YE-CT26 EUROPE



TAP Combo

HSS-E TAPS for Multi-Purpose

For Steels, Stainless Steels, Cast Iron and Non-Ferrous Materials

NEW ***AOS Tap***
(HiPIMS Coating Technology)
- Spiral Flute
- Spiral Point

Bright Finish | Steam Oxide | TiN | FSH

NEW NEW

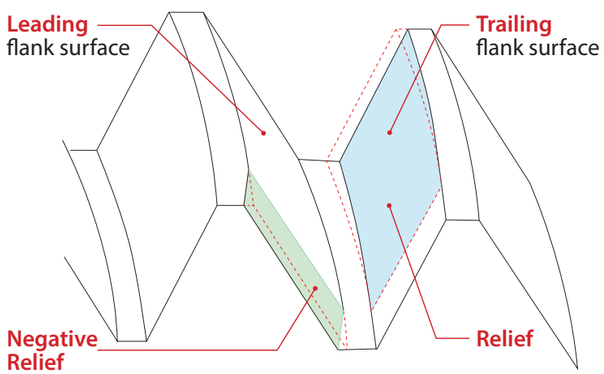
COMBO TAPS FOR MULTI-PURPOSE TAPPING

General Use for Various Materials

Combo Tap's geometry provides enough flute space resulting in smooth chip evacuation and therefore a continuous production process. Guarantee a high level of process reliability even under unfavorable conditions.

- ▶ For Steels, Stainless Steels, Cast Iron and Non-Ferrous Materials
- ▶ Prevents over & under feeding by its optimized flank geometry
- ▶ Constant threading quality preventing oversized threading





- **Optimized** flank **geometry** to **prevent over & under feeding**
- Enables **smoother tapping** with better chip evacuation
- **Compensation** of cutting force, which reduces tap wear and extends tool life

CASE STUDY

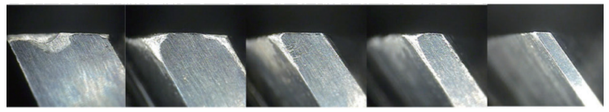
TEST I SPIRAL FLUTE

Cutting Condition

Tool	NEW Combo AOS Tap - Spiral Flute
Size	M10×1.5
Work Material	- JIS : SCM440 (HRc30) - DIN : 42CrMo4 - WR : 1.7225
Tapping Depth	20mm
Coolant	Wet Cut
Vc	10m/min.

Result

Conventional (112 Holes)



FSH-Coating (112 Holes)



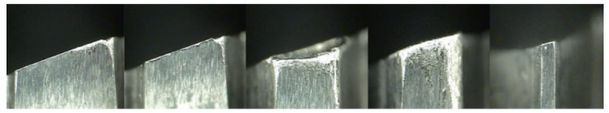
TEST II SPIRAL POINT

Cutting Condition

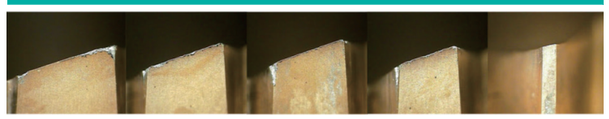
Tool	NEW Combo AOS Tap - Spiral Point
Size	M10×1.5
Work Material	- JIS : SCM440 (HRc30) - DIN : 42CrMo4 - WR : 1.7225
Tapping Depth	20mm
Coolant	Wet Cut
Vc	10m/min.

Result

Conventional (168 Holes)



FSH-Coating (168 Holes)

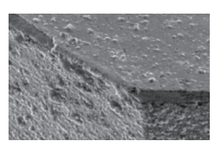


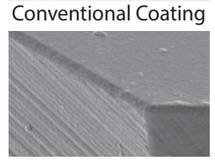
Working Material

For Steels, Stainless Steels, Ductile Iron and Cast Aluminum materials

FSH-Coating (High-End HiPIMS Coating Technology) NEW

Combining the advantages of all current coating technologies, it features high hardness, high toughness, and an extremely smooth surface. These characteristics provide highly reliable performance in threading processes.


Conventional Coating


FSH-Coating

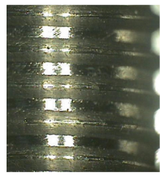
CASE STUDY

TEST Ⅲ SPIRAL FLUTE

Cutting Condition

Tool	Combo Spiral Flute Tap
Size	M8×1.25
Work Material	- JIS : S45C (HRc35) - DIN : C45 - WR : 1.0503
Tapping Depth	20mm
Coolant	Water Soluble Oil
Vc	10m/min.

Surface Roughness of Workpiece

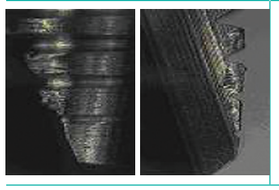
YG-1 Total Tapping 204 Holes	Competitor A Total Tapping 159 Holes	Competitor B Total Tapping 204 Holes
		

TEST Ⅳ SPIRAL POINT

Cutting Condition

Tool	Combo Spiral Point Tap
Size	M2×0.4
Work Material	- JIS : S45C (HRc35) - DIN : C45 - WR : 1.0503
Tapping Depth	6mm
Coolant	Tapping Oil
Vc	10m/min.

Surface Roughness of Workpiece

YG-1 Total Tapping 450 Holes	Competitor A Total Tapping 318 Holes	Competitor B Total Tapping 103 Holes
	Tool broke after tapping 318 holes	Tool broke after tapping 103 holes

GUIDE TO ICONS

Working Material



Multi-Purpose

Standard of Tools



Chamfer Lead



Form B (with Spiral Point and Chamfer Lead 4-5 Thread)



Form C (Chamfer Lead 2-3 Thread)



Form E (Chamfer Lead 1.5-2 Thread)

Helix Angle



Tool Raw Material



Thread Angle



Cutting Condition



Class of Thread



Surface Treatment



SELECTION GUIDE

HSS-E COMBO TAPS

HSS-E Taps for Multi-Purpose

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

HOLE TYPE							Max. 2.5xD Blind Hole			
TOOL MATERIAL							HSS-E			
CHAMFER LEAD ACC. TO DIN2197							C			
FLUTE TYPE							Spiral Flute			
SPIRAL FLUTE ANGLE							R40			
CLASS OF THREAD							6H	2B	6H	6H	2B
SERIES	M	DIN371/376					TC804 (p.10~11)		TC804-U (p.10~11)	TD804 (p.10~11)	
		DIN352									
		DIN357/LONG									
	MF	DIN374					TC844 (p.16~18)		TC844-U (p.16~18)	TD844 (p.16~18)	
		DIN2181									
	UNC	DIN371/376						TC824 (p.24)			TD824 (p.24)
		DIN351									
	UNF	DIN371/374						TC864 (p.26)			TD864 (p.26)
SURFACE TREATMENT							Bright	Bright	FSH	TiN	TiN
MODEL									 NEW		
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc					
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○ (15-20)	○ (15-20)	○ (20-25)	○ (20-25)	○ (20-25)
	2		About 0.45% C	Annealed	190	13	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)
	3		About 0.45% C	Quenched & Tempered	250	25	◎ (12-18)	◎ (12-18)	◎ (18-24)	◎ (18-24)	◎ (18-24)
	4		About 0.75% C	Annealed	270	28	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)
	5		About 0.75% C	Quenched & Tempered	300	32	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (10-14)	◎ (10-14)
	6	Low alloy steel		Annealed	180	10	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)
	7			Quenched & Tempered	275	29	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)
	8			Quenched & Tempered	300	32	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (10-14)	◎ (10-14)
	9			Quenched & Tempered	350	38	◎ (3-5)	◎ (3-5)	◎ (5-7)	◎ (5-7)	◎ (5-7)
	10	High alloyed steel, and tool steel		Annealed	200	15	○ (3-5)	○ (3-5)	○ (5-7)	○ (5-7)	○ (5-7)
	11			Quenched & Tempered	325	35					
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ (7-10)	◎ (7-10)	◎ (10-15)	◎ (10-15)	◎ (10-15)
	13		Martensitic	Quenched & Tempered	240	23	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)
	14			Austenitic	180	10	◎ (4-6)	◎ (4-6)	◎ (6-8)	◎ (6-8)	◎ (6-8)
K	15	Grey cast iron	Pearlitic / Ferritic		180	10	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)
	16		Pearlitic (Martensitic)		260	26	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)
	17	Nodular cast iron	Ferritic		160	3	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)
	18		Pearlitic		250	25	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)
	19	Malleable cast iron	Ferritic		130						
	20		Pearlitic		230	21					
N	21	Aluminum-wrought alloy	Not Curable		60						
	22		Curable	Hardened	100						
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)
	24		≤ 12% Si, Curable	Hardened	90						
	25		> 12% Si, Not Curable		130						
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		◎ (25-35)	◎ (25-35)	◎ (35-40)	◎ (35-40)	◎ (35-40)
	27		CuZn, CuSnZn (Brass)		90		◎ (8-12)	◎ (8-12)	◎ (12-17)	◎ (12-17)	◎ (12-17)
	28		CuSn, lead-free copper and electrolytic copper		100		◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)
	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		Ni or Co Based	Annealed	250	25					
	34			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					

HOLE TYPE			Max. 2.5xD Blind Hole										
TOOL MATERIAL			HSS-E										
CHAMFER LEAD ACC. TO DIN2197			C										
FLUTE TYPE			Spiral Flute										
SPIRAL FLUTE ANGLE			R40										
CLASS OF THREAD			6H	2B	4H	6G	3B	4H	6G	3B	4H	6H+0.1	6H+0.1
SERIES	M	DIN371/376	TB804 (p.10~11)		TCE05 (p.12)			TDE05 (p.12)			TBE05 (p.12)	TCE06 (p.13)	TDE06 (p.13)
		DIN352											
		DIN357/LONG											
	MF	DIN374	TB844 (p.16~18)			TCE09 (p.19~20)			TDE09 (p.19~20)				
		DIN2181											
	UNC	DIN371/376		TB824 (p.24)			TCE01 (p.25)			TDE01 (p.25)			
		DIN351											
	UNF	DIN371/374		TB864 (p.26)			TCE02 (p.27)			TDE02 (p.27)			
SURFACE TREATMENT			VAP	VAP	Bright	Bright	Bright	TiN	TiN	TiN	VAP	Bright	TiN
MODEL													
ISO	VDI 3323	Material Description											
P	1	Non-alloy steel	○ (15-20)	○ (15-20)	○ (15-20)	○ (15-20)	○ (15-20)	○ (20-25)	○ (20-25)	○ (20-25)	○ (15-20)	○ (15-20)	○ (20-25)
	2		◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)
	3		◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (18-24)	◎ (18-24)	◎ (18-24)	◎ (12-18)	◎ (12-18)	◎ (18-24)
	4		◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)
	5		◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (10-14)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)
	6	Low alloy steel	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)
	7		◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)
	8		◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (10-14)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)
	9		◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (5-7)	◎ (5-7)	◎ (5-7)	◎ (3-5)	◎ (3-5)	◎ (5-7)
	10	High alloyed steel, and tool steel	○ (3-5)	○ (3-5)	○ (3-5)	○ (3-5)	○ (3-5)	○ (5-7)	○ (5-7)	○ (5-7)	○ (3-5)	○ (3-5)	○ (5-7)
	11												
M	12	Stainless steel	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (7-10)	◎ (7-10)	◎ (10-15)
	13		◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)
	14		◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (6-8)	◎ (6-8)	◎ (6-8)	◎ (4-6)	◎ (4-6)	◎ (6-8)
K	15	Grey cast iron	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)
	16		◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)
	17	Nodular cast iron	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)
	18		◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)
	19	Malleable cast iron											
	20												
N	21	Aluminum-wrought alloy											
	22												
	23	Aluminum-cast, alloyed	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)
	24												
	25												
	26	Copper and Copper Alloys (Bronze / Brass)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (35-40)	◎ (35-40)	◎ (35-40)	◎ (25-35)	◎ (25-35)	◎ (35-40)
	27		◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (12-17)	◎ (12-17)	◎ (12-17)	◎ (8-12)	◎ (8-12)	◎ (12-17)
	28		◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)
	29	Non Metallic Materials											
	30												
S	31	Heat Resistant Super Alloys											
	32												
	33												
	34												
	35												
	36	Titanium Alloys											
	37												
H	38	Hardened steel											
	39												
	40	Chilled Cast Iron											
	41	Hardened Cast Iron											

Max. 2.5xD Blind Hole										Max. 3.0xD Through Hole				
HSS-E									HSS-E	HSS-E				
C									E	B				
Spiral Flute									Spiral Flute	Spiral Point				
R40									R40	-				
6H+0.1	6G	6G	6G	7G	7G	7G	6H	6H	6H	6H	2B	6H		
TBE06 (p.13)	TCE07 (p.14)	TDE07 (p.14)	TBE07 (p.14)	TCE08 (p.15)	TDE08 (p.15)	TBE08 (p.15)	TC804-IC (p.21)		TC807 (p.22)	TC814 (p.28~29)		TC814-U (p.28~29)	M	
								TC633 (p.23)						
										TC854 (p.34~36)		TC854-U (p.34~36)	MF	
											TC834 (p.41)		UNC	
											TC874 (p.43)		UNF	
VAP	Bright	TiN	VAP	Bright	TiN	VAP	Bright	Bright	Bright	Bright	Bright	FSH		
												NEW		
○ (15-20)	○ (15-20)	○ (20-25)	○ (15-20)	○ (15-20)	○ (20-25)	○ (15-20)	○ (15-20)	○ (15-20)	○ (15-20)	○ (15-20)	○ (15-20)	○ (20-25)	1	P
◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	2	
◎ (12-18)	◎ (12-18)	◎ (18-24)	◎ (12-18)	◎ (12-18)	◎ (18-24)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (18-24)	3	
◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	4	
◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (10-14)	5	
◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	6	
◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	7	
◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (10-14)	8	
◎ (3-5)	◎ (3-5)	◎ (5-7)	◎ (3-5)	◎ (3-5)	◎ (5-7)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (5-7)	9	
○ (3-5)	○ (3-5)	○ (5-7)	○ (3-5)	○ (3-5)	○ (5-7)	○ (3-5)	○ (3-5)	○ (3-5)	○ (3-5)	○ (3-5)	○ (3-5)	○ (5-7)	10	
													11	
◎ (7-10)	◎ (7-10)	◎ (10-15)	◎ (7-10)	◎ (7-10)	◎ (10-15)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (10-15)	12	M
◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	13	
◎ (4-6)	◎ (4-6)	◎ (6-8)	◎ (4-6)	◎ (4-6)	◎ (6-8)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (6-8)	14	
◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	15	K
◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	16	
◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	17	
◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	18	
													19	
													20	
													21	N
													22	
◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	23	
													24	
													25	
◎ (25-35)	◎ (25-35)	◎ (35-40)	◎ (25-35)	◎ (25-35)	◎ (35-40)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (35-40)	26	
◎ (8-12)	◎ (8-12)	◎ (12-17)	◎ (8-12)	◎ (8-12)	◎ (12-17)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (12-17)	27	
◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	28	
													29	
													30	
													31	S
													32	
													33	
													34	
													35	
													36	
													37	
													38	H
													39	
													40	
													41	

HOLE TYPE			Max. 3.0xD Through Hole										
TOOL MATERIAL			HSS-E										
CHAMFER LEAD ACC. TO DIN2197			B										
FLUTE TYPE			Spiral Point										
SPIRAL FLUTE ANGLE			-										
CLASS OF THREAD			6H	2B	6H	2B	4H	6G	3B	4H	6G	3B	4H
SERIES	M	DIN371/376	TD814 (p.28~29)		TB814 (p.28~29)		TCJ05 (p.30)			TDJ05 (p.30)			TBJ05 (p.30)
		DIN352											
		DIN357/LONG											
	MF	DIN374	TD854 (p.34~36)		TB854 (p.34~36)			TCJ09 (p.37~38)			TDJ09 (p.37~38)		
		DIN2181											
	UNC	DIN371/376		TD834 (p.41)		TB834 (p.41)			TCJ01 (p.42)			TDJ01 (p.42)	
		DIN351											
	UNF	DIN371/374		TD874 (p.43)		TB874 (p.43)			TCJ02 (p.44)			TDJ02 (p.44)	
SURFACE TREATMENT			TiN	TiN	VAP	VAP	Bright	Bright	Bright	TiN	TiN	TiN	VAP
MODEL													
ISO	VDI 3323	Material Description											
P	1	Non-alloy steel	○ (20-25)	○ (20-25)	○ (15-20)	○ (15-20)	○ (15-20)	○ (15-20)	○ (15-20)	○ (20-25)	○ (20-25)	○ (20-25)	○ (15-20)
	2		◎ (20-25)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)	◎ (15-20)
	3		◎ (18-24)	◎ (18-24)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (12-18)	◎ (18-24)	◎ (18-24)	◎ (18-24)	◎ (12-18)
	4		◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)
	5		◎ (10-14)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (10-14)	◎ (10-14)	◎ (6-10)
	6	Low alloy steel	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)
	7		◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)
	8		◎ (10-14)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (10-14)	◎ (10-14)	◎ (6-10)
	9		◎ (5-7)	◎ (5-7)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (3-5)	◎ (5-7)	◎ (5-7)	◎ (5-7)	◎ (3-5)
	10	High alloyed steel, and tool steel	○ (5-7)	○ (5-7)	○ (3-5)	○ (3-5)	○ (3-5)	○ (3-5)	○ (3-5)	○ (5-7)	○ (5-7)	○ (5-7)	○ (3-5)
	11												
M	12	Stainless steel	◎ (10-15)	◎ (10-15)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (7-10)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (7-10)
	13		◎ (8-11)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)	◎ (5-8)
	14		◎ (6-8)	◎ (6-8)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (4-6)	◎ (6-8)	◎ (6-8)	◎ (6-8)	◎ (4-6)
K	15	Grey cast iron	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)
	16		◎ (8-11)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)	◎ (5-8)
	17	Nodular cast iron	◎ (15-20)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (10-15)
	18		◎ (8-11)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (8-11)	◎ (8-11)	◎ (5-8)
	19	Malleable cast iron											
	20												
N	21	Aluminum-wrought alloy											
	22												
	23	Aluminum-cast, alloyed	◎ (20-25)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)	◎ (15-20)
	24												
	25												
	26	Copper and Copper Alloys (Bronze / Brass)	◎ (35-40)	◎ (35-40)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (25-35)	◎ (35-40)	◎ (35-40)	◎ (35-40)	◎ (25-35)
	27		◎ (12-17)	◎ (12-17)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (8-12)	◎ (12-17)	◎ (12-17)	◎ (12-17)	◎ (8-12)
	28		◎ (20-25)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (20-25)	◎ (20-25)	◎ (15-20)
	29	Non Metallic Materials											
	30												
S	31	Heat Resistant Super Alloys											
	32												
	33												
	34												
	35												
	36	Titanium Alloys											
	37												
H	38	Hardened steel											
	39												
	40	Chilled Cast Iron											
	41	Hardened Cast Iron											

