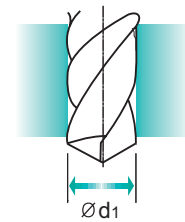
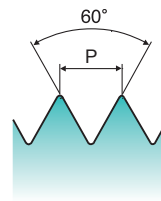
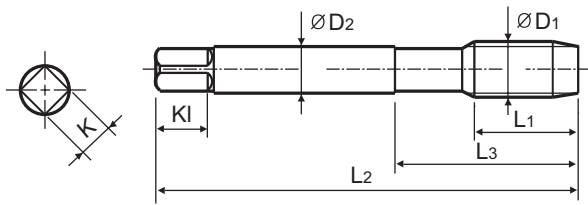
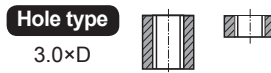


MF ISO Metric fine threads DIN 13
 • Metrisches ISO-Feingewinde DIN 13
 • ISO MÉTRIQUE PAS FINS DIN13
 • ISO Metrico passo grosso DIN 13

► For stainless steels and correct thread profiles & long tool life due to special tap geometry. YG-1 company has a patent.

► Für rostfreie stähle, genaue Gewindeprofile und lange Standzeit dank einer besonderen Schneidengeometrie. Von YG-1 patentiert.



Material groups: **VA** HSS-PM DIN 374 6H 60° B Vap

Machine taps
Maschinengewindebohrer

Recommended Cutting Page : P.117

Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	L1	L2	L3	ØD2	K	KI	Z	Ød1
M4 × 0.5		TQ438256	10	63	21	2.8	2.1	5	3	3.5
M5 × 0.5		TQ438296	11	70	25	3.5	2.7	6	3	4.5
M6 × 0.75		TQ438326	13	80	30	4.5	3.4	6	3	5.2
M6 × 0.5		TQ438336	13	80	30	4.5	3.4	6	3	5.5
M7 × 0.75		TQ438356	14	80	30	5.5	4.3	7	3	6.2
M8 × 1		TQ438376	17	90	36	6	4.9	8	3	7
M8 × 0.75		TQ438386	14	80	30	6	4.9	8	3	7.2
M10 × 1.25		TQ438436	22	100	40	7	5.5	8	3	8.8
M10 × 1		TQ438446	18	90	36	7	5.5	8	3	9
M10 × 0.75		TQ438456	18	90	36	7	5.5	8	3	9.2
M12 × 1.5		TQ438516	22	100	40	9	7	10	3	10.5
M12 × 1.25		TQ438526	22	100	40	9	7	10	3	10.8
M12 × 1		TQ438536	18	100	40	9	7	10	3	11

* Coating(TiN, TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended		○		○		○	○					◎	◎	◎							
ISO	N										S						H				
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys						Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					○



COMBO TAPS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

THREAD MILLS					TB744	TC814	TD814	TB814	TCJ05	TDJ05	TBJ05	TCJ06		
	SYNCHRO TAPS					TB754	TC854	TD854	TB854	TCJ09			TDJ09	
COMBO TAPS					TQ744	TC834	TD834	TB834	TCJ01	TDJ01				
YG TAP GENERAL					TQ754	TC874	TD874	TB874	TCJ02	TDJ02				
YG TAP STEEL	ISO	VDI 3323	Material Description	HB	HRC	Vc (m/min)								
YG TAP HARDENED	P	1	Non-alloy steel	125			15-20	20-25	15-20	15-20	20-25	15-20	15-20	
		2		190	13	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	
		3		250	25		12-18	18-24	12-18	12-18	18-24	12-18	12-18	
		4		270	28	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	
		5		300	32		6-10	10-14	6-10	6-10	10-14	6-10	6-10	
		6	Low alloy steel	180	10	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	
		7		275	29	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	
		8		300	32		6-10	10-14	6-10	6-10	10-14	6-10	6-10	
		9		350	38		3-5	5-7	3-5	3-5	5-7	3-5	3-5	
		10		High alloyed steel, and tool steel	200	15		3-5	5-7	3-5	3-5	5-7	3-5	3-5
		11			325	35								
YG TAP INOX	M	12	Stainless steel	200	15	7-10	7-10	10-15	7-10	7-10	10-15	7-10	7-10	
YG TAP CAST IRON		13		240	23	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	
YG TAP ALU		14		180	10	4-6	4-6	6-8	4-6	4-6	6-8	4-6	4-6	
YG TAP Ti Ni	K	15	Grey cast iron	180	10		10-15	15-20	10-15	10-15	15-20	10-15	10-15	
		16		260	26		5-8	8-11	5-8	5-8	8-11	5-8	5-8	
		17	Nodular cast iron	160	3		10-15	15-20	10-15	10-15	15-20	10-15	10-15	
		18		250	25		5-8	8-11	5-8	5-8	8-11	5-8	5-8	
19	Malleable cast iron	130												
20		230	21											
NUT TAPS	N	21	Aluminum-wrought alloy	60										
		22		100										
		23	Aluminum-cast, alloyed	75			15-20	20-25	15-20	15-20	20-25	15-20	15-20	
		24		90										
		25		130										
		26	Copper and Copper Alloys (Bronze / Brass)	110			25-35	35-40	25-35	25-35	35-40	25-35	25-35	
		27		90			8-12	12-17	8-12	8-12	12-17	8-12	8-12	
		28		100		15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	
		29	Non Metallic Materials											
30														
PIPE TAPS	S	31	Heat Resistant Super Alloys	200	15									
		32		280	30									
		33		250	25									
		34		350	38									
		35		320	34									
		36	Titanium Alloys	400 Rm										
		37		1050 Rm										
TECHNICAL DATA	H	38	Hardened steel	550	55									
		39		630	60									
		40	Chilled Cast Iron	400	42									
		41	Hardened Cast Iron	550	55									



RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

	TDJ06	TBJ06	TCJ07	TDJ07	TBJ07	TCJ08	TDJ08	TBJ08	TC814-IC	TC445	TB428 TB438	TQ428 TQ438
VDI 3323	Vc (m/min)											
1	20-25	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20		
2	20-25	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20	15-20	15-20
3	18-24	12-18	12-18	18-24	12-18	12-18	18-24	12-18	12-18	12-18		
4	15-20	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15	10-15
5	10-14	6-10	6-10	10-14	6-10	6-10	10-14	6-10	6-10	6-10		
6	15-20	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15	10-15
7	15-20	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15	10-15
8	10-14	6-10	6-10	10-14	6-10	6-10	10-14	6-10	6-10	6-10		
9	5-7	3-5	3-5	5-7	3-5	3-5	5-7	3-5	3-5	3-5		
10	5-7	3-5	3-5	5-7	3-5	3-5	5-7	3-5	3-5	3-5		
11												
12	10-15	7-10	7-10	10-15	7-10	7-10	10-15	7-10	7-10	7-10	7-10	7-10
13	8-11	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	5-8	5-8	5-8
14	6-8	4-6	4-6	6-8	4-6	4-6	6-8	4-6	4-6	4-6	4-6	4-6
15	15-20	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15		
16	8-11	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	5-8		
17	15-20	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15		
18	8-11	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	5-8		
19												
20												
21												
22												
23	20-25	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20		
24												
25												
26	35-40	25-35	25-35	35-40	25-35	25-35	35-40	25-35	25-35	25-35		
27	12-17	8-12	8-12	12-17	8-12	8-12	12-17	8-12	8-12	8-12		
28	20-25	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20	15-20	15-20
29												
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SURFACE TREATMENT AND COATING

The applied High Speed Steels holds a grant of good wear resistance and toughness. Therefore YG-1 normally delivers taps with bright and unfinished surface. For certain materials, various surface treatments provide higher advantage in machining.

STEAM TEMPERED - Vap

Steam Tempered is a Fe₃O₄-oxyd-coating which reduces friction between the tool and workpiece, also preventing cold welding.

NITRIDING - NI

Recommend surface treatment for machining materials that affect wear abrasion, such as grey cast iron, alu-alloys with high Si-percentages (more than 10%).

Below are the various surface treatments for excellent finish surfaces suitable for many applications. The surface treatments are produced and developed within the company.

TiN-COATING

TiN-coating yields a hardness of approx. 2,300 HV and also a heat resistant up to approx. 600°C. The current coating is an excellent all-round coating for normal applications.

Colour : Golden Coefficient of friction against steel : 0.4

TiCN-COATING

TiCN takes place of TiN when the conditions require the coating to have a different hardness and toughness.

The TiCN brings advantages for machining very difficult steels or cutting interrupted bores.

The TiCN-coating has a hardness of approx. 3,000 HV, but is heat resistance only holds up to approx. 400°C, meaning that the TiCN needs an excellent cooling system for a long service life.

