315.080	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

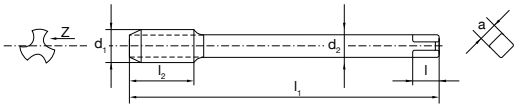
CU

MACHINE TAP

MF | 60° P | ISO 2 (6H) | FORM C 2-3 xP | 0° | HSSE V3

≤2xd | EMULSION | OIL

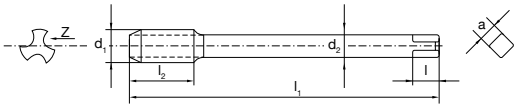
3.213.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.35	56	8		2.2	-	-	3	460.015	
M3.5	0.35	63	10		2.8	5	2.1	3	460.020	
M4	0.50	63	10		2.8	5	2.1	3	460.030	
M5	0.50	70	12		3.5	6	2.7	3	460.040	
M6	0.50	80	14		4.5	6	3.4	3	460.045	
M6	0.75	80	14		4.5	6	3.4	4	460.050	
M7	0.75	80	14		5.5	7	4.3	4	460.055	
M8	0.50	80	18		6.0	8	4.9	4	460.060	
M8	0.75	80	18		6.0	8	4.9	4	460.065	
M8	1.00	90	22		6.0	8	4.9	4	460.070	
M9	1.00	90	22		7.0	8	5.5	4	460.075	
M10	0.75	90	20		7.0	8	5.5	4	460.080	
M10	1.00	90	20		7.0	8	5.5	4	460.085	
M10	1.25	100	24		7.0	8	5.5	4	460.090	
M11	1.00	90	20		8.0	9	6.2	4	460.095	

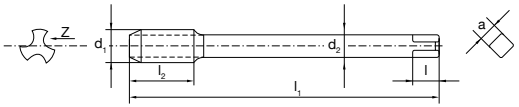
3.213.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.00	100	22		9.0	10	7	4	460.100	
M12	1.25	100	22		9.0	10	7	4	460.105	
M12	1.50	100	22		9.0	10	7	4	460.110	
M14	1.00	100	22		11.0	12	9	4	460.120	
M14	1.25	100	22		11.0	12	9	4	460.125	
M14	1.50	100	22		11.0	12	9	4	460.130	
M15	1.00	100	22		12.0	12	9	4	460.135	
M15	1.50	100	22		12.0	12	9	4	460.140	
M16	1.00	100	22		12.0	12	9	4	460.145	
M16	1.50	100	22		12.0	12	9	4	460.150	
M18	1.00	110	25		14.0	14	11	4	460.155	
M18	1.50	110	25		14.0	14	11	4	460.160	
M18	2.00	125	34		14.0	14	11	4	460.165	
M20	1.00	125	25		16.0	15	12	4	460.170	
M20	1.50	125	25		16.0	15	12	4	460.175	
M20	2.00	140	34		16.0	15	12	4	460.180	
M22	1.00	125	25		18.0	17	14.5	4	460.185	
M22	1.50	125	25		18.0	17	14.5	4	460.190	
M22	2.00	140	34		18.0	17	14.5	4	460.195	
M24	1.00	140	28		18.0	17	14.5	4	460.200	
M24	1.50	140	28		18.0	17	14.5	4	460.205	
M24	2.00	140	28		18.0	17	14.5	4	460.210	
M25	1.50	140	28		18.0	17	14.5	4	460.215	
M26	1.50	140	28		18.0	17	14.5	4	460.220	
M27	1.50	140	28		20.0	19	16	4	460.225	
M27	2.00	140	28		20.0	19	16	4	460.230	
M28	1.50	140	28		20.0	19	16	4	460.235	
M30	1.00	150	28		22.0	21	18	4	460.240	
M30	1.50	150	28		22.0	21	18	4	460.245	
M30	2.00	150	28		22.0	21	18	4	460.250	
M32	1.50	150	28		22.0	21	18	6	460.255	
M33	1.50	160	30		25.0	23	20	6	460.260	
M34	1.50	170	30		28.0	25	22	6	460.270	
M35	1.50	170	30		28.0	25	22	6	460.275	
									CONTINUED	

3.213.422



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M36	1.50	170	30		28.0	25	22	6	460.280	
M38	1.50	170	30		28.0	25	22	6	460.295	
M40	1.50	170	30		32.0	27	24	6	460.310	
M42	1.50	170	30		32.0	27	24	6	460.325	
M45	1.50	180	32		36.0	32	29	6	460.340	
M48	1.50	190	32		36.0	32	29	6	460.355	
M50	1.50	190	32		36.0	32	29	6	460.370	
M52	1.50	190	32		40.0	35	32	6	460.385	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

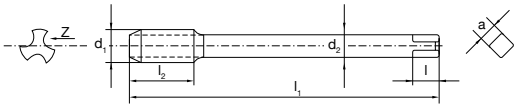
CU

MACHINE TAP

MF | 60° P | ISO2 (6H) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

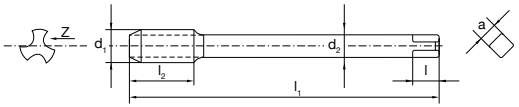
3.212.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.35	56	8		2.2	-	-	3	455.015	
M3.5	0.35	63	10		2.8	5	2.1	3	455.020	
M4	0.50	63	10		2.8	5	2.1	3	455.030	
M5	0.50	70	12		3.5	6	2.7	3	455.040	
M6	0.50	80	14		4.5	6	3.4	3	455.045	
M6	0.75	80	14		4.5	6	3.4	3	455.050	
M7	0.75	80	14		5.5	7	4.3	3	455.055	
M8	0.50	80	18		6.0	8	4.9	3	455.060	
M8	0.75	80	18		6.0	8	4.9	3	455.065	
M8	1.00	90	22		6.0	8	4.9	3	455.070	
M9	1.00	90	22		7.0	8	5.5	3	455.075	
M10	0.75	90	20		7.0	8	5.5	3	455.080	
M10	1.00	90	20		7.0	8	5.5	3	455.085	
M10	1.25	100	24		7.0	8	5.5	3	455.090	
									CONTINUED	

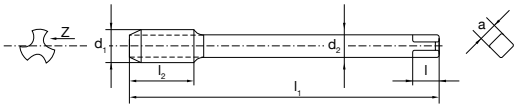
3.112.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M11	1.00	90	20		8.0	9	6.2	3	455.095	
M12	1.00	100	22		9.0	10	7	3	455.100	
M12	1.25	100	22		9.0	10	7	3	455.105	
M12	1.50	100	22		9.0	10	7	3	455.110	
M14	1.00	100	22		11.0	12	9	3	455.120	
M14	1.25	100	22		11.0	12	9	3	455.125	
M14	1.50	100	22		11.0	12	9	3	455.130	
M15	1.00	100	22		12.0	12	9	3	455.135	
M15	1.50	100	22		12.0	12	9	3	455.140	
M16	1.00	100	22		12.0	12	9	3	455.145	
M16	1.50	100	22		12.0	12	9	3	455.150	
M18	1.00	110	25		14.0	14	11	3	455.155	
M18	1.50	110	25		14.0	14	11	3	455.160	
M18	2.00	125	34		14.0	14	11	3	455.165	
M20	1.00	125	25		16.0	15	12	3	455.170	
M20	1.50	125	25		16.0	15	12	3	455.175	
M20	2.00	140	34		16.0	15	12	3	455.180	
M22	1.00	125	25		18.0	17	14.5	3	455.185	
M22	1.50	125	25		18.0	17	14.5	3	455.190	
M22	2.00	140	34		18.0	17	14.5	3	455.195	
M24	1.00	140	28		18.0	17	14.5	3	455.200	
M24	1.50	140	28		18.0	17	14.5	3	455.205	
M24	2.00	140	28		18.0	17	14.5	3	455.210	
M25	1.50	140	28		18.0	17	14.5	3	455.215	
M26	1.50	140	28		18.0	17	14.5	4	455.220	
M27	1.50	140	28		20.0	19	16	4	455.225	
M27	2.00	140	28		20.0	19	16	4	455.230	
M28	1.50	140	28		20.0	19	16	4	455.235	
M30	1.00	150	28		22.0	21	18	4	455.240	
M30	1.50	150	28		22.0	21	18	4	455.245	
M30	2.00	150	28		22.0	21	18	4	455.250	
M32	1.50	150	30		22.0	21	18	4	455.255	
M33	1.50	160	30		25.0	23	20	4	455.260	
M34	1.50	170	30		28.0	25	22	4	455.270	
M35	1.50	170	30		28.0	25	22	4	455.275	

3.212.420



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M36	1.50	170	30		28.0	25	22	4	455.280	
M38	1.50	170	30		28.0	25	22	4	455.295	
M40	1.50	170	30		32.0	27	24	4	455.310	
M42	1.50	170	30		32.0	27	24	4	455.325	
M45	1.50	180	32		36.0	32	29	4	455.340	
M48	1.50	190	32		36.0	32	29	4	455.355	
M50	1.50	190	32		36.0	32	29	4	455.370	
M52	1.50	190	32		40.0	35	32	4	455.385	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

MACHINE TAP

MF

60° P

ISO2 (6H)

FORM B 3.5-5 xP

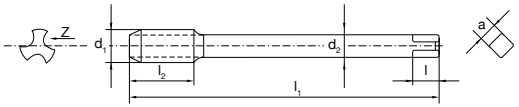
B

C-COAT HSSE V3

EMULSION

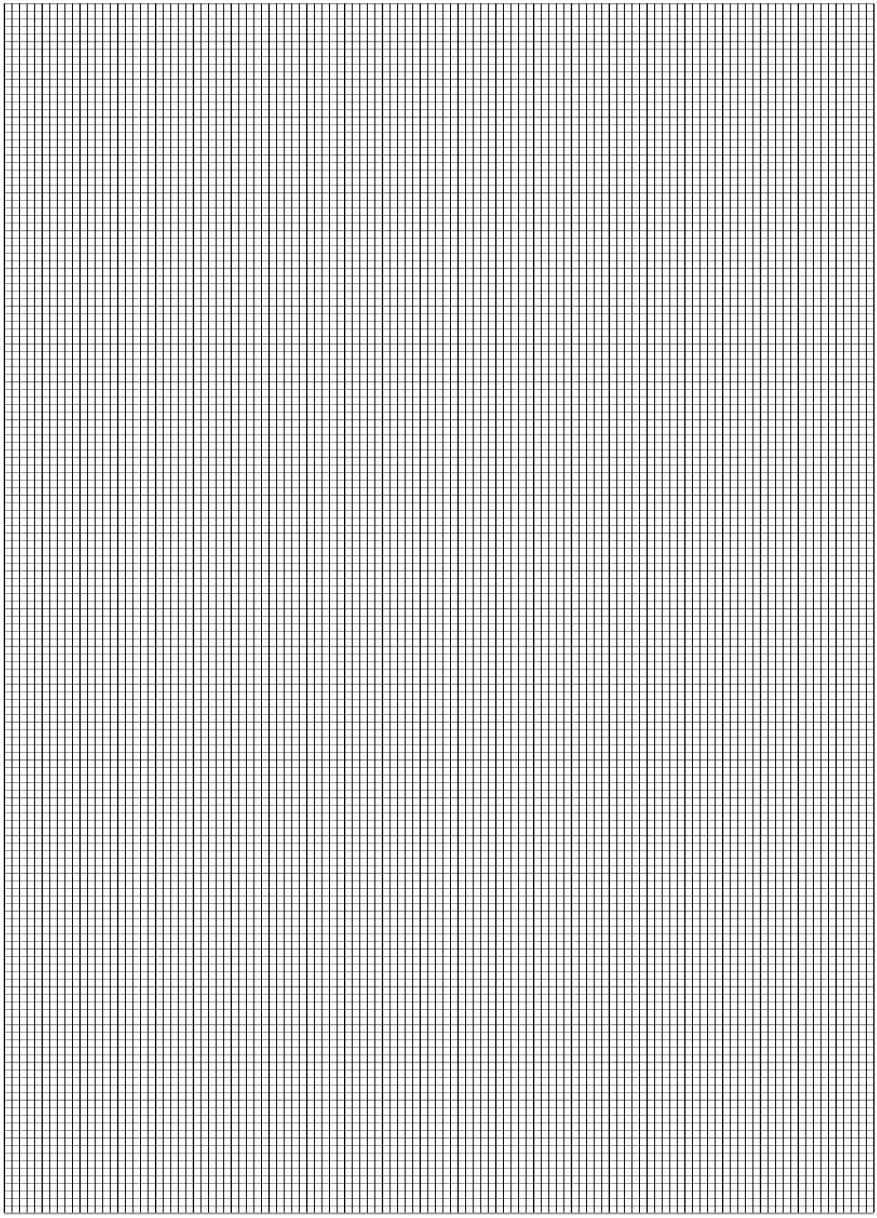
OIL

3.212.422



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	0.75	80	14		4.5	6	3.4	3	465.050	
M8	1.00	90	22		6.0	8	4.9	3	465.070	
M10	1.00	90	20		7.0	8	5.5	3	465.085	
M12	1.50	100	22		9.0	10	7	3	465.110	
M16	1.50	100	22		12.0	12	9	3	465.150	





STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

MACHINE TAP

MF

60° P

ISO2 (6H)

FORM C 2-3 xP

15°

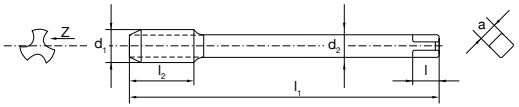
HSSE V3

≤2xd

EMULSION

OIL

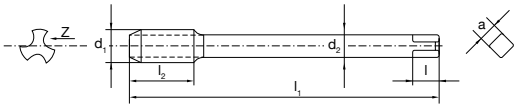
3.214.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M4	0.50	63	6		2.8	5	2.1	3	475.030	
M5	0.50	70	7		3.5	6	2.7	3	475.040	
M6	0.75	80	8		4.5	6	3.4	3	475.050	
M8	0.75	80	10		6.0	8	4.9	3	475.065	
M8	1.00	90	10		6.0	8	4.9	3	475.070	
M10	1.00	90	12		7.0	8	5.5	3	475.085	
M10	1.25	100	12		7.0	8	5.5	3	475.090	
M12	1.00	100	14		9.0	10	7	3	475.100	
M12	1.25	100	14		9.0	10	7	3	475.105	
M12	1.50	100	14		9.0	10	7	3	475.110	
M14	1.00	100	16		11.0	12	9	3	475.120	
M14	1.25	100	16		11.0	12	9	3	475.125	
M14	1.50	100	16		11.0	12	9	3	475.130	
M16	1.00	100	16		12.0	12	9	3	475.145	
M16	1.50	100	16		12.0	12	9	3	475.150	

3.214.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M18	1.00	110	20		14.0	14	11	4	475.155	
M18	1.50	110	20		14.0	14	11	4	475.160	
M20	1.00	125	20		16.0	15	12	4	475.170	
M20	1.50	125	20		16.0	15	12	4	475.175	
M22	1.50	125	20		18.0	17	14.5	4	475.190	
M24	1.50	140	24		18.0	17	14.5	4	475.205	
M24	2.00	140	24		18.0	17	14.5	4	475.210	
M26	1.50	140	24		18.0	17	14.5	4	475.220	
M27	1.50	140	24		20.0	19	16	4	475.225	
M27	2.00	140	24		20.0	19	16	4	475.230	
M28	1.50	140	24		20.0	19	16	4	475.235	
M30	1.50	150	28		22.0	21	18	4	475.245	
M30	2.00	150	28		22.0	21	18	4	475.250	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

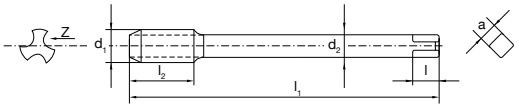
CU

MACHINE TAP

MF | 60° P | ISO2 (6H) | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

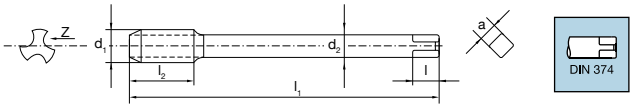
3.215.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.35	56	4		2.2	-	-	3	480.015	
M4	0.50	63	6		2.8	5	2.1	3	480.030	
M5	0.50	70	7		3.5	6	2.7	3	480.040	
M6	0.50	80	8		4.5	6	3.4	3	480.045	
M6	0.75	80	8		4.5	6	3.4	3	480.050	
M8	0.75	80	10		6.0	8	4.9	3	480.065	
M8	1.00	90	10		6.0	8	4.9	3	480.070	
M10	1.00	90	12		7.0	8	5.5	3	480.085	
M10	1.25	100	12		7.0	8	5.5	3	480.090	
M12	1.00	100	14		9.0	10	7	3	480.100	
M12	1.25	100	14		9.0	10	7	3	480.105	
M12	1.50	100	14		9.0	10	7	3	480.110	
M14	1.00	100	16		11.0	12	9	3	480.120	
M14	1.25	100	16		11.0	12	9	3	480.125	
M14	1.50	100	16		11.0	12	9	3	480.130	

3.115.420



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M16	1.00	100	16		12.0	12	9	3	480.145	
M16	1.50	100	16		12.0	12	9	3	480.150	
M18	1.00	110	20		14.0	14	11	4	480.155	
M18	1.50	110	20		14.0	14	11	4	480.160	
M20	1.00	125	20		16.0	15	12	4	480.170	
M20	1.50	125	20		16.0	15	12	4	480.175	
M22	1.50	125	20		18.0	17	14.5	4	480.190	
M24	1.50	140	24		18.0	17	14.5	4	480.205	
M24	2.00	140	24		18.0	17	14.5	4	480.210	
M25	1.50	140	24		18.0	17	14.5	4	480.215	
M26	1.50	140	24		18.0	17	14.5	4	480.220	
M27	1.50	140	24		20.0	19	16	4	480.225	
M27	2.00	140	24		20.0	19	16	4	480.230	
M28	1.50	140	24		20.0	19	16	4	480.235	
M30	1.50	150	28		22.0	21	18	4	480.245	
M30	2.00	150	28		22.0	21	18	4	480.250	



STEEL 500-800 N/mm²

CU

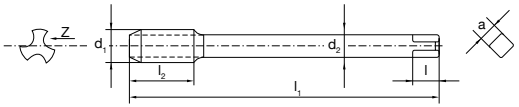
ALU Si <10%

MACHINE TAP

MF | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | C-COAT HSSE V3

>2xd | EMULSION | OIL

3.216.422



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	0.75	80	8		4.5	6	3.4	3	485.050	
M8	1.00	90	10		6.0	8	4.9	3	485.070	
M10	1.00	90	12		7.0	8	5.5	3	485.085	
M12	1.50	100	14		9.0	10	7	3	485.110	
M16	1.50	100	16		12.0	12	9	3	485.150	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

MACHINE TAP

MF

60° P

ISO 3 (6G)

FORM B 3.5-5 xP

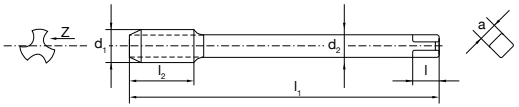
B

HSSE V3

EMULSION

OIL

3.222.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	0.75	80	14		4.5	6	3.4	3	470.050	
M8	1.00	90	22		6.0	8	4.9	3	470.070	
M10	1.00	90	20		7.0	8	5.5	3	470.085	
M12	1.50	100	22		9.0	10	7	3	470.110	
M14	1.50	100	22		11.0	12	9	3	470.130	
M16	1.50	100	22		12.0	12	9	3	470.150	
M18	1.50	110	25		14.0	14	11	3	470.160	
M20	1.50	125	25		16.0	15	12	3	470.175	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

MACHINE TAP

MF



ISO 3 (6G)





HSSE V3



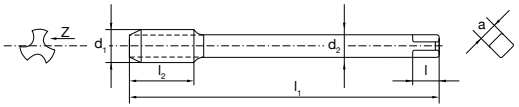






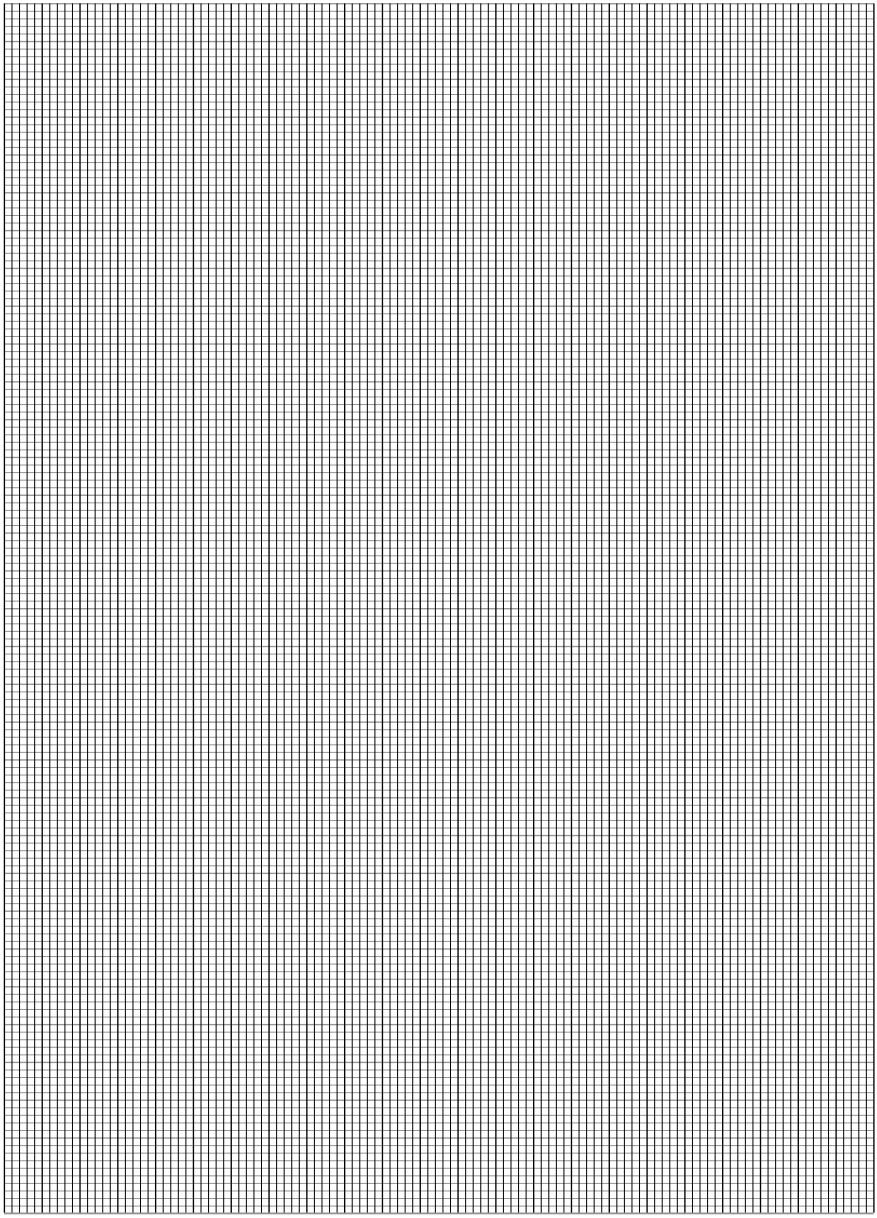


3.225.420



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	0.75	80	8		4.5	6	3.4	3	490.050	
M8	1.00	90	10		6.0	8	4.9	3	490.070	
M10	1.00	90	12		7.0	8	5.5	3	490.085	
M12	1.50	100	14		9.0	10	7	3	490.110	
M14	1.50	100	16		11.0	12	9	3	490.130	
M16	1.50	100	16		12.0	12	9	3	490.150	
M18	1.50	110	20		14.0	14	11	4	490.160	
M20	1.50	125	20		16.0	15	12	4	490.175	





STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

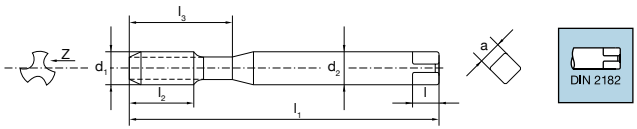
ALU Si <10%

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

3.392.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.1	64	50	8	9	2.8	5	2.1	2	580.005	
No.2	56	50	9	10	2.8	5	2.1	2	580.010	
No.3	48	50	9	10	2.8	5	2.1	2	580.015	
No.4	40	56	11	18	3.5	6	2.7	2	580.020	
No.5	40	56	11	18	3.5	6	2.7	3	580.025	
No.6	32	56	13	19	4.0	6	3	3	580.030	
No.8	32	63	13	19	4.5	6	3.4	3	580.035	
No.10	24	70	16	20	6.0	8	4.9	3	580.040	
No.12	24	80	17	29	6.0	8	4.9	3	580.045	
1/4	20	80	19	30	7.0	8	5.5	3	580.050	
5/16	18	90	22	34	8.0	9	6.2	3	580.055	
3/8	16	90	22	35	9.0	10	7	3	580.060	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

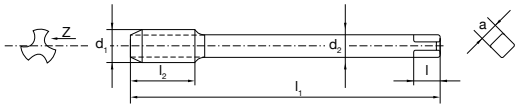
ALU Si <10%

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

3.392.620



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
7/16	14	100	24		8.0	8	6.2	3	585.065	
1/2	13	110	29		9.0	10	7	3	585.070	
9/16	12	110	30		11.0	12	9	3	585.075	
5/8	11	110	32		12.0	12	9	3	585.080	
3/4	10	125	34		14.0	14	11	3	585.085	
7/8	9	140	34		18.0	17	14.5	3	585.090	
1	8	160	38		18.0	17	14.5	3	585.095	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

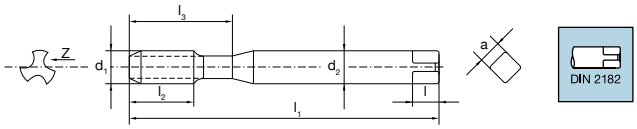
ALU Si <10%

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.395.120



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.2	56	50	9	10	2.8	5	1.7	2	590.010	
No.3	48	50	9	10	2.8	5	1.9	2	590.015	
No.4	40	56	11	18	3.5	6	2.2	2	590.020	
No.5	40	56	7	18	3.5	6	2.4	3	590.025	
No.6	32	56	8	19	4.0	6	2.6	3	590.030	
No.8	32	63	8	19	4.5	6	3.2	3	590.035	
No.10	24	70	11	20	6.0	8	3.6	3	590.040	
No.12	24	80	11	29	6.0	8	4.3	3	590.045	
1/4	20	80	13	30	7.0	8	4.6	3	590.050	
5/16	18	90	15	34	8.0	9	5.9	3	590.055	
3/8	16	90	16	35	9.0	10	6.9	3	590.060	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

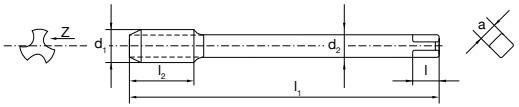
ALU Si <10%

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.395.620



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
7/16	14	100	22	40	8.0	8	6.2	3	595.065	
1/2	13	110	23	44	9.0	10	7	3	595.070	
9/16	12	110	25	44	11.0	12	9	3	595.075	
5/8	11	110	28	44	12.0	12	9	3	595.080	
3/4	10	125	30	50	14.0	14	11	4	595.085	
7/8	9	140	34	56	18.0	17	14.5	4	595.090	
1	8	160	38	64	18.0	17	14.5	4	595.095	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

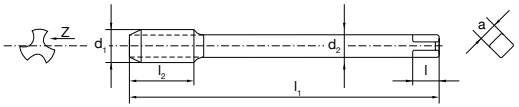
CU

MACHINE TAP

UNF | 60° P | 2B B1.1 | ANSI B1.1 | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

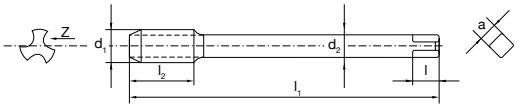
3.492.620



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.4	48	56	11		2.2	-	-	3	620.025	
No.5	44	56	11		2.2	-	-	3	620.030	
No.6	40	56	13		2.5	5	2.1	3	620.035	
No.8	36	63	13		2.8	5	2.1	3	620.040	
No.10	32	70	16		3.5	6	2.7	3	620.045	
No.12	28	80	17		4.0	6	3	3	620.050	
1/4	28	80	19		4.5	6	3.4	3	620.055	
5/16	24	90	22		6.0	8	4.9	3	620.060	
3/8	24	90	22		7.0	8	5.5	3	620.065	
7/16	20	100	20		8.0	9	6.2	3	620.070	
1/2	20	100	22		9.0	10	7	3	620.075	
9/16	18	100	22		11.0	12	9	3	620.080	
5/8	18	100	22		12.0	12	9	3	620.085	
3/4	16	110	25		14.0	14	11	3	620.090	
7/8	14	125	25		18.0	17	14.5	3	620.095	

3.492.620



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
1	12	125	25		18.0	17	14.5	3	620.100	
1 1/8	12	150	28		22.0	21	18	4	620.105	
1 1/4	12	150	28		22.0	21	18	4	620.110	
1 3/8	12	170	30		28.0	25	22	4	620.115	
1 1/2	12	170	30		32.0	27	24	4	620.120	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

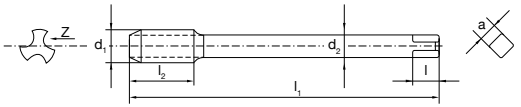
CU

MACHINE TAP

UNF | 60° P | 2B B1.1 | ANSI B1.1 | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.495.620



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.4	48	56	7		2.2	-	-	2	625.025	
No.5	44	56	7		2.2	-	-	3	625.030	
No.6	40	56	7		2.5	5	2.1	3	625.035	
No.8	36	63	7		2.8	5	2.1	3	625.040	
No.10	32	70	9		3.5	6	2.7	3	625.045	
No.12	28	80	9		4.0	6	3	3	625.050	
1/4	28	80	11		4.5	6	3.4	3	625.055	
5/16	24	90	12		6.0	8	4.9	3	625.060	
3/8	24	90	13		7.0	8	5.5	3	625.065	
7/16	20	100	15		8.0	9	6.2	3	625.070	
1/2	20	100	16		9.0	10	7	3	625.075	
9/16	18	100	17		11.0	12	9	3	625.080	
5/8	18	100	19		12.0	12	9	3	625.085	
3/4	16	110	21		14.0	14	11	4	625.090	
7/8	14	125	23		18.0	17	14.5	4	625.095	
1	12	125	25		18.0	17	14.5	4	625.100	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU

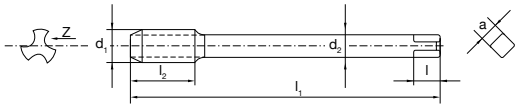
CU

MACHINE TAP

G | 55° P | ISO 228 | FORM C 2-3 xP | 0° | HSSE V3

≤2xd | EMULSION | OIL

3.693.520



DIN 5156

d_1	$P_{(TPI)}$	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	90	20		7	8	5.5	4	550.005	
G1/4	19	100	22		11	12	9	4	550.010	
G3/8	19	100	22		12	12	9	4	550.015	
G1/2	14	125	25		16	15	12	4	550.020	
G5/8	14	125	25		18	17	14.5	4	550.025	
G3/4	14	140	28		20	19	16	4	550.030	
G7/8	14	150	28		22	21	18	4	550.035	
G1	11	160	30		25	23	20	4	550.040	
G1 1/8	11	170	30		28	25	22	4	550.045	
G1 1/4	11	170	30		32	27	24	6	550.050	
G1 3/8	11	180	32		36	32	29	6	550.055	
G1 1/2	11	190	32		36	32	29	6	550.060	
G1 3/4	11	200	40		40	35	32	6	550.065	
G2	11	220	40		45	38	35	6	550.070	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU

CU

MACHINE TAP

G

55° P

ISO 228

FORM B 3.5-5 xP

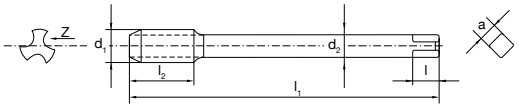
B

HSSE V3

EMULSION

OIL

3.692.520



DIN 5156

d_1	$P_{(TPI)}$	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	90	20		7	8	5.5	3	545.005	
G1/4	19	100	22		11	12	9	3	545.010	
G3/8	19	100	22		12	12	9	3	545.015	
G1/2	14	125	25		16	15	12	3	545.020	
G5/8	14	125	25		18	17	14.5	4	545.025	
G3/4	14	140	28		20	19	16	4	545.030	
G7/8	14	150	28		22	21	18	4	545.035	
G1	11	160	30		25	23	20	4	545.040	
G1 1/8	11	170	30		28	25	22	4	545.045	
G1 1/4	11	170	30		32	27	24	4	545.050	
G1 3/8	11	180	32		36	32	29	4	545.055	
G1 1/2	11	190	32		36	32	29	4	545.060	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU

CU

MACHINE TAP

G

55° P

ISO 228

FORM C 2-3 xP

15°

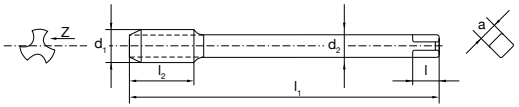
HSSE V3

≤2xd

EMULSION

OIL

3.694.520



DIN 5156

d_1	$P_{(TPI)}$	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	90	20		7	8	5.5	3	555.005	
G1/4	19	100	22		11	12	9	3	555.010	
G3/8	19	100	22		12	12	9	3	555.015	
G1/2	14	125	25		16	15	12	4	555.020	
G5/8	14	125	25		18	17	14.5	4	555.025	
G3/4	14	140	28		20	19	16	4	555.030	
G7/8	14	150	28		22	21	18	4	555.035	
G1	11	160	30		25	23	20	4	555.040	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

ALU

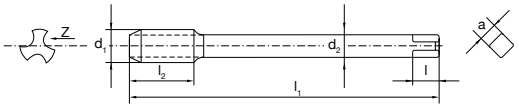
ALU Si >10%

MACHINE TAP

G | 55° P | ISO 228 | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

3.695.520



DIN 5156

d_1	$P_{(TPI)}$	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	90	20		7	8	5.5	4	560.005	
G1/4	19	100	22		11	12	9	4	560.010	
G3/8	19	100	22		12	12	9	4	560.015	
G1/2	14	125	25		16	15	12	4	560.020	
G5/8	14	125	25		18	17	14.5	4	560.025	
G3/4	14	140	28		20	19	16	4	560.030	
G7/8	14	150	28		22	21	18	4	560.035	
G1	11	160	30		25	23	20	4	560.040	
G1 1/8	11	170	30		28	25	22	4	560.045	
G1 1/4	11	170	30		32	27	24	4	560.050	
G1 3/8	11	180	32		36	32	29	4	560.055	
G1 1/2	11	190	32		36	32	29	4	560.060	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

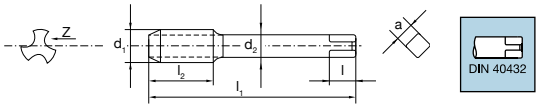
ALU

MACHINE TAP

NPT | 60° P | ANSI B1.1 | FORM C 2-3 xP | 0° | HSSE V3

≤2xd | EMULSION | OIL

3.793.920



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
1/16	27	56	14		6.0	8	4.9	4	645.005	
1/8	27	63	15		7.0	8	5.5	4	645.010	
1/4	18	63	21		11.0	12	9	4	645.015	
3/8	18	70	21		12.0	12	9	4	645.020	
1/2	14	80	27		16.0	15	12	4	645.025	
3/4	14	100	27		20.0	19	16	5	645.030	
1	11	110	32		25.0	23	20	5	645.035	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

CU

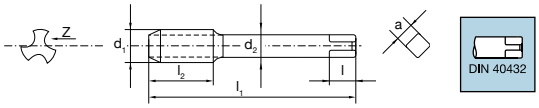
ALU

MACHINE TAP

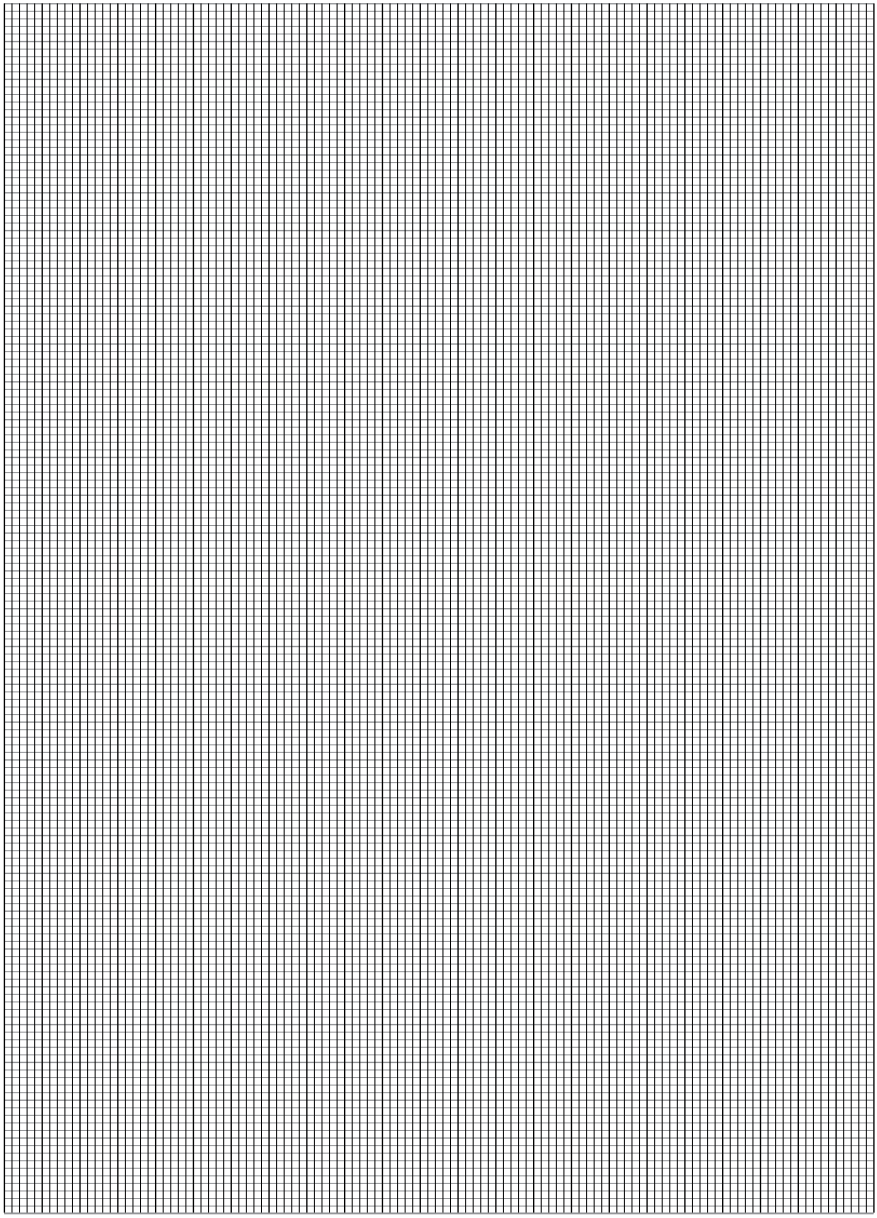
PG | 80° P | DIN 40430 | FORM C 2-3 xP | 0° | HSSE V3