Max. 3.0xD Through Hole												
HSS-E												
B												
Spiral Point												
-												
6H+0.1	6H+0.1	6H+0.1	6G	6G	6G	7G	7G	7G	6H	6H		
TCJ06 (p.31)	TDJ06 (p.31)	TBJ06 (p.31)	TCJ07 (p.32)	TDJ07 (p.32)	TBJ07 (p.32)	TCJ08 (p.33)	TDJ08 (p.33)	TBJ08 (p.33)	TC814-IC (p.39)		M	
										TC445 (p.40)		
											MF	
											UNC	
											UNF	
Bright	TiN	VAP	Bright	TiN	VAP	Bright	TiN	VAP	Bright	Bright		
												
○ (15-20)	○ (20-25)	○ (15-20)	○ (15-20)	○ (20-25)	○ (15-20)	○ (15-20)	○ (20-25)	○ (15-20)	○ (15-20)	○ (15-20)	1	P
◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	2	
◎ (12-18)	◎ (18-24)	◎ (12-18)	◎ (12-18)	◎ (18-24)	◎ (12-18)	◎ (12-18)	◎ (18-24)	◎ (12-18)	◎ (12-18)	◎ (12-18)	3	
◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	4	
◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (6-10)	5	
◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	6	
◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	7	
◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (10-14)	◎ (6-10)	◎ (6-10)	◎ (6-10)	8	
◎ (3-5)	◎ (5-7)	◎ (3-5)	◎ (3-5)	◎ (5-7)	◎ (3-5)	◎ (3-5)	◎ (5-7)	◎ (3-5)	◎ (3-5)	◎ (3-5)	9	
○ (3-5)	○ (5-7)	○ (3-5)	○ (3-5)	○ (5-7)	○ (3-5)	○ (3-5)	○ (5-7)	○ (3-5)	○ (3-5)	○ (3-5)	10	
											11	
◎ (7-10)	◎ (10-15)	◎ (7-10)	◎ (7-10)	◎ (10-15)	◎ (7-10)	◎ (7-10)	◎ (10-15)	◎ (7-10)	◎ (7-10)	◎ (7-10)	12	M
◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	13	
◎ (4-6)	◎ (6-8)	◎ (4-6)	◎ (4-6)	◎ (6-8)	◎ (4-6)	◎ (4-6)	◎ (6-8)	◎ (4-6)	◎ (4-6)	◎ (4-6)	14	
◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	15	K
◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	16	
◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (15-20)	◎ (10-15)	◎ (10-15)	◎ (10-15)	17	
◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (8-11)	◎ (5-8)	◎ (5-8)	◎ (5-8)	18	
											19	
											20	
											21	N
											22	
◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	23	
											24	
											25	
◎ (25-35)	◎ (35-40)	◎ (25-35)	◎ (25-35)	◎ (35-40)	◎ (25-35)	◎ (25-35)	◎ (35-40)	◎ (25-35)	◎ (25-35)	◎ (25-35)	26	
◎ (8-12)	◎ (12-17)	◎ (8-12)	◎ (8-12)	◎ (12-17)	◎ (8-12)	◎ (8-12)	◎ (12-17)	◎ (8-12)	◎ (8-12)	◎ (8-12)	27	
◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (20-25)	◎ (15-20)	◎ (15-20)	◎ (15-20)	28	
											29	
											30	
											31	S
											32	
											33	
											34	
											35	
											36	
											37	
											38	H
											39	
											40	
											41	

COMBO TAP SETS

Combo Spiral Flute Taps	
TB804SET5	TC804SET7
VAP	Bright
5 pcs	7 pcs



Combo Spiral Flute Taps + Gold-P Drill
TD804SET7-GLP195
TiN
14 pcs



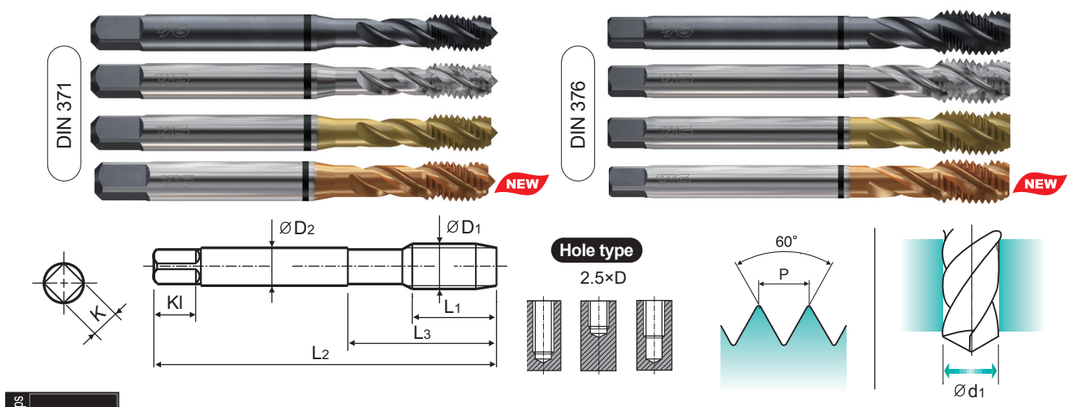
p.45

SERIES

M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap	TB804	TiN	TD804
Bright	TC804	FSH	TC804-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 6H | 60° | C | R40 | Vap Bright TiN | FSH

p.5-6

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2	× 0.4	TB804136	TC804136	TD804136	TC804136U	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	TB804156	TC804156	TD804156	-	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	TB804196	TC804196	TD804196	-	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	TB804176	TC804176	TD804176	-	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	TB804496	TC804496	TD804496	-	9	50	15	2.8	2.1	5	3	2.15
M3	× 0.5	TB804206	TC804206	TD804206	TC804206U	6	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	TB804226	TC804226	TD804226	-	7	56	20	4	3	6	3	2.9
M4	× 0.7	TB804246	TC804246	TD804246	TC804246U	7	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	TB804266	TC804266	TD804266	-	8	70	25	6	4.9	8	3	3.8
M5	× 0.8	TB804286	TC804286	TD804286	TC804286U	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	TB804316	TC804316	TD804316	TC804316U	10	80	30	6	4.9	8	3	5.0
M7	× 1.0	TB804346	TC804346	TD804346	-	10	80	30	7	5.5	8	3	6.0
M8	× 1.25	TB804366	TC804366	TD804366	TC804366U	13	90	35	8	6.2	9	3	6.8
M9	× 1.25	TB804396	TC804396	TD804396	-	13	90	35	9	7	10	3	7.8
M10	× 1.5	TB804426	TC804426	TD804426	TC804426U	15	100	39	10	8	11	3	8.5
M11	× 1.5	TB804466	TC804466	TD804466	-	17	100	40	8	6.2	9	3	9.5
M12	× 1.75	TB804506	TC804506	TD804506	TC804506U	18	110	44	9	7	10	3	10.3
M14	× 2.0	TB804546	TC804546	TD804546	TC804546U	20	110	52	11	9	12	3	12.0
M16	× 2.0	TB804606	TC804606	TD804606	TC804606U	20	110	52	12	9	12	3	14.0
M18	× 2.5	TB804656	TC804656	TD804656	TC804656U	25	125	66	14	11	14	4	15.5
M20	× 2.5	TB804706	TC804706	TD804706	TC804706U	25	140	72	16	12	15	4	17.5
M22	× 2.5	TB804746	TC804746	TD804746	TC804746U	25	140	78	18	14.5	17	4	19.5

▶ NEXT PAGE

▶ DIN 371(M2~M10) and DIN 376(M11~M52)
* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

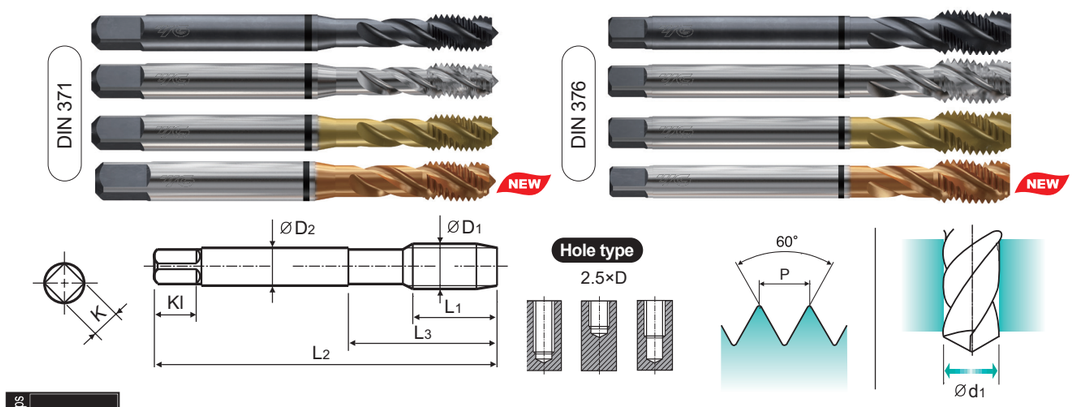
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

SERIES

M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap TB804 TiN TD804
Bright TC804 FSH TC804-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups MU | HSS-E | DIN 371/376 | 6H | 60° | C | R40 | Vap Bright TiN | FSH

p.5-6

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M24	× 3.0	TB804786	TC804786	TD804786	TC804786U	30	160	85	18	14.5	17	4	21.0
M27	× 3.0	TB804866	TC804866	TD804866	TC804866U	30	160	92	20	16	19	4	24.0
M30	× 3.5	TB804946	TC804946	TD804946	TC804946U	35	180	102	22	18	21	4	26.5
M33	x 3.5	-	TC804A46	TD804A46	-	35	180	105	25	20	23	4	29.5
M36	x 4.0	-	TC804B36	TD804B36	-	40	200	120	28	22	25	4	32.0
M39	x 4.0	-	TC804C06	TD804C06	-	40	200	120	32	24	27	4	35.0
M42	x 4.5	-	TC804C86	TD804C86	-	45	200	120	32	24	27	4	37.5
M45	x 4.5	-	TC804D56	TD804D56	-	45	220	100	36	29	32	4	40.5
M48	x 5.0	-	TC804E26	TD804E26	-	50	250	130	36	29	32	4	43.0
M52	x 5.0	-	TC804F36	TD804F36	-	50	250	130	40	32	35	4	47.0

▶ DIN 371(M2~M10) and DIN 376(M11~M52)
* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

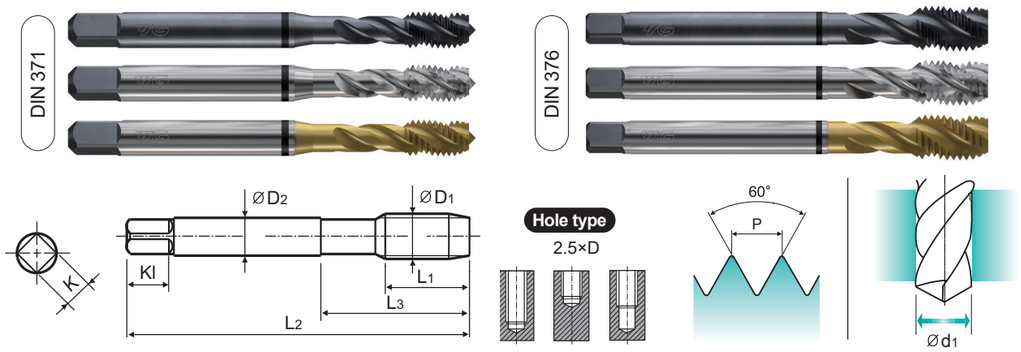
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap **TBE05** / Bright **TCE05** / TiN **TDE05** SERIES

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 4H | 60° | C | R40 | Vap Bright TiN | p.6

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2 ×	0.4	TBE05136	TCE05136	TDE05136	8	45	13	2.8	2.1	5	3	1.6
M2.2 ×	0.45	TBE05156	TCE05156	TDE05156	8	45	13	2.8	2.1	5	3	1.75
M2.3 ×	0.4	TBE05196	TCE05196	TDE05196	8	45	13	2.8	2.1	5	3	1.9
M2.5 ×	0.45	TBE05176	TCE05176	TDE05176	9	50	15	2.8	2.1	5	3	2.05
M2.6 ×	0.45	TBE05496	TCE05496	TDE05496	9	50	15	2.8	2.1	5	3	2.15
M3 ×	0.5	TBE05206	TCE05206	TDE05206	6	56	18	3.5	2.7	6	3	2.5
M3.5 ×	0.6	TBE05226	TCE05226	TDE05226	7	56	20	4	3	6	3	2.9
M4 ×	0.7	TBE05246	TCE05246	TDE05246	7	63	21	4.5	3.4	6	3	3.3
M4.5 ×	0.75	TBE05266	TCE05266	TDE05266	8	70	25	6	4.9	8	3	3.8
M5 ×	0.8	TBE05286	TCE05286	TDE05286	8	70	25	6	4.9	8	3	4.2
M6 ×	1.0	TBE05316	TCE05316	TDE05316	10	80	30	6	4.9	8	3	5.0
M7 ×	1.0	TBE05346	TCE05346	TDE05346	10	80	30	7	5.5	8	3	6.0
M8 ×	1.25	TBE05366	TCE05366	TDE05366	13	90	35	8	6.2	9	3	6.8
M9 ×	1.25	TBE05396	TCE05396	TDE05396	13	90	35	9	7	10	3	7.8
M10 ×	1.5	TBE05426	TCE05426	TDE05426	15	100	39	10	8	11	3	8.5
M11 ×	1.5	TBE05466	TCE05466	TDE05466	17	100	40	8	6.2	9	3	9.5
M12 ×	1.75	TBE05506	TCE05506	TDE05506	18	110	44	9	7	10	3	10.3
M14 ×	2.0	TBE05546	TCE05546	TDE05546	20	110	52	11	9	12	3	12.0
M16 ×	2.0	TBE05606	TCE05606	TDE05606	20	110	52	12	9	12	3	14.0
M18 ×	2.5	TBE05656	TCE05656	TDE05656	25	125	66	14	11	14	4	15.5
M20 ×	2.5	TBE05706	TCE05706	TDE05706	25	140	72	16	12	15	4	17.5
M22 ×	2.5	TBE05746	TCE05746	TDE05746	25	140	78	18	14.5	17	4	19.5
M24 ×	3.0	TBE05786	TCE05786	TDE05786	30	160	85	18	14.5	17	4	21.0
M27 ×	3.0	TBE05866	TCE05866	TDE05866	30	160	92	20	16	19	4	24.0
M30 ×	3.5	TBE05946	TCE05946	TDE05946	35	180	102	22	18	21	4	26.5

