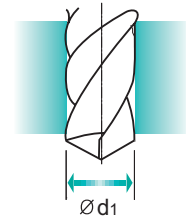
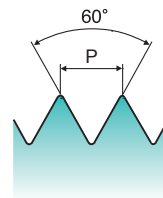
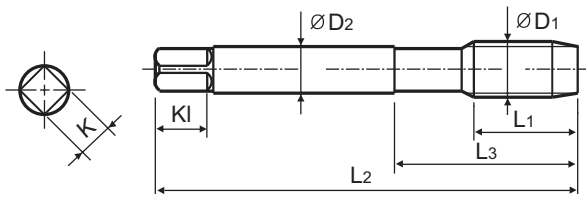


MF ISO Metric fine threads DIN 13
 ● Metrisches ISO-Feingewinde DIN 13
 ○ ISO MÉTRIQUE PAS FINS DIN13
 ○ ISO Metrico passo grosso DIN 13

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

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



Material groups: **MU** HSS-E DIN 374 6G 60° B Bright TiN

Machine taps
Maschinengewindebohrer

Recommended Cutting Page : P.116

Unit : mm

SIZE	Pitch	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN								
M4	× 0.5	TCJ09256	TDJ09256	10	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	TCJ09296	TDJ09296	11	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	TCJ09326	TDJ09326	13	80	30	4.5	3.4	6	3	5.2
M6	× 0.5	TCJ09336	TDJ09336	13	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	TCJ09356	TDJ09356	14	80	30	5.5	4.3	7	3	6.2
M8	× 1	TCJ09376	TDJ09376	17	90	36	6	4.9	8	3	7
M8	× 0.75	TCJ09386	TDJ09386	14	80	30	6	4.9	8	3	7.2
M10	× 1.25	TCJ09436	TDJ09436	22	100	40	7	5.5	8	3	8.8
M10	× 1	TCJ09446	TDJ09446	18	90	36	7	5.5	8	3	9
M10	× 0.75	TCJ09456	TDJ09456	18	90	36	7	5.5	8	3	9.2
M12	× 1.5	TCJ09516	TDJ09516	22	100	40	9	7	10	3	10.5
M12	× 1.25	TCJ09526	TDJ09526	22	100	40	9	7	10	3	10.8
M12	× 1	TCJ09536	TDJ09536	18	100	40	9	7	10	3	11
M14	× 1.5	TCJ09556	TDJ09556	22	100	40	11	9	12	3	12.5
M14	× 1.25	TCJ09566	TDJ09566	22	100	40	11	9	12	3	12.8
M14	× 1.0	TCJ09576	TDJ09576	22	100	40	11	9	12	3	13
M16	× 1.5	TCJ09616	TDJ09616	22	100	40	12	9	12	3	14.5
M16	× 1	TCJ09626	TDJ09626	18	100	40	12	9	12	3	15
M18	× 1.5	TCJ09676	TDJ09676	25	110	44	14	11	14	4	16.5
M18	× 1	TCJ09686	TDJ09686	20	110	44	14	11	14	4	17

* The other coating(TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

► NEXT PAGE

◎ : 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	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			◎			◎	◎	◎													



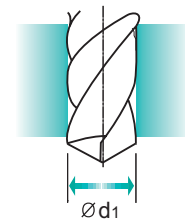
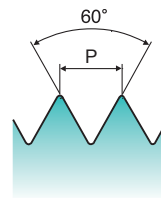
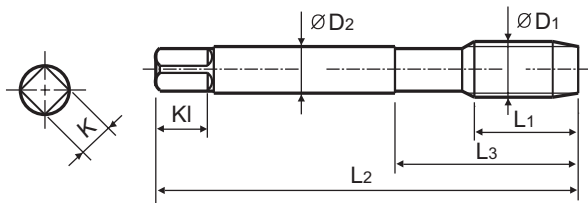
Bright **TCJ09** SERIES
TiN **TDJ09** SERIES

MF ISO Metric fine threads DIN 13

● Metrisches ISO-Feingewinde DIN 13
● ISO MÉTRIQUE PAS FINS DIN13
● ISO Metrico passo grosso DIN 13

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

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



Material groups **MU** **HSS-E** **DIN 374** **6G** **60°** **B** **Bright TiN**

Machine taps
Maschinengewindebohrer

Recommended Cutting Page : P.116

Unit : mm

SIZE	Pitch	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN								
M20 × 1.5		TCJ09726	TDJ09726	25	125	50	16	12	15	4	18.5
M20 × 1		TCJ09736	TDJ09736	20	125	50	16	12	15	4	19
M22 × 1.5		TCJ09766	TDJ09766	25	125	50	18	14.5	17	4	20.5
M22 × 1		TCJ09776	TDJ09776	20	125	50	18	14.5	17	4	21
M24 × 2		TCJ09796	TDJ09796	27	140	54	18	14.5	17	4	22
M24 × 1.5		TCJ09806	TDJ09806	27	140	54	18	14.5	17	4	22.5
M26 × 1.5		TCJ09856	TDJ09856	28	140	54	18	14.5	17	4	24.5
M27 × 2		TCJ09876	TDJ09876	28	140	54	20	16	19	4	25
M27 × 1.5		TCJ09886	TDJ09886	28	140	54	20	16	19	4	25.5
M28 × 1.5		TCJ09916	TDJ09916	28	140	54	20	16	19	4	26.5
M30 × 2		TCJ09966	TDJ09966	30	150	57	22	18	21	4	28
M30 × 1.5		TCJ09976	TDJ09976	30	150	57	22	18	21	4	28.5

* The other coating(TiCN or TiAlN) or Surface Treatment(Steam Homo) 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			◎			◎	◎	◎													



RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

THREAD MILLS					TB744	TC814	TD814	TB814	TCJ05	TDJ05				
SYNCHRO TAPS					TB754	TC854	TD854	TB854	TCJ09	TDJ09				
COMBO TAPS					TQ744	TC834	TD834	TB834	TCJ01	TDJ01	TBJ05	TCJ06		
YG TAP GENERAL					TQ754	TC874	TD874	TB874	TCJ02	TDJ02				
YG TAP STEEL	ISO	VDI 3323	Material Description	HB	HRc	Vc (m/min)								
COMBO TAPS	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 HARDENED	M	12	Stainless steel	200	15	7-10	7-10	10-15	7-10	7-10	10-15	7-10	7-10	
		13		240	23	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	
		14		180	10	4-6	4-6	6-8	4-6	4-6	6-8	4-6	4-6	
YG TAP INOX	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		130										
20	Malleable cast iron	230	21											
YG TAP ALU	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		110			25-35	35-40	25-35	25-35	35-40	25-35	25-35	
		27	Copper and Copper Alloys (Bronze / Brass)	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												
YG TAP Ti Ni	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										
YG TAP FORMING	H	38	Hardened steel	550	55									
		39		630	60									
		40	Chilled Cast Iron	400	42									
		41	Hardened Cast Iron	550	55									

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						