≤2xd | EMULSION | OIL

3.893.920



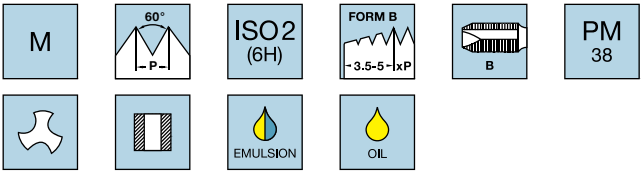
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
7	20	70	22		9.0	10	7	4	640.015	
9	18	70	22		12.0	12	9	4	640.020	
11	18	80	22		14.0	14	11	4	640.025	
13.5	18	80	22		16.0	15	12	4	640.030	
16	18	80	22		18.0	17	14.5	4	640.035	
21	16	90	22		22.0	21	18	4	640.005	
29	16	100	25		28.0	25	22	4	640.010	



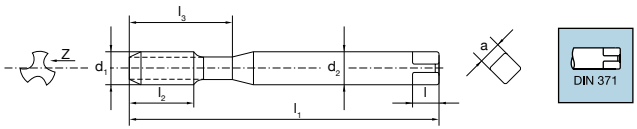


STEEL
800-1300
N/mm²

MACHINE TAP



5.112.150

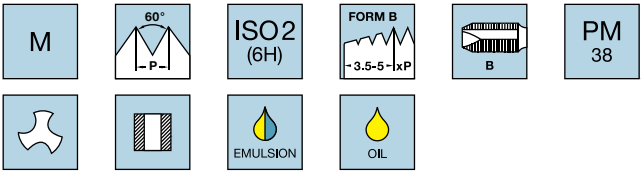


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2.5	0.45	50	9		2.8	5	2.1	2	830.055	
M3	0.50	56	11	18	3.5	6	2.7	3	830.065	
M3.5	0.60	56	12	20	4.0	6	3	3	830.070	
M4	0.70	63	13	21	4.5	6	3.4	3	830.075	
M5	0.80	70	16	25	6.0	8	4.9	3	830.085	
M6	1.00	80	19	30	6.0	8	4.9	3	830.090	
M8	1.25	90	22	35	8.0	9	6.2	3	830.100	
M10	1.50	100	24	39	10.0	11	8	3	830.110	

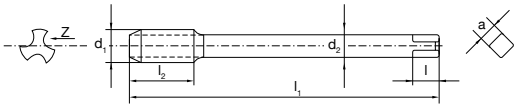


STEEL
800-1300
N/mm²

MACHINE TAP



5.112.650



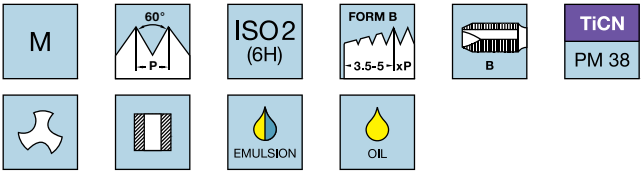


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	831.060	
M14	2.00	110	30		11.0	12	9	3	831.065	
M16	2.00	110	32		12.0	12	9	4	831.070	
M18	2.50	125	34		14.0	14	11	4	831.075	
M20	2.50	140	34		16.0	15	12	4	831.080	
M22	2.50	140	34		18.0	17	14.5	4	831.085	
M24	3.00	160	38		18.0	17	14.5	4	831.090	
M27	3.00	160	38		20.0	19	16	4	831.095	
M30	3.50	180	45		22.0	21	18	4	831.100	

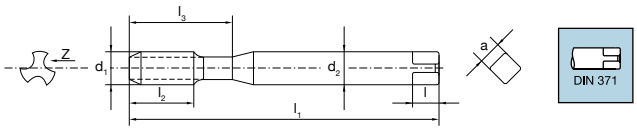


STEEL
800-1300
N/mm²

MACHINE TAP



5.112.153

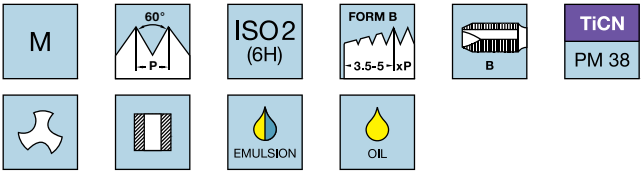


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2.5	0.45	50	9		2.8	5	2.1	2	835.055	
M3	0.50	56	11	18	3.5	6	2.7	3	835.065	
M3.5	0.60	56	12	20	4.0	6	3	3	835.070	
M4	0.70	63	13	21	4.5	6	3.4	3	835.075	
M5	0.80	70	16	25	6.0	8	4.9	3	835.085	
M6	1.00	80	19	30	6.0	8	4.9	3	835.090	
M8	1.25	90	22	35	8.0	9	6.2	3	835.100	
M10	1.50	100	24	39	10.0	11	8	3	835.110	

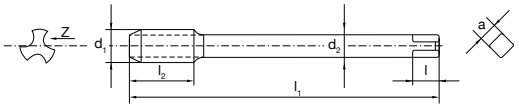


STEEL
800-1300
N/mm²

MACHINE TAP



5.112.653



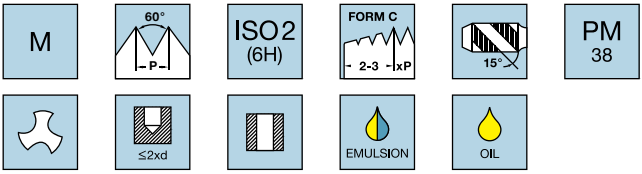
DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	836.060	
M14	2.00	110	30		11.0	12	9	3	836.065	
M16	2.00	110	32		12.0	12	9	4	836.070	
M18	2.50	125	34		14.0	14	11	4	836.075	
M20	2.50	140	34		16.0	15	12	4	836.080	
M22	2.50	140	34		18.0	17	14.5	4	836.085	
M24	3.00	160	38		18.0	17	14.5	4	836.090	
M27	3.00	160	38		20.0	19	16	4	836.095	
M30	3.50	180	45		22.0	21	18	4	836.100	

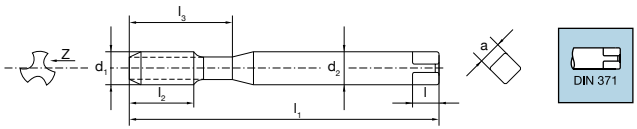


STEEL
800-1300
N/mm²

MACHINE TAP



5.114.150

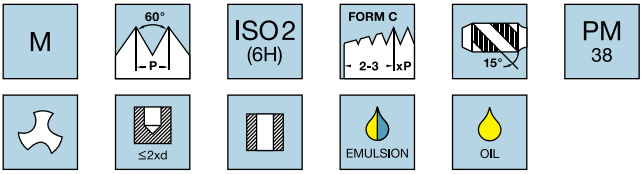


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2.5	0.45	50	9		2.8	5	2.1	2	840.055	
M3	0.50	56	5	18	3.5	6	2.7	3	840.065	
M3.5	0.60	56	6	20	4.0	6	3	3	840.070	
M4	0.70	63	7	21	4.5	6	3.4	3	840.075	
M5	0.80	70	8	25	6.0	8	4.9	3	840.085	
M6	1.00	80	10	30	6.0	8	4.9	3	840.090	
M8	1.25	90	13	35	8.0	9	6.2	3	840.100	
M10	1.50	100	15	39	10.0	11	8	3	840.110	

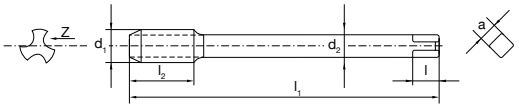


STEEL
800-1300
N/mm²

MACHINE TAP



5.114.650



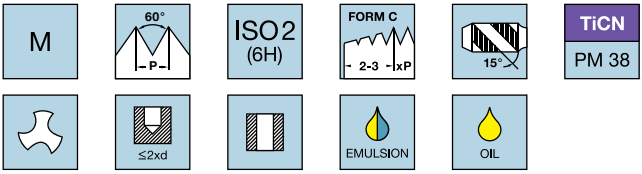
DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	841.060	
M14	2.00	110	20		11.0	12	9	3	841.065	
M16	2.00	110	20		12.0	12	9	3	841.070	
M18	2.50	125	25		14.0	14	11	4	841.075	
M20	2.50	140	25		16.0	15	12	4	841.080	
M22	2.50	140	25		18.0	17	14.5	4	841.085	
M24	3.00	160	30		18.0	17	14.5	4	841.090	
M27	3.00	160	30		20.0	19	16	4	841.095	
M30	3.50	180	35		22.0	21	18	4	841.100	

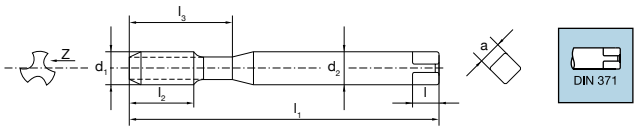


STEEL
800-1300
N/mm²

MACHINE TAP



5.114.153

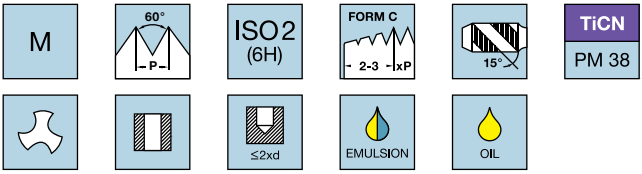


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2.5	0.45	50	9		2.8	5	2.1	2	845.055	
M3	0.50	56	5	18	3.5	6	2.7	3	845.065	
M3.5	0.60	56	6	20	4.0	6	3	3	845.070	
M4	0.70	63	7	21	4.5	6	3.4	3	845.075	
M5	0.80	70	8	25	6.0	8	4.9	3	845.085	
M6	1.00	80	10	30	6.0	8	4.9	3	845.090	
M8	1.25	90	13	35	8.0	9	6.2	3	845.100	
M10	1.50	100	15	39	10.0	11	8	3	845.110	

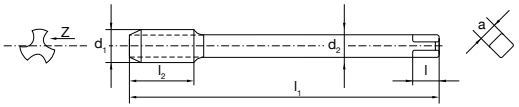
STEEL
800-1300
N/mm²



MACHINE TAP



5.114.653



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	846.060	
M14	2.00	110	20		11.0	12	9	3	846.065	
M16	2.00	110	20		12.0	12	9	3	846.070	
M18	2.50	125	25		14.0	14	11	4	846.075	
M20	2.50	140	25		16.0	15	12	4	846.080	
M22	2.50	140	34		18.0	17	14.5	4	846.085	
M24	3.00	160	30		18.0	17	14.5	4	846.090	
M27	3.00	160	30		20.0	19	16	4	846.095	
M30	3.50	180	35		22.0	21	18	4	846.100	



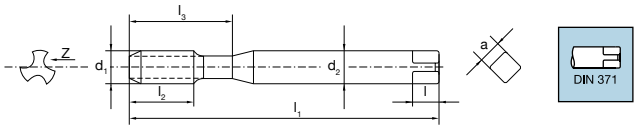
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 0° | OX HSSE V3

≤2xd | EMULSION | OIL

6.113.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	3	125.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	3	125.055	
M3	0.50	56	11	18	3.5	6	2.7	3	125.065	
M4	0.70	63	13	21	4.5	6	3.4	3	125.075	
M5	0.80	70	16	25	6.0	8	4.9	3	125.085	
M6	1.00	80	19	30	6.0	8	4.9	3	125.090	
M8	1.25	90	22	35	8.0	9	6.2	4	125.100	
M10	1.50	100	24	39	10.0	11	8	4	125.110	



STEEL 500-800 N/mm²

ALU Si >10%

BRASS

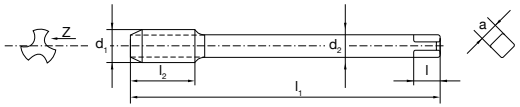
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 0° | OX HSSE V3

≤2xd | EMULSION | OIL

6.113.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	4	325.060	
M14	2.00	110	30		11.0	12	9	4	325.065	
M16	2.00	110	32		12.0	12	9	4	325.070	
M18	2.50	125	34		14.0	14	11	4	325.075	
M20	2.50	140	34		16.0	15	12	4	325.080	
M22	2.50	140	34		18.0	17	14.5	4	325.085	
M24	3.00	160	38		18.0	17	14.5	4	325.090	



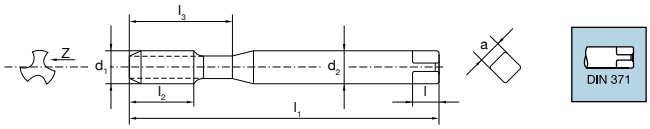
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | AT | ISO 2 (6H) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

6.112.120-AT



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	150.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	150.055	
M3	0.50	56	11	18	3.5	6	2.7	3	150.065	
M4	0.70	63	13	21	4.5	6	3.4	3	150.075	
M5	0.80	70	16	25	6.0	8	4.9	3	150.085	
M6	1.00	80	19	30	6.0	8	4.9	3	150.090	
M8	1.25	90	22	35	8.0	9	6.2	3	150.100	
M10	1.50	100	24	39	10.0	11	8	3	150.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

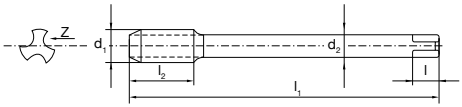
Ni

MACHINE TAP

M | 60° P | AT | ISO 2 (6H) | FORM B 3.5-5 xP | B | HSSE V3

EMULSION | OIL

6.112.620-AT



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	350.060	
M14	2.00	110	30		11.0	12	9	3	350.065	
M16	2.00	110	32		12.0	12	9	3	350.070	
M18	2.50	125	34		14.0	14	11	3	350.075	
M20	2.50	140	34		16.0	15	12	3	350.080	



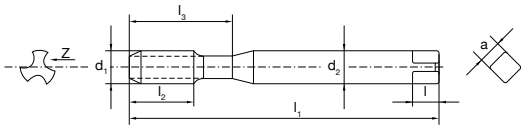
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5-xP | B | OX HSSE V3

EMULSION | OIL

6.112.121



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	120.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	120.055	
M3	0.50	56	11	18	3.5	6	2.7	3	120.065	
M3.5	0.60	56	12	20	4.0	6	3	3	120.070	
M4	0.70	63	13	21	4.5	6	3.4	3	120.075	
M5	0.80	70	16	25	6.0	8	4.9	3	120.085	
M6	1.00	80	19	30	6.0	8	4.9	3	120.090	
M8	1.25	90	22	35	8.0	9	6.2	3	120.100	
M10	1.50	100	24	39	10.0	11	8	3	120.110	
M12	1.75	110	28	45	12.0	12	9	3	120.120	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

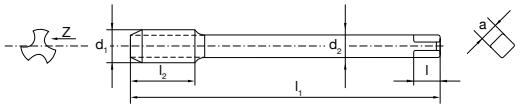
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5 xP | B | OX HSSE V3

EMULSION | OIL

6.112.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11		2.2	-	-	3	320.005	
M4	0.70	63	13		2.8	5	2.1	3	320.015	
M5	0.80	70	16		3.5	6	2.7	3	320.025	
M6	1.00	80	19		4.5	6	3.4	3	320.030	
M8	1.25	90	22		6.0	8	4.9	3	320.040	
M10	1.50	100	24		7.0	8	5.5	3	320.050	
M12	1.75	110	28		9.0	10	7	3	320.060	
M14	2.00	110	30		11.0	12	9	3	320.065	
M16	2.00	110	32		12.0	12	9	3	320.070	
M18	2.50	125	34		14.0	14	11	3	320.075	
M20	2.50	140	34		16.0	15	12	3	320.080	
M22	2.50	140	34		18.0	17	14.5	3	320.085	
M24	3.00	160	38		18.0	17	14.5	3	320.090	
M27	3.00	160	38		20.0	19	16	4	320.095	
M30	3.50	180	45		22.0	21	18	4	320.100	
M33	3.50	180	50		25.0	23	20	4	320.105	
M36	4.00	200	56		28.0	25	22	4	320.110	

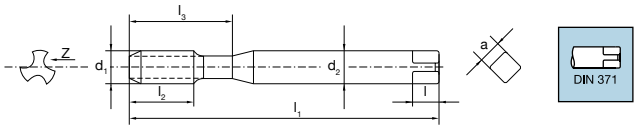


STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M
60° P
ISO2 (6H)
FORM B 3.5-5 xP
B
C-COAT HSSE V3
EMULSION
OIL

6.112.122



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	130.065	
M4	0.70	63	13	21	4.5	6	3.4	3	130.075	
M5	0.80	70	16	25	6.0	8	4.9	3	130.085	
M6	1.00	80	19	30	6.0	8	4.9	3	130.090	
M8	1.25	90	22	35	8.0	9	6.2	3	130.100	
M10	1.50	100	24	39	10.0	11	8	3	130.110	

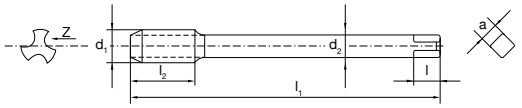


STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M
60° P
ISO2 (6H)
FORM B 3.5-5 xP
B
C-COAT HSSE V3
EMULSION
OIL

6.112.622



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11		2.2	-	-	3	330.005	
M4	0.70	63	13		2.8	5	2.1	3	330.015	
M5	0.80	70	16		3.5	6	2.7	3	330.025	
M6	1.00	80	19		4.5	6	3.4	3	330.030	
M8	1.25	90	22		6.0	8	4.9	3	330.040	
M10	1.50	100	24		7.0	8	5.5	3	330.050	
M12	1.75	110	28		9.0	10	7	3	330.060	
M14	2.00	110	30		11.0	12	9	3	330.065	
M16	2.00	110	32		12.0	12	9	3	330.070	
M18	2.50	125	34		14.0	14	11	3	330.075	
M20	2.50	140	34		16.0	15	12	3	330.080	
M22	2.50	140	34		18.0	17	14.5	3	330.085	
M24	3.00	160	38		18.0	17	14.5	3	330.090	
M27	3.00	160	38		20.0	19	16	4	330.095	
M30	3.50	180	45		22.0	21	18	4	330.100	
M33	3.50	180	50		25.0	23	20	4	330.105	
M36	4.00	200	56		28.0	25	22	4	330.110	



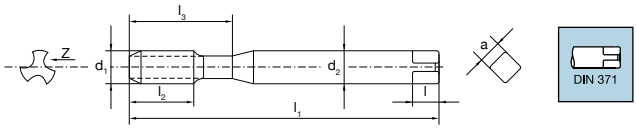
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5 xP | B | TiCN HSSE V3

EMULSION | OIL

6.112.123



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	135.065	
M4	0.70	63	13	21	4.5	6	3.4	3	135.075	
M5	0.80	70	16	25	6.0	8	4.9	3	135.085	
M6	1.00	80	19	30	6.0	8	4.9	3	135.090	
M8	1.25	90	22	35	8.0	9	6.2	3	135.100	
M10	1.50	100	24	39	10.0	11	8	3	135.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

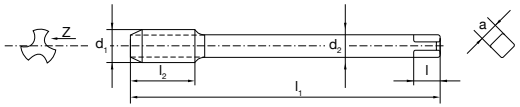
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5 xP | B | TiCN HSSE V3

EMULSION | OIL

6.112.623



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	335.060	
M14	2.00	110	30		11.0	12	9	3	335.065	
M16	2.00	110	32		12.0	12	9	3	335.070	
M18	2.50	125	34		14.0	14	11	3	335.075	
M20	2.50	140	34		16.0	15	12	3	335.080	
M22	2.50	140	34		18.0	17	14.5	3	335.085	
M24	3.00	160	38		18.0	17	14.5	3	335.090	
M27	3.00	160	38		20.0	19	16	4	335.095	
M30	3.50	180	45		22.0	21	18	4	335.100	
M33	3.50	180	50		25.0	23	20	4	335.105	
M36	4.00	200	56		28.0	25	22	4	335.110	



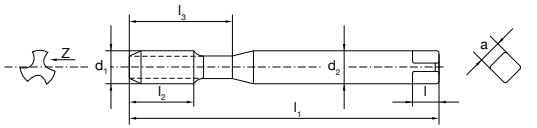
STEEL INOX | STEEL 500-800 N/mm² | ALU Si >10% | CU 200-300 HB | Ni

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM B 3.5-5 xP | B | TiCN PM 38

EMULSION | OIL

6.112.153



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	870.065	
M4	0.70	63	13	21	4.5	6	3.4	3	870.075	
M5	0.80	70	16	25	6.0	8	4.9	3	870.085	
M6	1.00	80	19	30	6.0	8	4.9	3	870.090	
M8	1.25	90	22	35	8.0	9	6.2	3	870.100	
M10	1.50	100	24	39	10.0	11	8	3	870.110	



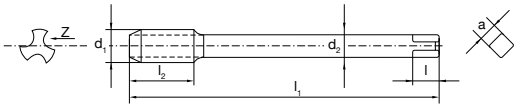
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM B 3.5-5 xP | B | TiCN PM 38

EMULSION | OIL

6.112.653



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	871.060	
M16	2.00	110	32		12.0	12	9	4	871.070	
M20	2.50	110	34		16.0	15	12	4	871.080	



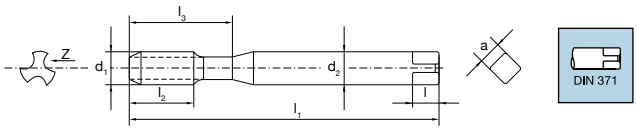
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 15° | OX HSSE V3

≤2xd | EMULSION | OIL

6.114.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	155.065	
M4	0.70	63	7	21	4.5	6	3.4	3	155.075	
M5	0.80	70	8	25	6.0	8	4.9	3	155.085	
M6	1.00	80	10	30	6.0	8	4.9	3	155.090	
M8	1.25	90	13	35	8.0	9	6.2	3	155.100	
M10	1.50	100	15	39	10.0	11	8	3	155.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

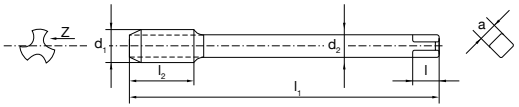
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 15° | OX HSSE V3

≤2xd | EMULSION | OIL

6.114.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	355.060	
M14	2.00	110	20		11.0	12	9	3	355.065	
M16	2.00	110	20		12.0	12	9	3	355.070	
M18	2.50	125	25		14.0	14	11	4	355.075	
M20	2.50	140	25		16.0	15	12	4	355.080	
M22	2.50	140	25		18.0	17	14.5	4	355.085	
M24	3.00	160	30		18.0	17	14.5	4	355.090	
M27	3.00	160	30		20.0	19	16	4	355.095	
M30	3.50	180	35		22.0	21	18	4	355.100	
M33	3.50	180	35		25.0	23	20	4	355.105	
M36	4.00	200	40		28.0	25	22	4	355.110	



STEEL INOX

STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

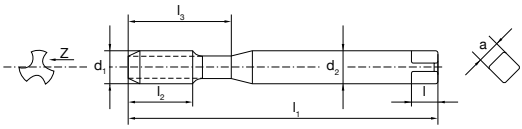
Ni

MACHINE TAP

M | 60° P | AT | ISO 2 (6H) | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

6.115.120-AT



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	180.065	
M4	0.70	63	7	21	4.5	6	3.4	3	180.075	
M5	0.80	70	8	25	6.0	8	4.9	3	180.085	
M6	1.00	80	10	30	6.0	8	4.9	3	180.090	
M8	1.25	90	13	35	8.0	9	6.2	3	180.100	
M10	1.50	100	15	39	10.0	11	8	3	180.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

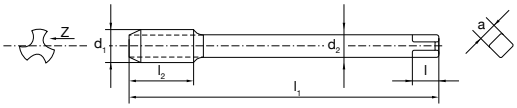
Ni

MACHINE TAP

M | 60° P | AT | ISO 2 (6H) | FORM C 2-3 xP | 40° | HSSE V3

>2xd | EMULSION | OIL

6.115.620-AT



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	380.060	
M16	2.00	110	20		12.0	12	9	4	380.070	
M20	2.50	140	25		16.0	15	12	4	380.080	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

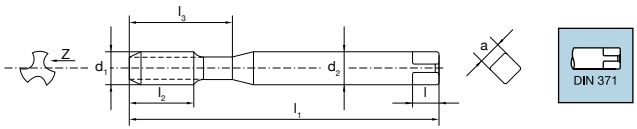
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.115.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	160.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	160.055	
M3	0.50	56	5	18	3.5	6	2.7	3	160.065	
M3.5	0.60	56	6	20	4.0	6	3	3	160.070	
M4	0.70	63	7	21	4.5	6	3.4	3	160.075	
M5	0.80	70	8	25	6.0	8	4.9	3	160.085	
M6	1.00	80	10	30	6.0	8	4.9	3	160.090	
M8	1.25	90	13	35	8.0	9	6.2	3	160.100	
M10	1.50	100	15	39	10.0	11	8	3	160.110	
M12	1.75	110	18	45	12.0	12	9	4	160.120	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

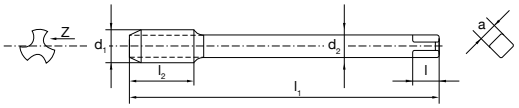
Ni

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.115.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5		2.2	-	-	3	360.005	
M4	0.70	63	7		2.8	5	2.1	3	360.015	
M5	0.80	70	8		3.5	6	2.7	3	360.025	
M6	1.00	80	10		4.5	6	3.4	3	360.030	
M8	1.25	90	13		6.0	8	4.9	3	360.040	
M10	1.50	100	15		7.0	8	5.5	3	360.050	
M12	1.75	110	18		9.0	10	7	4	360.060	
M14	2.00	110	20		11.0	12	9	4	360.065	
M16	2.00	110	20		12.0	12	9	4	360.070	
M18	2.50	125	25		14.0	14	11	4	360.075	
M20	2.50	140	25		16.0	15	12	4	360.080	
M22	2.50	140	25		18.0	17	14.5	4	360.085	
M24	3.00	160	30		18.0	17	14.5	4	360.090	
M27	3.00	160	30		20.0	19	16	4	360.095	
M30	3.50	180	35		22.0	21	18	5	360.100	
M33	3.50	180	35		25.0	23	20	5	360.105	
M36	4.00	200	40		28.0	25	22	5	360.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

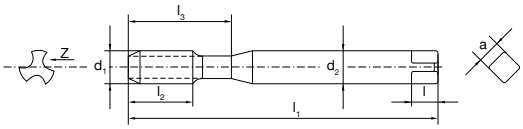
Ni

MACHINE TAP

M | 60° P | BT | ISO2 (6H) | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.115.121-BT



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	165.065	
M4	0.70	63	7	21	4.5	6	3.4	3	165.075	
M5	0.80	70	8	25	6.0	8	4.9	3	165.085	
M6	1.00	80	10	30	6.0	8	4.9	3	165.090	
M8	1.25	90	13	35	8.0	9	6.2	3	165.100	
M10	1.50	100	15	39	10.0	11	8	3	165.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

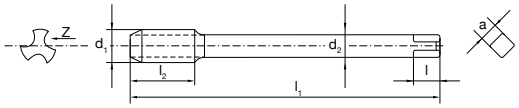
Ni

MACHINE TAP

M | 60° P | BT | ISO2 (6H) | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.115.621-BT



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	365.060	
M14	2.00	110	20		11.0	12	9	4	365.065	
M16	2.00	110	20		12.0	12	9	4	365.070	
M20	2.50	140	25		16.0	15	12	4	365.080	



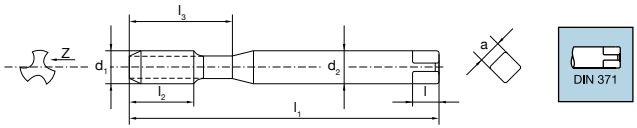
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 40° | C-COAT HSSE V3

>2xd | EMULSION | OIL

6.115.122



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	185.065	
M4	0.70	63	7	21	4.5	6	3.4	3	185.075	
M5	0.80	70	8	25	6.0	8	4.9	3	185.085	
M6	1.00	80	10	30	6.0	8	4.9	3	185.090	
M8	1.25	90	13	35	8.0	9	6.2	3	185.100	
M10	1.50	100	15	39	10.0	11	8	3	185.110	



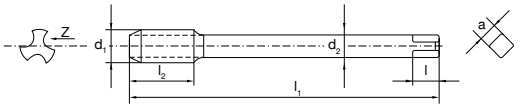
STEEL INOX | STEEL 500-800 N/mm² | ALU Si >10% | CU 200-300 HB | Ni

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM C 2-3 xP | 40° | C-COAT HSSE V3

>2xd | EMULSION | OIL

6.115.622



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5		2.2	-	-	3	385.005	
M4	0.70	63	7		2.8	5	2.1	3	385.015	
M5	0.80	70	8		3.5	6	2.7	3	385.025	
M6	1.00	80	10		4.5	6	3.4	3	385.030	
M8	1.25	90	13		6.0	8	4.9	3	385.040	
M10	1.50	100	15		7.0	8	5.5	3	385.050	
M12	1.75	110	18		9.0	10	7	4	385.060	
M14	2.00	110	20		11.0	12	9	4	385.065	
M16	2.00	110	20		12.0	12	9	4	385.070	
M18	2.50	125	25		14.0	14	11	4	385.075	
M20	2.50	140	25		16.0	15	12	4	385.080	
M22	2.50	140	25		18.0	17	14.5	4	385.085	
M24	3.00	160	30		18.0	17	14.5	4	385.090	
M27	3.00	160	30		20.0	19	16	4	385.095	
M30	3.50	180	35		22.0	21	18	5	385.100	
M33	3.50	180	35		25.0	23	20	5	385.105	
M36	4.00	200	40		28.0	25	22	5	385.110	



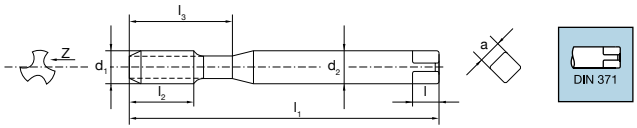
STEEL INOX | STEEL 500-800 N/mm² | ALU Si >10% | CU 200-300 HB | Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 40° | TiCN HSSE V3

>2xd | EMULSION | OIL

6.115.123



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	190.065	
M4	0.70	63	7	21	4.5	6	3.4	3	190.075	
M5	0.80	70	8	25	6.0	8	4.9	3	190.085	
M6	1.00	80	10	30	6.0	8	4.9	3	190.090	
M8	1.25	90	13	35	8.0	9	6.2	3	190.100	
M10	1.50	100	15	39	10.0	11	8	3	190.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

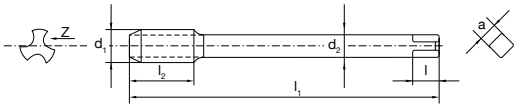
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 40° | TiCN HSSE V3

>2xd | EMULSION | OIL

6.115.623



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	390.060	
M14	2.00	110	20		11.0	12	9	4	390.065	
M16	2.00	110	20		12.0	12	9	4	390.070	
M18	2.50	125	25		14.0	14	11	4	390.075	
M20	2.50	140	25		16.0	15	12	4	390.080	
M22	2.50	140	25		18.0	17	14.5	4	390.085	
M24	3.00	160	30		18.0	17	14.5	4	390.090	
M27	3.00	160	30		20.0	19	16	5	390.095	
M30	3.50	180	35		22.0	21	18	5	390.100	
M33	3.50	180	35		25.0	23	20	5	390.105	
M36	4.00	200	40		28.0	25	22	4	390.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

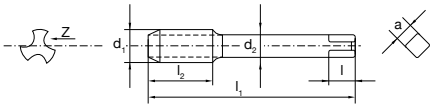
Ni

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM C 2-3 xP | 45° | OX HSSE V3

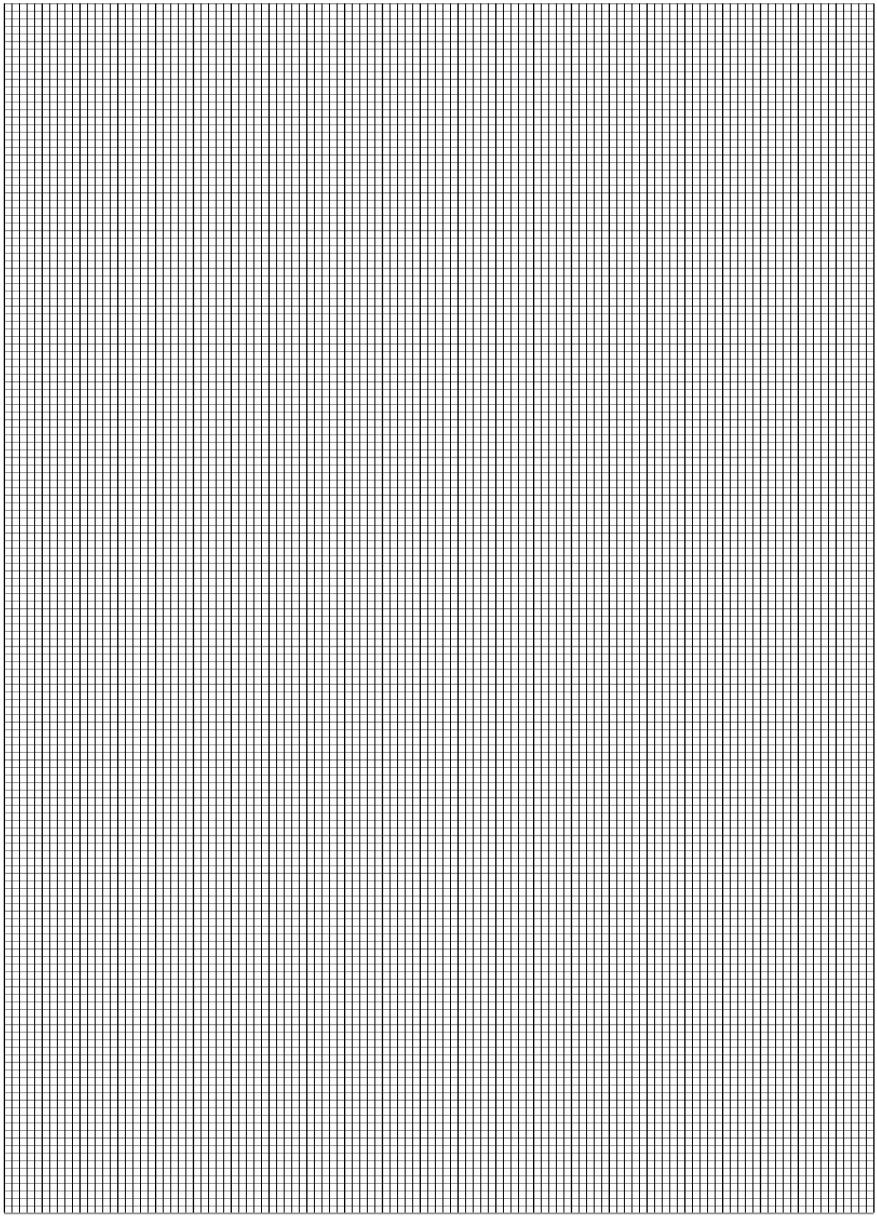
>2xd | EMULSION | OIL

6.116.221



DIN 352

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	36	8		2.8	5	2.1	2	020.040	
M2.5	0.45	40	9		2.8	5	2.1	2	020.055	
M3	0.50	40	5		3.5	6	2.7	3	020.065	
M4	0.70	45	7		4.5	6	3.4	3	020.075	
M5	0.80	50	8		6.0	8	4.9	3	020.085	
M6	1.00	56	10		6.0	8	4.9	3	020.090	





STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

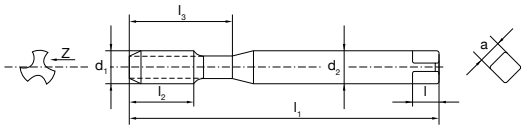
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | OX HSSE V3

>2xd | EMULSION | OIL

6.116.121



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	175.065	
M4	0.70	63	7	21	4.5	6	3.4	3	175.075	
M5	0.80	70	8	25	6.0	8	4.9	3	175.085	
M6	1.00	80	10	30	6.0	8	4.9	3	175.090	
M8	1.25	90	13	35	8.0	9	6.2	3	175.100	
M10	1.50	100	15	39	10.0	11	8	3	175.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

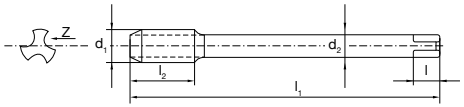
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 45° | OX HSSE V3