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

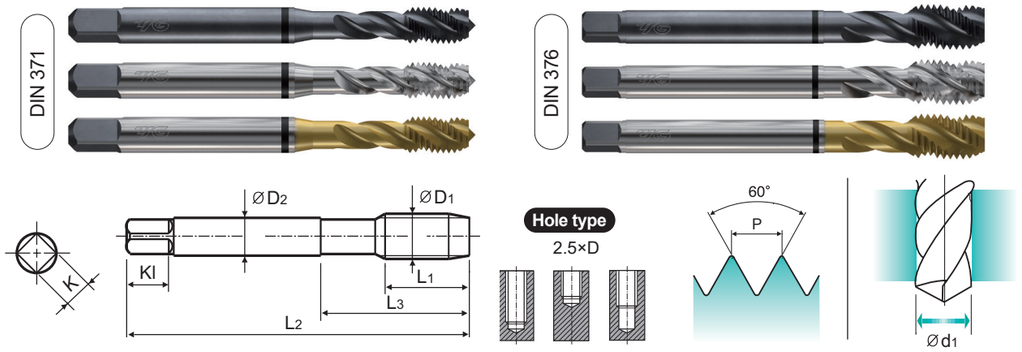
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap **TBE06** / Bright **TCE06** / TiN **TDE06** SERIES

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 6H+0.1 | 60° | C | R40 | Vap Bright TiN | p.6-7

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2 ×	0.4	TBE06136	TCE06136	TDE06136	8	45	13	2.8	2.1	5	3	1.7
M2.2 ×	0.45	TBE06156	TCE06156	TDE06156	8	45	13	2.8	2.1	5	3	1.85
M2.3 ×	0.4	TBE06196	TCE06196	TDE06196	8	45	13	2.8	2.1	5	3	2.0
M2.5 ×	0.45	TBE06176	TCE06176	TDE06176	9	50	15	2.8	2.1	5	3	2.15
M2.6 ×	0.45	TBE06496	TCE06496	TDE06496	9	50	15	2.8	2.1	5	3	2.25
M3 ×	0.5	TBE06206	TCE06206	TDE06206	6	56	18	3.5	2.7	6	3	2.6
M3.5 ×	0.6	TBE06226	TCE06226	TDE06226	7	56	20	4	3	6	3	3.0
M4 ×	0.7	TBE06246	TCE06246	TDE06246	7	63	21	4.5	3.4	6	3	3.4
M4.5 ×	0.75	TBE06266	TCE06266	TDE06266	8	70	25	6	4.9	8	3	3.9
M5 ×	0.8	TBE06286	TCE06286	TDE06286	8	70	25	6	4.9	8	3	4.3
M6 ×	1.0	TBE06316	TCE06316	TDE06316	10	80	30	6	4.9	8	3	5.1
M7 ×	1.0	TBE06346	TCE06346	TDE06346	10	80	30	7	5.5	8	3	6.1
M8 ×	1.25	TBE06366	TCE06366	TDE06366	13	90	35	8	6.2	9	3	6.9
M9 ×	1.25	TBE06396	TCE06396	TDE06396	13	90	35	9	7	10	3	7.9
M10 ×	1.5	TBE06426	TCE06426	TDE06426	15	100	39	10	8	11	3	8.6
M11 ×	1.5	TBE06466	TCE06466	TDE06466	17	100	40	8	6.2	9	3	9.6
M12 ×	1.75	TBE06506	TCE06506	TDE06506	18	110	44	9	7	10	3	10.4
M14 ×	2.0	TBE06546	TCE06546	TDE06546	20	110	52	11	9	12	3	12.1
M16 ×	2.0	TBE06606	TCE06606	TDE06606	20	110	52	12	9	12	3	14.1
M18 ×	2.5	TBE06656	TCE06656	TDE06656	25	125	66	14	11	14	4	15.6
M20 ×	2.5	TBE06706	TCE06706	TDE06706	25	140	72	16	12	15	4	17.6
M22 ×	2.5	TBE06746	TCE06746	TDE06746	25	140	78	18	14.5	17	4	19.6
M24 ×	3.0	TBE06786	TCE06786	TDE06786	30	160	85	18	14.5	17	4	21.1
M27 ×	3.0	TBE06866	TCE06866	TDE06866	30	160	92	20	16	19	4	24.1
M30 ×	3.5	TBE06946	TCE06946	TDE06946	35	180	102	22	18	21	4	26.6

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

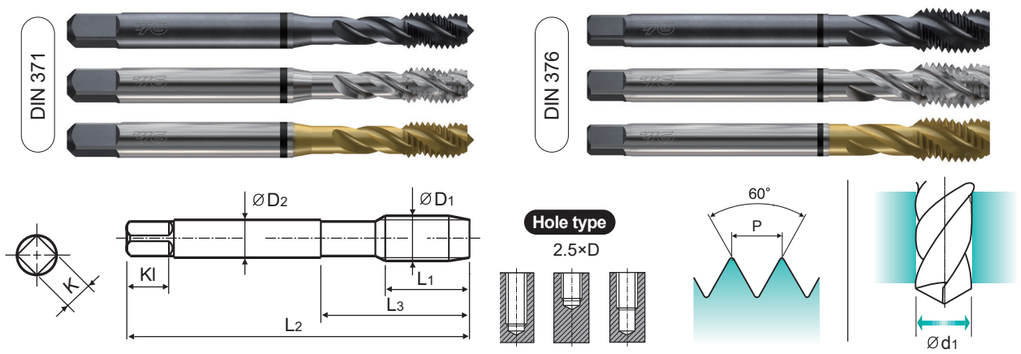
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap **TBE07** / Bright **TCE07** / TiN **TDE07** SERIES

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 6G | 60° | C | R40 | Vap Bright TiN | p.7

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2 ×	0.4	TBE07136	TCE07136	TDE07136	8	45	13	2.8	2.1	5	3	1.6
M2.2 ×	0.45	TBE07156	TCE07156	TDE07156	8	45	13	2.8	2.1	5	3	1.75
M2.3 ×	0.4	TBE07196	TCE07196	TDE07196	8	45	13	2.8	2.1	5	3	1.9
M2.5 ×	0.45	TBE07176	TCE07176	TDE07176	9	50	15	2.8	2.1	5	3	2.05
M2.6 ×	0.45	TBE07496	TCE07496	TDE07496	9	50	15	2.8	2.1	5	3	2.15
M3 ×	0.5	TBE07206	TCE07206	TDE07206	6	56	18	3.5	2.7	6	3	2.5
M3.5 ×	0.6	TBE07226	TCE07226	TDE07226	7	56	20	4	3	6	3	2.9
M4 ×	0.7	TBE07246	TCE07246	TDE07246	7	63	21	4.5	3.4	6	3	3.3
M4.5 ×	0.75	TBE07266	TCE07266	TDE07266	8	70	25	6	4.9	8	3	3.8
M5 ×	0.8	TBE07286	TCE07286	TDE07286	8	70	25	6	4.9	8	3	4.2
M6 ×	1.0	TBE07316	TCE07316	TDE07316	10	80	30	6	4.9	8	3	5.0
M7 ×	1.0	TBE07346	TCE07346	TDE07346	10	80	30	7	5.5	8	3	6.0
M8 ×	1.25	TBE07366	TCE07366	TDE07366	13	90	35	8	6.2	9	3	6.8
M9 ×	1.25	TBE07396	TCE07396	TDE07396	13	90	35	9	7	10	3	7.8
M10 ×	1.5	TBE07426	TCE07426	TDE07426	15	100	39	10	8	11	3	8.5
M11 ×	1.5	TBE07466	TCE07466	TDE07466	17	100	40	8	6.2	9	3	9.5
M12 ×	1.75	TBE07506	TCE07506	TDE07506	18	110	44	9	7	10	3	10.3
M14 ×	2.0	TBE07546	TCE07546	TDE07546	20	110	52	11	9	12	3	12.0
M16 ×	2.0	TBE07606	TCE07606	TDE07606	20	110	52	12	9	12	3	14.0
M18 ×	2.5	TBE07656	TCE07656	TDE07656	25	125	66	14	11	14	4	15.5
M20 ×	2.5	TBE07706	TCE07706	TDE07706	25	140	72	16	12	15	4	17.5
M22 ×	2.5	TBE07746	TCE07746	TDE07746	25	140	78	18	14.5	17	4	19.5
M24 ×	3.0	TBE07786	TCE07786	TDE07786	30	160	85	18	14.5	17	4	21.0
M27 ×	3.0	TBE07866	TCE07866	TDE07866	30	160	92	20	16	19	4	24.0
M30 ×	3.5	TBE07946	TCE07946	TDE07946	35	180	102	22	18	21	4	26.5

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

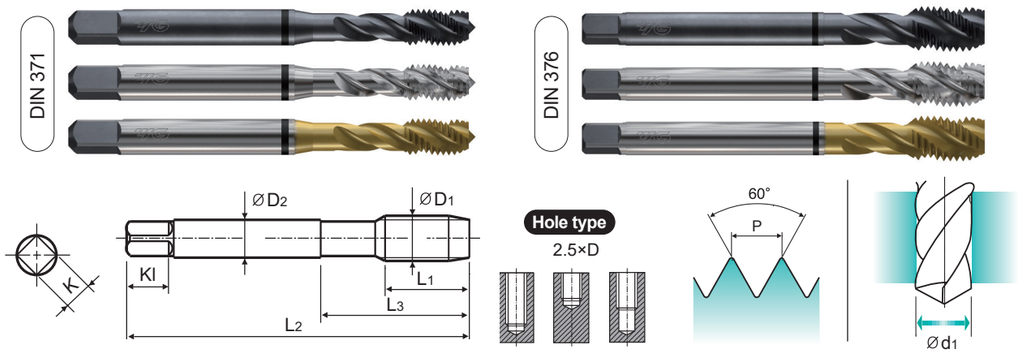
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap **TBE08** / Bright **TCE08** / TiN **TDE08** SERIES

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 7G | 60° | C | R40 | Vap Bright TiN | p.7

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2 ×	0.4	TBE08136	TCE08136	TDE08136	8	45	13	2.8	2.1	5	3	1.6
M2.2 ×	0.45	TBE08156	TCE08156	TDE08156	8	45	13	2.8	2.1	5	3	1.75
M2.3 ×	0.4	TBE08196	TCE08196	TDE08196	8	45	13	2.8	2.1	5	3	1.9
M2.5 ×	0.45	TBE08176	TCE08176	TDE08176	9	50	15	2.8	2.1	5	3	2.05
M2.6 ×	0.45	TBE08496	TCE08496	TDE08496	9	50	15	2.8	2.1	5	3	2.15
M3 ×	0.5	TBE08206	TCE08206	TDE08206	6	56	18	3.5	2.7	6	3	2.5
M3.5 ×	0.6	TBE08226	TCE08226	TDE08226	7	56	20	4	3	6	3	2.9
M4 ×	0.7	TBE08246	TCE08246	TDE08246	7	63	21	4.5	3.4	6	3	3.3
M4.5 ×	0.75	TBE08266	TCE08266	TDE08266	8	70	25	6	4.9	8	3	3.8
M5 ×	0.8	TBE08286	TCE08286	TDE08286	8	70	25	6	4.9	8	3	4.2
M6 ×	1.0	TBE08316	TCE08316	TDE08316	10	80	30	6	4.9	8	3	5.0
M7 ×	1.0	TBE08346	TCE08346	TDE08346	10	80	30	7	5.5	8	3	6.0
M8 ×	1.25	TBE08366	TCE08366	TDE08366	13	90	35	8	6.2	9	3	6.8
M9 ×	1.25	TBE08396	TCE08396	TDE08396	13	90	35	9	7	10	3	7.8
M10 ×	1.5	TBE08426	TCE08426	TDE08426	15	100	39	10	8	11	3	8.5
M11 ×	1.5	TBE08466	TCE08466	TDE08466	17	100	40	8	6.2	9	3	9.5
M12 ×	1.75	TBE08506	TCE08506	TDE08506	18	110	44	9	7	10	3	10.3
M14 ×	2.0	TBE08546	TCE08546	TDE08546	20	110	52	11	9	12	3	12.0
M16 ×	2.0	TBE08606	TCE08606	TDE08606	20	110	52	12	9	12	3	14.0
M18 ×	2.5	TBE08656	TCE08656	TDE08656	25	125	66	14	11	14	4	15.5
M20 ×	2.5	TBE08706	TCE08706	TDE08706	25	140	72	16	12	15	4	17.5
M22 ×	2.5	TBE08746	TCE08746	TDE08746	25	140	78	18	14.5	17	4	19.5
M24 ×	3.0	TBE08786	TCE08786	TDE08786	30	160	85	18	14.5	17	4	21.0
M27 ×	3.0	TBE08866	TCE08866	TDE08866	30	160	92	20	16	19	4	24.0
M30 ×	3.5	TBE08946	TCE08946	TDE08946	35	180	102	22	18	21	4	26.5

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

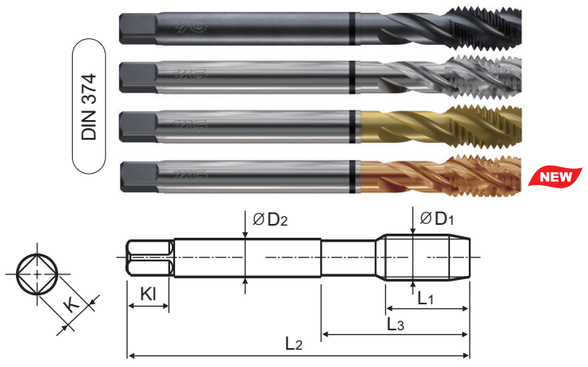
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

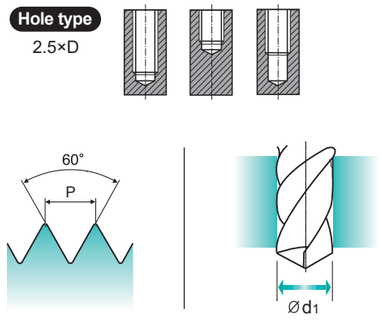
MF HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

SERIES

Vap	TB844	TiN	TD844
Bright	TC844	FSH	TC844-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.





Material groups **MU** | HSS-E | DIN 374 | 6H | 60° | C | R40 | Vap Bright TiN | FSH | p.5-6

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M4	× 0.5	TB844256	TC844256	TD844256	-	5	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	TB844296	TC844296	TD844296	-	5	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	TB844326	TC844326	TD844326	-	8	80	30	4.5	3.4	6	3	5.3
M6	× 0.5	TB844336	TC844336	TD844336	-	5	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	TB844356	TC844356	TD844356	-	10	80	30	5.5	4.3	7	3	6.3
M8	× 1.0	TB844376	TC844376	TD844376	TC844376U	10	90	36	6	4.9	8	3	7.0
M8	× 0.75	TB844386	TC844386	TD844386	TC844386U	8	80	30	6	4.9	8	3	7.3
M10	× 1.25	TB844436	TC844436	TD844436	TC844436U	16	100	40	7	5.5	8	3	8.8
M10	× 1.0	TB844446	TC844446	TD844446	TC844446U	10	90	36	7	5.5	8	3	9.0
M10	× 0.75	TB844456	TC844456	TD844456	TC844456U	10	90	36	7	5.5	8	3	9.3
M12	× 1.5	TB844516	TC844516	TD844516	TC844516U	15	100	40	9	7	10	3	10.5
M12	× 1.25	TB844526	TC844526	TD844526	TC844526U	15	100	40	9	7	10	3	10.8
M12	× 1.0	TB844536	TC844536	TD844536	TC844536U	11	100	40	9	7	10	3	11.0
M14	× 1.5	TB844556	TC844556	TD844556	TC844556U	15	100	47	11	9	12	3	12.5
M14	× 1.25	TB844566	TC844566	TD844566	TC844566U	15	100	47	11	9	12	3	12.8
M14	× 1.0	TB844576	TC844576	TD844576	TC844576U	11	100	47	11	9	12	3	13.0
M16	× 1.5	TB844616	TC844616	TD844616	TC844616U	15	100	49	12	9	12	3	14.5
M16	× 1.0	TB844626	TC844626	TD844626	TC844626U	12	100	49	12	9	12	3	15.0
M18	× 1.5	TB844676	TC844676	TD844676	TC844676U	17	110	55	14	11	14	4	16.5
M18	× 1.0	TB844686	TC844686	TD844686	TC844686U	13	110	55	14	11	14	4	17.0
M20	× 1.5	TB844726	TC844726	TD844726	TC844726U	17	125	60	16	12	15	4	18.5
M20	× 1.0	TB844736	TC844736	TD844736	TC844736U	14	125	60	16	12	15	4	19.0
M22	× 1.5	TB844766	TC844766	TD844766	TC844766U	17	125	65	18	14.5	17	4	20.5
M22	× 1.0	TB844776	TC844776	TD844776	TC844776U	14	125	65	18	14.5	17	4	21.0

* The other coating(TiCN or TiAlN) is available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

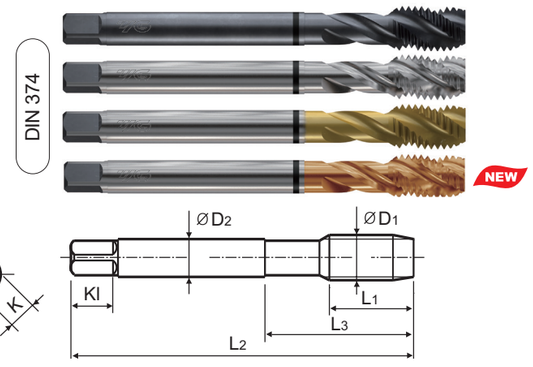
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

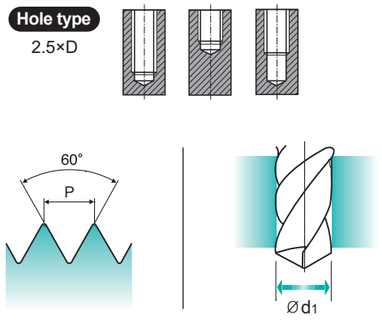
MF HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

SERIES

Vap	TB844	TiN	TD844
Bright	TC844	FSH	TC844-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.