Colour : Blue-Grey Coefficient of friction against steel : 0.4

TiAlN-COATING

A special coating for machining abrasive materials such as grey cast iron, alu-alloys with silicon, fiber reinforced plastics, etc., or machining at high temperatures with insufficient cooling, or at high speeds ≥ 600 m/min. TiAlN has a hardness of approx. 3,000 HV and is heat resistant up to approx. 800°C.

Colour : Violet-Grey Coefficient of friction against steel : 0.4

Hardslick-COATING

Hardslick combines the advantages of an extremely hard, thermally stable TiAlN-coating with the sliding and lubricating properties of an outer WC/C(Tungsten carbide/carbon)-coating in a novel way. The Hardslick coating has a hardness of approx. 3,000 HV and is temperature-resistant up to approx. 800°C.

Colour : Violet-Grey Coefficient of friction against steel : 0.2

SELECTION GUIDE



HSS-E & HSS-PM COMBO TAPS

For Multi Purpose Tapping
YG-1's Patent



Please visit
globalyg1.com/mat
for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.114

HOLE TYPE		Max. 3.0xD Through Hole						
TOOL MATERIAL		HSS-E						
CHAMFER LEAD ACC. TO DIN2197		B	B	B	B	B	B	
FLUTE TYPE		Spiral Point	Spiral Point	Spiral Point	Spiral Point	Spiral Point	Spiral Point	
SPIRAL FLUTE ANGLE		-	-	-	-	-	-	
SERIES	M	DIN 371/376	TC814 (P.95)	TD814 (P.95)	TB814 (P.95)	TCJ05 (P.96)	TDJ05 (P.96)	TBJ05 (P.96)
		DIN352						
		DIN357/LONG						
	MF	DIN374	TC854 (P.100)	TD854 (P.100)	TB854 (P.100)	TCJ09 (P.102)	TDJ09 (P.102)	
		DIN2181						
	UNC	DIN 371/376	TC834 (P.109)	TD834 (P.109)	TB834 (P.109)	TCJ01 (P.110)	TDJ01 (P.110)	
		DIN351						
	UNF	DIN 371/374	TC874 (P.111)	TD874 (P.111)	TB874 (P.111)	TCJ02 (P.112)	TDJ02 (P.112)	
		DIN2181						
	BSW	DIN2182/2183						
		DIN351						
	G(BSP)	DIN5156/5157						
	EG-M	DIN 371/376						
	EG-UNC	DIN 371/376						
EG-UNF	DIN 371/374							
SURFACE TREATMENT		Bright	TiN	VAP	Bright	TiN	VAP	
MODEL								

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC						
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	○	○	○	○	○
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
	4	Low alloy steel	About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	6			Annealed	180	10	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎
	8	High alloyed steel, and tool steel		Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	9			Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎
	10			Annealed	200	15	○	○	○	○	○	○
	11		Quenched & Tempered	325	35							
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎	◎	◎	◎	◎
	13		Martensitic	Quenched & Tempered	240	23	◎	◎	◎	◎	◎	◎
	14		Austenitic		180	10	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎	◎	◎	◎	◎
	16		Pearlitic (Martensitic)		260	26	◎	◎	◎	◎	◎	◎
	17	Nodular cast iron	Ferritic		160	3	◎	◎	◎	◎	◎	◎
	18		Pearlitic		250	25	◎	◎	◎	◎	◎	◎
	19		Ferritic		130							
20	Malleable cast iron	Pearlitic		230	21							
N	21	Aluminum-wrought alloy	Not Curable		60							
	22		Curable Hardened		100							
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎	◎	◎	◎	◎	◎
	24		≤ 12% Si, Curable Hardened		90							
	25		> 12% Si, Not Curable		130							
	26		Cutting Alloys, PB>1%		110		◎	◎	◎	◎	◎	◎
	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90		◎	◎	◎	◎	◎	◎
	28		CuSn, lead-free copper and electrolytic copper		100		◎	◎	◎	◎	◎	◎
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic									
	30		Rubber, Wood, etc.									
S	31	Heat Resistant Super Alloys	Fe Based Annealed		200	15						
	32		Cured		280	30						
	33		Annealed		250	25						
	34		Ni or Co Based Cured		350	38						
	35		Cast		320	34						
	36	Titanium Alloys	Pure Titanium		400 Rm							
	37		Alpha + Beta Alloys Hardened		1050 Rm							
H	38	Hardened steel	Hardened		550	55						
	39		Hardened		630	60						
	40	Chilled Cast Iron	Cast		400	42						
	41	Hardened Cast Iron	Hardened		550	55						