>2xd | EMULSION | OIL

6.116.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	375.060	
M16	2.00	110	20		12.0	12	9	4	375.070	
M20	2.50	140	25		16.0	15	12	4	375.080	



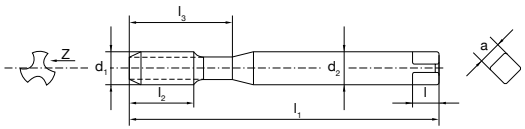
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM C 2-3 xP | 50° | TiCN PM 38

>2xd | EMULSION | OIL

6.116.153



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	875.065	
M4	0.70	63	7	21	4.5	6	3.4	3	875.075	
M5	0.80	70	8	25	6.0	8	4.9	3	875.085	
M6	1.00	80	10	30	6.0	8	4.9	3	875.090	
M8	1.25	90	13	35	8.0	9	6.2	3	875.100	
M10	1.50	100	15	39	10.0	11	8	3	875.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

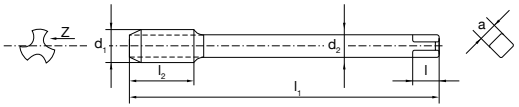
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | 50° | TiCN PM 38

>2xd | EMULSION | OIL

6.116.653



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	876.060	
M14	2.00	110	20		11.0	12	9	4	876.065	
M16	2.00	110	20		12.0	12	9	4	876.070	
M18	2.50	125	25		14.0	14	11	4	876.075	
M20	2.50	140	25		16.0	15	12	4	876.080	
M22	2.50	140	25		18.0	17	14.5	4	876.085	
M24	3.00	160	30		18.0	17	14.5	4	876.090	
M27	3.00	160	30		20.0	19	16	4	876.095	
M30	3.50	180	35		22.0	21	18	4	876.100	

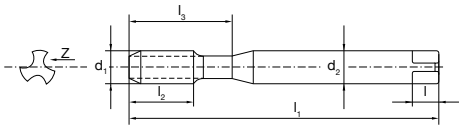


STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M
60° P
ISO2 (6H)
FORM C 2-3 xP
OIL HOLE 50°
TiCN PM 38
>2xd
EMULSION
OIL

6.116.153-OH



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	1.00	80	10	30	6.0	8	4.9	3	880.090	
M8	1.25	90	13	35	8.0	9	6.2	3	880.100	
M10	1.50	100	15	39	10.0	11	8	3	880.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

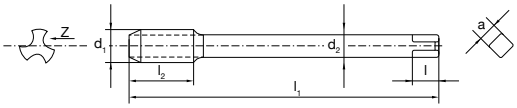
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM C 2-3 xP | OIL HOLE 50° | TiCN PM 38

>2xd | EMULSION | OIL

6.116.653-OH



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	881.060	
M14	2.00	110	20		11.0	12	9	4	881.065	
M16	2.00	110	20		12.0	12	9	4	881.070	
M18	2.50	125	25		14.0	14	11	4	881.075	
M20	2.50	140	25		16.0	15	12	4	881.080	
M22	2.50	140	25		18.0	17	14.5	4	881.085	
M24	3.00	160	30		18.0	17	14.5	4	881.090	
M27	3.00	160	30		20.0	19	16	4	881.095	
M30	3.50	180	35		22.0	21	18	4	881.100	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

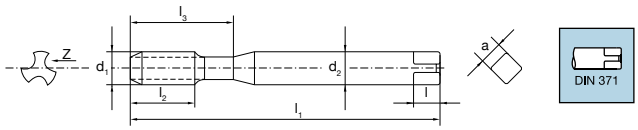
Ni

MACHINE TAP

M | 60° P | ISO 2 (6H) | FORM E 1.5-2 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.118.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	170.040	
M3	0.50	56	5	18	3.5	6	2.7	3	170.065	
M4	0.70	63	7	21	4.5	6	3.4	3	170.075	
M5	0.80	70	8	25	6.0	8	4.9	3	170.085	
M6	1.00	80	10	30	6.0	8	4.9	3	170.090	
M8	1.25	90	13	35	8.0	9	6.2	3	170.100	
M10	1.50	100	15	39	10.0	11	8	3	170.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

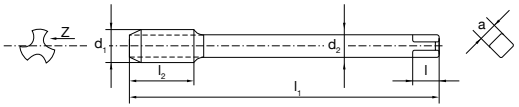
Ni

MACHINE TAP

M | 60° P | ISO2 (6H) | FORM E 1.5-2 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.118.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	370.060	
M14	2.00	110	20		11.0	12	9	4	370.065	
M16	2.00	110	20		12.0	12	9	4	370.070	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

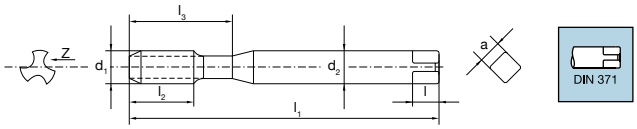
Ni

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM B 3.5-5-xP | B | OX HSSE V3

EMULSION | OIL

6.122.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	140.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	140.055	
M3	0.50	56	11	18	3.5	6	2.7	3	140.065	
M3.5	0.60	56	12	20	4.0	6	3	3	140.070	
M4	0.70	63	13	21	4.5	6	3.4	3	140.075	
M5	0.80	70	16	25	6.0	8	4.9	3	140.085	
M6	1.00	80	19	30	6.0	8	4.9	3	140.090	
M8	1.25	90	22	35	8.0	9	6.2	3	140.100	
M10	1.50	100	24	39	10.0	11	8	3	140.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

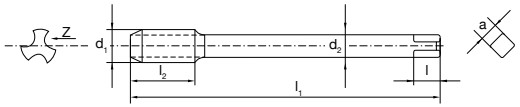
Ni

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM B 3.5-5 xP | B | OX HSSE V3

EMULSION | OIL

6.122.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	340.060	
M14	2.00	110	30		11.0	12	9	3	340.065	
M16	2.00	110	32		12.0	12	9	3	340.070	
M18	2.50	125	34		14.0	14	11	3	340.075	
M20	2.50	140	34		16.0	15	12	3	340.080	



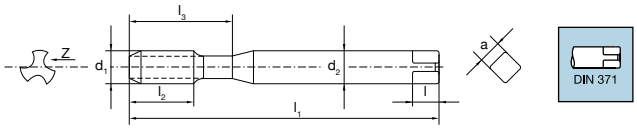
STEEL INOX | STEEL 500-800 N/mm² | STEEL 800-1200 N/mm² | CU 200-300 HB | ALU Si >10% | Ni

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM B 3.5-5 xP | B | TiCN HSSE V3

EMULSION | OIL

6.122.123



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	145.040	
M3	0.50	56	11	18	3.5	6	2.7	3	145.065	
M4	0.70	63	13	21	4.5	6	3.4	3	145.075	
M5	0.80	70	16	25	6.0	8	4.9	3	145.085	
M6	1.00	80	19	30	6.0	8	4.9	3	145.090	
M8	1.25	90	22	35	8.0	9	6.2	3	145.100	
M10	1.50	100	24	39	10.0	11	8	3	145.110	



STEEL INOX

STEEL 500-800 N/mm²

STEEL 800-1200 N/mm²

CU 200-300 HB

ALU Si >10%

Ni

MACHINE TAP

M

60° P

ISO 3 (6G)

FORM B 3.5-5 xP

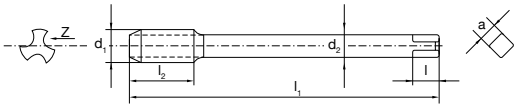
B

TiCN HSSE V3

EMULSION

OIL

6.122.623



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	345.060	
M16	2.00	110	32		12.0	12	9	3	345.070	
M20	2.50	140	34		16.0	15	12	3	345.080	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

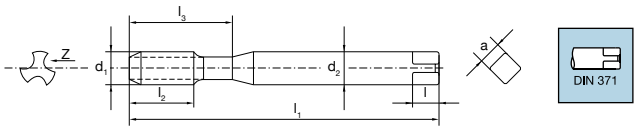
Ni

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.125.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	195.040	
M2.5	0.45	50	9	12.5	2.8	5	2.1	2	195.055	
M3	0.50	56	5	18	3.5	6	2.7	3	195.065	
M3.5	0.60	56	6	20	4	6	3	3	195.070	
M4	0.70	63	7	21	4.5	6	3.4	3	195.075	
M5	0.80	70	8	25	6.0	8	4.9	3	195.085	
M6	1.00	80	10	30	6.0	8	4.9	3	195.090	
M8	1.25	90	13	35	8.0	9	6.2	3	195.100	
M10	1.50	100	15	39	10.0	11	8	3	195.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

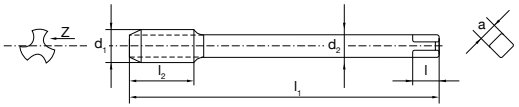
Ni

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.125.621



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	395.060	
M14	2.00	110	20		11.0	12	9	4	395.065	
M16	2.00	110	20		12.0	12	9	4	395.070	
M18	2.50	125	25		14.0	14	11	4	395.075	
M20	2.50	140	25		16.0	15	12	4	395.080	
M24	3.00	160	30		18.0	17	14.5	4	395.090	
M27	3.00	160	30		20.0	19	16	4	395.095	
M30	3.50	180	35		22.0	21	18	5	395.100	



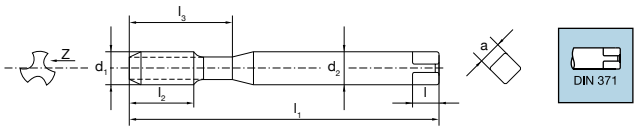
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | TiCN HSSE V3

>2xd | EMULSION | OIL

6.125.123



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M2	0.40	45	8	10	2.8	5	2.1	2	200.040	
M3	0.50	56	5	18	3.5	6	2.7	3	200.065	
M4	0.70	63	7	21	4.5	6	3.4	3	200.075	
M5	0.80	70	8	25	6.0	8	4.9	3	200.085	
M6	1.00	80	10	30	6.0	8	4.9	3	200.090	
M8	1.25	90	13	35	8.0	9	6.2	3	200.100	
M10	1.50	100	15	39	10.0	11	8	3	200.110	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

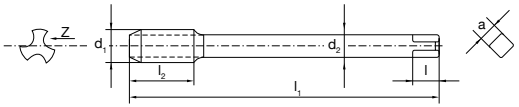
Ni

MACHINE TAP

M | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | TiCN HSSE V3

>2xd | EMULSION | OIL

6.125.623



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	400.060	
M16	2.00	110	20		12.0	12	9	4	400.070	
M20	2.50	140	25		16.0	15	12	4	400.080	



STEEL INOX 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

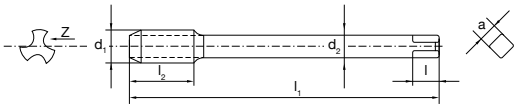
Ni

MACHINE TAP

MF | 60° P | ISO2 (6H) | FORM B 3.5-5-1xP | B | OX HSSE V3

EMULSION | OIL

6.212.421



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.35	56	8		2.2	-	-	3	495.015	
M4	0.50	63	10		2.8	5	2.1	3	495.030	
M5	0.50	70	12		3.5	6	2.7	3	495.040	
M6	0.50	80	14		4.5	6	3.4	3	495.045	
M6	0.75	80	14		4.5	6	3.4	3	495.050	
M8	0.75	80	18		6.0	8	4.9	3	495.065	
M8	1.00	90	22		6.0	8	4.9	3	495.070	
M10	1.00	90	20		7.0	8	5.5	3	495.085	
M12	1.00	100	22		9.0	10	7	3	495.100	
M12	1.50	100	22		9.0	10	7	3	495.110	
M14	1.50	100	22		11.0	12	9	3	495.130	
M16	1.50	100	22		12.0	12	9	3	495.150	
M18	1.50	110	25		14.0	14	11	3	495.160	
M20	1.50	125	25		16.0	15	12	3	495.175	
M22	1.50	125	25		18.0	17	14.5	3	495.190	
M24	1.50	140	25		18.0	17	14.5	3	495.205	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

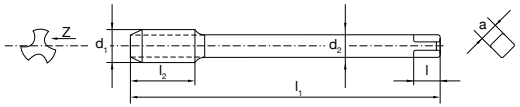
Ni

MACHINE TAP

MF | 60° P | ISO2 (6H) | FORM B 3.5-5-5 xP | B | TiCN HSSE V3

EMULSION | OIL

6.212.423



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M8	1.00	90	22		6.0	8	4.9	3	500.070	
M10	1.00	90	20		7.0	8	5.5	3	500.085	
M12	1.50	100	22		9.0	10	7	3	500.110	
M16	1.50	100	22		12.0	12	9	3	500.150	
M20	1.50	125	25		16.0	15	12	3	500.175	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

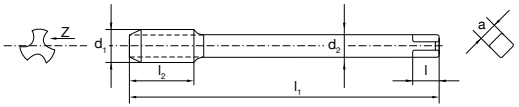
Ni

MACHINE TAP

MF | 60° P | ISO 2 (6H) | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.215.421



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.35	56	4		2.2	-	-	3	515.015	
M4	0.50	63	6		2.8	5	2.1	3	515.030	
M5	0.50	70	7		3.5	6	2.7	3	515.040	
M6	0.50	80	8		4.5	6	3.4	3	515.045	
M6	0.75	80	8		4.5	6	3.4	3	515.050	
M8	0.75	80	10		6.0	8	4.9	3	515.065	
M8	1.00	90	10		6.0	8	4.9	3	515.070	
M10	1.00	90	12		7.0	8	5.5	4	515.085	
M12	1.00	100	14		9.0	10	7	4	515.100	
M12	1.50	100	14		9.0	10	7	4	515.110	
M14	1.50	100	16		11.0	12	9	4	515.130	
M16	1.50	100	16		12.0	12	9	5	515.150	
M18	1.50	110	20		14.0	14	11	5	515.160	
M20	1.50	125	20		16.0	15	12	5	515.175	
M22	1.50	125	20		18.0	17	14.5	5	515.190	
M24	1.50	140	24		18.0	17	14.5	5	515.205	
M27	1.50	140	24		20.0	19	16	5	515.225	
M30	1.50	150	28		22.0	21	18	5	515.245	



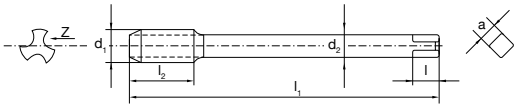
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

MF | 60° P | ISO2 (6H) | FORM C 2-3 xP | 40° | TiCN HSSE V3

>2xd | EMULSION | OIL

6.215.423



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	€
M8	1.00	90	10		6.0	8	4.9	3	520.070	
M10	1.00	90	12		7.0	8	5.5	4	520.085	
M12	1.50	100	14		9.0	10	7	4	520.110	
M16	1.50	100	16		12.0	12	9	5	520.150	
M20	1.50	125	20		16.0	15	12	5	520.175	



STEEL INOX 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

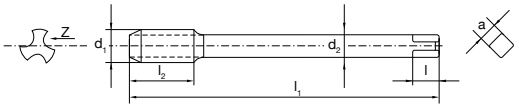
Ni

MACHINE TAP

MF | 60° P | ISO 3 (6G) | FORM B 3.5-5 xP | B | OX HSSE V3

EMULSION | OIL

6.222.421



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	0.75	80	14		4.5	6	3.4	3	505.050	
M8	1.00	90	22		6.0	8	4.9	3	505.070	
M10	1.00	90	20		7.0	8	5.5	3	505.085	
M12	1.50	100	22		9.0	10	7	3	505.110	
M14	1.50	100	22		11.0	12	9	3	505.130	
M16	1.50	100	22		12.0	12	9	3	505.150	
M18	1.50	110	25		14.0	14	11	3	505.160	
M20	1.50	125	25		16.0	15	12	3	505.175	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

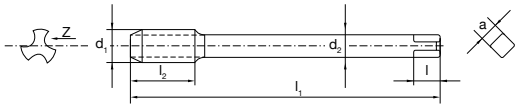
Ni

MACHINE TAP

MF | 60° P | ISO 3 (6G) | FORM B 3.5-5 xP | B | TiCN HSSE V3

EMULSION | OIL

6.222.423



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M8	1.00	90	22		6.0	8	4.9	3	510.070	
M10	1.00	90	20		7.0	8	5.5	3	510.085	
M12	1.50	100	22		9.0	10	7	3	510.110	
M16	1.50	100	22		12.0	12	9	3	510.150	
M20	1.50	125	25		16.0	15	12	3	510.175	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

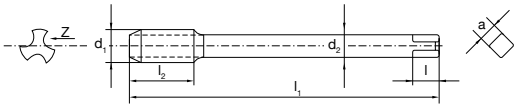
Ni

MACHINE TAP

MF | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | OX HSSE V3

≤2xd | EMULSION | OIL

6.225.421



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M6	0.75	80	8		4.5	6	3.4	3	525.050	
M8	1.00	90	10		6.0	8	4.9	3	525.070	
M10	1.00	90	12		7.0	8	5.5	4	525.085	
M12	1.50	100	14		9.0	10	7	4	525.110	
M14	1.50	100	16		11.0	12	9	4	525.130	
M16	1.50	100	16		12.0	12	9	5	525.150	
M18	1.50	110	20		14.0	14	11	5	525.160	
M20	1.50	125	20		16.0	15	12	5	525.175	



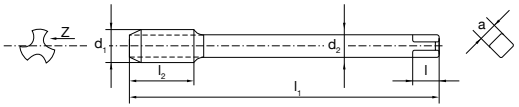
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

MF | 60° P | ISO 3 (6G) | FORM C 2-3 xP | 40° | TiCN HSSE V3

≤2xd | EMULSION | OIL

6.225.423



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M8	1.00	90	10		6.0	8	4.9	3	530.070	
M10	1.00	90	12		7.0	8	5.5	4	530.085	
M12	1.50	100	14		9.0	10	7	4	530.110	
M16	1.50	100	16		12.0	12	9	5	530.150	
M20	1.50	125	20		16.0	15	12	5	530.175	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

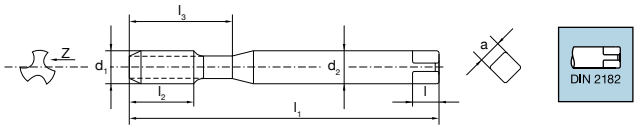
Ni

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM B 3.5-5 xP | B | OX HSSE V3

EMULSION | OIL

6.392.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.4	40	56	11	18	3.5	6	2.7	2	600.020	
No.5	40	56	11	18	3.5	6	2.7	3	600.025	
No.6	32	56	13	19	4.0	6	3	3	600.030	
No.8	32	63	13	19	4.5	6	3.4	3	600.035	
No.10	24	70	16	20	6.0	8	4.9	3	600.040	
1/4	20	80	19	30	7.0	8	5.5	3	600.050	
5/16	18	90	22	34	8.0	9	6.2	3	600.055	
3/8	16	90	22	35	9.0	10	7	3	600.060	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

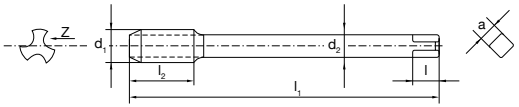
Ni

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM B 3.5-5 xP | B | OX HSSE V3

EMULSION | OIL

6.392.621



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
1/2	13	110	29	44	9.0	10	7	3	605.070	
5/8	11	110	32	44	12.0	12	9	3	605.080	
3/4	10	125	34	50	14.0	14	11	3	605.085	
7/8	9	140	34	56	18.0	17	14.5	3	605.090	
1	8	160	38	64	18.0	17	14.5	3	605.095	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

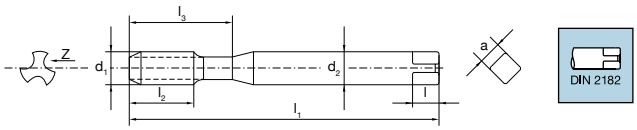
Ni

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.395.121



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.6	32	56	8	19	4.0	6	3	3	610.030	
No.8	32	63	8	19	4.5	6	3.4	3	610.035	
No.10	24	70	11	20	6.0	8	4.9	3	610.040	
1/4	20	80	13	30	7.0	8	5.5	3	610.050	
5/16	18	90	15	34	8.0	9	6.2	3	610.055	
3/8	16	90	16	35	9.0	10	7	3	610.060	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

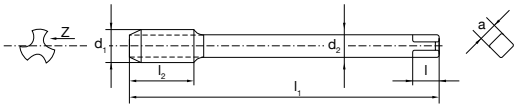
Ni

MACHINE TAP

UNC | 60° P | 2B B1.1 | ANSI B1.1 | FORM C 2-3 xP | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.395.621



DIN 2182

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
1/2	13	110	23	44	9.0	10	7	4	615.070	
5/8	11	110	28	44	12.0	12	9	4	615.080	
3/4	10	125	30	50	14.0	14	11	4	615.085	
7/8	9	140	34	56	18.0	17	14.5	4	615.090	
1	8	160	38	64	18.0	17	14.5	5	615.095	



STEEL INOX

STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

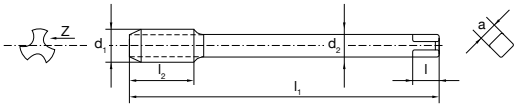
Ni

MACHINE TAP

UNF | 60° P | 2B B1.1 | ANSI B1.1 | FORM B 3.5-5 xP | B | OX HSSE V3

EMULSION | OIL

6.492.621



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.6	40	56	13	22	2.5	5	2.1	3	630.035	
No.10	32	70	16	28	3.5	6	2.7	3	630.045	
1/4	28	80	19	32	4.5	6	3.4	3	630.055	
5/16	24	90	22	36	6.0	8	4.9	3	630.060	
3/8	24	90	22	36	7.0	8	5.5	3	630.065	
7/16	20	100	20	40	8.0	9	6.2	3	630.070	
1/2	20	100	22	40	9.0	10	7	3	630.075	
5/8	18	100	22	40	12.0	12	9	3	630.085	
3/4	16	110	25	44	14.0	14	11	3	630.090	
7/8	14	125	25	50	18.0	17	14.5	3	630.095	
1	12	125	25	50	18.0	17	14.5	3	630.100	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

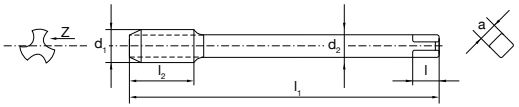
Ni

MACHINE TAP

UNF | 60° P | 2B B1.1 | ANSI B1.1 | 40° | OX HSSE V3

>2xd | EMULSION | OIL

6.495.621



DIN 2183

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
No.6	40	56	7	22	2.5	5	2.1	3	635.035	
No.10	32	70	9	28	3.5	6	2.7	3	635.045	
1/4	28	80	11	32	4.5	6	3.4	3	635.055	
5/16	24	90	12	36	6.0	8	4.9	3	635.060	
3/8	24	90	13	36	7.0	8	5.5	3	635.065	
7/16	20	100	15	40	8.0	9	6.2	4	635.070	
1/2	20	100	16	40	9.0	10	7	4	635.075	
5/8	18	100	19	40	12.0	12	9	4	635.085	
3/4	16	110	21	44	14.0	14	11	4	635.090	
7/8	14	125	23	50	18.0	17	14.5	4	635.095	
1	12	125	25	50	18.0	17	14.5	5	635.100	



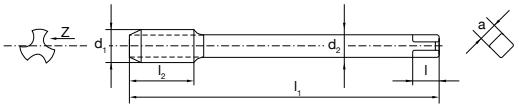
STEEL INOX
STEEL 500-800 N/mm²
ALU Si >10%
CU 200-300 HB
Ni

MACHINE TAP

G | 55° P | ISO 228 | FORM B 3.5-5-5 xP | B | OX HSSE V3

EMULSION | OIL

6.692.521



DIN 5156

d_1	$P_{(TPI)}$	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	90	20		7	8	5.5	3	565.005	
G1/4	19	100	22		11	12	9	3	565.010	
G3/8	19	100	22		12	12	9	3	565.015	
G1/2	14	125	25		16	15	12	3	565.020	
G5/8	14	125	25		18	17	14.5	4	565.025	
G3/4	14	140	28		20	19	16	4	565.030	
G7/8	14	150	28		22	21	18	4	565.035	
G1	11	160	30		25	23	20	4	565.040	



STEEL 500-800 N/mm²

ALU Si >10%

CU 200-300 HB

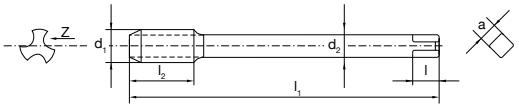
Ni

MACHINE TAP

G | 55° P | ISO 228 | FORM C 2-3 xP | 40° | OX HSSE V3

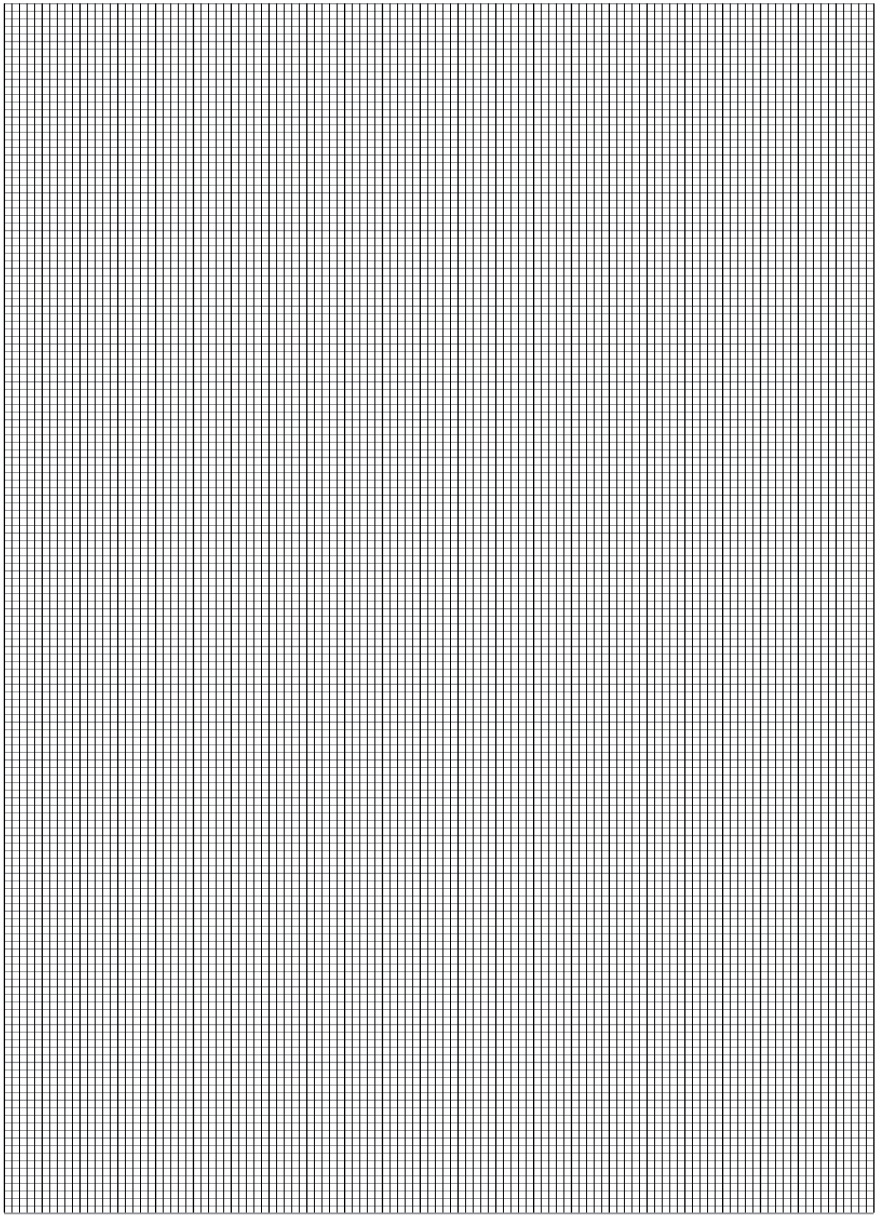
>2xd | EMULSION | OIL

6.695.521



DIN 5156

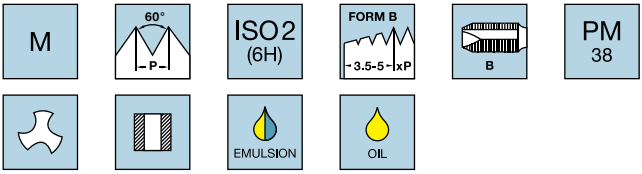
d_1	$P_{(TPI)}$	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	90	20		7	8	5.5	3	570.005	
G1/4	19	100	22		11	12	9	3	570.010	
G3/8	19	100	22		12	12	9	3	570.015	
G1/2	14	125	25		16	15	12	4	570.020	
G5/8	14	125	25		18	17	14.5	4	570.025	
G3/4	14	140	28		20	19	16	4	570.030	
G7/8	14	150	28		22	21	18	4	570.035	
G1	11	160	30		25	23	20	4	570.040	
G1 1/8	11	170	30		28	25	22	4	570.045	
G1 1/4	11	170	30		32	27	24	4	570.050	
G1 3/8	11	180	32		36	32	29	4	570.055	
G1 1/2	11	190	32		36	32	29	4	570.060	



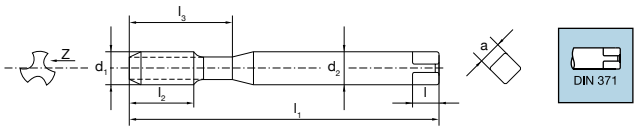


Ni
900-1500
N/mm²

MACHINE TAP

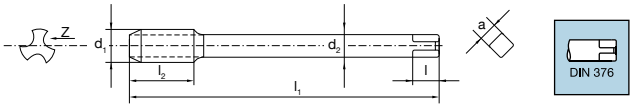


7.112.150



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	12		3.5	6	2.7	3	860.065	
M4	0.70	63	16		4.5	6	3.4	3	860.075	
M5	0.80	70	19		6.0	8	4.9	3	860.085	
M6	1.00	80	23		6.0	8	4.9	3	860.090	
M8	1.25	90	30		8.0	9	6.2	3	860.100	
M10	1.50	100	38		10.0	11	8	3	860.110	

7.112.650

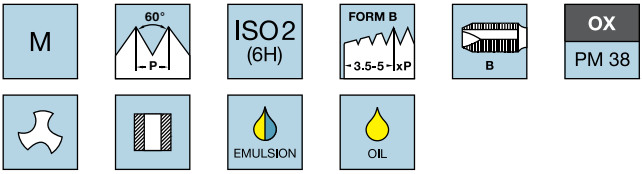


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9	10	7	3	861.060	

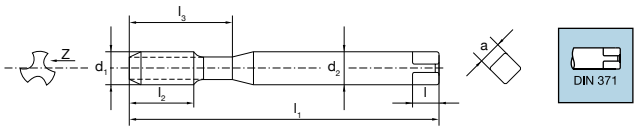


Ti

MACHINE TAP



7.112.151

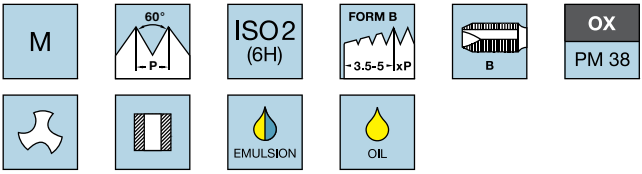


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	850.065	
M4	0.70	63	13	21	4.5	6	3.4	3	850.075	
M5	0.80	70	16	25	6.0	8	4.9	3	850.085	
M6	1.00	80	19	30	6.0	8	4.9	3	850.090	
M8	1.25	90	22	35	8.0	9	6.2	3	850.100	
M10	1.50	100	24	39	10.0	11	8	3	850.110	

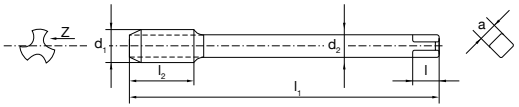


Ti

MACHINE TAP

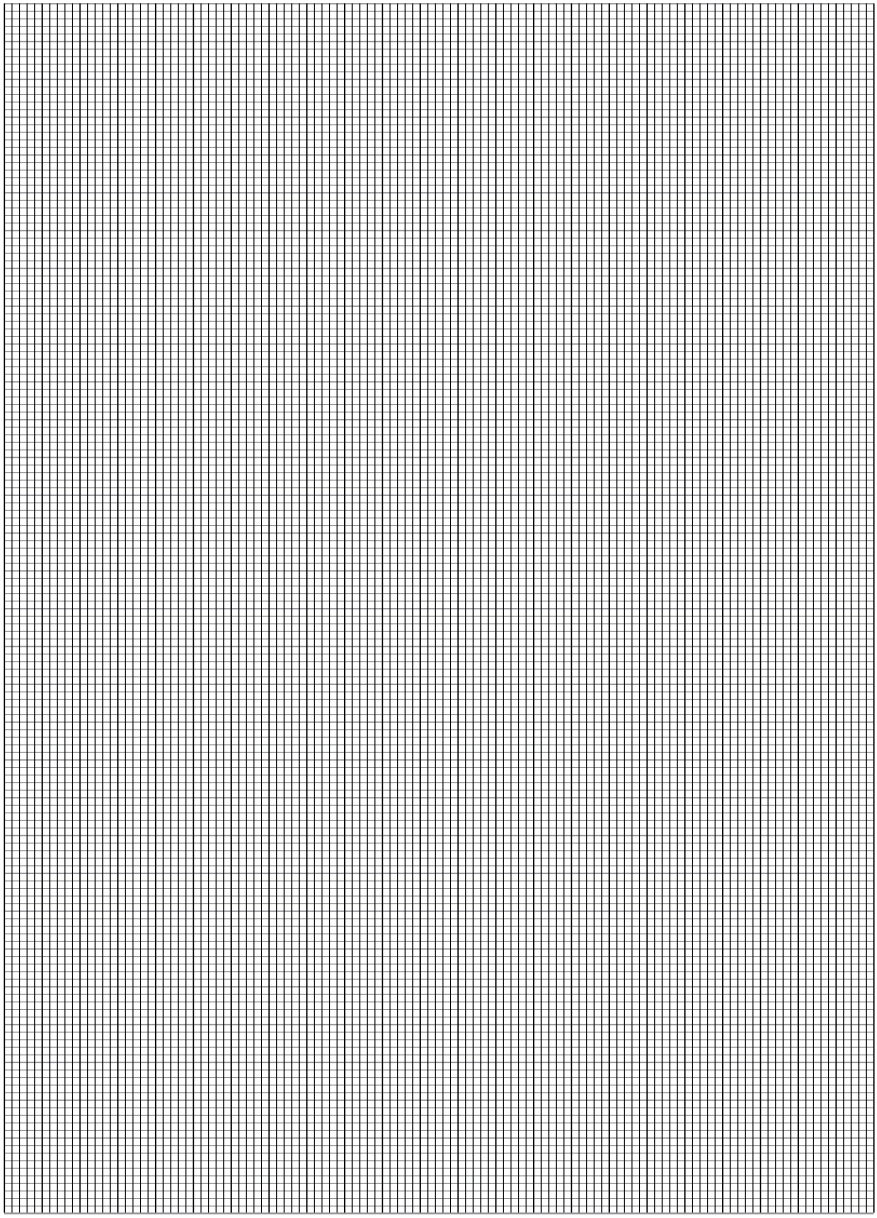


7.112.651





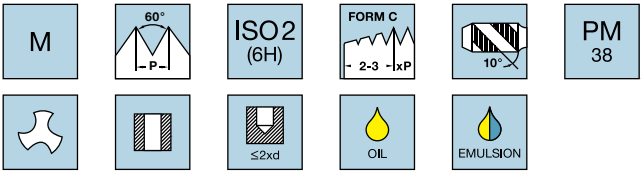
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	851.060	
M16	2.00	110	32		12.0	12	9	3	851.070	
M20	2.50	140	34		16.0	15	12	3	851.080	



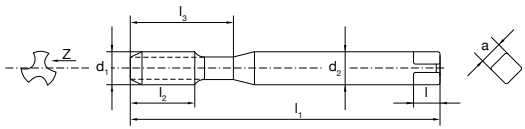


STEEL
800-1200
N/mm²

MACHINE TAP



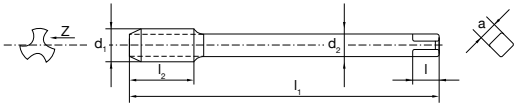
7.114.150



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11		3.5	6	2.7	3	865.065	
M4	0.70	63	14		4.5	6	3.4	3	865.075	
M5	0.80	70	17		6.0	8	4.9	3	865.085	
M6	1.00	80	21		6.0	8	4.9	3	865.090	
M8	1.25	90	28		8.0	9	6.2	3	865.100	
M10	1.50	100	35		10.0	11	8	3	865.110	

7.114.650



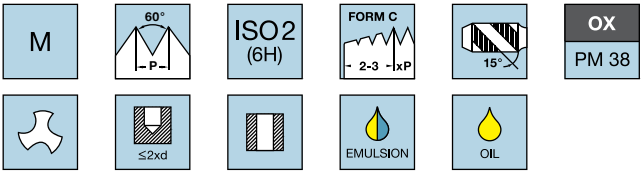
DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	866.060	