Material groups **MU** | HSS-E | DIN 374 | 6H | 60° | C | R40 | Vap Bright TiN | FSH | p.5-6

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M24	× 2.0	TB844796	TC844796	TD844796	TC844796U	20	140	70	18	14.5	17	4	22.0
M24	× 1.5	TB844806	TC844806	TD844806	TC844806U	20	140	70	18	14.5	17	4	22.5
M26	× 1.5	TB844856	TC844856	TD844856	-	20	140	75	18	14.5	17	4	24.5
M27	× 2.0	TB844876	TC844876	TD844876	-	20	140	77	20	16	19	4	25.0
M27	× 1.5	TB844886	TC844886	TD844886	-	20	140	77	20	16	19	4	25.5
M28	× 1.5	TB844916	TC844916	TD844916	-	20	140	77	20	16	19	4	26.5
M30	× 2.0	TB844966	TC844966	TD844966	-	22	150	78	22	18	21	4	28.0
M30	× 1.5	TB844976	TC844976	TD844976	-	22	150	78	22	18	21	4	28.5
M32	x 2.0	-	TC844A16	TD844A16	-	22	150	78	22	18	21	4	30.0
M32	x 1.5	-	TC844A26	TD844A26	-	22	150	78	22	18	21	4	30.5
M33	x 2.0	-	TC844A66	TD844A66	-	24	160	85	25	20	23	4	31.0
M33	x 1.5	-	TC844A76	TD844A76	-	24	160	85	25	20	23	4	31.5
M34	x 1.5	-	TC844A96	TD844A96	-	24	170	95	28	22	25	4	32.5
M35	x 1.5	-	TC844B16	TD844B16	-	24	170	95	28	22	25	4	33.5
M36	x 3.0	-	TC844B46	TD844B46	-	30	200	120	28	22	25	4	33.0
M36	x 2.0	-	TC844B56	TD844B56	-	24	170	90	28	22	25	4	34.0
M36	x 1.5	-	TC844B66	TD844B66	-	24	170	90	28	22	25	4	34.5
M38	x 1.5	-	TC844B86	TD844B86	-	24	170	90	28	22	25	4	36.5
M39	x 1.5	-	TC844C36	TD844C36	-	25	170	90	32	24	27	4	37.5
M40	x 1.5	-	TC844C66	TD844C66	-	25	170	90	32	24	27	4	38.5
M42	x 3.0	-	TC844D06	TD844D06	-	30	200	120	32	24	27	4	39.0
M42	x 2.0	-	TC844D16	TD844D16	-	25	170	90	32	24	27	4	40.0
M42	x 1.5	-	TC844D26	TD844D26	-	25	170	90	32	24	27	4	40.5
M45	x 1.5	-	TC844D96	TD844D96	-	26	180	80	36	29	32	4	43.5

* The other coating(TiCN or TiAlN) is available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

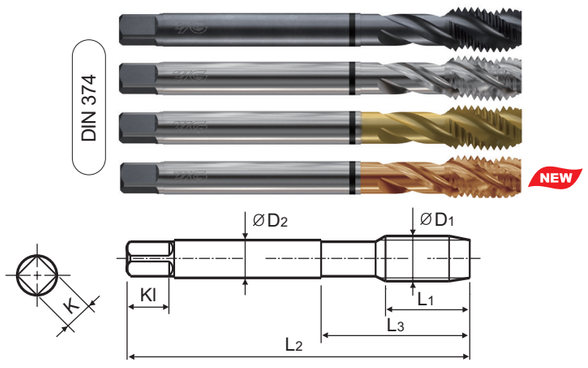
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

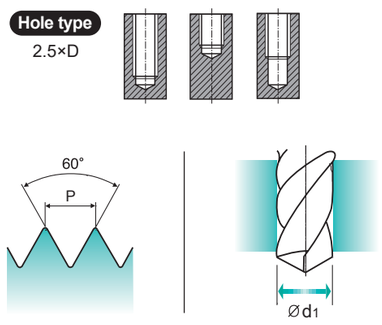
MF HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

SERIES

Vap	TB844	TiN	TD844
Bright	TC844	FSH	TC844-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.





Material groups **MU** | HSS-E | DIN 374 | 6H | 60° | C | R40 | Vap Bright TiN | FSH

p.5-6

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M48 x	3.0	-	TC844E56	TD844E56	-	36	225	115	36	29	32	4	45.0
M48 x	2.0	-	TC844E66	TD844E66	-	28	190	90	36	29	32	4	46.0
M48 x	1.5	-	TC844E76	TD844E76	-	28	190	90	36	29	32	4	46.5
M50 x	1.5	-	TC844F16	TD844F16	-	28	190	90	36	29	32	4	48.5
M52 x	3.0	-	TC844F56	TD844F56	-	36	225	115	40	32	35	4	49.0
M52 x	2.0	-	TC844F66	TD844F66	-	28	190	90	40	32	35	4	50.0
M52 x	1.5	-	TC844F76	TD844F76	-	28	190	90	40	32	35	4	50.5

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

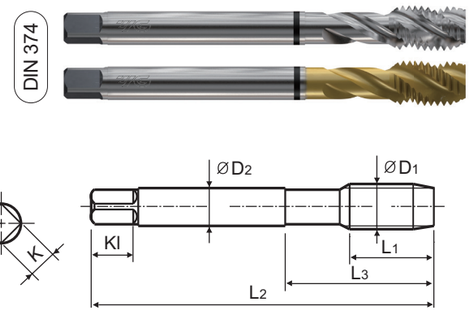
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

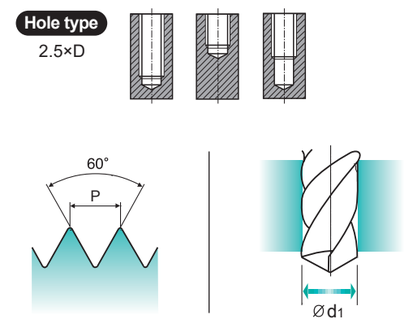
MF HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

SERIES

Bright	TCE09	TiN	TDE09

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.





Material groups **MU** | HSS-E | DIN 374 | 6G | 60° | C | R40 | Bright TiN

p.6

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M4 ×	0.5	TCE09256	TDE09256	5	63	21	2.8	2.1	5	3	3.5
M5 ×	0.5	TCE09296	TDE09296	5	70	25	3.5	2.7	6	3	4.5
M6 ×	0.75	TCE09326	TDE09326	8	80	30	4.5	3.4	6	3	5.3
M6 ×	0.5	TCE09336	TDE09336	5	80	30	4.5	3.4	6	3	5.5
M7 ×	0.75	TCE09356	TDE09356	10	80	30	5.5	4.3	7	3	6.3
M8 ×	1.0	TCE09376	TDE09376	10	90	36	6	4.9	8	3	7.0
M8 ×	0.75	TCE09386	TDE09386	8	80	30	6	4.9	8	3	7.3
M10 ×	1.25	TCE09436	TDE09436	16	100	40	7	5.5	8	3	8.8
M10 ×	1.0	TCE09446	TDE09446	10	90	36	7	5.5	8	3	9.0
M10 ×	0.75	TCE09456	TDE09456	10	90	36	7	5.5	8	3	9.3
M12 ×	1.5	TCE09516	TDE09516	15	100	40	9	7	10	3	10.5
M12 ×	1.25	TCE09526	TDE09526	15	100	40	9	7	10	3	10.8
M12 ×	1.0	TCE09536	TDE09536	11	100	40	9	7	10	3	11.0
M14 ×	1.5	TCE09556	TDE09556	15	100	47	11	9	12	3	12.5
M14 ×	1.25	TCE09566	TDE09566	15	100	47	11	9	12	3	12.8
M14 ×	1.0	TCE09576	TDE09576	11	100	47	11	9	12	3	13.0
M16 ×	1.5	TCE09616	TDE09616	15	100	49	12	9	12	3	14.5
M16 ×	1.0	TCE09626	TDE09626	12	100	49	12	9	12	3	15.0
M18 ×	1.5	TCE09676	TDE09676	17	110	55	14	11	14	4	16.5
M18 ×	1.0	TCE09686	TDE09686	13	110	55	14	11	14	4	17.0
M20 ×	1.5	TCE09726	TDE09726	17	125	60	16	12	15	4	18.5
M20 ×	1.0	TCE09736	TDE09736	14	125	60	16	12	15	4	19.0
M22 ×	1.5	TCE09766	TDE09766	17	125	65	18	14.5	17	4	20.5
M22 ×	1.0	TCE09776	TDE09776	14	125	65	18	14.5	17	4	21.0

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

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

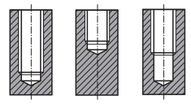
MF HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Fine Threads - DIN 13

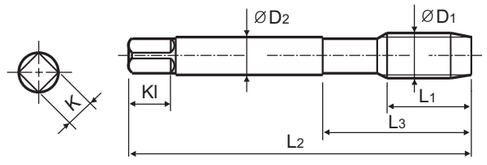
SERIES
Bright **TCE09**
TiN **TDE09**

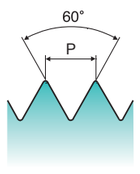
▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.

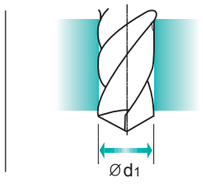


Hole type
2.5×D









Material groups **MU** | HSS-E | DIN 374 | 6G | 60° | C | R40 | Bright / TiN | p.6

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M24 ×	2.0	TCE09796	TDE09796	20	140	70	18	14.5	17	4	22.0
M24 ×	1.5	TCE09806	TDE09806	20	140	70	18	14.5	17	4	22.5
M26 ×	1.5	TCE09856	TDE09856	20	140	75	18	14.5	17	4	24.5
M27 ×	2.0	TCE09876	TDE09876	20	140	77	20	16	19	4	25.0
M27 ×	1.5	TCE09886	TDE09886	20	140	77	20	16	19	4	25.5
M28 ×	1.5	TCE09916	TDE09916	20	140	77	20	16	19	4	26.5
M30 ×	2.0	TCE09966	TDE09966	22	150	78	22	18	21	4	28.0
M30 ×	1.5	TCE09976	TDE09976	22	150	78	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					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

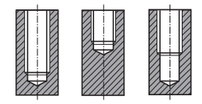
M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES
TC804-IC

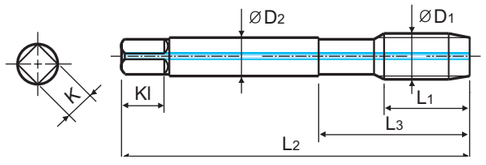
▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.

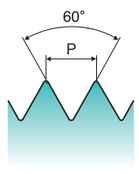


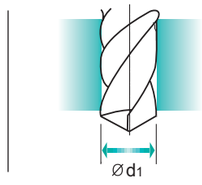
Hole type
2.5×D



with Internal Coolant







Material groups **MU** | HSS-E | DIN 371/376 | 6H | 60° | C | R40 | Bright | p.7

Machine Taps

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	Bright	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M6 ×	1.0	TC804316IC	10	80	30	6	4.9	8	3	5.0
M8 ×	1.25	TC804366IC	13	90	35	8	6.2	9	3	6.8
M10 ×	1.5	TC804426IC	15	100	39	10	8	11	3	8.5
M12 ×	1.75	TC804506IC	18	110	44	9	7	10	3	10.3
M14 ×	2.0	TC804546IC	20	110	52	11	9	12	3	12.0
M16 ×	2.0	TC804606IC	20	110	52	12	9	12	3	14.0
M18 ×	2.5	TC804656IC	25	125	66	14	11	14	4	15.5
M20 ×	2.5	TC804706IC	25	140	72	16	12	15	4	17.5

▶ DIN 371(M6~M10) and DIN 376(M12~M20)
* Coating(TiN, TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

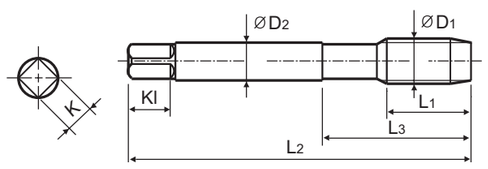
M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES **TC807**

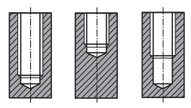
▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.

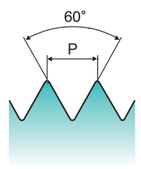


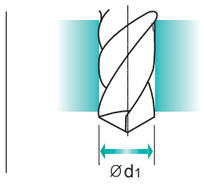
Short Chamfer



Hole type
2.5×D







Material groups **MU** | HSS-E | DIN 371/376 | 6H | 60° | E | R40 | Bright

p.7

Machine Taps

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	Bright	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2 ×	0.4	TC807136	8	45	13	2.8	2.1	5	3	1.6
M2.2 ×	0.45	TC807156	8	45	13	2.8	2.1	5	3	1.75
M2.3 ×	0.4	TC807196	8	45	13	2.8	2.1	5	3	1.9
M2.5 ×	0.45	TC807176	9	50	15	2.8	2.1	5	3	2.05
M2.6 ×	0.45	TC807496	9	50	15	2.8	2.1	5	3	2.15
M3 ×	0.5	TC807206	6	56	18	3.5	2.7	6	3	2.5
M3.5 ×	0.6	TC807226	7	56	20	4	3	6	3	2.9
M4 ×	0.7	TC807246	7	63	21	4.5	3.4	6	3	3.3
M4.5 ×	0.75	TC807266	8	70	25	6	4.9	8	3	3.8
M5 ×	0.8	TC807286	8	70	25	6	4.9	8	3	4.2
M6 ×	1.0	TC807316	10	80	30	6	4.9	8	3	5.0
M7 ×	1.0	TC807346	10	80	30	7	5.5	8	3	6.0
M8 ×	1.25	TC807366	13	90	35	8	6.2	9	3	6.8
M9 ×	1.25	TC807396	13	90	35	9	7	10	3	7.8
M10 ×	1.5	TC807426	15	100	39	10	8	11	3	8.5
M11 ×	1.5	TC807466	17	100	40	8	6.2	9	3	9.5
M12 ×	1.75	TC807506	18	110	44	9	7	10	3	10.3
M14 ×	2.0	TC807546	20	110	52	11	9	12	3	12.0
M16 ×	2.0	TC807606	20	110	52	12	9	12	3	14.0
M18 ×	2.5	TC807656	25	125	66	14	11	14	4	15.5
M20 ×	2.5	TC807706	25	140	72	16	12	15	4	17.5
M22 ×	2.5	TC807746	25	140	78	18	14.5	17	4	19.5
M24 ×	3.0	TC807786	30	160	85	18	14.5	17	4	21.0
M27 ×	3.0	TC807866	30	160	92	20	16	19	4	24.0
M30 ×	3.5	TC807946	35	180	102	22	18	21	4	26.5

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* Coating(TiN, TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

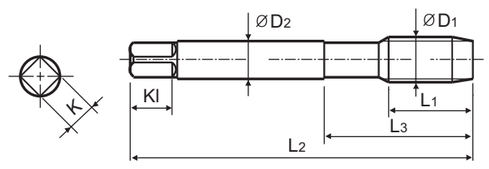
M HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES **TC633**

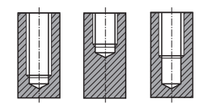
▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.