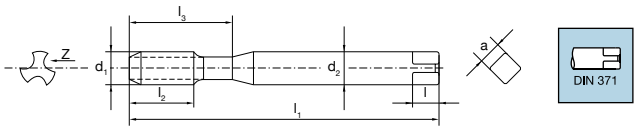
Ti



MACHINE TAP



7.114.151

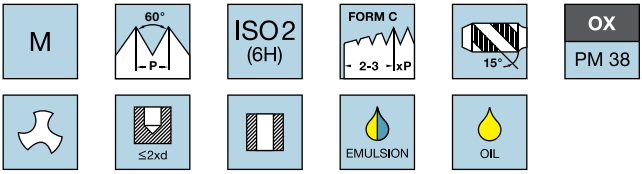


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	855.065	
M4	0.70	63	7	21	4.5	6	3.4	3	855.075	
M5	0.80	70	8	25	6.0	8	4.9	3	855.085	
M6	1.00	80	10	30	6.0	8	4.9	3	855.090	
M8	1.25	90	13	35	8.0	9	6.2	3	855.100	
M10	1.50	100	15	39	10.0	11	8	3	855.110	

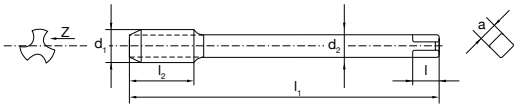


Ti

MACHINE TAP



7.114.651



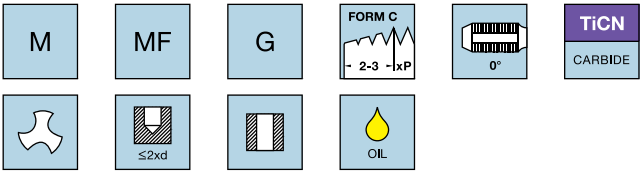


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	3	856.060	
M16	2.00	110	20		12.0	12	9	3	856.070	
M20	2.50	140	25		16.0	15	12	4	856.080	
M22	2.50	140	34		18.0	17	14.5	4	856.085	

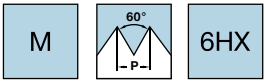


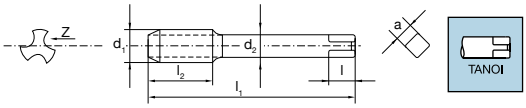
STEEL
HRC
50-63

MACHINE TAP



9.113.983



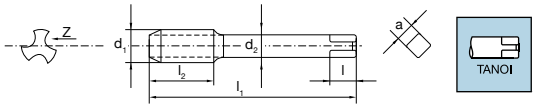


d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	• 0.50	46	11		3.5	6	2.7	4	960.075	
M4	• 0.70	52	13		4.5	6	3.4	4	960.095	
M5	• 0.80	60	16		6	8	4.9	4	960.120	
M6	• 1.00	62	19		6	8	4.9	5	960.130	
M8	• 1.25	70	22		6	8	4.9	5	960.155	
M8	• 1.00	70	22		6	8	4.9	5	960.170	
M10	• 1.50	75	24		7	8	5.5	5	960.185	
M10	• 1.00	75	24		7	8	5.5	5	960.195	
M12	• 1.75	82	29		9	10	7	5	960.215	
M12	• 1.00	82	29		9	10	7	5	960.220	
M12	• 1.50	82	29		9	10	7	5	960.230	

• METRIC
• METRIC FINE PITCH

9.113.983

M | 60° P | 6HX



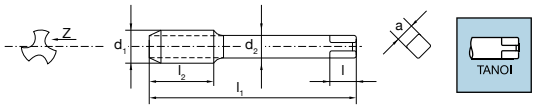
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M14	• 2.00	88	30		11	12	9	6	960.240	
M14	• 1.50	88	30		11	12	9	6	960.255	
M16	• 2.00	95	32		12	12	9	6	960.270	
M16	• 1.50	95	32		12	12	9	6	960.280	
M20	• 2.50	105	37		16	15	12	6	960.305	
M20	• 1.50	95	32		12	12	9	6	960.315	

• METRIC

• METRIC FINE PITCH

9.113.983

G | 55° P

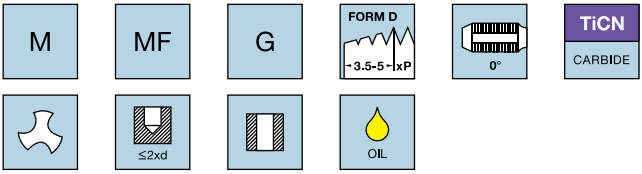


d_1	P TPi	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	63	18		7	8	5.5	5	960.010	
G1/4	19	70	20		11	12	9	5	960.015	

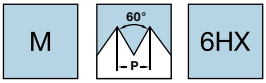


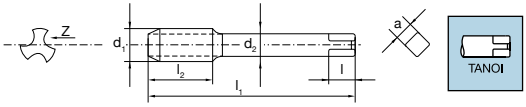
STEEL
HRC
50-63

MACHINE TAP



9.117.983





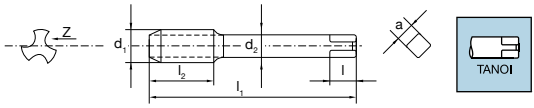
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	• 0.50	46	11		3.5	6	2.7	4	965.075	
M4	• 0.70	52	13		4.5	6	3.4	4	965.095	
M5	• 0.80	60	16		6	8	4.9	4	965.120	
M6	• 1.00	62	19		6	8	4.9	5	965.130	
M8	• 1.25	70	22		6	8	4.9	5	965.155	
M8	• 1.00	70	22		6	8	4.9	5	965.170	
M10	• 1.50	75	24		7	8	5.5	5	965.185	
M10	• 1.00	75	24		7	8	5.5	5	965.195	
M12	• 1.75	82	29		9	10	7	5	965.215	
M12	• 1.00	82	29		9	10	7	5	965.220	
M12	• 1.50	82	29		9	10	7	5	965.230	

• METRIC

• METRIC FINE PITCH

9.117.983

M | 60° P | 6HX



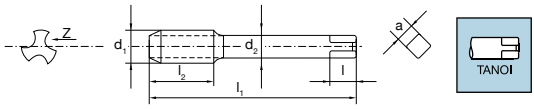
d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M14	• 2.00	88	30		11	12	9	6	965.240	
M14	• 1.50	88	30		11	12	9	6	965.255	
M16	• 2.00	95	32		12	12	9	6	965.270	
M16	• 1.50	95	32		12	12	9	6	965.280	
M20	• 2.50	105	37		16	15	12	6	965.305	
M20	• 1.50	95	32		12	12	9	6	965.315	

• METRIC

• METRIC FINE PITCH

9.117.983

G | 55° P



d_1	P TPi	l_1	l_2	l_3	d_2	l	a	z	Code	
G1/8	28	63	18		7	8	5.5	5	965.010	
G1/4	19	70	20		11	12	9	5	965.015	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

ALU Si <10%

Ni

MACHINE TAP

M

60° P

6HX

FORM B 3.5-5 xP

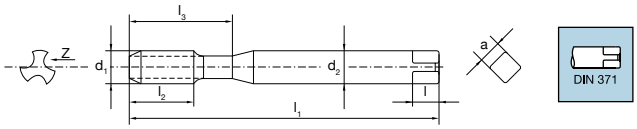
B

HARD LUBE PM 38

EMULSION

OIL

9.112.155



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	11	18	3.5	6	2.7	3	885.065	
M4	0.70	63	13	21	4.5	6	3.4	3	885.075	
M5	0.80	70	16	25	6.0	8	4.9	3	885.085	
M6	1.00	80	19	30	6.0	8	4.9	3	885.090	
M8	1.25	90	22	35	8.0	9	6.2	3	885.100	
M10	1.50	100	24	39	10.0	11	8	3	885.110	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

ALU Si <10%

Ni

MACHINE TAP

M

60° P

6HX

FORM B 3.5-5 xP

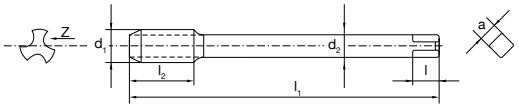
B

HARD LUBE PM 38

EMULSION

OIL

9.112.655



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	886.060	
M14	2.00	110	30		11.0	12	9	3	886.065	
M16	2.00	110	32		12.0	12	9	4	886.070	
M20	2.50	140	34		16.0	15	12	4	886.080	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

ALU Si <10%

Ni

MACHINE TAP

M

60° P

6HX

FORM B 3.5-5 xP

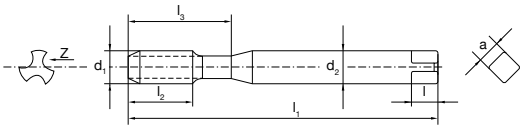
OIL HOLE B

HARD LUBE PM 38

EMULSION

OIL

9.112.155-OH



DIN 371

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	1.00	80	19	30	6.0	8	4.9	3	890.090	
M8	1.25	90	22	35	8.0	9	6.2	3	890.100	
M10	1.50	100	24	39	10.0	11	8	3	890.110	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

ALU Si <10%

Ni

MACHINE TAP

M

60° P

6HX

FORM B 3.5-5 xP

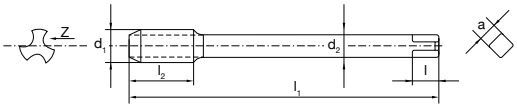
OIL HOLE B

HARD LUBE PM 38

EMULSION

OIL

9.112.655-OH



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	28		9.0	10	7	3	891.060	
M16	2.00	110	32		12.0	12	9	4	891.070	
M18	2.50	140	34		16.0	15	12	4	891.080	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

CU

ALU Si <10%

Ni

MACHINE TAP

M



6HX





HARD LUBE

PM 38



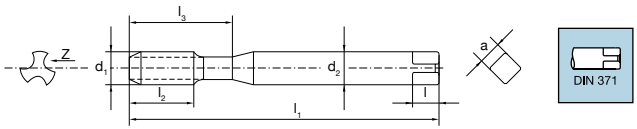








9.116.155



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	900.065	
M4	0.70	63	7	21	4.5	6	3.4	3	900.075	
M5	0.80	70	8	25	6.0	8	4.9	3	900.085	
M6	1.00	80	10	30	6.0	8	4.9	3	900.090	
M8	1.25	90	13	35	8.0	9	6.2	3	900.100	
M10	1.50	100	15	39	10.0	11	8	3	900.110	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

CU

ALU Si <10%

Ni

MACHINE TAP

M

60° P

6HX

FORM C 2-3 xP

50°

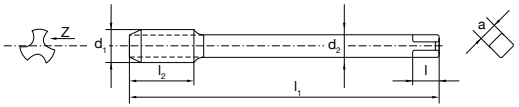
HARD LUBE PM 38

>2xd

EMULSION

OIL

9.116.655



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	901.060	
M14	2.00	110	20		11.0	12	9	4	901.065	
M16	2.00	110	20		12.0	12	9	4	901.070	
M20	2.50	140	25		16.0	15	12	4	901.080	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

CU

ALU Si <10%

Ni

MACHINE TAP

M

60° P

6HX

FORM C 2-3 xP

OIL HOLE 50°

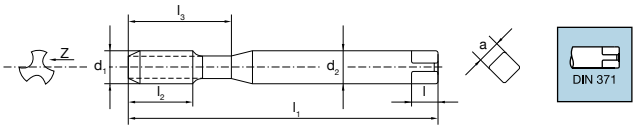
HARD LUBE PM 38

>2xd

EMULSION

OIL

9.116.155-OH



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M6	1.00	80	10	30	6.0	8	4.9	3	905.090	
M8	1.25	90	13	35	8.0	9	6.2	3	905.100	
M10	1.50	100	15	39	10.0	11	8	3	905.110	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

CU

ALU Si <10%

Ni

MACHINE TAP

M



6HX





HARD LUBE

PM 38



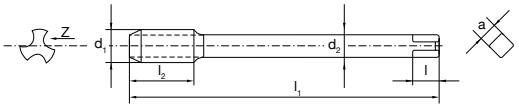








9.116.655-OH



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	906.060	
M16	2.00	110	20		12.0	12	9	4	906.070	
M20	2.50	140	25		16.0	15	12	4	906.080	

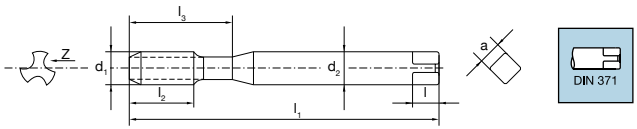


STEEL 500-800 N/mm²
STEEL 800-1300 N/mm²
STEEL INOX
GG/G CAST
CU
ALU Si <10%
Ni

MACHINE TAP

M
60° P
ISO2 (6H)
FORM C 2-3 xP
45°
C-COAT
PM 38
>2xd
EMULSION
OIL

9.116.159



d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M3	0.50	56	5	18	3.5	6	2.7	3	895.065	
M4	0.70	63	7	21	4.5	6	3.4	3	895.075	
M5	0.80	70	8	25	6.0	8	4.9	3	895.085	
M6	1.00	80	10	30	6.0	8	4.9	3	895.090	
M8	1.25	90	13	35	8.0	9	6.2	3	895.100	
M10	1.50	100	15	39	10.0	11	8	3	895.110	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

CU

ALU

ALU Si <10%

Ni

MACHINE TAP

M

60° P

ISO2 (6H)

FORM C 2-3 xP

45°

C-COAT

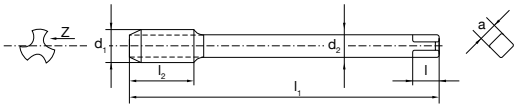
PM 38

>2xd

EMULSION

OIL

9.116.659



DIN 376

d_1	P	l_1	l_2	l_3	d_2	l	a	z	Code	
M12	1.75	110	18		9.0	10	7	4	896.060	
M16	2.00	110	20		12.0	12	9	4	896.070	
M20	2.50	140	25		16.0	15	12	4	896.080	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

ALU Si <10%

Ni

MACHINE TAP

MF

60° P

6HX

FORM B 3.5-5 xP

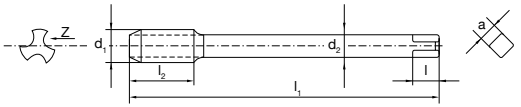
B

HARD LUBE PM 38

EMULSION

OIL

9.212.455



DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
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M10	1.00	90	20		7.0	8	5.5	3	887.085	
M10	1.25	100	24		7.0	8	7	3	887.090	
M12	1.00	100	22		9.0	10	7	4	887.100	
M12	1.25	100	22		9.0	10	7	4	887.105	
M12	1.50	100	22		9.0	10	9	4	887.110	
M14	1.50	100	22		11.0	12	9	4	887.130	
M16	1.50	100	22		12.0	12	11	4	887.150	
M18	1.50	110	25		14.0	14	12	4	887.160	
M20	1.50	125	25		16.0	15	4.9	4	887.175	



STEEL 500-800 N/mm²

STEEL 800-1300 N/mm²

STEEL INOX

GG/G CAST

CU

ALU Si <10%

Ni

MACHINE TAP

MF

60° P

6HX

FORM C 2-3 xP

45°

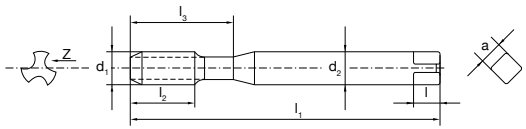
HARD LUBE PM 38

>2xd

EMULSION

OIL

9.216.455

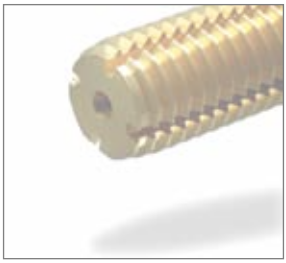


DIN 374

d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M8	1.00	90	10		6.0	8	5.5	3	902.070	
M10	1.00	90	12		7.0	8	5.5	3	902.085	
M10	1.25	100	12		7.0	8	7	3	902.090	
M12	1.00	100	14		9.0	10	7	4	902.100	
M12	1.25	100	14		9.0	10	7	4	902.105	
M12	1.50	100	14		9.0	10	9	4	902.110	
M14	1.50	100	16		11.0	12	9	4	902.130	
M16	1.50	100	16		12.0	12	11	4	902.150	
M18	1.50	110	20		14.0	14	12	4	902.160	
M20	1.50	125	20		16.0	15	4.9	4	902.175	

TANOI







MACHINE TAPS *FORMING*



MACHINE TAPS FORMING

		PAGES
Metric Taps / Metric Fine Taps	- For General Use	235
G Taps	- For General Use	237
Product Details		238–268

For General Use

Aluminium, Copper,
Steels < 800 N/mm², Stainless Steels < 1200 N/mm²

M/MF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
>2xd	6.153.329-IT-Micro	TANOI	FORM C 2-3 xP		4HX	C-COAT PM 38	240
>2xd	6.158.929-IT-Micro	TANOI	FORM E 1.5-2 xP		4HX	C-COAT PM 38	240
>2xd	3.153.323-IT-Micro	TANOI	FORM C 2-3 xP		4HX	TiCN PM 38	241
>2xd	3.158.923-IT-Micro	TANOI	FORM C 2-3 xP		4HX	TiCN PM 38	241
>2xd	6.153.329-IT	DIN 2174	FORM C 2-3 xP		5HX 6HX	C-COAT HSSE Co8	242
>2xd	3.153.323-IT	DIN 2174	FORM C 2-3 xP		5HX 6HX	TiCN HSSE V3	243
>2xd	1.153.323-SL	DIN 2174	FORM C 2-3 xP		6HX	TiCN HSSE V3	11
>2xd	3.153.320	DIN 2174	FORM C 2-3 xP		6HX	HSSE V3	244
>2xd	3.153.320-WF	DIN 2174	FORM C 2-3 xP		6HX	HSSE V3	246
>2xd	3.153.321-WF	DIN 2174	FORM C 2-3 xP		6HX	OX HSSE V3	248
>2xd	3.153.322	DIN 2174	FORM C 2-3 xP		6HX	C-COAT HSSE V3	250
>2xd	3.153.322-WF	DIN 2174	FORM C 2-3 xP		6HX	C-COAT HSSE V3	252

For General Use

Aluminium, Copper,
Steels < 800 N/mm², Stainless Steels < 1200 N/mm²

M/MF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
>2xd	3.153.323	DIN 2174	FORM C 2-3 xP		6HX	TiCN HSSE V3	254
>2xd	3.153.323-WF	DIN 2174	FORM C 2-3 xP		6HX	TiCN HSSE V3	256
>2xd	3.163.320	DIN 2174	FORM C 2-3 xP		6GX	HSSE V3	258
>2xd	3.163.320-WF	DIN 2174	FORM C 2-3 xP		6GX	HSSE V3	259
>2xd	3.163.321-WF	DIN 2174	FORM C 2-3 xP		6GX	OX HSSE V3	260
>2xd	3.163.322	DIN 2174	FORM C 2-3 xP		6GX	C-COAT HSSE V3	262
>2xd	3.163.322-WF	DIN 2174	FORM C 2-3 xP		6GX	C-COAT HSSE V3	263
>2xd	3.163.323	DIN 2174	FORM C 2-3 xP		6GX	TiCN HSSE V3	264
>2xd	3.163.323-WF	DIN 2174	FORM C 2-3 xP		6GX	TiCN HSSE V3	265

For General Use

Aluminium, Copper,
Steels < 800 N/mm², Stainless Steels < 1200 N/mm²

G

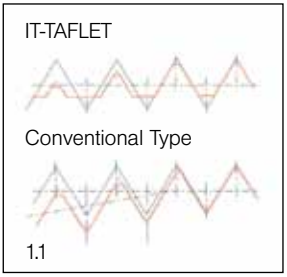
Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
	 3.693.920-WF	DIN 2189	FORM C 2-3 xP		6HX	HSSE V3	266
	 3.693.922-WF	DIN 2189	FORM C 2-3 xP		6HX	C-COAT / HSSE V3	267
	 3.693.923-WF	DIN 2189	FORM C 2-3 xP		6HX	TiCN / HSSE V3	268

FORMING TAPS

ADVANTAGES OF IT-TAFLET

Technical Features

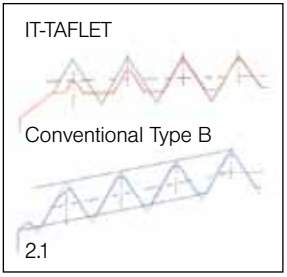
- IT-Taflet forming taps have a unique chamfer section with reduced full profile threads (Picture 1.1).
- Unlike common forming taps the pitch between all chamfer threads is constant. All threads have symmetric profile. These features eliminate axial forces on the work piece (Picture 2.1).
- The thread root is designed to create a rounded thread crest on the formed thread (Picture 2.2).



1.1

Advantages in Production

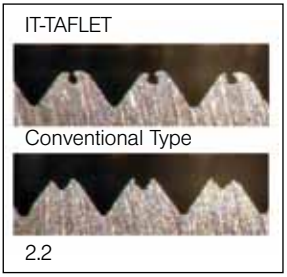
- Tool life is dramatically increased because of the reduced forming torque.
- Burrs at the entry and exit of holes are nearly completely avoided due to the largely reduced axial forces.
- IT-Taflet may be used on thin work pieces as well as very small threads down to S0.5 due to the low torque generated.



2.1

Available in 3 executions:

- MICRO - S0.5 ~ S0.9
- MINI - M1 ~ M1.8
- STANDARD - from size M2



2.2

IT-Taps are patented:
Japan patent no. 3457248
US patent no. 6386954
Europa patent no. 0953396

Available sizes

- IT-Taflets are also available in sizes from S0.5. These are used for manufacturing miniature screw threads in clocks, watches, optical instruments, measuring instruments and similar products requiring very small size threads of highest precision.
- The application of miniature IT-Taflets requires spindle speeds of 3'000 rpm. Both executions TiCN and C-Coating are suitable for these speeds and should be applied according to the work material.
- For tapping at speeds below 1'000 rpm - as may be required on automatic machines - TANOI offers a special steam oxide treatment (OX).

See application details on page XX

Size	Pitch	Drill hole diameter (mm)			
		4H5		4H6	
		Min.	Max.	Min.	Max.
S0.5	**0.125**	0.437	0.455	0.437	0.466
S0.6	**0.150**	0.525	0.549	0.525	0.559
S0.7	**0.175**	0.612	0.640	0.612	0.650
S0.8	**0.200**	0.699	0.729	0.699	0.740
S0.9	**0.225**	0.787	0.819	0.787	0.829

See application details on page XX



STEEL INOX

STEEL 500-800 N/mm²

STEEL ≤ 500 N/mm²

S MINI

60° P

4HX

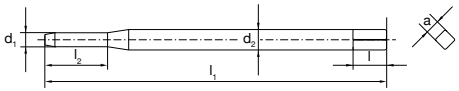
C-COAT PM 38

>2xd

OIL

EMULSION

6.153.329-IT

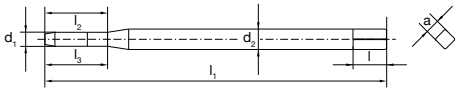


FORM C 2-3 xP

TANOI

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
S0.5	0.125	50	2.0	7.0	2.8	5	2.1	4 / -	795.005	
S0.6	0.150	50	2.5	7.5	2.8	5	2.1	4 / -	795.010	
S0.7	0.175	50	2.5	7.5	2.8	5	2.1	4 / -	795.015	
S0.8	0.200	50	3.0	8.0	2.8	5	2.1	4 / -	795.020	
S0.9	0.225	50	3.0	8.0	2.8	5	2.1	4 / -	795.025	

6.158.929-IT



FORM E 1.5-2 xP

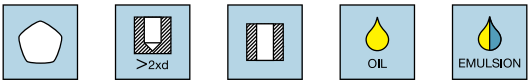
TANOI

S0.5	0.125	30	2.0	7.0	3.0	5	2.5	4 / -	790.005	
S0.6	0.150	30	2.5	7.5	3.0	5	2.5	4 / -	790.010	
S0.7	0.175	30	2.5	7.5	3.0	5	2.5	4 / -	790.015	
S0.8	0.200	30	3.0	8.0	3.0	5	2.5	4 / -	790.020	
S0.9	0.225	30	3.0	8.0	3.0	5	2.5	4 / -	790.025	

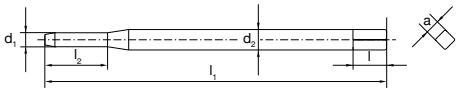


ALU | ALU Si <10% | ALU Si >10% | CU | STEEL 500-800 N/mm² | STEEL ≤ 500 N/mm²

S MINI | 60° P | 4HX | TiCN PM 38



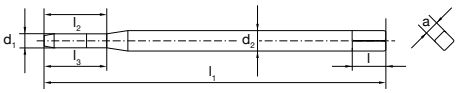
3.153.323-IT



FORM C 2-3 xP | TANOI

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
S0.5	0.125	50	2.0	7.0	2.8	5	2.1	4 / -	796.005	
S0.6	0.150	50	2.5	7.5	2.8	5	2.1	4 / -	796.010	
S0.7	0.175	50	2.5	7.5	2.8	5	2.1	4 / -	796.015	
S0.8	0.200	50	3.0	8.0	2.8	5	2.1	4 / -	796.020	
S0.9	0.225	50	3.0	8.0	2.8	5	2.1	4 / -	796.025	

3.158.923-IT



FORM E 1.5-2 xP | TANOI

S0.5	0.125	30	2.0	7.0	3.0	5	2.5	4 / -	791.005	
S0.6	0.150	30	2.5	7.5	3.0	5	2.5	4 / -	791.010	
S0.7	0.175	30	2.5	7.5	3.0	5	2.5	4 / -	791.015	
S0.8	0.200	30	3.0	8.0	3.0	5	2.5	4 / -	791.020	
S0.9	0.225	30	3.0	8.0	3.0	5	2.5	4 / -	791.025	



STEEL INOX

STEEL 500-800 N/mm²

STEEL ≤ 500 N/mm²

M

60° P

FORM C 2-3 xP

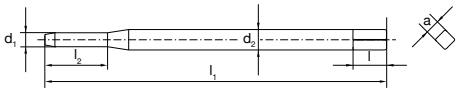
C-COAT HSSE Co8

>2xd

OIL

EMULSION

6.153.329-IT

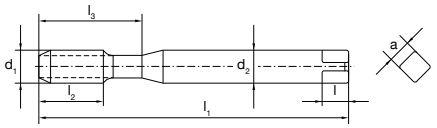


5HX

TANOI

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M1	0.25	40	5	7	2.8	5	2.1	4 / -	795.030	
M1.1	0.25	40	5	7	2.8	5	2.1	4 / -	795.035	
M1.2	0.25	40	5	7	2.8	5	2.1	4 / -	795.040	
M1.4	0.30	40	7	9	2.8	5	2.1	4 / -	795.045	
M1.6	0.35	40	8	9.5	2.8	5	2.1	4 / -	795.050	
M1.8	0.35	40	8	10.5	2.8	5	2.1	4 / -	795.060	

6.153.329-IT



6HX

DIN 2174

M2	0.40	45	8	10	2.8	5	2.1	4 / -	795.065	
M2.2	0.45	45	9	11	2.8	5	2.1	4 / -	795.070	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4 / -	795.080	
M3	0.50	56	11	18	3.5	6	2.7	5 / 1	795.090	
M3.5	0.60	56	12	20	4.0	6	3.0	5 / 1	795.095	
M4	0.70	63	13	21	4.5	6	3.4	5 / 1	795.100	
M5	0.80	70	16	25	6.0	8	4.9	5 / 1	795.110	
M6	1.00	80	19	30	6.0	8	4.9	5 / 1	795.115	
M8	1.25	90	22	35	8.0	9	6.2	6 / 3	795.125	
M10	1.50	100	24	39	10.0	11	8.0	8 / 4	795.135	

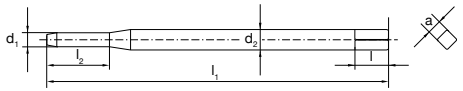


ALU | ALU Si <10% | ALU Si >10% | CU | STEEL 500-800 N/mm² | STEEL ≤ 500 N/mm²

M | 60° P | FORM C 2-3 xP | TiCN HSSE Co8

>2xd | OIL | EMULSION

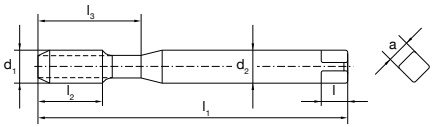
3.153.323-IT



5HX | TANOI

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M1	0.25	40	5	7	2.8	5	2.1	4 / -	796.030	
M1.1	0.25	40	5	7	2.8	5	2.1	4 / -	796.035	
M1.2	0.25	40	5	7	2.8	5	2.1	4 / -	796.040	
M1.4	0.30	40	7	9	2.8	5	2.1	4 / -	796.045	
M1.6	0.35	40	8	9.5	2.8	5	2.1	4 / -	796.050	
M1.8	0.35	40	8	10.5	2.8	5	2.1	4 / -	796.060	

3.153.323-IT



6HX | DIN 2174

M2	0.40	45	8	10	2.8	5	2.1	4 / -	796.065	
M2.2	0.45	45	9	11	2.8	5	2.1	4 / -	796.070	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4 / -	796.080	
M3	0.50	56	11	18	3.5	6	2.7	5 / 1	796.090	
M3.5	0.60	56	12	20	4.0	6	3.0	5 / 1	796.095	
M4	0.70	63	13	21	4.5	6	3.4	5 / 1	796.100	
M5	0.80	70	16	25	6.0	8	4.9	5 / 1	796.110	
M6	1.00	80	19	30	6.0	8	4.9	5 / 1	796.115	
M8	1.25	90	22	35	8.0	9	6.2	6 / 3	796.125	
M10	1.50	100	24	39	10.0	11	8.0	8 / 4	796.135	



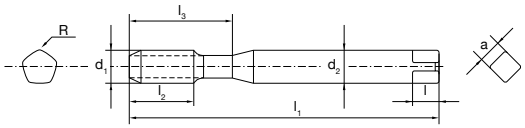
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | HSSE V3

>2xd | OIL | EMULSION

3.153.320



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M2	• 0.40	45	8	10	2.8	5	2.1	4	650.065	
M2.5	• 0.45	50	9	12.5	2.8	5	2.1	4	650.080	
M3	◦ 0.35	56	8	18	3.5	6	2.7	4	650.086	
M3	• 0.50	56	11	18	3.5	6	2.7	4	650.090	
M4	◦ 0.50	63	10	21	4.5	6	3.4	4	650.097	
M4	• 0.70	63	13	21	4.5	6	3.4	4	650.100	
M5	◦ 0.50	70	12	25	6.0	8	4.9	4	650.106	
M5	• 0.80	70	16	25	6.0	8	4.9	4	650.110	
M6	◦ 0.75	80	14	30	6.0	8	4.9	4	650.112	
M6	• 1.00	80	19	30	6.0	8	4.9	4	650.115	
M8	◦ 1.00	90	22	35	8.0	9	6.2	6	650.123	
M8	• 1.25	90	22	35	8.0	9	6.2	6	650.125	
M10	◦ 1.00	90	20	35	8.0	11	8.0	8	650.132	
M10	• 1.50	100	24	39	10.0	11	8.0	8	650.135	

• METRIC
◦ METRIC FINE PITCH



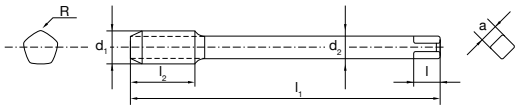
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | HSSE V3

>2xd | OIL | EMULSION

3.153.320



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M12	● 1.50	100	22	40	9.0	10	7.0	8	650.143	
M12	• 1.75	110	28	44	9.0	10	7.0	8	650.145	
M14	• 2.00	110	30	44	11.0	12	9.0	8	650.150	
M16	● 1.50	100	22	40	12.0	12	9.0	8	650.152	
M16	• 2.00	110	32	44	12.0	12	9.0	8	650.155	

• METRIC
● METRIC FINE PITCH

FORMING TAPS



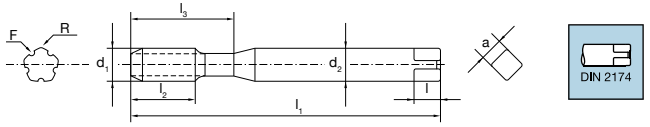
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | HSSE V3

>2xd | OIL | EMULSION

3.153.320-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	• 0.40	45	8	10	2.8	5	2.1	4 / 2	655.065	
M2.5	• 0.45	50	9	12.5	2.8	5	2.1	4 / 2	655.080	
M3	• 0.35	56	8	18	3.5	6	2.7	4 / 2	655.086	
M3	• 0.50	56	11	18	3.5	6	2.7	4 / 2	655.090	
M4	• 0.50	63	10	21	4.5	6	3.4	4 / 2	655.097	
M4	• 0.70	63	13	21	4.5	6	3.4	4 / 2	655.100	
M5	• 0.50	70	12	25	6.0	8	4.9	4 / 2	655.106	
M5	• 0.80	70	16	25	6.0	8	4.9	4 / 2	655.110	
M6	• 0.75	80	14	30	6.0	8	4.9	4 / 2	655.112	
M6	• 1.00	80	19	30	6.0	8	4.9	4 / 2	655.115	
M8	• 1.00	90	22	35	8.0	9	6.2	6 / 3	655.123	
M8	• 1.25	90	22	35	8.0	9	6.2	6 / 3	655.125	
M10	• 1.00	90	20	35	8.0	11	8.0	8 / 4	655.132	
M10	• 1.50	100	24	39	10.0	11	8.0	8 / 4	655.135	

• METRIC
• METRIC FINE PITCH

FORMING TAPS



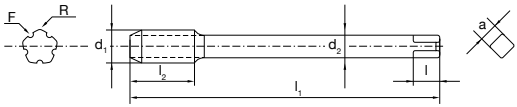
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | HSSE V3

>2xd | OIL | EMULSION

3.153.320-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M12	• 1.50	100	22	40	9.0	10	7.0	8 / 4	655.143	
M12	• 1.75	110	28	44	9.0	10	7.0	8 / 4	655.145	
M14	• 2.00	110	30	44	11.0	12	9.0	8 / 4	655.150	
M16	• 1.50	100	22	40	12.0	12	9.0	8 / 4	655.152	
M16	• 2.00	110	32	44	12.0	12	9.0	8 / 4	655.155	

• METRIC
• METRIC FINE PITCH

FORMING TAPS



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

STEEL 800-1200 N/mm²

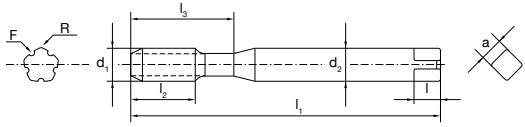
STEEL INOX

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | OX HSSE V3

>2xd | OIL | EMULSION

3.153.321-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	• 0.40	45	8	10	2.8	5	2.1	4 / 2	656.065	
M2.5	• 0.45	50	9	12.5	2.8	5	2.1	4 / 2	656.080	
M3	• 0.35	56	8	18	3.5	6	2.7	4 / 2	656.086	
M3	• 0.50	56	11	18	3.5	6	2.7	4 / 2	656.090	
M4	• 0.50	63	10	21	4.5	6	3.4	4 / 2	656.097	
M4	• 0.70	63	13	21	4.5	6	4.9	4 / 2	656.100	
M5	• 0.50	70	12	25	6.0	8	4.9	4 / 2	656.106	
M5	• 0.80	70	16	25	6.0	8	4.9	4 / 2	656.110	
M6	• 0.75	80	14	30	6.0	8	4.9	4 / 2	656.112	
M6	• 1.00	80	19	30	6.0	8	6.2	4 / 2	656.115	
M8	• 1.00	90	22	35	8.0	9	6.2	6 / 3	656.123	
M8	• 1.25	90	22	35	8.0	9	8.0	6 / 3	656.125	
M10	• 1.00	90	20	35	8.0	11	8.0	8 / 4	656.132	
M10	• 1.50	100	24	39	10.0	11	8.0	8 / 4	656.135	

• METRIC

• METRIC FINE PITCH



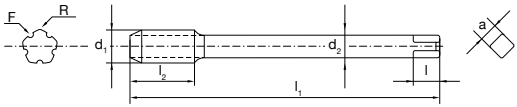
STEEL ≤ 500 N/mm² | STEEL 500-800 N/mm² | STEEL 800-1200 N/mm² | STEEL INOX

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | OX HSSE V3

>2xd | OIL | EMULSION

3.153.321-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M12	• 1.50	100	22	40	9.0	10	7.0	8 / 4	656.143	
M12	• 1.75	110	28	44	9.0	10	7.0	8 / 4	656.145	
M14	• 2.00	110	30	44	11.0	12	9.0	8 / 4	656.150	
M16	• 1.50	100	22	40	12.0	12	9.0	8 / 4	656.152	
M16	• 2.00	110	32	44	12.0	12	9.0	8 / 4	656.155	

• METRIC

• METRIC FINE PITCH

FORMING TAPS



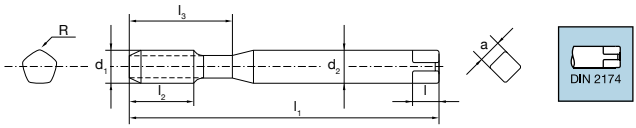
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | C-COAT HSSE V3

>2xd | OIL | EMULSION

3.153.322



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M2	• 0.40	45	8	10	2.8	5	2.1	4	660.065	
M2.5	• 0.45	50	9	12.5	2.8	5	2.1	4	660.080	
M3	◦ 0.35	56	8	18	3.5	6	2.7	4	660.086	
M3	• 0.50	56	11	18	3.5	6	2.7	4	660.090	
M4	◦ 0.50	63	10	21	4.5	6	3.4	4	660.097	
M4	• 0.70	63	13	21	4.5	6	3.4	4	660.100	
M5	◦ 0.50	70	12	25	6.0	8	4.9	4	660.106	
M5	• 0.80	70	16	25	6.0	8	4.9	4	660.110	
M6	◦ 0.75	80	14	30	6.0	8	4.9	4	660.112	
M6	• 1.00	80	19	30	6.0	8	4.9	4	660.115	
M8	◦ 1.00	90	22	35	8.0	9	6.2	6	660.123	
M8	• 1.25	90	22	35	8.0	9	6.2	6	660.125	
M10	◦ 1.00	90	20	35	8.0	11	8	8	660.132	
M10	• 1.50	100	24	39	10.0	11	8	8	660.135	