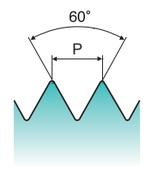


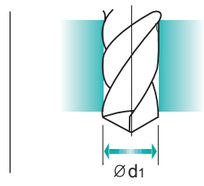
Long Shank



Hole type
2.5×D







Material groups **MU** | HSS-E | LONG | 6H | 60° | C | R40 | Bright

p.7

Machine Taps

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	Bright	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M3 ×	0.5	TC633206	11	100	18	3.5	2.7	6	3	2.5
M4 ×	0.7	TC633246	13	125	21	4.5	3.4	6	3	3.3
M5 ×	0.8	TC633286	15	140	25	6	4.9	8	3	4.2
M6 ×	1.0	TC633316	17	160	30	6	4.9	8	3	5.0
M8 ×	1.25	TC633366	20	180	35	6	4.9	8	3	6.8
M10 ×	1.5	TC633426	22	200	39	7	5.5	8	3	8.5
M12 ×	1.75	TC633506	24	220	44	9	7	10	3	10.3
M14 ×	2.0	TC633546	26	220	52	11	9	12	3	12.0
M16 ×	2.0	TC633606	27	220	52	12	9	12	3	14.0
M20 ×	2.5	TC633706	32	280	72	16	12	15	4	17.5

* Coating(TiN, TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

◎ : Excellent ○ : Good

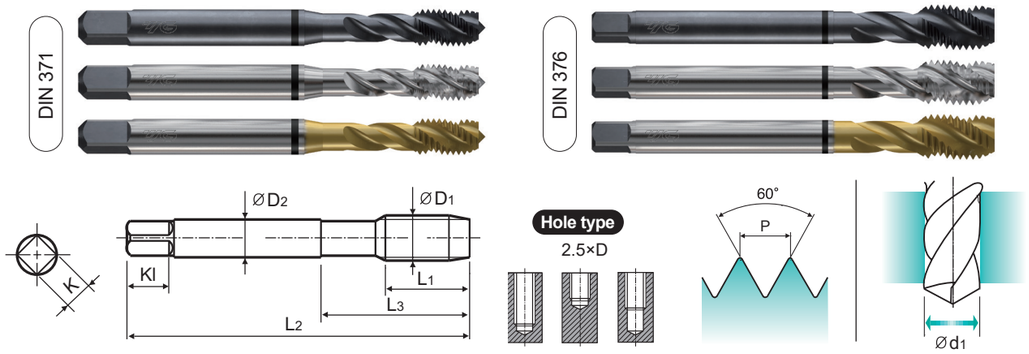
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

UNC HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE Unified Coarse Threads

Vap **TB824** / Bright **TC824** / TiN **TD824** SERIES

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 2B | 60° | C | R40 | Vap Bright TiN | p.5-6

Machine Taps

Unit : mm

SIZE	TPI	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Vap	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4 -	40UNC	TB824162	TC824162	TD824162	6	56	18	3.5	2.7	6	3	2.3
#5 -	40UNC	TB824202	TC824202	TD824202	7	56	18	3.5	2.7	6	3	2.6
#6 -	32UNC	TB824242	TC824242	TD824242	7	56	20	4	3	6	3	2.8
#8 -	32UNC	TB824282	TC824282	TD824282	8	63	21	4.5	3.4	6	3	3.4
#10 -	24UNC	TB824322	TC824322	TD824322	10	70	25	6	4.9	8	3	3.9
#12 -	24UNC	TB824362	TC824362	TD824362	10	80	30	6	4.9	8	3	4.5
1/4 -	20UNC	TB824402	TC824402	TD824402	13	80	30	7	5.5	8	3	5.1
5/16 -	18UNC	TB824442	TC824442	TD824442	14	90	35	8	6.2	9	3	6.6
3/8 -	16UNC	TB824482	TC824482	TD824482	16	100	39	9	7	10	3	8.0
7/16 -	14UNC	TB824522	TC824522	TD824522	17	100	40	8	6.2	9	3	9.4
1/2 -	13UNC	TB824562	TC824562	TD824562	20	110	46	9	7	10	3	10.8
9/16 -	12UNC	TB824602	TC824602	TD824602	20	110	54	11	9	12	3	12.2
5/8 -	11UNC	TB824642	TC824642	TD824642	22	110	59	12	9	12	3	13.6
3/4 -	10UNC	TB824702	TC824702	TD824702	25	125	69	14	11	14	4	16.5
7/8 -	9UNC	TB824742	TC824742	TD824742	27	140	80	18	14.5	17	4	19.5
1" -	8UNC	TB824782	TC824782	TD824782	30	160	90	20	16	19	4	22.3

▶ DIN 371(#4~3/8) and DIN 376(7/16~1")
* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

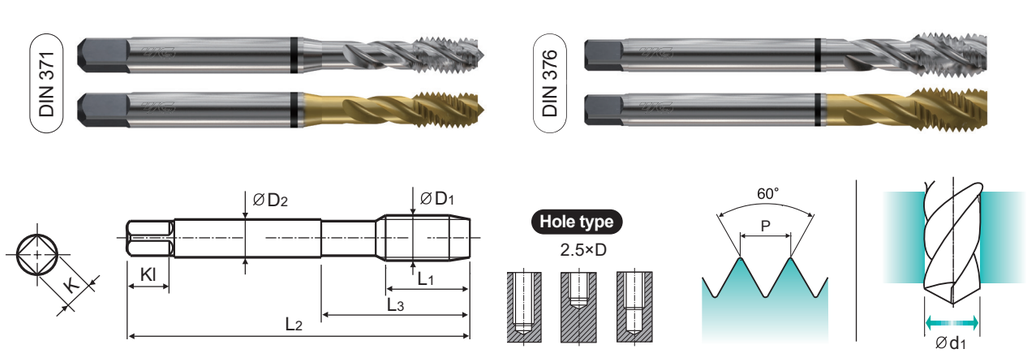
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

UNC HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE Unified Coarse Threads

Bright **TCE01** / TiN **TDE01**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 3B | 60° | C | R40 | Bright TiN | p.6

Machine Taps

Unit : mm

SIZE	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4 -	40UNC	TCE01162	TDE01162	6	56	18	3.5	2.7	6	3	2.3
#5 -	40UNC	TCE01202	TDE01202	7	56	18	3.5	2.7	6	3	2.6
#6 -	32UNC	TCE01242	TDE01242	7	56	20	4	3	6	3	2.8
#8 -	32UNC	TCE01282	TDE01282	8	63	21	4.5	3.4	6	3	3.4
#10 -	24UNC	TCE01322	TDE01322	10	70	25	6	4.9	8	3	3.9
#12 -	24UNC	TCE01362	TDE01362	10	80	30	6	4.9	8	3	4.5
1/4 -	20UNC	TCE01402	TDE01402	13	80	30	7	5.5	8	3	5.1
5/16 -	18UNC	TCE01442	TDE01442	14	90	35	8	6.2	9	3	6.6
3/8 -	16UNC	TCE01482	TDE01482	16	100	39	9	7	10	3	8.0
7/16 -	14UNC	TCE01522	TDE01522	17	100	40	8	6.2	9	3	9.4
1/2 -	13UNC	TCE01562	TDE01562	20	110	46	9	7	10	3	10.8
9/16 -	12UNC	TCE01602	TDE01602	20	110	54	11	9	12	3	12.2
5/8 -	11UNC	TCE01642	TDE01642	22	110	59	12	9	12	3	13.6
3/4 -	10UNC	TCE01702	TDE01702	25	125	69	14	11	14	4	16.5
7/8 -	9UNC	TCE01742	TDE01742	27	140	80	18	14.5	17	4	19.5
1" -	8UNC	TCE01782	TDE01782	30	160	90	20	16	19	4	22.3

▶ DIN 371(#4~3/8) and DIN 376(7/16~1")
* The other coating(TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

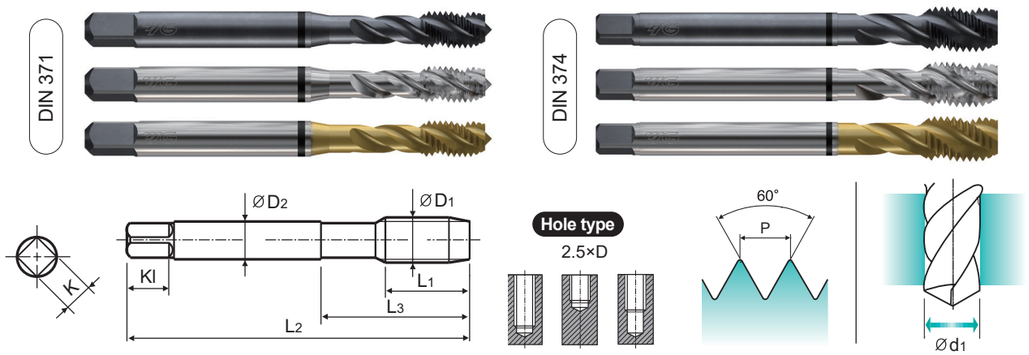
UNF

HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
Unified Fine Threads

SERIES

Vap **TB864**
Bright **TC864**
TiN **TD864**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/374 | 2B | 60° | C | R40 | Vap Bright TiN | p.5-6

Machine Taps

Unit : mm

SIZE	TPI	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Vap	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4 -	48UNF	TB864182	TC864182	TD864182	6	56	18	3.5	2.7	6	3	2.4
#5 -	44UNF	TB864222	TC864222	TD864222	7	56	18	3.5	2.7	6	3	2.7
#6 -	40UNF	TB864262	TC864262	TD864262	7	56	20	4	3	6	3	2.9
#8 -	36UNF	TB864302	TC864302	TD864302	8	63	21	4.5	3.4	6	3	3.5
#10 -	32UNF	TB864342	TC864342	TD864342	10	70	25	6	4.9	8	3	4.1
#12 -	28UNF	TB864382	TC864382	TD864382	10	80	30	6	4.9	8	3	4.6
1/4 -	28UNF	TB864422	TC864422	TD864422	10	80	30	7	5.5	8	3	5.5
5/16 -	24UNF	TB864462	TC864462	TD864462	10	90	35	8	6.2	9	3	6.9
3/8 -	24UNF	TB864502	TC864502	TD864502	10	100	39	9	7	10	3	8.5
7/16 -	20UNF	TB864542	TC864542	TD864542	13	100	40	8	6.2	9	3	9.9
1/2 -	20UNF	TB864582	TC864582	TD864582	13	100	42	9	7	10	3	11.5
9/16 -	18UNF	TB864622	TC864622	TD864622	15	100	44	11	9	12	3	12.9
5/8 -	18UNF	TB864662	TC864662	TD864662	15	100	48	12	9	12	3	14.5
3/4 -	16UNF	TB864722	TC864722	TD864722	17	110	57	14	11	14	4	17.5
7/8 -	14UNF	TB864762	TC864762	TD864762	17	125	65	18	14.5	17	4	20.5
1" -	12UNF	TB864802	TC864802	TD864802	20	140	74	20	16	19	4	23.3

▶ DIN 371(#4~3/8) and DIN 374(7/16~1")
* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

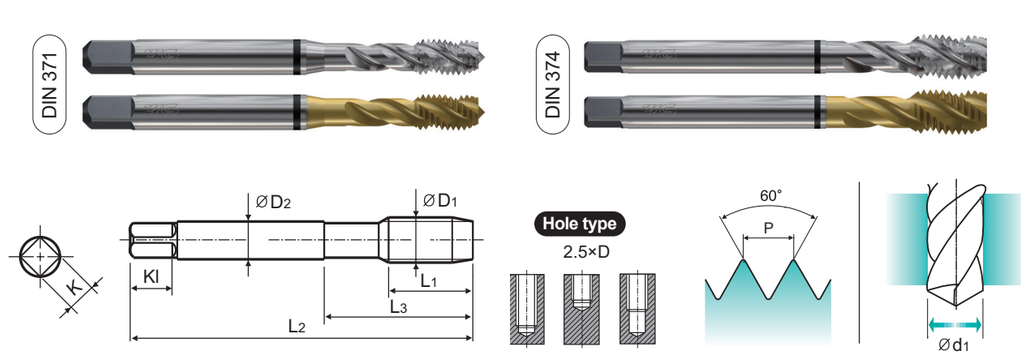
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

UNF

HSS-E SPIRAL FLUTE TAPS for MULTI-PURPOSE
Unified Fine Threads

Bright **TCE02**
TiN **TDE02**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/374 | 3B | 60° | C | R40 | Bright TiN | p.6

Machine Taps

Unit : mm

SIZE	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4 -	48UNF	TCE02182	TDE02182	6	56	18	3.5	2.7	6	3	2.4
#5 -	44UNF	TCE02222	TDE02222	7	56	18	3.5	2.7	6	3	2.7
#6 -	40UNF	TCE02262	TDE02262	7	56	20	4	3	6	3	2.9
#8 -	36UNF	TCE02302	TDE02302	8	63	21	4.5	3.4	6	3	3.5
#10 -	32UNF	TCE02342	TDE02342	10	70	25	6	4.9	8	3	4.1
#12 -	28UNF	TCE02382	TDE02382	10	80	30	6	4.9	8	3	4.6
1/4 -	28UNF	TCE02422	TDE02422	10	80	30	7	5.5	8	3	5.5
5/16 -	24UNF	TCE02462	TDE02462	10	90	35	8	6.2	9	3	6.9
3/8 -	24UNF	TCE02502	TDE02502	10	100	39	9	7	10	3	8.5
7/16 -	20UNF	TCE02542	TDE02542	13	100	40	8	6.2	9	3	9.9
1/2 -	20UNF	TCE02582	TDE02582	13	100	42	9	7	10	3	11.5
9/16 -	18UNF	TCE02622	TDE02622	15	100	44	11	9	12	3	12.9
5/8 -	18UNF	TCE02662	TDE02662	15	100	48	12	9	12	3	14.5
3/4 -	16UNF	TCE02722	TDE02722	17	110	57	14	11	14	4	17.5
7/8 -	14UNF	TCE02762	TDE02762	17	125	65	18	14.5	17	4	20.5
1" -	12UNF	TCE02802	TDE02802	20	140	74	20	16	19	4	23.3

▶ DIN 371(#4~3/8) and DIN 374(7/16~1")
* The other coating(TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

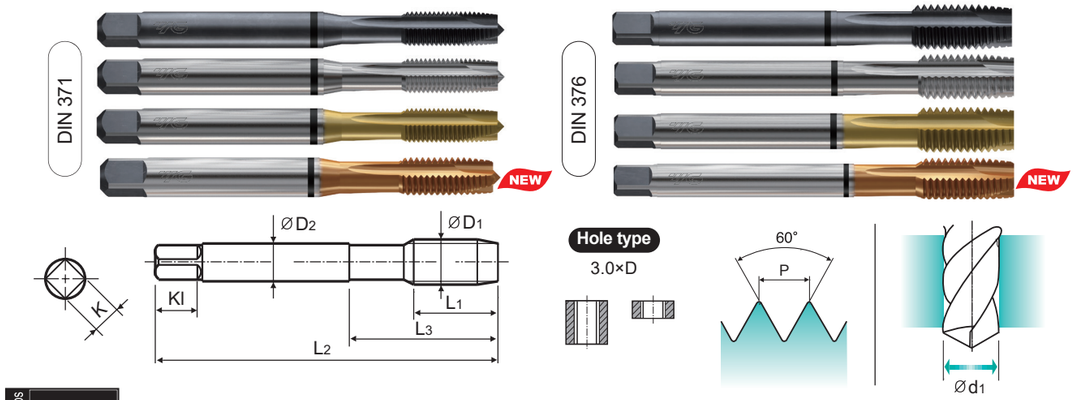
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

SERIES

M HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap	TB814	TiN	TD814
Bright	TC814	FSH	TC814-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups: MU | HSS-E | DIN 371/376 | 6H | 60° | B | Vap Bright TiN | FSH

p.7-8

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2	× 0.4	TB814136	TC814136	TD814136	TC814136U	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	TB814156	TC814156	TD814156	-	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	TB814196	TC814196	TD814196	-	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	TB814176	TC814176	TD814176	-	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	TB814496	TC814496	TD814496	-	9	50	15	2.8	2.1	5	3	2.15
M3	× 0.5	TB814206	TC814206	TD814206	TC814206U	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	TB814226	TC814226	TD814226	-	12	56	20	4	3	6	3	2.9
M4	× 0.7	TB814246	TC814246	TD814246	TC814246U	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	TB814266	TC814266	TD814266	-	14	70	25	6	4.9	8	3	3.8
M5	× 0.8	TB814286	TC814286	TD814286	TC814286U	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	TB814316	TC814316	TD814316	TC814316U	17	80	30	6	4.9	8	3	5.0
M7	× 1.0	TB814346	TC814346	TD814346	-	17	80	30	7	5.5	8	3	6.0
M8	× 1.25	TB814366	TC814366	TD814366	TC814366U	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	TB814396	TC814396	TD814396	-	20	90	35	9	7	10	3	7.8
M10	× 1.5	TB814426	TC814426	TD814426	TC814426U	22	100	39	10	8	11	3	8.5
M11	× 1.5	TB814466	TC814466	TD814466	-	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	TB814506	TC814506	TD814506	TC814506U	24	110	44	9	7	10	3	10.3
M14	× 2.0	TB814546	TC814546	TD814546	TC814546U	26	110	44	11	9	12	3	12.0
M16	× 2.0	TB814606	TC814606	TD814606	TC814606U	27	110	44	12	9	12	3	14.0
M18	× 2.5	TB814656	TC814656	TD814656	TC814656U	30	125	50	14	11	14	4	15.5
M20	× 2.5	TB814706	TC814706	TD814706	TC814706U	32	140	54	16	12	15	4	17.5
M22	× 2.5	TB814746	TC814746	TD814746	TC814746U	32	140	54	18	14.5	17	4	19.5

▶ NEXT PAGE

▶ DIN 371(M2~M10) and DIN 376(M11~M52)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

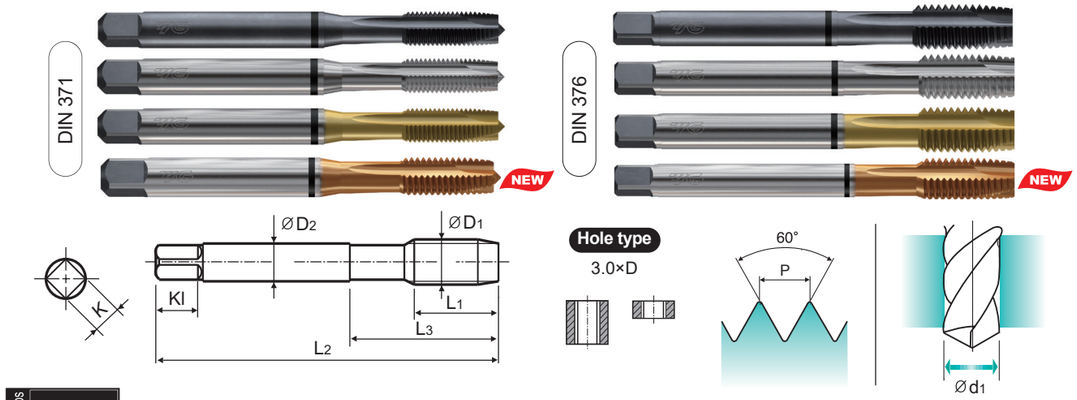
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

SERIES

M HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

Vap TB814 TiN TD814
Bright TC814 FSH TC814-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups: MU | HSS-E | DIN 371/376 | 6H | 60° | B | Vap Bright TiN | FSH

p.7-8

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M24	× 3.0	TB814786	TC814786	TD814786	TC814786U	34	160	60	18	14.5	17	4	21.0
M27	× 3.0	TB814866	TC814866	TD814866	TC814866U	36	160	60	20	16	19	4	24.0
M30	× 3.5	TB814946	TC814946	TD814946	TC814946U	40	180	70	22	18	21	4	26.5
M33	x 3.5	-	TC814A46	TD814A46	-	40	180	70	25	20	23	4	29.5
M36	x 4.0	-	TC814B36	TD814B36	-	50	200	80	28	22	25	4	32.0
M39	x 4.0	-	TC814C06	TD814C06	-	50	200	80	32	24	27	4	35.0
M42	x 4.5	-	TC814C86	TD814C86	-	56	200	85	32	24	27	4	37.5
M45	x 4.5	-	TC814D56	TD814D56	-	58	220	85	36	29	32	4	40.5
M48	x 5.0	-	TC814E26	TD814E26	-	65	250	90	36	29	32	4	43.0
M52	x 5.0	-	TC814F36	TD814F36	-	65	250	90	40	32	35	4	47.0

▶ DIN 371(M2~M10) and DIN 376(M11~M52)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

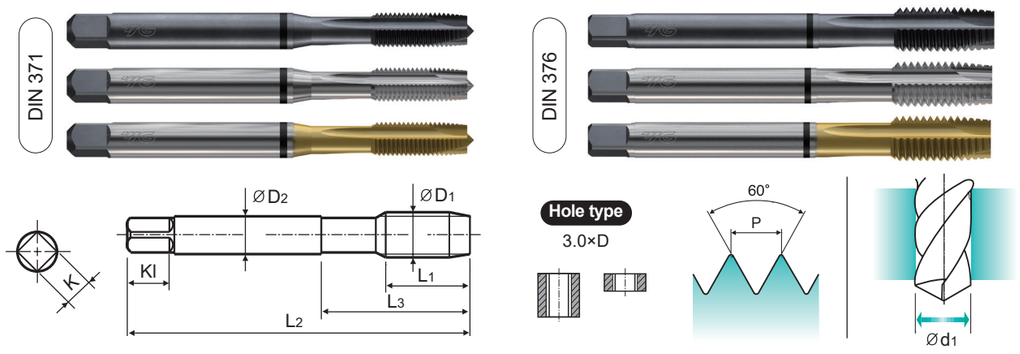
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES

Vap **TBJ05** | Bright **TCJ05** | TiN **TDJ05**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 4H | 60° | B | Vap Bright TiN | p.8

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2	× 0.4	TBJ05136	TCJ05136	TDJ05136	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	TBJ05156	TCJ05156	TDJ05156	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	TBJ05196	TCJ05196	TDJ05196	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	TBJ05176	TCJ05176	TDJ05176	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	TBJ05496	TCJ05496	TDJ05496	9	50	15	2.8	2.1	5	3	2.15
M3	× 0.5	TBJ05206	TCJ05206	TDJ05206	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	TBJ05226	TCJ05226	TDJ05226	12	56	20	4	3	6	3	2.9
M4	× 0.7	TBJ05246	TCJ05246	TDJ05246	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	TBJ05266	TCJ05266	TDJ05266	14	70	25	6	4.9	8	3	3.8
M5	× 0.8	TBJ05286	TCJ05286	TDJ05286	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	TBJ05316	TCJ05316	TDJ05316	17	80	30	6	4.9	8	3	5.0
M7	× 1.0	TBJ05346	TCJ05346	TDJ05346	17	80	30	7	5.5	8	3	6.0
M8	× 1.25	TBJ05366	TCJ05366	TDJ05366	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	TBJ05396	TCJ05396	TDJ05396	20	90	35	9	7	10	3	7.8
M10	× 1.5	TBJ05426	TCJ05426	TDJ05426	22	100	39	10	8	11	3	8.5
M11	× 1.5	TBJ05466	TCJ05466	TDJ05466	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	TBJ05506	TCJ05506	TDJ05506	24	110	44	9	7	10	3	10.3
M14	× 2.0	TBJ05546	TCJ05546	TDJ05546	26	110	44	11	9	12	3	12.0
M16	× 2.0	TBJ05606	TCJ05606	TDJ05606	27	110	44	12	9	12	3	14.0
M18	× 2.5	TBJ05656	TCJ05656	TDJ05656	30	125	50	14	11	14	4	15.5
M20	× 2.5	TBJ05706	TCJ05706	TDJ05706	32	140	54	16	12	15	4	17.5
M22	× 2.5	TBJ05746	TCJ05746	TDJ05746	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	TBJ05786	TCJ05786	TDJ05786	34	160	60	18	14.5	17	4	21.0
M27	× 3.0	TBJ05866	TCJ05866	TDJ05866	36	160	60	20	16	19	4	24.0
M30	× 3.5	TBJ05946	TCJ05946	TDJ05946	40	180	70	22	18	21	4	26.5

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

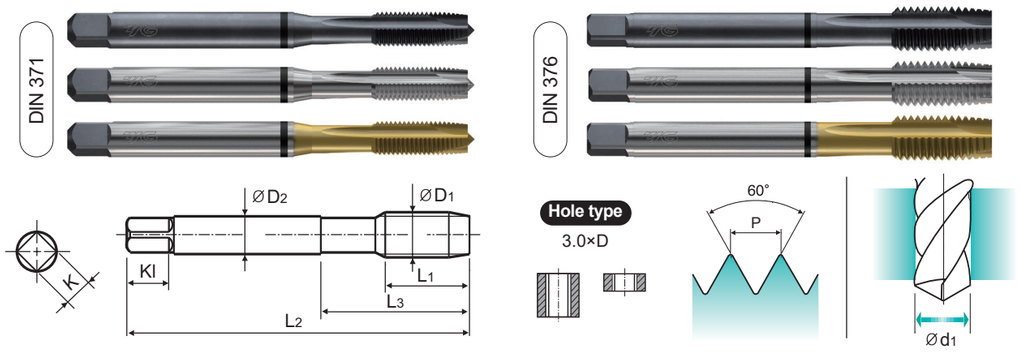
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES

Vap **TBJ06** | Bright **TCJ06** | TiN **TDJ06**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 6H+0.1 | 60° | B | Vap Bright TiN | p.9

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2	× 0.4	TBJ06136	TCJ06136	TDJ06136	8	45	13	2.8	2.1	5	3	1.7
M2.2	× 0.45	TBJ06156	TCJ06156	TDJ06156	8	45	13	2.8	2.1	5	3	1.85
M2.3	× 0.4	TBJ06196	TCJ06196	TDJ06196	8	45	13	2.8	2.1	5	3	2.0
M2.5	× 0.45	TBJ06176	TCJ06176	TDJ06176	9	50	15	2.8	2.1	5	3	2.15
M2.6	× 0.45	TBJ06496	TCJ06496	TDJ06496	9	50	15	2.8	2.1	5	3	2.25
M3	× 0.5	TBJ06206	TCJ06206	TDJ06206	11	56	18	3.5	2.7	6	3	2.6
M3.5	× 0.6	TBJ06226	TCJ06226	TDJ06226	12	56	20	4	3	6	3	3.0
M4	× 0.7	TBJ06246	TCJ06246	TDJ06246	13	63	21	4.5	3.4	6	3	3.4
M4.5	× 0.75	TBJ06266	TCJ06266	TDJ06266	14	70	25	6	4.9	8	3	3.9
M5	× 0.8	TBJ06286	TCJ06286	TDJ06286	15	70	25	6	4.9	8	3	4.3
M6	× 1.0	TBJ06316	TCJ06316	TDJ06316	17	80	30	6	4.9	8	3	5.1
M7	× 1.0	TBJ06346	TCJ06346	TDJ06346	17	80	30	7	5.5	8	3	6.1
M8	× 1.25	TBJ06366	TCJ06366	TDJ06366	20	90	35	8	6.2	9	3	6.9
M9	× 1.25	TBJ06396	TCJ06396	TDJ06396	20	90	35	9	7	10	3	7.9
M10	× 1.5	TBJ06426	TCJ06426	TDJ06426	22	100	39	10	8	11	3	8.6
M11	× 1.5	TBJ06466	TCJ06466	TDJ06466	22	100	40	8	6.2	9	3	9.6
M12	× 1.75	TBJ06506	TCJ06506	TDJ06506	24	110	44	9	7	10	3	10.4
M14	× 2.0	TBJ06546	TCJ06546	TDJ06546	26	110	44	11	9	12	3	12.1
M16	× 2.0	TBJ06606	TCJ06606	TDJ06606	27	110	44	12	9	12	3	14.1
M18	× 2.5	TBJ06656	TCJ06656	TDJ06656	30	125	50	14	11	14	4	15.6
M20	× 2.5	TBJ06706	TCJ06706	TDJ06706	32	140	54	16	12	15	4	17.6
M22	× 2.5	TBJ06746	TCJ06746	TDJ06746	32	140	54	18	14.5	17	4	19.6
M24	× 3.0	TBJ06786	TCJ06786	TDJ06786	34	160	60	18	14.5	17	4	21.1
M27	× 3.0	TBJ06866	TCJ06866	TDJ06866	36	160	60	20	16	19	4	24.1
M30	× 3.5	TBJ06946	TCJ06946	TDJ06946	40	180	70	22	18	21	4	26.6

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

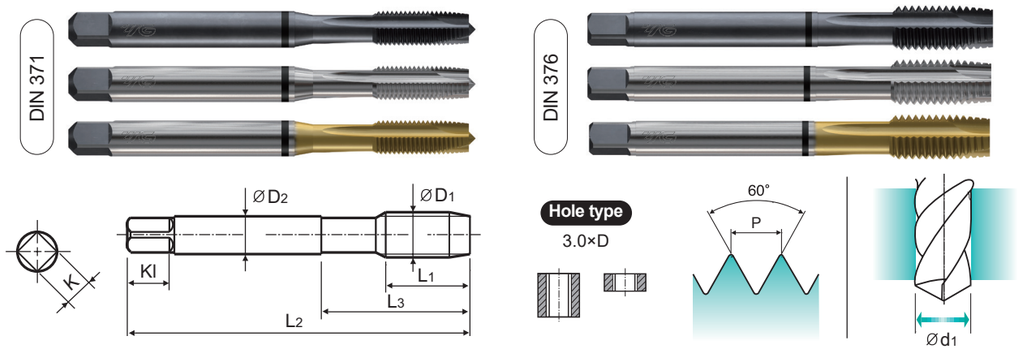
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES

Vap **TBJ07** | Bright **TCJ07** | TiN **TDJ07**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 6G | 60° | B | Vap Bright TiN | p.9

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2	× 0.4	TBJ07136	TCJ07136	TDJ07136	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	TBJ07156	TCJ07156	TDJ07156	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	TBJ07196	TCJ07196	TDJ07196	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	TBJ07176	TCJ07176	TDJ07176	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	TBJ07496	TCJ07496	TDJ07496	9	50	15	2.8	2.1	5	3	2.15
M3	× 0.5	TBJ07206	TCJ07206	TDJ07206	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	TBJ07226	TCJ07226	TDJ07226	12	56	20	4	3	6	3	2.9
M4	× 0.7	TBJ07246	TCJ07246	TDJ07246	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	TBJ07266	TCJ07266	TDJ07266	14	70	25	6	4.9	8	3	3.8
M5	× 0.8	TBJ07286	TCJ07286	TDJ07286	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	TBJ07316	TCJ07316	TDJ07316	17	80	30	6	4.9	8	3	5.0
M7	× 1.0	TBJ07346	TCJ07346	TDJ07346	17	80	30	7	5.5	8	3	6.0
M8	× 1.25	TBJ07366	TCJ07366	TDJ07366	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	TBJ07396	TCJ07396	TDJ07396	20	90	35	9	7	10	3	7.8
M10	× 1.5	TBJ07426	TCJ07426	TDJ07426	22	100	39	10	8	11	3	8.5
M11	× 1.5	TBJ07466	TCJ07466	TDJ07466	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	TBJ07506	TCJ07506	TDJ07506	24	110	44	9	7	10	3	10.3
M14	× 2.0	TBJ07546	TCJ07546	TDJ07546	26	110	44	11	9	12	3	12.0
M16	× 2.0	TBJ07606	TCJ07606	TDJ07606	27	110	44	12	9	12	3	14.0
M18	× 2.5	TBJ07656	TCJ07656	TDJ07656	30	125	50	14	11	14	4	15.5
M20	× 2.5	TBJ07706	TCJ07706	TDJ07706	32	140	54	16	12	15	4	17.5
M22	× 2.5	TBJ07746	TCJ07746	TDJ07746	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	TBJ07786	TCJ07786	TDJ07786	34	160	60	18	14.5	17	4	21.0
M27	× 3.0	TBJ07866	TCJ07866	TDJ07866	36	160	60	20	16	19	4	24.0
M30	× 3.5	TBJ07946	TCJ07946	TDJ07946	40	180	70	22	18	21	4	26.5

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

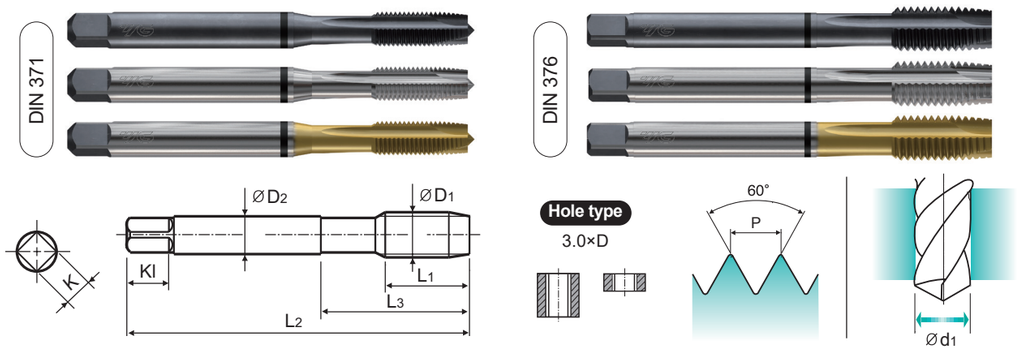
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES

Vap **TBJ08** | Bright **TCJ08** | TiN **TDJ08**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 7G | 60° | B | Vap Bright TiN | p.9

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2	× 0.4	TBJ08136	TCJ08136	TDJ08136	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	TBJ08156	TCJ08156	TDJ08156	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	TBJ08196	TCJ08196	TDJ08196	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	TBJ08176	TCJ08176	TDJ08176	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	TBJ08496	TCJ08496	TDJ08496	9	50	15	2.8	2.1	5	3	2.15
M3	× 0.5	TBJ08206	TCJ08206	TDJ08206	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	TBJ08226	TCJ08226	TDJ08226	12	56	20	4	3	6	3	2.9
M4	× 0.7	TBJ08246	TCJ08246	TDJ08246	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	TBJ08266	TCJ08266	TDJ08266	14	70	25	6	4.9	8	3	3.8
M5	× 0.8	TBJ08286	TCJ08286	TDJ08286	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	TBJ08316	TCJ08316	TDJ08316	17	80	30	6	4.9	8	3	5.0
M7	× 1.0	TBJ08346	TCJ08346	TDJ08346	17	80	30	7	5.5	8	3	6.0
M8	× 1.25	TBJ08366	TCJ08366	TDJ08366	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	TBJ08396	TCJ08396	TDJ08396	20	90	35	9	7	10	3	7.8
M10	× 1.5	TBJ08426	TCJ08426	TDJ08426	22	100	39	10	8	11	3	8.5
M11	× 1.5	TBJ08466	TCJ08466	TDJ08466	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	TBJ08506	TCJ08506	TDJ08506	24	110	44	9	7	10	3	10.3
M14	× 2.0	TBJ08546	TCJ08546	TDJ08546	26	110	44	11	9	12	3	12.0
M16	× 2.0	TBJ08606	TCJ08606	TDJ08606	27	110	44	12	9	12	3	14.0
M18	× 2.5	TBJ08656	TCJ08656	TDJ08656	30	125	50	14	11	14	4	15.5
M20	× 2.5	TBJ08706	TCJ08706	TDJ08706	32	140	54	16	12	15	4	17.5
M22	× 2.5	TBJ08746	TCJ08746	TDJ08746	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	TBJ08786	TCJ08786	TDJ08786	34	160	60	18	14.5	17	4	21.0
M27	× 3.0	TBJ08866	TCJ08866	TDJ08866	36	160	60	20	16	19	4	24.0
M30	× 3.5	TBJ08946	TCJ08946	TDJ08946	40	180	70	22	18	21	4	26.5