• METRIC
◦ METRIC FINE PITCH



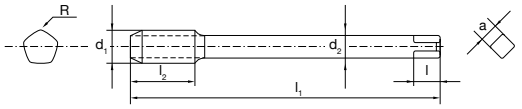
STEEL ≤ 500 N/mm² | STEEL 500-800 N/mm² | STEEL 800-1200 N/mm² | STEEL INOX | ALU | ALU Si <10% | CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | C-COAT HSSE V3

>2xd | OIL | EMULSION

3.153.322



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M12	● 1.50	100	22	40	9.0	10	7	8	660.143	
M12	• 1.75	110	28	44	9.0	10	7	8	660.145	
M14	• 2.00	110	30	44	11.0	12	9	8	660.150	
M16	● 1.50	100	22	40	12.0	12	9	8	660.152	
M16	• 2.00	110	32	44	12.0	12	9	8	660.155	

• METRIC

● METRIC FINE PITCH

FORMING TAPS



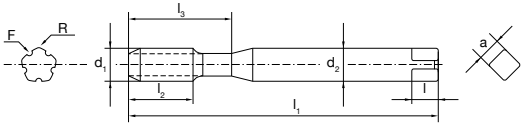
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | C-COAT HSSE V3

>2xd | OIL | EMULSION

3.153.322-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	• 0.40	45	8	10	2.8	5	2.1	4 / 2	665.065	
M2.5	• 0.45	50	9	12.5	2.8	5	2.1	4 / 2	665.080	
M3	◦ 0.35	56	8	18	3.5	6	2.7	4 / 2	665.086	
M3	• 0.50	56	11	18	3.5	6	2.7	4 / 2	665.090	
M4	◦ 0.50	63	10	21	4.5	6	3.4	4 / 2	665.097	
M4	• 0.70	63	13	21	4.5	6	3.4	4 / 2	665.100	
M5	◦ 0.50	70	12	25	6.0	8	4.9	4 / 2	665.106	
M5	• 0.80	70	16	25	6.0	8	4.9	4 / 2	665.110	
M6	◦ 0.75	80	14	30	6.0	8	4.9	4 / 2	665.112	
M6	• 1.00	80	19	30	6.0	8	4.9	4 / 2	665.115	
M8	◦ 1.00	90	22	35	8.0	9	6.2	6 / 3	665.123	
M8	• 1.25	90	22	35	8.0	9	6.2	6 / 3	665.125	
M10	◦ 1.00	90	20	35	8.0	11	8.0	8 / 4	665.132	
M10	• 1.50	100	24	39	10.0	11	8.0	8 / 4	665.135	

• METRIC
◦ METRIC FINE PITCH



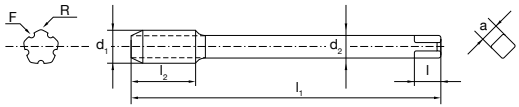
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | C-COAT HSSE V3

>2xd | OIL | EMULSION

3.153.322-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M12	• 1.50	100	22	40	9.0	10	7.0	8 / 4	665.143	
M12	• 1.75	110	28	44	9.0	10	7.0	8 / 4	665.145	
M14	• 2.00	110	30	44	11.0	12	9.0	8 / 4	665.150	
M16	• 1.50	100	22	40	12.0	12	9.0	8 / 4	665.152	
M16	• 2.00	110	32	44	12.0	12	9.0	8 / 4	665.155	

• METRIC
• METRIC FINE PITCH

FORMING TAPS

TANOI



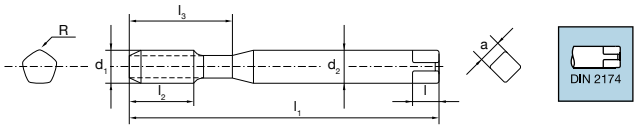
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | TiCN HSSE V3

>2xd | OIL | EMULSION

3.153.323



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M2	• 0.40	45	8	10	2.8	5	2.1	4	670.065	
M2.5	• 0.45	50	9	12.5	2.8	5	2.1	4	670.080	
M3	◦ 0.35	56	8	18	3.5	6	2.7	4	670.086	
M3	• 0.50	56	11	18	3.5	6	2.7	4	670.090	
M3.5	◦ 0.60	56	12	21	4.0	6	3.0	3	670.095	
M4	◦ 0.50	63	10	21	4.5	6	3.4	4	670.097	
M4	• 0.70	63	13	21	4.5	6	3.4	4	670.100	
M5	◦ 0.50	70	12	25	6.0	8	4.9	4	670.106	
M5	• 0.80	70	16	25	6.0	8	4.9	4	670.110	
M6	◦ 0.75	80	14	30	6.0	8	4.9	4	670.112	
M6	• 1.00	80	19	30	6.0	8	4.9	4	670.115	
M8	◦ 1.00	90	22	35	8.0	9	6.2	6	670.123	
M8	• 1.25	90	22	35	8.0	9	6.2	6	670.125	
M10	◦ 1.00	90	20	35	8.0	11	8.0	8	670.132	
M10	• 1.50	100	24	39	10.0	11	8.0	8	670.135	

• METRIC
◦ METRIC FINE PITCH



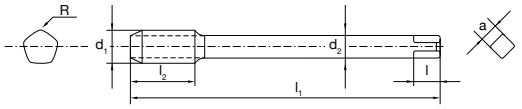
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | TiCN HSSE V3

>2xd | OIL | EMULSION

3.153.323



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M12	● 1.50	100	22	40	9.0	10	7.0	8	670.143	
M12	• 1.75	110	28	44	9.0	10	7.0	8	670.145	
M14	• 2.00	110	30	44	11.0	12	9.0	8	670.150	
M16	● 1.50	100	22	40	12.0	12	9.0	8	670.152	
M16	• 2.00	110	32	44	12.0	12	9.0	8	670.155	

• METRIC
● METRIC FINE PITCH

FORMING TAPS



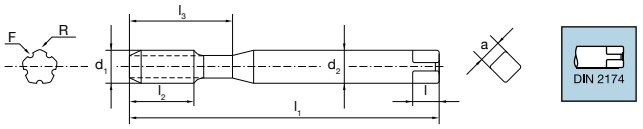
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | TiCN HSSE V3

>2xd | OIL | EMULSION

3.153.323-WF



d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	• 0.40	45	8	10	2.8	5	2.1	4 / 2	675.065	
M2.5	• 0.45	50	9	12.5	2.8	5	2.1	4 / 2	675.080	
M3	◦ 0.35	56	8	18	3.5	6	2.7	4 / 2	675.086	
M3	• 0.50	56	11	18	3.5	6	2.7	4 / 2	675.090	
M3.5	• 0.60	56	12	18	4.0	6	3.0	4 / 2	675.095	
M4	◦ 0.50	63	10	21	4.5	6	3.4	4 / 2	675.097	
M4	• 0.70	63	13	21	4.5	6	3.4	4 / 2	675.100	
M5	◦ 0.50	70	12	25	6.0	8	4.9	4 / 2	675.106	
M5	• 0.80	70	16	25	6.0	8	4.9	4 / 2	675.110	
M6	◦ 0.75	80	14	30	6.0	8	4.9	4 / 2	675.112	
M6	• 1.00	80	19	30	6.0	8	4.9	4 / 2	675.115	
M8	◦ 1.00	90	22	35	8.0	9	6.2	6 / 3	675.123	
M8	• 1.25	90	22	35	8.0	9	6.2	6 / 3	675.125	
M10	◦ 1.00	90	20	35	8.0	11	8.0	8 / 4	675.132	
M10	• 1.50	100	24	39	10.0	11	8.0	8 / 4	675.135	

• METRIC
◦ METRIC FINE PITCH



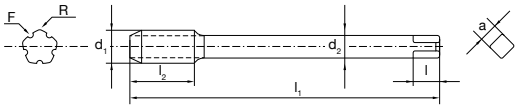
STEEL ≤ 500 N/mm² | STEEL 500-800 N/mm² | STEEL 800-1200 N/mm² | STEEL INOX | ALU | ALU Si <10% | CU

MACHINE TAP

M | MF | 60° P | 6HX | FORM C 2-3 xP | TiCN HSSE V3

>2xd | OIL | EMULSION

3.153.323-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M12	• 1.50	100	22	40	9.0	10	7.0	8 / 4	675.143	
M12	• 1.75	110	28	44	9.0	10	7.0	8 / 4	675.145	
M14	• 2.00	110	30	44	11.0	12	9.0	8 / 4	675.150	
M16	• 1.50	100	22	40	12.0	12	9.0	8 / 4	675.152	
M16	• 2.00	110	32	44	12.0	12	9.0	8 / 4	675.155	

• METRIC

• METRIC FINE PITCH

FORMING TAPS



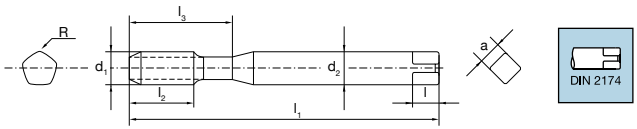
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | 60° P | 6GX | FORM C 2-3 xP | HSSE V3

>2xd | OIL | EMULSION

3.163.320



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M2	0.40	45	8	10	2.8	5	2.1	4	680.065	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4	680.080	
M3	0.50	56	11	18	3.5	6	2.7	4	680.090	
M4	0.70	63	13	21	4.5	6	3.4	4	680.100	
M5	0.80	70	16	25	6.0	8	4.9	4	680.110	
M6	1.00	80	19	30	6.0	8	4.9	4	680.115	
M8	1.25	90	22	35	8.0	9	6.2	6	680.125	
M10	1.50	100	24	39	10.0	11	8.0	8	680.135	



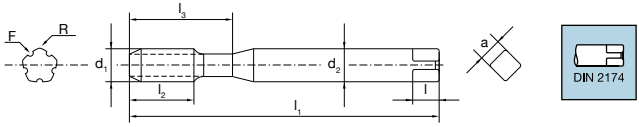
STEEL ≤ 500 N/mm² | STEEL 500-800 N/mm² | STEEL 800-1200 N/mm² | STEEL INOX | ALU | ALU Si <10% | CU

MACHINE TAP

M | 60° P | 6GX | FORM C 2-3 xP | HSSE V3

>2xd | OIL | EMULSION

3.163.320-WF



d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	0.40	45	8	10	2.8	5	2.1	4 / 2	695.065	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4 / 2	695.080	
M3	0.50	56	11	18	3.5	6	2.7	4 / 2	695.090	
M4	0.70	63	13	21	4.5	6	3.4	4 / 2	695.100	
M5	0.80	70	16	25	6.0	8	4.9	4 / 2	695.110	
M6	1.00	80	19	30	6.0	8	4.9	4 / 2	695.115	
M8	1.25	90	22	35	8.0	9	6.2	6 / 3	695.125	
M10	1.50	100	24	39	10.0	11	8.0	8 / 4	695.135	



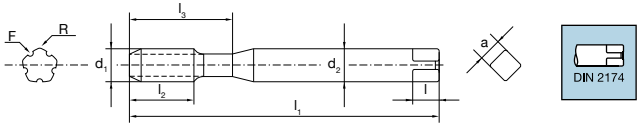
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

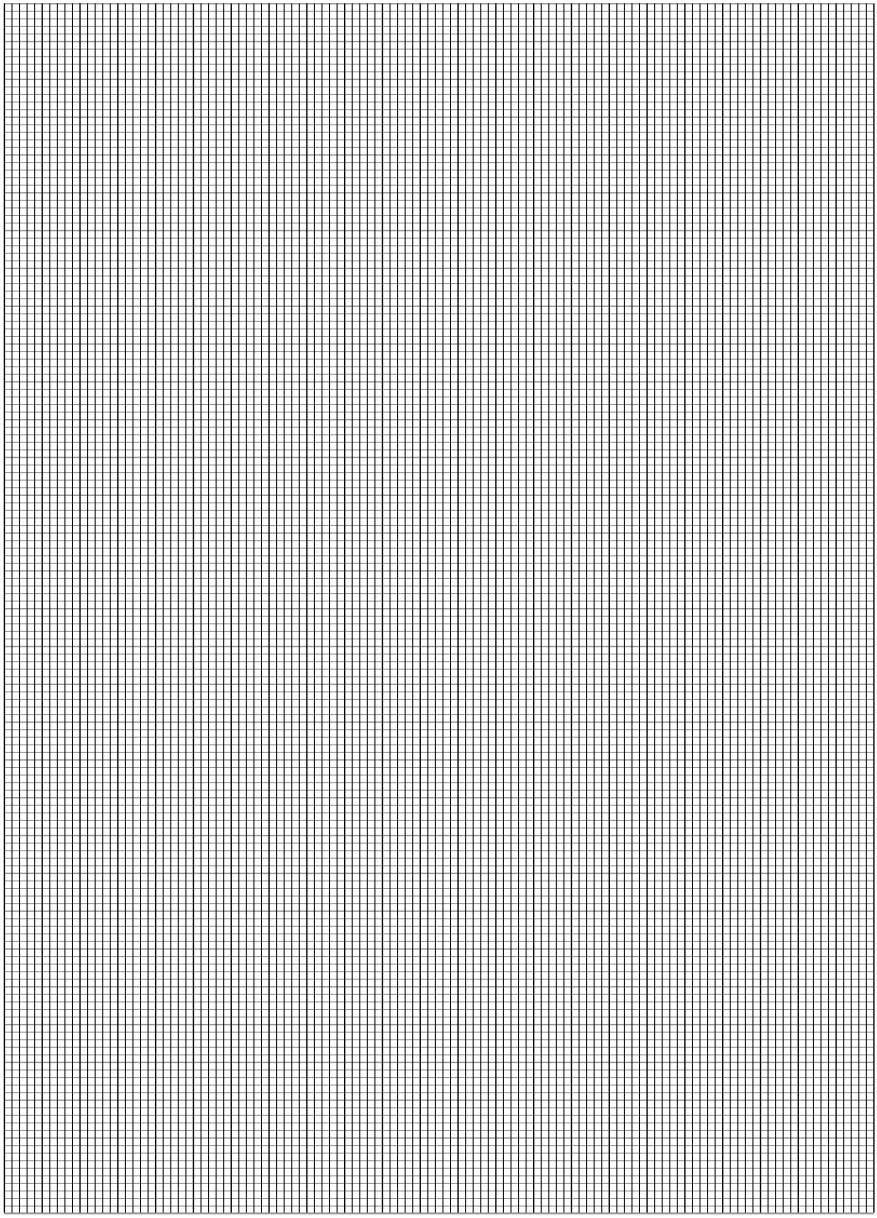
M | 60° P | 6GX | FORM C 2-3 xP | OX HSSE V3

>2xd | OIL | EMULSION

3.163.320-WF



d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	0.40	45	8	10	2.8	5	2.1	4 / 2	696.065	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4 / 2	696.080	
M3	0.50	56	11	18	3.5	6	2.7	4 / 2	696.090	
M4	0.70	63	13	21	4.5	6	3.4	4 / 2	696.100	
M5	0.80	70	16	25	6.0	8	4.9	4 / 2	696.110	
M6	1.00	80	19	30	6.0	8	4.9	4 / 2	696.115	
M8	1.25	90	22	35	8.0	9	6.2	6 / 3	696.125	
M10	1.50	100	24	39	10.0	11	8.0	8 / 4	696.135	





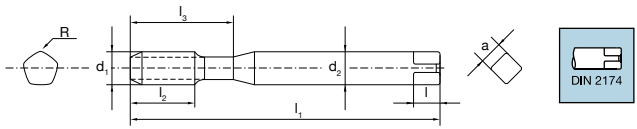
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | 60° P | 6GX | FORM C 2-3 xP | C-COAT HSSE V3

>2xd | OIL | EMULSION

3.163.322



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M2	0.40	45	8	10	2.8	5	2.1	4	685.065	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4	685.080	
M3	0.50	56	11	18	3.5	6	2.7	4	685.090	
M4	0.70	63	13	21	4.5	6	3.4	4	685.100	
M5	0.80	70	16	25	6.0	8	4.9	4	685.110	
M6	1.00	80	19	30	6.0	8	4.9	4	685.115	
M8	1.25	90	22	35	8.0	9	6.2	6	685.125	
M10	1.50	100	24	39	10.0	11	8.0	8	685.135	

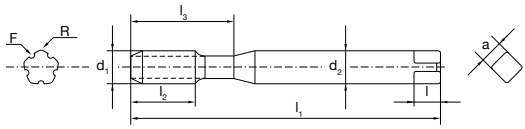


STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M
60° P
6GX
FORM C 2-3 xP
C-COAT HSSE V3
>2xd
OIL
EMULSION

3.163.322-WF



DIN 2174

d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	0.40	45	8	10	2.8	5	2.1	4 / 2	700.065	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4 / 2	700.080	
M3	0.50	56	11	18	3.5	6	2.7	4 / 2	700.090	
M4	0.70	63	13	21	4.5	6	3.4	4 / 2	700.100	
M5	0.80	70	16	25	6.0	8	4.9	4 / 2	700.110	
M6	1.00	80	19	30	6.0	8	4.9	4 / 2	700.115	
M8	1.25	90	22	35	8.0	9	6.2	6 / 3	700.125	
M10	1.50	100	24	39	10.0	11	8.0	8 / 4	700.135	



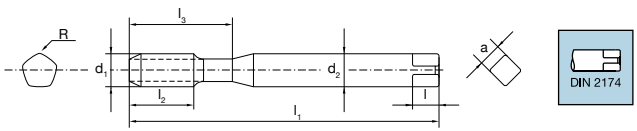
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | 60° P | 6GX | FORM C 2-3 xP | TiCN HSSE V3

>2xd | OIL | EMULSION

3.163.323



d_1	P	l_1	l_2	l_3	d_2	l	a	R	Code	
M2	0.40	45	8	10	2.8	5	2.1	4	690.065	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4	690.080	
M3	0.50	56	11	18	3.5	6	2.7	4	690.090	
M4	0.70	63	13	21	4.5	6	3.4	4	690.100	
M5	0.80	70	16	25	6.0	8	4.9	4	690.110	
M6	1.00	80	19	30	6.0	8	4.9	4	690.115	
M8	1.25	90	22	35	8.0	9	6.2	6	690.125	
M10	1.50	100	24	39	10.0	11	8.0	8	690.135	



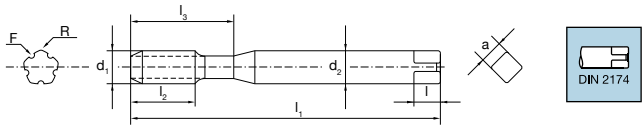
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

M | 60° P | 6GX | FORM C 2-3 xP | TiCN HSSE V3

>2xd | OIL | EMULSION

3.163.323-WF



d_1	P	l_1	l_2	l_3	d_2	l	a	R / F	Code	
M2	0.40	45	8	10	2.8	5	2.1	4 / 2	676.065	
M2.5	0.45	50	9	12.5	2.8	5	2.1	4 / 2	676.080	
M3	0.50	56	11	18	3.5	6	2.7	4 / 2	676.090	
M3.5	0.60	56	12	18	4.0	6	2.7	4 / 2	676.095	
M4	0.70	63	13	21	4.5	6	3.0	4 / 2	676.100	
M5	0.80	70	16	25	6.0	8	4.9	4 / 2	676.110	
M6	1.00	80	19	30	6.0	8	4.9	4 / 2	676.115	
M8	1.25	90	22	35	8.0	9	6.2	6 / 3	676.125	
M10	1.50	100	24	39	10.0	11	8.0	8 / 4	676.135	



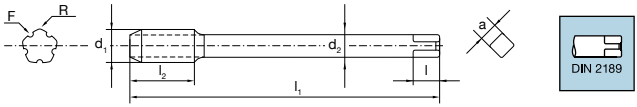
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

G | 55° P | 6HX | FORM C 2-3 xP | HSSE V3

>2xd | OIL | EMULSION

3.693.920-WF



DIN 2189

d_1	P TPi	l_1	l_2	l_3	d_2	l	a	R / F	Code	
1/8	28	90	20		7.0	8	5.5	8 / 4	770.005	
1/4	19	100	22		11.0	12	9	8 / 4	770.010	
3/8	19	100	22		12.0	12	9	8 / 4	770.015	

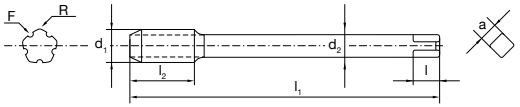


STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

G
55° P
6HX
FORM C 2-3 xP
C-COAT HSSE V3
>2xd
OIL
EMULSION

3.693.922-WF



DIN 2189

d_1	P TPi	l_1	l_2	l_3	d_2	l	a	R / F	Code	
1/8	28	90	20		7.0	8	5.5	8 / 4	775.005	
1/4	19	100	22		11.0	12	9	8 / 4	775.010	
3/8	19	100	22		12.0	12	9	8 / 4	775.015	

FORMING TAPS



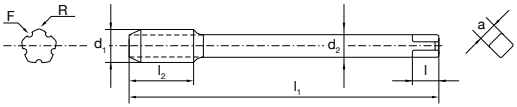
STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
STEEL 800-1200 N/mm²
STEEL INOX
ALU
ALU Si <10%
CU

MACHINE TAP

G | 55° P | 6HX | FORM C 2-3 xP | TiCN HSSE V3

>2xd | OIL | EMULSION

3.693.923-WF



DIN 2189

d_1	P TPi	l_1	l_2	l_3	d_2	l	a	R / F	Code	
1/8	28	90	20		7.0	8	5.5	8 / 4	780.005	
1/4	19	100	22		11.0	12	9	8 / 4	780.010	
3/8	19	100	22		12.0	12	9	8 / 4	780.015	

HAND TAPS



HAND TAPS

		PAGES
Metric Taps	- For General Use	271
Metric Taps	- For Stainless Steels < 1200 N/mm²	271
MF Taps	- For General Use	272
G Taps	- For General Use	272
UNC Taps	- For General Use	273
UNF Taps	- For General Use	273

For General Use

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
 ≤2xd	 3.119.710	DIN 352	FORM C – 2-3 – xP	0°	ISO 2 (6H)	HSSE V3	275
		Available as single taps No 1, No 2, No 3 and Sets					
 ≤2xd	 3.119.710-LH	DIN 352	FORM C – 2-3 – xP	0°	ISO 2 (6H)	HSSE V3	282
		Available as single taps No 1, No 2, No 3 and Sets					

For Stainless Steels < 1200 N/mm²

M

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
 ≤2xd	 6.119.721	DIN 352	FORM C – 2-3 – xP	0°	ISO 2 (6H)	OX HSSE V3	284
		Available as single taps No 1, No 2, No 3 and Sets					
 ≤2xd	 6.119.721-Pilot	DIN 352	FORM C – 2-3 – xP	0°	ISO 2 (6H)	OX HSSE V3	286
		Available as single taps No 1, No 2, No 3 and Sets					

For General Use — MF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 3.219.810	DIN 2181	FORM C – 2-3 – xP	0°	ISO 2 (6H)	HSSE V3	288
		Available as single taps No 1, No 2 and Sets					

For General Use — G

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
≤2xd	 3.699.510	DIN 5157	FORM C – 2-3 – xP	0°	ISO 228	HSSE V3	302
		Available as single taps No 1, No 2 and Sets					

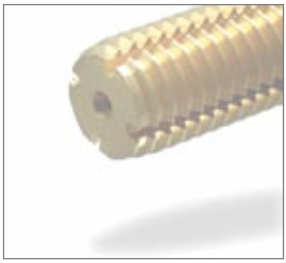
For General Use — UNC

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
 ≤2xd	 3.399.710	 DIN 352	 FORM C 2-3 xP	 0°	ISO 2 (6H)	HSSE V3	295
		Available as single taps No 1, No 2, No 3 and Sets					

For General Use — UNF

Hole	Picture / No.	Standard	Form	Flutes	Tol.	Coating	Page
 ≤2xd	 3.499.810	 DIN 5157	 FORM C 2-3 xP	 0°	ISO 228	HSSE V3	299
		Available as single taps No 1, No 2 and Sets					







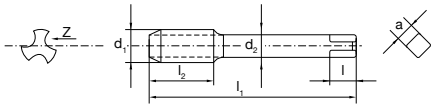


STEEL ≤ 500 N/mm²
STEEL 500-800 N/mm²
ALU Si <10%
CU

HAND TAP

M
60° P
0°
HSSE V3
>2xd
DRY
EMULSION
OIL

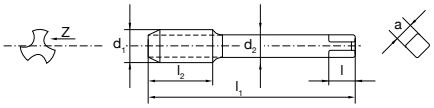
3.119.710



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M1.2	0.25	No.1	32	6	2.5	5	2.1	3	910.015-I	
M1.2	0.25	No.2	32	6	2.5	5	2.1	3	910.015-II	
M1.2	0.25	No.3	32	6	2.5	5	2.1	3	910.015-III	
M1.2	0.25	Set	32	6	2.5	5	2.1	3	910.015-S	
M1.4	0.30	No.1	32	7	2.5	5	2.1	3	910.020-I	
M1.4	0.30	No.2	32	7	2.5	5	2.1	3	910.020-II	
M1.4	0.30	No.3	32	7	2.5	5	2.1	3	910.020-III	
M1.4	0.30	Set	32	7	2.5	5	2.1	3	910.020-S	
M1.6	0.35	No.1	32	8	2.5	5	2.1	3	910.025-I	
M1.6	0.35	No.2	32	8	2.5	5	2.1	3	910.025-II	
M1.6	0.35	No.3	32	8	2.5	5	2.1	3	910.025-III	
M1.6	0.35	Set	32	8	2.5	5	2.1	3	910.025-S	
									CONTINUED	

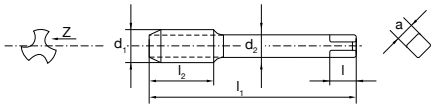
3.119.710



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M1.7	0.35	No.1	32	8	2.5	5	2.1	3	910.030-I	
M1.7	0.35	No.2	32	8	2.5	5	2.1	3	910.030-II	
M1.7	0.35	No.3	32	8	2.5	5	2.1	3	910.030-III	
M1.7	0.35	Set	32	8	2.5	5	2.1	3	910.030-S	
M1.8	0.35	No.1	32	8	2.5	5	2.1	3	910.035-I	
M1.8	0.35	No.2	32	8	2.5	5	2.1	3	910.035-II	
M1.8	0.35	No.3	32	8	2.5	5	2.1	3	910.035-III	
M1.8	0.35	Set	32	8	2.5	5	2.1	3	910.035-S	
M2	0.40	No.1	36	8	2.8	5	2.1	3	910.040-I	
M2	0.40	No.2	36	8	2.8	5	2.1	3	910.040-II	
M2	0.40	No.3	36	8	2.8	5	2.1	3	910.040-III	
M2	0.40	Set	36	8	2.8	5	2.1	3	910.040-S	
M2.2	0.45	No.1	36	9	2.8	5	2.1	3	910.045-I	
M2.2	0.45	No.2	36	9	2.8	5	2.1	3	910.045-II	
M2.2	0.45	No.3	36	9	2.8	5	2.1	3	910.045-III	
M2.2	0.45	Set	36	9	2.8	5	2.1	3	910.045-S	
M2.3	0.40	No.1	36	9	2.8	5	2.1	3	910.050-I	
M2.3	0.40	No.2	36	9	2.8	5	2.1	3	910.050-II	
M2.3	0.40	No.3	36	9	2.8	5	2.1	3	910.050-III	
M2.3	0.40	Set	36	9	2.8	5	2.1	3	910.050-S	
M2.5	0.45	No.1	40	9	2.8	5	2.1	3	910.055-I	
M2.5	0.45	No.2	40	9	2.8	5	2.1	3	910.055-II	
M2.5	0.45	No.3	40	9	2.8	5	2.1	3	910.055-III	
M2.5	0.45	Set	40	9	2.8	5	2.1	3	910.055-S	
M2.6	0.45	No.1	40	9	2.8	5	2.1	3	910.060-I	
M2.6	0.45	No.2	40	9	2.8	5	2.1	3	910.060-II	
M2.6	0.45	No.3	40	9	2.8	5	2.1	3	910.060-III	
M2.6	0.45	Set	40	9	2.8	5	2.1	3	910.060-S	
M3	0.50	No.1	40	11	3.5	6	2.7	3	910.065-I	
M3	0.50	No.2	40	11	3.5	6	2.7	3	910.065-II	
M3	0.50	No.3	40	11	3.5	6	2.7	3	910.065-III	
M3	0.50	Set	40	11	3.5	6	2.7	3	910.065-S	
M3.5	0.60	No.1	45	12	4.0	6	3	3	910.070-I	
M3.5	0.60	No.2	45	12	4.0	6	3	3	910.070-II	
M3.5	0.60	No.3	45	12	4.0	6	3	3	910.070-III	
M3.5	0.60	Set	45	12	4.0	6	3	3	910.070-S	

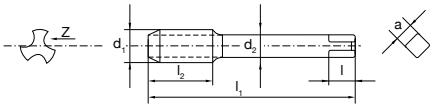
3.119.710



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M4	0.70	No.1	45	13	4.5	6	3.4	3	910.075-I	
M4	0.70	No.2	45	13	4.5	6	3.4	3	910.075-II	
M4	0.70	No.3	45	13	4.5	6	3.4	3	910.075-III	
M4	0.70	Set	45	13	4.5	6	3.4	3	910.075-S	
M4.5	0.75	No.1	50	16	6.0	8	4.9	3	910.080-I	
M4.5	0.75	No.2	50	16	6.0	8	4.9	3	910.080-II	
M4.5	0.75	No.3	50	16	6.0	8	4.9	3	910.080-III	
M4.5	0.75	Set	50	16	6.0	8	4.9	3	910.080-S	
M5	0.80	No.1	50	16	6.0	8	4.9	3	910.085-I	
M5	0.80	No.2	50	16	6.0	8	4.9	3	910.085-II	
M5	0.80	No.3	50	16	6.0	8	4.9	3	910.085-III	
M5	0.80	Set	50	16	6.0	8	4.9	3	910.085-S	
M6	1.00	No.1	56	19	6.0	8	4.9	3	910.090-I	
M6	1.00	No.2	56	19	6.0	8	4.9	3	910.090-II	
M6	1.00	No.3	56	19	6.0	8	4.9	3	910.090-III	
M6	1.00	Set	56	19	6.0	8	4.9	3	910.090-S	
M7	1.00	No.1	56	19	6.0	8	4.9	4	910.095-I	
M7	1.00	No.2	56	19	6.0	8	4.9	4	910.095-II	
M7	1.00	No.3	56	19	6.0	8	4.9	4	910.095-III	
M7	1.00	Set	56	19	6.0	8	4.9	4	910.095-S	
M8	1.25	No.1	63	22	6.0	8	4.9	4	910.100-I	
M8	1.25	No.2	63	22	6.0	8	4.9	4	910.100-II	
M8	1.25	No.3	63	22	6.0	8	4.9	4	910.100-III	
M8	1.25	Set	63	22	6.0	8	4.9	4	910.100-S	
M9	1.25	No.1	63	22	7.0	8	5.5	4	910.105-I	
M9	1.25	No.2	63	22	7.0	8	5.5	4	910.105-II	
M9	1.25	No.3	63	22	7.0	8	5.5	4	910.105-III	
M9	1.25	Set	63	22	7.0	8	5.5	4	910.105-S	
M10	1.50	No.1	70	24	7.0	8	5.5	4	910.110-I	
M10	1.50	No.2	70	24	7.0	8	5.5	4	910.110-II	
M10	1.50	No.3	70	24	7.0	8	5.5	4	910.110-III	
M10	1.50	Set	70	24	7.0	8	5.5	4	910.110-S	
									CONTINUED	

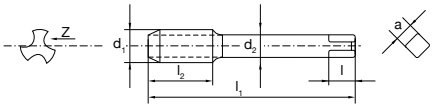
3.119.710



DIN 352

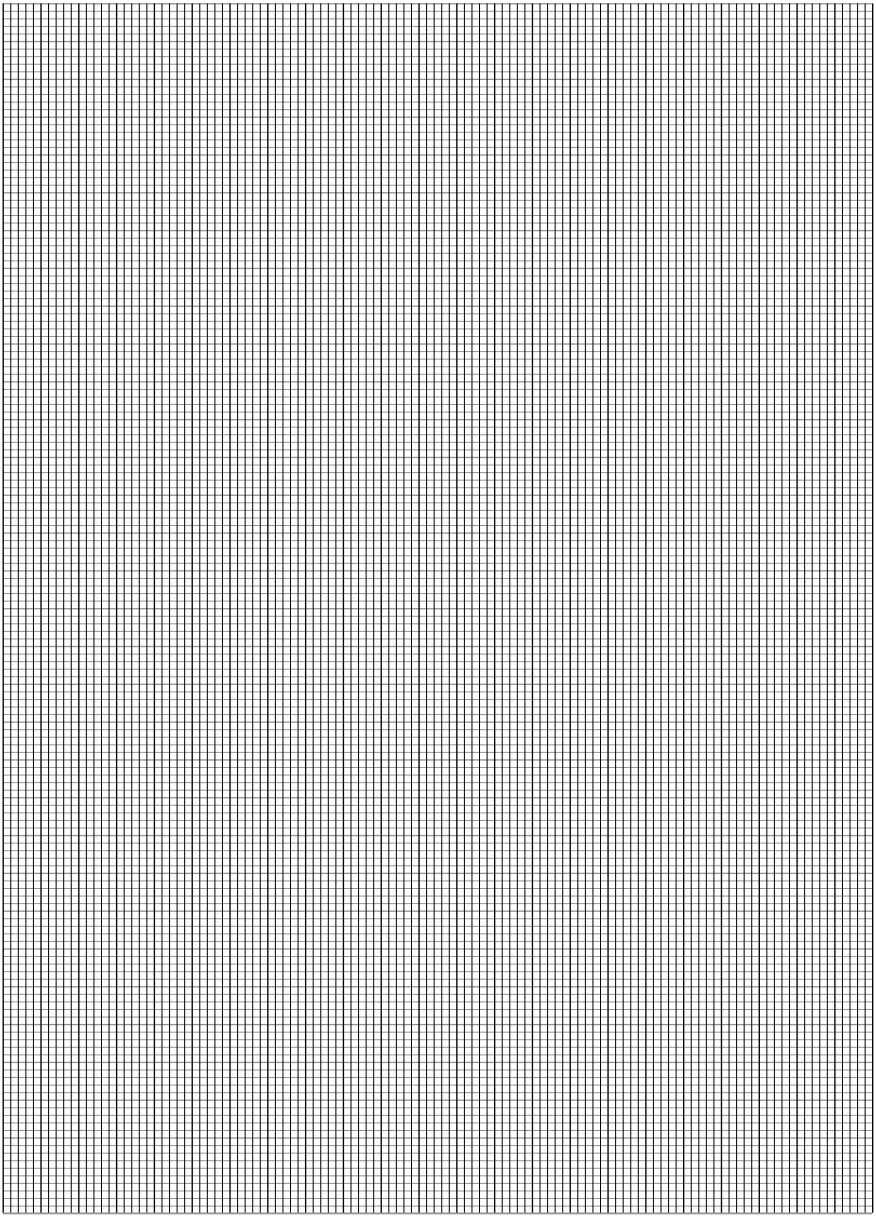
d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M11	1.50	No.1	70	24	8.0	9	6.2	4	910.115-I	
M11	1.50	No.2	70	24	8.0	9	6.2	4	910.115-II	
M11	1.50	No.3	70	24	8.0	9	6.2	4	910.115-III	
M11	1.50	Set	70	24	8.0	9	6.2	4	910.115-S	
M12	1.75	No.1	75	28	9.0	10	7	4	910.120-I	
M12	1.75	No.2	75	28	9.0	10	7	4	910.120-II	
M12	1.75	No.3	75	28	9.0	10	7	4	910.120-III	
M12	1.75	Set	75	28	9.0	10	7	4	910.120-S	
M14	2.00	No.1	80	30	11.0	12	9	4	910.125-I	
M14	2.00	No.2	80	30	11.0	12	9	4	910.125-II	
M14	2.00	No.3	80	30	11.0	12	9	4	910.125-III	
M14	2.00	Set	80	30	11.0	12	9	4	910.125-S	
M16	2.00	No.1	80	32	12.0	12	9	4	910.130-I	
M16	2.00	No.2	80	32	12.0	12	9	4	910.130-II	
M16	2.00	No.3	80	32	12.0	12	9	4	910.130-III	
M16	2.00	Set	80	32	12.0	12	9	4	910.130-S	
M18	2.50	No.1	95	34	14.0	14	11	4	910.135-I	
M18	2.50	No.2	95	34	14.0	14	11	4	910.135-II	
M18	2.50	No.3	95	34	14.0	14	11	4	910.135-III	
M18	2.50	Set	95	34	14.0	14	11	4	910.135-S	
M20	2.50	No.1	95	34	16.0	15	12	4	910.140-I	
M20	2.50	No.2	95	34	16.0	15	12	4	910.140-II	
M20	2.50	No.3	95	34	16.0	15	12	4	910.140-III	
M20	2.50	Set	95	34	16.0	15	12	4	910.140-S	
M22	2.50	No.1	100	34	18.0	17	14.5	4	910.145-I	
M22	2.50	No.2	100	34	18.0	17	14.5	4	910.145-II	
M22	2.50	No.3	100	34	18.0	17	14.5	4	910.145-III	
M22	2.50	Set	100	34	18.0	17	14.5	4	910.145-S	
M24	3.00	No.1	110	38	18.0	17	14.5	4	910.150-I	
M24	3.00	No.2	110	38	18.0	17	14.5	4	910.150-II	
M24	3.00	No.3	110	38	18.0	17	14.5	4	910.150-III	
M24	3.00	Set	110	38	18.0	17	14.5	4	910.150-S	
M27	3.00	No.1	110	38	20.0	19	16	4	910.155-I	
M27	3.00	No.2	110	38	20.0	19	16	4	910.155-II	
M27	3.00	No.3	110	38	20.0	19	16	4	910.155-III	
M27	3.00	Set	110	38	20.0	19	16	4	910.155-S	