▶ DIN 371(M2~M10) and DIN 376(M11~M30)

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

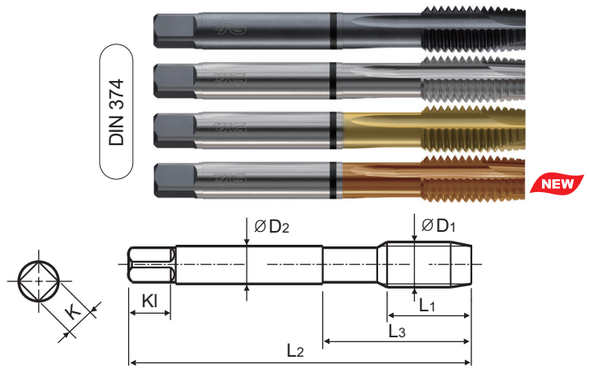
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

MF HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

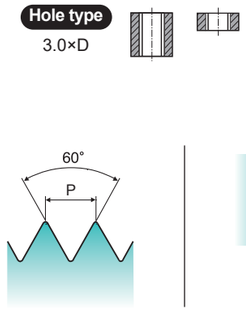
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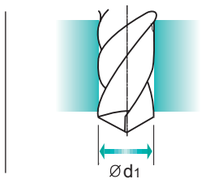
Vap	TB854	TiN	TD854
Bright	TC854	FSH	TC854-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Hole type
3.0×D





Material groups **MU** | HSS-E | DIN 374 | 6H | 60° | B | Vap Bright TiN | FSH | p.7-8

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M4 ×	0.5	TB854256	TC854256	TD854256	-	10	63	21	2.8	2.1	5	3	3.5
M5 ×	0.5	TB854296	TC854296	TD854296	-	11	70	25	3.5	2.7	6	3	4.5
M6 ×	0.75	TB854326	TC854326	TD854326	-	13	80	30	4.5	3.4	6	3	5.3
M6 ×	0.5	TB854336	TC854336	TD854336	-	13	80	30	4.5	3.4	6	3	5.5
M7 ×	0.75	TB854356	TC854356	TD854356	-	14	80	30	5.5	4.3	7	3	6.3
M8 ×	1.0	TB854376	TC854376	TD854376	TC854376U	17	90	36	6	4.9	8	3	7.0
M8 ×	0.75	TB854386	TC854386	TD854386	TC854386U	14	80	30	6	4.9	8	3	7.3
M10 ×	1.25	TB854436	TC854436	TD854436	TC854436U	22	100	40	7	5.5	8	3	8.8
M10 ×	1.0	TB854446	TC854446	TD854446	TC854446U	18	90	36	7	5.5	8	3	9.0
M10 ×	0.75	TB854456	TC854456	TD854456	TC854456U	18	90	36	7	5.5	8	3	9.3
M12 ×	1.5	TB854516	TC854516	TD854516	TC854516U	22	100	40	9	7	10	3	10.5
M12 ×	1.25	TB854526	TC854526	TD854526	TC854526U	22	100	40	9	7	10	3	10.8
M12 ×	1.0	TB854536	TC854536	TD854536	TC854536U	18	100	40	9	7	10	3	11.0
M14 ×	1.5	TB854556	TC854556	TD854556	TC854556U	22	100	40	11	9	12	3	12.5
M14 ×	1.25	TB854566	TC854566	TD854566	TC854566U	22	100	40	11	9	12	3	12.8
M14 ×	1.0	TB854576	TC854576	TD854576	TC854576U	22	100	40	11	9	12	3	13.0
M16 ×	1.5	TB854616	TC854616	TD854616	TC854616U	22	100	40	12	9	12	3	14.5
M16 ×	1.0	TB854626	TC854626	TD854626	TC854626U	18	100	40	12	9	12	3	15.0
M18 ×	1.5	TB854676	TC854676	TD854676	TC854676U	25	110	44	14	11	14	4	16.5
M18 ×	1.0	TB854686	TC854686	TD854686	TC854686U	20	110	44	14	11	14	4	17.0
M20 ×	1.5	TB854726	TC854726	TD854726	TC854726U	25	125	50	16	12	15	4	18.5
M20 ×	1.0	TB854736	TC854736	TD854736	TC854736U	20	125	50	16	12	15	4	19.0

* The other coating(TiCN or TiAlN) is available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

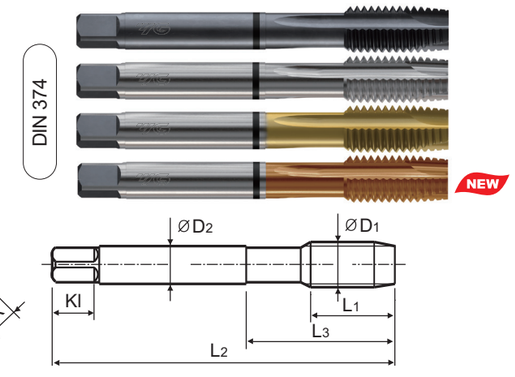
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

MF HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

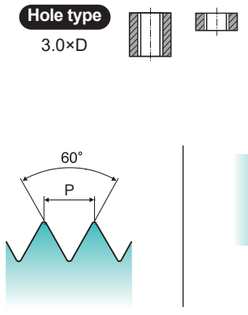
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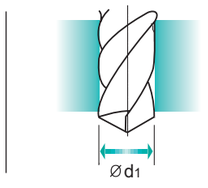
Vap	TB854	TiN	TD854
Bright	TC854	FSH	TC854-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Hole type
3.0×D





Material groups MU | HSS-E | DIN 374 | 6H | 60° | B | Vap Bright TiN | FSH | p.7-8

Machine Taps

Unit : mm

SIZE	Pitch	EDP No.			NEW AOS TAP	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	Bright	TiN	FSH	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M22 ×	1.5	TB854766	TC854766	TD854766	TC854766U	25	125	50	18	14.5	17	4	20.5
M22 ×	1.0	TB854776	TC854776	TD854776	TC854776U	20	125	50	18	14.5	17	4	21.0
M24 ×	2.0	TB854796	TC854796	TD854796	TC854796U	27	140	54	18	14.5	17	4	22.0
M24 ×	1.5	TB854806	TC854806	TD854806	TC854806U	27	140	54	18	14.5	17	4	22.5
M26 ×	1.5	TB854856	TC854856	TD854856	-	28	140	54	18	14.5	17	4	24.5
M27 ×	2.0	TB854876	TC854876	TD854876	-	28	140	54	20	16	19	4	25.0
M27 ×	1.5	TB854886	TC854886	TD854886	-	28	140	54	20	16	19	4	25.5
M28 ×	1.5	TB854916	TC854916	TD854916	-	28	140	54	20	16	19	4	26.5
M30 ×	2.0	TB854966	TC854966	TD854966	-	30	150	57	22	18	21	4	28.0
M30 ×	1.5	TB854976	TC854976	TD854976	-	30	150	57	22	18	21	4	28.5
M32 x	2.0	-	TC854A16	TD854A16	-	30	150	57	22	18	21	4	30.0
M32 x	1.5	-	TC854A26	TD854A26	-	30	150	57	22	18	21	4	30.5
M33 x	2.0	-	TC854A66	TD854A66	-	33	160	60	25	20	23	4	31.0
M33 x	1.5	-	TC854A76	TD854A76	-	32	160	60	25	20	23	4	31.5
M34 x	1.5	-	TC854A96	TD854A96	-	33	170	70	28	22	25	4	32.5
M35 x	1.5	-	TC854B16	TD854B16	-	33	170	70	28	22	25	4	33.5
M36 x	3.0	-	TC854B46	TD854B46	-	45	200	80	28	22	25	4	33.0
M36 x	2.0	-	TC854B56	TD854B56	-	33	170	70	28	22	25	4	34.0
M36 x	1.5	-	TC854B66	TD854B66	-	33	170	70	28	22	25	4	34.5
M38 x	1.5	-	TC854B86	TD854B86	-	33	170	70	28	22	25	4	36.5
M39 x	1.5	-	TC854C36	TD854C36	-	33	170	70	32	24	27	4	37.5
M40 x	1.5	-	TC854C66	TD854C66	-	33	170	70	32	24	27	4	38.5

* The other coating(TiCN or TiAlN) is available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

MF HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

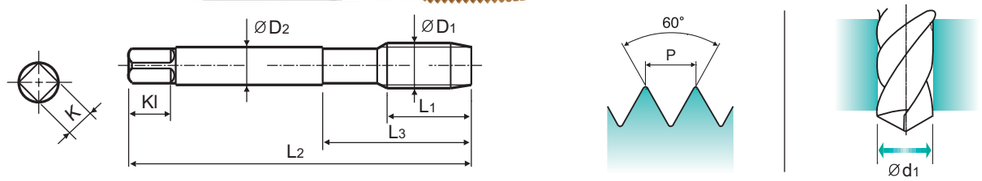
SERIES

Vap	TB854	TiN	TD854
Bright	TC854	FSH	TC854-U

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Hole type
3.0×D



Material groups **MU** | HSS-E | DIN 374 | 6H | 60° | B | Vap Bright TiN | FSH

p.7-8

Machine Taps

Unit : mm

SIZE	Pitch	EDP No. Vap	Bright	TiN	NEW AOS TAP FSH	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
ØD1	P												
M42 x	3.0	-	TC854D06	TD854D06	-	45	200	80	32	24	27	4	39.0
M42 x	2.0	-	TC854D16	TD854D16	-	33	170	70	32	24	27	4	40.0
M42 x	1.5	-	TC854D26	TD854D26	-	33	170	70	32	24	27	4	40.5
M45 x	1.5	-	TC854D96	TD854D96	-	33	180	80	36	29	32	4	43.5
M48 x	3.0	-	TC854E56	TD854E56	-	45	225	90	36	29	32	4	45.0
M48 x	2.0	-	TC854E66	TD854E66	-	36	190	80	36	29	32	4	46.0
M48 x	1.5	-	TC854E76	TD854E76	-	36	190	80	36	29	32	4	46.5
M50 x	1.5	-	TC854F16	TD854F16	-	36	190	80	36	29	32	4	48.5
M52 x	3.0	-	TC854F56	TD854F56	-	45	225	90	40	32	35	4	49.0
M52 x	2.0	-	TC854F66	TD854F66	-	36	190	80	40	32	35	4	50.0
M52 x	1.5	-	TC854F76	TD854F76	-	36	190	80	40	32	35	4	50.5

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

MF HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE ISO Metric Fine Threads - DIN 13

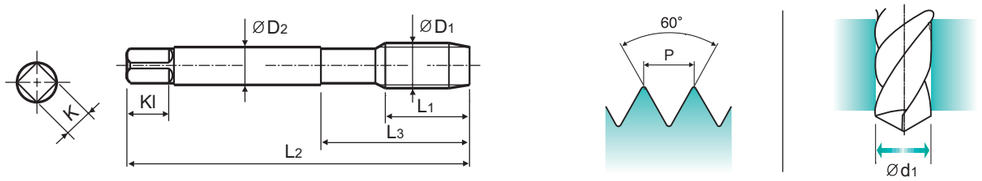
SERIES

Bright	TCJ09	TiN	TDJ09

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Hole type
3.0×D



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

p.8

Machine Taps

Unit : mm

SIZE	Pitch	EDP No. Bright	TiN	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
ØD1	P										
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	5.3
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	6.3
M8 ×	1.0	TCJ09376	TDJ09376	17	90	36	6	4.9	8	3	7.0
M8 ×	0.75	TCJ09386	TDJ09386	14	80	30	6	4.9	8	3	7.3
M10 ×	1.25	TCJ09436	TDJ09436	22	100	40	7	5.5	8	3	8.8
M10 ×	1.0	TCJ09446	TDJ09446	18	90	36	7	5.5	8	3	9.0
M10 ×	0.75	TCJ09456	TDJ09456	18	90	36	7	5.5	8	3	9.3
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 ×	1.0	TCJ09536	TDJ09536	18	100	40	9	7	10	3	11.0
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	13.0
M16 ×	1.5	TCJ09616	TDJ09616	22	100	40	12	9	12	3	14.5
M16 ×	1.0	TCJ09626	TDJ09626	18	100	40	12	9	12	3	15.0
M18 ×	1.5	TCJ09676	TDJ09676	25	110	44	14	11	14	4	16.5
M18 ×	1.0	TCJ09686	TDJ09686	20	110	44	14	11	14	4	17.0
M20 ×	1.5	TCJ09726	TDJ09726	25	125	50	16	12	15	4	18.5
M20 ×	1.0	TCJ09736	TDJ09736	20	125	50	16	12	15	4	19.0

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

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

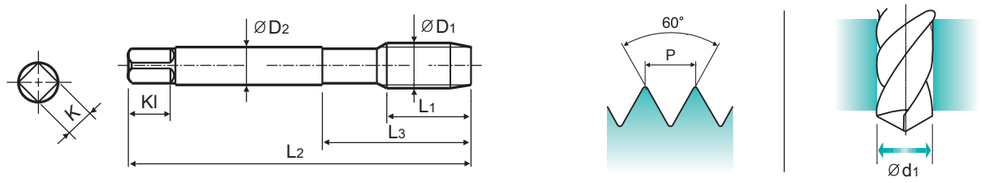
MF HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Fine Threads - DIN 13

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

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Hole type
3.0×D



Material groups **MU** | HSS-E | DIN 374 | 6G | 60° | B | Bright TiN | p.8

Machine Taps

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	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M22 ×	1.5	**TCJ09766**	**TDJ09766**	25	125	50	18	14.5	17	4	20.5
M22 ×	1.0	**TCJ09776**	**TDJ09776**	20	125	50	18	14.5	17	4	21.0
M24 ×	2.0	**TCJ09796**	**TDJ09796**	27	140	54	18	14.5	17	4	22.0
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 ×	2.0	**TCJ09876**	**TDJ09876**	28	140	54	20	16	19	4	25.0
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 ×	2.0	**TCJ09966**	**TDJ09966**	30	150	57	22	18	21	4	28.0
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					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

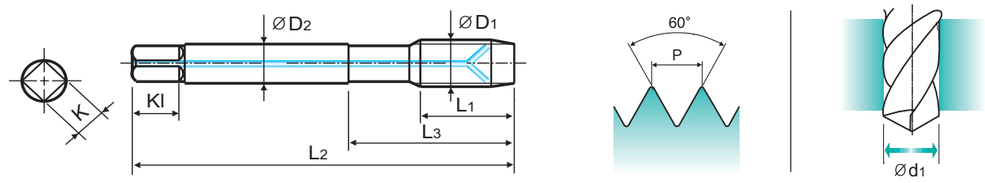
SERIES
TC814-IC

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



with Internal Coolant

Hole type
3.0×D



Material groups **MU** | HSS-E | DIN 371/376 | 6H | 60° | B | Bright | p.9

Machine Taps

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	Bright	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M6 ×	1.0	**TC814316IC**	17	80	30	6	4.9	8	3	5.0
M8 ×	1.25	**TC814366IC**	20	90	35	8	6.2	9	3	6.8
M10 ×	1.5	**TC814426IC**	22	100	39	10	8	11	3	8.5
M12 ×	1.75	**TC814506IC**	24	110	44	9	7	10	3	10.3
M14 ×	2.0	**TC814546IC**	26	110	44	11	9	12	3	12.0
M16 ×	2.0	**TC814606IC**	27	110	44	12	9	12	3	14.0
M18 ×	2.5	**TC814656IC**	30	125	50	14	11	14	4	15.5
M20 ×	2.5	**TC814706IC**	32	140	54	16	12	15	4	17.5

▶ DIN 371(M6~M10) and DIN 376(M12~M20)
* Coating(TiN, TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

M HSS-E SPIRAL POINTS TAPS for MULTI-PURPOSE
ISO Metric Coarse Threads - DIN 13

SERIES **TC445**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | LONG | 6H | 60° | B | Bright p.9

Machine Taps

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	Bright	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M3 ×	0.5	**TC445206**	11	100	18	3.5	2.7	6	3	2.5
M4 ×	0.7	**TC445246**	13	125	21	4.5	3.4	6	3	3.3
M5 ×	0.8	**TC445286**	15	140	25	6	4.9	8	3	4.2
M6 ×	1.0	**TC445316**	17	160	30	6	4.9	8	3	5.0
M8 ×	1.25	**TC445366**	20	180	35	6	4.9	8	3	6.8
M10 ×	1.5	**TC445426**	22	200	39	7	5.5	8	3	8.5
M12 ×	1.75	**TC445506**	24	220	44	9	7	10	3	10.3
M14 ×	2.0	**TC445546**	26	220	44	11	9	12	3	12.0
M16 ×	2.0	**TC445606**	27	220	44	12	9	12	3	14.0
M20 ×	2.5	**TC445706**	32	280	54	16	12	15	4	17.5

* Coating(TiN, TiCN or TiAlN) or Surface Treatment(Steam Homo) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

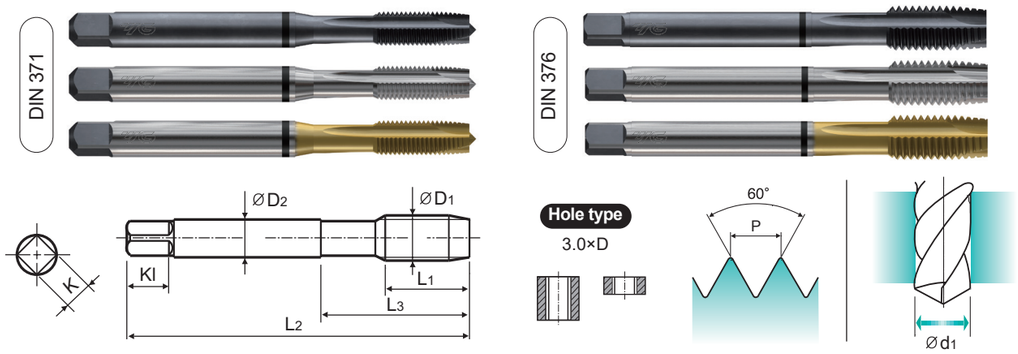
ISO	N										S							H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

UNC HSS-E SPIRAL POINTS TAPS for MULTI-PURPOSE
Unified Coarse Threads

Vap **TB834** | Bright **TC834** | TiN **TD834**

SERIES

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 2B | 60° | B | Vap Bright TiN p.7-8

Machine Taps

Unit : mm

SIZE	TPI	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Vap	Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4 -	40UNC	**TB834162**	**TC834162**	**TD834162**	11	56	18	3.5	2.7	6	3	2.3
#5 -	40UNC	**TB834202**	**TC834202**	**TD834202**	11	56	18	3.5	2.7	6	3	2.6
#6 -	32UNC	**TB834242**	**TC834242**	**TD834242**	12	56	20	4	3	6	3	2.8
#8 -	32UNC	**TB834282**	**TC834282**	**TD834282**	13	63	21	4.5	3.4	6	3	3.4
#10 -	24UNC	**TB834322**	**TC834322**	**TD834322**	15	70	25	6	4.9	8	3	3.9
#12 -	24UNC	**TB834362**	**TC834362**	**TD834362**	16	80	30	6	4.9	8	3	4.5
1/4 -	20UNC	**TB834402**	**TC834402**	**TD834402**	17	80	30	7	5.5	8	3	5.1
5/16 -	18UNC	**TB834442**	**TC834442**	**TD834442**	20	90	35	8	6.2	9	3	6.6
3/8 -	16UNC	**TB834482**	**TC834482**	**TD834482**	22	100	39	9	7	10	3	8.0
7/16 -	14UNC	**TB834522**	**TC834522**	**TD834522**	22	100	40	8	6.2	9	3	9.4
1/2 -	13UNC	**TB834562**	**TC834562**	**TD834562**	25	110	44	9	7	10	3	10.8
9/16 -	12UNC	**TB834602**	**TC834602**	**TD834602**	26	110	44	11	9	12	3	12.2
5/8 -	11UNC	**TB834642**	**TC834642**	**TD834642**	27	110	44	12	9	12	3	13.6
3/4 -	10UNC	**TB834702**	**TC834702**	**TD834702**	30	125	50	14	11	14	4	16.5
7/8 -	9UNC	**TB834742**	**TC834742**	**TD834742**	32	140	54	18	14.5	17	4	19.5
1" -	8UNC	**TB834782**	**TC834782**	**TD834782**	36	160	60	20	16	19	4	22.3

▶ DIN 371(#4~3/8) and DIN 376(7/16~1")
* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

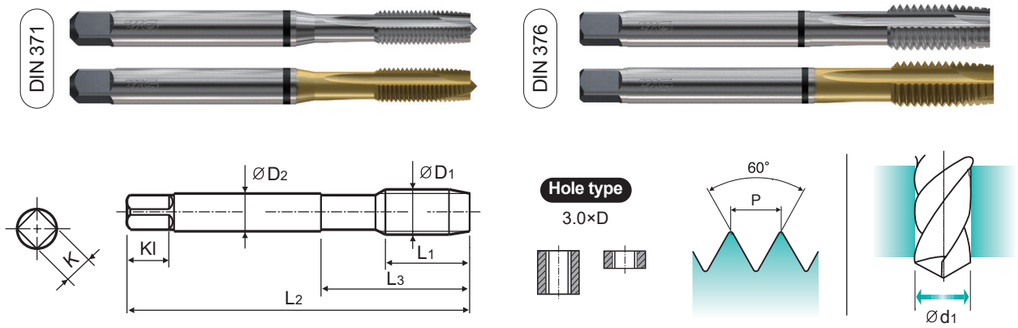
UNC HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE Unified Coarse Threads

SERIES

Bright **TCJ01**

TiN **TDJ01**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/376 | 3B | 60° | B | Bright TiN | p.8

Machine Taps

Unit : mm

SIZE ØD1	TPI	EDP No. Bright	EDP No. TiN	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
#4 -	40UNC	TCJ01162	TDJ01162	11	56	18	3.5	2.7	6	3	2.3
#5 -	40UNC	TCJ01202	TDJ01202	11	56	18	3.5	2.7	6	3	2.6
#6 -	32UNC	TCJ01242	TDJ01242	12	56	20	4	3	6	3	2.8
#8 -	32UNC	TCJ01282	TDJ01282	13	63	21	4.5	3.4	6	3	3.4
#10 -	24UNC	TCJ01322	TDJ01322	15	70	25	6	4.9	8	3	3.9
#12 -	24UNC	TCJ01362	TDJ01362	16	80	30	6	4.9	8	3	4.5
1/4 -	20UNC	TCJ01402	TDJ01402	17	80	30	7	5.5	8	3	5.1
5/16 -	18UNC	TCJ01442	TDJ01442	20	90	35	8	6.2	9	3	6.6
3/8 -	16UNC	TCJ01482	TDJ01482	22	100	39	9	7	10	3	8.0
7/16 -	14UNC	TCJ01522	TDJ01522	22	100	40	8	6.2	9	3	9.4
1/2 -	13UNC	TCJ01562	TDJ01562	25	110	44	9	7	10	3	10.8
9/16 -	12UNC	TCJ01602	TDJ01602	26	110	44	11	9	12	3	12.2
5/8 -	11UNC	TCJ01642	TDJ01642	27	110	44	12	9	12	3	13.6
3/4 -	10UNC	TCJ01702	TDJ01702	30	125	50	14	11	14	4	16.5
7/8 -	9UNC	TCJ01742	TDJ01742	32	140	54	18	14.5	17	4	19.5
1" -	8UNC	TCJ01782	TDJ01782	36	160	60	20	16	19	4	22.3

▶ DIN 371(#4~3/8) and DIN 376(7/16~1")

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

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

UNF HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE Unified Fine Threads

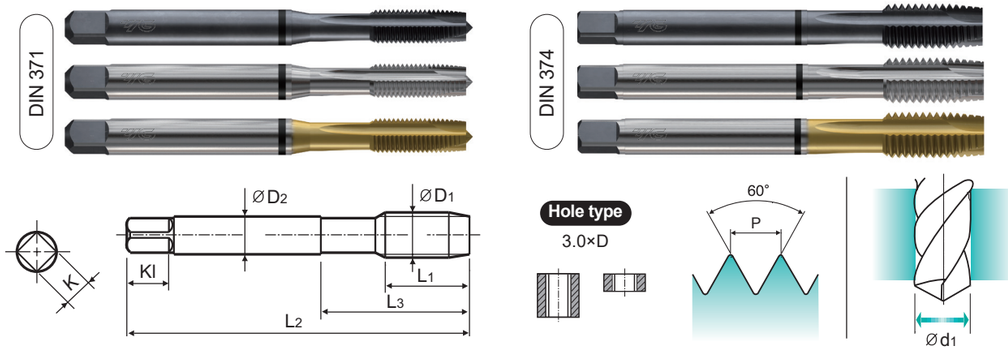
Vap **TB874**

Bright **TC874**

SERIES

TiN **TD874**

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.



Material groups **MU** | HSS-E | DIN 371/374 | 2B | 60° | B | Vap Bright TiN | p.7-8

Machine Taps

Unit : mm

SIZE ØD1	TPI	EDP No. Vap	EDP No. Bright	EDP No. TiN	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
#4 -	48UNF	TB874182	TC874182	TD874182	11	56	18	3.5	2.7	6	3	2.4
#5 -	44UNF	TB874222	TC874222	TD874222	11	56	18	3.5	2.7	6	3	2.7
#6 -	40UNF	TB874262	TC874262	TD874262	12	56	20	4	3	6	3	2.9
#8 -	36UNF	TB874302	TC874302	TD874302	13	63	21	4.5	3.4	6	3	3.5
#10 -	32UNF	TB874342	TC874342	TD874342	15	70	25	6	4.9	8	3	4.1
#12 -	28UNF	TB874382	TC874382	TD874382	16	80	30	6	4.9	8	3	4.6
1/4 -	28UNF	TB874422	TC874422	TD874422	17	80	30	7	5.5	8	3	5.5
5/16 -	24UNF	TB874462	TC874462	TD874462	17	90	35	8	6.2	9	3	6.9
3/8 -	24UNF	TB874502	TC874502	TD874502	18	100	39	9	7	10	3	8.5
7/16 -	20UNF	TB874542	TC874542	TD874542	22	100	40	8	6.2	9	3	9.9
1/2 -	20UNF	TB874582	TC874582	TD874582	22	100	40	9	7	10	3	11.5
9/16 -	18UNF	TB874622	TC874622	TD874622	22	100	40	11	9	12	3	12.9
5/8 -	18UNF	TB874662	TC874662	TD874662	22	100	40	12	9	12	3	14.5
3/4 -	16UNF	TB874722	TC874722	TD874722	25	110	44	14	11	14	4	17.5
7/8 -	14UNF	TB874762	TC874762	TD874762	26	125	50	18	14.5	17	4	20.5
1" -	12UNF	TB874802	TC874802	TD874802	28	140	54	20	16	19	4	23.3

▶ DIN 371(#4~3/8) and DIN 374(7/16~1")

* The other coating(TiCN or TiAlN) is available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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		
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

SERIES

Bright TCJ02

TiN TDJ02

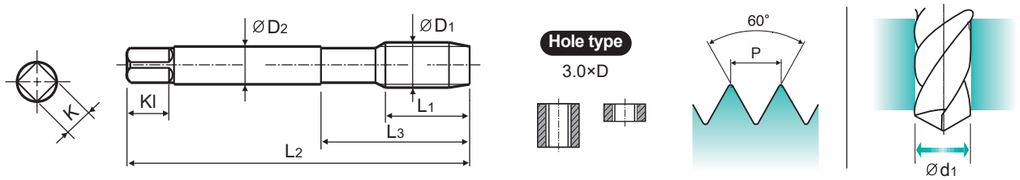
UNF

HSS-E SPIRAL POINT TAPS for MULTI-PURPOSE
Unified Fine Threads

▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry.







Material groups MU | HSS-E | DIN 371/374 | 3B | 60° | B | Bright / TiN | p.8

Machine Taps

Unit : mm

SIZE	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Bright	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4	48UNF	**TCJ02182**	**TDJ02182**	11	56	18	3.5	2.7	6	3	2.4
#5	44UNF	**TCJ02222**	**TDJ02222**	11	56	18	3.5	2.7	6	3	2.7
#6	40UNF	**TCJ02262**	**TDJ02262**	12	56	20	4	3	6	3	2.9
#8	36UNF	**TCJ02302**	**TDJ02302**	13	63	21	4.5	3.4	6	3	3.5
#10	32UNF	**TCJ02342**	**TDJ02342**	15	70	25	6	4.9	8	3	4.1
#12	28UNF	**TCJ02382**	**TDJ02382**	16	80	30	6	4.9	8	3	4.6
1/4	28UNF	**TCJ02422**	**TDJ02422**	17	80	30	7	5.5	8	3	5.5
5/16	24UNF	**TCJ02462**	**TDJ02462**	17	90	35	8	6.2	9	3	6.9
3/8	24UNF	**TCJ02502**	**TDJ02502**	18	100	39	9	7	10	3	8.5
7/16	20UNF	**TCJ02542**	**TDJ02542**	22	100	40	8	6.2	9	3	9.9
1/2	20UNF	**TCJ02582**	**TDJ02582**	22	100	40	9	7	10	3	11.5
9/16	18UNF	**TCJ02622**	**TDJ02622**	22	100	40	11	9	12	3	12.9
5/8	18UNF	**TCJ02662**	**TDJ02662**	22	100	40	12	9	12	3	14.5
3/4	16UNF	**TCJ02722**	**TDJ02722**	25	110	44	14	11	14	4	17.5
7/8	14UNF	**TCJ02762**	**TDJ02762**	26	125	50	18	14.5	17	4	20.5
1"	12UNF	**TCJ02802**	**TDJ02802**	28	140	54	20	16	19	4	23.3

▶ DIN 371(#4~3/8) and DIN 374(7/16~1")

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

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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			
Material Description	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	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

Combo Spiral Flute Tap Set



TB804SET5



TC804SET7

Set No.	Series	Surface Treatment	Size	Quantity
TB804SET5	TB804	VAP	M5, M6, M8, M10, M12	5 pcs
TC804SET7	TC804	Bright	M3, M4, M5, M6, M8, M10, M12	7 pcs

Combo Spiral Flute Tap + Gold-P Drill (HSS-E, DIN 338, Straight Shank, 135° Split Point, Jobber Length) Set



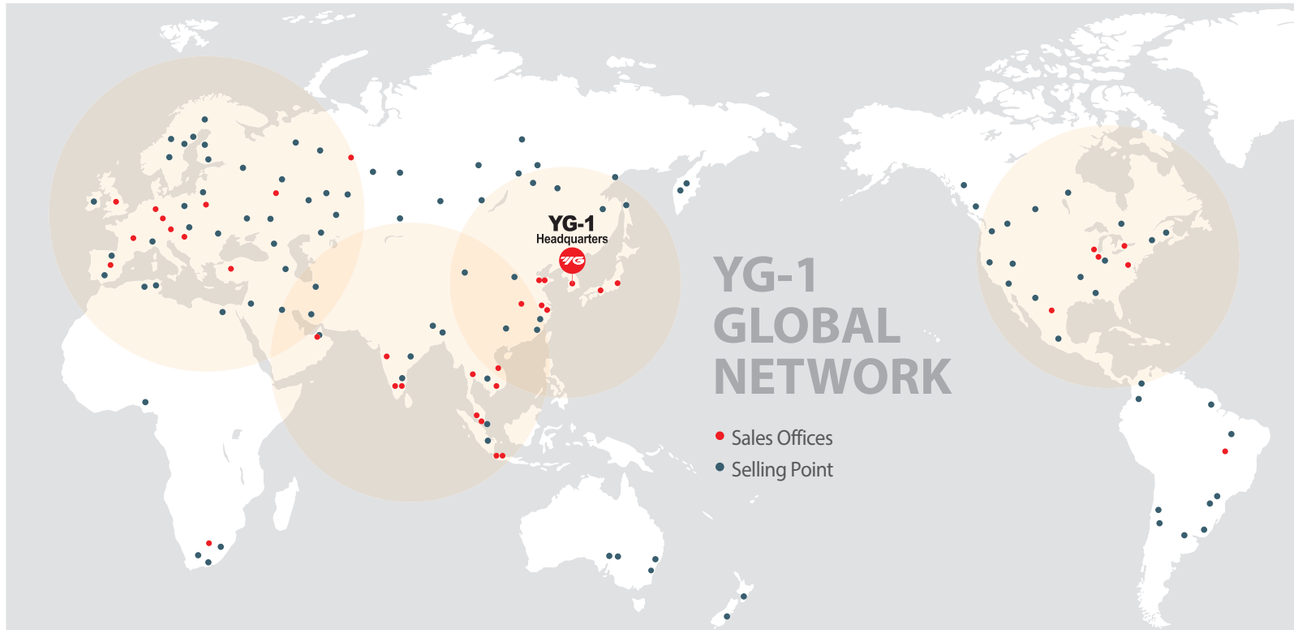
TD804SET7-GLP195

Set No.	Series	Surface Treatment	Size							Quantity
TD804SET7-GLP195	TD804	TiN	M3	M4	M5	M6	M8	M10	M12	14 pcs
	DLGP195	TiN	2.5	3.3	4.2	5	6.8	8.5	10.2	

MEMO

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Vietnam					

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Combo TAP

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YG-1 CO., LTD.

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