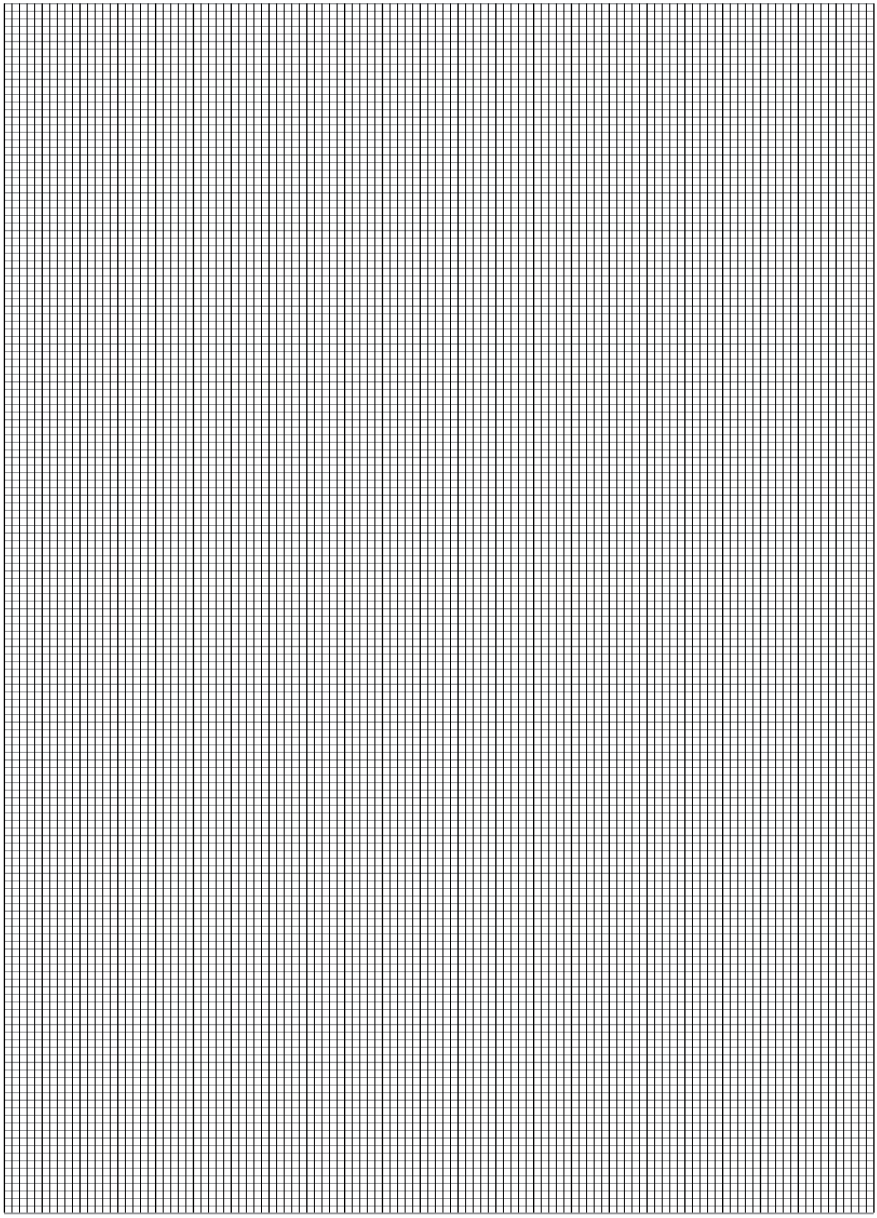
3.119.710



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M30	3.50	No.1	125	45	22.0	21	18	4	910.160-I	
M30	3.50	No.2	125	45	22.0	21	18	4	910.160-II	
M30	3.50	No.3	125	45	22.0	21	18	4	910.160-III	
M30	3.50	Set	125	45	22.0	21	18	4	910.160-S	
M33	3.50	No.1	125	50	25.0	23	20	4	910.165-I	
M33	3.50	No.2	125	50	25.0	23	20	4	910.165-II	
M33	3.50	No.3	125	50	25.0	23	20	4	910.165-III	
M33	3.50	Set	125	50	25.0	23	20	4	910.165-S	
M36	4.00	No.1	150	56	28.0	25	22	4	910.170-I	
M36	4.00	No.2	150	56	28.0	25	22	4	910.170-II	
M36	4.00	No.3	150	56	28.0	25	22	4	910.170-III	
M36	4.00	Set	150	56	28.0	25	22	4	910.170-S	
M39	4.00	No.1	150	60	32.0	27	24	4	910.175-I	
M39	4.00	No.2	150	60	32.0	27	24	4	910.175-II	
M39	4.00	No.3	150	60	32.0	27	24	4	910.175-III	
M39	4.00	Set	150	60	32.0	27	24	4	910.175-S	
M42	4.50	No.1	150	60	32.0	27	24	6	910.180-I	
M42	4.50	No.2	150	60	32.0	27	24	6	910.180-II	
M42	4.50	No.3	150	60	32.0	27	24	6	910.180-III	
M42	4.50	Set	150	60	32.0	27	24	6	910.180-S	
M45	4.50	No.1	160	65	36.0	32	29	6	910.185-I	
M45	4.50	No.2	160	65	36.0	32	29	6	910.185-II	
M45	4.50	No.3	160	65	36.0	32	29	6	910.185-III	
M45	4.50	Set	160	65	36.0	32	29	6	910.185-S	
M48	5.00	No.1	180	70	36.0	32	29	6	910.190-I	
M48	5.00	No.2	180	70	36.0	32	29	6	910.190-II	
M48	5.00	No.3	180	70	36.0	32	29	6	910.190-III	
M48	5.00	Set	180	70	36.0	32	29	6	910.190-S	
M52	5.00	No.1	180	70	40.0	35	32	6	910.195-I	
M52	5.00	No.2	180	70	40.0	35	32	6	910.195-II	
M52	5.00	No.3	180	70	40.0	35	32	6	910.195-III	
M52	5.00	Set	180	70	40.0	35	32	6	910.195-S	






No. 1


No. 2


No. 3







ISO2 (6H)

STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

HAND TAP

M



LH



HSSE V3





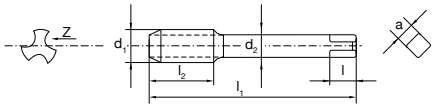








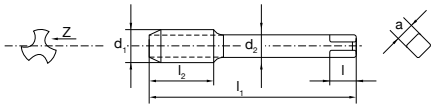
3.119.710-LH





d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M3	0.50	No.1	40	11	3.5	6	2.7	3	915.065-I	
M3	0.50	No.2	40	11	3.5	6	2.7	3	915.065-II	
M3	0.50	No.3	40	11	3.5	6	2.7	3	915.065-III	
M3	0.50	Set	40	11	3.5	6	2.7	3	915.065-S	
M4	0.70	No.1	45	13	4.5	6	3.4	3	915.075-I	
M4	0.70	No.2	45	13	4.5	6	3.4	3	915.075-II	
M4	0.70	No.3	45	13	4.5	6	3.4	3	915.075-III	
M4	0.70	Set	45	13	4.5	6	3.4	3	915.075-S	
M5	0.80	No.1	50	16	6.0	8	4.9	3	915.085-I	
M5	0.80	No.2	50	16	6.0	8	4.9	3	915.085-II	
M5	0.80	No.3	50	16	6.0	8	4.9	3	915.085-III	
M5	0.80	Set	50	16	6.0	8	4.9	3	915.085-S	
M6	1.00	No.1	56	19	6.0	8	4.9	3	915.090-I	
M6	1.00	No.2	56	19	6.0	8	4.9	3	915.090-II	
M6	1.00	No.3	56	19	6.0	8	4.9	3	915.090-III	
M6	1.00	Set	56	19	6.0	8	4.9	3	915.090-S	

3.119.710-LH

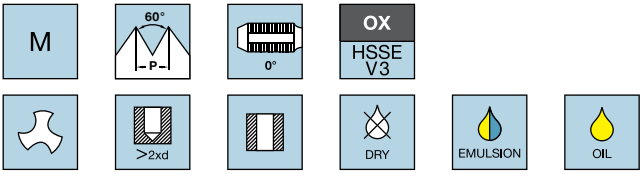


DIN 352

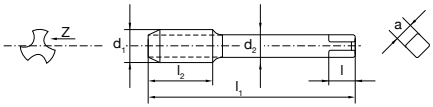
d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M8	1.25	No.1	63	22	6.0	8	4.9	4	915.100-I	
M8	1.25	No.2	63	22	6.0	8	4.9	4	915.100-II	
M8	1.25	No.3	63	22	6.0	8	4.9	4	915.100-III	
M8	1.25	Set	63	22	6.0	8	4.9	4	915.100-S	
M10	1.50	No.1	70	24	7.0	8	5.5	4	915.110-I	
M10	1.50	No.2	70	24	7.0	8	5.5	4	915.110-II	
M10	1.50	No.3	70	24	7.0	8	5.5	4	915.110-III	
M10	1.50	Set	70	24	7.0	8	5.5	4	915.110-S	
M12	1.75	No.1	75	28	9.0	10	7	4	915.120-I	
M12	1.75	No.2	75	28	9.0	10	7	4	915.120-II	
M12	1.75	No.3	75	28	9.0	10	7	4	915.120-III	
M12	1.75	Set	75	28	9.0	10	7	4	915.120-S	
M14	2.00	No.1	80	30	11.0	12	9	4	915.125-I	
M14	2.00	No.2	80	30	11.0	12	9	4	915.125-II	
M14	2.00	No.3	80	30	11.0	12	9	4	915.125-III	
M14	2.00	Set	80	30	11.0	12	9	4	915.125-S	
M16	2.00	No.1	80	32	12.0	12	9	4	915.130-I	
M16	2.00	No.2	80	32	12.0	12	9	4	915.130-II	
M16	2.00	No.3	80	32	12.0	12	9	4	915.130-III	
M16	2.00	Set	80	32	12.0	12	9	4	915.130-S	
M18	2.50	No.1	95	34	14.0	14	11	4	915.135-I	
M18	2.50	No.2	95	34	14.0	14	11	4	915.135-II	
M18	2.50	No.3	95	34	14.0	14	11	4	915.135-III	
M18	2.50	Set	95	34	14.0	14	11	4	915.135-S	
M20	2.50	No.1	95	34	16.0	15	12	4	915.140-I	
M20	2.50	No.2	95	34	16.0	15	12	4	915.140-II	
M20	2.50	No.3	95	34	16.0	15	12	4	915.140-III	
M20	2.50	Set	95	34	16.0	15	12	4	915.140-S	
M22	2.50	No.1	100	34	18.0	17	14.5	4	915.145-I	
M22	2.50	No.2	100	34	18.0	17	14.5	4	915.145-II	
M22	2.50	No.3	100	34	18.0	17	14.5	4	915.145-III	
M22	2.50	Set	100	34	18.0	17	14.5	4	915.145-S	
M24	3.00	No.1	110	38	18.0	17	14.5	4	915.150-I	
M24	3.00	No.2	110	38	18.0	17	14.5	4	915.150-II	
M24	3.00	No.3	110	38	18.0	17	14.5	4	915.150-III	
M24	3.00	Set	110	38	18.0	17	14.5	4	915.150-S	



HAND TAP



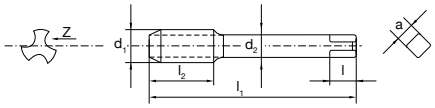
6.119.721



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M2	0.40	No.1	36	8	2.8	5	2.1	3	920.040-I	
M2	0.40	No.2	36	8	2.8	5	2.1	3	920.040-II	
M2	0.40	No.3	36	8	2.8	5	2.1	3	920.040-III	
M2	0.40	Set	36	8	2.8	5	2.1	3	920.040-S	
M2.5	0.45	No.1	40	9	2.8	5	2.1	3	920.055-I	
M2.5	0.45	No.2	40	9	2.8	5	2.1	3	920.055-II	
M2.5	0.45	No.3	40	9	2.8	5	2.1	3	920.055-III	
M2.5	0.45	Set	40	9	2.8	5	2.1	3	920.055-S	
M3	0.50	No.1	40	11	3.5	6	2.7	3	920.065-I	
M3	0.50	No.2	40	11	3.5	6	2.7	3	920.065-II	
M3	0.50	No.3	40	11	3.5	6	2.7	3	920.065-III	
M3	0.50	Set	40	11	3.5	6	2.7	3	920.065-S	
M3.5	0.60	No.1	45	12	4.0	6	3	3	920.070-I	
M3.5	0.60	No.2	45	12	4.0	6	3	3	920.070-II	
M3.5	0.60	No.3	45	12	4.0	6	3	3	920.070-III	
M3.5	0.60	Set	45	12	4.0	6	3	4	920.070-S	

6.119.721



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M4	0.70	No.1	45	13	4.5	6	3.4	3	920.075-I	
M4	0.70	No.2	45	13	4.5	6	3.4	3	920.075-II	
M4	0.70	No.3	45	13	4.5	6	3.4	3	920.075-III	
M4	0.70	Set	45	13	4.5	6	3.4	3	920.075-S	
M5	0.80	No.1	50	16	6.0	8	4.9	3	920.085-I	
M5	0.80	No.2	50	16	6.0	8	4.9	3	920.085-II	
M5	0.80	No.3	50	16	6.0	8	4.9	3	920.085-III	
M5	0.80	Set	50	16	6.0	8	4.9	3	920.085-S	
M6	1.00	No.1	56	19	6.0	8	4.9	3	920.090-I	
M6	1.00	No.2	56	19	6.0	8	4.9	3	920.090-II	
M6	1.00	No.3	56	19	6.0	8	4.9	3	920.090-III	
M6	1.00	Set	56	19	6.0	8	4.9	3	920.090-S	
M8	1.25	No.1	63	22	6.0	8	4.9	4	920.100-I	
M8	1.25	No.2	63	22	6.0	8	4.9	4	920.100-II	
M8	1.25	No.3	63	22	6.0	8	4.9	4	920.100-III	
M8	1.25	Set	63	22	6.0	8	4.9	4	920.100-S	
M10	1.50	No.1	70	24	7.0	8	5.5	4	920.110-I	
M10	1.50	No.2	70	24	7.0	8	5.5	4	920.110-II	
M10	1.50	No.3	70	24	7.0	8	5.5	4	920.110-III	
M10	1.50	Set	70	24	7.0	8	5.5	4	920.110-S	
M12	1.75	No.1	75	28	9.0	10	7	4	920.120-I	
M12	1.75	No.2	75	28	9.0	10	7	4	920.120-II	
M12	1.75	No.3	75	28	9.0	10	7	4	920.120-III	
M12	1.75	Set	75	28	9.0	10	7	4	920.120-S	
M14	2.00	No.1	80	30	11.0	12	9	4	920.125-I	
M14	2.00	No.2	80	30	11.0	12	9	4	920.125-II	
M14	2.00	No.3	80	30	11.0	12	9	4	920.125-III	
M14	2.00	Set	80	30	11.0	12	9	4	920.125-S	
M16	2.00	No.1	80	32	12.0	12	9	4	920.130-I	
M16	2.00	No.2	80	32	12.0	12	9	4	920.130-II	
M16	2.00	No.3	80	32	12.0	12	9	4	920.130-III	
M16	2.00	Set	80	32	12.0	12	9	4	920.130-S	

No. 1



No. 2



No. 3



FORM A 6-8 xP

FORM D 3.5-5 xP

FORM C 2-3 xP

PILOT 90°

ISO2 (6H)

STEEL INOX 500-800 N/mm²

ALU Si <10%

BRASS

Ni

HAND TAP

M

60° P

0°

OX HSSE V3

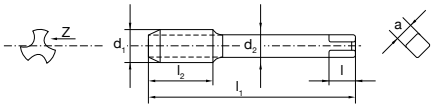
>2xd

DRY

EMULSION

OIL

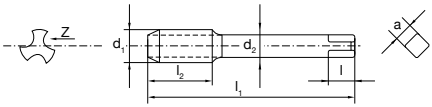
6.119.721-P



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M2	0.40	No.1	36	8	2.8	5	2.1	3	925.040-I	
M2	0.40	No.2	36	8	2.8	5	2.1	3	920.040-II	
M2	0.40	No.3	36	8	2.8	5	2.1	3	920.040-III	
M2	0.40	Set	36	8	2.8	5	2.1	3	925.040-S	
M2.5	0.45	No.1	40	9	2.8	5	2.1	3	925.055-I	
M2.5	0.45	No.2	40	9	2.8	5	2.1	3	920.055-II	
M2.5	0.45	No.3	40	9	2.8	5	2.1	3	920.055-III	
M2.5	0.45	Set	40	9	2.8	5	2.1	3	925.055-S	
M3	0.50	No.1	40	11	3.5	6	2.7	3	925.065-I	
M3	0.50	No.2	40	11	3.5	6	2.7	3	920.065-II	
M3	0.50	No.3	40	11	3.5	6	2.7	3	920.065-III	
M3	0.50	Set	40	11	3.5	6	2.7	3	925.065-S	
M3.5	0.60	No.1	45	12	4.0	6	3	3	925.070-I	
M3.5	0.60	No.2	45	12	4.0	6	3	3	920.070-II	
M3.5	0.60	No.3	45	12	4.0	6	3	3	920.070-III	
M3.5	0.60	Set	45	12	4.0	6	3	4	925.070-S	

6.119.721-P



DIN 352

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M4	0.70	No.1	45	13	4.5	6	3.4	3	925.075-I	
M4	0.70	No.2	45	13	4.5	6	3.4	3	920.075-II	
M4	0.70	No.3	45	13	4.5	6	3.4	3	920.075-III	
M4	0.70	Set	45	13	4.5	6	3.4	3	925.075-S	
M5	0.80	No.1	50	16	6.0	8	4.9	3	925.085-I	
M5	0.80	No.2	50	16	6.0	8	4.9	3	920.085-II	
M5	0.80	No.3	50	16	6.0	8	4.9	3	920.085-III	
M5	0.80	Set	50	16	6.0	8	4.9	3	925.085-S	
M6	1.00	No.1	56	19	6.0	8	4.9	3	925.090-I	
M6	1.00	No.2	56	19	6.0	8	4.9	3	920.090-II	
M6	1.00	No.3	56	19	6.0	8	4.9	3	920.090-III	
M6	1.00	Set	56	19	6.0	8	4.9	3	925.090-S	
M8	1.25	No.1	63	22	6.0	8	4.9	4	925.100-I	
M8	1.25	No.2	63	22	6.0	8	4.9	4	920.100-II	
M8	1.25	No.3	63	22	6.0	8	4.9	4	920.100-III	
M8	1.25	Set	63	22	6.0	8	4.9	4	925.100-S	
M10	1.50	No.1	70	24	7.0	8	5.5	4	925.110-I	
M10	1.50	No.2	70	24	7.0	8	5.5	4	920.110-II	
M10	1.50	No.3	70	24	7.0	8	5.5	4	920.110-III	
M10	1.50	Set	70	24	7.0	8	5.5	4	925.110-S	
M12	1.75	No.1	75	28	9.0	10	7	4	925.120-I	
M12	1.75	No.2	75	28	9.0	10	7	4	920.120-II	
M12	1.75	No.3	75	28	9.0	10	7	4	920.120-III	
M12	1.75	Set	75	28	9.0	10	7	4	925.120-S	
M14	2.00	No.1	80	30	11.0	12	9	4	925.125-I	
M14	2.00	No.2	80	30	11.0	12	9	4	920.125-II	
M14	2.00	No.3	80	30	11.0	12	9	4	920.125-III	
M14	2.00	Set	80	30	11.0	12	9	4	925.125-S	
M16	2.00	No.1	80	32	12.0	12	9	4	925.130-I	
M16	2.00	No.2	80	32	12.0	12	9	4	920.130-II	
M16	2.00	No.3	80	32	12.0	12	9	4	920.130-III	
M16	2.00	Set	80	32	12.0	12	9	4	925.130-S	

No. 1



No. 2







ISO 2 (6H)

STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

HAND TAP

MF





HSSE V3





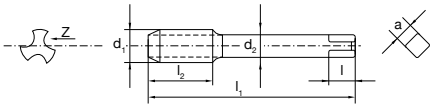








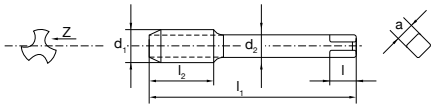
3.219.810





d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M2	0.25	No.1	36	8	2.8	5	2.1	3	930.000-I	
M2	0.25	No.2	36	8	2.8	5	2.1	3	930.000-II	
M2	0.25	Set	36	8	2.8	5	2.1	4	930.000-S	
M2.5	0.35	No.1	40	9	2.8	5	2.1	3	930.005-I	
M2.5	0.35	No.2	40	9	2.8	5	2.1	3	930.005-II	
M2.5	0.35	Set	40	9	2.8	5	2.1	3	930.005-S	
M3	0.35	No.1	40	8	3.5	6	2.7	3	930.015-I	
M3	0.35	No.2	40	8	3.5	6	2.7	3	930.015-II	
M3	0.35	Set	40	8	3.5	6	2.7	3	930.015-S	
M3.5	0.35	No.1	45	9	4.0	6	3	3	930.020-I	
M3.5	0.35	No.2	45	9	4.0	6	3	3	930.020-II	
M3.5	0.35	Set	45	9	4.0	6	3	3	930.020-S	
M4	0.35	No.1	45	10	4.5	6	3.4	3	930.025-I	
M4	0.35	No.2	45	10	4.5	6	3.4	3	930.025-II	
M4	0.35	Set	45	10	4.5	6	3.4	3	930.025-S	

3.219.810



DIN 2181

d_1	P	Type	l_2	l_3	d_2	l	a	z	Code	
M4	0.50	No.1	45	10	4.5	6	3.4	3	930.030-I	
M4	0.50	No.2	45	10	4.5	6	3.4	3	930.030-II	
M4	0.50	Set	45	10	4.5	6	3.4	3	930.030-S	
M5	0.50	No.1	50	12	6.0	8	4.9	3	930.040-I	
M5	0.50	No.2	50	12	6.0	8	4.9	3	930.040-II	
M5	0.50	Set	50	12	6.0	8	4.9	3	930.040-S	
M6	0.50	No.1	56	14	6.0	8	4.9	3	930.045-I	
M6	0.50	No.2	56	14	6.0	8	4.9	3	930.045-II	
M6	0.50	Set	56	14	6.0	8	4.9	3	930.045-S	
M6	0.75	No.1	56	14	6.0	8	4.9	3	930.050-I	
M6	0.75	No.2	56	14	6.0	8	4.9	3	930.050-II	
M6	0.75	Set	56	14	6.0	8	4.9	3	930.050-S	
M8	0.50	No.1	56	18	6.0	8	4.9	4	930.060-I	
M8	0.50	No.2	56	18	6.0	8	4.9	4	930.060-II	
M8	0.50	Set	56	18	6.0	8	4.9	4	930.060-S	
M8	0.75	No.1	56	18	6.0	8	4.9	4	930.065-I	
M8	0.75	No.2	56	18	6.0	8	4.9	4	930.065-II	
M8	0.75	Set	56	18	6.0	8	4.9	4	930.065-S	
M8	1.00	No.1	63	22	6.0	8	4.9	4	930.070-I	
M8	1.00	No.2	63	22	6.0	8	4.9	4	930.070-II	
M8	1.00	Set	63	22	6.0	8	4.9	4	930.070-S	
M10	0.75	No.1	63	20	7.0	8	5.5	4	930.080-I	
M10	0.75	No.2	63	20	7.0	8	5.5	4	930.080-II	
M10	0.75	Set	63	20	7.0	8	5.5	4	930.080-S	
M10	1.00	No.1	63	20	7.0	8	5.5	4	930.085-I	
M10	1.00	No.2	63	20	7.0	8	5.5	4	930.085-II	
M10	1.00	Set	63	20	7.0	8	5.5	4	930.085-S	
M10	1.25	No.1	70	24	7.0	8	5.5	4	930.090-I	
M10	1.25	No.2	70	24	7.0	8	5.5	4	930.090-II	
M10	1.25	Set	70	24	7.0	8	5.5	4	930.090-S	
M11	1.00	No.1	63	20	8.0	9	6.2	4	930.095-I	
M11	1.00	No.2	63	20	8.0	9	6.2	4	930.095-II	
M11	1.00	Set	63	20	8.0	9	6.2	4	930.095-S	
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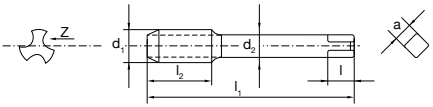
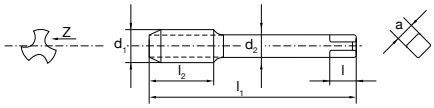
3.219.810



DIN 2181

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M12	1.00	No.1	70	22	9.0	10	7	4	930.100-I	
M12	1.00	No.2	70	22	9.0	10	7	4	930.100-II	
M12	1.00	Set	70	22	9.0	10	7	4	930.100-S	
M12	1.25	No.1	70	22	9.0	10	7	4	930.105-I	
M12	1.25	No.2	70	22	9.0	10	7	4	930.105-II	
M12	1.25	Set	70	22	9.0	10	7	4	930.105-S	
M12	1.50	No.1	70	22	9.0	10	7	4	930.110-I	
M12	1.50	No.2	70	22	9.0	10	7	4	930.110-II	
M12	1.50	Set	70	22	9.0	10	7	4	930.110-S	
M14	1.00	No.1	70	22	11.0	12	9	4	930.120-I	
M14	1.00	No.2	70	22	11.0	12	9	4	930.120-II	
M14	1.00	Set	70	22	11.0	12	9	4	930.120-S	
M14	1.25	No.1	70	22	11.0	12	9	4	930.125-I	
M14	1.25	No.2	70	22	11.0	12	9	4	930.125-II	
M14	1.25	Set	70	22	11.0	12	9	4	930.125-S	
M14	1.50	No.1	70	22	11.0	12	9	4	930.130-I	
M14	1.50	No.2	70	22	11.0	12	9	4	930.130-II	
M14	1.50	Set	70	22	11.0	12	9	4	930.130-S	
M15	1.00	No.1	80	22	12.0	12	9	4	930.135-I	
M15	1.00	No.2	80	22	12.0	12	9	4	930.135-II	
M15	1.00	Set	80	22	12.0	12	9	4	930.135-S	
M15	1.50	No.1	80	22	12.0	12	9	4	930.140-I	
M15	1.50	No.2	80	22	12.0	12	9	4	930.140-II	
M15	1.50	Set	80	22	12.0	12	9	4	930.140-S	
M16	1.00	No.1	80	22	12.0	12	9	4	930.145-I	
M16	1.00	No.2	80	22	12.0	12	9	4	930.145-II	
M16	1.00	Set	80	22	12.0	12	9	4	930.145-S	
M16	1.50	No.1	80	22	12.0	12	9	4	930.150-I	
M16	1.50	No.2	80	22	12.0	12	9	4	930.150-II	
M16	1.50	Set	80	22	12.0	12	9	4	930.150-S	
M18	1.00	No.1	80	22	14.0	14	11	4	930.155-I	
M18	1.00	No.2	80	22	14.0	14	11	4	930.155-II	
M18	1.00	Set	80	22	14.0	14	11	4	930.155-S	
M18	1.50	No.1	80	22	14.0	14	11	4	930.160-I	
M18	1.50	No.2	80	22	14.0	14	11	4	930.160-II	
M18	1.50	Set	80	22	14.0	14	11	4	930.160-S	

3.219.810



DIN 2181

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M18	2.00	No.1	80	22	14.0	14	11	4	930.165-I	
M18	2.00	No.2	80	22	14.0	14	11	4	930.165-II	
M18	2.00	Set	80	22	14.0	14	11	4	930.165-S	
M20	1.00	No.1	80	22	16.0	15	12	4	930.170-I	
M20	1.00	No.2	80	22	16.0	15	12	4	930.170-II	
M20	1.00	Set	80	22	16.0	15	12	4	930.170-S	
M20	1.50	No.1	80	22	16.0	15	12	4	930.175-I	
M20	1.50	No.2	80	22	16.0	15	12	4	930.175-II	
M20	1.50	Set	80	22	16.0	15	12	4	930.175-S	
M20	2.00	No.1	80	22	16.0	15	12	4	930.180-I	
M20	2.00	No.2	80	22	16.0	15	12	4	930.180-II	
M20	2.00	Set	80	22	16.0	15	12	4	930.180-S	
M22	1.00	No.1	80	22	18.0	17	14.5	4	930.185-I	
M22	1.00	No.2	80	22	18.0	17	14.5	4	930.185-II	
M22	1.00	Set	80	22	18.0	17	14.5	4	930.185-S	
M22	1.50	No.1	80	22	18.0	17	14.5	4	930.190-I	
M22	1.50	No.2	80	22	18.0	17	14.5	4	930.190-II	
M22	1.50	Set	80	22	18.0	17	14.5	4	930.190-S	
M24	1.00	No.1	90	22	18.00	18	14.5	4	930.200-I	
M24	1.00	No.2	90	22	18.00	18	14.5	4	930.200-II	
M24	1.00	Set	90	22	18.00	18	14.5	4	930.200-S	
M24	1.50	No.1	90	22	18.0	17	14.5	4	930.205-I	
M24	1.50	No.2	90	22	18.0	17	14.5	4	930.205-II	
M24	1.50	Set	90	22	18.0	17	14.5	4	930.205-S	
M24	2.00	No.1	90	22	18.0	17	14.5	4	930.210-I	
M24	2.00	No.2	90	22	18.0	17	14.5	4	930.210-II	
M24	2.00	Set	90	22	18.0	17	14.5	4	930.210-S	
M26	1.50	No.1	90	22	18.0	17	14.5	4	930.220-I	
M26	1.50	No.2	90	22	18.0	17	14.5	4	930.220-II	
M26	1.50	Set	90	22	18.0	17	14.5	4	930.220-S	
M27	1.50	No.1	90	22	20.0	19	16	4	930.225-I	
M27	1.50	No.2	90	22	20.0	19	16	4	930.225-II	
M27	1.50	Set	90	22	20.0	19	16	4	930.225-S	
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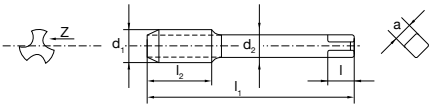
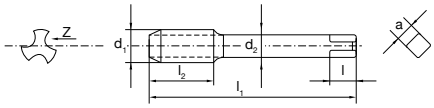
3.219.810



DIN 2181

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M28	1.50	No.1	90	22	20.0	19	16	4	930.235-I	
M28	1.50	No.2	90	22	20.0	19	16	4	930.235-II	
M28	1.50	Set	90	22	20.0	19	16	4	930.235-S	
M30	1.50	No.1	90	22	22.00	21	18	4	930.245-I	
M30	1.50	No.2	90	22	22.00	21	18	4	930.245-II	
M30	1.50	Set	90	22	22.00	21	18	4	930.245-S	
M30	1.50	No.1	90	22	22.0	21	18	4	930.245-I	
M30	1.50	No.2	90	22	22.0	21	18	4	930.245-II	
M30	1.50	Set	90	22	22.0	21	18	4	930.245-S	
M30	2.00	No.1	90	22	22.0	21	18	4	930.250-I	
M30	2.00	No.2	90	22	22.0	21	18	4	930.250-II	
M30	2.00	Set	90	22	22.0	21	18	4	930.250-S	
M32	1.50	No.1	90	22	22.0	21	18	4	930.255-I	
M32	1.50	No.2	90	22	22.0	21	18	4	930.255-II	
M32	1.50	Set	90	22	22.0	21	18	4	930.255-S	
M33	2.00	No.1	100	25	25.0	23	20	4	930.265-I	
M33	2.00	No.2	100	25	25.0	23	20	4	930.265-II	
M33	2.00	Set	100	25	25.0	23	20	4	930.265-S	
M36	1.50	No.1	100	25	28.0	25	22	4	930.280-I	
M36	1.50	No.2	100	25	28.0	25	22	4	930.280-II	
M36	1.50	Set	100	25	28.0	25	22	4	930.280-S	
M36	2.00	No.1	125	40	28.0	25	22	4	930.285-I	
M36	2.00	No.2	125	40	28.0	25	22	4	930.285-II	
M36	2.00	Set	125	40	28.0	25	22	4	930.285-S	
M36	3.00	No.1	125	40	28.0	25	22	4	930.290-I	
M36	3.00	No.2	125	40	28.0	25	22	4	930.290-II	
M36	3.00	Set	125	40	28.0	25	22	4	930.290-S	
M38	1.50	No.1	100	25	28.0	25	22	4	930.295-I	
M38	1.50	No.2	100	25	28.0	25	22	4	930.295-II	
M38	1.50	Set	100	25	28.0	25	22	4	930.295-S	
M39	2.00	No.1	125	40	32.0	27	24	4	930.300-I	
M39	2.00	No.2	125	40	32.0	27	24	4	930.300-II	
M39	2.00	Set	125	40	32.0	27	24	4	930.300-S	
M39	3.00	No.1	125	40	32.0	27	24	4	930.305-I	
M39	3.00	No.2	125	40	32.0	27	24	4	930.305-II	
M39	3.00	Set	125	40	32.0	27	24	4	930.305-S	

3.219.810



DIN 2181

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M40	1.50	No.1	110	25	32.0	27	24	4	930.310-I	
M40	1.50	No.2	110	25	32.0	27	24	4	930.310-II	
M40	1.50	Set	110	25	32.0	27	24	4	930.310-S	
M40	2.00	No.1	125	40	32.0	27	24	4	930.315-I	
M40	2.00	No.2	125	40	32.0	27	24	4	930.315-II	
M40	2.00	Set	125	40	32.0	27	24	4	930.315-S	
M40	3.00	No.1	125	40	32.0	27	24	4	930.320-I	
M40	3.00	No.2	125	40	32.0	27	24	4	930.320-II	
M40	3.00	Set	125	40	32.0	27	24	4	930.320-S	
M42	1.50	No.1	110	25	32.0	27	24	6	930.325-I	
M42	1.50	No.2	110	25	32.0	27	24	6	930.325-II	
M42	1.50	Set	110	25	32.0	27	24	6	930.325-S	
M42	2.00	No.1	125	40	32.0	27	24	6	930.330-I	
M42	2.00	No.2	125	40	32.0	27	24	6	930.330-II	
M42	2.00	Set	125	40	32.0	27	24	6	930.330-S	
M42	3.00	No.1	125	40	32.0	27	24	6	930.335-I	
M42	3.00	No.2	125	40	32.0	27	24	6	930.335-II	
M42	3.00	Set	125	40	32.0	27	24	6	930.335-S	
M50	1.50	No.1	140	40	36.0	32	29	6	930.370-I	
M50	1.50	No.2	140	40	36.0	32	29	6	930.370-II	
M50	1.50	Set	140	40	36.0	32	29	6	930.370-S	
M50	1.50	No.1	140	40	36.0	32	29	6	930.370-I	
M50	1.50	No.2	140	40	36.0	32	29	6	930.370-II	
M50	1.50	Set	140	40	36.0	32	29	6	930.370-S	
M50	2.00	No.1	140	40	36.0	32	29	6	930.375-I	
M50	2.00	No.2	140	40	36.0	32	29	6	930.375-II	
M50	2.00	Set	140	40	36.0	32	29	6	930.375-S	
M50	3.00	No.1	140	40	36.0	32	29	6	930.380-I	
M50	3.00	No.2	140	40	36.0	32	29	6	930.380-II	
M50	3.00	Set	140	40	36.0	32	29	6	930.380-S	
M52	1.50	No.1	140	40	40.0	35	32	6	930.385-I	
M52	1.50	No.2	140	40	40.0	35	32	6	930.385-II	
M52	1.50	Set	140	40	40.0	35	32	6	930.385-S	
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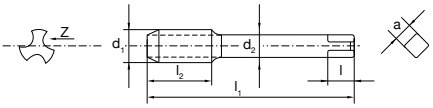
3.219.810



DIN 2181

d_1	P	Type	l_1	l_2	d_2	l	a	z	Code	
M52	2.00	No.1	140	40	40.0	35	32	6	930.390-I	
M52	2.00	No.2	140	40	40.0	35	32	6	930.390-II	
M52	2.00	Set	140	40	40.0	35	32	6	930.390-S	
M52	3.00	No.1	140	40	40.0	35	32	6	930.395-I	
M52	3.00	No.2	140	40	40.0	35	32	6	930.395-II	
M52	3.00	Set	140	40	40.0	35	32	6	930.395-S	



STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

HAND TAP

UNC

60° P

0°

HSSE V3

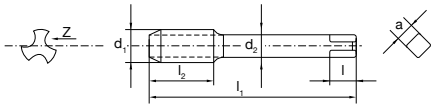
≤2xd

DRY

OIL

EMULSION

3.399.710



DIN 352

d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
No.1	64	No.1	36	8	2.8	5	2.1	3	940.005-I	
No.1	64	No.2	36	8	2.8	5	2.1	3	940.005-II	
No.1	64	No.3	36	8	2.8	5	2.1	3	940.005-III	
No.1	64	Set	36	8	2.8	5	2.1	3	940.005-S	
No.2	56	No.1	36	9	2.8	5	2.1	3	940.010-I	
No.2	56	No.2	36	9	2.8	5	2.1	3	940.010-II	
No.2	56	No.3	36	9	2.8	5	2.1	3	940.010-III	
No.2	56	Set	36	9	2.8	5	2.1	3	940.010-S	
No.3	48	No.1	40	9	2.8	5	2.1	3	940.015-I	
No.3	48	No.2	40	9	2.8	5	2.1	3	940.015-II	
No.3	48	No.3	40	9	2.8	5	2.1	3	940.015-III	
No.3	48	Set	40	9	2.8	5	2.1	3	940.015-S	
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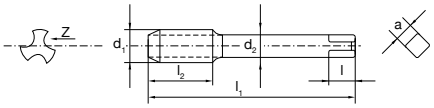
3.399.710



DIN 352

d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
No.4	40	No.1	40	11	3.5	6	2.7	3	940.020-I	
No.4	40	No.2	40	11	3.5	6	2.7	3	940.020-II	
No.4	40	No.3	40	11	3.5	6	2.7	3	940.020-III	
No.4	40	Set	40	11	3.5	6	2.7	3	940.020-S	
No.5	40	No.1	40	11	3.5	6	2.7	3	940.025-I	
No.5	40	No.2	40	11	3.5	6	2.7	3	940.025-II	
No.5	40	No.3	40	11	3.5	6	2.7	3	940.025-III	
No.5	40	Set	40	11	3.5	6	2.7	3	940.025-S	
No.6	32	No.1	45	12	4.0	6	3	3	940.030-I	
No.6	32	No.2	45	12	4.0	6	3	3	940.030-II	
No.6	32	No.3	45	12	4.0	6	3	3	940.030-III	
No.6	32	Set	45	12	4.0	6	3	3	940.030-S	
No.8	32	No.1	45	13	4.5	6	3.4	3	940.035-I	
No.8	32	No.2	45	13	4.5	6	3.4	3	940.035-II	
No.8	32	No.3	45	13	4.5	6	3.4	3	940.035-III	
No.8	32	Set	45	13	4.5	6	3.4	3	940.035-S	
No.10	24	No.1	50	16	6.0	7	4.9	3	940.040-I	
No.10	24	No.2	50	16	6.0	7	4.9	3	940.040-II	
No.10	24	No.3	50	16	6.0	7	4.9	3	940.040-III	
No.10	24	Set	50	16	6.0	7	4.9	3	940.040-S	
No.12	24	No.1	50	16	6.0	8	4.9	3	940.045-I	
No.12	24	No.2	50	16	6.0	8	4.9	3	940.045-II	
No.12	24	No.3	50	16	6.0	8	4.9	3	940.045-III	
No.12	24	Set	50	16	6.0	8	4.9	3	940.045-S	
1/4	20	No.1	56	19	6.0	8	4.9	3	940.050-I	
1/4	20	No.2	56	19	6.0	8	4.9	3	940.050-II	
1/4	20	No.3	56	19	6.0	8	4.9	3	940.050-III	
1/4	20	Set	56	19	6.0	8	4.9	3	940.050-S	
5/16	18	No.1	63	22	6.0	8	4.9	4	940.055-I	
5/16	18	No.2	63	22	6.0	8	4.9	4	940.055-II	
5/16	18	No.3	63	22	6.0	8	4.9	4	940.055-III	
5/16	18	Set	63	22	6.0	8	4.9	4	940.055-S	
3/8	16	No.1	63	22	7.0	8	5.5	4	940.060-I	
3/8	16	No.2	63	22	7.0	8	5.5	4	940.060-II	
3/8	16	No.3	63	22	7.0	8	5.5	4	940.060-III	
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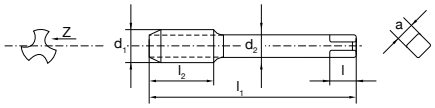
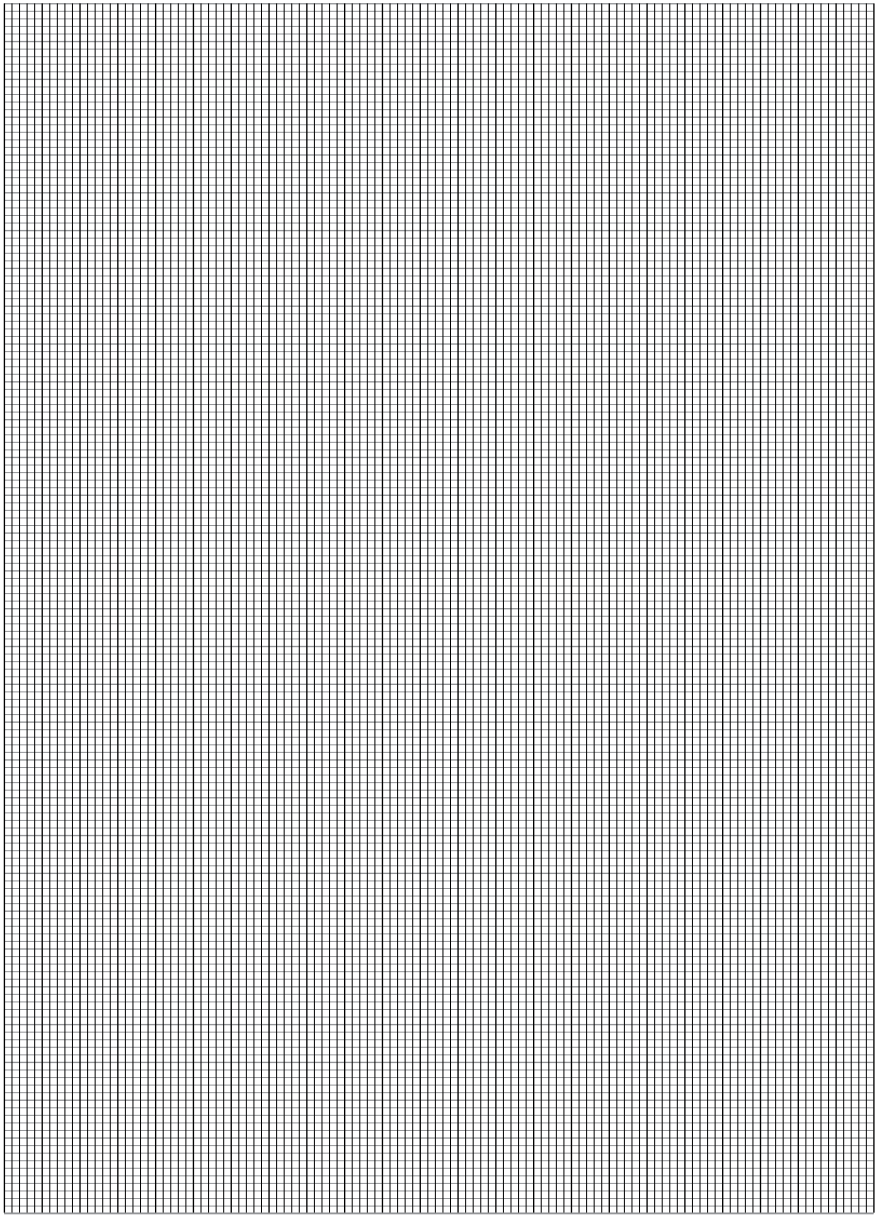


DIN 352

d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
7/16	14	No.1	70	24	8.0	9	6.2	4	940.065-I	
7/16	14	No.2	70	24	8.0	9	6.2	4	940.065-II	
7/16	14	No.3	70	24	8.0	9	6.2	4	940.065-III	
7/16	14	Set	70	24	8.0	9	6.2	4	940.065-S	
1/2	13	No.1	75	28	9.0	10	7	4	940.070-I	
1/2	13	No.2	75	28	9.0	10	7	4	940.070-II	
1/2	13	No.3	75	28	9.0	10	7	4	940.070-III	
1/2	13	Set	75	28	9.0	10	7	4	940.070-S	
9/16	12	No.1	80	30	11.0	12	9	4	940.075-I	
9/16	12	No.2	80	30	11.0	12	9	4	940.075-II	
9/16	12	No.3	80	30	11.0	12	9	4	940.075-III	
9/16	12	Set	80	30	11.0	12	9	4	940.075-S	
5/8	11	No.1	80	32	12.0	12	9	4	940.080-I	
5/8	11	No.2	80	32	12.0	12	9	4	940.080-II	
5/8	11	No.3	80	32	12.0	12	9	4	940.080-III	
5/8	11	Set	80	32	12.0	12	9	4	940.080-S	
3/4	10	No.1	95	34	14.0	14	11	4	940.085-I	
3/4	10	No.2	95	34	14.0	14	11	4	940.085-II	
3/4	10	No.3	95	34	14.0	14	11	4	940.085-III	
3/4	10	Set	95	34	14.0	14	11	4	940.085-S	
7/8	9	No.1	100	34	18.0	17	14.5	4	940.090-I	
7/8	9	No.2	100	34	18.0	17	14.5	4	940.090-II	
7/8	9	No.3	100	34	18.0	17	14.5	4	940.090-III	
7/8	9	Set	100	34	18.0	17	14.5	4	940.090-S	
1	8	No.1	110	38	20.0	19	16	4	940.095-I	
1	8	No.2	110	38	20.0	19	16	4	940.095-II	
1	8	No.3	110	38	20.0	19	16	4	940.095-III	
1	8	Set	110	38	20.0	19	16	4	940.095-S	



No. 1



No. 2







2B
B1.1

STEEL
≤ 500
N/mm²

STEEL
500-800
N/mm²

ALU
Si <10%

CU

HAND TAP

UNF





HSSE
V3





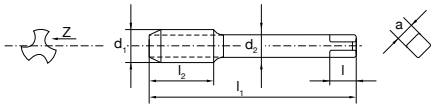








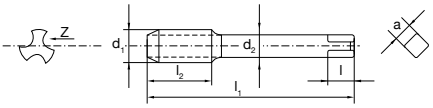
3.499.810





d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
No.0	80	No.1	32	8	2.5	5	2.1	3	945.005-I	
No.0	80	No.2	32	8	2.5	5	2.1	3	945.005-II	
No.0	80	Set	32	8	2.5	5	2.1	3	945.005-S	
No.1	72	No.1	36	8	2.8	5	2.1	3	945.010-I	
No.1	72	No.2	36	8	2.8	5	2.1	3	945.010-II	
No.1	72	Set	36	8	2.8	5	2.1	3	945.010-S	
No.2	64	No.1	36	9	2.8	5	2.1	3	945.015-I	
No.2	64	No.2	36	9	2.8	5	2.1	3	945.015-II	
No.2	64	Set	36	9	2.8	5	2.1	3	945.015-S	
No.3	56	No.1	40	9	2.8	5	2.1	3	945.020-I	
No.3	56	No.2	40	9	2.8	5	2.1	3	945.020-II	
No.3	56	Set	40	9	2.8	5	2.1	3	945.020-S	
									CONTINUED	

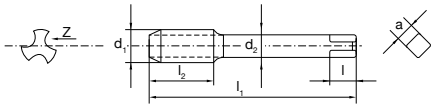
3.499.810



DIN 2181

d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
No.4	48	No.1	40	8	3.5	6	2.7	3	945.025-I	
No.4	48	No.2	40	8	3.5	6	2.7	3	945.025-II	
No.4	48	Set	40	8	3.5	6	2.7	3	945.025-S	
No.5	44	No.1	40	8	3.5	6	2.7	3	945.030-I	
No.5	44	No.2	40	8	3.5	6	2.7	3	945.030-II	
No.5	44	Set	40	8	3.5	6	2.7	3	945.030-S	
No.6	40	No.1	45	9	4.0	6	3	3	945.035-I	
No.6	40	No.2	45	9	4.0	6	3	3	945.035-II	
No.6	40	Set	45	9	4.0	6	3	3	945.035-S	
No.8	36	No.1	45	10	4.5	6	3.4	3	945.040-I	
No.8	36	No.2	45	10	4.5	6	3.4	3	945.040-II	
No.8	36	Set	45	10	4.5	6	3.4	3	945.040-S	
No.10	32	No.1	56	12	6.0	7	4.9	3	945.045-I	
No.10	32	No.2	50	12	6.0	7	4.9	3	945.045-II	
No.10	32	Set	50	12	6.0	7	4.9	3	945.045-S	
No.12	28	No.1	50	12	6.0	8	4.9	3	945.050-I	
No.12	28	No.2	50	12	6.0	8	4.9	3	945.050-II	
No.12	28	Set	50	12	6.0	8	4.9	3	945.050-S	
1/4	28	No.1	56	14	6.0	8	4.9	3	945.055-I	
1/4	28	No.2	56	14	6.0	8	4.9	3	945.055-II	
1/4	28	Set	56	14	6.0	8	4.9	3	945.055-S	
5/16	24	No.1	63	22	6.0	8	4.9	4	945.060-I	
5/16	24	No.2	63	22	6.0	8	4.9	4	945.060-II	
5/16	24	Set	63	22	6.0	8	4.9	3	945.060-S	
3/8	24	No.1	63	20	7.0	8	5.5	4	945.065-I	
3/8	24	No.2	63	20	7.0	8	5.5	4	945.065-II	
3/8	24	Set	63	20	7.0	8	5.5	4	945.065-S	
7/16	20	No.1	63	20	8.0	9	6.2	4	945.070-I	
7/16	20	No.2	63	20	8.0	9	6.2	4	945.070-II	
7/16	20	Set	63	20	8.0	9	6.2	4	945.070-S	
1/2	20	No.1	70	22	9.0	10	7	4	945.075-I	
1/2	20	No.2	70	22	9.0	10	7	4	945.075-II	
1/2	20	Set	70	22	9.0	10	7	4	945.075-S	
9/16	18	No.1	70	22	11.0	12	9	4	945.080-I	
9/16	18	No.2	70	22	11.0	12	9	4	945.080-II	
9/16	18	Set	70	22	11.0	12	9	4	945.080-S	

3.499.810



DIN 2181

d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
5/8	18	No.1	80	22	12.0	12	9	4	945.085-I	
5/8	18	No.2	80	22	12.0	12	9	4	945.085-II	
5/8	18	Set	80	22	12.0	12	9	4	945.085-S	
3/4	16	No.1	80	22	14.0	14	11	4	945.090-I	
3/4	16	No.2	80	22	14.0	14	11	4	945.090-II	
3/4	16	Set	80	22	14.0	14	11	4	945.090-S	
7/8	14	No.1	80	22	18.0	17	14.5	4	945.095-I	
7/8	14	No.2	80	22	18.0	17	14.5	4	945.095-II	
7/8	14	Set	80	22	18.0	17	14.5	4	945.095-S	
1	12	No.1	90	22	18.0	19	16	4	945.100-I	
1	12	No.2	90	22	18.0	19	16	4	945.100-II	
1	12	Set	90	22	18.0	19	16	4	945.100-S	

No. 1





No. 2





STEEL ≤ 500 N/mm²

STEEL 500-800 N/mm²

ALU Si <10%

CU

HAND TAP

G





HSSE V3





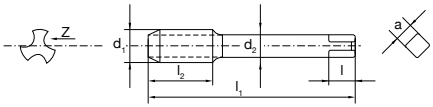








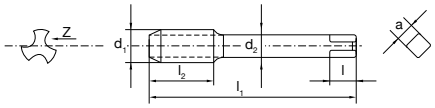
3.699.510





d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
1/8	28	No.1	63	20	7.0	8	5.5	4	935.010-I	
1/8	28	No.2	63	20	7.0	8	5.5	4	935.010-II	
1/8	28	Set	63	20	7.0	8	5.5	4	935.010-S	
1/4	19	No.1	70	22	11.0	12	9	4	935.015-I	
1/4	19	No.2	70	22	11.0	12	9	4	935.015-II	
1/4	19	Set	70	22	11.0	12	9	4	935.015-S	
3/8	19	No.1	70	22	12.0	12	9	4	935.020-I	
3/8	19	No.2	70	22	12.0	12	9	4	935.020-II	
3/8	19	Set	70	22	12.0	12	9	4	935.020-S	
1/2	14	No.1	80	22	16.0	15	12	4	935.025-I	
1/2	14	No.2	80	22	16.0	15	12	4	935.025-II	
1/2	14	Set	80	22	16.0	15	12	4	935.025-S	
5/8	14	No.1	80	22	18.0	17	14.5	4	935.030-I	
5/8	14	No.2	80	22	18.0	17	14.5	4	935.030-II	
5/8	14	Set	80	22	18.0	17	14.5	4	935.030-S	

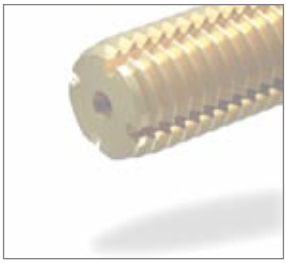
3.699.510



DIN 5157

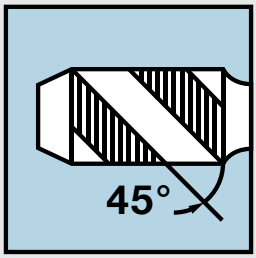
d_1	P TPi	Type	l_1	l_2	d_2	l	a	z	Code	
3/4	14	No.1	90	22	20.0	19	16	4	935.035-I	
3/4	14	No.2	90	22	20.0	19	16	4	935.035-II	
3/4	14	Set	90	22	20.0	19	16	4	935.035-S	
7/8	14	No.1	90	22	22.0	21	18	4	935.040-I	
7/8	14	No.2	90	22	22.0	21	18	4	935.040-II	
7/8	14	Set	90	22	22.0	21	18	4	935.040-S	
1	11	No.1	100	25	25.0	23	20	4	935.045-I	
1	11	No.2	100	25	25.0	23	20	4	935.045-II	
1	11	Set	100	25	25.0	23	20	4	935.045-S	
1 1/4	11	No.1	125	40	32.0	27	24	6	935.055-I	
1 1/4	11	No.2	125	40	32.0	27	24	6	935.055-II	
1 1/4	11	Set	125	40	32.0	27	24	6	935.055-S	
1 1/2	11	No.1	140	40	36.0	32	29	6	935.060-I	
1 1/2	11	No.2	140	40	36.0	32	29	6	935.060-II	
1 1/2	11	Set	140	40	36.0	32	29	6	935.060-S	
2	11	No.1	160	40	45.0	38	35	6	935.070-I	
2	11	No.2	160	40	45.0	38	35	6	935.070-II	
2	11	Set	160	40	45.0	38	35	6	935.070-S	







ICONS



Icons	Thread Types
DIN 13	Metric Thread According to ISO68 / DIN13
DIN 40430	Panzerrohr Gewinde PG According to DIN40430
G	Whitworth Pipe Thread DIN/ISO 228
ISO 228	ISO / DIN 228
LH	Lefthand Thread
M	Metric Thread ISO68 / DIN13
MF	Metric Finepitch Thread ISO68 / DIN13
NPT	National Pipe Thread Tappered ASME/ANSI B1.20.1
PG	Panzerrohr Gewinde PG According to DIN40430
S MINI	Metric Miniature Thread ISO / DIN 1501
UNC	Unified Coarse Thread ASME / ANSI B1.1
UNF	Unified Fine Thread ASME / ANSI B1.1

Icons	Thread Angles
	55° Thread Angle (G)
	60° Thread Angle
	80° Thread Angle (PG)
Icons	**Special Thread Executions**
AT	Alternating Thread
BT	Thread with Back-Taper
	For use on synchronized spindles only!

Icons	Tolerances
2B B1.1	Tolerance 2B ANSI / ASME B1.1
4HX	Tolerance 4HX
5HX	Tolerance 5HX
6HX	Tolerance 6HX
6GX	Tolerance 6GX
7G	Tolerance 7G
ANSI B1.1	According to ASME /ANSI B1.1 Standard
ISO 1 (5H)	Tolerance ISO1 / 5H
ISO 2 (6H)	Tolerance ISO 2 / 6H
ISO 3 (6G)	Tolerance ISO 3 / 6G

Icons	Chamfer Types
	Chamfer Form A Length = 6-8 x Thread Pitch
	Chamfer Form B Length = 3.5-5.5 x Thread Pitch With Gun Nose
	Chamfer Form C Length = 2-3 x Thread Pitch
	Chamfer Form D Length = 3.5-5 x Thread Pitch
	Chamfer Form E Length = 1.5-2 x Thread Pitch
	With guiding Pilot for hand taps

Icons	Flute Forms
	Straight Flute With Gun Nose Form B
	Straight Flute With Gun Nose Form Left B
	Straight Flute
	Spiral Flute 10° Right Hand Spiral
	Spiral Flute 15° Left Hand Spiral
	Spiral Flute 15° Right Hand Spiral
	Spiral Flute 17° Left Hand Spiral
	Spiral Flute 35° Right Hand Spiral
	Spiral Flute 40° Right Hand Spiral
	Spiral Flute 45° Right Hand Spiral
	Spiral Flute 50° Right Hand Spiral
LSP	Left hand spiral right hand cutting

Icons	Pre Hole Types
	Cylindrical Blind Hole Maximum Depth = 2.5 X Diameter
	Cylindrical Blind Hole Deeper than 2.5 X Diameter
	Cylindrical Through Hole
	Cylindrical Through Hole In Thin Sheet Metals
	Conical Blind Hole
	Conical Through Hole
	Conical Through Hole With Thin Film Cap

Icons	Lubrification Methods
	Tapping Without Cooling or Lubrification
	Tapping With Emulsion Favorably min. 10% Oil Content
	Tapping With Cutting Oil
	Internal cooling

Icons	Materials & Coatings
HARD LUBE / HSSE V3	Surface: Balinit Hardlube Material: Vanadium High Speed Steel
HARD LUBE / PM 38	Surface: Balinit Hardlube Material: High Speed Steel, Powdermetalurgical
Ni OX / HSSE V3	Surface: Nitrided + Steam-Oxide Material: Vanadium High Speed Steel
Ni OX / PM 38	Surface: Nitrided + Steam-Oxide Material: High Speed Steel, Powdermetalurgical
OX / HSSE V3	Surface: Steam-Oxide Material: Vanadium High Speed Steel
OX / PM 38	Surface: Steam-Oxide Material: High Speed Steel, Powdermetalurgical
TiCN / HSSE V3	Surface: Titanium CarboNitride Material: Vanadium High Speed Steel
TiCN / PM 38	Surface: Titanium CarboNitride Material: High Speed Steel, Powdermetalurgical
TiCN / CARBIDE	Surface: Titanium CarboNitride Material: Micrograin Carbide
TiCN / HSSE Co8	Surface: Material:
C-COAT / HSSE V3	Surface: Multi Layer Coating Material: Vanadium High Speed Steel
C-COAT / HSSE Co8	Surface: Multi Layer Coating Material: With Cobalt content of ~ 8%
C-COAT / PM 38	Surface: Multi Layer Coating Material: Vanadium High Speed Steel, Powdermetalurgical

Icons	Materials & Coatings
HSSE V3	HSSE High Speed Steel E With Vanadium content of ~3%
MG CARBIDE	Micrograin Carbide
PM 100	Powder-Metalurgical High Speed Steel Micro Grain / Superior Grade
PM 38	Powder-Metalurgical High Speed Steel / Micro Grain With a Content of 3% V and 8% Co

Icons	Tap Types
	Cutting Tap
	Forming Tap With Oil Groves
	Forming Tap

TECHNICAL GUIDE

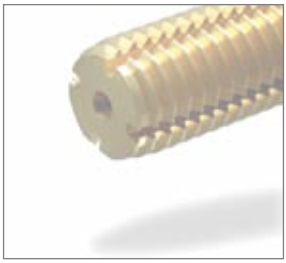
Icons	Tool shank according
	Tool Shank according to DIN 352
	Tool Shank according to DIN 371
	Tool Shank according to DIN 374
	Tool Shank according to DIN 376
	Tool Shank according to DIN 1835B / ISO 3338
	Tool Shank according to DIN 2174
	Tool Shank according to DIN 2181
	Tool Shank according to DIN 2182
	Tool Shank according to DIN 2183
	Tool Shank according to DIN 2189
	Tool Shank according to DIN 40432
	Tool Shank According to DIN 5156
	Tool Shank According to DIN 5157

Icons	Tool shank according
	Tool Shank double length According to Tanoi Standard
	Tool Shank According to Tanoi Standard
	Tool Shank According to DIN 371 / 376 with flat DIN 1835B

Icons	Materials
ALU	Aluminium
ALU Si <10%	Aluminium Alloys Si < 10%
ALU Si >10%	Aluminium Alloys Si > 10%
ZDC	Zink die Cast
GG/G CAST	Cast Iron, Short Chipping, Abrasive
CU	Copper, Copper Alloys Long Chipping <= 200 HB
CU SHORT	Copper Alloys Short Chipping
CU 200-300 HB	Copper Alloys 200 - 300 HB
Ni	Nickel, Nickel Alloys Rm <= 900 N/mm^2
Ni 900-1500 N/mm^2	Nickel Alloys 900 N/mm^2 < Rm < 1'500 N/mm^2
STEEL ≤ 500 N/mm^2	Soft Structural Steels Rm <= 500 N/mm^2
STEEL 500-800 N/mm^2	Mild, Cast, and Carbon Steels Alloyed & Unalloyed Steels Rm <=800 N/mm^2
STEEL 800-1200 N/mm^2	Alloyed and Heat Treates Steels 800 N/mm2 < Rm < 1'200 N/mm^2

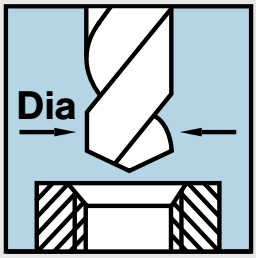
Icons	Materials
STEEL 800-1300 N/mm^2	Tool Steels, Unalloyed, Cold Work & Heat Resistant 800 N/mm^2 < Rm < 1'300 N/mm^2
STEEL INOX	Stainless Steels Rm <= 1'200 N/mm^2
STEEL HRC 42-53	Heat Treated Steels 45-53 HRC
STEEL HRC 50-63	Heat Treated Steels 50-63 HRC
Ti	Titanium and Titanium alloys







DRILL HOLE TABLES



Cutting Taps (M)		
Size	**Pitch**	**Drill Hole Diam.**
M1	0.25	0.75
M1.1	0.25	0.85
M1.2	0.25	0.95
M1.4	0.3	1.10
M1.6	0.35	1.25
M1.7	0.35	1.30
M1.8	0.35	1.45
M2	0.4	1.60
M2.2	0.45	1.75
M2.3	0.4	1.90
M2.5	0.45	2.05
M2.6	0.45	2.10
M3	0.5	2.50
M3.5	0.6	2.90
M4	0.7	3.30
M4.5	0.75	3.80
M5	0.8	4.20
M6	1	5.00
M7	1	6.00
M8	1.25	6.80
M9	1.25	7.80
M10	1.5	8.50
M11	1.5	9.50
M12	1.75	10.20
M14	2	12.00
M16	2	14.00
M18	2.5	15.50
M20	2.5	17.50
M22	2.5	19.50
M24	3	21.00
M27	3	24.00
M30	3.5	26.50
M33	3.5	29.50

Cutting Taps (M)		
Size	**Pitch**	**Drill Hole Diam.**
M36	4	32.00
M39	4	35.00
M42	4.5	37.50
M45	4.5	40.50
M48	5	43.00
M52	5	47.00

Cutting Taps (MF)		
Size	**Pitch**	**Drill Hole Diam.**
M2	0.25	1.75
M2.2	0.25	1.95
M2.3	0.25	2.05
M2.5	0.35	2.15
M2.6	0.35	2.25
M3	0.35	2.65
M3.5	0.35	3.15
M4	0.35	3.65
M4	0.5	3.50
M5	0.5	4.50
M6	0.5	5.50
M6	0.75	5.20
M7	0.75	6.20
M8	0.5	7.50
M8	0.75	7.20
M8	1	7.00
M9	1	8.00
M10	0.75	9.20
M10	1	9.00
M10	1.25	8.80
M11	1	10.00
M12	1	11.00
M12	1.25	10.80
M12	1.5	10.50
M14	1	13.00
M14	1.25	12.80
M14	1.5	12.50
M15	1	14.00
M15	1.5	13.50
M16	1	15.00
M16	1.5	14.50
M18	1	17.00
M18	1.5	16.50

Cutting Taps (MF)		
Size	**Pitch**	**Drill Hole Diam.**
M18	2	16.00
M20	1	19.00
M20	1.5	18.50
M20	2	18.00
M22	1	21.00
M22	1.5	20.50
M22	2	20.00
M24	1	23.00
M24	1.5	22.50
M24	2	22.00
M25	1.5	23.50
M26	1.5	24.50
M27	1.5	25.50
M27	2	25.00
M28	1.5	26.50
M30	1	29.00
M30	1.5	28.50
M30	2	28.00
M32	1.5	30.50
M33	1.5	31.50
M33	2	31.00
M34	1.5	32.50
M35	1.5	33.50
M36	1.5	34.50
M36	2	34.00
M36	3	33.00
M38	1.5	36.50
M39	2	37.00
M39	3	36.00
M40	1.5	38.50
M40	2	38.00
M40	3	37.00
M42	1.5	40.50

Cutting Taps (MF)		
Size	**Pitch**	**Drill Hole Diam.**
M42	2	40.00
M42	3	39.00
M45	1.5	43.50
M45	2	43.00
M45	3	42.00
M48	1.5	46.50
M48	2	46.00
M48	3	45.00
M50	1.5	48.50
M50	2	48.00
M50	3	47.00
M52	1.5	50.50
M52	2	50.00
M52	3	49.00

Cutting Taps (UNC)		
Size	**Pitch**	**Drill Hole Diam.**
1-64	1.50	
2-56	1.80	
3-48	2.10	
4-40	2.30	
5-40	2.65	
6-32	2.85	
8-32	3.50	
10-24	3.90	
12-24	4.50	
1/4-20	5.10	
5/16-18	6.60	
3/8-16	8.00	
7/16-14	9.40	
1/2-13	10.80	
9/16-12	12.20	
5/8-11	13.50	
3/4-10	16.50	
7/8-9	19.50	
1-8	22.25	
1 1/8-7	25.00	
1 1/4-7	28.20	
1 3/8-6	31.00	
1 1/2-6	34.00	
1 3/4-5	39.50	
2-4	45.20	

Cutting Taps (UNF)		
Size	**Pitch**	**Drill Hole Diam.**
0-80	1.25	
1-72	1.55	
2-64	1.85	
3-56	2.10	
4-48	2.40	
5-44	2.70	
6-40	3.00	
8-36	3.50	
10-32	4.10	
12-28	4.65	
1/4-28	5.50	
5/16-24	6.90	
3/8-24	8.50	
7/16-20	9.90	
1/2-20	11.50	
9/16-18	12.90	
5/8-18	14.50	
3/4-16	17.50	
7/8-14	20.50	
1-12	23.25	
1 1/8-12	26.50	
1 1/4-12	29.75	
1 3/8-12	33.00	
1 1/2-12	36.00	

Cutting Taps (G)		
Size	**Pitch**	**Drill Hole Diam.**
G1/8	28	8.80
G1/4	19	11.80
G3/8	19	15.25
G1/2	14	19.00
G5/8	14	21.00
G3/4	14	24.50
G7/8	14	28.25
G1	11	30.75
G1 1/8	11	35.50
G1 1/4	11	39.50
G1 3/8	11	42.00
G1 1/2	11	45.00
G1 3/8	11	51.00
G2	11	57.00
G2 1/4	11	63.10
G2 1/2	11	72.80
G2 3/4	11	79.00
G3	11	85.30

Forming Taps (M)

Size	Pitch	Drill Hole Diam.			
		100%	90%	80%	70%
M1	0.25	0.86	0.87	**0.89**	0.90
M1	0.2	0.89	0.90	**0.91**	0.92
M1.1	0.25	0.96	0.97	**0.99**	1.00
M1.1	0.2	0.99	1.00	**1.01**	1.02
M1.2	0.25	1.06	1.07	**1.09**	1.10
M1.2	0.2	1.09	1.10	**1.11**	1.12
M1.4	0.3	1.23	1.25	**1.26**	1.28
M1.4	0.2	1.29	1.30	**1.31**	1.32
M1.6	0.35	1.40	1.42	**1.44**	1.46
M1.6	0.2	1.49	1.50	**1.51**	1.52
M1.7	0.35	1.50	1.52	**1.54**	1.56
M1.7	0.2	1.59	1.60	**1.61**	1.62
M1.8	0.35	1.60	1.62	**1.64**	1.66
M1.8	0.2	1.69	1.70	**1.71**	1.72
M2	0.4	1.77	1.80	**1.82**	1.84
M2	0.25	1.86	1.87	**1.89**	1.91
M2.2	0.45	1.94	1.97	**2.00**	2.02
M2.2	0.25	2.06	2.07	**2.09**	2.10
M2.3	0.4	2.07	2.10	**2.12**	2.14
M2.3	0.25	2.16	2.17	**2.19**	2.20
M2.5	0.45	2.24	2.27	**2.30**	2.32
M2.5	0.35	2.30	2.32	**2.34**	2.36
M2.6	0.45	2.34	2.37	**2.40**	2.42
M2.6	0.35	2.40	2.42	**2.44**	2.46
M3	0.6	2.66	2.69	**2.73**	2.76
M3	0.5	2.72	2.74	**2.77**	2.80
M3	0.35	2.80	2.82	**2.84**	2.86
M3.5	0.6	3.16	3.19	**3.23**	3.26
M3.5	0.35	3.30	3.32	**3.34**	3.36
M4	0.75	3.57	3.62	**3.66**	3.70
M4	0.7	3.60	3.64	**3.68**	3.72
M4	0.5	3.72	3.74	**3.77**	3.80

Forming Taps (M)

Size	Pitch	Drill Hole Diam.			
		100%	90%	80%	70%
M4.5	0.75	4.07	4.12	**4.16**	4.20
M4.5	0.5	4.22	4.24	**4.27**	4.30
M5	0.9	4.49	4.54	**4.59**	4.64
M5	0.8	4.55	4.59	**4.64**	4.68
M5	0.5	4.72	4.74	**4.77**	4.80
M5.5	0.9	4.99	5.04	**5.09**	5.14
M5.5	0.5	5.22	5.24	**5.27**	5.30
M6	1	5.43	5.49	**5.55**	5.60
M6	0.75	5.57	5.62	**5.66**	5.70
M6	0.5	5.72	5.74	**5.77**	5.80
M7	1	6.43	6.49	**6.55**	6.60
M7	0.75	6.57	6.62	**6.66**	6.70
M7	0.5	6.72	6.74	**6.77**	6.80
M8	1.25	7.29	7.36	**7.43**	7.50
M8	1	7.43	7.49	**7.55**	7.60
M8	0.75	7.57	7.62	**7.66**	7.70
M8	0.5	7.72	7.74	**7.77**	7.80
M9	1.25	8.29	8.36	**8.43**	8.50
M9	1	8.43	8.49	**8.55**	8.60
M9	0.75	8.57	8.62	**8.66**	8.70
M9	0.5	8.72	8.74	**8.77**	8.80
M10	1.5	9.15	9.23	**9.32**	9.40
M10	1.25	9.29	9.36	**9.43**	9.50
M10	1	9.43	9.49	**9.55**	9.60
M10	0.75	9.57	9.62	**9.66**	9.70
M10	0.5	9.72	9.74	**9.77**	9.80
M11	1.5	10.15	10.23	**10.32**	10.40
M11	1	10.43	10.49	**10.55**	10.60
M11	0.75	10.57	10.62	**10.66**	10.70
M12	1.75	11.01	11.11	**11.21**	11.31
M12	1.5	11.15	11.23	**11.32**	11.40
M12	1.25	11.29	11.36	**11.43**	11.50
M12	1	11.43	11.49	**11.55**	11.60

Forming Taps (M)

Size	Pitch	Drill Hole Diam.			
		100%	90%	80%	70%
M14	2	12.87	12.98	**13.09**	13.21
M14	1.5	13.15	13.23	**13.32**	13.40
M14	1.25	13.29	13.36	**13.43**	13.50
M14	1	13.43	13.49	**13.55**	13.60
M15	1.5	14.15	14.23	**14.32**	14.40
M15	1	14.43	14.49	**14.55**	14.60
M16	2	14.87	14.98	**15.09**	15.21
M16	1.5	15.15	15.23	**15.32**	15.40
M16	1	15.43	15.49	**15.55**	15.60
M17	1.5	16.15	16.23	**16.32**	16.40
M17	1	16.43	16.49	**16.55**	16.60
M18	2.5	16.58	16.72	**16.87**	17.01
M18	2	16.87	16.98	**17.09**	17.21
M18	1.5	17.15	17.23	**17.32**	17.40
M18	1	17.43	17.49	**17.55**	17.60
M20	2.5	18.58	18.72	**18.87**	19.01
M20	2	18.87	18.98	**19.09**	19.21
M20	1.5	19.15	19.23	**19.32**	19.40
M20	1	19.43	19.49	**19.55**	19.60
M22	2.5	20.58	20.72	**20.87**	21.01
M22	2	20.87	20.98	**21.09**	21.21
M22	1.5	21.15	21.23	**21.32**	21.40
M22	1	21.43	21.49	**21.55**	21.60
M24	2	22.87	22.98	**23.09**	23.21
M24	1.5	23.15	23.23	**23.32**	23.40
M24	1	23.43	23.49	**23.55**	23.60

Forming Taps (UNC)

Size	Pitch	Drill Hole Diam.			
		100%	90%	80%	70%
1-64		1.63	1.65	**1.67**	1.70
2-56		1.93	1.95	**1.98**	2.00
3-48		2.21	2.24	**2.27**	2.30
4-40		2.49	2.52	**2.56**	2.59
5-40		2.82	2.85	**2.89**	2.92
6-32		3.05	3.10	**3.14**	3.19
8-32		3.72	3.76	**3.81**	3.85
10-24		4.23	4.29	**4.35**	4.41
12-24		4.89	4.95	**5.01**	5.07
1/4-20		5.63	5.70	**5.77**	5.85
5/16-18		7.14	7.22	**7.30**	7.38
3/8-16		8.62	8.71	**8.80**	8.89
7/16-14		10.08	10.19	**10.29**	10.39
1/2-13		11.59	11.70	**11.81**	11.92
9/16-12		13.09	13.21	**13.33**	13.45
5/8-11		14.55	14.68	**14.81**	14.94
3/4-10		17.61	17.75	**17.90**	18.04

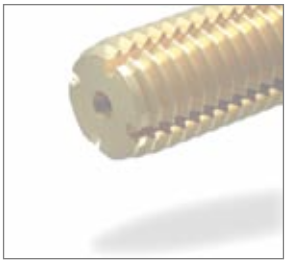
Forming Taps (UNF)

Size	Pitch	Drill Hole Diam.			
		100%	90%	80%	70%
0-80		1.34	1.36	**1.38**	1.40
1-72		1.65	1.67	**1.69**	1.71
2-64		1.96	1.98	**2.00**	2.03
3-56		2.26	2.28	**2.31**	2.34
4-48		2.54	2.57	**2.60**	2.63
5-44		2.85	2.88	**2.91**	2.95
6-40		3.15	3.18	**3.22**	3.25
8-36		3.77	3.81	**3.85**	3.89
10-32		4.38	4.42	**4.47**	4.51
12-28		4.97	5.02	**5.07**	5.13
1/4-28		5.84	5.89	**5.94**	5.99
5/16-24		7.34	7.40	**7.46**	7.52
3/8-24		8.92	8.98	**9.04**	9.10
7/16-20		10.39	10.46	**10.54**	10.61
1/2-20		11.98	12.05	**12.12**	12.20
9/16-18		13.49	13.57	**13.65**	13.73
5/8-18		15.06	15.14	**15.22**	15.30
3/4-16		18.15	18.24	**18.33**	18.42
7/8-14		21.20	21.30	**21.40**	21.50

Forming Taps (G)

Size	Pitch	Drill Hole Diam.			
		100%	90%	80%	70%
G1/8-28		9.17	9.22	**9.28**	9.33
G1/4-19		12.33	12.41	**12.49**	12.58
G3/8-19		15.83	15.92	**16.00**	16.08
G1/2-19		19.83	19.94	**20.06**	20.17







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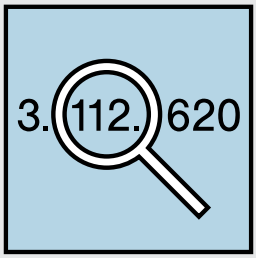
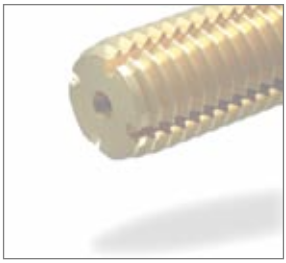


No.	P.	No.	P.	No.	P.	No.	P.
0.113.123	46	3.114.620	87	3.163.322-WF	263	6.112.122	156
0.113.126	48	3.114.920-LS	88	3.163.323	264	6.112.123	158
0.113.623	47	3.115.120	90	3.163.323-WF	265	6.112.153	160
0.113.626	49	3.115.120-LH	94	3.212.420	115	6.112.620-AT	153
0.213.423	50	3.115.220	89	3.212.422	118	6.112.621	155
0.213.426	51	3.115.620	91	3.213.420	112	6.112.622	157
0.693.526	52	3.115.620-LH	95	3.214.420	120	6.112.623	159
1.112.120	54	3.115.920-LS	92	3.215.420	122	6.112.653	161
1.112.123	56	3.115.952-SYN	103	3.216.422	124	6.113.121	150
1.112.620	55	3.116.122	96	3.219.810	288	6.113.621	151
1.112.623	57	3.116.622	97	3.222.420	125	6.114.121	162
1.113.923-MLT	14	3.117.120-LSP	98	3.225.420	126	6.114.621	163
1.113.980-MLT	16	3.117.620-LSP	99	3.392.120	128	6.115.120-AT	164
1.114.923-MLT	15	3.118.120	100	3.392.620	129	6.115.121	166
1.116.120	58	3.118.620	101	3.395.120	130	6.115.121-BT	168
1.116.123	60	3.119.710	275	3.395.620	131	6.115.122	170
1.116.620	59	3.119.710-LH	282	3.399.710	295	6.115.123	172
1.116.623	61	3.119.952-SYN	102	3.492.620	132	6.115.620-AT	165
1.153.323-SL	11	3.122.120	104	3.495.620	134	6.115.621	167
2.112.121	62	3.122.620	105	3.499.810	299	6.115.621-BT	169
2.112.621	63	3.125.120	106	3.692.520	136	6.115.622	171
2.115.121	64	3.125.620	107	3.693.520	135	6.115.623	173
2.115.621	65	3.142.120	108	3.693.920-WF	266	6.116.121	176
3.111.120	66	3.142.620	109	3.693.922-WF	267	6.116.153	178
3.111.620	67	3.145.120	110	3.693.923-WF	268	6.116.153-OH	180
3.112.120	72	3.145.620	111	3.694.520	137	6.116.221	174
3.112.120-LH	76	3.153.320	244	3.695.520	138	6.116.621	177
3.112.122	78	3.153.320-WF	246	3.699.510	302	6.116.653	179
3.112.129	80	3.153.321-WF	248	3.793.920	139	6.116.653-OH	181
3.112.126-WF	82	3.153.322	250	3.893.920	140	6.118.121	182
3.112.220	71	3.153.322-WF	252	5.112.150	142	6.118.621	183
3.112.620	73	3.153.323	254	5.112.153	144	6.119.721	284
3.112.620-LH	77	3.153.323-IT	243	5.112.650	143	6.119.721-P	286
3.112.622	79	3.153.323-IT-MIC	241	5.112.653	145	6.122.121	184
3.112.626-WF	83	3.153.323-WF	256	5.114.150	146	6.122.123	186
3.112.920-LS	75	3.158.923-IT-MIC	241	5.114.153	148	6.122.621	185
3.113.120	68	3.163.320	258	5.114.650	147	6.122.623	187
3.113.620	69	3.163.320-WF	259	5.114.653	149	6.125.121	188
3.114.120	86	3.163.321-WF	260	6.112.120-AT	152	6.125.123	190
3.114.220	84	3.163.322	262	6.112.121	154	6.125.621	189

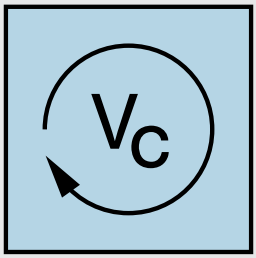
No.	P.	No.	P.	No.	P.	No.	P.
6.125.623	191	9.212.455	230				
6.153.329-IT	242	9.216.455	231				
6.153.329-IT-MIC	240						
6.158.929-IT-MIC	240						
6.212.421	192						
6.212.423	193						
6.215.421	194						
6.215.423	195						
6.222.421	196						
6.222.423	197						
6.225.421	198						
6.225.423	199						
6.392.121	200						
6.392.621	201						
6.395.121	202						
6.395.621	203						
6.492.621	204						
6.495.621	205						
6.692.521	206						
6.695.521	207						
7.112.150	209						
7.112.151	210						
7.112.650	209						
7.112.651	211						
7.114.150	213						
7.114.151	214						
7.114.650	213						
7.114.651	215						
9.112.155	220						
9.112.155-OH	222						
9.112.655	221						
9.112.655-OH	223						
9.113.983	216						
9.116.155	224						
9.116.155-OH	226						
9.116.655-OH	227						
9.116.159	228						
9.116.655	225						
9.116.659	229						
9.117.983	218						







CUTTING SPEED TABLES



	Cutting Taps		 ≤2xd	 >2xd
STEEL ≤ 500 N/mm²	**Soft Structural Steels S_U / R_m < 500 N/mm²**	**15~30**	**10~20**	**10~20**
STEEL 500-800 N/mm²	**Structural Steels and Free Cutting Steels S_U / R_m < 800 N/mm²**	**15~30**	**10~20**	**10~20**
STEEL 800-1200 N/mm²	**Heat Treated Steels, Alloyed Steels and Tool Steels S_U / R_m < 1'200 N/mm²**	**10~20**	**10~20**	**8~15**
STEEL 800-1300 N/mm²	**Unalloyed and Cold Work Tool Steels S_U / R_m < 1300 N/mm²**	**10~20**	**10~20**	**8~15**
	**Stainless Steels S_U / R_m < 1'200 N/mm²**	**8~20**	**5~15**	**5~15**
STEEL HRC 42-53	**Heat Treated Steels 42-53 HRC**	**2~3**	**1.5~3**	**1.5~3**
STEEL HRC 50-63	**Heat Treated Steels 50-63 HRC**	**2~3**	**1.5~3**	**1.5~3**
GG/G CAST	**Cast Iron**	**15~40**	**15~40**	**15~40**
CU	**Copper**	**5~30**	**5~30**	**5~30**
CU 200-300 HB	**Copper Alloys, 200-300 HB**	**5~30**	**5~30**	**5~30**
CU SHORT	**Copper Alloys, Short Chipping**	**5~30**	**5~30**	**5~30**

	Cutting Taps		≤2xd	>2xd
ALU	**Aluminium**	**15~60**	**15~60**	**15~60**
ALU Si <10%	**Aluminium Alloys with Si < 10%**	**10~60**	**10~40**	**10~40**
ALU Si >10%	**Aluminium Alloys with Si > 10%**	**10~60**	**10~40**	**10~40**
Ti	**Titanium**	**2~10**	**2~7**	**2~7**
Ni	**Nickel**	**2~10**	**2~7**	**2~7**
Ni 900-1500 N/mm²	**Nickel Alloys S_U / R_m 900-1500 N/mm²**	**2~4**	**2~4**	**2~4**

Cutting speeds may vary widely depending on work situation as well as on the taps used.
Therefore minimum speeds and maximum speeds are indicated.

To find the best suited cutting speeds test need to be conducted.
As general rules for testing please observe:

Factors requiring lower speeds
- Using taps made from HSSE
- Using taps without coating
- Cutting deep threads
- Difficult to machine materials

Factors allowing higher speeds
- Using taps made from powder metallurgic steels (PM)
- Using coated taps
- Short thread depths
- Easy to machine materials

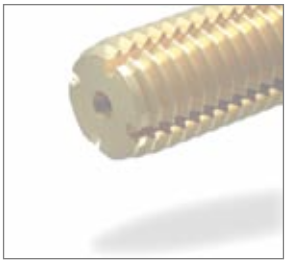
	Forming Taps		≤2xd	>2xd	>2xd
STEEL ≤ 500 N/mm²	**Soft Structural Steels S_U / R_m < 500 N/mm²**	10~30	10~30	8~25	8~25
STEEL 500-800 N/mm²	**Structural Steels and Free Cutting Steels S_U / R_m < 800 N/mm²**	10~30	10~30	8~25	8~25
STEEL 800-1200 N/mm²	**Heat Treated Steels, Alloyed Steels and Tool Steels S_U / R_m < 1'200 N/mm²**	5~20	5~20	3~15	3~15
STEEL 800-1300 N/mm²	**Unalloyed and Cold Work Tool Steels S_U / R_m < 1300 N/mm²**	5~20	5~20	3~15	3~15
CU	**Copper**	15~50	15~50	12~40	12~40
CU 200-300 HB	**Copper Alloys, 200-300 HB**	15~50	15~50	12~40	12~40
CU SHORT	**Copper Alloys, Short Chipping**	15~50	15~50	12~40	12~40
ALU	**Aluminium**	15~50	15~50	12~40	12~40
ALU Si <10%	**Aluminium Alloys with Si < 10%**	15~50	15~50	12~40	12~40
ALU Si >10%	**Aluminium Alloys with Si > 10%**	15~50	15~50	12~40	12~40

RPM for different cutting speeds and tap sizes

Diameter			Cutting Speed in m/min.													
S/M	G	UN	1	1.5	2	3	5	10	15	20	25	30	40	60	80	100
0.5			640	950	1.270	1.910	3.180	6.370	9.550							
0.6			530	800	1.060	1.590	2.650	5.310	7.960							
0.7			450	680	910	1.360	2.270	4.550	6.820	9.090						
0.8			400	600	800	1.190	1.990	3.980	5.970	7.960	9.950					
0.9			350	530	710	1.060	1.770	3.540	5.310	7.070	8.840					
1			320	480	640	950	1.590	3.180	4.770	6.370	7.960	9.550				
1.2			270	400	530	800	1.330	2.650	3.980	5.310	6.630	7.960				
1.4			230	340	450	680	1.140	2.270	3.410	4.550	5.680	6.820	9.090			
1.6			200	300	400	600	990	1.990	2.980	3.980	4.970	5.970	7.960			
1.7			190	280	370	560	940	1.870	2.810	3.740	4.680	5.620	7.490			
1.8			180	270	350	530	880	1.770	2.650	3.540	4.420	5.310	7.070			
2			160	240	320	480	800	1.590	2.390	3.180	3.980	4.770	6.370	9.550		
2.2			140	220	290	430	720	1.450	2.170	2.890	3.620	4.340	5.790	8.680		
2.3			140	210	280	420	690	1.380	2.080	2.770	3.460	4.150	5.540	8.300		
2.5			130	190	250	380	640	1.270	1.910	2.550	3.180	3.820	5.090	7.640		
2.6			120	180	240	370	610	1.220	1.840	2.450	3.060	3.670	4.900	7.350	9.790	
3		No.5	110	160	210	320	530	1.060	1.590	2.120	2.650	3.180	4.240	6.370	8.490	
3.5			90	140	180	270	450	910	1.360	1.820	2.270	2.730	3.640	5.460	7.280	9.090
4		No.8	80	120	160	240	400	800	1.190	1.590	1.990	2.390	3.180	4.770	6.370	7.960
5		No.10	60	100	130	190	320	640	950	1.270	1.590	1.910	2.550	3.820	5.090	6.370
6		1/4	50	80	110	160	270	530	800	1.060	1.330	1.590	2.120	3.180	4.240	5.310
8	1/16"	5/16	40	60	80	120	200	400	600	800	990	1.190	1.590	2.390	3.180	3.980
10	1/8"	7/16	30	50	60	100	160	320	480	640	800	950	1.270	1.910	2.550	3.180
12	1/4"	1/2	30	40	50	80	130	270	400	530	660	800	1.060	1.590	2.120	2.650
14		9/16	20	30	50	70	110	230	340	450	570	680	910	1.360	1.820	2.270
16	3/8"	5/8	20	30	40	60	100	200	300	400	500	600	800	1.190	1.590	1.990
18		3/4	20	30	40	50	90	180	270	350	440	530	710	1.060	1.410	1.770
20	1/2"		20	20	30	50	80	160	240	320	400	480	640	950	1.270	1.590
22	5/8"	7/8	10	20	30	40	70	140	220	290	360	430	580	870	1.160	1.450
24		1	10	20	30	40	70	130	200	270	330	400	530	800	1.060	1.330
27	3/4"	1 1/8	10	20	20	40	60	120	180	240	290	350	470	710	940	1.180
30	7/8"		10	20	20	30	50	110	160	210	270	320	420	640	850	1.060

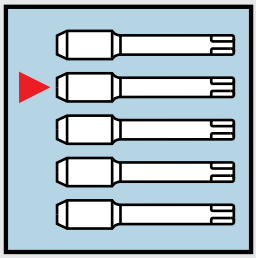
Example: to operate a tap of size M6 at cutting speed of 20m/min the spindle needs to rotate at 1060 rpm





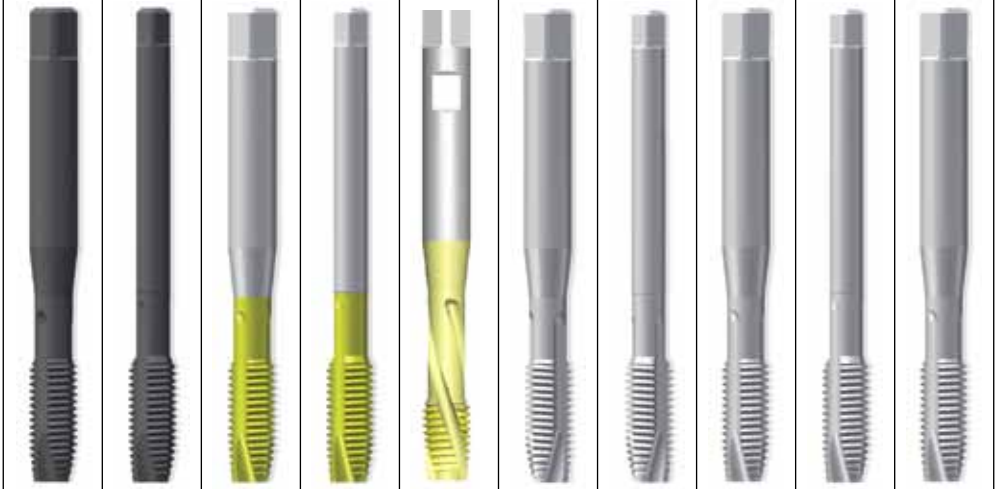


TAP SELECTION CHARTS





1.113.923 MLT	1.113.980 MLT	1.114.923 MLT	3.112.220	3.114.220	3.115.220	6.116.221	3.112.120	3.112.620	3.112.920 LS
14	16	15	71	84	89	174	72	73	75
FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P
6HX	6HX	6HX	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
				≤2xd	>2xd	>2xd			≤2xd
									O
			O	O	O	O	O	O	O
						O			
						O			
			O	O	O		O	O	O
						O			
O	O	O	O	O	O		O	O	O
O	O	O				O			
						O			



	2.112.121	2.112.621	3.112.122	3.112.622	3.119.952 SYNCHRO	3.112.120 LH	3.112.620 LH	3.122.120	3.122.620	3.142.120
	62	63	78	79	102	76	77	104	105	108
	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM D 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P
	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	6HX	ISO 2 (6H)	ISO 2 (6H)	ISO 3 (6G)	ISO 3 (6G)	7G
										
	O	O								
	O	O	O	O	O	O	O	O	O	O
					O					
					O					
					O					
					O					
			O	O	O	O	O	O	O	O
			O	O	O	O	O	O	O	O
					O					

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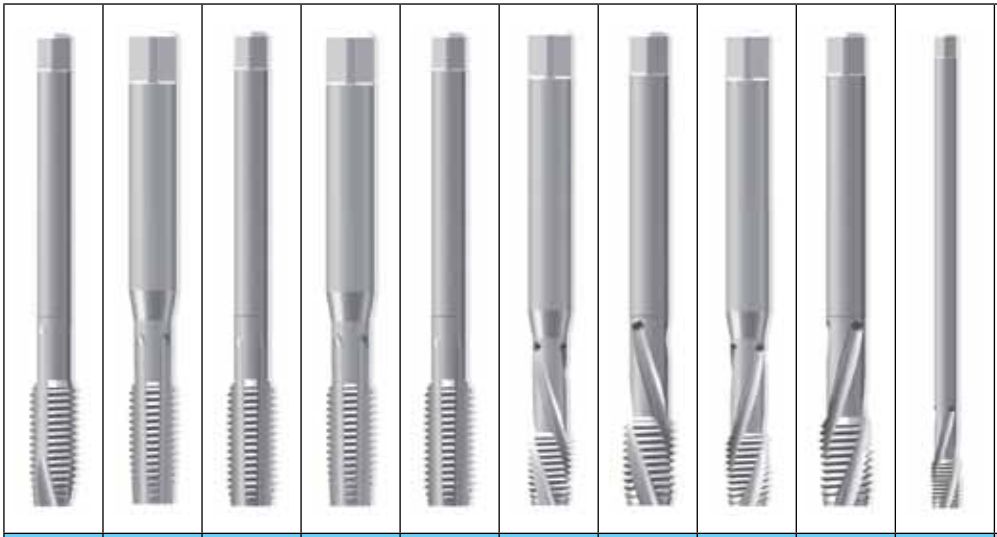

3.142.620	3.113.120	3.113.620	3.111.120	3.111.620	3.117.120 LSP	3.117.620 LSP	3.114.120	3.114.620	3.114.920 LS
109	68	69	66	67	98	99	86	87	88
FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM A 6-8 x P	FORM A 6-8 x P	FORM D 3.5-5 x P	FORM D 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P
7G	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
			≤2xd	≤2xd			≤2xd	≤2xd	≤2xd
									O
O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O

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	3.115.120	3.115.620	3.115.952 SYNCHRO	3.115.920 LS	2.115.121	2.115.621	3.118.120	3.118.620	3.116.122	3.116.622
	90	91	103	92	64	65	100	101	96	97
	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM E 1.5-2 x P	FORM E 1.5-2 x P	FORM C 2-3 x P	FORM C 2-3 x P
	ISO 2 (6H)	ISO 2 (6H)	6HX	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd
				O	O	O				
	O	O	O	O	O	O	O	O	O	O
			O							
			O							
			O							
			O							
	O	O	O	O			O	O	O	O
	O	O	O	O			O	O	O	O
			O							

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3.115.120 LH	3.115.620 LH	3.125.120	3.125.620	3.145.120	3.145.620	6.112.121	6.112.621	6.113.121	6.113.621
94	95	106	107	110	111	154	155	150	151
FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P
ISO 2 (6H)	ISO 2 (6H)	ISO 3 (6G)	ISO 3 (6G)	7G	7G	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
>2xd	>2xd	>2xd	>2xd	>2xd	>2xd			≤2xd	≤2xd
O	O	O	O	O	O	O	O	O	O
						O	O	O	O
						O	O	O	O
O	O	O	O	O	O				
						O	O	O	O
O	O	O	O	O	O				
						O	O	O	O
						O	O	O	O

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	6.112.122	6.112.622	6.112.123	6.112.623	6.122.121	6.122.621	6.122.123	6.122.623	6.112.120 AT	6.112.620 AT
	156	157	158	159	184	185	186	187	152	153
	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P
	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 3 (6G)	ISO 3 (6G)	ISO 3 (6G)	ISO 3 (6G)	ISO 2 (6H)	ISO 2 (6H)
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O

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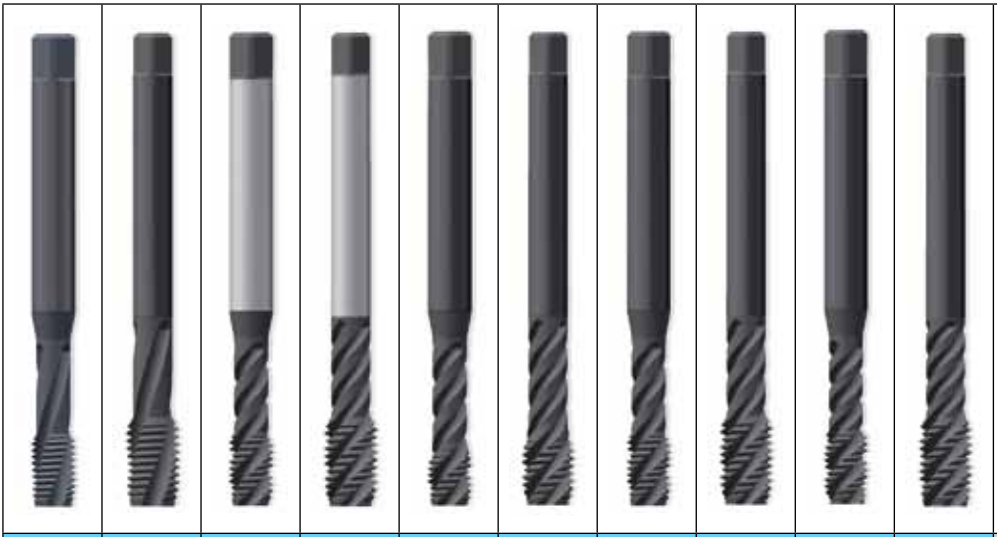

6.114.121	6.114.621	6.115.121	6.115.621	6.115.121 BT	6.115.621 BT	6.118.121	6.118.621	6.116.121	6.116.621
162	163	166	167	168	169	182	183	176	177
FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM E 1.5-2 x P	FORM E 1.5-2 x P	FORM C 2-3 x P	FORM C 2-3 x P
ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
≤2xd	≤2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd
O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O
O	O	O	O	O	O	O	O	O	O



	6.115.120 AT	6.115.620 AT	6.115.122	6.115.622	6.115.123	6.115.623	6.125.121	6.125.621	6.125.123	6.125.623
	164	165	170	171	172	173	188	189	190	191
	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P
	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 3 (6G)	ISO 3 (6G)	ISO 3 (6G)	ISO 3 (6G)
	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O	O

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1.112.120	1.112.620	1.112.123	1.112.623	1.116.120	1.116.620	1.116.123	1.116.623	0.113.126	0.113.626
54	55	56	57	58	59	60	61	48	49
FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P
ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	6HX	6HX
				>2xd	>2xd	>2xd	>2xd	≤2xd	≤2xd
								O	O
O	O	O	O	O	O	O	O		
								O	O
								O	O
O	O	O	O	O	O	O	O		
O	O	O	O	O	O	O	O		











	0.113.123	0.113.623	3.112.126 WF	3.112.626 WF	3.112.122	5.112.150	5.112.650	5.112.153	5.112.653
	46	47	82	83	78	142	143	144	145
	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P
	6HX	6HX	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
	≤2xd	≤2xd							
			O	O	O				
			O	O	O				
						O	O	O	O
						O	O	O	O
	O	O							
			O	O	O				
	O	O							
	O	O							
			O	O	O				

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7.112.151	7.112.651	7.112.150	7.112.650	6.112.153	6.112.653	9.112.155	9.112.655	9.112.155 OH	9.112.655 OH
210	211	209	209	160	161	220	221	222	223
FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P
ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	6HX	6HX	6HX	6HX
				O	O	O	O	O	O
				O	O	O	O	O	O
						O	O	O	O
				O	O	O	O	O	O
						O	O	O	O
				O	O				
						O	O	O	O
				O	O				
O	O								
				O	O	O	O	O	O
		O	O						



	5.114.150	5.114.650	5.114.153	5.114.653	7.114.150	7.114.650	7.114.151	7.114.651	6.116.153	6.116.653
	146	147	148	149	213	213	214	215	178	179
	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P
	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
	≤2xd	≤2xd	≤2xd	≤2xd	≤2xd	≤2xd	≤2xd	≤2xd	>2xd	>2xd
									O	O
	O	O	O	O					O	O
	O	O	O	O						
									O	O
									O	O
									O	O
							O	O		
									O	O
					O	O				

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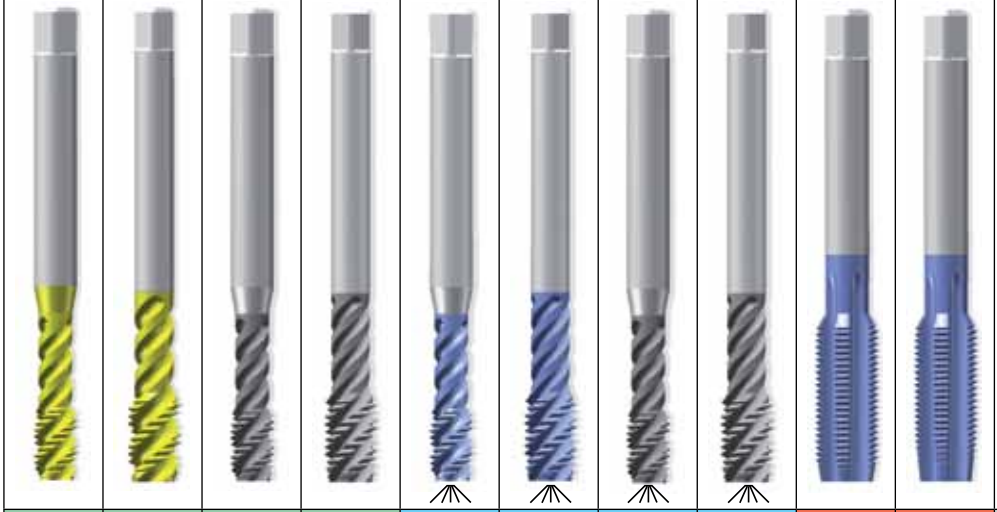
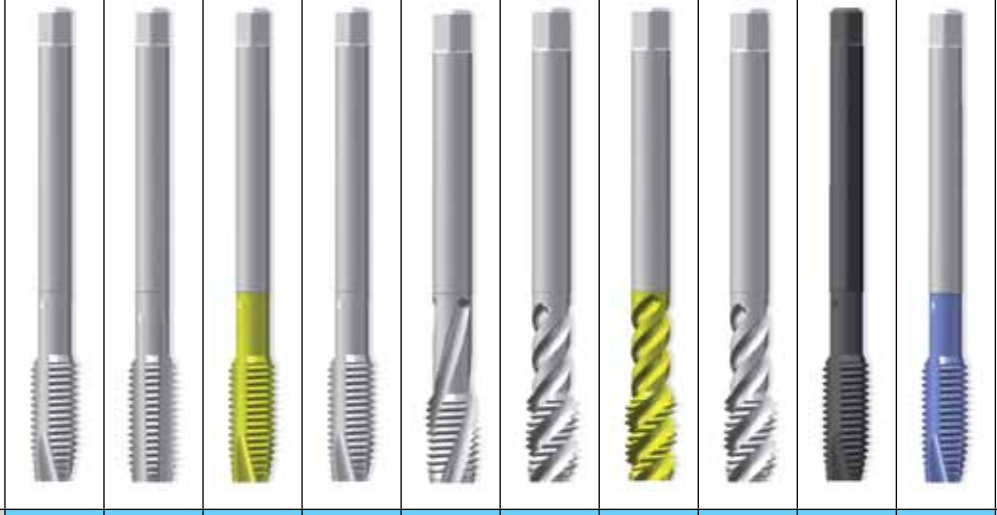


9.116.159	9.116.659	9.116.155	9.116.655	6.116.153 OH	6.116.653 OH	9.116.155 OH	9.116.655 OH	9.113.983	9.117.983
228	229	224	225	180	181	226	227	216	218
FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM D 3.5-5 x P
ISO 2 (6H)	ISO 2 (6H)	6HX	6HX	ISO 2 (6H)	ISO 2 (6H)	6HX	6HX	6HX	6HX
>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	≤2xd	≤2xd
O	O	O	O	O	O	O	O		
O	O	O	O	O	O	O	O		
O	O	O	O			O	O		
O	O	O	O	O	O	O	O		
								O	O
O	O	O	O			O	O		
O	O	O	O			O	O		
				O	O				
O	O	O	O			O	O		
				O	O	O			
O	O	O	O	O	O	O	O		



	3.212.420	3.213.420	3.212.422	3.222.420	3.214.420	3.215.420	3.216.422	3.225.420	6.212.421	6.212.423
	115	112	118	125	120	122	124	126	192	193
	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P
	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)	ISO 2 (6H)
		≤2xd			≤2xd	>2xd	>2xd	>2xd		
	O	O	O	O	O	O	O	O		
	O	O	O	O	O	O	O	O	O	O
									O	O
									O	O
	O	O	O	O	O	O	O	O		
									O	O
	O	O	O	O	O	O	O	O		
									O	O
									O	O

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6.222.421	6.222.423	6.215.421	6.215.423	6.225.421	6.225.423	0.213.426	0.213.423	9.212.455	9.216.455	
196	197	194	195	198	199	51	50	230	231	
FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	
ISO 3 (6G)	ISO 3 (6G)	ISO 2 (6H)	ISO 2 (6H)	ISO 3 (6G)	ISO 3 (6G)	6HX	6HX	6HX	6HX	
		>2xd	>2xd	>2xd	>2xd	≤2xd	≤2xd		>2xd	
O	O	O	O	O	O			O	O	
O	O	O	O	O	O			O	O	
								O	O	
O	O	O	O	O	O			O	O	
						O	O	O	O	
								O	O	
O	O	O	O	O	O	O	O			
						O	O			
								O	O	
O	O	O	O	O	O					
O	O	O	O	O	O			O	O	

											
		9.113.983	**9.117.983**								
		216	**218**								
		FORM C 2-3 x P	**FORM D 3.5-5 x P**								
		6HX	**6HX**								
		≤2xd	≤2xd								
		O	O								

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3.692.520	3.693.520	3.694.520	3.695.520	6.692.521	6.695.521	0.693.526		9.113.983	9.117.983	
136	135	137	138	206	207	52		216	218	
FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P		FORM C 2-3 x P	FORM D 3.5-5 x P	
ISO 228	ISO 228	ISO 228	ISO 228	ISO 228	ISO 228	ISO 228		6HX	6HX	
		≤2xd	>2xd					≤2xd	≤2xd	
O	O	O	O	O	O					
O	O	O	O	O	O					
				O	O					
				O	O					
								O	O	
						O				
O	O	O	O							
				O	O	O				
						O				
O	O	O	O							
				O	O					
				O	O					

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	3.392.120	3.392.620	3.395.120	3.395.620	6.392.121	6.392.621	6.395.121	6.395.621			
	128	129	130	131	200	201	202	203			
	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM B 3.5-5 x P	FORM B 3.5-5 x P	FORM C 2-3 x P	FORM C 2-3 x P			
	2B B1.1	2B B1.1	2B B1.1	2B B1.1	2B B1.1	2B B1.1	2B B1.1	2B B1.1			
			>2xd	>2xd			>2xd	>2xd			
	O	O	O	O	O	O	O	O			
	O	O	O	O	O	O	O	O			
					O	O	O	O			
					O	O	O	O			
	O	O	O	O							
					O	O	O	O			
	O	O	O	O							
					O	O	O	O			
					O	O	O	O			

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3.492.620	**3.495.620**	**6.492.621**	**6.495.621**							
132	**134**	**204**	**205**							
FORM B 3.5-5 x P	**FORM C 2-3 x P**	**FORM B 3.5-5 x P**	**FORM C 2-3 x P**							
2B B1.1	**2B B1.1**	**2B B1.1**	**2B B1.1**							
										
O	O									
O	O	O	O							
		O	O							
		O	O							
O	O	O	O							
		O	O							
O	O									
		O	O							
		O	O							

	PG		NPT								
											
	3.893.920		**3.793.920**								
	140		**139**								
	FORM C 2-3 x P		**FORM C 2-3 x P**								
	2B B1.1		**ANSI B1.1**								
	≤2xd		≤2xd								
	O		O								
	O		O								
	O		O								
	O		O								

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1.153.323 SL	6.158.929 IT Micro	6.153.329 IT	3.158.923 IT Micro	3.153.323 IT	3.153.320	3.153.320 WF	3.153.321 WF	3.153.322	3.153.322 WF
11	240	242	241	243	244	246	248	250	252
FORM C 2-3 x P	FORM E 2-3 x P	FORM C 2-3 x P	FORM E 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P
5HX / 6HX	4HX	4HX - 6HX	4HX	4HX - 6HX	6HX	6HX	6HX	6HX	6HX
>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd
	O	O	O	O	O	O	O	O	O
	O	O	O	O	O	O	O	O	O
					O	O	O	O	O
	O	O			O	O	O	O	O
			O	O	O	O	O	O	O
O			O	O	O	O	O	O	O
O			O	O	O	O	O	O	O
O			O	O					



	3.153.323	3.153.323 WF	3.163.320	3.163.320 WF	3.163.321 WF	3.163.322	3.163.322 WF	3.163.323	3.163.323 WF		
	254	256	258	259	260	262	263	264	265		
	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P	FORM C 2-3 x P		
	6HX	6HX	6GX	6GX	6GX	6GX	6GX	6GX	6GX		
	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd	>2xd		
	O	O	O	O	O	O	O	O	O		
	O	O	O	O	O	O	O	O	O		
	O	O	O	O	O	O	O	O	O		
	O	O	O	O	O	O	O	O	O		
	O	O	O	O	O	O	O	O	O		
	O	O	O	O	O	O	O	O	O		
	O	O	O	O	O	O	O	O	O		

										
3.693.920 WF	**3.693.922 WF**	**3.693.923 WF**								
266	**267**	**268**								
FORM C 2-3 x P	**FORM C 2-3 x P**	**FORM C 2-3 x P**								
6HX	**6HX**	**6HX**								
										
O	O	O								
O	O	O								
O	O	O								
O	O	O								
O	O	O								
O	O	O								

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	M	M	MF			
						
	3.119.710	**3.119.710 LH**	**3.219.810**			
	275	**282**	**288**			
	FORM C 2-3 x P	**FORM C 2-3 x P**	**FORM C 2-3 x P**			
	ISO 2 (6H)	**ISO 2 (6H)**	**ISO 2 (6H)**			
	≤2xd	≤2xd	≤2xd			
	O	O				
	O	O	O			
	O	O	O			
	O	O	O			

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6.119.721	**6.119.721 Pilot**					
284	**286**					
FORM C 2-3 x P	**FORM C 2-3 x P**					
ISO 2 (6H)	**ISO 2 (6H)**					
≤2xd	≤2xd					
O	O					
O	O					
O	O					
O	O					
O	O					
O	O					

	G		UNC		UNF		
							
	3.699.510		**3.399.710**		**3.499.810**		
	302		**295**		**299**		
	FORM C 2-3 x P		**FORM C 2-3 x P**		**FORM C 2-3 x P**		
	DIN 13		**ISO 2 (6H)**		**DIN 13**		
							
	O		O		O		
	O		O		O		
	O		O		O		

	Catalog No.	
	Pages	
	Chamfer	
	Tolerance	
	Hole type	
	S_U / R_m < 500 N/mm²	**STEELS**
	S_U / R_m < 800 N/mm²	
	S_U / R_m < 1200 N/mm²	
	S_U / R_m < 1300 N/mm²	
	Stainless / Inox < 1200 N/mm²	
	HRC 42-53 Tempered Steels	
	HRC 50-63 Tempered Steels	
	Cast Iron	**CAST**
	CU	**COPPER**
	Copper Alloys 200-300 HB	
	Copper Alloys short chipping	
	AL	**ALUMINIUM ZINC**
	AL Si < 10%	
	AL Si > 10% / ADC / ZDC	
	Ti	**TITANIUM**
	Ni	**NICKEL**
	Ni Alloys S_U / R_m 900-1'500 N/mm²	

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